Honeywell

Honeywell Thermal Solutions

COMBUSTION CATALOG

2017-2018

Buying Rebuilts? Proceed with CAUTION

We would like to address a subject that is a concern to all of us—safety—specifically burner and boiler safety controls.

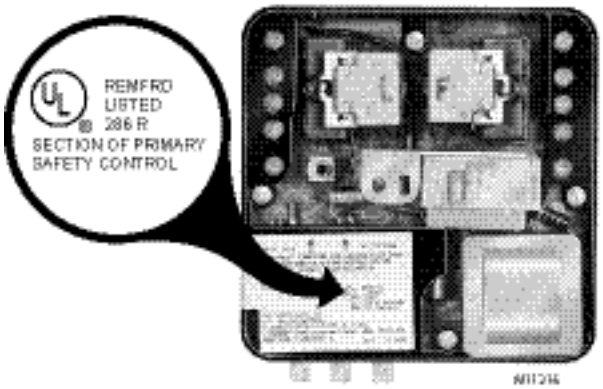
As an industry leader in the manufacture of Flame Safeguard controls, Honeywell feels obligated to inform you of the difference between Honeywell controls and controls repaired by an independent rebuilder.

There are a number of standards and codes for burners and boilers and the controls for burner and boiler equipment. Among the most familiar are those established by Underwriters Laboratories Inc. (U.L.). The U.L. standards are often the basis used for local, city, state, insurance, and other codes. Chances are that when a burner or boiler was originally purchased, it met the U.L. standard in effect at the time.

When controls fail, they are replaced with new controls or repaired controls. There are potential safety concerns regarding controls repaired by an independent rebuilder.

1. The controls purchased from independent rebuilders may utilize parts from old controls or other parts that may not meet approved specifications required for safety.
2. Honeywell remanufactured controls were upgraded to the latest code revisions and engineering specifications. Independently rebuilt controls typically are not.
3. Honeywell new and remanufactured Flame Safeguard controls are U.L. Listed or Component Recognized. Independently rebuilt controls are not. Do not be misled by rebuilders who do not remove the original U.L. or other listing identification when they “repair” the control.
4. Since rebuilt controls are not approved by a nationally recognized testing agency, they do not meet CSD-1, the standard adopted by many states and municipalities. Therefore, equipment with rebuilt controls does not meet code in these locations. This could leave you without insurance should the rebuilt control fail and cause damage.
5. When parts meeting Honeywell specifications and quality standards became difficult to obtain, we discontinued the remanufacture of Flame Safeguard controls. For replacement purposes, Honeywell provides a new control, often through a replacement exchange program. Independent Rebuilders, however, frequently continue to repair these controls.

Although we no longer remanufacture Flame Safeguard controls, there are many Honeywell remanufactured controls still operating safely and reliably. How do you differentiate genuine Honeywell remanufactured controls from independent rebuilt controls? How do you recognize an independently rebuilt control? Typically, it has all of the approval body designators removed. A rebuilder will often put his own label on the device, but this label may be removed later; therefore, a rebuilt control can be difficult to identify. The only way to be sure you have a Honeywell remanufactured control is if it is stamped “REMFRD” or “REMFRD Listed” near the U.L. or Component Recognized symbol, and if the letter “R” follows the date code (e.g., 8850R) or the serial number (e.g., S/N8906Q018R).



Honeywell Flame Safeguard controls are specifically designed to supervise the safe operation of a boiler. Therefore, safety is involved. If you have any doubts that you have a genuine, Honeywell device, please call the nearest Honeywell Home and Building Control Representative or Authorized Honeywell Flame Safeguard Distributor for verification and to discuss your options.

If you have any other questions about rebuilt controls, please contact your Honeywell sales representative.

The products in this catalog are protected by U.S. and foreign patents. Illustrations and product descriptions published in this catalog are not binding in detail. To determine the suitability of a product for a specific application, the customer should consult the product data sheets provided with the product, or contact Honeywell directly. In keeping with its policy of continued improvement, Honeywell reserves the right to change or modify design or specifications of products without notice or obligation.

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Product Selection Matrix for CE Sequence Primary/Programmer Relay Modules:

For 230 Vac nominal applications —

Fuel	Burner Type	Relay Module Type
Single	Atmospheric with fan	EC7820
Combination or single	On/Off Controlled Power Burner	EC7830
Combination or single	Full Modulation Power Burner	EC7850

For 120 Vac nominal applications —

Fuel	Burner Type	Relay Module Type
Combination or single	On/Off Controlled Power Burner	RM7830
Combination or single	Full Modulation Power Burner	RM7850

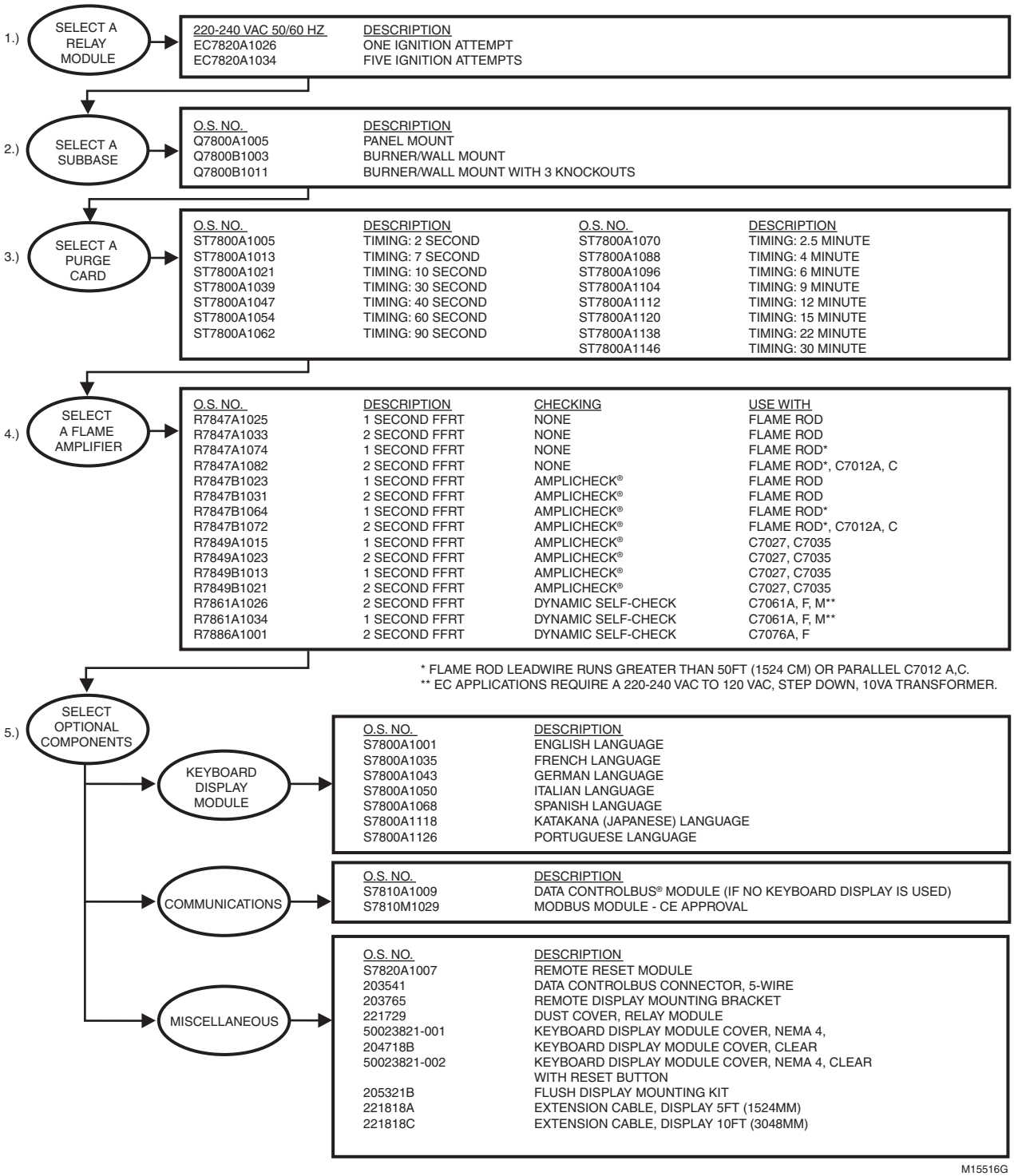
Use the following pages to select the following *required* devices:
Relay Module, 1 per burner
Subbase, 1 per relay module
Purge Timer Card, 1 per relay module
Flame Amplifier, 1 per relay module

Some products are available only through Authorized Flame Safeguard Wholesalers and/or Distributors.

Use the following pages to select the following optional devices:
Keyboard Display module, up to 1 mounted to relay module, remote as desired network and ControlBus™ modules to service selected relays
Miscellaneous, as required to complete installation.

Product Selection Matrix

PRODUCT SELECTION MATRIX FOR EC7820 PROGRAMMER RELAY MODULES:



220-240 VAC 50/60 HZ	DESCRIPTION
EC7820A1026	ONE IGNITION ATTEMPT
EC7820A1034	FIVE IGNITION ATTEMPTS

O.S. NO.	DESCRIPTION
Q7800A1005	PANEL MOUNT
Q7800B1003	BURNER/WALL MOUNT
Q7800B1011	BURNER/WALL MOUNT WITH 3 KNOCKOUTS

O.S. NO.	DESCRIPTION	O.S. NO.	DESCRIPTION
ST7800A1005	TIMING: 2 SECOND	ST7800A1070	TIMING: 2.5 MINUTE
ST7800A1013	TIMING: 7 SECOND	ST7800A1088	TIMING: 4 MINUTE
ST7800A1021	TIMING: 10 SECOND	ST7800A1096	TIMING: 6 MINUTE
ST7800A1039	TIMING: 30 SECOND	ST7800A1104	TIMING: 9 MINUTE
ST7800A1047	TIMING: 40 SECOND	ST7800A1112	TIMING: 12 MINUTE
ST7800A1054	TIMING: 60 SECOND	ST7800A1120	TIMING: 15 MINUTE
ST7800A1062	TIMING: 90 SECOND	ST7800A1138	TIMING: 22 MINUTE
		ST7800A1146	TIMING: 30 MINUTE

O.S. NO.	DESCRIPTION	CHECKING	USE WITH
R7847A1025	1 SECOND FFRT	NONE	FLAME ROD
R7847A1033	2 SECOND FFRT	NONE	FLAME ROD
R7847A1074	1 SECOND FFRT	NONE	FLAME ROD*
R7847A1082	2 SECOND FFRT	NONE	FLAME ROD*, C7012A, C
R7847B1023	1 SECOND FFRT	AMPLICHECK®	FLAME ROD
R7847B1031	2 SECOND FFRT	AMPLICHECK®	FLAME ROD
R7847B1064	1 SECOND FFRT	AMPLICHECK®	FLAME ROD*
R7847B1072	2 SECOND FFRT	AMPLICHECK®	FLAME ROD*, C7012A, C
R7849A1015	1 SECOND FFRT	AMPLICHECK®	C7027, C7035
R7849A1023	2 SECOND FFRT	AMPLICHECK®	C7027, C7035
R7849B1013	1 SECOND FFRT	AMPLICHECK®	C7027, C7035
R7849B1021	2 SECOND FFRT	AMPLICHECK®	C7027, C7035
R7861A1026	2 SECOND FFRT	DYNAMIC SELF-CHECK	C7061A, F, M**
R7861A1034	1 SECOND FFRT	DYNAMIC SELF-CHECK	C7061A, F, M**
R7886A1001	2 SECOND FFRT	DYNAMIC SELF-CHECK	C7076A, F

* FLAME ROD LEADWIRE RUNS GREATER THAN 50FT (1524 CM) OR PARALLEL C7012 A,C.
** EC APPLICATIONS REQUIRE A 220-240 VAC TO 120 VAC, STEP DOWN, 10VA TRANSFORMER.

O.S. NO.	DESCRIPTION
S7800A1001	ENGLISH LANGUAGE
S7800A1035	FRENCH LANGUAGE
S7800A1043	GERMAN LANGUAGE
S7800A1050	ITALIAN LANGUAGE
S7800A1068	SPANISH LANGUAGE
S7800A1118	KATAKANA (JAPANESE) LANGUAGE
S7800A1126	PORTUGUESE LANGUAGE

O.S. NO.	DESCRIPTION
S7810A1009	DATA CONTROLBUS® MODULE (IF NO KEYBOARD DISPLAY IS USED)
S7810M1029	MODBUS MODULE - CE APPROVAL

O.S. NO.	DESCRIPTION
S7820A1007	REMOTE RESET MODULE
203541	DATA CONTROLBUS CONNECTOR, 5-WIRE
203765	REMOTE DISPLAY MOUNTING BRACKET
221729	DUST COVER, RELAY MODULE
50023821-001	KEYBOARD DISPLAY MODULE COVER, NEMA 4,
204718B	KEYBOARD DISPLAY MODULE COVER, CLEAR
50023821-002	KEYBOARD DISPLAY MODULE COVER, NEMA 4, CLEAR WITH RESET BUTTON
205321B	FLUSH DISPLAY MOUNTING KIT
221818A	EXTENSION CABLE, DISPLAY 5FT (1524MM)
221818C	EXTENSION CABLE, DISPLAY 10FT (3048MM)

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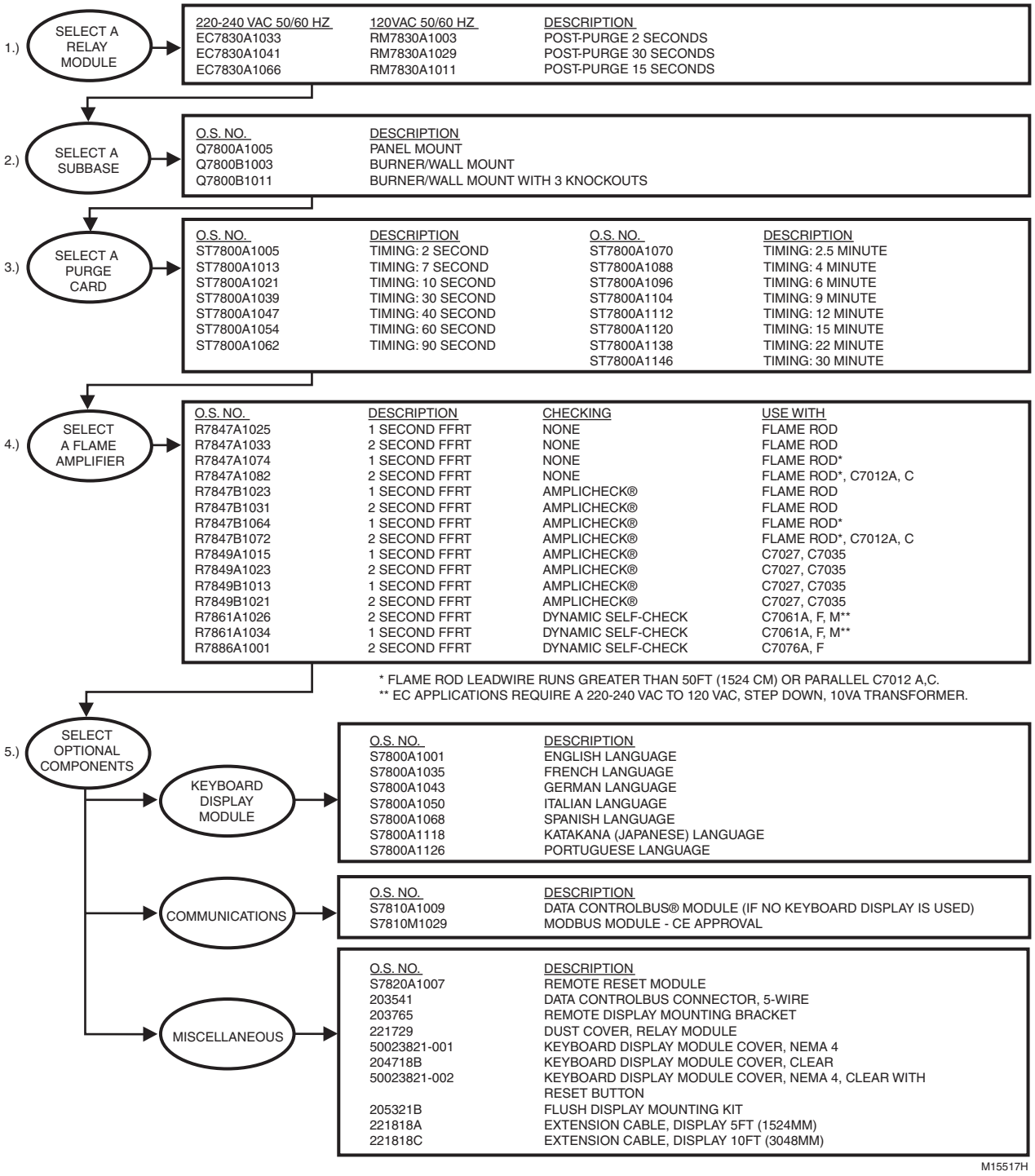
PRODUCT SELECTION MATRIX FOR EC/RM7830 PROGRAMMER RELAY MODULES:



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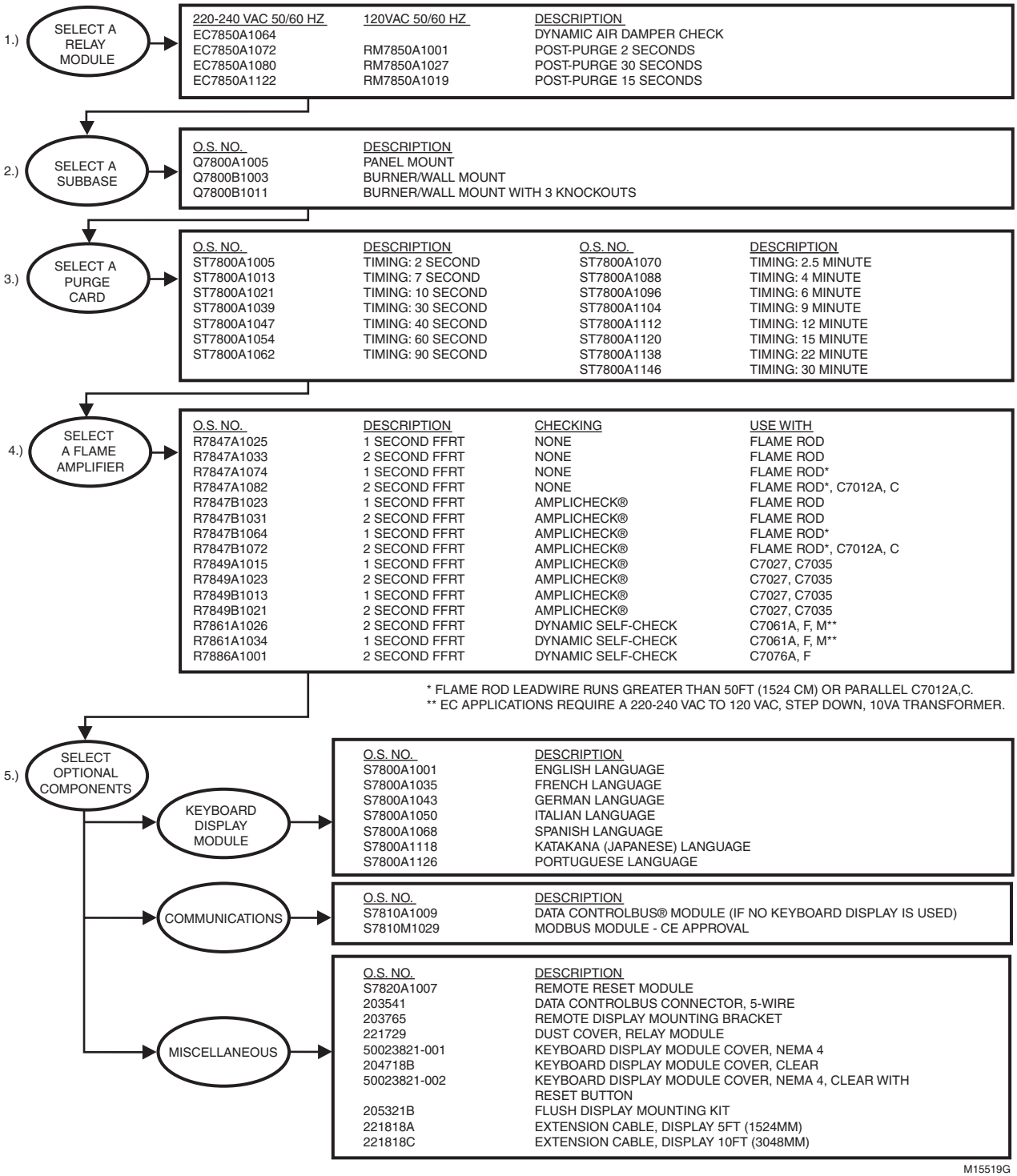
Product Selection Matrix

PRODUCT SELECTION MATRIX FOR EC/RM7850 PROGRAMMER RELAY MODULES:



220-240 VAC 50/60 HZ	120VAC 50/60 HZ	DESCRIPTION
EC7850A1064		DYNAMIC AIR DAMPER CHECK
EC7850A1072	RM7850A1001	POST-PURGE 2 SECONDS
EC7850A1080	RM7850A1027	POST-PURGE 30 SECONDS
EC7850A1122	RM7850A1019	POST-PURGE 15 SECONDS

O.S. NO.	DESCRIPTION
Q7800A1005	PANEL MOUNT
Q7800B1003	BURNER/WALL MOUNT
Q7800B1011	BURNER/WALL MOUNT WITH 3 KNOCKOUTS

O.S. NO.	DESCRIPTION	O.S. NO.	DESCRIPTION
ST7800A1005	TIMING: 2 SECOND	ST7800A1070	TIMING: 2.5 MINUTE
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ST7800A1021	TIMING: 10 SECOND	ST7800A1096	TIMING: 6 MINUTE
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ST7800A1047	TIMING: 40 SECOND	ST7800A1112	TIMING: 12 MINUTE
ST7800A1054	TIMING: 60 SECOND	ST7800A1120	TIMING: 15 MINUTE
ST7800A1062	TIMING: 90 SECOND	ST7800A1138	TIMING: 22 MINUTE
		ST7800A1146	TIMING: 30 MINUTE

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R7847B1031	2 SECOND FFRT	AMPLICHECK®	FLAME ROD
R7847B1064	1 SECOND FFRT	AMPLICHECK®	FLAME ROD*
R7847B1072	2 SECOND FFRT	AMPLICHECK®	FLAME ROD*, C7012A, C
R7849A1015	1 SECOND FFRT	AMPLICHECK®	C7027, C7035
R7849A1023	2 SECOND FFRT	AMPLICHECK®	C7027, C7035
R7849B1013	1 SECOND FFRT	AMPLICHECK®	C7027, C7035
R7849B1021	2 SECOND FFRT	AMPLICHECK®	C7027, C7035
R7861A1026	2 SECOND FFRT	DYNAMIC SELF-CHECK	C7061A, F, M**
R7861A1034	1 SECOND FFRT	DYNAMIC SELF-CHECK	C7061A, F, M**
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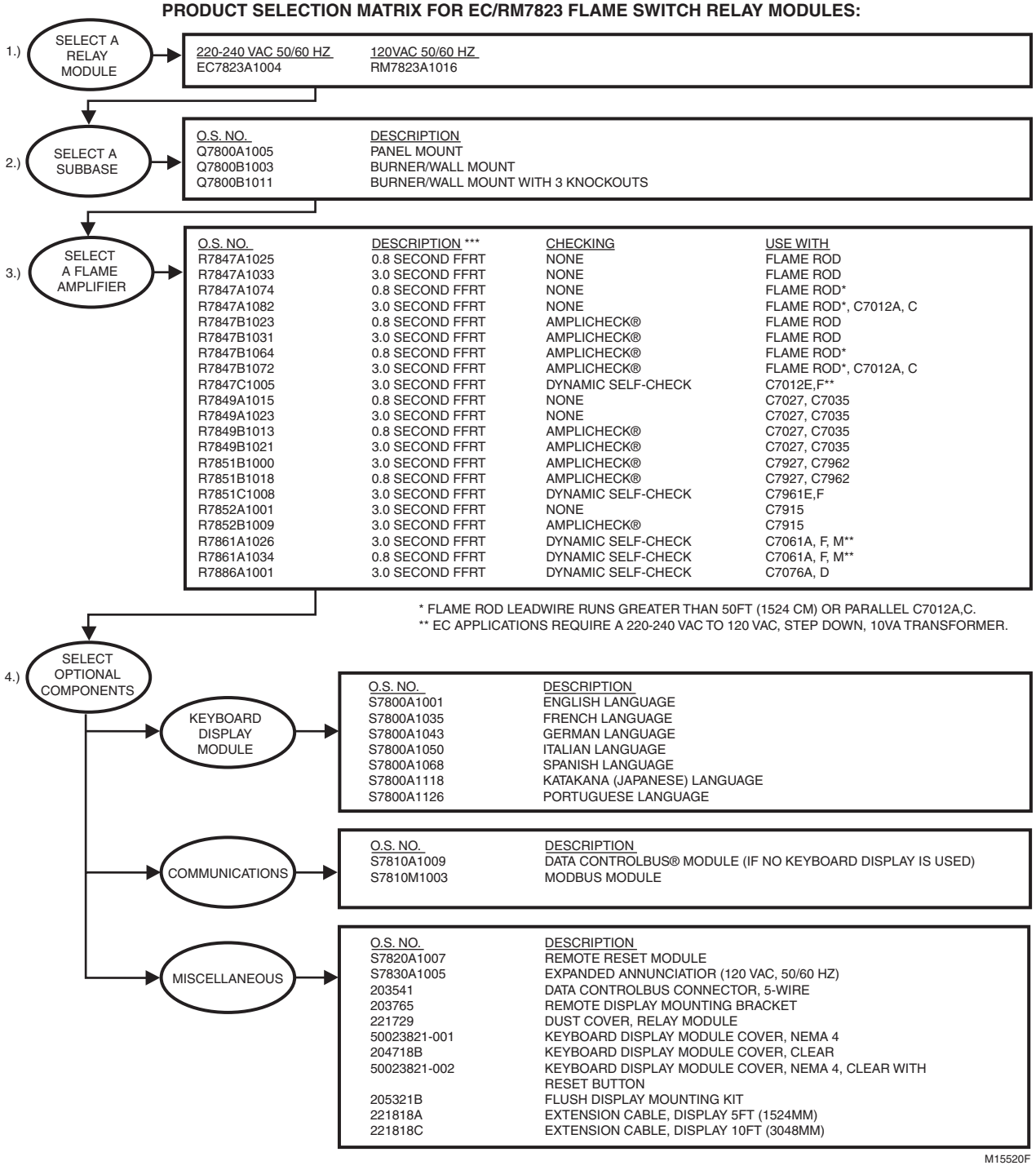
S7800A1043	GERMAN LANGUAGE
S7800A1050	ITALIAN LANGUAGE
S7800A1068	SPANISH LANGUAGE
S7800A1118	KATAKANA (JAPANESE) LANGUAGE
S7800A1126	PORTUGUESE LANGUAGE

O.S. NO.	DESCRIPTION
S7810A1009	DATA CONTROLBUS® MODULE (IF NO KEYBOARD DISPLAY IS USED)
S7810M1029	MODBUS MODULE - CE APPROVAL

O.S. NO.	DESCRIPTION
S7820A1007	REMOTE RESET MODULE
203541	DATA CONTROLBUS CONNECTOR, 5-WIRE
203765	REMOTE DISPLAY MOUNTING BRACKET
221729	DUST COVER, RELAY MODULE
50023821-001	KEYBOARD DISPLAY MODULE COVER, NEMA 4
204718B	KEYBOARD DISPLAY MODULE COVER, CLEAR
50023821-002	KEYBOARD DISPLAY MODULE COVER, NEMA 4, CLEAR WITH RESET BUTTON
205321B	FLUSH DISPLAY MOUNTING KIT
221818A	EXTENSION CABLE, DISPLAY 5FT (1524MM)
221818C	EXTENSION CABLE, DISPLAY 10FT (3048MM)

M15519G

PRODUCT SELECTION MATRIX FOR EC/RM7823 FLAME SWITCH RELAY MODULES:

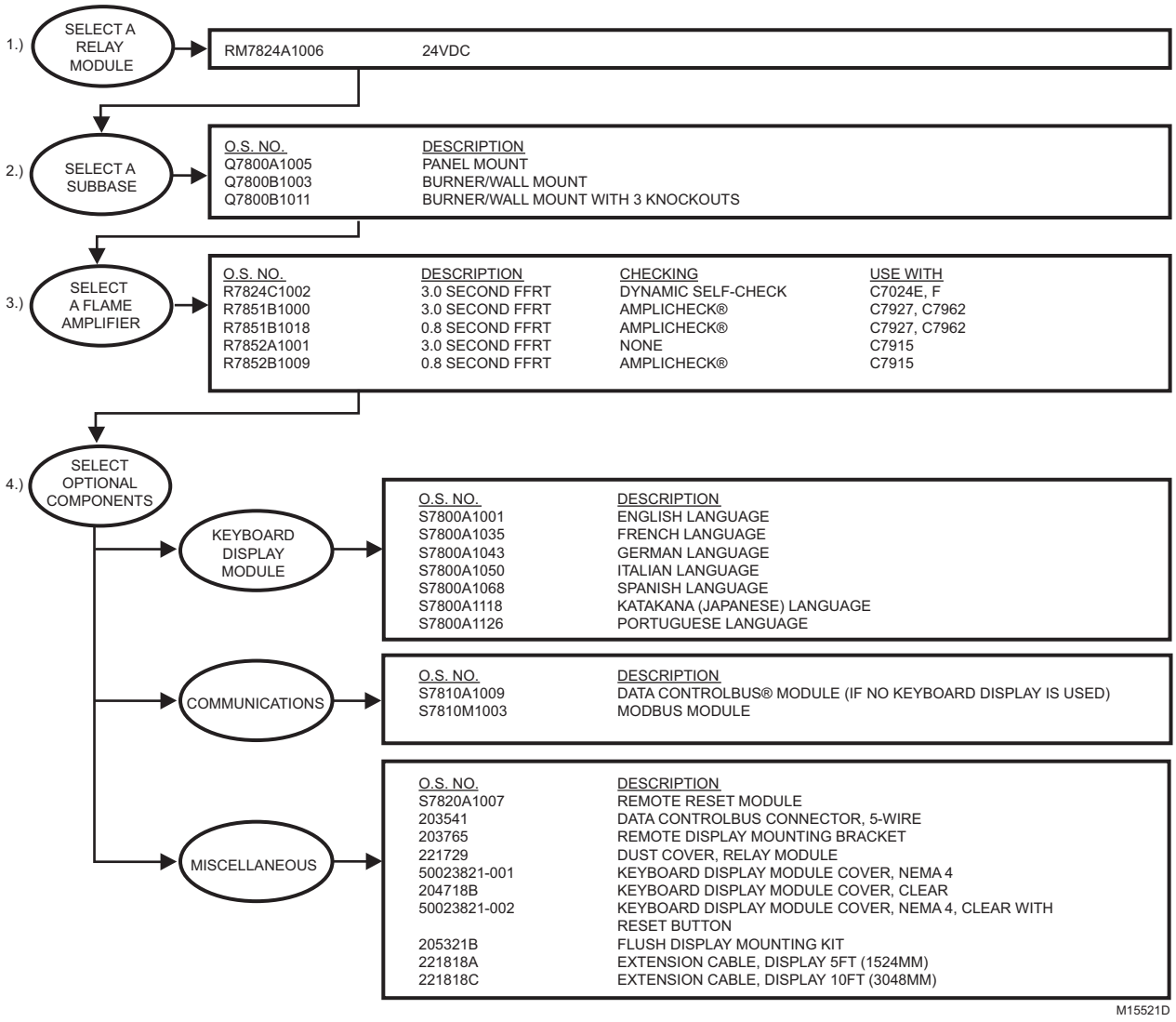


* FLAME ROD LEADWIRE RUNS GREATER THAN 50FT (1524 CM) OR PARALLEL C7012A,C.
** EC APPLICATIONS REQUIRE A 220-240 VAC TO 120 VAC, STEP DOWN, 10VA TRANSFORMER.

M15520F

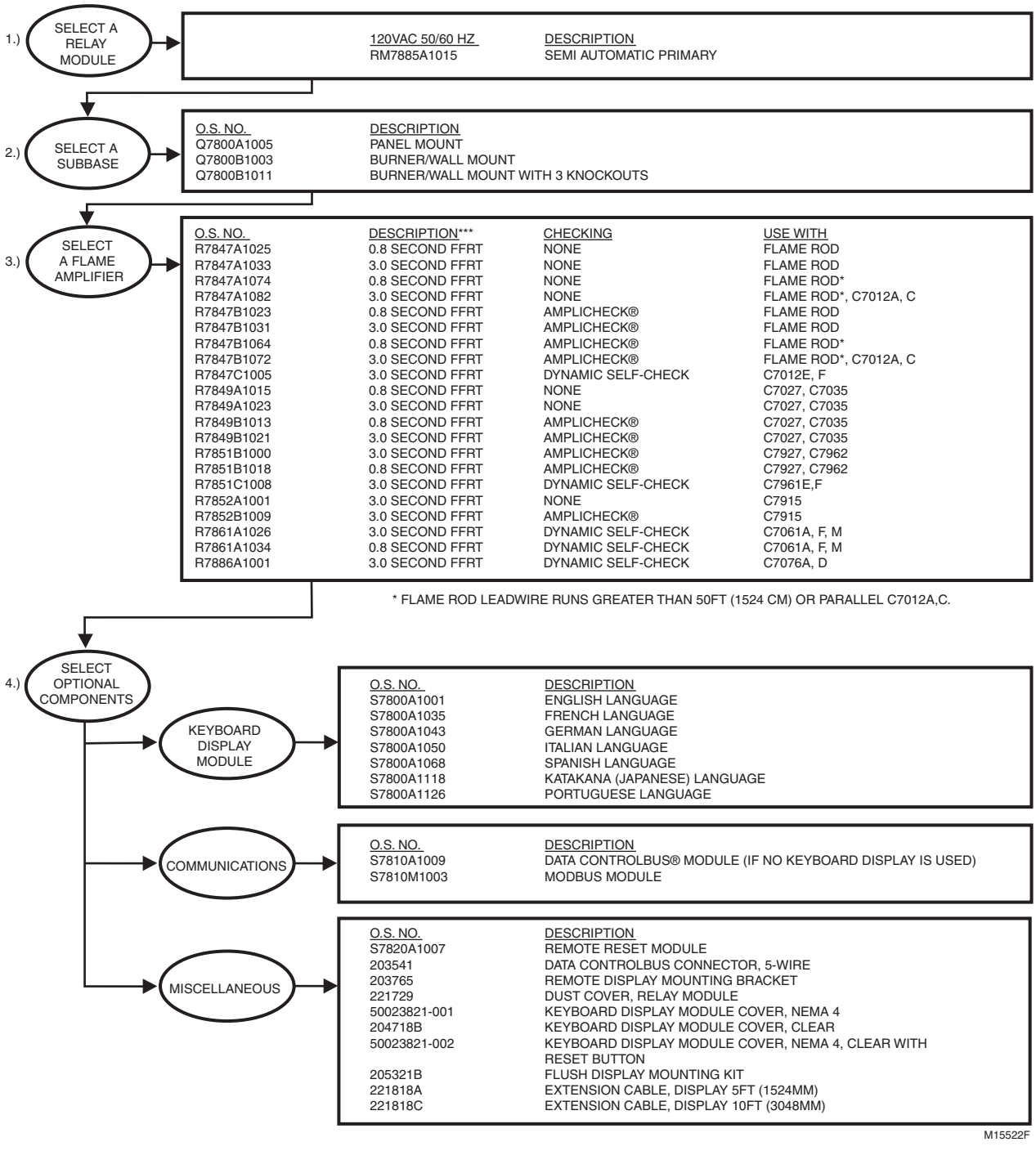
Product Selection Matrix

PRODUCT SELECTION MATRIX FOR RM7824A 24VDC PRIMARY CONTROL RELAY MODULES:



M15521D

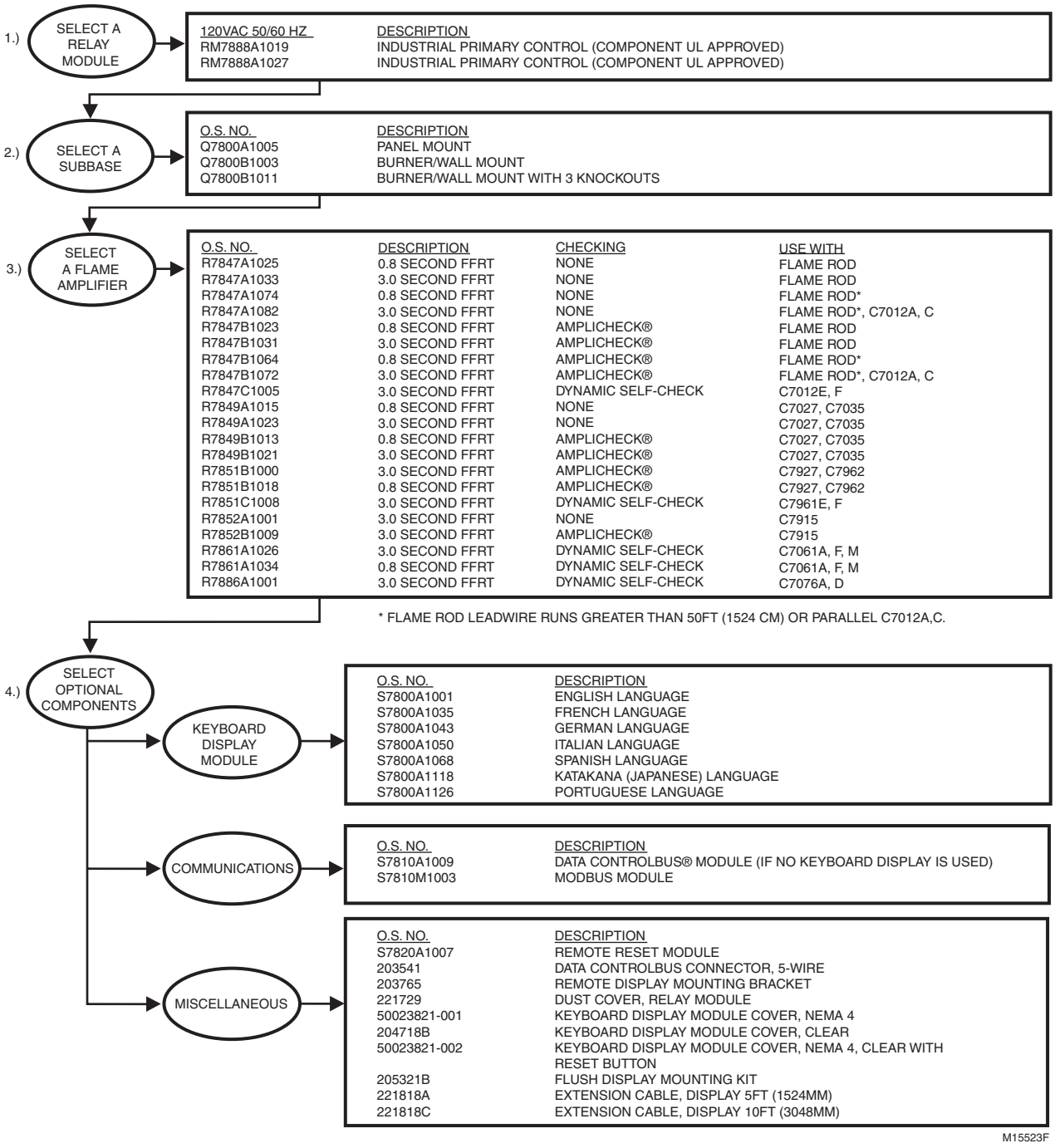
PRODUCT SELECTION MATRIX FOR RM7885 MANUAL START PRIMARY RELAY MODULES:



M15522F

Product Selection Matrix

PRODUCT SELECTION MATRIX FOR RM7888A SPECIAL FUNCTION PRIMARY CONTROL RELAY MODULES:



120VAC 50/60 HZ	DESCRIPTION
RM7888A1019	INDUSTRIAL PRIMARY CONTROL (COMPONENT UL APPROVED)
RM7888A1027	INDUSTRIAL PRIMARY CONTROL (COMPONENT UL APPROVED)

O.S. NO.	DESCRIPTION
Q7800A1005	PANEL MOUNT
Q7800B1003	BURNER/WALL MOUNT
Q7800B1011	BURNER/WALL MOUNT WITH 3 KNOCKOUTS

O.S. NO.	DESCRIPTION	CHECKING	USE WITH
R7847A1025	0.8 SECOND FFRT	NONE	FLAME ROD
R7847A1033	3.0 SECOND FFRT	NONE	FLAME ROD
R7847A1074	0.8 SECOND FFRT	NONE	FLAME ROD*
R7847A1082	3.0 SECOND FFRT	NONE	FLAME ROD*, C7012A, C
R7847B1023	0.8 SECOND FFRT	AMPLICHECK®	FLAME ROD
R7847B1031	3.0 SECOND FFRT	AMPLICHECK®	FLAME ROD
R7847B1064	0.8 SECOND FFRT	AMPLICHECK®	FLAME ROD*
R7847B1072	3.0 SECOND FFRT	AMPLICHECK®	FLAME ROD*, C7012A, C
R7847C1005	3.0 SECOND FFRT	DYNAMIC SELF-CHECK	C7012E, F
R7849A1015	0.8 SECOND FFRT	NONE	C7027, C7035
R7849A1023	3.0 SECOND FFRT	NONE	C7027, C7035
R7849B1013	0.8 SECOND FFRT	AMPLICHECK®	C7027, C7035
R7849B1021	3.0 SECOND FFRT	AMPLICHECK®	C7027, C7035
R7851B1000	3.0 SECOND FFRT	AMPLICHECK®	C7927, C7962
R7851B1018	0.8 SECOND FFRT	AMPLICHECK®	C7927, C7962
R7851C1008	3.0 SECOND FFRT	DYNAMIC SELF-CHECK	C7961E, F
R7852A1001	3.0 SECOND FFRT	NONE	C7915
R7852B1009	3.0 SECOND FFRT	AMPLICHECK®	C7915
R7861A1026	3.0 SECOND FFRT	DYNAMIC SELF-CHECK	C7061A, F, M
R7861A1034	0.8 SECOND FFRT	DYNAMIC SELF-CHECK	C7061A, F, M
R7886A1001	3.0 SECOND FFRT	DYNAMIC SELF-CHECK	C7076A, D

* FLAME ROD LEADWIRE RUNS GREATER THAN 50FT (1524 CM) OR PARALLEL C7012A,C.

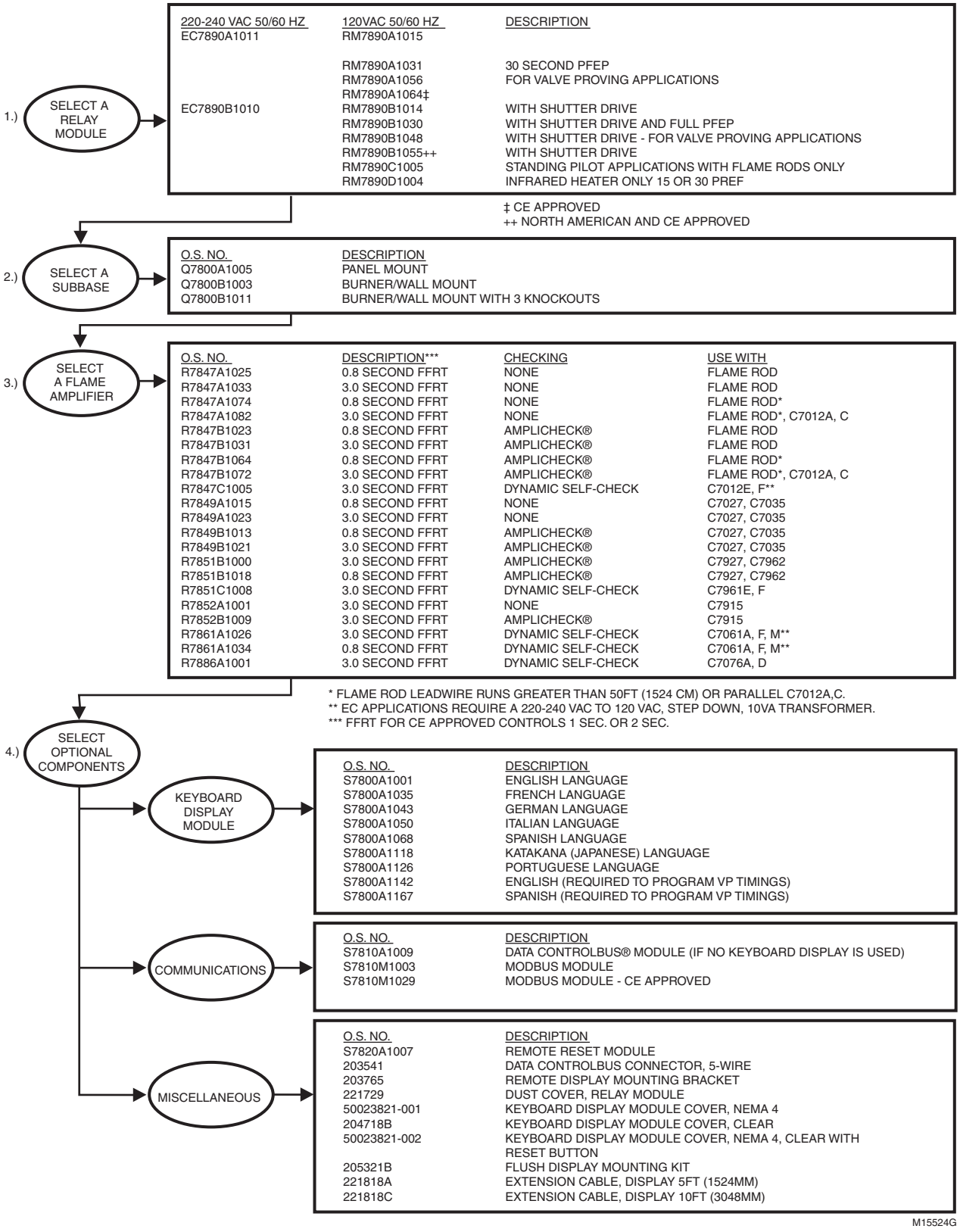
O.S. NO.	DESCRIPTION
S7800A1001	ENGLISH LANGUAGE
S7800A1035	FRENCH LANGUAGE
S7800A1043	GERMAN LANGUAGE
S7800A1050	ITALIAN LANGUAGE
S7800A1068	SPANISH LANGUAGE
S7800A1118	KATAKANA (JAPANESE) LANGUAGE
S7800A1126	PORTUGUESE LANGUAGE

O.S. NO.	DESCRIPTION
S7810A1009	DATA CONTROLBUS® MODULE (IF NO KEYBOARD DISPLAY IS USED)
S7810M1003	MODBUS MODULE

O.S. NO.	DESCRIPTION
S7820A1007	REMOTE RESET MODULE
203541	DATA CONTROLBUS CONNECTOR, 5-WIRE
203765	REMOTE DISPLAY MOUNTING BRACKET
221729	DUST COVER, RELAY MODULE
50023821-001	KEYBOARD DISPLAY MODULE COVER, NEMA 4
204718B	KEYBOARD DISPLAY MODULE COVER, CLEAR
50023821-002	KEYBOARD DISPLAY MODULE COVER, NEMA 4, CLEAR WITH RESET BUTTON
205321B	FLUSH DISPLAY MOUNTING KIT
221818A	EXTENSION CABLE, DISPLAY 5FT (1524MM)
221818C	EXTENSION CABLE, DISPLAY 10FT (3048MM)

M15523F

PRODUCT SELECTION MATRIX FOR EC/RM7890 ON/OFF PRIMARY CONTROL RELAY MODULES:



220-240 VAC 50/60 HZ	120VAC 50/60 HZ	DESCRIPTION
EC7890A1011	RM7890A1015	
	RM7890A1031	30 SECOND PFEP
	RM7890A1056	FOR VALVE PROVING APPLICATIONS
	RM7890A1064‡	
EC7890B1010	RM7890B1014	WITH SHUTTER DRIVE
	RM7890B1030	WITH SHUTTER DRIVE AND FULL PFEP
	RM7890B1048	WITH SHUTTER DRIVE - FOR VALVE PROVING APPLICATIONS
	RM7890B1055++	WITH SHUTTER DRIVE
	RM7890C1005	STANDING PILOT APPLICATIONS WITH FLAME RODS ONLY
	RM7890D1004	INFRARED HEATER ONLY 15 OR 30 PREF

‡ CE APPROVED
++ NORTH AMERICAN AND CE APPROVED

O.S. NO.	DESCRIPTION
Q7800A1005	PANEL MOUNT
Q7800B1003	BURNER/WALL MOUNT
Q7800B1011	BURNER/WALL MOUNT WITH 3 KNOCKOUTS

O.S. NO.	DESCRIPTION***	CHECKING	USE WITH
R7847A1025	0.8 SECOND FFRT	NONE	FLAME ROD
R7847A1033	3.0 SECOND FFRT	NONE	FLAME ROD
R7847A1074	0.8 SECOND FFRT	NONE	FLAME ROD*
R7847A1082	3.0 SECOND FFRT	NONE	FLAME ROD*, C7012A, C
R7847B1023	0.8 SECOND FFRT	AMPLICHECK®	FLAME ROD
R7847B1031	3.0 SECOND FFRT	AMPLICHECK®	FLAME ROD
R7847B1064	0.8 SECOND FFRT	AMPLICHECK®	FLAME ROD*
R7847B1072	3.0 SECOND FFRT	AMPLICHECK®	FLAME ROD*, C7012A, C
R7847C1005	3.0 SECOND FFRT	DYNAMIC SELF-CHECK	C7012E, F**
R7849A1015	0.8 SECOND FFRT	NONE	C7027, C7035
R7849A1023	3.0 SECOND FFRT	NONE	C7027, C7035
R7849B1013	0.8 SECOND FFRT	AMPLICHECK®	C7027, C7035
R7849B1021	3.0 SECOND FFRT	AMPLICHECK®	C7027, C7035
R7851B1000	3.0 SECOND FFRT	AMPLICHECK®	C7927, C7962
R7851B1018	0.8 SECOND FFRT	AMPLICHECK®	C7927, C7962
R7851C1008	3.0 SECOND FFRT	DYNAMIC SELF-CHECK	C7961E, F
R7852A1001	3.0 SECOND FFRT	NONE	C7915
R7852B1009	3.0 SECOND FFRT	AMPLICHECK®	C7915
R7861A1026	3.0 SECOND FFRT	DYNAMIC SELF-CHECK	C7061A, F, M**
R7861A1034	0.8 SECOND FFRT	DYNAMIC SELF-CHECK	C7061A, F, M**
R7886A1001	3.0 SECOND FFRT	DYNAMIC SELF-CHECK	C7076A, D

* FLAME ROD LEADWIRE RUNS GREATER THAN 50FT (1524 CM) OR PARALLEL C7012A,C.
** EC APPLICATIONS REQUIRE A 220-240 VAC TO 120 VAC, STEP DOWN, 10VA TRANSFORMER.
*** FFRT FOR CE APPROVED CONTROLS 1 SEC. OR 2 SEC.

O.S. NO.	DESCRIPTION
S7800A1001	ENGLISH LANGUAGE
S7800A1035	FRENCH LANGUAGE
S7800A1043	GERMAN LANGUAGE
S7800A1050	ITALIAN LANGUAGE
S7800A1068	SPANISH LANGUAGE
S7800A1118	KATAKANA (JAPANESE) LANGUAGE
S7800A1126	PORTUGUESE LANGUAGE
S7800A1142	ENGLISH (REQUIRED TO PROGRAM VP TIMINGS)
S7800A1167	SPANISH (REQUIRED TO PROGRAM VP TIMINGS)

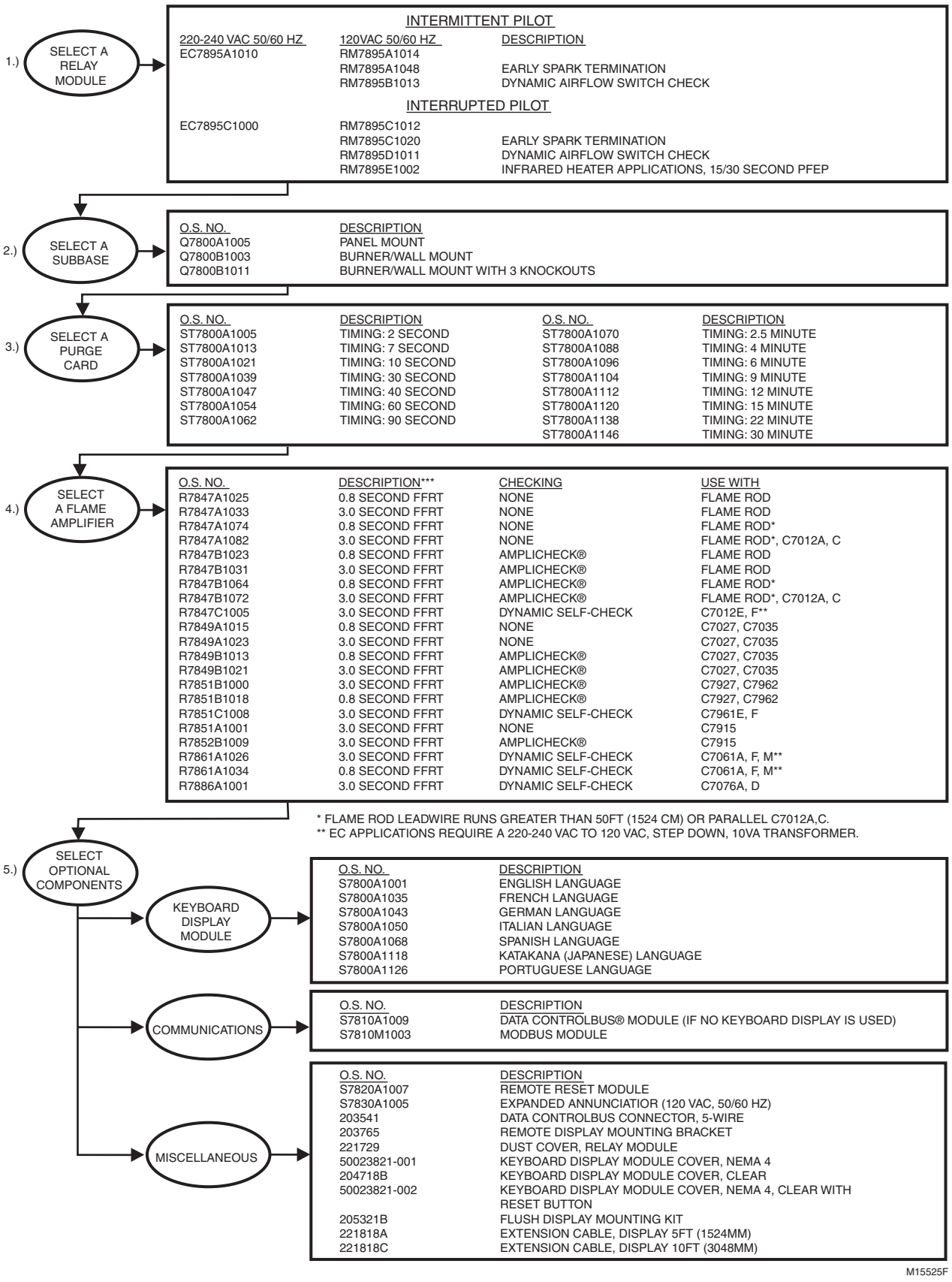
O.S. NO.	DESCRIPTION
S7810A1009	DATA CONTROLBUS® MODULE (IF NO KEYBOARD DISPLAY IS USED)
S7810M1003	MODBUS MODULE
S7810M1029	MODBUS MODULE - CE APPROVED

O.S. NO.	DESCRIPTION
S7820A1007	REMOTE RESET MODULE
203541	DATA CONTROLBUS CONNECTOR, 5-WIRE
203765	REMOTE DISPLAY MOUNTING BRACKET
221729	DUST COVER, RELAY MODULE
50023821-001	KEYBOARD DISPLAY MODULE COVER, NEMA 4
204718B	KEYBOARD DISPLAY MODULE COVER, CLEAR
50023821-002	KEYBOARD DISPLAY MODULE COVER, NEMA 4, CLEAR WITH RESET BUTTON
205321B	FLUSH DISPLAY MOUNTING KIT
221818A	EXTENSION CABLE, DISPLAY 5FT (1524MM)
221818C	EXTENSION CABLE, DISPLAY 10FT (3048MM)

M15524G

Product Selection Matrix

PRODUCT SELECTION MATRIX FOR EC/RM7895 ON/OFF WITH PURGE PRIMARY RELAY MODULES:



1.) SELECT A RELAY MODULE

220-240 VAC 50/60 HZ	120VAC 50/60 HZ	DESCRIPTION
	INTERMITTENT PILOT	
EC7895A1010	RM7895A1014	
	RM7895A1048	EARLY SPARK TERMINATION
	RM7895B1013	DYNAMIC AIRFLOW SWITCH CHECK
	INTERRUPTED PILOT	
EC7895C1000	RM7895C1012	
	RM7895C1020	EARLY SPARK TERMINATION
	RM7895D1011	DYNAMIC AIRFLOW SWITCH CHECK
	RM7895E1002	INFRARED HEATER APPLICATIONS, 15/30 SECOND PFEP

2.) SELECT A SUBBASE

O.S. NO.	DESCRIPTION
Q7800A1005	PANEL MOUNT
Q7800B1003	BURNER/WALL MOUNT
Q7800B1011	BURNER/WALL MOUNT WITH 3 KNOCKOUTS

3.) SELECT A PURGE CARD

O.S. NO.	DESCRIPTION	O.S. NO.	DESCRIPTION
ST7800A1005	TIMING: 2 SECOND	ST7800A1070	TIMING: 2.5 MINUTE
ST7800A1013	TIMING: 7 SECOND	ST7800A1088	TIMING: 4 MINUTE
ST7800A1021	TIMING: 10 SECOND	ST7800A1096	TIMING: 6 MINUTE
ST7800A1039	TIMING: 30 SECOND	ST7800A1104	TIMING: 9 MINUTE
ST7800A1047	TIMING: 40 SECOND	ST7800A1112	TIMING: 12 MINUTE
ST7800A1054	TIMING: 60 SECOND	ST7800A1120	TIMING: 15 MINUTE
ST7800A1062	TIMING: 90 SECOND	ST7800A1138	TIMING: 22 MINUTE
		ST7800A1146	TIMING: 30 MINUTE

4.) SELECT A FLAME AMPLIFIER

O.S. NO.	DESCRIPTION***	CHECKING	USE WITH
R7847A1025	0.8 SECOND FFRT	NONE	FLAME ROD
R7847A1033	3.0 SECOND FFRT	NONE	FLAME ROD
R7847A1074	0.8 SECOND FFRT	NONE	FLAME ROD*
R7847A1082	3.0 SECOND FFRT	NONE	FLAME ROD*, C7012A, C
R7847B1023	0.8 SECOND FFRT	AMPLICHECK®	FLAME ROD
R7847B1031	3.0 SECOND FFRT	AMPLICHECK®	FLAME ROD
R7847B1064	0.8 SECOND FFRT	AMPLICHECK®	FLAME ROD*
R7847B1072	3.0 SECOND FFRT	AMPLICHECK®	FLAME ROD*, C7012A, C
R7847C1005	3.0 SECOND FFRT	DYNAMIC SELF-CHECK	C7012E, F**
R7849A1015	0.8 SECOND FFRT	NONE	C7027, C7035
R7849A1023	3.0 SECOND FFRT	NONE	C7027, C7035
R7849B1013	0.8 SECOND FFRT	AMPLICHECK®	C7027, C7035
R7849B1021	3.0 SECOND FFRT	AMPLICHECK®	C7027, C7035
R7851B1000	3.0 SECOND FFRT	AMPLICHECK®	C7927, C7962
R7851B1018	0.8 SECOND FFRT	AMPLICHECK®	C7927, C7962
R7851C1008	3.0 SECOND FFRT	DYNAMIC SELF-CHECK	C7961E, F
R7851A1001	3.0 SECOND FFRT	NONE	C7915
R7852B1009	3.0 SECOND FFRT	AMPLICHECK®	C7915
R7861A1026	3.0 SECOND FFRT	DYNAMIC SELF-CHECK	C7061A, F, M**
R7861A1034	0.8 SECOND FFRT	DYNAMIC SELF-CHECK	C7061A, F, M**
R7886A1001	3.0 SECOND FFRT	DYNAMIC SELF-CHECK	C7076A, D

* FLAME ROD LEADWIRE RUNS GREATER THAN 50FT (1524 CM) OR PARALLEL C7012A,C.
** EC APPLICATIONS REQUIRE A 220-240 VAC TO 120 VAC, STEP DOWN, 10VA TRANSFORMER.

5.) SELECT OPTIONAL COMPONENTS

KEYBOARD DISPLAY MODULE

O.S. NO.	DESCRIPTION
S7800A1001	ENGLISH LANGUAGE
S7800A1035	FRENCH LANGUAGE
S7800A1043	GERMAN LANGUAGE
S7800A1050	ITALIAN LANGUAGE
S7800A1068	SPANISH LANGUAGE
S7800A1118	KATAKANA (JAPANESE) LANGUAGE
S7800A1126	PORTUGUESE LANGUAGE

COMMUNICATIONS

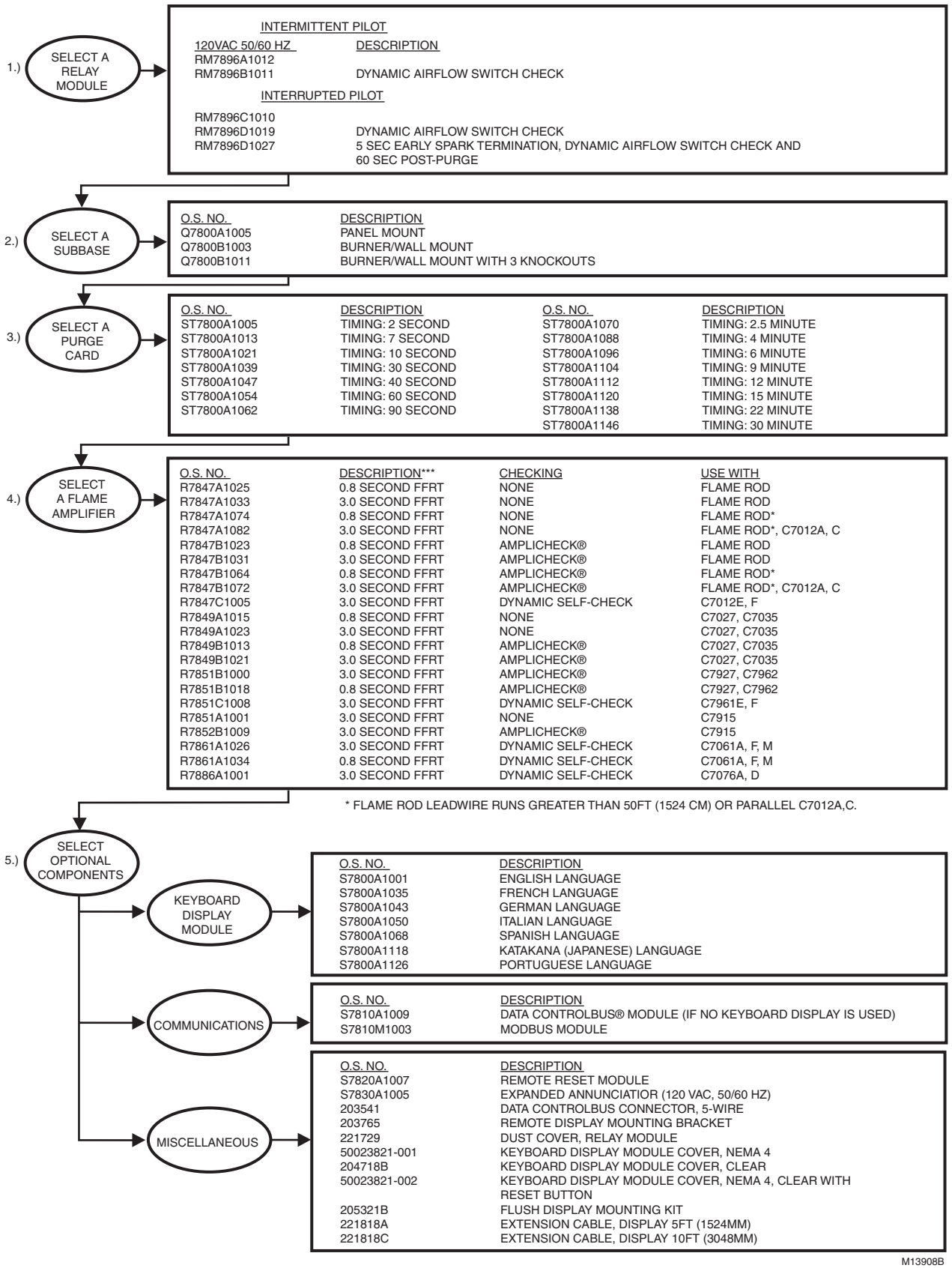
O.S. NO.	DESCRIPTION
S7810A1009	DATA CONTROLBUS® MODULE (IF NO KEYBOARD DISPLAY IS USED)
S7810M1003	MODBUS MODULE

MISCELLANEOUS

O.S. NO.	DESCRIPTION
S7820A1007	REMOTE RESET MODULE
S7830A1005	EXPANDED ANNUNCIATIOR (120 VAC, 50/60 HZ)
203541	DATA CONTROLBUS CONNECTOR, 5-WIRE
203765	REMOTE DISPLAY MOUNTING BRACKET
221729	DUST COVER, RELAY MODULE
50023821-001	KEYBOARD DISPLAY MODULE COVER, NEMA 4
204718B	KEYBOARD DISPLAY MODULE COVER, CLEAR
50023821-002	KEYBOARD DISPLAY MODULE COVER, NEMA 4, CLEAR WITH RESET BUTTON
205321B	FLUSH DISPLAY MOUNTING KIT
221818A	EXTENSION CABLE, DISPLAY 5FT (1524MM)
221818C	EXTENSION CABLE, DISPLAY 10FT (3048MM)

M15525F

PRODUCT SELECTION MATRIX FOR RM7896 ON/OFF WITH PRE- AND POST-PURGE PRIMARY RELAY MODULES:



1.) SELECT A RELAY MODULE

120VAC 50/60 HZ	DESCRIPTION
INTERMITTENT PILOT	
RM7896A1012	
RM7896B1011	DYNAMIC AIRFLOW SWITCH CHECK
INTERRUPTED PILOT	
RM7896C1010	
RM7896D1019	DYNAMIC AIRFLOW SWITCH CHECK
RM7896D1027	5 SEC EARLY SPARK TERMINATION, DYNAMIC AIRFLOW SWITCH CHECK AND 60 SEC POST-PURGE

2.) SELECT A SUBBASE

O.S. NO.	DESCRIPTION
Q7800A1005	PANEL MOUNT
Q7800B1003	BURNER/WALL MOUNT
Q7800B1011	BURNER/WALL MOUNT WITH 3 KNOCKOUTS

3.) SELECT A PURGE CARD

O.S. NO.	DESCRIPTION	O.S. NO.	DESCRIPTION
ST7800A1005	TIMING: 2 SECOND	ST7800A1070	TIMING: 2.5 MINUTE
ST7800A1013	TIMING: 7 SECOND	ST7800A1088	TIMING: 4 MINUTE
ST7800A1021	TIMING: 10 SECOND	ST7800A1096	TIMING: 6 MINUTE
ST7800A1039	TIMING: 30 SECOND	ST7800A1104	TIMING: 9 MINUTE
ST7800A1047	TIMING: 40 SECOND	ST7800A1112	TIMING: 12 MINUTE
ST7800A1054	TIMING: 60 SECOND	ST7800A1120	TIMING: 15 MINUTE
ST7800A1062	TIMING: 90 SECOND	ST7800A1138	TIMING: 22 MINUTE
		ST7800A1146	TIMING: 30 MINUTE

4.) SELECT A FLAME AMPLIFIER

O.S. NO.	DESCRIPTION***	CHECKING	USE WITH
R7847A1025	0.8 SECOND FFRT	NONE	FLAME ROD
R7847A1033	3.0 SECOND FFRT	NONE	FLAME ROD
R7847A1074	0.8 SECOND FFRT	NONE	FLAME ROD*
R7847A1082	3.0 SECOND FFRT	NONE	FLAME ROD*, C7012A, C
R7847B1023	0.8 SECOND FFRT	AMPLICHECK®	FLAME ROD
R7847B1031	3.0 SECOND FFRT	AMPLICHECK®	FLAME ROD
R7847B1064	0.8 SECOND FFRT	AMPLICHECK®	FLAME ROD*
R7847B1072	3.0 SECOND FFRT	AMPLICHECK®	FLAME ROD*, C7012A, C
R7847C1005	3.0 SECOND FFRT	DYNAMIC SELF-CHECK	C7012E, F
R7849A1015	0.8 SECOND FFRT	NONE	C7027, C7035
R7849A1023	3.0 SECOND FFRT	NONE	C7027, C7035
R7849B1013	0.8 SECOND FFRT	AMPLICHECK®	C7027, C7035
R7849B1021	3.0 SECOND FFRT	AMPLICHECK®	C7027, C7035
R7851B1000	3.0 SECOND FFRT	AMPLICHECK®	C7927, C7962
R7851B1018	0.8 SECOND FFRT	AMPLICHECK®	C7927, C7962
R7851C1008	3.0 SECOND FFRT	DYNAMIC SELF-CHECK	C7961E, F
R7851A1001	3.0 SECOND FFRT	NONE	C7915
R7852B1009	3.0 SECOND FFRT	AMPLICHECK®	C7915
R7861A1026	3.0 SECOND FFRT	DYNAMIC SELF-CHECK	C7061A, F, M
R7861A1034	0.8 SECOND FFRT	DYNAMIC SELF-CHECK	C7061A, F, M
R7886A1001	3.0 SECOND FFRT	DYNAMIC SELF-CHECK	C7076A, D

* FLAME ROD LEADWIRE RUNS GREATER THAN 50FT (1524 CM) OR PARALLEL C7012A,C.

5.) SELECT OPTIONAL COMPONENTS

KEYBOARD DISPLAY MODULE

O.S. NO.	DESCRIPTION
S7800A1001	ENGLISH LANGUAGE
S7800A1035	FRENCH LANGUAGE
S7800A1043	GERMAN LANGUAGE
S7800A1050	ITALIAN LANGUAGE
S7800A1068	SPANISH LANGUAGE
S7800A1118	KATAKANA (JAPANESE) LANGUAGE
S7800A1126	PORTUGUESE LANGUAGE

COMMUNICATIONS

O.S. NO.	DESCRIPTION
S7810A1009	DATA CONTROLBUS® MODULE (IF NO KEYBOARD DISPLAY IS USED)
S7810M1003	MODBUS MODULE

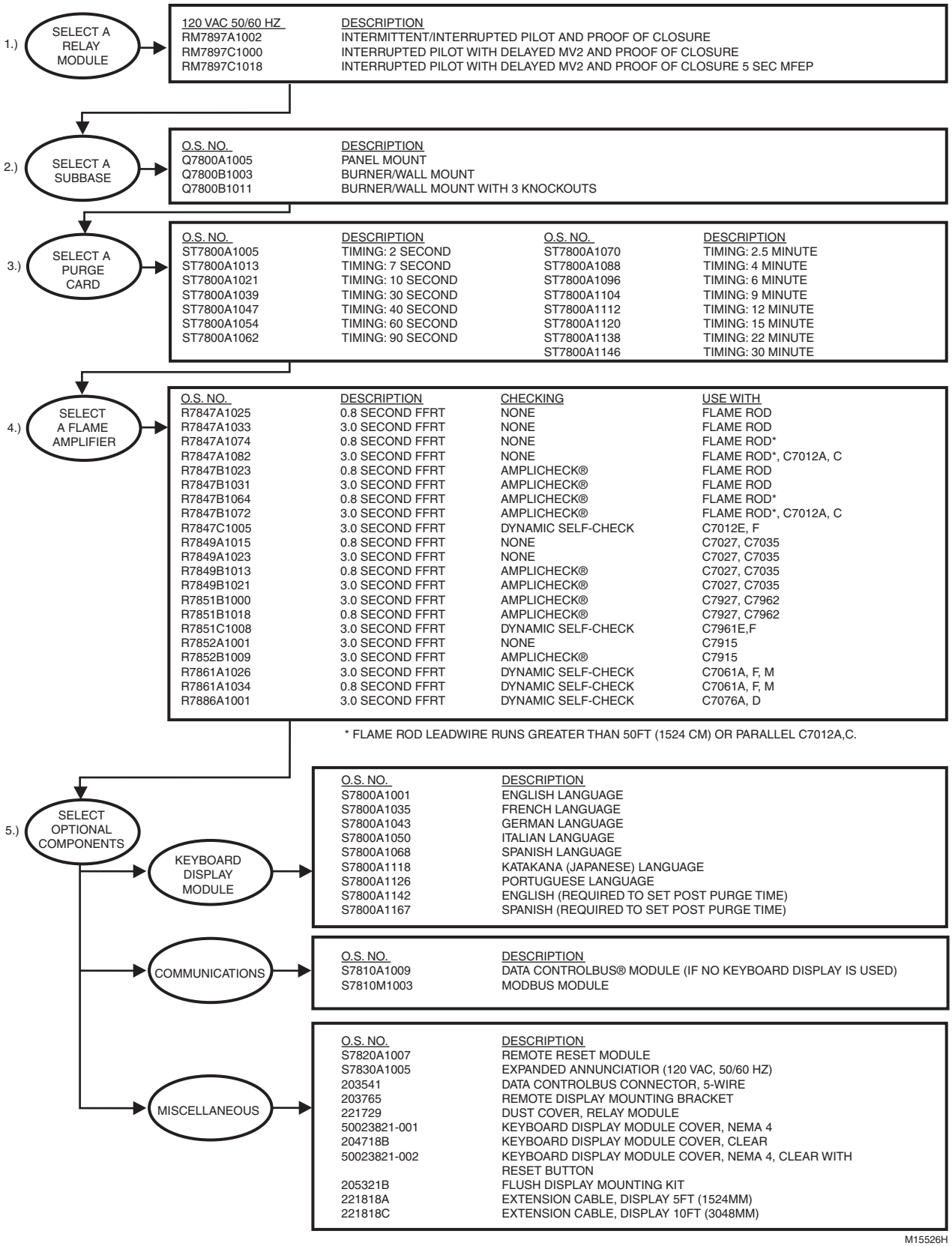
MISCELLANEOUS

O.S. NO.	DESCRIPTION
S7820A1007	REMOTE RESET MODULE
S7830A1005	EXPANDED ANNUNCIATIOR (120 VAC, 50/60 HZ)
203541	DATA CONTROLBUS CONNECTOR, 5-WIRE
203765	REMOTE DISPLAY MOUNTING BRACKET
221729	DUST COVER, RELAY MODULE
50023821-001	KEYBOARD DISPLAY MODULE COVER, NEMA 4
204718B	KEYBOARD DISPLAY MODULE COVER, CLEAR
50023821-002	KEYBOARD DISPLAY MODULE COVER, NEMA 4, CLEAR WITH RESET BUTTON
205321B	FLUSH DISPLAY MOUNTING KIT
221818A	EXTENSION CABLE, DISPLAY 5FT (1524MM)
221818C	EXTENSION CABLE, DISPLAY 10FT (3048MM)

M13908B

Product Selection Matrix

PRODUCT SELECTION MATRIX FOR RM7897 ON/OFF WITH PRE- AND PROGRAMMABLE POST-PURGE PRIMARY RELAY MODULES:



120 VAC 50/60 HZ	DESCRIPTION
RM7897A1002	INTERMITTENT/INTERRUPTED PILOT AND PROOF OF CLOSURE
RM7897C1000	INTERRUPTED PILOT WITH DELAYED MV2 AND PROOF OF CLOSURE
RM7897C1018	INTERRUPTED PILOT WITH DELAYED MV2 AND PROOF OF CLOSURE 5 SEC MFEP

O.S. NO.	DESCRIPTION
Q7800A1005	PANEL MOUNT
Q7800B1003	BURNER/WALL MOUNT
Q7800B1011	BURNER/WALL MOUNT WITH 3 KNOCKOUTS

O.S. NO.	DESCRIPTION	O.S. NO.	DESCRIPTION
ST7800A1005	TIMING: 2 SECOND	ST7800A1070	TIMING: 2.5 MINUTE
ST7800A1013	TIMING: 7 SECOND	ST7800A1088	TIMING: 4 MINUTE
ST7800A1021	TIMING: 10 SECOND	ST7800A1096	TIMING: 6 MINUTE
ST7800A1039	TIMING: 30 SECOND	ST7800A1104	TIMING: 9 MINUTE
ST7800A1047	TIMING: 40 SECOND	ST7800A1112	TIMING: 12 MINUTE
ST7800A1054	TIMING: 60 SECOND	ST7800A1120	TIMING: 15 MINUTE
ST7800A1062	TIMING: 90 SECOND	ST7800A1138	TIMING: 22 MINUTE
		ST7800A1146	TIMING: 30 MINUTE

O.S. NO.	DESCRIPTION	CHECKING	USE WITH
R7847A1025	0.8 SECOND FFRT	NONE	FLAME ROD
R7847A1033	3.0 SECOND FFRT	NONE	FLAME ROD
R7847A1074	0.8 SECOND FFRT	NONE	FLAME ROD*
R7847A1082	3.0 SECOND FFRT	NONE	FLAME ROD*, C7012A, C
R7847B1023	0.8 SECOND FFRT	AMPLICHECK®	FLAME ROD
R7847B1031	3.0 SECOND FFRT	AMPLICHECK®	FLAME ROD
R7847B1064	0.8 SECOND FFRT	AMPLICHECK®	FLAME ROD*
R7847B1072	3.0 SECOND FFRT	AMPLICHECK®	FLAME ROD*, C7012A, C
R7847C1005	3.0 SECOND FFRT	DYNAMIC SELF-CHECK	C7012E, F
R7849A1015	0.8 SECOND FFRT	NONE	C7027, C7035
R7849A1023	3.0 SECOND FFRT	NONE	C7027, C7035
R7849B1013	0.8 SECOND FFRT	AMPLICHECK®	C7027, C7035
R7849B1021	3.0 SECOND FFRT	AMPLICHECK®	C7027, C7035
R7851B1000	3.0 SECOND FFRT	AMPLICHECK®	C7927, C7962
R7851B1018	0.8 SECOND FFRT	AMPLICHECK®	C7927, C7962
R7851C1008	3.0 SECOND FFRT	DYNAMIC SELF-CHECK	C7961E,F
R7852A1001	3.0 SECOND FFRT	NONE	C7915
R7852B1009	3.0 SECOND FFRT	AMPLICHECK®	C7915
R7861A1026	3.0 SECOND FFRT	DYNAMIC SELF-CHECK	C7061A, F, M
R7861A1034	0.8 SECOND FFRT	DYNAMIC SELF-CHECK	C7061A, F, M
R7886A1001	3.0 SECOND FFRT	DYNAMIC SELF-CHECK	C7076A, D

* FLAME ROD LEADWIRE RUNS GREATER THAN 50FT (1524 CM) OR PARALLEL C7012A,C.

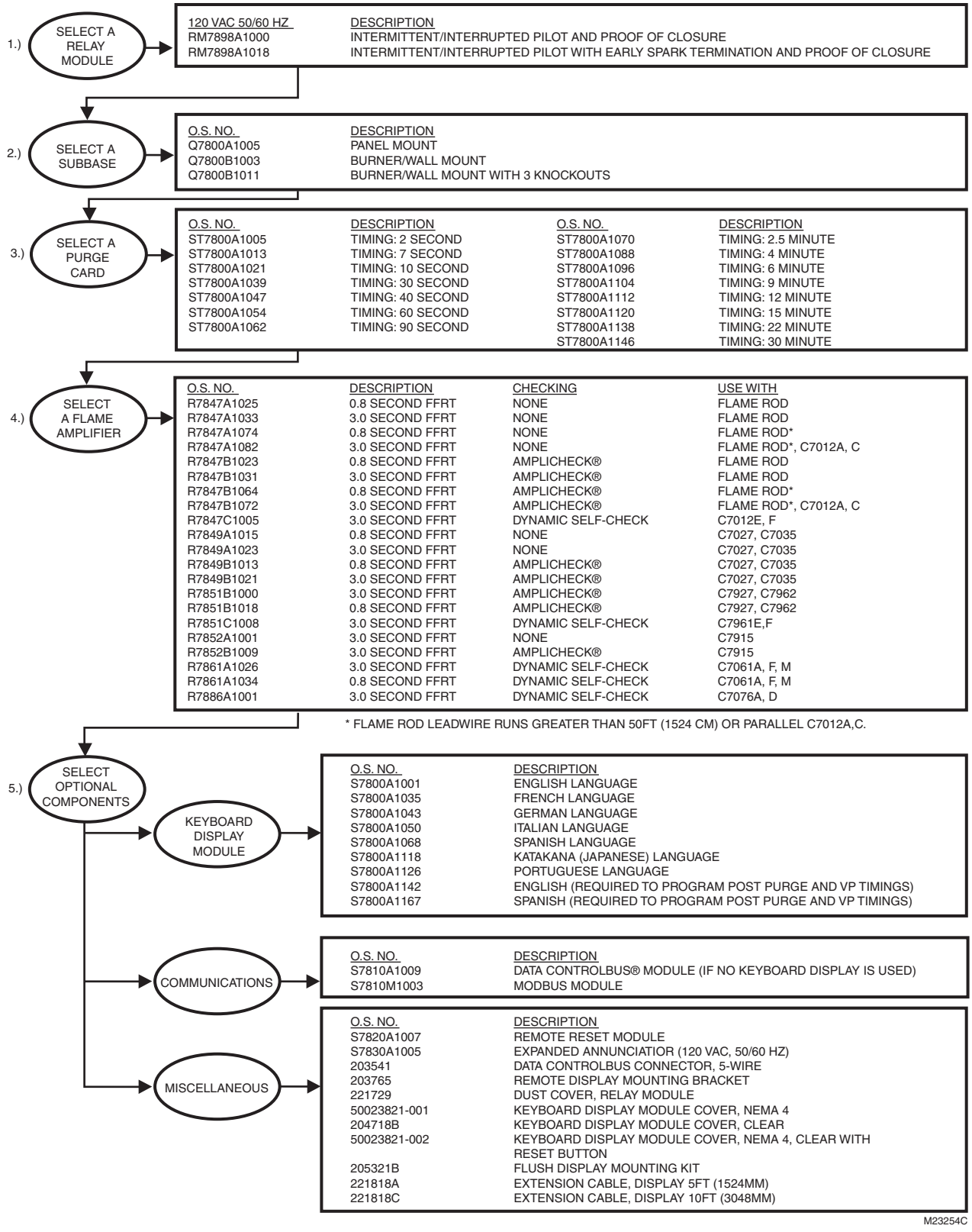
O.S. NO.	DESCRIPTION
S7800A1001	ENGLISH LANGUAGE
S7800A1035	FRENCH LANGUAGE
S7800A1043	GERMAN LANGUAGE
S7800A1050	ITALIAN LANGUAGE
S7800A1068	SPANISH LANGUAGE
S7800A1118	KATAKANA (JAPANESE) LANGUAGE
S7800A1126	PORTUGUESE LANGUAGE
S7800A1142	ENGLISH (REQUIRED TO SET POST PURGE TIME)
S7800A1167	SPANISH (REQUIRED TO SET POST PURGE TIME)

O.S. NO.	DESCRIPTION
S7810A1009	DATA CONTROLBUS® MODULE (IF NO KEYBOARD DISPLAY IS USED)
S7810M1003	MODBUS MODULE

O.S. NO.	DESCRIPTION
S7820A1007	REMOTE RESET MODULE
S7830A1005	EXPANDED ANNUNCIATIOR (120 VAC, 50/60 HZ)
203541	DATA CONTROLBUS CONNECTOR, 5-WIRE
203765	REMOTE DISPLAY MOUNTING BRACKET
221729	DUST COVER, RELAY MODULE
50023821-001	KEYBOARD DISPLAY MODULE COVER, NEMA 4
204718B	KEYBOARD DISPLAY MODULE COVER, CLEAR
50023821-002	KEYBOARD DISPLAY MODULE COVER, NEMA 4, CLEAR WITH RESET BUTTON
205321B	FLUSH DISPLAY MOUNTING KIT
221818A	EXTENSION CABLE, DISPLAY 5FT (1524MM)
221818C	EXTENSION CABLE, DISPLAY 10FT (3048MM)

M15526H

PRODUCT SELECTION MATRIX FOR RM7898 ON/OFF WITH PRE- AND PROGRAMMABLE POST-PURGE PRIMARY RELAY MODULES FOR VALVE PROVING APPLICATIONS:



120 VAC 50/60 HZ	DESCRIPTION
RM7898A1000	INTERMITTENT/INTERRUPTED PILOT AND PROOF OF CLOSURE
RM7898A1018	INTERMITTENT/INTERRUPTED PILOT WITH EARLY SPARK TERMINATION AND PROOF OF CLOSURE

O.S. NO.	DESCRIPTION
Q7800A1005	PANEL MOUNT
Q7800B1003	BURNER/WALL MOUNT
Q7800B1011	BURNER/WALL MOUNT WITH 3 KNOCKOUTS

O.S. NO.	DESCRIPTION	O.S. NO.	DESCRIPTION
ST7800A1005	TIMING: 2 SECOND	ST7800A1070	TIMING: 2.5 MINUTE
ST7800A1013	TIMING: 7 SECOND	ST7800A1088	TIMING: 4 MINUTE
ST7800A1021	TIMING: 10 SECOND	ST7800A1096	TIMING: 6 MINUTE
ST7800A1039	TIMING: 30 SECOND	ST7800A1104	TIMING: 9 MINUTE
ST7800A1047	TIMING: 40 SECOND	ST7800A1112	TIMING: 12 MINUTE
ST7800A1054	TIMING: 60 SECOND	ST7800A1120	TIMING: 15 MINUTE
ST7800A1062	TIMING: 90 SECOND	ST7800A1138	TIMING: 22 MINUTE
		ST7800A1146	TIMING: 30 MINUTE

O.S. NO.	DESCRIPTION	CHECKING	USE WITH
R7847A1025	0.8 SECOND FFRT	NONE	FLAME ROD
R7847A1033	3.0 SECOND FFRT	NONE	FLAME ROD
R7847A1074	0.8 SECOND FFRT	NONE	FLAME ROD*
R7847A1082	3.0 SECOND FFRT	NONE	FLAME ROD*, C7012A, C
R7847B1023	0.8 SECOND FFRT	AMPLICHECK®	FLAME ROD
R7847B1031	3.0 SECOND FFRT	AMPLICHECK®	FLAME ROD
R7847B1064	0.8 SECOND FFRT	AMPLICHECK®	FLAME ROD*
R7847B1072	3.0 SECOND FFRT	AMPLICHECK®	FLAME ROD*, C7012A, C
R7847C1005	3.0 SECOND FFRT	DYNAMIC SELF-CHECK	C7012E, F
R7849A1015	0.8 SECOND FFRT	NONE	C7027, C7035
R7849A1023	3.0 SECOND FFRT	NONE	C7027, C7035
R7849B1013	0.8 SECOND FFRT	AMPLICHECK®	C7027, C7035
R7849B1021	3.0 SECOND FFRT	AMPLICHECK®	C7027, C7035
R7851B1000	3.0 SECOND FFRT	AMPLICHECK®	C7927, C7962
R7851B1018	0.8 SECOND FFRT	AMPLICHECK®	C7927, C7962
R7851C1008	3.0 SECOND FFRT	DYNAMIC SELF-CHECK	C7961E,F
R7852A1001	3.0 SECOND FFRT	NONE	C7915
R7852B1009	3.0 SECOND FFRT	AMPLICHECK®	C7915
R7861A1026	3.0 SECOND FFRT	DYNAMIC SELF-CHECK	C7061A, F, M
R7861A1034	0.8 SECOND FFRT	DYNAMIC SELF-CHECK	C7061A, F, M
R7886A1001	3.0 SECOND FFRT	DYNAMIC SELF-CHECK	C7076A, D

* FLAME ROD LEADWIRE RUNS GREATER THAN 50FT (1524 CM) OR PARALLEL C7012A,C.

O.S. NO.	DESCRIPTION
S7800A1001	ENGLISH LANGUAGE
S7800A1035	FRENCH LANGUAGE
S7800A1043	GERMAN LANGUAGE
S7800A1050	ITALIAN LANGUAGE
S7800A1068	SPANISH LANGUAGE
S7800A1118	KATAKANA (JAPANESE) LANGUAGE
S7800A1126	PORTUGUESE LANGUAGE
S7800A1142	ENGLISH (REQUIRED TO PROGRAM POST PURGE AND VP TIMINGS)
S7800A1167	SPANISH (REQUIRED TO PROGRAM POST PURGE AND VP TIMINGS)

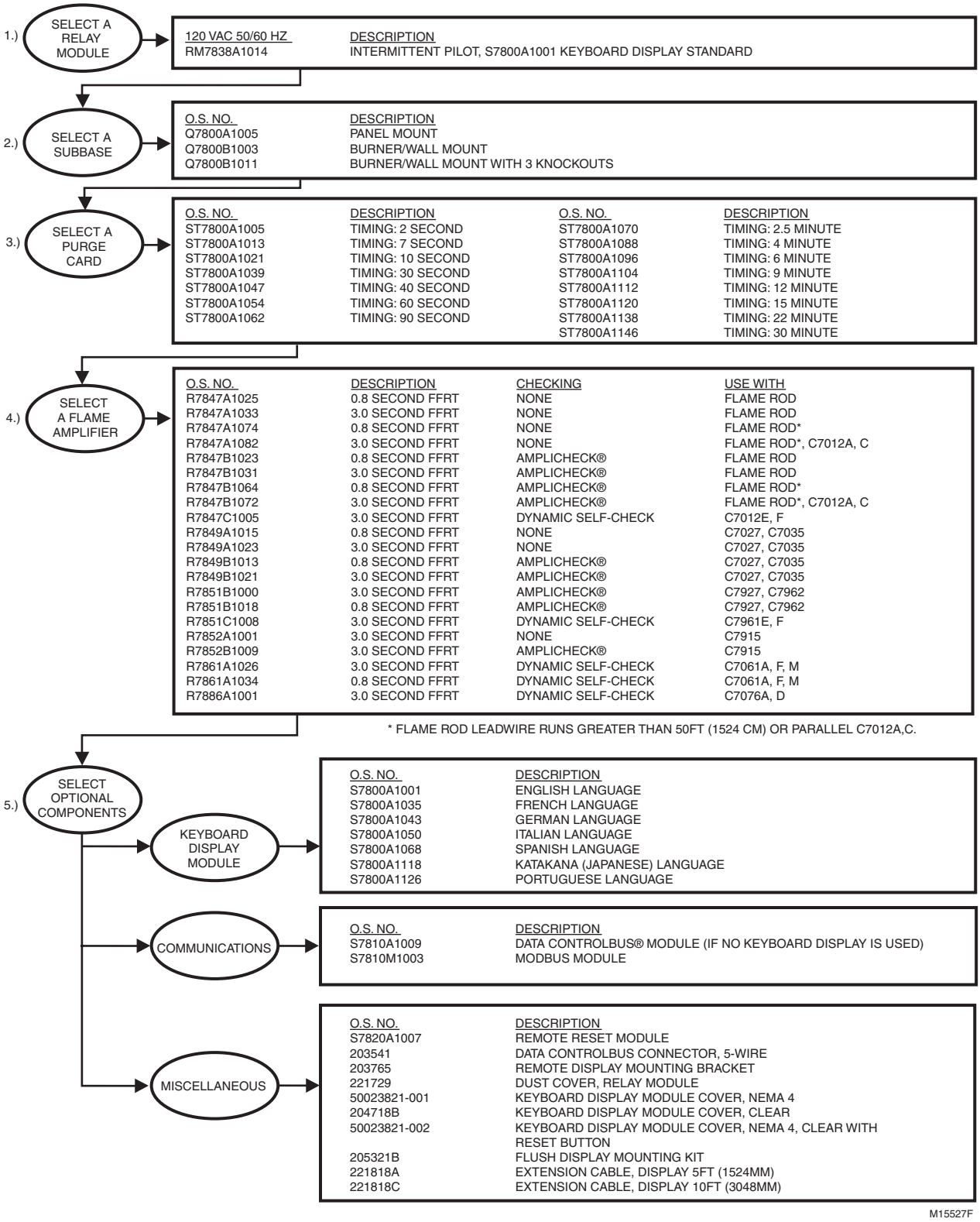
O.S. NO.	DESCRIPTION
S7810A1009	DATA CONTROLBUS® MODULE (IF NO KEYBOARD DISPLAY IS USED)
S7810M1003	MODBUS MODULE

O.S. NO.	DESCRIPTION
S7820A1007	REMOTE RESET MODULE
S7830A1005	EXPANDED ANNUNCIATIOR (120 VAC, 50/60 HZ)
203541	DATA CONTROLBUS CONNECTOR, 5-WIRE
203765	REMOTE DISPLAY MOUNTING BRACKET
221729	DUST COVER, RELAY MODULE
50023821-001	KEYBOARD DISPLAY MODULE COVER, NEMA 4
204718B	KEYBOARD DISPLAY MODULE COVER, CLEAR
50023821-002	KEYBOARD DISPLAY MODULE COVER, NEMA 4, CLEAR WITH RESET BUTTON
205321B	FLUSH DISPLAY MOUNTING KIT
221818A	EXTENSION CABLE, DISPLAY 5FT (1524MM)
221818C	EXTENSION CABLE, DISPLAY 10FT (3048MM)

M23254C

Product Selection Matrix

PRODUCT SELECTION MATRIX FOR RM7838A MANUAL START WITH PURGE INDUSTRIAL PRIMARY RELAY MODULE:



120 VAC 50/60 HZ	DESCRIPTION
RM7838A1014	INTERMITTENT PILOT, S7800A1001 KEYBOARD DISPLAY STANDARD

O.S. NO.	DESCRIPTION
Q7800A1005	PANEL MOUNT
Q7800B1003	BURNER/WALL MOUNT
Q7800B1011	BURNER/WALL MOUNT WITH 3 KNOCKOUTS

O.S. NO.	DESCRIPTION	O.S. NO.	DESCRIPTION
ST7800A1005	TIMING: 2 SECOND	ST7800A1070	TIMING: 2.5 MINUTE
ST7800A1013	TIMING: 7 SECOND	ST7800A1088	TIMING: 4 MINUTE
ST7800A1021	TIMING: 10 SECOND	ST7800A1096	TIMING: 6 MINUTE
ST7800A1039	TIMING: 30 SECOND	ST7800A1104	TIMING: 9 MINUTE
ST7800A1047	TIMING: 40 SECOND	ST7800A1112	TIMING: 12 MINUTE
ST7800A1054	TIMING: 60 SECOND	ST7800A1120	TIMING: 15 MINUTE
ST7800A1062	TIMING: 90 SECOND	ST7800A1138	TIMING: 22 MINUTE
		ST7800A1146	TIMING: 30 MINUTE

O.S. NO.	DESCRIPTION	CHECKING	USE WITH
R7847A1025	0.8 SECOND FFRT	NONE	FLAME ROD
R7847A1033	3.0 SECOND FFRT	NONE	FLAME ROD
R7847A1074	0.8 SECOND FFRT	NONE	FLAME ROD*
R7847A1082	3.0 SECOND FFRT	NONE	FLAME ROD*, C7012A, C
R7847B1023	0.8 SECOND FFRT	AMPLICHECK®	FLAME ROD
R7847B1031	3.0 SECOND FFRT	AMPLICHECK®	FLAME ROD
R7847B1064	0.8 SECOND FFRT	AMPLICHECK®	FLAME ROD*
R7847B1072	3.0 SECOND FFRT	AMPLICHECK®	FLAME ROD*, C7012A, C
R7847C1005	3.0 SECOND FFRT	DYNAMIC SELF-CHECK	C7012E, F
R7849A1015	0.8 SECOND FFRT	NONE	C7027, C7035
R7849A1023	3.0 SECOND FFRT	NONE	C7027, C7035
R7849B1013	0.8 SECOND FFRT	AMPLICHECK®	C7027, C7035
R7849B1021	3.0 SECOND FFRT	AMPLICHECK®	C7027, C7035
R7851B1000	3.0 SECOND FFRT	AMPLICHECK®	C7927, C7962
R7851B1018	0.8 SECOND FFRT	AMPLICHECK®	C7927, C7962
R7851C1008	3.0 SECOND FFRT	DYNAMIC SELF-CHECK	C7961E, F
R7852A1001	3.0 SECOND FFRT	NONE	C7915
R7852B1009	3.0 SECOND FFRT	AMPLICHECK®	C7915
R7861A1026	3.0 SECOND FFRT	DYNAMIC SELF-CHECK	C7061A, F, M
R7861A1034	0.8 SECOND FFRT	DYNAMIC SELF-CHECK	C7061A, F, M
R7886A1001	3.0 SECOND FFRT	DYNAMIC SELF-CHECK	C7076A, D

* FLAME ROD LEADWIRE RUNS GREATER THAN 50FT (1524 CM) OR PARALLEL C7012A,C.

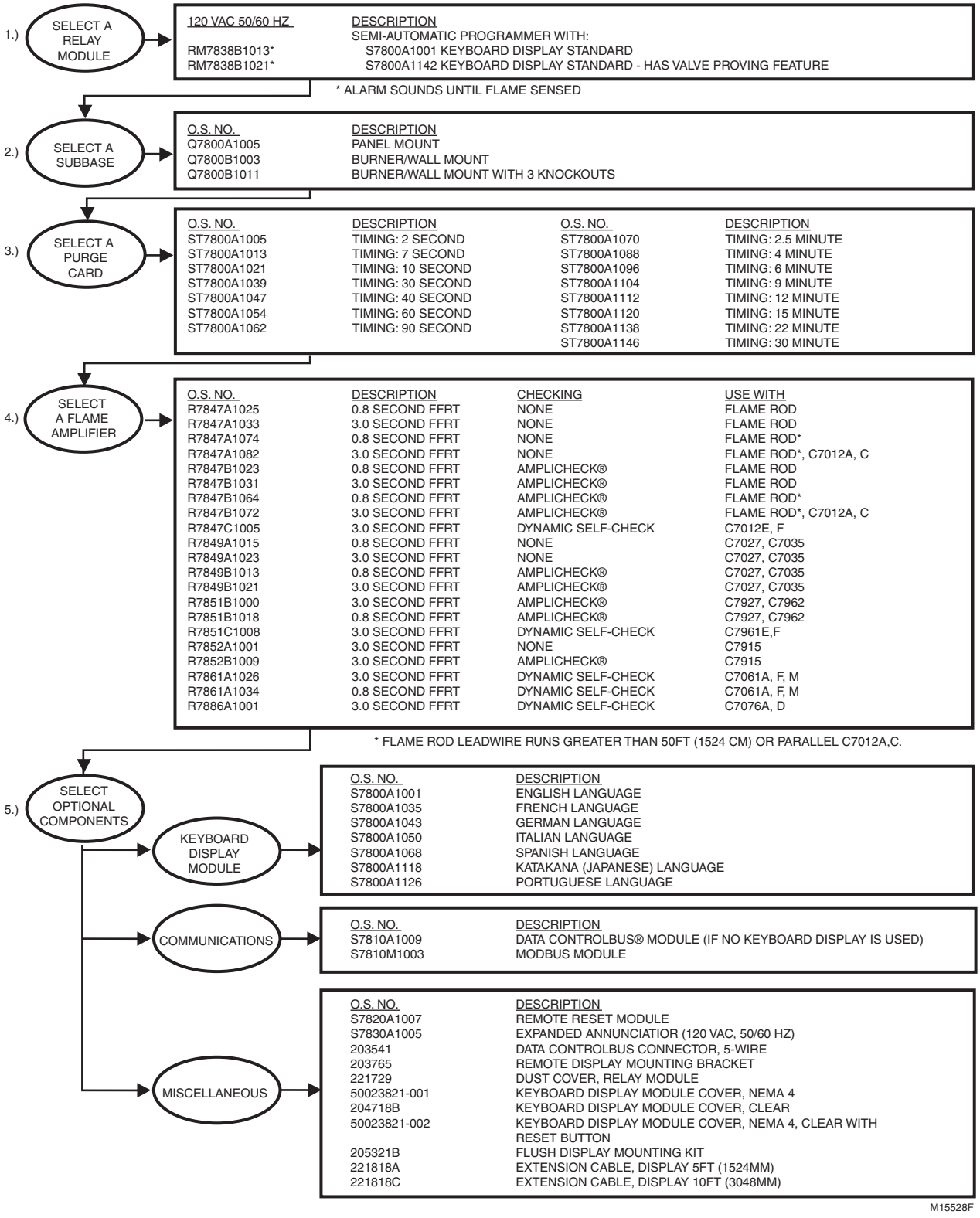
O.S. NO.	DESCRIPTION
S7800A1001	ENGLISH LANGUAGE
S7800A1035	FRENCH LANGUAGE
S7800A1043	GERMAN LANGUAGE
S7800A1050	ITALIAN LANGUAGE
S7800A1068	SPANISH LANGUAGE
S7800A1118	KATAKANA (JAPANESE) LANGUAGE
S7800A1126	PORTUGUESE LANGUAGE

O.S. NO.	DESCRIPTION
S7810A1009	DATA CONTROLBUS® MODULE (IF NO KEYBOARD DISPLAY IS USED)
S7810M1003	MODBUS MODULE

O.S. NO.	DESCRIPTION
S7820A1007	REMOTE RESET MODULE
203541	DATA CONTROLBUS CONNECTOR, 5-WIRE
203765	REMOTE DISPLAY MOUNTING BRACKET
221729	DUST COVER, RELAY MODULE
50023821-001	KEYBOARD DISPLAY MODULE COVER, NEMA 4
204718B	KEYBOARD DISPLAY MODULE COVER, CLEAR
50023821-002	KEYBOARD DISPLAY MODULE COVER, NEMA 4, CLEAR WITH RESET BUTTON
205321B	FLUSH DISPLAY MOUNTING KIT
221818A	EXTENSION CABLE, DISPLAY 5FT (1524MM)
221818C	EXTENSION CABLE, DISPLAY 10FT (3048MM)

M15527F

PRODUCT SELECTION MATRIX FOR RM7838B MANUAL START INDUSTRIAL PROGRAMMER RELAY MODULE:



120 VAC 50/60 HZ	DESCRIPTION
	SEMI-AUTOMATIC PROGRAMMER WITH:
RM7838B1013*	S7800A1001 KEYBOARD DISPLAY STANDARD
RM7838B1021*	S7800A1142 KEYBOARD DISPLAY STANDARD - HAS VALVE PROVING FEATURE

* ALARM SOUNDS UNTIL FLAME SENSED

O.S. NO.	DESCRIPTION
Q7800A1005	PANEL MOUNT
Q7800B1003	BURNER/WALL MOUNT
Q7800B1011	BURNER/WALL MOUNT WITH 3 KNOCKOUTS

O.S. NO.	DESCRIPTION	O.S. NO.	DESCRIPTION
ST7800A1005	TIMING: 2 SECOND	ST7800A1070	TIMING: 2.5 MINUTE
ST7800A1013	TIMING: 7 SECOND	ST7800A1088	TIMING: 4 MINUTE
ST7800A1021	TIMING: 10 SECOND	ST7800A1096	TIMING: 6 MINUTE
ST7800A1039	TIMING: 30 SECOND	ST7800A1104	TIMING: 9 MINUTE
ST7800A1047	TIMING: 40 SECOND	ST7800A1112	TIMING: 12 MINUTE
ST7800A1054	TIMING: 60 SECOND	ST7800A1120	TIMING: 15 MINUTE
ST7800A1062	TIMING: 90 SECOND	ST7800A1138	TIMING: 22 MINUTE
		ST7800A1146	TIMING: 30 MINUTE

O.S. NO.	DESCRIPTION	CHECKING	USE WITH
R7847A1025	0.8 SECOND FFRT	NONE	FLAME ROD
R7847A1033	3.0 SECOND FFRT	NONE	FLAME ROD
R7847A1074	0.8 SECOND FFRT	NONE	FLAME ROD*
R7847A1082	3.0 SECOND FFRT	NONE	FLAME ROD*, C7012A, C
R7847B1023	0.8 SECOND FFRT	AMPLICHECK®	FLAME ROD
R7847B1031	3.0 SECOND FFRT	AMPLICHECK®	FLAME ROD
R7847B1064	0.8 SECOND FFRT	AMPLICHECK®	FLAME ROD*
R7847B1072	3.0 SECOND FFRT	AMPLICHECK®	FLAME ROD*, C7012A, C
R7847C1005	3.0 SECOND FFRT	DYNAMIC SELF-CHECK	C7012E, F
R7849A1015	0.8 SECOND FFRT	NONE	C7027, C7035
R7849A1023	3.0 SECOND FFRT	NONE	C7027, C7035
R7849B1013	0.8 SECOND FFRT	AMPLICHECK®	C7027, C7035
R7849B1021	3.0 SECOND FFRT	AMPLICHECK®	C7027, C7035
R7851B1000	3.0 SECOND FFRT	AMPLICHECK®	C7927, C7962
R7851B1018	0.8 SECOND FFRT	AMPLICHECK®	C7927, C7962
R7851C1008	3.0 SECOND FFRT	DYNAMIC SELF-CHECK	C7961E,F
R7852A1001	3.0 SECOND FFRT	NONE	C7915
R7852B1009	3.0 SECOND FFRT	AMPLICHECK®	C7915
R7861A1026	3.0 SECOND FFRT	DYNAMIC SELF-CHECK	C7061A, F, M
R7861A1034	0.8 SECOND FFRT	DYNAMIC SELF-CHECK	C7061A, F, M
R7886A1001	3.0 SECOND FFRT	DYNAMIC SELF-CHECK	C7076A, D

* FLAME ROD LEADWIRE RUNS GREATER THAN 50FT (1524 CM) OR PARALLEL C7012A,C.

O.S. NO.	DESCRIPTION
S7800A1001	ENGLISH LANGUAGE
S7800A1035	FRENCH LANGUAGE
S7800A1043	GERMAN LANGUAGE
S7800A1050	ITALIAN LANGUAGE
S7800A1068	SPANISH LANGUAGE
S7800A1118	KATAKANA (JAPANESE) LANGUAGE
S7800A1126	PORTUGUESE LANGUAGE

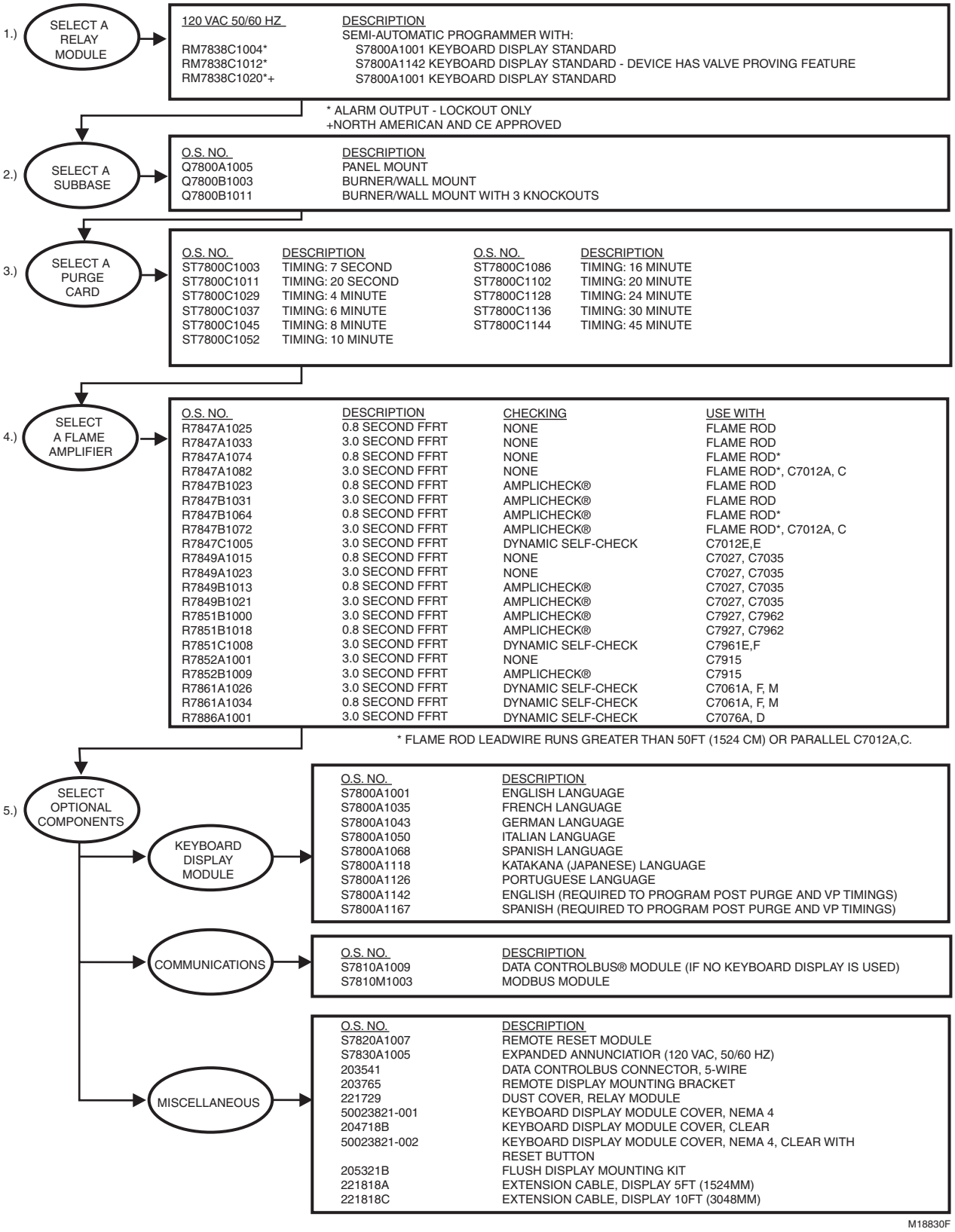
O.S. NO.	DESCRIPTION
S7810A1009	DATA CONTROLBUS® MODULE (IF NO KEYBOARD DISPLAY IS USED)
S7810M1003	MODBUS MODULE

O.S. NO.	DESCRIPTION
S7820A1007	REMOTE RESET MODULE
S7830A1005	EXPANDED ANNUNCIATIOR (120 VAC, 50/60 HZ)
203541	DATA CONTROLBUS CONNECTOR, 5-WIRE
203765	REMOTE DISPLAY MOUNTING BRACKET
221729	DUST COVER, RELAY MODULE
50023821-001	KEYBOARD DISPLAY MODULE COVER, NEMA 4
204718B	KEYBOARD DISPLAY MODULE COVER, CLEAR
50023821-002	KEYBOARD DISPLAY MODULE COVER, NEMA 4, CLEAR WITH RESET BUTTON
205321B	FLUSH DISPLAY MOUNTING KIT
221818A	EXTENSION CABLE, DISPLAY 5FT (1524MM)
221818C	EXTENSION CABLE, DISPLAY 10FT (3048MM)

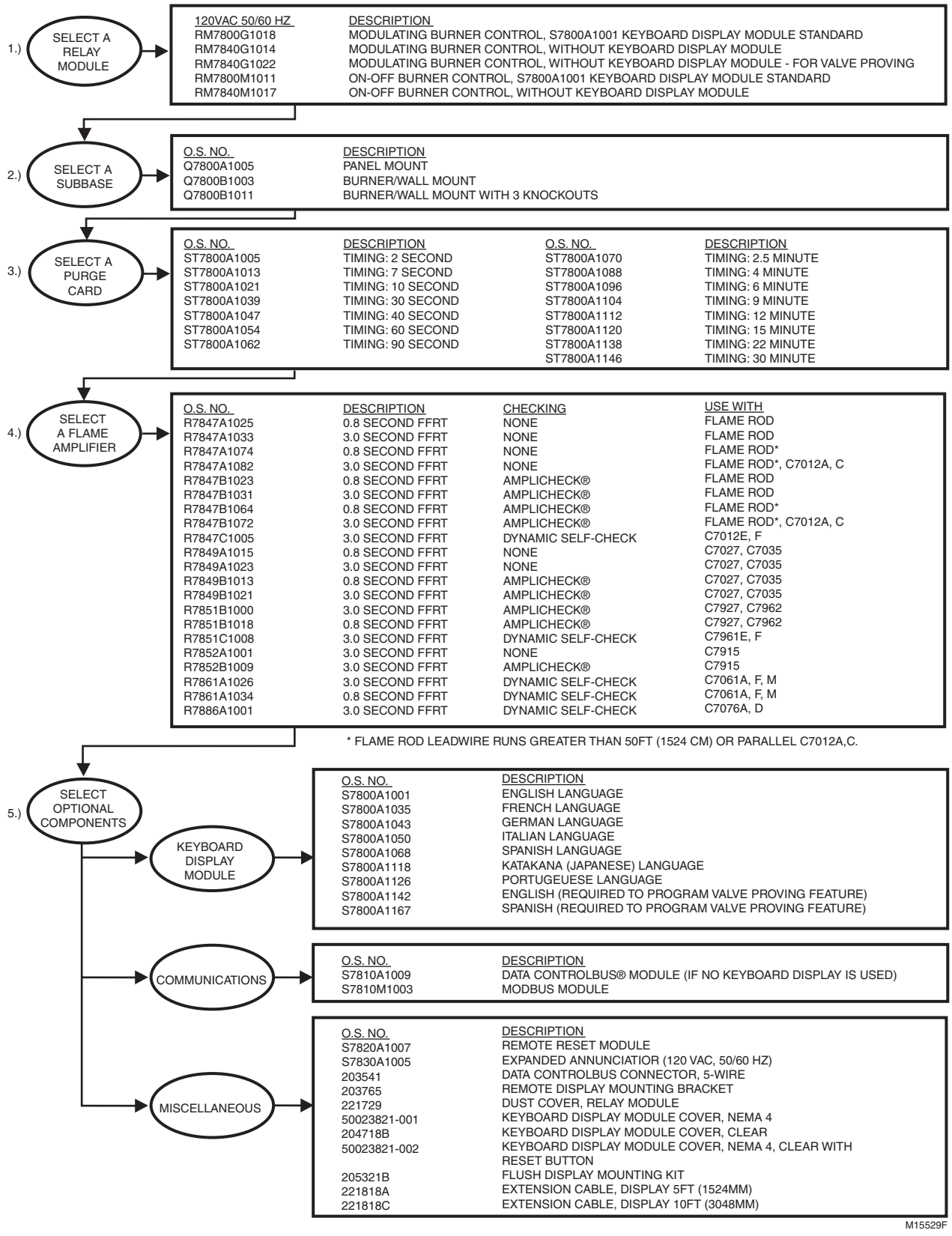
M15528F

Product Selection Matrix

PRODUCT SELECTION MATRIX FOR RM7838C MANUAL START INDUSTRIAL PROGRAMMER RELAY MODULE:



PRODUCT SELECTION MATRIX FOR UL/CSA RM78XXG,M PROGRAMMER RELAY MODULE:



1.) SELECT A RELAY MODULE

120VAC 50/60 HZ	DESCRIPTION
RM7800G1018	MODULATING BURNER CONTROL, S7800A1001 KEYBOARD DISPLAY MODULE STANDARD
RM7840G1014	MODULATING BURNER CONTROL, WITHOUT KEYBOARD DISPLAY MODULE
RM7840G1022	MODULATING BURNER CONTROL, WITHOUT KEYBOARD DISPLAY MODULE - FOR VALVE PROVING
RM7800M1011	ON-OFF BURNER CONTROL, S7800A1001 KEYBOARD DISPLAY MODULE STANDARD
RM7840M1017	ON-OFF BURNER CONTROL, WITHOUT KEYBOARD DISPLAY MODULE

2.) SELECT A SUBBASE

O.S. NO.	DESCRIPTION
Q7800A1005	PANEL MOUNT
Q7800B1003	BURNER/WALL MOUNT
Q7800B1011	BURNER/WALL MOUNT WITH 3 KNOCKOUTS

3.) SELECT A PURGE CARD

O.S. NO.	DESCRIPTION	O.S. NO.	DESCRIPTION
ST7800A1005	TIMING: 2 SECOND	ST7800A1070	TIMING: 2.5 MINUTE
ST7800A1013	TIMING: 7 SECOND	ST7800A1088	TIMING: 4 MINUTE
ST7800A1021	TIMING: 10 SECOND	ST7800A1096	TIMING: 6 MINUTE
ST7800A1039	TIMING: 30 SECOND	ST7800A1104	TIMING: 9 MINUTE
ST7800A1047	TIMING: 40 SECOND	ST7800A1112	TIMING: 12 MINUTE
ST7800A1054	TIMING: 60 SECOND	ST7800A1120	TIMING: 15 MINUTE
ST7800A1062	TIMING: 90 SECOND	ST7800A1138	TIMING: 22 MINUTE
		ST7800A1146	TIMING: 30 MINUTE

4.) SELECT A FLAME AMPLIFIER

O.S. NO.	DESCRIPTION	CHECKING	USE WITH
R7847A1025	0.8 SECOND FFRT	NONE	FLAME ROD
R7847A1033	3.0 SECOND FFRT	NONE	FLAME ROD
R7847A1074	0.8 SECOND FFRT	NONE	FLAME ROD*
R7847A1082	3.0 SECOND FFRT	NONE	FLAME ROD*, C7012A, C
R7847B1023	0.8 SECOND FFRT	AMPLICHECK®	FLAME ROD
R7847B1031	3.0 SECOND FFRT	AMPLICHECK®	FLAME ROD
R7847B1064	0.8 SECOND FFRT	AMPLICHECK®	FLAME ROD*
R7847B1072	3.0 SECOND FFRT	AMPLICHECK®	FLAME ROD*, C7012A, C
R7847C1005	3.0 SECOND FFRT	DYNAMIC SELF-CHECK	C7012E, F
R7849A1015	0.8 SECOND FFRT	NONE	C7027, C7035
R7849A1023	3.0 SECOND FFRT	NONE	C7027, C7035
R7849B1013	0.8 SECOND FFRT	AMPLICHECK®	C7027, C7035
R7849B1021	3.0 SECOND FFRT	AMPLICHECK®	C7027, C7035
R7851B1000	3.0 SECOND FFRT	AMPLICHECK®	C7927, C7962
R7851B1018	0.8 SECOND FFRT	AMPLICHECK®	C7927, C7962
R7851C1008	3.0 SECOND FFRT	DYNAMIC SELF-CHECK	C7961E, F
R7852A1001	3.0 SECOND FFRT	NONE	C7915
R7852B1009	3.0 SECOND FFRT	AMPLICHECK®	C7915
R7861A1026	3.0 SECOND FFRT	DYNAMIC SELF-CHECK	C7061A, F, M
R7861A1034	0.8 SECOND FFRT	DYNAMIC SELF-CHECK	C7061A, F, M
R7886A1001	3.0 SECOND FFRT	DYNAMIC SELF-CHECK	C7076A, D

* FLAME ROD LEADWIRE RUNS GREATER THAN 50FT (1524 CM) OR PARALLEL C7012A,C.

5.) SELECT OPTIONAL COMPONENTS

KEYBOARD DISPLAY MODULE

O.S. NO.	DESCRIPTION
S7800A1001	ENGLISH LANGUAGE
S7800A1035	FRENCH LANGUAGE
S7800A1043	GERMAN LANGUAGE
S7800A1050	ITALIAN LANGUAGE
S7800A1068	SPANISH LANGUAGE
S7800A1118	KATAKANA (JAPANESE) LANGUAGE
S7800A1126	PORTUGUEUSE LANGUAGE
S7800A1142	ENGLISH (REQUIRED TO PROGRAM VALVE PROVING FEATURE)
S7800A1167	SPANISH (REQUIRED TO PROGRAM VALVE PROVING FEATURE)

COMMUNICATIONS

O.S. NO.	DESCRIPTION
S7810A1009	DATA CONTROLBUS® MODULE (IF NO KEYBOARD DISPLAY IS USED)
S7810M1003	MODBUS MODULE

MISCELLANEOUS

O.S. NO.	DESCRIPTION
S7820A1007	REMOTE RESET MODULE
S7830A1005	EXPANDED ANNUNCIATIOR (120 VAC, 50/60 HZ)
203541	DATA CONTROLBUS CONNECTOR, 5-WIRE
203765	REMOTE DISPLAY MOUNTING BRACKET
221729	DUST COVER, RELAY MODULE
50023821-001	KEYBOARD DISPLAY MODULE COVER, NEMA 4
204718B	KEYBOARD DISPLAY MODULE COVER, CLEAR
50023821-002	KEYBOARD DISPLAY MODULE COVER, NEMA 4, CLEAR WITH RESET BUTTON
205321B	FLUSH DISPLAY MOUNTING KIT
221818A	EXTENSION CABLE, DISPLAY 5FT (1524MM)
221818C	EXTENSION CABLE, DISPLAY 10FT (3048MM)

M15529F

Product Selection Matrix

PRODUCT SELECTION MATRIX FOR FM/IRI RM78XXE, L PROGRAMMER RELAY MODULE:

1.) SELECT A RELAY MODULE

120VAC 50/60 HZ	DESCRIPTION
RM7845A1001	WITHOUT KEYBOARD DISPLAY (LESS IGNITION AND 15 SECOND MFEP PILOT TERMINALS)

2.) SELECT A SUBBASE

O.S. NO.	DESCRIPTION
Q7800A1005	PANEL MOUNT
Q7800B1003	BURNER/WALL MOUNT
Q7800B1011	BURNER/WALL MOUNT WITH 3 KNOCKOUTS

3.) SELECT A PURGE CARD

O.S. NO.	DESCRIPTION	O.S. NO.	DESCRIPTION
ST7800A1005	TIMING: 2 SECOND	ST7800A1070	TIMING: 2.5 MINUTE
ST7800A1013	TIMING: 7 SECOND	ST7800A1088	TIMING: 4 MINUTE
ST7800A1021	TIMING: 10 SECOND	ST7800A1096	TIMING: 6 MINUTE
ST7800A1039	TIMING: 30 SECOND	ST7800A1104	TIMING: 9 MINUTE
ST7800A1047	TIMING: 40 SECOND	ST7800A1112	TIMING: 12 MINUTE
ST7800A1054	TIMING: 60 SECOND	ST7800A1120	TIMING: 15 MINUTE
ST7800A1062	TIMING: 90 SECOND	ST7800A1138	TIMING: 22 MINUTE
		ST7800A1146	TIMING: 30 MINUTE

4.) SELECT A FLAME AMPLIFIER

O.S. NO.	DESCRIPTION	CHECKING	USE WITH
R7847A1025	0.8 SECOND FFRT	NONE	FLAME ROD
R7847A1033	3.0 SECOND FFRT	NONE	FLAME ROD
R7847A1074	0.8 SECOND FFRT	NONE	FLAME ROD*
R7847A1082	3.0 SECOND FFRT	NONE	FLAME ROD*, C7012A, C
R7847B1023	0.8 SECOND FFRT	AMPLICHECK®	FLAME ROD
R7847B1031	3.0 SECOND FFRT	AMPLICHECK®	FLAME ROD
R7847B1064	0.8 SECOND FFRT	AMPLICHECK®	FLAME ROD*
R7847B1072	3.0 SECOND FFRT	AMPLICHECK®	FLAME ROD*, C7012A, C
R7847C1005	3.0 SECOND FFRT	DYNAMIC SELF-CHECK	C7012E, F
R7849A1015	0.8 SECOND FFRT	NONE	C7027, C7035
R7849A1023	3.0 SECOND FFRT	NONE	C7027, C7035
R7849B1013	0.8 SECOND FFRT	AMPLICHECK®	C7027, C7035
R7849B1021	3.0 SECOND FFRT	AMPLICHECK®	C7027, C7035
R7851B1000	3.0 SECOND FFRT	AMPLICHECK®	C7927, C7962
R7851B1018	0.8 SECOND FFRT	AMPLICHECK®	C7927, C7962
R7851C1008	3.0 SECOND FFRT	DYNAMIC SELF-CHECK	C7961E, F
R7852A1001	3.0 SECOND FFRT	NONE	C7915
R7852B1009	3.0 SECOND FFRT	AMPLICHECK®	C7915
R7861A1026	3.0 SECOND FFRT	DYNAMIC SELF-CHECK	C7061A, F, M
R7861A1034	0.8 SECOND FFRT	DYNAMIC SELF-CHECK	C7061A, F, M
R7886A1001	3.0 SECOND FFRT	DYNAMIC SELF-CHECK	C7076A, D

* FLAME ROD LEADWIRE RUNS GREATER THAN 50FT (1524 CM) OR PARALLEL C7012A,C.

5.) SELECT OPTIONAL COMPONENTS

KEYBOARD DISPLAY MODULE

O.S. NO.	DESCRIPTION
S7800A1001	ENGLISH LANGUAGE
S7800A1035	FRENCH LANGUAGE
S7800A1043	GERMAN LANGUAGE
S7800A1050	ITALIAN LANGUAGE
S7800A1068	SPANISH LANGUAGE
S7800A1118	KATAKANA (JAPANESE) LANGUAGE
S7800A1126	PORTUGUESE LANGUAGE
S7800A1142	ENGLISH (REQUIRED TO PROGRAM VALVE PROVING FEATURE)
S7800A1167	SPANISH (REQUIRED TO PROGRAM VALVE PROVING FEATURE)

COMMUNICATIONS

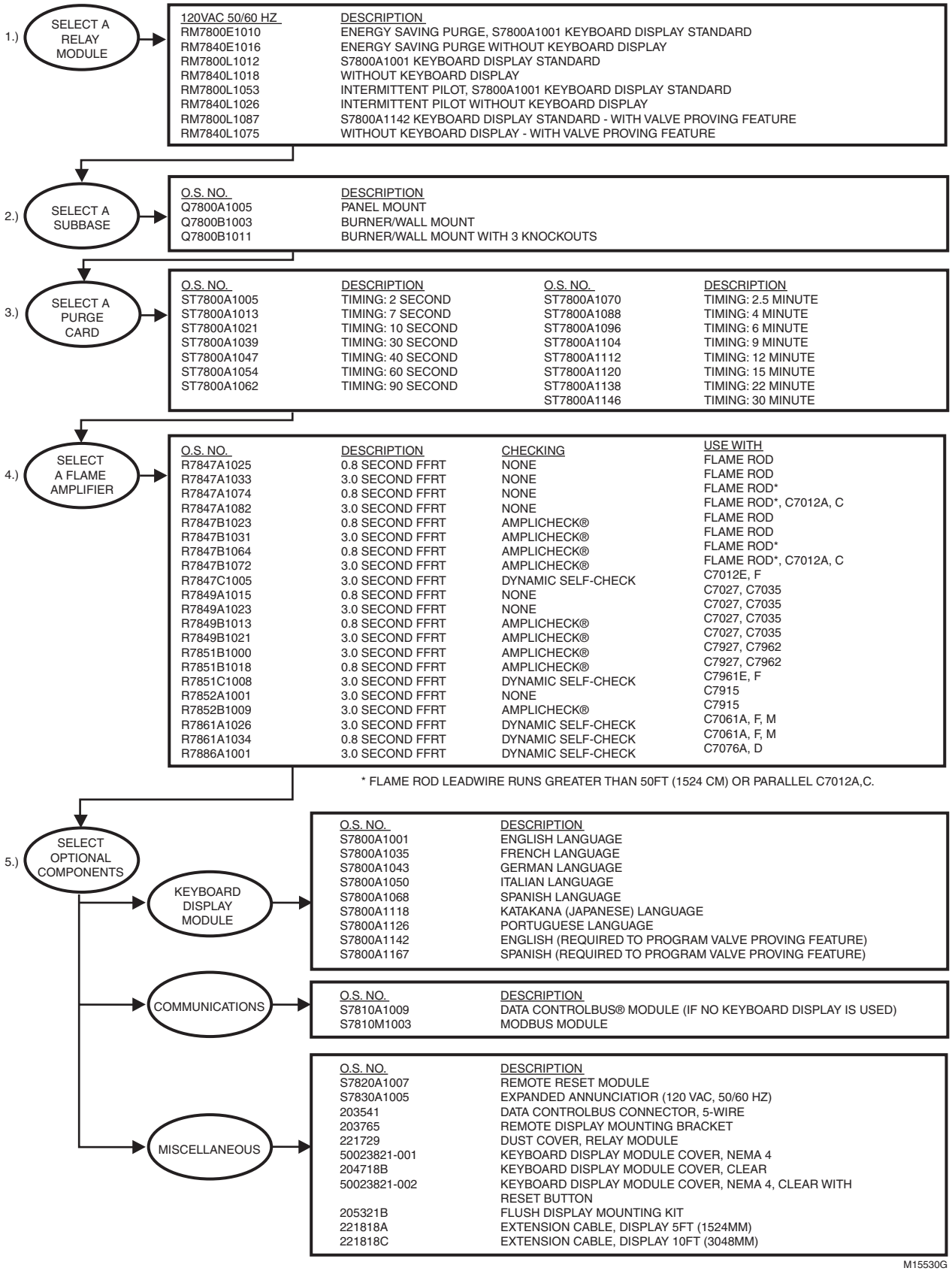
O.S. NO.	DESCRIPTION
S7810A1009	DATA CONTROLBUS® MODULE (IF NO KEYBOARD DISPLAY IS USED)
S7810M1003	MODBUS MODULE

MISCELLANEOUS

O.S. NO.	DESCRIPTION
S7820A1007	REMOTE RESET MODULE
S7830A1005	EXPANDED ANNUNCIATIOR (120 VAC, 50/60 HZ)
203541	DATA CONTROLBUS CONNECTOR, 5-WIRE
203765	REMOTE DISPLAY MOUNTING BRACKET
221729	DUST COVER, RELAY MODULE
50023821-001	KEYBOARD DISPLAY MODULE COVER, NEMA 4
204718B	KEYBOARD DISPLAY MODULE COVER, CLEAR
50023821-002	KEYBOARD DISPLAY MODULE COVER, NEMA 4, CLEAR WITH RESET BUTTON
205321B	FLUSH DISPLAY MOUNTING KIT
221818A	EXTENSION CABLE, DISPLAY 5FT (1524MM)
221818C	EXTENSION CABLE, DISPLAY 10FT (3048MM)

M34645

PRODUCT SELECTION MATRIX FOR FM/IRI RM78XXE, L PROGRAMMER RELAY MODULE:



120VAC 50/60 HZ	DESCRIPTION
RM7800E1010	ENERGY SAVING PURGE, S7800A1001 KEYBOARD DISPLAY STANDARD
RM7840E1016	ENERGY SAVING PURGE WITHOUT KEYBOARD DISPLAY
RM7800L1012	S7800A1001 KEYBOARD DISPLAY STANDARD
RM7840L1018	WITHOUT KEYBOARD DISPLAY
RM7800L1053	INTERMITTENT PILOT, S7800A1001 KEYBOARD DISPLAY STANDARD
RM7840L1026	INTERMITTENT PILOT WITHOUT KEYBOARD DISPLAY
RM7800L1087	S7800A1142 KEYBOARD DISPLAY STANDARD - WITH VALVE PROVING FEATURE
RM7840L1075	WITHOUT KEYBOARD DISPLAY - WITH VALVE PROVING FEATURE

O.S. NO.	DESCRIPTION
Q7800A1005	PANEL MOUNT
Q7800B1003	BURNER/WALL MOUNT
Q7800B1011	BURNER/WALL MOUNT WITH 3 KNOCKOUTS

O.S. NO.	DESCRIPTION	O.S. NO.	DESCRIPTION
ST7800A1005	TIMING: 2 SECOND	ST7800A1070	TIMING: 2.5 MINUTE
ST7800A1013	TIMING: 7 SECOND	ST7800A1088	TIMING: 4 MINUTE
ST7800A1021	TIMING: 10 SECOND	ST7800A1096	TIMING: 6 MINUTE
ST7800A1039	TIMING: 30 SECOND	ST7800A1104	TIMING: 9 MINUTE
ST7800A1047	TIMING: 40 SECOND	ST7800A1112	TIMING: 12 MINUTE
ST7800A1054	TIMING: 60 SECOND	ST7800A1120	TIMING: 15 MINUTE
ST7800A1062	TIMING: 90 SECOND	ST7800A1138	TIMING: 22 MINUTE
		ST7800A1146	TIMING: 30 MINUTE

O.S. NO.	DESCRIPTION	CHECKING	USE WITH
R7847A1025	0.8 SECOND FFRT	NONE	FLAME ROD
R7847A1033	3.0 SECOND FFRT	NONE	FLAME ROD
R7847A1074	0.8 SECOND FFRT	NONE	FLAME ROD*
R7847A1082	3.0 SECOND FFRT	NONE	FLAME ROD*, C7012A, C
R7847B1023	0.8 SECOND FFRT	AMPLICHECK®	FLAME ROD
R7847B1031	3.0 SECOND FFRT	AMPLICHECK®	FLAME ROD
R7847B1064	0.8 SECOND FFRT	AMPLICHECK®	FLAME ROD*
R7847B1072	3.0 SECOND FFRT	AMPLICHECK®	FLAME ROD*, C7012A, C
R7847C1005	3.0 SECOND FFRT	DYNAMIC SELF-CHECK	C7012E, F
R7849A1015	0.8 SECOND FFRT	NONE	C7027, C7035
R7849A1023	3.0 SECOND FFRT	NONE	C7027, C7035
R7849B1013	0.8 SECOND FFRT	AMPLICHECK®	C7027, C7035
R7849B1021	3.0 SECOND FFRT	AMPLICHECK®	C7027, C7035
R7851B1000	3.0 SECOND FFRT	AMPLICHECK®	C7927, C7962
R7851B1018	0.8 SECOND FFRT	AMPLICHECK®	C7927, C7962
R7851C1008	3.0 SECOND FFRT	DYNAMIC SELF-CHECK	C7961E, F
R7852A1001	3.0 SECOND FFRT	NONE	C7915
R7852B1009	3.0 SECOND FFRT	AMPLICHECK®	C7915
R7861A1026	3.0 SECOND FFRT	DYNAMIC SELF-CHECK	C7061A, F, M
R7861A1034	0.8 SECOND FFRT	DYNAMIC SELF-CHECK	C7061A, F, M
R7886A1001	3.0 SECOND FFRT	DYNAMIC SELF-CHECK	C7076A, D

* FLAME ROD LEADWIRE RUNS GREATER THAN 50FT (1524 CM) OR PARALLEL C7012A,C.

O.S. NO.	DESCRIPTION
S7800A1001	ENGLISH LANGUAGE
S7800A1035	FRENCH LANGUAGE
S7800A1043	GERMAN LANGUAGE
S7800A1050	ITALIAN LANGUAGE
S7800A1068	SPANISH LANGUAGE
S7800A1118	KATAKANA (JAPANESE) LANGUAGE
S7800A1126	PORTUGUESE LANGUAGE
S7800A1142	ENGLISH (REQUIRED TO PROGRAM VALVE PROVING FEATURE)
S7800A1167	SPANISH (REQUIRED TO PROGRAM VALVE PROVING FEATURE)

O.S. NO.	DESCRIPTION
S7810A1009	DATA CONTROLBUS® MODULE (IF NO KEYBOARD DISPLAY IS USED)
S7810M1003	MODBUS MODULE

O.S. NO.	DESCRIPTION
S7820A1007	REMOTE RESET MODULE
S7830A1005	EXPANDED ANNUNCIATIOR (120 VAC, 50/60 HZ)
203541	DATA CONTROLBUS CONNECTOR, 5-WIRE
203765	REMOTE DISPLAY MOUNTING BRACKET
221729	DUST COVER, RELAY MODULE
50023821-001	KEYBOARD DISPLAY MODULE COVER, NEMA 4
204718B	KEYBOARD DISPLAY MODULE COVER, CLEAR
50023821-002	KEYBOARD DISPLAY MODULE COVER, NEMA 4, CLEAR WITH RESET BUTTON
205321B	FLUSH DISPLAY MOUNTING KIT
221818A	EXTENSION CABLE, DISPLAY 5FT (1524MM)
221818C	EXTENSION CABLE, DISPLAY 10FT (3048MM)

M15530G

EC7820 Primary Control Meeting European Community Timings

Integrated burner control for automatically fired gas, oil, or combination, single burner atmospheric with fan applications. Has automatic burner sequencing, flame supervising system status indication, system or self-diagnostics, and troubleshooting.

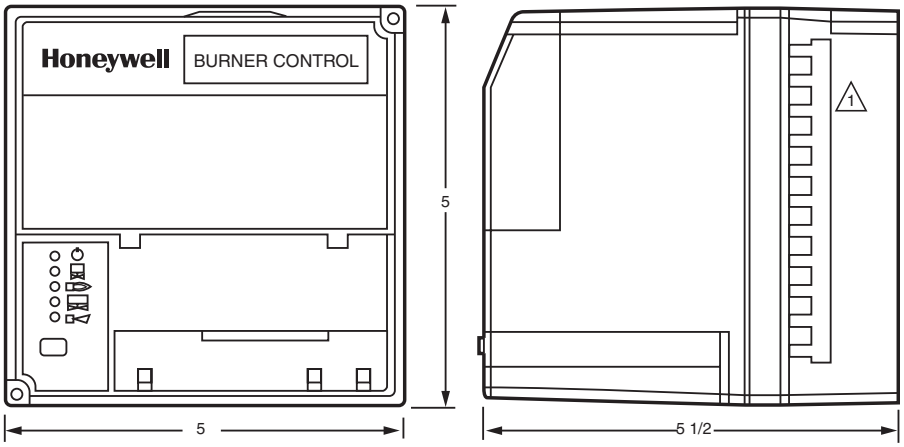
- Access for external electrical voltage checks.
- Application flexibility and communication interface capability.
- Five LEDs provide sequence information.
- Five function Run/Test Switch. Interchangeable plug-in amplifiers.
- Local or remote annunciation of operation and fault information (optional).
- Non-volatile memory retains history files and lockout status after loss of power.
- Compatible with existing Honeywell flame detectors.

Application: Primary Control
Interlocks: Lockout
Preignition: Yes
PrePurge: Determined by ST7800A Purge Timer Card
PostPurge: 5 sec
Early Spark Termination: Yes, 5 sec
Required Components: Q7800A, B Universal Wiring Subbases. R7847, R7849, R7861, or R7886 Flame Signal Amplifier. ST7800A Plug-in Purge Timer Card.
Frequency: 60 Hz (±10%), 50 Hz
AirFlow Check: User selectable
Second Stage Pilot Valve: Intermittent
Vibration: 0.5 G environment
Shipping and Storage Temperature Range: -40°F to +140°F (-40°C to +60°C)

Approximate, Dimensions: 5 in. wide x 5 in. high x 5 1/4 in. deep with Q7800A Subbase x 6 3/32 in. deep with Q7800B Subbase (127 mm wide x 127 mm high x 133 mm deep with Q7800A Subbase x 155 mm deep with Q7800B Subbase)
Weight lb. (kg): 1 lb 10 oz (0.7 kg)
Approvals, Swiss RE: Acceptable
Approvals, Factory Mutual: Report No. 1V9AO.AF.
Approvals, Gastec/European: GASTEC: CE-63AP3070/1, Approved to EN298.

SIL3 Capable

Dimensions in inches (millimeters)



1 REMOVE ONLY FOR TERMINAL TEST ACCESS.

M12821

Material Number	Voltage	Pilot Type	Flame Establishing Period - Main	Flame Establishing Period - Pilot	Comments
EC7820A1026/U	220 to 240 Vac (+10, -15%)	interrupted	5 sec, or 8 sec, or Intermittent	5 sec or 10 sec	1 ignition attempt, Includes Modulation w/ Fan Output
EC7820A1034/U	220 to 240 Vac (+10, -15%)	interrupted	5 sec, or 8 sec, or Intermittent	5 sec or 10 sec	5 ignition attempts, Includes Modulation w/ Fan Output

EC7830; EC7850; RM7830; RM7850 Programming Control Meeting European Community Timings

Microprocessor-based integrated burner control for full modulation applications. Provides automatic burner sequencing, flame supervision, system status indication, system or self-diagnostics, and troubleshooting.

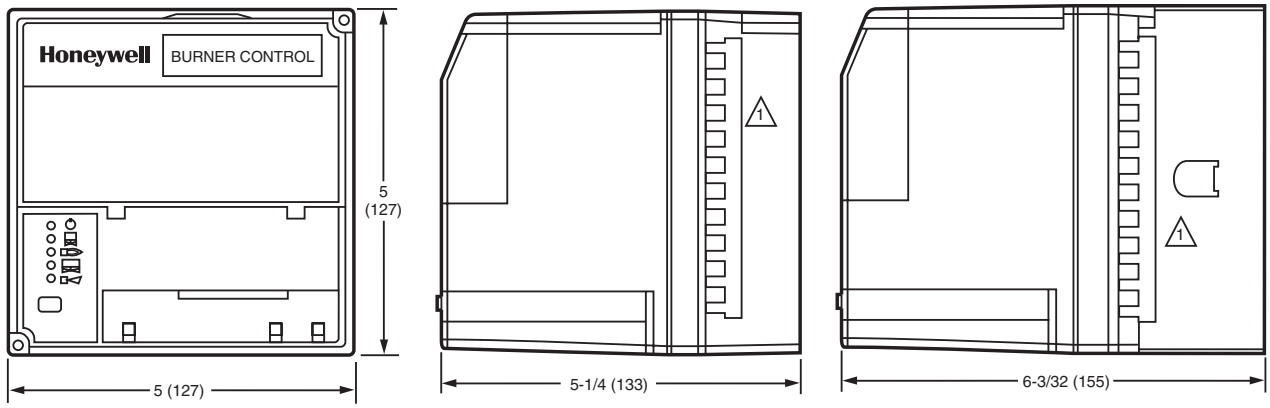
- Access for external electrical voltage checks.
- Application flexibility and communication interface capability.
- Five LEDs provide sequence information.
- Five function Run/Test Switch.
- Interchangeable plug-in amplifiers.
- Local or remote annunciation of operation and fault information (optional).
- Non-volatile memory retains history files and lockout status after loss of power.
- Compatible with existing Honeywell flame detectors.

Application: Programming Control
Flame Establishing Period - Main: 3 sec, or 5 sec, or Intermittent
Flame Establishing Period - Pilot: 3 sec or 5 sec
Interlocks: Lockout
Preignition: Yes
PrePurge: Determined by ST7800A Purge Timer Card
Early Spark Termination: Yes, 5 sec
Required Components: Q7800A,B Universal Wiring Subbases. R7847, R7849, R7861, or R7886 Flame Signal Amplifier. ST7800A Plug-in Purge Timer Card.
AirFlow Check: User selectable
Second Stage Pilot Valve: Intermittent
Pilot Type: interrupted
Vibration: 0.5 G environment
Shipping and Storage Temperature Range: -40°F to +140°F (-40°C to +60°C)

Approximate, Dimensions: 5 in. wide x 5 in. high x 5 1/4 in. deep with Q7800A Subbase x 6 3/32 in. deep with Q7800B Subbase (127 mm wide x 127 mm high x 133 mm deep with Q7800A Subbase x 155 mm deep with Q7800B Subbase)
Weight lb. (kg): 1 lb 10 oz (0.7 kg)
Approvals, Swiss RE: Acceptable
Approvals, Factory Mutual: EC7830, EC7850, RM7830-Report No. 1V9AO.AF; RM7850-Report No. J.I. OYOA9.AF
Approvals, Gastec/European: GASTEC: CE-63AP3070/1, Approved to EN298.

SIL3 Capable

Dimensions in inches (millimeters)



1 REMOVE ONLY FOR TERMINAL TEST ACCESS.

M15532A

Material Number	Voltage	Frequency	PostPurge	Comments
EC7830A1033/U	220 to 240 Vac (+10, -15%)	60 Hz (±10%), 50 Hz	2 sec	On/Off Power Burner
EC7830A1041/U	220 to 240 Vac (+10, -15%)	60 Hz (±10%), 50 Hz	30 sec	On/Off Power Burner
EC7830A1066/U	220 to 240 Vac (+10, -15%)	60 Hz (±10%), 50 Hz	15 sec	On/Off Power Burner
EC7850A1064/U	220 to 240 Vac (+10, -15%)	60 Hz (±10%), 50 Hz	30 sec	LHL-LF & HF Proven; Dynamic damper check
EC7850A1072/U	220 to 240 Vac (+10, -15%)	60 Hz (±10%), 50 Hz	2 sec	LHL-LF & HF Proven
EC7850A1080/U	220 to 240 Vac (+10, -15%)	60 Hz (±10%), 50 Hz	30 sec	LHL-LF & HF Proven
EC7850A1122/U	220 to 240 Vac (+10, -15%)	60 Hz (±10%), 50 Hz	15 sec	LHL-LF & HF Proven
EC7850A1148/U	220 to 240 Vac (+10, -15%)	60 Hz (±10%), 50 Hz	2 sec	LHL-LF & HF Proven
RM7830A1003/U	120 Vac (+10, -15%)	50 Hz; 60 Hz (±10%)	2 sec	On/Off Power Burner
RM7830A1011/U	120 Vac (+10, -15%)	50 Hz; 60 Hz (±10%)	15 sec	On/Off Power Burner
RM7830A1029/U	120 Vac (+10, -15%)	50 Hz; 60 Hz (±10%)	30 sec	On/Off Power Burner
RM7850A1001/U	120 Vac (+10, -15%)	50 Hz; 60 Hz (±10%)	2 sec	LHL-LF & HF Proven; Complies with Gas Appliance Directive (90/396/EEC). Low Voltage Directive (73/23/EEC). EMC Directive (89/336/EEC).
RM7850A1019/U	120 Vac (+10, -15%)	50 Hz; 60 Hz (±10%)	15 sec	LHL-LF & HF Proven; Complies with Gas Appliance Directive (90/396/EEC). Low Voltage Directive (73/23/EEC). EMC Directive (89/336/EEC).
RM7850A1027/U	120 Vac (+10, -15%)	50 Hz; 60 Hz (±10%)	30 sec	LHL-LF & HF Proven; Complies with Gas Appliance Directive (90/396/EEC). Low Voltage Directive (73/23/EEC). EMC Directive (89/336/EEC).

RM7800 Programmers

Microprocessor-based integrated burner control for automatically fired gas, oil, coal or combination fuel single burner applications. Provides safety, functional capability and features beyond conventional controls.

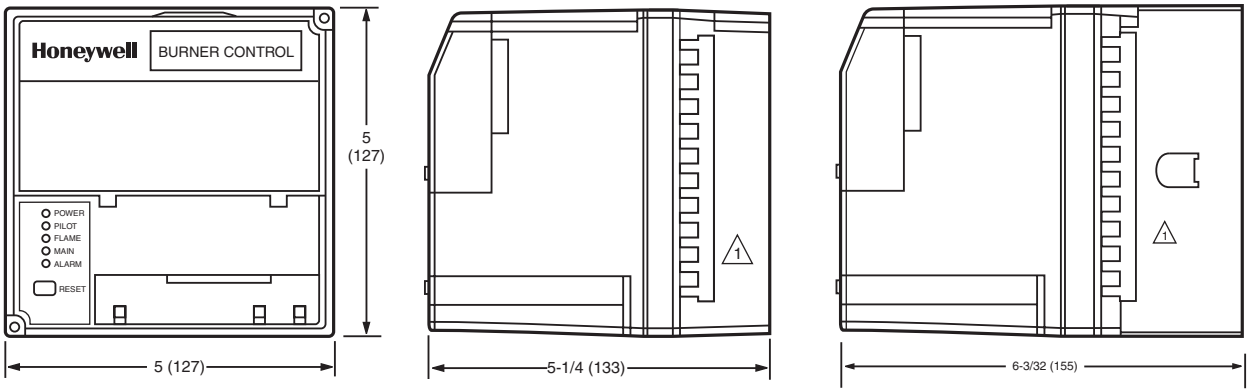
- Functions include automatic burner sequencing, flame supervision, system status indication, system or self-diagnostics and trouble shooting.
- Access for external electrical voltage checks.
- Application flexibility and communication interface capability.
- Five LEDs provide sequence information.
- Five function Run/Test Switch.
- Interchangeable plug-in flame amplifiers.
- Local or remote annunciation of operation and fault information (optional).
- Nonvolatile memory retains history files and lockout status after loss of power.
- Compatible with existing Honeywell flame detectors.
- Includes Keyboard Display Module.

Application: Programming Control
Preignition: Yes
PrePurge: Determined by ST7800A Purge Timer Card
PostPurge: 15 sec
Early Spark Termination: Yes, 5 sec
Required Components: Q7800A, B Universal Wiring Subbases. R7847, R7848, R7849, R7851, R7852, R7861, or R7886 Flame Signal Amplifier. ST7800A Plug-in Purge Timer Card.
Frequency: 50 Hz; 60 Hz (±10%)
AirFlow Check: User selectable
Pilot Type: interrupted
Vibration: 0.5 G environment
Shipping and Storage Temperature Range: -40°F to +140°F (-40°C to +60°C)
Approximate, Dimensions: 5 in. wide x 5 in. high x 5 1/4 in. deep with Q7800A Subbase x 6 3/32 in. deep with Q7800B Subbase (127 mm wide x 127 mm high x 133 mm deep with Q7800A Subbase x 155 mm deep with Q7800B Subbase)

Weight lb. (kg): 1 lb 10 oz (0.7 kg)
Approvals, Underwriters Laboratories Inc.: Component Recognized, File No. MP268; Guide No. MCCZ.
Approvals, CSA: Certified, File No. LR95329-3.
Approvals, FCC: FCC Part 15, Class B, Emissions.
Approvals, Swiss RE: Acceptable
Approvals, Factory Mutual: Report No. 1V9AO.AF.

SIL3 Capable

Dimensions in inches (millimeters)



MODULE WITH SUBBASE

1 REMOVE ONLY FOR TERMINAL TEST ACCESS.

M15518B

Material Number	Voltage	Flame Establishing Period - Main	Flame Establishing Period - Pilot	Second Stage Pilot Valve	Interlocks	Comments
RM7800E1010/U	120 Vac (+10, -15%)	10 sec or 15 sec	4 sec or 10 sec	Interrupted	Lockout	Includes S7800 Display, LHL-LF & HF Proven
RM7800G1018/U	120 Vac (+10, -15%)	10 sec, or 15 sec, or 30 sec, or Intermittent	4 sec or 10 sec	selectable	Running	Includes S7800 Display, LHL-LF Proven
RM7800L1012/U	120 Vac (+10, -15%)	10 sec or 15 sec	4 sec or 10 sec	Interrupted	Lockout	Includes S7800 Display, LHL-LF & HF Proven
RM7800L1053/U	120 Vac (+10, -15%)	10 sec or Intermittent	4 sec or 10 sec	Intermittent	Lockout	Includes S7800 Display, LHL-LF & HF Proven
RM7800M1011/U	120 Vac (+10, -15%)	10 sec or Intermittent	4 sec or 10 sec	Intermittent	Running	Includes S7800 Display, On/Off-LF proven

RM7800 Programmers with VPS

Integrated burner control for gas, oil, coal or combination fuel single burner uses. With Valve Proving Feature. RM7800L comes standard with S7800A1142 Keyboard Display.

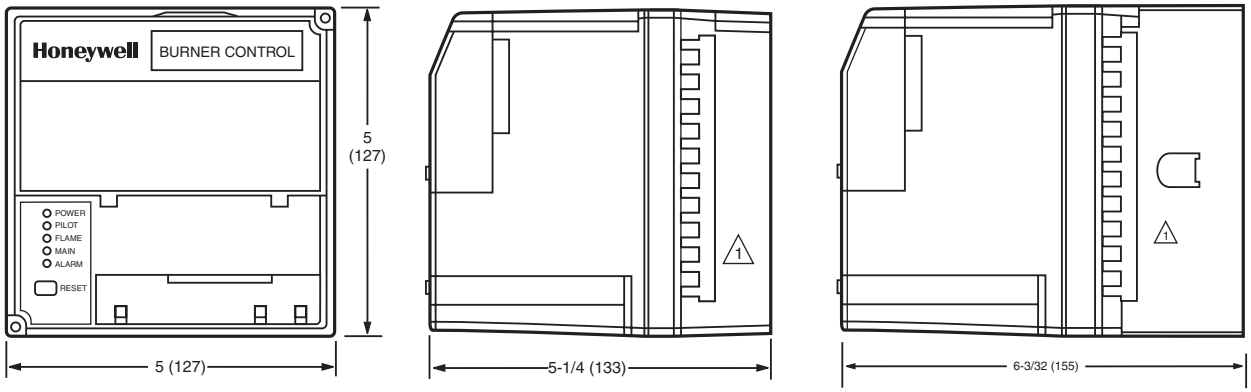
- Functions include automatic burner sequencing, flame supervision, system status indication, system or self-diagnostics and trouble shooting.
- Access for external electrical voltage checks.
- Application flexibility and communication interface capability.
- Five LEDs provide sequence information. Power LED blinks fault code on Lockout.
- Five function Run/Test Switch.
- Interchangeable plug-in flame amplifiers.
- Local or remote annunciation of operation and fault information (optional).
- Nonvolatile memory retains history files and lockout status after loss of power.
- Compatible with existing Honeywell flame detectors.
- RM7800 comes with S7800A1142 Keyboard Display Module.
- Keyboard required to setup Valve Proving Feature and change post purge time.

Application: Programming Control w/VPS
Preignition: Yes
PrePurge: Determined by ST7800A Purge Timer Card
PostPurge: programmed with S7800A1142 display
Early Spark Termination: Yes, 5 sec
Required Components: Q7800A, B Universal Wiring Subbases. R7847, R7848, R7849, R7851, R7852, R7861, or R7886 Flame Signal Amplifier. ST7800A Plug-in Purge Timer Card.
Frequency: 50 Hz; 60 Hz (±10%)
AirFlow Check: User selectable
Pilot Type: interrupted
Vibration: 0.5 G environment
Shipping and Storage Temperature Range: -40°F to +140°F (-40°C to +60°C)
Approximate, Dimensions: 5 in. wide x 5 in. high x 5 1/4 in. deep with Q7800A Subbase x 6 3/32 in. deep with Q7800B Subbase (127 mm wide x 127 mm high x 133 mm deep with Q7800A Subbase x 155 mm deep with Q7800B Subbase)

Weight lb. (kg): 1 lb 10 oz (0.7 kg)
Approvals, Underwriters Laboratories Inc.: Component Recognized, File No. MP268; Guide No. MCCZ.
Approvals, FCC: FCC Part 15, Class B, Emissions.
Approvals, Factory Mutual: Report No. 1V9AO.AF.

SIL3 Capable

Dimensions in inches (millimeters)



MODULE WITH SUBBASE

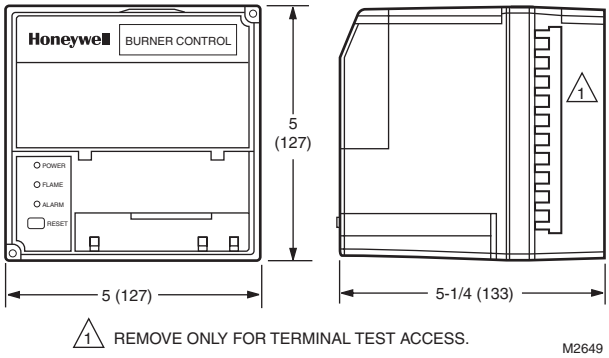
1 REMOVE ONLY FOR TERMINAL TEST ACCESS.

M15518B

Material Number	Voltage	Flame Establishing Period - Main	Flame Establishing Period - Pilot	Second Stage Pilot Valve	Interlocks	Comments
RM7800L1087/U	120 Vac (+10, -15%)	10 sec or 15 sec	4 sec or 10 sec	Interrupted	Lockout	Includes S7800A1142 Display, LHL-LF & HF Proven

RM7823; EC7823 Flame Switch

Dimensions in inches (millimeters)



Microprocessor-based integrated flame switch for detecting a flame using rectification, ultraviolet (UV) or infrared (IR) source. Provides level of safety, functional capability and features beyond conventional controls.

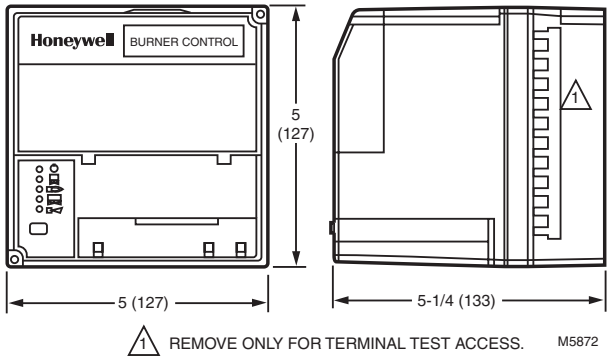
- Can be fitted with any 7800 Series Amplifier to provide relay action from two single pole, double throw (SPDT) relays when flame is present or not present. RM7823A and EC7823 are a flame detector relays only.
- Suitable primary control must be used to provide safe-start check, safety lockout, load switching and other functions required in flame safeguard systems.
- Three LEDs to indicate power, flame and alarm.
- Access for external electrical voltage checks.
- Nonvolatile memory.
- Shutter drive output.
- Compatible with existing Honeywell flame detectors.

Application: Flame Switch
Required Components: Q7800A, B Universal Wiring Subbases. R7847, R7848, R7849, R7851, R7852, R7861, or R7886 Flame Signal Amplifier.
Vibration: 0.5 G environment
Shipping and Storage Temperature Range: -40°F to +140°F (-40°C to +60°C)
Approximate, Dimensions: 5 in. wide x 5 in. high x 5 1/4 in. deep with Q7800A Subbase x 6 3/32 in. deep with Q7800B Subbase (127 mm wide x 127 mm high x 133 mm deep with Q7800A Subbase x 155 mm deep with Q7800B Subbase)
Weight lb. (kg): 1 lb 13 oz (0.8 kg)
Approvals, Swiss RE: Acceptable
Comments: two SPDT outputs

Material Number	Voltage	Frequency	Approvals, Underwriters Laboratories Inc.	Approvals, CSA	Approvals, FCC	Approvals, Factory Mutual
EC7823A1004/U	220 to 240 Vac (+10, -15%)	60 Hz (±10%), 50 Hz				Report No. OY0A9.AF.
RM7823A1016/U	120 Vac (+10, -15%)	50 Hz; 60 Hz (±10%)	Component Recognized, File No. MP268; Guide No. MCCZ.	Certified, File No. LR95329-3.	FCC Part 15, Class B, Emissions.	Report No. OX4A5.AF.

RM7824 On-Off Primary Control

Dimensions in inches (millimeters)



24 Vdc microprocessor-based integrated burner control for automatically fired gas, oil or combination fuel single burner applications. Provides level of safety, functional capability and features beyond the capacity of conventional controls.

- For use with R7824C Amplifier with C7024E, F Flame Detectors; R7848A, B with C7015A Flame Detectors; R7851B with C7927, C7962 Flame Detectors; or R7852A, B with C7915 Flame Detectors.
- Functions include automatic burner sequencing, flame supervision, system status indication, system or self diagnostics and troubleshooting.
- Five LEDs provide sequence information.
- Selectable recycle or lockout on loss of flame.
- Shutter drive output for use with dynamic self-check flame detectors.
- Access for external electrical voltage checks.
- Plug-in flame amplifier.
- Nonvolatile memory retains history files and lockout status after loss of power.

Application: Primary Control 24 Vdc
Required Components: Q7800A, B Universal Wiring Subbases. R7824 or R7848 Flame Signal Amplifier.
Pilot Type: intermittent
Vibration: 0.5 G environment
Shipping and Storage Temperature Range: -40°F to +140°F (-40°C to +60°C)
Approximate, Dimensions: 5 in. wide x 5 in. high x 5 1/4 in. deep with Q7800A Subbase x 6 3/32 in. deep with Q7800B Subbase (127 mm wide x 127 mm high x 133 mm deep with Q7800A Subbase x 155 mm deep with Q7800B Subbase)
Weight lb. (kg): 1 lb 13 oz (0.8 kg)
Approvals, Underwriters Laboratories Inc.: Component Recognized, File No. MP268; Guide No. MCCZ.
Approvals, CSA: Certified, File No. LR95329-3.
Approvals, FCC: FCC Part 15, Class B, Emissions.
Approvals, Swiss RE: Acceptable
Approvals, Factory Mutual: Report No. OX4A5.AF.

Material Number	Voltage	Flame Establishing Period - Main	Flame Establishing Period - Pilot
RM7824A1006/U	24 Vdc (+10, -15%)	Intermittent	4 sec or 10 sec

RM7838A Manual Start Industrial Primary Control with Purge

Microprocessor-based integrated burner control for industrial semi-automatically fired gas, oil, coal or combination fuel single burner applications. Provides level of safety, functional capability and features beyond conventional controls.

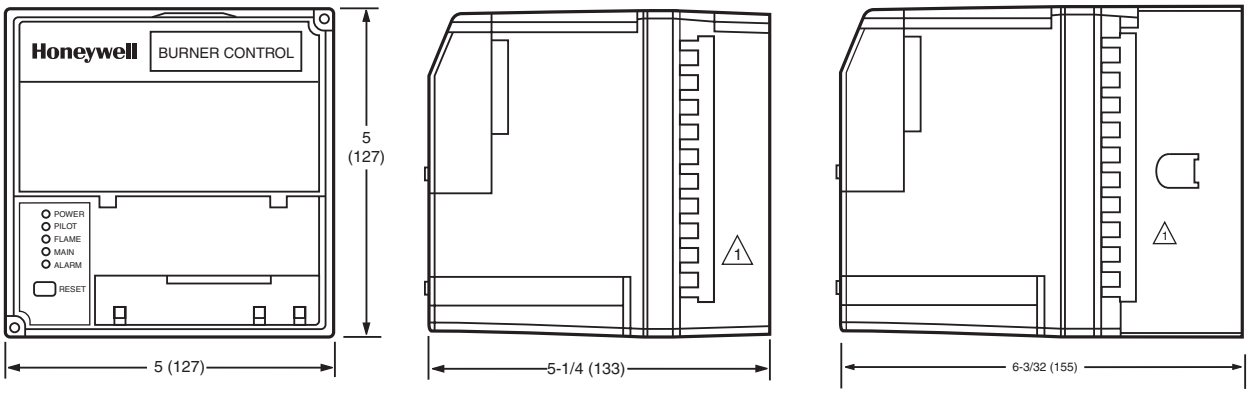
- Functions include purge, burner pilot startup, flame supervision, system status indication, system or self diagnosis and troubleshooting.
- Delays admission of fuel to combustion chamber until pilot flame has been proven and then monitors the flame through the run period while providing system status indication.
- Includes Keyboard Display Module.
- Five LEDs provide sequence information.
- Intermittent pilot valve.
- Interchangeable plug-in flame amplifier.
- Access for external electrical voltage checks.
- Nonvolatile memory retains history files and lockout status after loss of power.
- Selectable pilot flame establishing period.
- Provides application flexibility and optional communication interface capability.
- Compatible with existing Honeywell flame detectors.

Application: Semi Automatic Primary Control with Purge
Interlocks: Running
PrePurge: Determined by ST7800A Purge Timer Card
Required Components: Q7800A, B Universal Wiring Subbases. R7847, R7848, R7849, R7851, R7852, R7861, or R7886 Flame Signal Amplifier. ST7800A Plug-in Purge Timer Card.
Frequency: 50 Hz; 60 Hz (±10%)
Pilot Type: intermittent
Vibration: 0.5 G environment
Shipping and Storage Temperature Range: -40°F to +140°F (-40°C to +60°C)
Approximate, Dimensions: 5 in. wide x 5 in. high x 5 1/4 in. deep with Q7800A Subbase x 6 3/32 in. deep with Q7800B Subbase (127 mm wide x 127 mm high x 133 mm deep with Q7800A Subbase x 155 mm deep with Q7800B Subbase)

Weight lb. (kg): 1 lb 10 oz (0.7 kg)
Approvals, Underwriters Laboratories Inc.: Component Recognized, File No. MP268; Guide No. MCCZ.
Approvals, CSA: Certified, File No. LR95329-3.
Approvals, Control Safety Devices: Acceptable: CSD-1
Approvals, FCC: FCC Part 15, Class B, Emissions.
Approvals, Swiss RE: Acceptable
Approvals, Factory Mutual: Report No. OX4A5.AF.

SIL3 Capable

Dimensions in inches (millimeters)



MODULE WITH SUBBASE

1 REMOVE ONLY FOR TERMINAL TEST ACCESS.

M15518B

Material Number	Voltage	Flame Establishing Period - Main	Flame Establishing Period - Pilot	Comments
RM7838A1014/U	120 Vac (+10, -15%)	Intermittent	4 sec or 10 sec	Includes S7800 Display

RM7838B, C Manual Start Industrial Programmers

Microprocessor-based integrated burner control for industrial semi-automatically fired gas, oil, coal or combination fuel single burner applications. Provides level of safety, functional capability and features beyond conventional controls.

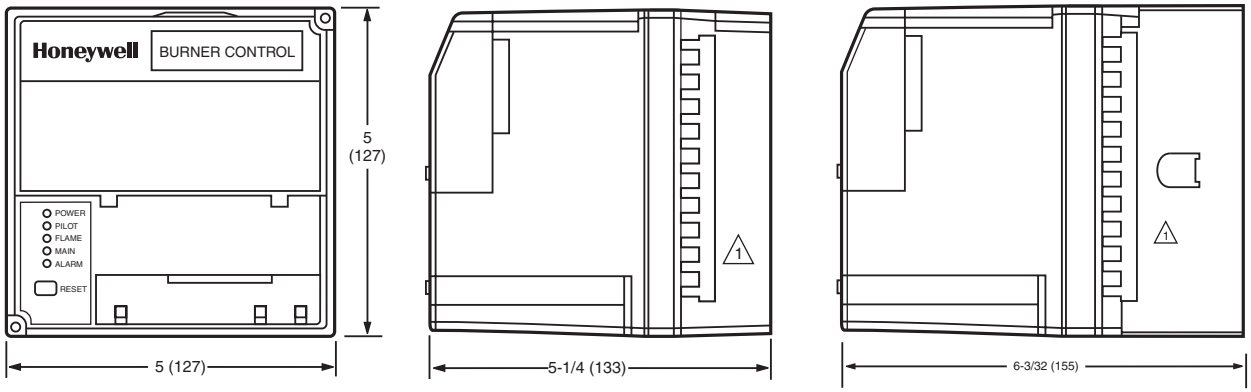
- Functions include purge, burner pilot startup, flame supervision, system status indication, system or self diagnosis and troubleshooting.
- Delays admission of fuel to combustion chamber until pilot flame has been proven and then monitors the flame through the run period while providing system status indication.
- Includes Keyboard Display Module.
- Five LEDs provide sequence information.
- Intermittent pilot valve.
- Interchangeable plug-in flame amplifier.
- Access for external electrical voltage checks.
- Nonvolatile memory retains history files and lockout status after loss of power.
- Selectable pilot flame establishing period.
- Provides application flexibility and optional communication interface capability.
- Compatible with existing Honeywell flame detectors.

Application: Semi Automatic Programming Control
Interlocks: Lockout
Preignition: Yes
Early Spark Termination: Yes, 5 sec
Frequency: 50 Hz; 60 Hz (±10%)
Pilot Type: interrupted
Vibration: 0.5 G environment
Shipping and Storage Temperature Range: -40°F to +140°F (-40°C to +60°C)
Approximate, Dimensions: 5 in. wide x 5 in. high x 5 1/4 in. deep with Q7800A Subbase x 6 3/32 in. deep with Q7800B Subbase (127 mm wide x 127 mm high x 133 mm deep with Q7800A Subbase x 155 mm deep with Q7800B Subbase)
Weight lb. (kg): 1 lb 10 oz (0.7 kg)

Approvals, Underwriters Laboratories Inc.: Component Recognized, File No. MP268; Guide No. MCCZ.
Approvals, CSA: Certified, File No. LR95329-3.
Approvals, Control Safety Devices: Acceptable: CSD-1
Approvals, FCC: FCC Part 15, Class B, Emissions.
Approvals, Swiss RE: Acceptable
Approvals, Factory Mutual: Report No. OX4A5.AF.

SIL3 Capable

Dimensions in inches (millimeters)



MODULE WITH SUBBASE

1 REMOVE ONLY FOR TERMINAL TEST ACCESS.

M15518B

Material Number	Voltage	Flame Establishing Period - Main	Flame Establishing Period - Pilot	PrePurge	Required Components	Approvals, Gastec/European	Comments
RM7838B1013/U	120 Vac (+10, -15%)	10 sec or Intermittent	4 sec or 10 sec	Determined by ST7800A Purge Timer Card	Q7800A, B Universal Wiring Subbases. R7847, R7848, R7849, R7851, R7852, R7861, or R7886 Flame Signal Amplifier. ST7800A Plug-in Purge Timer Card.		Includes S7800 Display
RM7838C1004/U	120 Vac (+10, -15%)	10 sec or Intermittent	4 sec or 10 sec	Determined by ST7800C Purge Timer Card	Q7800A, B Universal Wiring Subbases. R7847, R7848, R7849, R7851, R7852, R7861, or R7886 Flame Signal Amplifier. ST7800C Plug-in Purge Timer Card.		Includes S7800 Display
RM7838C1020/U	120 Vac (+10, -15%)	10 sec or Intermittent	4 sec or 10 sec	Determined by ST7800C Purge Timer Card	Q7800A, B Universal Wiring Subbases. R7847, R7848, R7849, R7851, R7852, R7861, or R7886 Flame Signal Amplifier. ST7800C Plug-in Purge Timer Card.	Gastec EN268 Report 1156791	Includes S7800 Display

RM7838B, C Manual Start Industrial Programmers with VPS

Integrated burner control for industrial semi-automatically fired gas, oil, coal or combination fuel single burner applications. Includes Valve Proving Feature with S7800A1142 Keyboard Display.

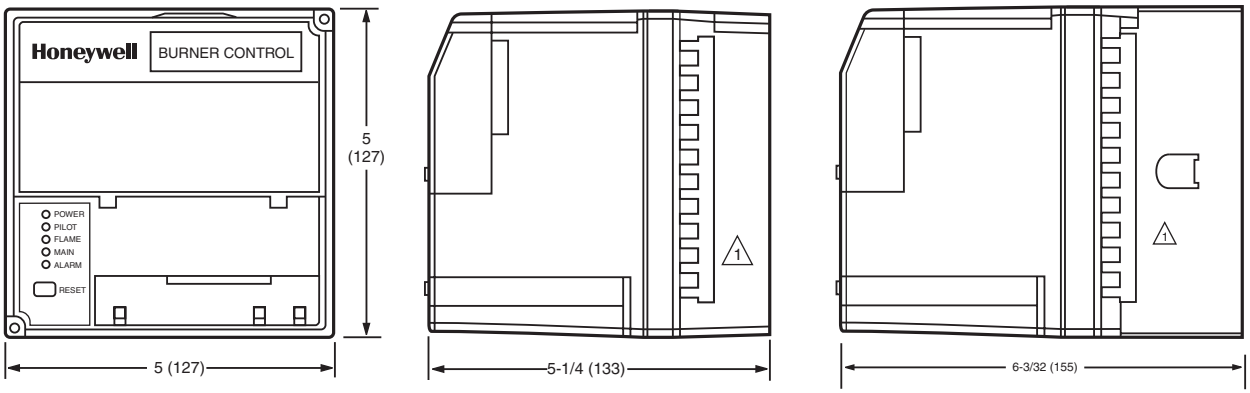
- Functions include purge, burner pilot startup, flame supervision, system status indication, system or self diagnosis and troubleshooting.
- Delays admission of fuel to combustion chamber until pilot flame has been proven and then monitors the flame through the run period while providing system status indication.
- Includes S7800A1142 Keyboard Display Module.
- Five LEDs provide sequence information.
- Intermittent pilot valve.
- Interchangeable plug-in flame amplifier.
- Access for external electrical voltage checks.
- Nonvolatile memory retains history files and lockout status after loss of power.
- Selectable pilot flame establishing period.
- Provides application flexibility and optional communication interface capability.
- Compatible with existing Honeywell flame detectors.
- With Valve Proving Feature and Programmable Post Purge Time.
- Power LED blinks a fault code on system lockout.

Application: Semi Automatic Programming Control w/VPS
Interlocks: Lockout
Preignition: Yes
PostPurge: programmed with S7800A1142 display
Early Spark Termination: Yes, 5 sec
Frequency: 50 Hz; 60 Hz (±10%)
Pilot Type: interrupted
Vibration: 0.5 G environment
Shipping and Storage Temperature Range: -40°F to +140°F (-40°C to +60°C)
Approximate, Dimensions: 5 in. wide x 5 in. high x 5 1/4 in. deep with Q7800A Subbase x 6 3/32 in. deep with Q7800B Subbase (127 mm wide x 127 mm high x 133 mm deep with Q7800A Subbase x 155 mm deep with Q7800B Subbase)

Weight lb. (kg): 1 lb 10 oz (0.7 kg)
Approvals, Underwriters Laboratories Inc.: Component Recognized, File No. MP268; Guide No. MCCZ.
Approvals, Control Safety Devices: Acceptable: CSD-1
Approvals, FCC: FCC Part 15, Class B, Emissions.
Approvals, Swiss RE: Acceptable
Approvals, Factory Mutual: Report No. OX4A5.AF.

SIL3 Capable

Dimensions in inches (millimeters)



MODULE WITH SUBBASE

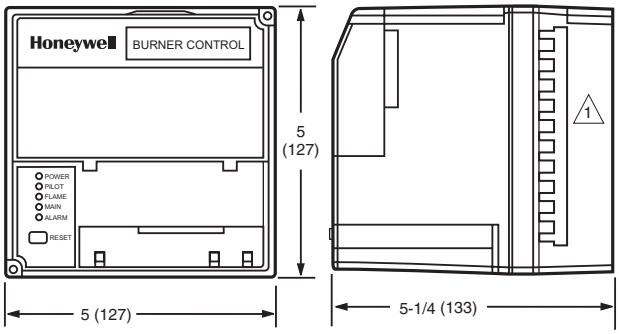
1 REMOVE ONLY FOR TERMINAL TEST ACCESS.

M15518B

Material Number	Voltage	Flame Establishing Period - Main	Flame Establishing Period - Pilot	PrePurge	Required Components	Comments
RM7838B1021/U	120 Vac (+10, -15%)	10 sec or Intermittent	4 sec or 10 sec	Determined by ST7800A Purge Timer Card	Q7800A, B Universal Wiring Subbases. R7847, R7848, R7849, R7851, R7852, R7861, or R7886 Flame Signal Amplifier. ST7800A Plug-in Purge Timer Card.	Includes programmable VPS (Valve Proving Switch) check feature and blinking LED fault annunciation
RM7838C1012/U	120 Vac (+10, -15%)	10 sec or Intermittent	4 sec or 10 sec	Determined by ST7800C Purge Timer Card	Q7800A, B Universal Wiring Subbases. R7847, R7848, R7849, R7851, R7852, R7861, or R7886 Flame Signal Amplifier. ST7800C Plug-in Purge Timer Card.	Includes programmable VPS (Valve Proving Switch) check feature and blinking LED fault annunciation

RM7840 Programmers

Dimensions in inches (millimeters)



Microprocessor-based integrated burner control for automatically fired gas, oil, coal or combination fuel single burner applications. Provides safety, functional capability and features beyond conventional controls.

- Functions include automatic burner sequencing, flame supervision, system status indication, system or self-diagnostics and troubleshooting.
- Access for external electrical voltage checks.
- Application flexibility and communication interface capability.
- Five LEDs provide sequence information.
- Five function Run/Test Switch.
- Interchangeable plug-in flame amplifiers.
- Local or remote annunciation of RM7840 operation and fault information.
- Nonvolatile memory retains history files and lockout status after loss of power.
- Compatible with existing Honeywell flame detectors.

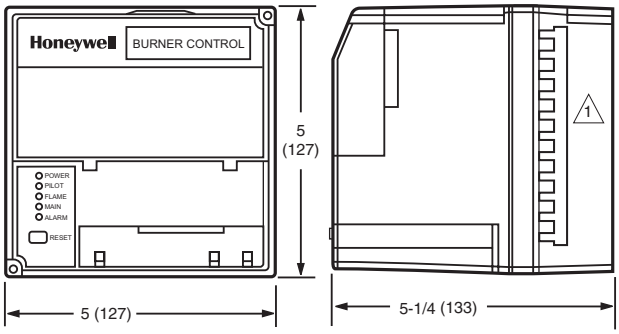
Application: Programming Control
Preignition: Yes
PrePurge: Determined by ST7800A Purge Timer Card
PostPurge: 15 sec
Early Spark Termination: Yes, 5 sec
Required Components: Q7800A, B Universal Wiring Subbases. R7847, R7848, R7849, R7851, R7852, R7861, or R7886 Flame Signal Amplifier. ST7800A Plug-in Purge Timer Card.
Voltage: 120 Vac (+10, -15%)
Frequency: 50 Hz; 60 Hz (±10%)
AirFlow Check: User selectable
Pilot Type: interrupted
Vibration: 0.5 G environment
Shipping and Storage Temperature Range: -40°F to +140°F (-40°C to +60°C)
Approximate, Dimensions: 5 in. wide x 5 in. high x 5 1/4 in. deep with Q7800A Subbase x 6 3/32 in. deep with Q7800B Subbase (127 mm wide x 127 mm high x 133 mm deep with Q7800A Subbase x 155 mm deep with Q7800B Subbase)
Weight lb. (kg): 1 lb 13 oz (0.8 kg)
Approvals, Underwriters Laboratories Inc.: Component Recognized, File No. MP268; Guide No. MCCZ.
Approvals, CSA: Certified, File No. LR95329-3.
Approvals, Control Safety Devices: Acceptable: CSD-1
Approvals, FCC: FCC Part 15, Class B, Emissions.
Approvals, Swiss RE: Acceptable
Approvals, Factory Mutual: Report No. OX4A5.AF.

SIL3 Capable

Material Number	Interlocks	Second Stage Pilot Valve	Flame Establishing Period - Main	Flame Establishing Period - Pilot	Comments
RM7840E1016/U	Lockout	Interrupted	10 sec or 15 sec	4 sec or 10 sec	LHL-LF & HF Proven
RM7840G1014/U	Running	selectable	10 sec, or 15 sec, or 30 sec, or Intermittent	4 sec or 10 sec	LHL-LF Proven
RM7840L1018/U	Lockout	Interrupted	10 sec or 15 sec	4 sec or 10 sec	LHL-LF & HF Proven
RM7840L1026/U	Lockout	Intermittent	10 sec or Intermittent	4 sec or 10 sec	LHL-LF & HF Proven
RM7840M1017/U	Running	Intermittent	10 sec or Intermittent	4 sec or 10 sec	On/Off-LF Proven

RM7840 Programmers with VPS

Dimensions in inches (millimeters)



1 REMOVE ONLY FOR TERMINAL TEST ACCESS. M5003B

Integrated burner control for gas, oil, coal or combination fuel single burner uses. Provides safety, functional capability and features beyond normal controls. With Valve Proving Feature. Requires S7800A1142 Keyboard Display.

- Functions include automatic burner sequencing, flame supervision, system status indication, system or self-diagnostics and trouble shooting.
- Access for external electrical voltage checks.
- Application flexibility and communication interface capability.
- Five LEDs provide sequence information. Power LED blinks fault code on Lockout.
- Five function Run/Test Switch.
- Interchangeable plug-in flame amplifiers.
- Local or remote annunciation of operation and fault information (optional).
- Nonvolatile memory retains history files and lockout status after loss of power.
- Compatible with existing Honeywell flame detectors.
- RM7800 comes with S7800A1142 Keyboard Display Module.
- Keyboard required to setup Valve Proving Feature and change post purge time.

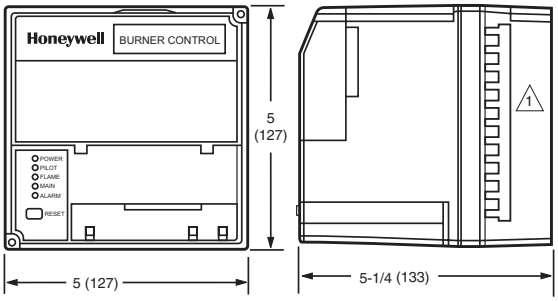
Application: Programming Control w/VPS
Preignition: Yes
PrePurge: Determined by ST7800A Purge Timer Card
PostPurge: programmed with S7800A1142 display
Early Spark Termination: Yes, 5 sec
Required Components: Q7800A, B Universal Wiring Subbases. R7847, R7848, R7849, R7851, R7852, R7861, or R7886 Flame Signal Amplifier. ST7800A Plug-in Purge Timer Card.
Frequency: 50 Hz; 60 Hz (±10%)
AirFlow Check: User selectable
Second Stage Pilot Valve: selectable
Pilot Type: interrupted
Vibration: 0.5 G environment
Shipping and Storage Temperature Range: -40°F to +140°F (-40°C to +60°C)
Approximate, Dimensions: 5 in. wide x 5 in. high x 5 1/4 in. deep with Q7800A Subbase x 6 3/32 in. deep with Q7800B Subbase (127 mm wide x 127 mm high x 133 mm deep with Q7800A Subbase x 155 mm deep with Q7800B Subbase)
Weight lb. (kg): 1 lb 10 oz (0.7 kg)
Approvals, FCC: FCC Part 15, Class B, Emissions.

SIL3 Capable

Material Number	Voltage	Flame Establishing Period - Main	Flame Establishing Period - Pilot	Interlocks	Comments	Approvals, Underwriters Laboratories Inc.	Approvals, Factory Mutual
EC7840L1014/U	220 to 240 Vac (+10, -15%)	10 sec or 15 sec	4 sec or 10 sec	Lockout	Requires S7800A1142 Display, LHL-LF & HF Proven		
RM7840G1022/U	120 Vac (+10, -15%)	10 sec, 15 sec, 30 sec, or Intermittent	4 sec or 10 sec	Running	Requires S7800A1142 Display, LHL-LF Proven	Component Recognized, File No. MP268; Guide No. MCCZ.	Report No. 1V9AO.AF.
RM7840L1075/U	120 Vac (+10, -15%)	10 sec or 15 sec	4 sec or 10 sec	Lockout	Requires S7800A1142 Display, LHL-LF & HF Proven	Component Recognized, File No. MP268; Guide No. MCCZ.	Report No. 1V9AO.AF.

RM7845 Programmers

Dimensions in inches (millimeters)



Microprocessor-based integrated burner control for automatically fired gas, oil, coal or combination fuel single burner applications. Provides safety, functional capability and features beyond conventional controls.

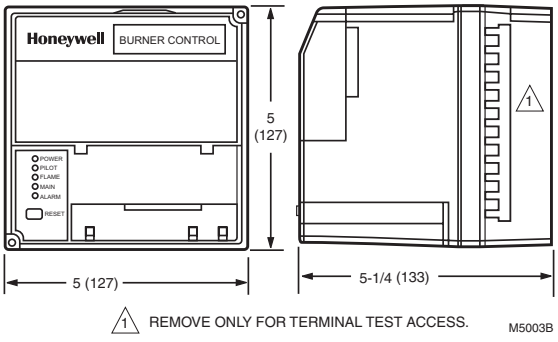
- Functions include automatic burner sequencing, flame supervision, system status indication, system or self-diagnostics and troubleshooting.
- Access for external electrical voltage checks.
- Application flexibility and communication interface capability.
- Five LEDs provide sequence information.
- Five function Run/Test Switch.
- Interchangeable plug-in flame amplifiers.
- Local or remote annunciation of RM7840 operation and fault information.
- Nonvolatile memory retains history files and lockout status after loss of power.
- Compatible with existing Honeywell flame detectors.

Application: Programming Control
Interlocks: Lockout
Preignition: Yes
PrePurge: Determined by ST7800A Purge Timer Card
PostPurge: 15 sec
Required Components: Q7800A, B Universal Wiring Subbases. R7847, R7848, R7849, R7851, R7852, R7861, or R7886 Flame Signal Amplifier. ST7800A Plug-in Purge Timer Card.
Voltage: 120 Vac (+10, -15%)
Frequency: 50 Hz; 60 Hz (±10%)
AirFlow Check: User selectable
Pilot Type: interrupted
Vibration: 0.5 G environment
Shipping and Storage Temperature Range: -40°F to +140°F (-40°C to +60°C)
Weight lb. (kg): 1 lb 13 oz (0.8 kg)
Approvals, Underwriters Laboratories Inc.: Component Recognized, File No. MP268; Guide No. MCCZ.
Approvals, CSA: Certified, File No. LR95329-3.
Approvals, Control Safety Devices: Acceptable: CSD-1
Approvals, FCC: FCC Part 15, Class B, Emissions.
Approvals, Swiss RE: Acceptable
Approvals, Factory Mutual: Report No. 1V9AO.AF.

Material Number	Flame Establishing Period - Main	Flame Establishing Period - Pilot	Comments
RM7845A1001/U	10 sec	4 sec or 10 sec	LHL-LF & HF Proven

RM7885; EC7885 Manual Start Industrial Primary Control

Dimensions in inches (millimeters)



Microprocessor-based integrated burner control for industrial semi-automatically fired gas, oil, coal, or combination fuel single burner applications. Provides level of safety, functional capability and features beyond conventional controls.

- Functions include flame supervision, system status indication, system or self-diagnostics and troubleshooting.
- Adaptable to continuous firing, high-low or modulating firing rate for semi-automatic burner sequencing.
- Operates with the following: Torch-ignited main burner or torch-ignited pilot using S445A Start-Stop Station, or conventional knee or foot operated station.
- Direct-ignition oil burner or electrically ignited pilot, using S445A Start-Stop Station.
- Five LEDs provide sequence information.
- Nonvolatile memory.
- Flame signal check during standby.
- Shutter drive output.
- Compatible with existing Honeywell flame detectors.
- Terminal provided for external alarm to sound on flame failure.

Application: Semi Automatic Primary Control
Required Components: Q7800A, B Universal Wiring Subbases. R7847, R7848, R7849, R7851, R7852, R7861, or R7886 Flame Signal Amplifier.
Frequency: 50 Hz; 60 Hz (±10%)
Pilot Type: intermittent
Vibration: 0.5 G environment
Shipping and Storage Temperature Range: -40°F to +140°F (-40°C to +60°C)
Weight lb. (kg): 1 lb 13 oz (0.8 kg)
Approvals, Underwriters Laboratories Inc.: Component Recognized, File No. MP268; Guide No. MCCZ.
Approvals, CSA: Certified, File No. LR95329-3.
Approvals, FCC: FCC Part 15, Class B, Emissions.
Approvals, Swiss RE: Acceptable
Approvals, Factory Mutual: Report No. OX4A5.AF.

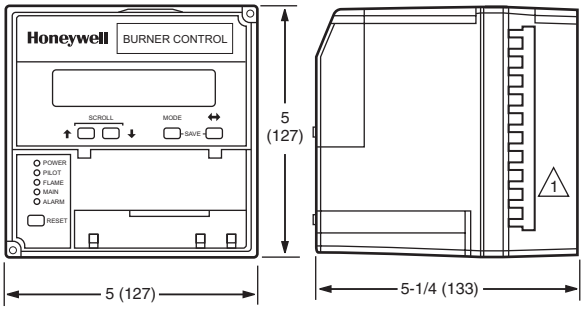
Material Number	Voltage	Flame Establishing Period - Main	Flame Establishing Period - Pilot
RM7885A1015/U	120 Vac (+10, -15%)	Intermittent	15 min

RM7888 PLC Adaptable Primary Control

Integrated burner control for industrial process semi-automatically fired gas, oil, coal, or combination fuels for single and multiple burner applications. PLC Adaptable.

- Functions include automatic burner startup sequencing, five user selectable run sequences, four line-voltage sequence control inputs, flame supervision, system status indication, system or self-diagnostics and troubleshooting.
- Requires a relay module, subbase, and amplifier for operation.
- Options include PC interface, keyboard display module, DATA CONTROLBUS™ MODULE, remote display mounting, first-out expanded annunciator, and COMBUSTION SYSTEM MANAGER™ software.
- Use with master system control which determines purge timing and confirms air supply and air flow.
- Nonvolatile memory retains history files and sequencing status after power loss.
- Optional remote reset capability.
- Five LEDs provide sequence information.
- Interchangeable plug-in flame amplifiers.
- Local or remote annunciation of operation and fault information.

Dimensions in inches (millimeters)



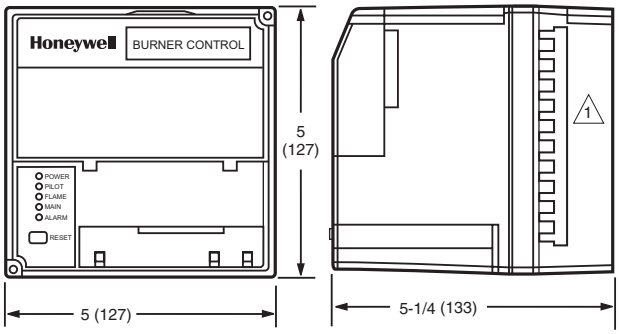
1 REMOVE ONLY FOR TERMINAL TEST ACCESS. M9494

Application: Primary Control - PLC Adaptable
Required Components: Q7800A, B Universal Wiring Subbases. R7847, R7848, R7849, R7851, R7852, R7861, or R7886 Flame Signal Amplifier.
Voltage: 120 Vac (+10, -15%)
Frequency: 50 Hz; 60 Hz (±10%)
Pilot Type: selectable
Vibration: 0.5 G environment
Shipping and Storage Temperature Range: -40°F to +140°F (-40°C to +60°C)
Approximate, Dimensions: 5 in. wide x 5 in. high x 5 1/4 in. deep with Q7800A Subbase x 6 3/32 in. deep with Q7800B Subbase (127 mm wide x 127 mm high x 133 mm deep with Q7800A Subbase x 155 mm deep with Q7800B Subbase)
Weight lb. (kg): 1 lb 10 oz (0.7 kg)
Approvals, CSA: Certified
Approvals, Factory Mutual: Approved.

Material Number	Flame Establishing Period - Main	Flame Establishing Period - Pilot	Comments
RM7888A1019/U	15 sec	4 sec	Selectable sequences
RM7888A1027/U	15 sec	10 sec	For 10 sec DSI applications, selectable sequences

RM7890 On-Off Primary Control with VPS

Dimensions in inches (millimeters)



Integrated on/off primary burner control for automatically fired gas, oil or combination fuel single burner applications. Contains Valve Proving Feature. Requires S7800A1142 Display to program VPS feature.

- Functions include automatic burner sequencing, flame supervision, system status indication, system or self diagnostics and troubleshooting.
- Subbase and amplifier are required for operation.
- Power LED blinks Fault Code on lockout.
- Options include PC interface, keyboard display module, DATA CONTROLBUS™ MODULE, remote display module, first-out expanded annunciator, and COMBUSTION SYSTEM MANAGER™ software.
- Five LEDs provide sequence information.
- Interchangeable plug-in flame amplifiers.
- Optional local or remote annunciation of operation and fault information.
- Nonvolatile memory retains history files and sequencing status after power loss.
- Optional remote reset capability.
- Optional report generation.
- Selectable relight or lockout on loss of flame.
- Contains Valve Proving Feature - require S7800A1142 Keyboard Display (not provided) to set up.

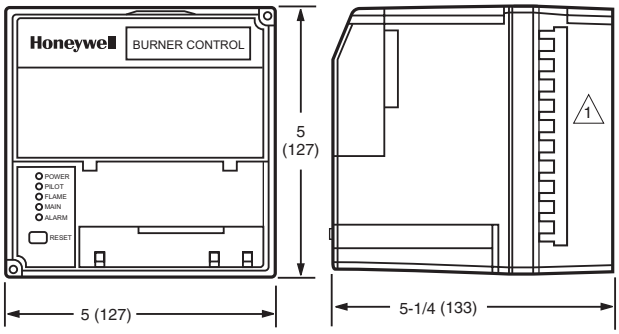
Application: On-Off Primary Control w/VPS
Preignition: Yes
Required Components: Q7800A, B Universal Wiring Subbases. R7847, R7848, R7849, R7851, R7852, R7861, or R7886 Flame Signal Amplifier.
Voltage: 120 Vac (+10, -15%)
Frequency: 50 Hz; 60 Hz (±10%)
Pilot Type: intermittent
Vibration: 0.5 G environment
Shipping and Storage Temperature Range: -40°F to +140°F (-40°C to +60°C)
Approximate, Dimensions: 5 in. wide x 5 in. high x 5 1/4 in. deep with Q7800A Subbase x 6 3/32 in. deep with Q7800B Subbase (127 mm wide x 127 mm high x 133 mm deep with Q7800A Subbase x 155 mm deep with Q7800B Subbase)
Weight lb. (kg): 1 lb 13 oz (0.8 kg)
Approvals, Underwriters Laboratories Inc.: Component Recognized, File No. MP268; Guide No. MCCZ.
Approvals, CSA: Certified, File No. LR95329-3.
Approvals, FCC: FCC Part 15, Class B, Emissions.
Approvals, Swiss RE: Acceptable
Approvals, Factory Mutual: Report No. OX4A5.AF.

SIL3 Capable

Material Number	Flame Establishing Period - Main	Flame Establishing Period - Pilot	Comments
RM7890A1056/U	Intermittent	4 sec or 10 sec	Includes programmable VPS (Valve Proving Switch) check feature and blinking LED fault annunciation
RM7890B1048/U	Intermittent	4 sec or 10 sec	Includes Shutter Drive Capability, VPS (Valve Proving Switch) check and blinking LED fault annunciation

RM7890; EC7890 On-Off Primary Controls

Dimensions in inches (millimeters)



Microprocessor-based integrated primary burner control for automatically fired gas, oil or combination fuel single burner applications. Provides level of safety, functional capability and features beyond conventional controls.

- Functions include automatic burner sequencing, flame supervision, system status indication, system or self diagnostics and troubleshooting.
- Subbase and amplifier are required for operation.
- Options include PC interface, keyboard display module, DATA CONTROLBUS™ MODULE, remote display module, first-out expanded annunciator, and COMBUSTION SYSTEM MANAGER™ software.
- Five LEDs provide sequence information.
- Interchangeable plug-in flame amplifiers.
- Optional local or remote annunciation of operation and fault information.
- Nonvolatile memory retains history files and sequencing status after power loss.
- Optional remote reset capability.
- Optional report generation.
- Selectable relight or lockout on loss of flame.

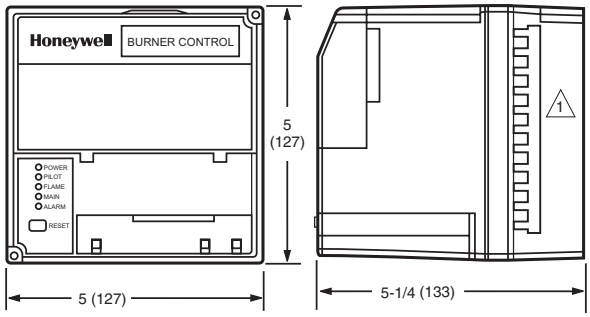
Application: On-Off Primary Control
Flames Establishing Period - Main: Intermittent
Required Components: Q7800A, B Universal Wiring Subbases. R7847, R7848, R7849, R7851, R7852, R7861, or R7886 Flame Signal Amplifier.
Frequency: 50 Hz; 60 Hz (±10%)
Pilot Type: intermittent
Vibration: 0.5 G environment
Shipping and Storage Temperature Range: -40°F to +140°F (-40°C to +60°C)
Approximate, Dimensions: 5 in. wide x 5 in. high x 5 1/4 in. deep with Q7800A Subbase x 6 3/32 in. deep with Q7800B Subbase (127 mm wide x 127 mm high x 133 mm deep with Q7800A Subbase x 155 mm deep with Q7800B Subbase)
Weight lb. (kg): 1 lb 13 oz (0.8 kg)
Approvals, Swiss RE: Acceptable

SIL3 Capable

Material Number	Voltage	Flame Establishing Period - Pilot	Approvals, Underwriters Laboratories Inc.	Approvals, CSA	Approvals, Factory Mutual	Approvals, Gastec/ European	Comments
EC7890A1011/U	220 to 240 Vac (+10, -15%)	4 sec or 10 sec			Report No. 1D0A1.AF		
EC7890B1010/U	220 to 240 Vac (+10, -15%)	4 sec or 10 sec			Report No. 1D0A1.AF		Includes Shutter Drive Capability
EC7890B1028/U	220 to 240 Vac (+10, -15%)	4 sec or 10 sec			Report No. 1V9AO.AF.		Includes Shutter Drive Capability
RM7890A1015/U	120 Vac (+10, -15%)	4 sec or 10 sec	Component Recognized, File No. MP268; Guide No. MCCZ.	Certified, File No. LR95329-3.	Report No. OX4A5.AF.		
RM7890A1031/U	120 Vac (+10, -15%)	30 sec fixed	Component Recognized, File No. MP268; Guide No. MCCZ.	Certified, File No. LR95329-3.	Report No. OX4A5.AF.		
RM7890A1064/U	120 Vac (+10, -15%)	4 sec or 10 sec			Report No. 1D0A1.AF	GASTEC: CE-63AP3070/1, Approved to EN298.	
RM7890B1014/U	120 Vac (+10, -15%)	4 sec or 10 sec	Component Recognized, File No. MP268; Guide No. MCCZ.	Certified, File No. LR95329-3.	Report No. OX4A5.AF.		Includes Shutter Drive Capability
RM7890B1030/U	120 Vac (+10, -15%)	Fixed 4 sec or 10 sec PFEP	Component Recognized, File No. MP268; Guide No. MCCZ.	Certified, File No. LR95329-3.	Report No. OX4A5.AF.		Includes Shutter Drive Capability, Alarm sounds when Reset pushed.
RM7890B1055/U	120 Vac (+10, -15%)	4 sec or 10 sec	Component Recognized, File No. MP268; Guide No. MCCZ.	Certified, File No. LR95329-3.	Report No. OX4A5.AF.	Gastec EN268 Report 1156791	Includes Shutter Drive Capability
RM7890D1004/U	120 Vac (+10, -15%)	15 sec or 30 sec	Component Recognized, File No. MP268; Guide No. MCCZ.	Certified, File No. LR95329-3.	Report No. OX4A5.AF.		Higher Flame Sensor Voltage for Infra Red Heater Applications

RM7895; EC7895 On-Off Primary Control with Prepurge

Dimensions in inches (millimeters)



Microprocessor-based integrated primary burner control for automatically fired gas, oil, or combination fuel single burner applications. Provides level of safety, functional capability and features beyond conventional controls.

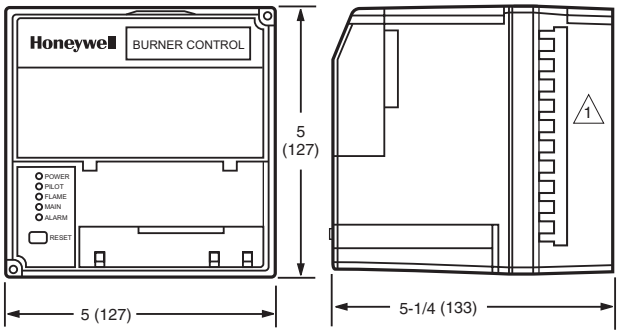
- Functions include automatic burner sequencing, flame supervision, system status indication, system or self diagnostics and troubleshooting.
- Subbase, amplifier, and prepurge timer are required for operation.
- Options include PC interface, keyboard display module, DATA CONTROLBUS™ MODULE, remote display module, first-out expanded annunciator, and COMBUSTION SYSTEM MANAGER™ software.
- Five LEDs provide sequence information.
- Interchangeable plug-in flame amplifiers.
- Optional local or remote annunciation of operation and fault information.
- Nonvolatile memory retains history files and sequencing status after power loss.
- Optional remote reset capability.
- Optional report generation. Selectable relight or lockout on loss of flame.
- Airflow switch check.

Application: On-Off Primary Control with Prepurge
Interlocks: Selectable
PrePurge: Determined by ST7800A Purge Timer Card
Required Components: Q7800 Universal Wiring Subbases, Flame Signal Amplifier and ST7800A Plug-in Purge Timer Card
Frequency: 50 Hz; 60 Hz (±10%)
Vibration: 0.5 G environment
Shipping and Storage Temperature Range: -40°F to +140°F (-40°C to +60°C)
Approximate, Dimensions: 5 in. wide x 5 in. high x 5 1/4 in. deep with Q7800A Subbase x 6 3/32 in. deep with Q7800B Subbase (127 mm wide x 127 mm high x 133 mm deep with Q7800A Subbase x 155 mm deep with Q7800B Subbase)
Weight lb. (kg): 1 lb 15 oz (0.9 kg)
Approvals, Swiss RE: Acceptable
Used With: 7800 Series Amplifiers (Except RM7895E1002/U uses R7847 ONLY)

Material Number	Voltage	Pilot Type	AirFlow Check	Delayed Main Valve	Flame Establishing Period - Main	Flame Establishing Period - Pilot	Approvals, Underwriters Laboratories Inc.	Approvals, CSA	Approvals, Control Safety Devices	Approvals, Factory Mutual	Comments
EC7895A1010/U	220 to 240 Vac (+10, -15%)	intermittent		No	Intermittent	4 sec or 10 sec				Report No. 1D0A1.AF	
EC7895C1000/U	220 to 240 Vac (+10, -15%)	interrupted		Yes	10 sec	4 sec or 10 sec				Report No. 1D0A1.AF	
RM7895A1014/U	120 Vac (+10, -15%)	intermittent		No	Intermittent	4 sec or 10 sec	Component Recognized, File No. MP268; Guide No. MCCZ.	Certified, File No. LR95329-3.	Acceptable: CSD-1	Report No. OX4A5.AF	
RM7895A1048/U	120 Vac (+10, -15%)	intermittent		No	Intermittent	4 sec or 10 sec	Component Recognized, File No. MP268; Guide No. MCCZ.	Certified, File No. LR95329-3.	Acceptable: CSD-1	Report No. OX4A5.AF	Includes ignition cut-out during PFEP and special sequence for early spark termination
RM7895B1013/U	120 Vac (+10, -15%)	intermittent	Dynamic	No	Intermittent	4 sec to 10 sec	Component Recognized, File No. MP268; Guide No. MCCZ.	Certified, File No. LR95329-3.	Acceptable: CSD-1	Report No. OX4A5.AF	
RM7895C1012/U	120 Vac (+10, -15%)	interrupted		Yes	10 sec	4 sec or 10 sec	Component Recognized, File No. MP268; Guide No. MCCZ.	Certified, File No. LR95329-3.	Acceptable: CSD-1	Report No. OX4A5.AF	
RM7895C1020/U	120 Vac (+10, -15%)	interrupted		Yes	10 sec	10 sec	Component Recognized, File No. MP268; Guide No. MCCZ.	Certified, File No. LR95329-3.	Acceptable: CSD-1	Report No. OX4A5.AF	Includes ignition cut-out during PFEP and special sequence for early spark termination
RM7895D1011/U	120 Vac (+10, -15%)	interrupted	Dynamic	Yes	10 sec	4 sec or 10 sec	Component Recognized, File No. MP268; Guide No. MCCZ.	Certified, File No. LR95329-3.	Acceptable: CSD-1	Report No. OX4A5.AF	
RM7895E1002/U	120 Vac (+10, -15%)	intermittent		No	Intermittent	15 sec or 30 sec	Component Recognized, File No. MP268; Guide No. MCCZ.	Certified, File No. LR95329-3.	Acceptable: CSD-1	Report No. OX4A5.AF	Higher Flame Sensor Voltage for Infra Red Heater Applications

RM7896 On-Off Primary Control with Pre- and Post-Purge

Dimensions in inches (millimeters)



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Microprocessor-based integrated full-function primary burner control for automatically fired gas, oil, or combination fuel single burner applications. Provides level of safety, functional capability and features beyond conventional controls.

- Functions include automatic burner sequencing, flame supervision, system status indication, system or self-diagnostics and troubleshooting.
- Subbase, amplifier and purge card are required for operation.
- Options include PC interface, keyboard display module, DATA CONTROLBUS™ MODULE, remote display module, first-out expanded annunciator, and COMBUSTION SYSTEM MANAGER™ software.
- 15 second postpurge.
- Five LEDs provide sequence information.
- Interchangeable plug-in flame amplifiers.
- Local or remote annunciation of operation and fault information.
- Nonvolatile memory retains history files and sequencing status after power loss.
- Optional remote reset capability.
- Optional report generation.
- Selectable recycle or lockout on loss of airflow or flame.
- Shutter drive output.
- Airflow switch check.
- Delayed main valve.

Application: On-Off Primary Control with Pre- and Post-purge
Interlocks: Selectable
PrePurge: Determined by ST7800A Purge Timer Card
Required Components: Q7800A, B Universal Wiring Subbases. R7847, R7848, R7849, R7851, R7852, R7861, or R7886 Flame Signal Amplifier. ST7800A Plug-in Purge Timer Card.
Voltage: 120 Vac (+10, -15%)
Frequency: 50 Hz; 60 Hz (±10%)
Vibration: 0.5 G environment
Shipping and Storage Temperature Range: -40°F to +140°F (-40°C to +60°C)
Approximate, Dimensions: 5 in. wide x 5 in. high x 5 1/4 in. deep with Q7800A Subbase x 6 3/32 in. deep with Q7800B Subbase (127 mm wide x 127 mm high x 133 mm deep with Q7800A Subbase x 155 mm deep with Q7800B Subbase)
Weight lb. (kg): 1 lb 15 oz (0.9 kg)
Approvals, Underwriters Laboratories Inc.: Component Recognized, File No. MP268; Guide No. MCCZ.
Approvals, CSA: Certified, File No. LR95329-3.
Approvals, FCC: FCC Part 15, Class B, Emissions.
Approvals, Swiss RE: Acceptable
Approvals, Factory Mutual: Report No. OX4A5.AF.

Material Number	Pilot Type	AirFlow Check	Flame Establishing Period - Main	Flame Establishing Period - Pilot	Delayed Main Valve	PostPurge	Comments
RM7896A1012/U	intermittent		Intermittent	4 sec or 10 sec	No	15 sec	Includes Pre- and Post-Purge.
RM7896C1010/U	interrupted		10 sec	4 sec or 10 sec	Yes	15 sec	Includes Pre- and Post-Purge.
RM7896D1019/U	interrupted	Dynamic	10 sec	4 sec or 10 sec	Yes	15 sec	Includes Pre- and Post-Purge.
RM7896D1027/U	interrupted	Dynamic	10 sec	4 sec or 10 sec	Yes	60 sec	Blinking Fault code LED, early spark termination when flame sensed, pre- and post-purge

RM7897 Automatic Primary Control with Programmable Post-Purge

Microprocessor-based integrated full-function primary burner control for automatically fired gas, oil, or combination fuel single burner applications. Programmable Post-Purge. Requires S7800A1142 Display to program post-purge feature.

- Functions include automatic burner sequencing, flame supervision, system status indication, system or self-diagnostics and troubleshooting.
- Subbase, amplifier and purge card are required for operation.
- Options include PC interface, keyboard display module, DATA CONTROLBUS™ MODULE, remote display module, first-out expanded annunciator, and COMBUSTION SYSTEM MANAGER™ software.
- Five LEDs provide sequence information. Power LED blinks fault code on Safety Shutdown.
- Interchangeable plug-in flame amplifiers.
- Local or remote annunciation of operation and fault information.
- Nonvolatile memory retains history files and sequencing status after power loss.
- Optional remote reset capability.
- Optional report generation.
- Selectable recycle or lockout on loss of airflow or flame.
- Shutter drive output.
- Airflow switch check.
- Delayed main valve.
- Programmable post-purge using S7800A1142 Keyboard Display (not provided).

Application: On-Off Primary Control with Pre- and Programmable Post-purge
Flame Establishing Period - Pilot: 4 sec or 10 sec
Interlocks: Selectable
Preignition: Yes
PrePurge: Determined by ST7800A Purge Timer Card
PostPurge: programmed with S7800A1142 display
Required Components: Q7800A, B Universal Wiring Subbases. R7847, R7848, R7849, R7851, R7852, R7861, or R7886 Flame Signal Amplifier. ST7800A Plug-in Purge Timer Card.
Frequency: 50 Hz; 60 Hz (±10%)
Vibration: 0.5 G environment
Shipping and Storage Temperature Range: -40°F to +140°F (-40°C to +60°C)
Approximate, Dimensions: 5 in. wide x 5 in. high x 5 1/4 in. deep with Q7800A Subbase x 6 3/32 in. deep with Q7800B Subbase (127 mm wide x 127 mm high x 133 mm deep with Q7800A Subbase x 155 mm deep with Q7800B Subbase)

Weight lb. (kg): 1 lb 15 oz (0.9 kg)
Approvals, Underwriters Laboratories Inc.: Component Recognized, File No. MP268; Guide No. MCCZ.
Approvals, CSA: Certified, File No. LR95329-3.
Approvals, Control Safety Devices: Acceptable: CSD-1
Approvals, FCC: FCC Part 15, Class B, Emissions.
Approvals, Swiss RE: Acceptable
Approvals, Factory Mutual: Report No. OX4A5.AF.

SIL3 Capable

Material Number	Voltage	Pilot Type	Delayed Main Valve	Comments	Used With
RM7897A1002/U	120 Vac (+10, -15%)	selectable		Includes blinking LED fault annunciation feature	7800 Series Amplifiers
RM7897C1000/U	120 Vac (+10, -15%)	selectable	Yes	Includes blinking LED fault annunciation feature	7800 Series Amplifiers

RM7898 On-Off Primary Control with VPS

Integrated full-function primary burner control for gas, oil, or combination fuel single burner applications. Include Programmable Post-Purge and Valve Proving Feature. Requires S7800A1142 Display to program VPS and post-purge features.

- Functions include automatic burner sequencing, flame supervision, system status indication, system or self-diagnostics and troubleshooting.
- Subbase, amplifier and purge card are required for operation.
- Options include PC interface, keyboard display module, DATA CONTROLBUS™ MODULE, remote display module, first-out expanded annunciator, and COMBUSTION SYSTEM MANAGER™ software.
- Programmable post-purge.
- Five LEDs provide sequence information. Power LED Blinks Fault code on safety shutdown.
- Interchangeable plug-in flame amplifiers.
- Local or remote annunciation of operation and fault information.
- Nonvolatile memory retains history files and sequencing status after power loss.
- Optional remote reset capability.
- Optional report generation.
- Selectable recycle or lockout on loss of airflow or flame.
- Shutter drive output.
- Airflow switch check.
- Programmable post-purge and Valve Proving feature with S7800A1142 Keyboard Display (not supplied).

Application: On-Off Primary Control w/VPS
Flame Establishing Period - Pilot: 4 sec or 10 sec
Interlocks: Selectable
Preignition: Yes
PrePurge: Determined by ST7800A Purge Timer Card
PostPurge: programmed with S7800A1142 display
Required Components: Q7800A, B Universal Wiring Subbases. R7847, R7848, R7849, R7851, R7852, R7861, or R7886 Flame Signal Amplifier. ST7800A Plug-in Purge Timer Card.
Frequency: 50 Hz; 60 Hz (±10%)
Pilot Type: selectable
Vibration: 0.5 G environment
Shipping and Storage Temperature Range: -40°F to +140°F (-40°C to +60°C)

Approximate, Dimensions: 5 in. wide x 5 in. high x 5 1/4 in. deep with Q7800A Subbase x 6 3/32 in. deep with Q7800B Subbase (127 mm wide x 127 mm high x 133 mm deep with Q7800A Subbase x 155 mm deep with Q7800B Subbase)
Weight lb. (kg): 1 lb 15 oz (0.9 kg)
Approvals, Underwriters Laboratories Inc.: Component Recognized, File No. MP268; Guide No. MCCZ.
Approvals, CSA: Pending
Approvals, FCC: FCC Part 15, Class B, Emissions.
Approvals, Swiss RE: Acceptable
Approvals, Factory Mutual: Report No. OX4A5.AF.

SIL3 Capable

Material Number	Voltage	Early Spark Terminations	Comments	Used With
RM7898A1000/U	120 Vac (+10, -15%)		Includes blinking LED fault annunciation feature	7800 Series Amplifiers
RM7898A1018/U	120 Vac (+10, -15%)	Special Sequence	Includes blinking LED fault annunciation feature, with early spark termination	7800 Series Amplifiers

R7120M Fireye M Series Replacement Control

The Honeywell R7120M Burner Control Modules are microprocessor-based integrated burner controls. It is a plug in replacement of Fireye M series controls for automatically fired gas, oil or combination fuel on/off single burner applications.

- Functions provided by the R7120M include automatic burner sequencing, flame supervision, system status indication, system or self-diagnostics and troubleshooting.
- Plug in replacement for Fireye M series controls using the existing Fireye wiring subbase.
- Require ST7800 Purge Timer and appropriate R78XX Amplifier to complete the replacement.

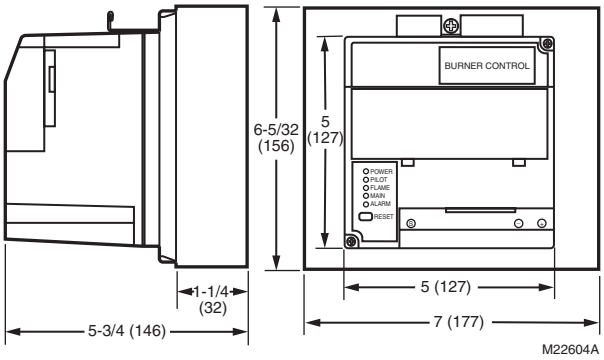
Application: Replacement Primary Control for Fireye M Series - Intermittent Pilot
Interlocks: Running
PrePurge: Determined by ST7800A Purge Timer Card
PostPurge: programmed with S7800A1142 display
Required Components: R7847, R7848, R7849, R7851, R7852, R7861, or R7886 Flame Signal Amplifier. ST7800 Plug-in Purge Timer Card.
Frequency: 50 Hz; 60 Hz
Vibration: 0.5 G environment

Shipping and Storage Temperature Range: -40°F to +135°F (-40°C to +57°C)
Approximate, Dimensions: 7 in. wide x 6 5/32 in. high x 5 3/4 in. deep (177 mm wide x 156 mm high x 146 mm deep)
Weight lb. (kg): 3 lb 1 oz (1.4 kg)
Approvals, Underwriters Laboratories Inc.: Component Recognized, File No. MP268; Guide No. MCCZ.
Approvals, FCC: FCC Part 15, Class B, Emissions.

Material Number	Voltage	Pilot Type	AirFlow Check	Flame Establishing Period - Main	Flame Establishing Period - Pilot	Comments
R7120M1001/U	120 Vac (+10, -15%)	intermittent	User selectable	Intermittent	4 sec or 10 sec	On/Off
R7120M1019/U	120 Vac (+10, -15%)	interrupted	User selectable	10 sec	4 sec or 10 sec	On/Off

R7140 Programmers

Dimensions in inches (millimeters)



The Honeywell R7140G, L, M Burner Control Modules are microprocessor-based integrated burner control for automatically fired gas, oil or combination fuel single burner applications.

- Functions provided by the R7140G, L, M include automatic burner sequencing, flame supervision, system status indication, system or self-diagnostics and troubleshooting.
- Upgrade replacement for BC7000 or R4140 legacy Programmer controls.
- Require ST7800 Purge Timer and appropriate R78XX Amplifier to complete the replacement.

Application: Upgrade Replacement Programming Control for R4140 or BC7000
Preignition: Yes
PrePurge: Determined by ST7800A Purge Timer Card
PostPurge: 15 sec
Early Spark Termination: Yes, 5 sec
Required Components: R7847, R7848, R7849, R7851, R7852, R7861, or R7886 Flame Signal Amplifier. ST7800 Plug-in Purge Timer Card.
Voltage: 120 Vac (+10, -15%)
Frequency: 50 Hz; 60 Hz (±10%)
AirFlow Check: User selectable
Vibration: 0.5 G environment
Shipping and Storage Temperature Range: -40°F to +140°F (-40°C to +60°C)
Approximate, Dimensions: 7 in. wide x 6 5/32 in. high x 5 3/4 in. deep (177 mm wide x 156 mm high x 146 mm deep)
Weight lb. (kg): 3 lb 1 oz (1.4 kg)
Approvals, Underwriters Laboratories Inc.: Component Recognized, File No. MP268; Guide No. MCCZ.
Approvals, FCC: FCC Part 15, Class B, Emissions.

Material Number	Pilot Type	Flame Establishing Period - Main	Flame Establishing Period - Pilot	Second Stage Pilot Valve	Interlocks	Comments
R7140G1000/U	Interrupted or Intermittent	10 sec, or 15 sec, or 30 sec, or Intermittent	4 sec or 10 sec	selectable	Running	LHL-LF Proven
R7140G2008/U	Interrupted or Intermittent	10 sec, or 15 sec, or 30 sec, or Intermittent	4 sec or 10 sec		Running	LHL-LF Proven
R7140L1009/U	interrupted	10 sec or 15 sec	4 sec or 10 sec	Interrupted	Lockout	LHL-LF & HF Proven
R7140L2007/U	interrupted	10 sec or 15 sec	4 sec or 10 sec	Interrupted	Lockout	LHL-LF & HF Proven
R7140M1007/U	Interrupted or Intermittent	10 sec or Intermittent	4 sec or 10 sec	Intermittent	Running	On/Off-LF Proven

Q7800 22 Terminal Universal Wiring Subbases

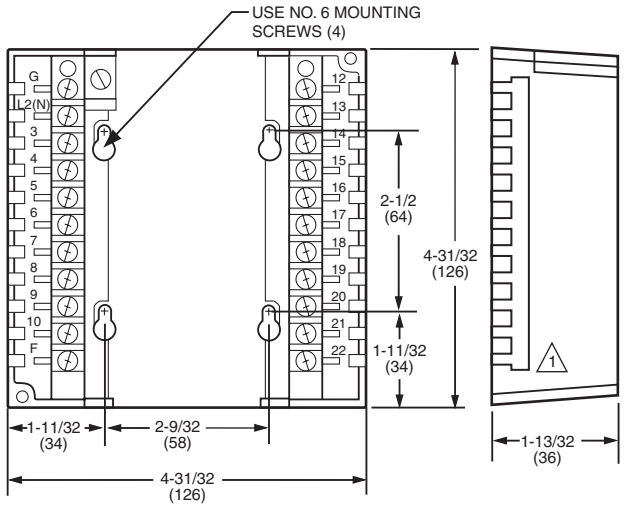
Burner, panel or wall mount subbases for 7800 SERIES relay modules and S7830A Expanded Annunciator.

- Makes electrical connections for 7800 SERIES relay modules or S7830A Expanded Annunciator through bifurcated contacts.
- Provides terminals for field wiring.
- Twenty-two terminals.

Vibration: 0.5 G environment
Shipping and Storage Temperature Range: -40°F to +140°F (-40°C to +60°C)
Approvals, CSA: Certified, File No. LR95329-3.

Material Number	Application	Approximate, Dimensions	Weight lb. (kg)	Approvals, Underwriters Laboratories Inc.	Comments	Used With
Q7800A1005/U	Wiring Subbase	4 31/32 in. wide x 4 31/32 in. high x 1 13/32 in. deep (126 mm wide x 126 mm high x 36 mm deep)	7 oz (0.20 kg)	Component Recognized, File No. MP268; Guide No. MCCZ2.	Panel mount	
Q7800B1003/U	Wiring Subbase	4 31/32 in. wide x 4 31/32 in. high x 1 13/32 in. deep (126 mm wide x 126 mm high x 36 mm deep)	1 lb 3 oz (0.54 kg)	Component Recognized, File No. MP268; Guide No. MCCZ.	Burner/wall mount 2 knockouts each end	
Q7800B1011/U	Wiring Subbase	4 31/32 in. wide x 4 31/32 in. high x 3 in. deep (126 mm wide x 126 mm high x 76 mm deep)	1 lb 3 oz (0.54 kg)	Component Recognized, File No. MP268; Guide No. MCCZ.	Burner/wall mount 3 knockouts each end	
Q7800F1004/U	Wiring Adapter Subbase	5 in. high x 5 in. wide x 1 3/4 in. deep (127 mm high x 127 mm wide x 44 mm deep)	15 oz (0.43 kg)	Component Recognized, File No. MP268; Guide No. MCCZ2.	Burner/wall mount adapter subbase for RA890	RM7890
Q7800F1012/U	Wiring Adapter Subbase	5 in. high x 5 in. wide x 1 3/4 in. deep (127 mm high x 127 mm wide x 44 mm deep)	15 oz (0.43 kg)	Component Recognized, File No. MP268; Guide No. MCCZ2.	Burner/wall mount adapter subbase for R4795	RM7895

Q7800A dimensions in inches (millimeters)



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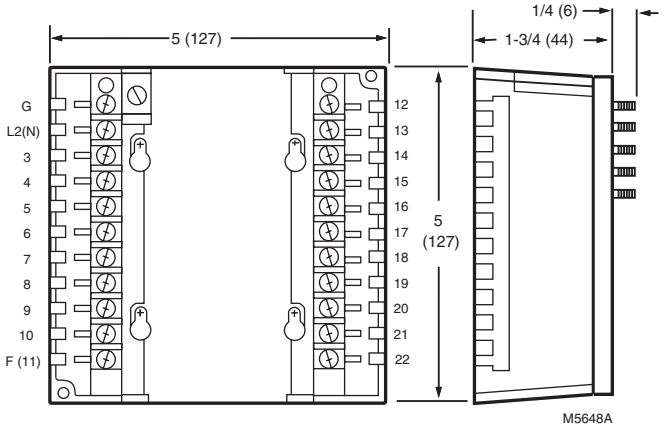
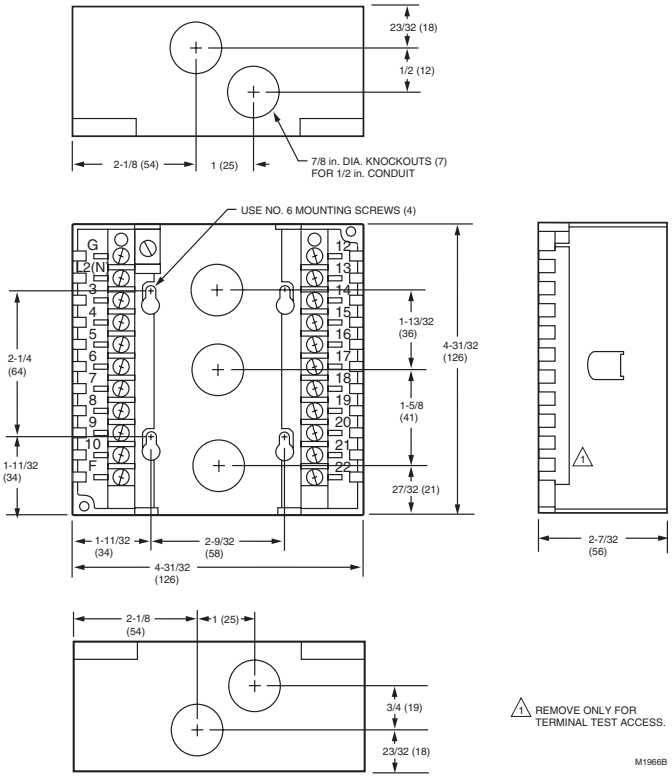
Q7800F dimensions in inches (millimeters)

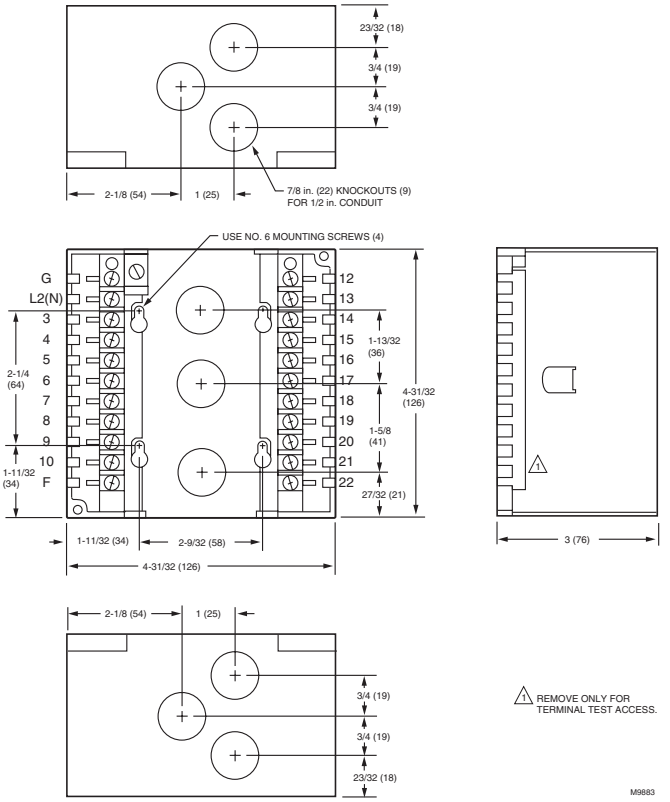


M5648A

Q7800B1003 dimensions in inches (millimeters)



Q7800B1011 dimensions in inches (millimeters)



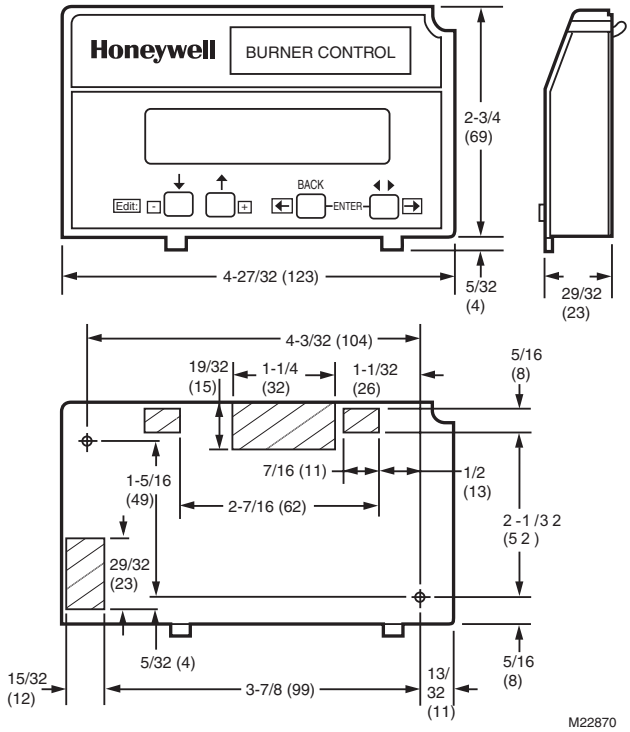
S7800 Keyboard Display Module

Provides current status of burner sequence, timing information, hold information and lockout information, as well as selectable or preemptive messages.

- Application flexibility.
- First-out annunciation and system diagnostics provided by 2 row by 20 column Vacuum Fluorescent Display (VFD).
- S7800A1001 offers “Call Service” (Business Card) programmable message displayed when system lockout occurs.
- S7800A1001 series 5 and greater has selectable ModBus Feature.
- Local or remote annunciation of operation and fault information.
- First out expanded annunciation with 24 limit and interlock LEDs enhances keyboard display module information.
- Remote reset.

Application: Keyboard Display
Vibration: 0.5 G environment
Shipping and Storage Temperature Range: -40°F to +140°F (-40°C to +60°C)
Approximate, Dimensions: 4 27/32 in. wide x 2 29/32 in. high x 29/32 in. deep (123 mm wide x 73 mm high x 23 mm deep)
Weight lb. (kg): 4 oz (0.11 kg)
Approvals, Underwriters Laboratories Inc.: Component Recognized, File No. MP268; Guide No. MCCZ.
Approvals, CSA: Certified, File No. LR95329-3.
Approvals, FCC: FCC Part 15, Class B, Emissions.
Approvals, Swiss RE: Acceptable
Approvals, Factory Mutual: Report No. 1V9AO.AF.

Dimensions in inches (millimeters)



Material Number	Voltage	Comments
S7800A1001/U	13 Vdc peak fullwave rectified (+20/-15%).	English Language
S7800A1035/U	13 Vdc peak fullwave rectified (+20/-15%).	French Language
S7800A1043/U	13 Vdc peak fullwave rectified (+20/-15%).	German Language
S7800A1050/U	13 Vdc peak fullwave rectified (+20/-15%).	Italian Language
S7800A1068/U	13 Vdc peak fullwave rectified (+20/-15%).	Spanish Language
S7800A1118/U	13 Vdc peak fullwave rectified (+20/-15%).	Japanese Language
S7800A1126/U	13 Vdc peak fullwave rectified (+20/-15%).	Portuguese Language

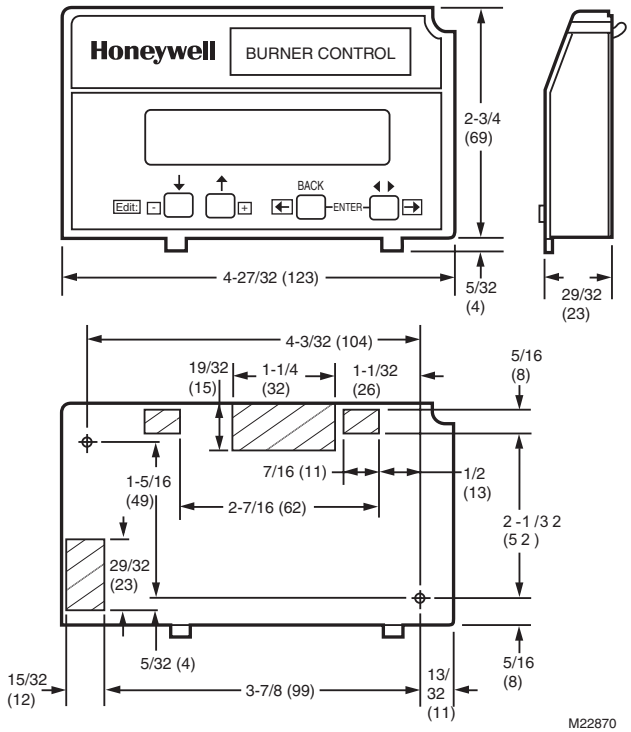
S7800 Keyboard Display Module for VP Programming

Provides current status of burner sequence, timing information, hold information and lockout information, as well as selectable or preemptive messages.

- Application flexibility.
- First-out annunciation and system diagnostics provided by 2 row by 20 column Vacuum Fluorescent Display (VFD).
- “Call Service” (Business Card) programmable message displayed when system lockout occurs.
- Local or remote annunciation of operation and fault information.
- First out expanded annunciation with 24 limit and interlock LEDs enhances keyboard display module information. Display can be Programmed to customize the expanded annunciator messages to the system.
- Required to program Valve Proving and Post Purge feature on selected 7800 Series devices.
- Can be setup for ModBus Communication.
- Provides burner controller data.
- Remote reset.

Application: Keyboard Display for VP setup
Vibration: 0.5 G environment
Shipping and Storage Temperature Range: -40°F to +140°F (-40°C to +60°C)
Approximate, Dimensions: 4 27/32 in. wide x 2 29/32 in. high x 29/32 in. deep (123 mm wide x 73 mm high x 23 mm deep)
Weight lb. (kg): 4 oz (0.11 kg)
Approvals, Underwriters Laboratories Inc.: Component Recognized, File No. MP268; Guide No. MCCZ.
Approvals, CSA: Certified, File No. LR95329-3.
Approvals, FCC: FCC Part 15, Class B, Emissions.
Approvals, Swiss RE: Acceptable
Approvals, Factory Mutual: Report No. 1V9AO.AF.

Dimensions in inches (millimeters)



Material Number	Voltage	Comments
S7800A1142/U	13 Vdc peak fullwave rectified (+20/-15%).	English Language, Capable of displaying special “Call Service” messages, allows setup of S7830A1005 Expanded Annunciator messages, used for VPS programming, and programming Post Purge on select 7800 Devices
S7800A1167/U	13 Vdc peak fullwave rectified (+20/-15%).	Spanish Language with Valve Proving, Post-purge, “Call Service”, and Expanded Annunciator programming ability

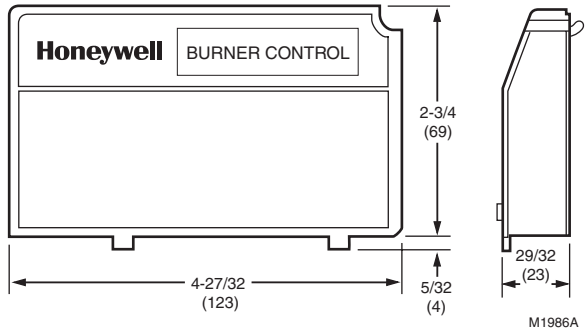
S7810A Data ControlBus™ Module

Supports remote mounting of S7800 Keyboard Display Module, personal computer communications interface and remote reset.

- Use with remotely mounted S7800 Keyboard Display Module.
- Installs directly on the front of 7800 SERIES Relay Modules.
- Provides communications bus interface and remote reset.

Application: ControlBus™ Module
Vibration: 0.5 G environment
Shipping and Storage Temperature Range: -40°F to +140°F (-40°C to +60°C)
Approximate, Dimensions: 4 27/32 in. wide x 3 11/32 in. high x 29/32 in. deep (123 mm wide x 84 mm high x 23 mm deep)
Weight lb. (kg): 4 oz (0.11 kg)
Approvals, Underwriters Laboratories Inc.: Component Recognized, File No. MP268; Guide No. MCCZ2.
Approvals, CSA: Certified, File No. LR95329-3.
Approvals, Factory Mutual: Report No. 1V9AO.AF.

Dimensions in inches (millimeters)



Material Number	Voltage	Comments
S7810A1009/U	13 Vdc peak fullwave rectified (+20/-15%).	Includes 203541 5-wire Connector

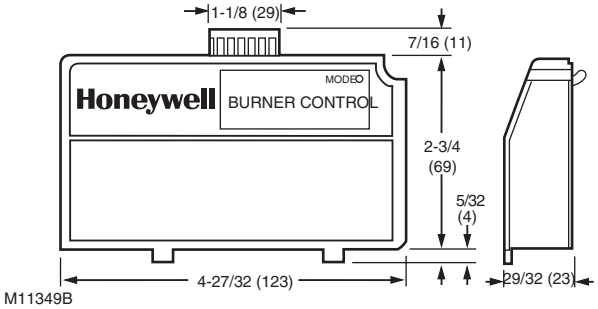
S7810M ModBus Module

S7810M ModBus Module operates as ModBus RTU slave device.

- Provides ability to remotely mount the S7800 Keyboard Display Module.
- Installs directly on the front of 7800 SERIES Relay Modules.
- Provides ModBus communications bus interface.
- Remote reset.

Vibration: 0.5 G environment
Shipping and Storage Temperature Range: -40°F to +140°F (-40°C to +60°C)
Approximate, Dimensions: 4 27/32 in. wide x 2 29/32 in. high x 29/32 in. deep (123 mm wide x 73 mm high x 23 mm deep)
Weight lb. (kg): 4 oz (0.11 kg)
Approvals, Underwriters Laboratories Inc.: Component Recognized, File No. MP268; Guide No. MCCZ2.
Approvals, CSA: Certified, File No. LR95329-3.
Approvals, Factory Mutual: Report No. 1V9AO.AF.

Dimensions in inches (millimeters)



Material Number	Voltage	Application	Comments	Approvals, Gastec/European
S7810M1003/U	13 Vdc peak fullwave rectified (+20/-15%).	ControlBus™ Module-MODBUS	Includes 208727 8 pin electrical connector	
S7810M1029/U	13 Vdc peak fullwave rectified (+20/-15%).	ControlBus™ Module-MODBUS - CE Certified (no reset allowed)	Includes 208727 8 pin electrical connector	Gastec EN268 Report 1156791

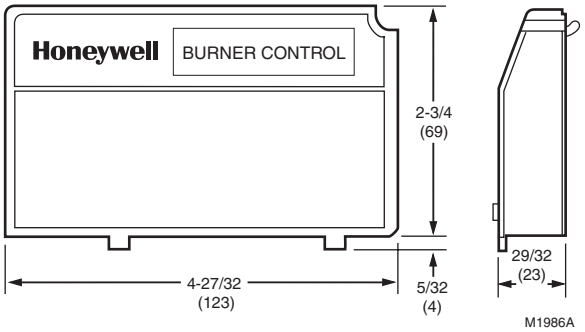
S7820 Remote Reset Module

Serves as link between remote reset pushbutton and relay module. Allows 7800 SERIES relay module to be reset from a remote location.

- Reset button can be installed up to 1000 feet away.
- Installs directly on the front of 7800 SERIES relay module.

Vibration: 0.5 G environment
Shipping and Storage Temperature Range: -40°F to +140°F (-40°C to +60°C)
Approximate, Dimensions: 4 27/32 in. wide x 2 29/32 in. high x 29/32 in. deep (123 mm wide x 73 mm high x 23 mm deep)
Weight lb. (kg): 3 oz (0.09 kg)
Approvals, Underwriters Laboratories Inc.: Component Recognized, File No. MP268; Guide No. MCCZ2.
Approvals, CSA: Certified, File No. LR95329-3.
Approvals, Factory Mutual: Report No. 1V9AO.AF.

Dimensions in inches (millimeters)



Material Number	Application	Comments
S7820A1007/U	Remote Reset Module	Includes 203541 5-wire Connector

S7830 First Out Expanded Annunciator

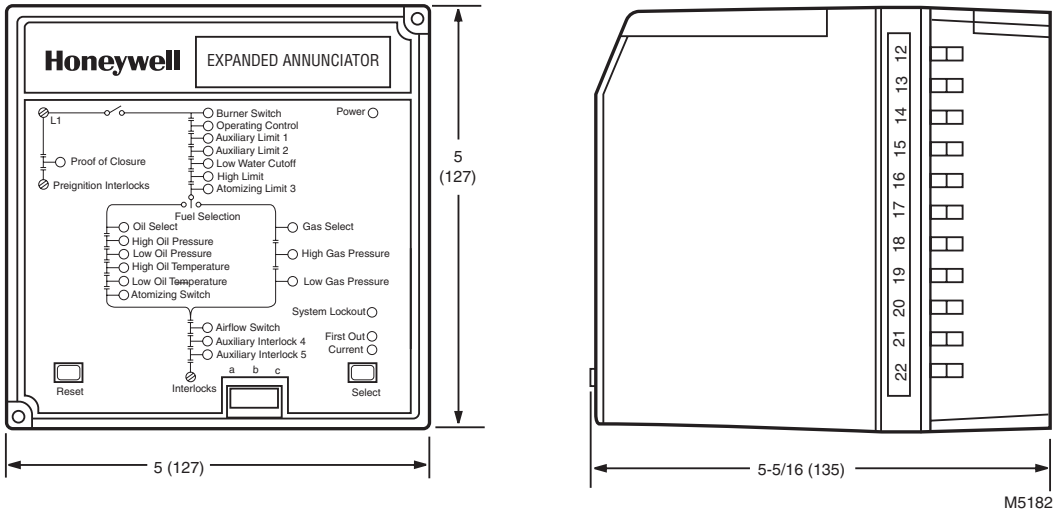
Microprocessor-based expanded annunciator to support the 7800 SERIES relay modules for first-out annunciation, sequencing, system or self-diagnostics and troubleshooting.

- Twenty-six status LEDs.
- Front panel LED array-arranged to indicate flow of line-voltage through string of limits, controls and interlocks.
- Selectable current and first-out LED array display status.
- Twenty-one monitored contact points.
- Access for external electrical voltage checks.

Required Components: 7800 Series Relay Modules and Q7800A, B Subbases
Frequency: 50 Hz; 60 Hz (±10%)
Vibration: 0.5 G environment
Shipping and Storage Temperature Range: -40°F to +140°F (-40°C to +60°C)
Approximate, Dimensions: 5 in. wide x 5 in. high x 5 1/4 in. deep with Q7800A Subbase x 6 3/32 in. deep with Q7800B Subbase (127 mm wide x 127 mm high x 133 mm deep with Q7800A Subbase x 155 mm deep with Q7800B Subbase)

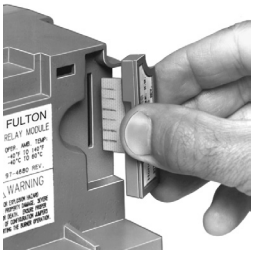
Weight lb. (kg): 1 lb 6 oz (0.62 kg)
Approvals, Underwriters Laboratories Inc.: Component Recognized, File No. MH17367; Guide No. MJAT.
Approvals, CSA: Certified, File No. LR95329.
Approvals, FCC: FCC Part 15, Class B, Emissions.
Approvals, Swiss RE: Acceptable
Approvals, Factory Mutual: Report No. 1V9AO.AF.

Dimensions in inches (millimeters)



Material Number	Voltage	Application
S7830A1005/U	120 Vac (+10, -15%)	Expanded Annunciator

ST7800 Plug In Purge Timer



Provides the prepurge timing for select 7800 SERIES relay modules. ST7800C used with the RM7838C only.

Approvals, Underwriters Laboratories Inc.: Component Recognized, File No. MP268; Guide No. MCCZ2.
Approvals, CSA: Certified, File No. LR95329-3.
Approvals, Factory Mutual: Approved: Report No. 2X0A1.AF.

Material Number	PrePurge	Application
ST7800A1005/U	2 seconds	Purge Timer
ST7800A1013/U	7 seconds	Purge Timer
ST7800A1021/U	10 seconds	Purge Timer
ST7800A1039/U	30 seconds	Purge Timer
ST7800A1047/U	40 seconds	Purge Timer
ST7800A1054/U	60 seconds	Purge Timer
ST7800A1062/U	90 seconds	Purge Timer
ST7800A1070/U	2.5 minutes	Purge Timer
ST7800A1088/U	4.0 minutes	Purge Timer
ST7800A1096/U	6.0 minutes	Purge Timer
ST7800A1104/U	9.0 minutes	Purge Timer
ST7800A1112/U	12.0 minutes	Purge Timer
ST7800A1120/U	15.0 minutes	Purge Timer
ST7800A1138/U	22.0 minutes	Purge Timer
ST7800A1146/U	30.0 minutes	Purge Timer
ST7800C1003/U	7 seconds	Purge Timer for RM7838C Only
ST7800C1011/U	20 seconds	Purge Timer for RM7838C Only
ST7800C1029/U	4.0 minutes	Purge Timer for RM7838C Only
ST7800C1037/U	6.0 minutes	Purge Timer for RM7838C Only
ST7800C1045/U	8.0 minutes	Purge Timer for RM7838C Only
ST7800C1052/U	10.0 minutes	Purge Timer for RM7838C Only
ST7800C1086/U	16.0 minutes	Purge Timer for RM7838C Only
ST7800C1102/U	20.0 minutes	Purge Timer for RM7838C Only
ST7800C1128/U	24.0 minutes	Purge Timer for RM7838C Only
ST7800C1136/U	30.0 minutes	Purge Timer for RM7838C Only
ST7800C1060/U	12.0 Minutes	Purge Timer for RM7838C Only
ST7800C1078/U	14.0 Minutes	Purge Timer for RM7838C Only
ST7800C1094/U	18.0 Minutes	Purge Timer for RM7838C Only
ST7800C1110/U	22.0 Minutes	Purge Timer for RM7838C Only
ST7800C1144/U	45.0 Minutes	Purge Timer for RM7838C Only

7800 Series Accessories or Parts

Application: Accessory or Replacement Part

Material Number	Comments	Used With	
203541/U		S7800 Display	
203765/U	Includes 203541 5-wire Connector	S7800 Display	
204718A/U	Includes 203541 5-wire Connector	S7800 Display	
204718B/U	Includes 203541 5-wire Connector	S7800 Display	
204718C/U	Includes 203541 5-wire Connector	S7800 Display	
205321B/U	Includes 203541 5-wire Connector	S7800 Display	
206311/U	Carrying Case for S7800 Display	S7800 Display	
208727/U		S7810B, S7810M	
221729A/U		7800 Relay Modules	
221818A/U		S7800 Display	
221818C/U		S7800 Display	
50023821-001/U	Includes 203541 5-wire Connector	S7800 Display	
50023821-002/U	Includes 203541 5-wire Connector	S7800 Display	

R8001 SLATE Combustion System

Microprocessor based integrated combustion management system, in a modular format, that provides configurable safety with programmable logic for automatic boiler sequencing, circulation pump control, fan control, electronic ignition, flame supervision, system status indication, firing rate control, load control and limit control. Provides level of safety, functional capability and features beyond conventional controls.

- Modular concept that is DIN Rail mountable for easy assembly
- 24 VDC to 24 VAC to 240 VAC in one system
- Configurable safety modules include: Base, Burner Control, Flame Amp modules, Fuel Air Ratio and Limit
- Programmable logic modules include: Analog I/O and Digital I/O modules, and Annunciation
- Actuators that provide 50 in/lb and 150 in/lb in NEMA 1 or NEMA 4 (300 and 900 in/lb available through Durastep Actuators from Maxon specifically configured for SLATE)
- Function block programming via SLATE AX Tool
- 2 Fuel capability
- Valve Proving
- BACNet, Modbus, and web services capability through SLATE Base
- 7 inch color touch screen display

SLATE Applications

- ModIndustrial and Commercial Burner Boiler Controls
- Air Handling
- Drying Applications
- Automotive Paint Booths
- Single Stage Furnaces and Kilns
- And more

Dimensions Approximate

SLATE Base:
6 3/32 in. Wide x 7 3/32 in High x 5 19/64 in. Deep
Weight oz. (g): 2.1 oz (60 g)
Ambient Temperature: -20°F to +150°F (-29°C to +66°C)
Vibration: 0.5 G environment
Frequency: 50/60 Hz (±10%)

SLATE Modules (does not include sub-base)
2 11/16 in. Wide x 7 3/32 in. High x 4 19/32 in. x 4 19/32 in Deep
Weight oz. (g): 16 oz (454 g)
Ambient Temperature: -20°F to +150°F (-29°C to +66°C)
Vibration: 0.5 G environment
Frequency: 50/60 Hz (±10%)

SLATE Sub-Base:
3 13/32 in. Wide x 7 7/32 in. High x 1 5/32 in Deep
Weight oz. (g): 5 oz (142 g)
Ambient Temperature: -20°F to +150°F (-29°C to +66°C)

SLATE Display
8 17/64 in. Wide x 4 51/64 in. High (panel mounted)
Weight oz. (g): 21 oz (595 g)
Ambient Temperature: +32°F to +158°F (0°C to +70°C)
Humidity: 95% continuous non-condensing

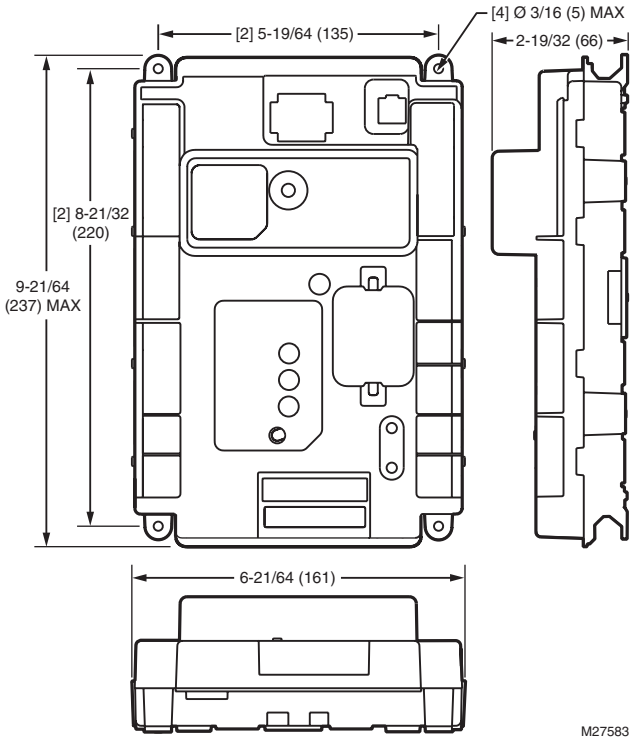
Approvals, Underwriters Laboratories: Listed US Canada File No. MP286
Approvals, Factory Mutual: Approved
Approvals, CE: pending July 2016
Approvals, ISO23552-1: pending July 2016

Product Number	Description
R8001A1001/U	SLATE Base Module-Provides power and external communications (Modbus/TCP, BACnet MSTP or IP, and web services), overall health, web based pages, event log and trend logs
R8001B2001/U	SLATE Burner Control Module-Flame safeguard controls, valve proving, dual fuel capability, configurable safety, and safety relay
R8001S1071/U	SLATE UV Flame Amp with Ampli-Check Module- responds to ultraviolet signal from an ultraviolet type flame detector. Used with C7027 and C7035 detector series
R8001S1051/U	SLATE UV Flame Amp with Shutter-Check Module-responds to ultraviolet signal from an ultraviolet type flame detector. Used with the C7061 detector series.
R8001V1091/U	SLATE UV/Visible Flame Amp with Ampli-Check Module-responds to an ultraviolet/visible light signal from a UV/visible light type flame detector. Used with the C7927, C7962 detector series.
R8001V1031/U	SLATE Rectification Flame Amp with Ampli-Check Module-responds a rectified signal from a rectification type flame detector. Used with the C7000X detector series.
R8001F1041/U	SLATE Infrared Flame Amp with Ampli-Check Module- responds to an infrared signal from an infrared type flame detector to indicate the presence of flame. This flame amplifier is used with the C7915 detector series
R8001C6001/U	SLATE Fuel Air Ratio Control Module- monitors and controls the air fuel ratio for combustion applications
R8001M1050/U	SLATE Low Torque Actuator- 50 in/lb torque size in NEMA 1 enclosure to be used with SLATE Fuel Air Ratio Module (R8001C6001/U)

Product Number	Description
R8001M1150/U	SLATE Low Torque Actuator- 150 in/lb torque size in NEMA 1 enclosure to be used with SLATE Fuel Air Ratio Module (R8001C6001/U)
R8001M4050/U	SLATE Low Torque Actuator- 50 in/lb torque size in NEMA 4 enclosure to be used with SLATE Fuel Air Ratio Module (R8001C6001/U)
R8001M4150/U	SLATE Low Torque Actuator- 150 in/lb torque size in NEMA 4 enclosure to be used with SLATE Fuel Air Ratio Module (R8001C6001/U)
R8001L8001/U	SLATE Limit Module- 12 limit block capability. Choose from high limit, low limit or dual track limit. Can monitor any sensor or pair sensors.
R8001U3001/U	SLATE Digital I/O Module- Digital input/output module with up to 14 opto inputs or 6 relays.
R8001D4001/U	SLATE Analog I/O Module- Universal analog input/output module with configurability
R8001N7001/U	SLATE Annunciator Module- Provides first out annunciation
R8001K5001/U	SLATE 7 inch color touchscreen display
SLATEAXTTOOL	SLATE AX Tool for programming of the SLATE system, configuration of the safety modules and creating display graphics
32008001-002/U	SLATE connector bag assembly that contains connectors for sub-base for remote flame amplifier module or remote reset button connections. This assembly also contains the 2 pin-power connector for the SLATE display
50096820-001/U	SLATE Extension Cable. Allows for connection between one SLATE systems and subsequent SLATE modules on another DIN Rail for space savings in an electrical enclosure.

SOLA™ Hydronic Control

Dimensions in inches (millimeters)



The R7910A SOLA HC is a hydronic boiler control system that provides heat control, flame supervision, circulation pump control, fan control, boiler control, and electric ignition function. It will also provide boiler status and error reporting.

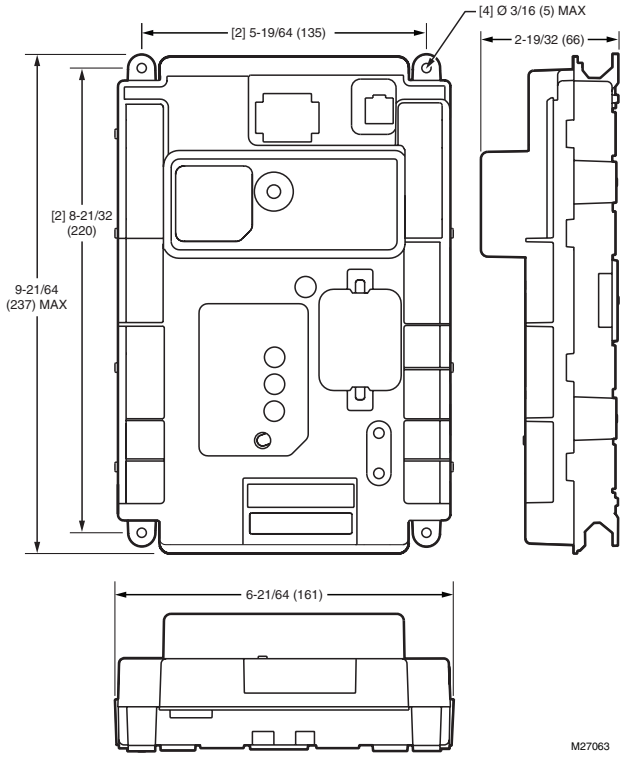
- Frost Protection, Slow Start, Anti-condensate, Boiler Delta-T, Stack Limit, Boiler Limit, DHW Limit, Outlet T-Rise Limit
- Primary Flame Safeguard Control
- Internal or external spark generator.
- Analog NTC Sensor Inputs (10 kohm or 12 kohm).
- Other Analog Inputs
- PID Load Control
- Digital Inputs
- Digital Outputs
- Analog Outputs
- Algorithm Prioritization
- Two Temperature Loops of Control (CH and DHW)
- High Limit Control-CH, DHW, & Stack (Meets UL 353) using dual 10 kohm NTC sensors.
- Fifteen Item Fault Code History including equipment status at time of lockout
- Fifteen Item Alert Code Status including equipment status at time of internal alerts
- 24 Vac Device Power
- 24 or 120 Vac Digital I/O models available.
- Flame Signal test jacks (Vdc)
- Three Status LEDs.
- UV or Flame rod Flame Sensing.
- Flap Valve Check
- Condensate Check
- Neighboring Burner Interaction
- Modbus Heartbeat
- DBI Early Spark Termination
- Flow Switch Input

Application: Hydronic
Frequency: 50-60 Hz ± 5%
Approximate, Dimensions: 9 21/64 in. x 6 21/64 in. x 2 19/32 in. (237 mm x 161 mm x 66 mm)
Comments: Includes Programmable features
Approvals, Control Safety Devices: Acceptable
Approvals, FCC: Part 15, Class B Emissions
Approvals, Underwriters Laboratories (RU)(cRU): File No. MP268 (MCCZ2, MCCZ8).

Material Number	Enclosure Rating	Firing Rate Switch	Flame Sensor Type	Modulation Output	Voltage	Approvals, Underwriters Laboratories
R7910A1001/U	NEMA 1/IP 40		FR/UV	Yes (PWM); Yes (4-20 mA); Yes (0-10 Vdc)	24 Vac Operating; 24 Vac Load	Underwriters Laboratories (RU)(cRU): File No. MP268 (MCCZ2, MCCZ8).
R7910A1019/U	NEMA 1/IP 40	High Fire Switch; Low Fire Switch	FR/UV	Yes (PWM); Yes (4-20 mA); Yes (0-10 Vdc)	24 Vac Operating; 120 Vac Load	Underwriters Laboratories (RU)(cRU): File No. MP268 (MCCZ2, MCCZ8).
R7910A1027/U	NEMA 1/IP 40		FR/UV	Yes (PWM); Yes (4-20 mA); Yes (0-10 Vdc)	24 Vac Operating; 120 Vac Load	Underwriters Laboratories (RU)(cRU): File No. MP268 (MCCZ2, MCCZ8).
R7910A1084/U	NEMA 1/IP 40		FR	Yes (PWM); Yes (4-20 mA); Yes (0-10 Vdc)	24 Vac Operating; 24 Vac Load	Underwriters Laboratories (RU)(cRU): File No. MP268 (MCCZ2, MCCZ8).
R7910A1118/U	NEMA I/IP 40		FR, High Energy Spark	Yes (PWM)	24 Vac Operating; 24 Vac Load	Underwriters Laboratories (RU)(cRU): File No. MP268 (MCCZ2, MCCZ8).
R7910A1138/U			FR/UV	Yes (PWM); Yes (4-20 mA); Yes (0-10 Vdc)	24 Vac Operating; 24 Vac Load	Underwriters Laboratories (RU)(cRU): File No. MP268 (MCCZ2, MCCZ8).
R7910A1183/U			FR/UV	Yes (PWM); Yes (4-20 mA); Yes (0-10 Vdc)	24 Vac Operating; 120 Vac Load	Underwriters Laboratories (RU)(cRU): File No. MP268 (MCCZ2, MCCZ8).

SOLA™ Steam Control

Dimensions in inches (millimeters)



The R7911A SOLA SC is a steam boiler control system that provides heat control, flame supervision, fan control, boiler control, and electric ignition function. It will also provide boiler status and error reporting.

- Slow Start, Stack Limit, Boiler Limit
- Primary Flame Safeguard Control
- Internal or external spark generator.
- Analog Stack Temp NTC Sensor Inputs (10kohm or 12kohm).
- Other Analog Inputs
- PID Load Control
- Digital Inputs
- Digital Outputs
- Analog Outputs
- Algorithm Prioritization
- High Limit Control - Stack (Meets UL 353) using dual 10 kohm NTC sensors.
- Fifteen Item Fault Code History including equipment status at time of lockout
- Fifteen Item Alert Code Status including equipment status at time of internal alerts
- 24 Vac Device Power
- 24 or 120 Vac Digital I/O models available.
- Flame Signal test jacks (Vdc)
- Three Status LEDs.
- UV or Flame rod Flame Sensing.

Application: Steam
Frequency: 50-60 Hz ± 5%
Approximate, Dimensions: 9 21/64 in. x 6 21/64 in. x 2 19/32 in. (237 mm x 161 mm x 66 mm)
Comments: Includes Programmable features
Approvals, Control Safety Devices: Acceptable
Approvals, FCC: Part 15, Class B Emissions
Approvals, Underwriters Laboratories (RU)(cRU): File No. MP268 (MCCZ2, MCCZ8).

Material Number	Enclosure Rating	Firing Rate Switch	Flame Sensor Type	Modulation Output	Voltage
R7911A1000/U	NEMA 1/IP 40		FR/UV	Yes (PWM); Yes (4-20 mA); Yes (0-10 Vdc)	24 Vac Operating; 120 Vac Load
R7911A1026/U	NEMA 1/IP 40	High Fire Switch; Low Fire Switch	FR/UV	No (PWM); Yes (4-20 mA); Yes (0-10 Vdc)	24 Vac Operating; 120 Vac Load

ITEM	R7910A1001	R7910A1019	R7910A1027	R7910A1084	R7910A1118	R7910A1138	R7910A1183	R7911A1000	R7911A1026
24 Vac Control Power Input 24 Vac Control Power Input	●	●	●	●	●	●	●	●	●
24 Vac Demand Circuit (STAT) 24 Vac Demand Circuit (STAT)	●	●	●	●	●	●	●	●	●
24 Vac Load Circuit 24 Vac Load Circuit	●			●	●	●			
120 Vac Load Circuit 120 Vac Load Circuit		●	●				●	●	●
Modulation Output: PWM Modulation Output: PWM	●	●	●	●	●	●	●	●	●
Modulation Output: 4-20 mA or 0-10 Vdc Modulation Output: 4-20 mA or 0-10 Vdc	●	●	●	●		●	●	●	●
High/Low fire Switch Inputs High/Low fire Switch Inputs		●							●
Flame Rod Flame Detection Flame Rod Flame Detection	●	●	●	●	●	●	●	●	●
UV Flame Detection UV Flame Detection	●	●	●			●	●	●	●
S10 Input S10 Input					●				
Flap Valve Input Flap Valve Input						●			
Condensate Input Condensate Input						●			
Neighboring Burner Interaction						●			
Pilot Valve	●	●	●	●		●	●	●	●
Main Valve	●	●	●	●	●	●	●	●	●
External Ignition Option	●	●	●	●		●	●	●	●
Thermostat Input/Heat Anticipator			●	●					
PII Input	●	●	●	●		●	●	●	●
TOD (Time of Day Input)	●	●	●	●		●	●	●	●
Hydronic Contro	●	●	●	●	●	●	●		
Steam Control								●	●
Lead-Lag (Cascade) Control	●	●	●	●	●	●	●	●	●
Expanded Annunciation Capability	●	●	●	●		●	●	●	●
CSD-1 Compliant	●	●	●	●	●	●	●	●	●
Modbus Heartbeat							●		
DBI with Early Spark Termination							●		
Flow Switch Input							●		

ITEM	R7910A1001	R7910A1019	R7910A1027	R7910A1084	R7910A1118	R7910A1138	R7910A1183	R7911A1000	R7911A1026	R7910B1009
24 Vac Control Power Input 24 Vac Control Power Input	●	●	●	●	●	●	●	●	●	●
24 Vac Demand Circuit (STAT) 24 Vac Demand Circuit (STAT)	●	●	●	●	●	●	●	●	●	●
24 Vac Load Circuit 24 Vac Load Circuit	●			●	●	●				●
120 Vac Load Circuit 120 Vac Load Circuit		●	●				●	●	●	
Modulation Output: PWM Modulation Output: PWM	●	●	●	●	●	●	●	●	●	●
Modulation Output: 4-20 mA or 0-10 Vdc Modulation Output: 4-20 mA or 0-10 Vdc	●	●	●	●		●	●	●	●	
High/Low fire Switch Inputs High/Low fire Switch Inputs		●							●	
Flame Rod Flame Detection Flame Rod Flame Detection	●	●	●	●	●	●	●	●	●	●
UV Flame Detection UV Flame Detection	●	●	●			●	●	●	●	
S10 Input S10 Input					●					●
Flap Valve Input Flap Valve Input						●				
Condensate Input Condensate Input						●				
Neighboring Burner Interaction						●				
Pilot Valve	●	●	●	●		●	●	●	●	
Main Valve	●	●	●	●	●	●	●	●	●	●
External Ignition Option	●	●	●	●		●	●	●	●	
Thermostat Input/Heat Anticipator				●	●					●
PII Input	●	●	●	●		●	●	●	●	
TOD (Time of Day Input)	●	●	●	●		●	●	●	●	
Hydronic Control	●	●	●	●	●	●	●			●
Steam Control								●	●	
Lead-Lag (Cascade) Control	●	●	●	●	●	●	●	●	●	●
Expanded Annunciation Capability	●	●	●	●		●	●	●	●	
CSD-1 Compliant	●	●	●	●	●	●	●	●	●	
Modbus Heartbeat							●			
DBI with Early Spark Termination							●			
Flow Switch Input							●			

S7999D SOLA™ System Operator Interface

The S7999D can be used to monitor an individual boiler and also used for multiple boiler applications in a lead/lag arrangement. It consists of 2 RS485 ports and a USB port. The S7999D display can be flush front or mounted behind in a panel cutout. Wiring connections are through a removable 8-pin wiring connector.

- Individual boiler status, configuration, history and diagnostics
- Allows configuration and monitoring of the Sola Controls (R7910 Hydronic Controls or R7911 Steam Control) burner control sequence, flame signal, diagnostics, historical files, and faults
- Allows switching view between multiple boilers and lead-lag master/slaves
- Real-time data trending analysis and transferring saved trend data to Excel spreadsheet
- 7” 800 x 480, 24 bit high resolution color LCD touch screen for clarity
- Audio output with integral speaker for sound output.
- Adjustable backlight control
- Real time clock with coin-cell battery back-up (CR2032)
- Volume control
- Screen Capture function to capture screen images
- USB port for file transfers and software updates
- 2 RS-485 (COM1 & 2) ports for Modbus™ interface to Sola controls and BAS Gateway.
- Windows® CE 6.0 Operating System
- 8-pin connector, back-up battery and mounting hardware are provided

Application: Interface Display
Frequency: 50-60 Hz ± 5%
Ambient Temperature Range: 14°F to 122°F (-10°C to 50°C)
Shipping and Storage Temperature Range: -13°F to 155°F (-25°C to 60°C)
Approximate, Dimensions: 9-13/32 in. wide x 6-21/32 in. high x 1-9/16 in. deep (239 mm wide x 169 mm high x 40 mm deep)
Operating Humidity Range (% RH): 85% RH continuous, non-condensing
Comments: Black Plastic Border
Approvals, FCC: FCC Part 15, Class A digital device
Approvals, Canadian Underwriters Inc.: Component Recognized: File Number MH20613 (MCCZ)
Approvals, Underwriters Laboratories (RU)(cRU): File No. MP268 (MCCZ2, MCCZ8).

Material Number	Voltage	Description	Used With
S7999D1006/U	24 Vac	System Operator Interface with Black Plastic Border	R7910/R7911

PM7910 Program Module

The PM7910 Program Module is an optional plug-in for the R7910 SOLA HC and R7911 Sola SC. From the system level the S7999 System Operator Interface can direct the R7910/R7911 to transfer or retrieve parameter information with the Program Module.

- Can be removed or installed while the R7910 or R7911 is powered.
- Facilitate multiple controller setups.
- Backup and restore the R7910 programmable data including:
  — Non-safety parameter values — Parameter Control Blocks (information on how the parameter values may be modified.)

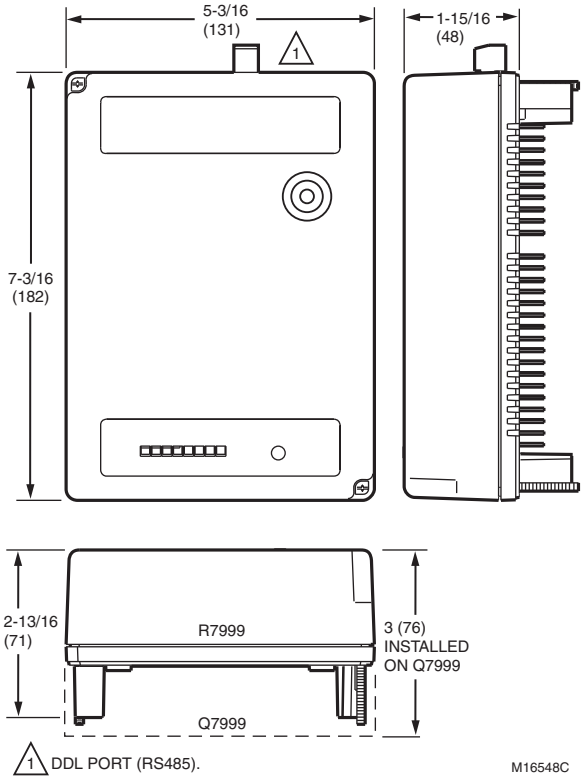
Material Number	Application	Comments
PM7910A1013/U	Support backup and restore	Indicator LEDs - One (Status LED) Blinking LED indicated the Program Module is properly seated and powered from the R7910/R7911

SOLA™ Accessories or Parts

Application: Single element sensor with 6" leadwire with socket.

Material Number	Application
32003971-002/U	10K Ohm Single element sensor with 6" Leadwire with Socket
32003971-003/U	10K Ohm Single element sensor with 42" leadwires, includes wire nuts (2), #8 mounting screws (3), anchors (2), sensor clip (1), tie strap (2)
50001464-006/U	10K Ohm Dual Element Sensor with 6" leadwires with Female Socket
50001464-007/U	10K Ohm Dual Element Sensor with 42" leadwires without connector
50032893-001/U	Bag of connectors for R7910 and R7911 Controllers
50063482-001/U	Replacement Bag Assembly for S7999D, includes: connector, battery, mounting screws, clamp filters.

R7999A ControLinks™ Fuel Air Controller



Uses microprocessor-based technology to control the ML7999 Universal Parallel Positioning Actuators. This represents a value added replacement of mechanical cam and linkage assembly controlling the relationship between fuel, airflow and flue gas recirculation (if used) on a power burner. The ControLinks Fuel Air Control System consists of the R7999 Fuel Air Controller, Q7999 Wiring Subbase, ML7999 Universal Parallel Positioning Actuator and ZM7999 Configuration Software. The R7999, with one communications port, provides communications capabilities similar to those found in the 7800 SERIES controls.

- Fast burner setup via PC or laptop
- Fuel, air, FGR profile download capability
- Two independent fuel profiles with or without FGR
- 7 to 24 point profiles
- Programmable behaviors of all actuators during Purge and Standby
- Programmable behavior of non-selected fuel actuator
- Independent light off and minimum modulation positions
- Wide power voltage input range (100 to 120 Vac, 50/60 Hz Auto/Manual input)
- Manual mode firing rate input
- Pluggable controller to wiring subbase
- Multipurpose communications port
- Field-configurable device
- Integrated boiler shock protection algorithms: Water temperature low fire hold
- Stack temperature low fire hold. FGR and low fire hold
- Selectable FGR hold based on stack temperature
- Programmable behavior of FGR actuator during purge
- Maximum modulation limit capability
- Remote reset input
- Automated actuator endpoint seeking process
- CSD-1 and NFPA acceptable

Voltage: 100 to 120 Vac
Vibration: 0.0 to 0.5g continuous
Shipping and Storage Temperature Range: -40°F to +140°F (-40°C to +60°C)
Approvals, Underwriters Laboratories Inc.: Listed: Report No. MH17367
Operating Humidity Range (% RH): 90% RH maximum, non-condensing

Replacement Parts:
32002515-001/U – 3 pin electrical connector, for R7999

Material Number	Frequency	Description
R7999A1005/U	50 Hz; 60 Hz	Fuel Air Ratio Controller, 100 to 120 Vac, 50/60 Hz.

S7999 ControLinks™ System Display

With the S7999. Each burner control, fuel/air ratio control, expanded annunciator other Modbus devices present on the burner system can be viewed individually to determine its status.

- Color (7" diagonal). Touch Screen User Interface
- Flush Mounting
- Allows setup and monitoring of R7999 ControLinks
- Two RS485 and one USB communication ports
- Screen saver, contrast control and volume control
- Modbus communication allows monitoring up to 99 different controls
- Allows Programmable Expanded Annunciator terminal naming
- Allows R7999 ControLinks EEPROM backup and restore
- Battery backup prevents losing date and time

Application: Interface Display
Temperature Range: Ambient - 14°F to 122°F (Ambient - -10°C to 50°C)
Shipping and Storage Temperature Range: -13°F to 155°F (-25°C to 60°C)
Approvals, Underwriters Laboratories Inc.: Component Listed
Approvals, FCC: FCC Part 15, Class A digital device
Used With: R7999
Operating Humidity Range (% RH): 85% RH continuous, non-condensing

Material Number	Voltage	Description
S7999D1048/U	24 Vac	S7999D System Display for R7999 ControLinks Configuration and System Monitoring

Q7999A ControLinks™ Fuel Air Control Wiring Subbase

Provides terminals for field wiring for the R7999A ControLinks™ Fuel Air Controller. Terminals on the R7999A, B Controller engage the Q7999 contacts to make electrical connections. The Q7999A Subbase is panel-mounted.

- Quick-mount wiring subbase for R7999A, B Fuel Air Ratio Controllers.
- Allows wiring of control system before installation of controller.
- Panel-mounted.
- NEMA 1 enclosure.

Vibration: 0.0 to 0.5g continuous
Shipping and Storage Temperature Range: -40°F to +150°F (-40°C to +65°C)
Approvals, Underwriters Laboratories Inc.: Listed: Report No. MH17367
Operating Humidity Range (% RH): 5 to 95% RH, non-condensing
Weight oz. (k): 10 oz (0.28 kg)

Material Number	Voltage	Frequency	Description
Q7999A1006/U	100 to 120 Vac	50 Hz; 60 Hz	Fuel Air Ratio Controller Wiring Subbase

ML7999A Universal Parallel-Positioning Actuator

ML7294 Non-Spring Return Direct Coupled Actuators control dampers or valves in HVAC applications. The ML7294 Non-Spring Return DCA accepts a current or voltage signal from an electronic controller to position a damper or valve.

- Password protected using eight-digit hexadecimal identification signal
- Separate wiring compartment between line voltage power wiring and low voltage control
- Couples directly to a 1/2-in. shaft with no additional parts required; couples directly to 5/16-in. and 3/8-in. shafts using self-centering shaft reduction accessories
- Shaft coupler assembly available for shafts larger than 1/2-in.
- Bracket accessory kit available for mounting to Honeywell V51 butterfly gas valves
- Visual indication of actuator position
- NEMA 2
- IF54 with weatherproof kit

Vibration: 0.0 to 0.5g continuous
Shipping and Storage Temperature Range: -40°F to +150°F (-40°C to +65°C)
Approvals, Underwriters Laboratories Inc.: Meets UL873
Approvals, CSA: Certified

Operating Humidity Range (% RH): 5 to 95% RH, non-condensing
Approvals, CE: Certified

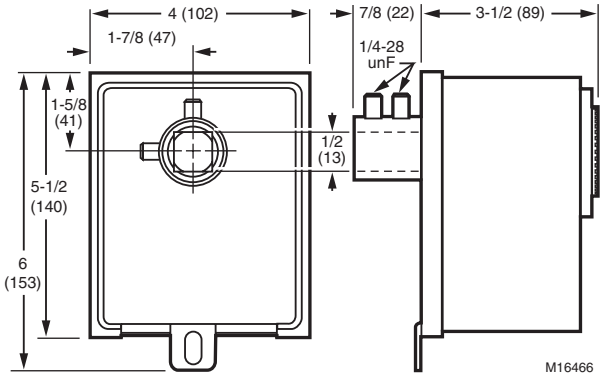
Material Number	Voltage	Frequency	Description
ML7999A2001/U	15 VA, 100 to 240 Vac	50 Hz; 60 Hz	Universal Parallel-Positioning Actuator. Medium torque electronic actuator with a precision feedback potentiometer and integral power supply capable of direct line voltage connection. Must be used with a Series 2 R7999.

ML7999B Universal Direct Coupled Actuator

Honeywell ML7999B universal direct coupled actuator provides 100 lb-in. torque, 4 to 20 mA control input to control combustion air dampers and modulation valves. Includes precision drive shaft control and integral power supply.

- Separate wiring compartment between line voltage power wiring and low voltage control
- Programmable actuator stroke against 4-20 mA input
- Couples directly to 1/2-in. shaft with no additional parts required; couples directly to 5/16- and 3/8-in. shafts using available self-centering shaft reduction accessories
- Shaft coupler assembly available for shafts larger than 1/2-in.
- Bracket accessory kit available for mounting to Honeywell V51 butterfly gas valves
- Visual indication of actuator position
- NEMA 2
- IF54 with weatherproof kit

Dimensions in inches (millimeters)



Vibration: 0.0 to 0.5g continuous
Shipping and Storage Temperature Range: -40°F to +150°F (-40°C to +65°C)
Approvals, Underwriters Laboratories Inc.: Meets UL873
Approvals, CSA: Certified
Operating Humidity Range (% RH): 5 to 95% RH, non-condensing
Approvals, CE: Certified

Accessories:
32002935-001/U – Weatherproofing kit for actuator, ML7999 ControLinks (NEMA 3).

Material Number	Voltage	Frequency	Description
ML7999B1002/U	15 VA, 100 to 240 Vac	50 Hz; 60 Hz	Universal Parallel-Positioning Actuator. Medium torque electronic actuator with a precision feedback potentiometer and integral power supply capable of direct line voltage connection.

ML7999 Accessories

Material Number	Description
201391/U	Shaft Adapter for 3/8 in. round or square valve shaft
32002935-001/U	Weatherproofing kit for actuator, ML7999 ControLinks (NEMA 3).
32003167-001/U	Shaft Adapter for 5/16 in. round or square shaft
32003168-001/U	Shaft Adapter for 3/4 in. round shaft only
32003168-002/U	Shaft Adapter for 5/8 in. round shaft only
32003168-003/U	Shaft Adapter for 9/16 in. round shaft only
32003396-002/U	V51E Mounting Kit for ML7999 Actuator (2-1/2, 3 & 4 in. valves). Includes angle bracket, mounting bracket, screws, nuts and washers, and instructions.
50036542-001/U	Auxiliary Switch Mounting Plate for ML7999B for 201052A or 201052B Auxiliary switch assembly

ZM7999A ControLinks Fuel Air Control System Configuration Software

The ZM7999 Software Configuration Tool reduces burner setup time by letting you create an R7999 Controlinks burner modulation curve. The software assists you through the commissioning process and when it's complete, you can monitor the system real-time.

- Minimum Hardware Requirements: PC or laptop with a Pentium© processor.
- Windows® 95 or Windows® 98.
- 16 MB of RAM.
- 1G hard drive with 100 MB of free memory.
- 4X (or higher) CD-ROM drive.
- Mouse.
- Super VGA color monitor (800 x 600 resolution suggested).

Material Number	Description	Used With
ZM7999A1006/U	Configuration Software	R7999

ControLinks Accessories

Material Number	Description	Used With
32002515-001/U	3 pin electrical connector, for R7999	R7999
50063482-001/U	Replacement Bag Assembly for S7999D, includes: connector, battery, mounting screws, clamp filters.	S7999D

7800 SERIES and R7140 Flame Signal Amplifiers

Solid state plug-in amplifiers that respond to flame detector inputs to indicate the presence of flame when used with 7800 SERIES relay modules.

- Flame failure response time of 0.8 or 3.0 seconds (1.0 or 2.0 for CE approved devices).
- Flame signal strength ranges from 0.0 to 5.0 Vdc.
- Plug into 7800 relay module through printed circuit board edge connector keyed for proper orientation.
- Flame signal test jacks to measure amplifier flame signal voltage.
- Color-coded labels identify flame detection type.
- Dynamic Self-Check Amplifier test the detectors and all electronic components in the flame detection system.
- Ampli-check tests the amplifier and 7800 SERIES Relay.
- None (standard) is just tested at normal system startup.
- 7800 SERIES relay module locks out on safety shutdown with flame detection system failure.
- Compatible with existing Honeywell flame detectors (order separately).

Approvals, Underwriters Laboratories Inc.: Listed: File No. MP268, Guide No. MCCZ
Approvals, CSA: Certified: File No. LR95329-3
Approvals, Swiss RE: Acceptable
Approvals, Factory Mutual: Approved: Report No. 1V9A0.AF

Material Number	Type	Flame Failure Response Time (sec)	Self Checking	Use With Primary Safety Control	Use With Flame Sensor	Comments
R7824C1002/U	Ultraviolet	3.0 sec	Dynamic Self-Check	RM7824	C7024E, F Flame Detector	Color: Green
R7847A1025/U	Rectification	0.8 sec or 1.0 sec	None (standard)	7800 SERIES Relay Modules	Gas: Rectifying Flame Rods C7004, C7005, C7007, C7008, C7009, Q179	Color: Green
R7847A1033/U	Rectification	2.0 sec or 3.0 sec	None (standard)	7800 SERIES Relay Modules	Gas: Rectifying Flame Rods C7004, C7005, C7007, C7008, C7009, Q179; Gas, oil, coal: Ultraviolet Flame Sensor C7012A, C	Color: Green
R7847A1074/U	Rectification	0.8 sec or 1.0 sec	None (standard)	7800 SERIES Relay Modules	Gas: Rectifying Flame Rods C7004, 5, 7, 8, or 9, Q179 for impedance matching for leadwire runs > 50' or Ultraviolet Flame Sensor C7012A, C	Color: Green
R7847A1082/U	Rectification	2.0 sec or 3.0 sec	None (standard)	7800 SERIES Relay Modules	Gas: Rectifying Flame Rods C7004, 5, 7, 8, or 9, Q179 for impedance matching for leadwire runs > 50' or Ultraviolet Flame Sensor C7012A, C	Color: Green
R7847B1023/U	Rectification	0.8 sec or 1.0 sec	Ampli-Check	7800 SERIES Relay Modules	Gas: Rectifying Flame Rods C7004, C7005, C7007, C7008, C7009, Q179	Color: Green
R7847B1031/U	Rectification	2.0 sec or 3.0 sec	Ampli-Check	7800 SERIES Relay Modules	Gas: Rectifying Flame Rods C7004, C7005, C7007, C7008, C7009, Q179; Gas, oil, coal: Ultraviolet Flame Sensor C7012A, C	Color: Green
R7847B1064/U	Rectification	0.8 sec or 1.0 sec	Ampli-Check	7800 SERIES Relay Modules	Gas: Rectifying Flame Rods C7004, 5, 7, 8, or 9, Q179 for impedance matching for leadwire runs > 50' or Ultraviolet Flame Sensor C7012A, C	Color: Green
R7847B1072/U	Rectification	2.0 sec or 3.0 sec	Ampli-Check	7800 SERIES Relay Modules	Gas: Rectifying Flame Rods C7004, 5, 7, 8, or 9, Q179 for impedance matching for leadwire runs > 50' or Ultraviolet Flame Sensor C7012A, C	Color: Green
R7847C1005/U	Rectification	2.0 sec or 3.0 sec	Dynamic Self-Check	7800 SERIES Relay Modules	Gas, oil, coal: Ultraviolet Flame Sensor C7012E, F	Color: Green
R7848A1008/U	Infrared	2.0 sec or 3.0 sec	None (standard)	7800 SERIES Relay Modules	Gas, oil, coal: Infrared (lead sulfide) C7015	Color: Red
R7848B1006/U	Infrared	2.0 sec or 3.0 sec	Ampli-Check	7800 SERIES Relay Modules	Gas, oil, coal: Infrared (lead sulfide) C7015	Color: Red
R7849A1015/U	Ultraviolet	0.8 sec or 1.0 sec	None (standard)	7800 SERIES Relay Modules	Gas, Oil: Minipeeper C7027A, C7035A, C7044	Color: Purple
R7849A1023/U	Ultraviolet	2.0 sec or 3.0 sec	None (standard)	7800 SERIES Relay Modules	Gas, Oil: Minipeeper C7027A, C7035A, C7044	Color: Purple
R7849B1013/U	Ultraviolet	0.8 sec or 1.0 sec	Ampli-Check	7800 SERIES Relay Modules	Gas, Oil: Minipeeper C7027A, C7035A, C7044	Color: Purple
R7849B1021/U	Ultraviolet	2.0 sec or 3.0 sec	Ampli-Check	7800 SERIES Relay Modules	Gas, Oil: Minipeeper C7027A, C7035A, C7044	Color: Purple
R7851B1000/U	Optical	2.0 sec or 3.0 sec	Ampli-Check	7800 SERIES Relay Modules	Gas, Oil, Coal: Optical (UV, Visible Light) C7927, C7962	Color: White
R7851B1018/U	Optical	0.8 sec or 1.0 sec	Ampli-Check	7800 SERIES Relay Modules	Gas, Oil, Coal: Optical (UV, Visible Light) C7927, C7962	Color: White
R7851C1008/U	Optical	2.0 sec or 3.0 sec	Dynamic Self-Check	7800 SERIES Relay Modules	Gas, oil, coal: Optical (UV only) C7961E, F	Color: White
R7852A1001/U	Infrared	2.0 sec or 3.0 sec	None (standard)	7800 SERIES Relay Modules	Gas, oil, coal: Infrared (lead sulfide) C7915	Color: Red/White
R7852B1009/U	Infrared	2.0 sec or 3.0 sec	Ampli-Check	7800 SERIES Relay Modules	Gas, oil, coal: Infrared (lead sulfide) C7915	Color: Red/White
R7861A1026/U	Ultraviolet	2.0 sec or 3.0 sec	Dynamic Self-Check	7800 SERIES Relay Modules	Gas, oil, coal: Ultraviolet Flame Sensor C7061	Color: Purple
R7861A1034/U	Ultraviolet	0.8 sec or 1.0 sec	Dynamic Self-Check	7800 SERIES Relay Modules	Gas, oil, coal: Ultraviolet Flame Sensor C7061	Color: Purple
R7886A1001/U	Ultraviolet	2.0 sec or 3.0 sec	Dynamic Self-Check	7800 SERIES Relay Modules	Gas, oil, coal: Adjustable Sensitivity Ultraviolet Flame Sensor C7076	Color: Blue

R7247; R7248; R7249; R7476 Flame Amplifiers

Solid state plug-in units respond to flame detector signal and indicate presence of flame.

- Use with BC7000; R4140; R4075C, D, E; R4138C, D Flame Safeguard controls and appropriate flame detector and FSP5075A1, FSP5075A3 Flame Amplifier Modules.

Use With Primary Safety Control: R4140; BC7000; R4075C, D, E; R4138C, D; FSP5075

Approvals, Factory Mutual: Approved: Report No. 24181.01

Material Number	Type	Flame Failure Response Time (sec)	Self Checking	Use With Flame Sensor	Approvals, Underwriters Laboratories Inc.	Approvals, CSA	Approvals, Control Safety Devices	Approvals, Swiss RE	Comments
R7247B1003/U	Rectification	2 to 4 sec	Ampli-Check	Gas: Rectifying Flame Rods C7004, C7005, C7007, C7008, C7009, Q179; Gas, oil, coal: Ultraviolet Flame Sensor C7012A, C	Listed: File No. MP268, Guide No. MCCZ2	Certified: File No. LR1620, Guide No. 140-A-2	Acceptable (CSD-1)	Acceptable	Color: Green
R7247C1001/U	Rectification	2 to 4 sec	Dynamic Self-Check	Gas, oil, coal: Ultraviolet Flame Sensor C7012E, F	Listed: File No. MP268, Guide No. MCCZ2	Certified: File No. LR1620, Guide No. 140-A-2	Acceptable (CSD-1)	Acceptable	Color: Green
R7248A1004/U	Infrared	2 to 4 sec	None (standard)	Gas, oil, coal: Infrared (lead sulfide) C7015	Listed: File No. MP268, Guide No. MCCZ	Certified: File No. LR1620, Guide No. 140-A-2 (gas), 300-I-0.2 (oil)	Acceptable (CSD-1)	Acceptable	Color: Red
R7249A1003/U	Ultraviolet	2 to 4 sec	None (standard)	Gas, oil, coal: Ultraviolet (Minipeeper) C7027, C7035	Listed: File No. MP268, Guide No. MCCZ2	Certified: File No. LR1620, Guide No. 140-A-2	Acceptable (CSD-1)	Acceptable	Color: Purple
R7476A1007/U	Ultraviolet	2 to 4 sec	Dynamic Self-Check	Gas, oil, coal: Adjustable Sensitivity Ultraviolet Flame Sensor C7076	Listed: File No. MP268, Guide No. MCCZ	Certified: File No. LR1620, Guide No. 140-A-2 (gas), 300-I-0.2 (oil)			Color: Blue
R7476A1015/U	Ultraviolet	2 sec max.	Dynamic Self-Check	Gas, oil, coal: Adjustable Sensitivity Ultraviolet Flame Sensor C7076	Listed: File No. MP268, Guide No. MCCZ	Certified: File No. LR1620, Guide No. 140-A-2 (gas), 300-I-0.2 (oil)			Color: Blue

Flame Amplifier Accessories

Material Number	Description	Used With
32005301-001/U	T Filter for Rectification Applications	R7847, R7247

Flame Rods and Flame Rod Holders

C7007 Flame Rod Holder

Used to apply flame rod in gas-fired system controlled by rectification type flame safeguard control.

- Use with pressurized fire boxes.
- Hold flame rods firmly over the pilot or burner with a chuck and setscrew arrangement.
- Provide electrical connection through a terminal screw.
- Allow ventilation to cool the unit or to minimize soot deposit through a 1/2 in.
- NPT tapping.
- Mount easily with sleeve or thread type mounting adapters, and a straight or angle body.

Type: Flame Rod
Application: Gas fired pilot or gas fired system.
Approximate, Dimensions: 1 15/16 in. high x 2 3/16 in. diameter x 3 3/16 in. long (49 mm high x 56 mm diameter x 81 mm long)
Approvals, Underwriters Laboratories Inc.: Listed: File No. MP268, Guide No. MCCZ

Approvals, CSA: Certified: File No. L95329-1
Approvals, Swiss RE: Acceptable
Approvals, Factory Mutual: Approved: Report No. 24181.03

Material Number	Electrical Connections	Mounting	Required Components	Comments	Used With
C7007A1001/U	Terminal screw	1/2 in.-14 NPT male	102709A -12 in. Flame Rod; 102709B -18 in. Flame Rod; 102709C -24 in. Flame Rod; 102709D -36 in. Flame Rod; or 102709E -48 in. Flame Rod	Holder only, order Kanthal flame rod separately.	Flame Amplifiers: R7247A, B, R7847A, B, R7257, R7289

C7008 Flame Rod Holder

Miniature "spark plug" type flame rod holder with threaded base, snap-on cover and Kanthal A-1 Flame Rod.

- Use with Honeywell Flame Safeguard controls requiring rectification-type flame detection.
- Use only with gas.
- Install with or without cover.
- Comes in several different lengths and can be cut to exact desired length.
- Uses Rajah electrical connector.

Type: Flame Rod
Application: Gas fired pilot or gas fired system.
Approximate, Dimensions: Holder: 7/8 in. diameter x 3 3/4 in. long (Holder: 22 mm diameter x 95 mm long)
Approvals, Underwriters Laboratories Inc.: Listed: File No. MP268, Guide No. MCCZ

Approvals, CSA: Certified: File No. L95329-1
Approvals, Swiss RE: Acceptable
Approvals, Factory Mutual: Approved: Report No. 24181.03

Material Number	Electrical Connections	Mounting	Includes	Used With
C7008A1000/U	Rajah electrical connector	1/4 in. NPT male	6" Flame rod and holder	Flame Amplifiers: R7247A, B, R7847A, B, R7257, R7289
C7008A1018/U	Rajah electrical connector	1/4 in. NPT male	12" Flame rod and holder	Flame Amplifiers: R7247A, B, R7847A, B, R7257, R7289
C7008A1026/U	Rajah electrical connector	1/4 in. NPT male	18" Flame rod and holder	Flame Amplifiers: R7247A, B, R7847A, B, R7257, R7289
C7008A1034/U	Rajah electrical connector	1/4 in. NPT male	24" Flame rod and holder	Flame Amplifiers: R7247A, B, R7847A, B, R7257, R7289
C7008A1174/U	Rajah electrical connector	1/4 in. NPT male	12" Flame rod and holder	Flame Amplifiers: R7247A, B, R7847A, B, R7257, R7289
C7008A1182/U	Rajah electrical connector	1/4 in. NPT male	24" Flame rod and holder	Flame Amplifiers: R7247A, B, R7847A, B, R7257, R7289

C7009 Flame Rod Holder

Subminiature "spark plug" type flame rod holder with flame rod.
- Use on industrial flame-retention gas burner nozzles.
- Works with Honeywell Flame Safeguard controls requiring rectification type flame detector.
- Mounts in areas with limited space because flame rod can be cut to desired length.
- Uses Rajah electrical connector.

Type: Flame Rod
Application: Gas fired pilot or gas fired system.
Approximate, Dimensions: Holder: 3/8 in. diameter x 2 3/8 in. long (Holder: 10 mm diameter x 60 mm long)
Approvals, Underwriters Laboratories Inc.: Listed: File No. MP268, Guide No. MCCZ
Approvals, CSA: Certified: File No. L95329-1
Approvals, Swiss RE: Acceptable
Approvals, Factory Mutual: Approved: Report No. 24181.03

Material Number	Electrical Connections	Mounting	Includes	Comments	Used With
C7009A1009/U	Rajah electrical connector	1/8 in. NPT male	Flame rod and holder	4 in. (102 mm) flame rod	Flame Amplifiers: R7247A, B, R7847A, B, R7257, R7289
C7009A1025/U	Rajah electrical connector	1/8 in. NPT male	Flame rod and holder	12 in. (305 mm) flame rod	Flame Amplifiers: R7247A, B, R7847A, B, R7257, R7289

Flame Rod Detector Accessories or Parts

Material Number	Description
102709B/U	Kanthal Flame Rod - 18 in. (.182" diameter) for C7004B, C7007A, C7011A
102709C/U	Kanthal Flame Rod - 24 in. (.182" diameter) for C7004B, C7007A, C7011A
102709D/U	Kanthal Flame Rod - 36 in. (.182" diameter) for C7004B, C7007A, C7011A
105478A/U	Kanthal Flame Rod - 6 in. (.182" diameter-threaded 6-32) for C7008
105478B/U	Kanthal Flame Rod - 12 in. (.182" diameter-threaded 6-32) for C7008
105478C/U	Kanthal Flame Rod - 18 in. (.182" diameter-threaded 6-32) for C7008
105478D/U	Kanthal Flame Rod - 24 in. (.182" diameter-threaded 6-32) for C7008

C7012 Solid State Purple Peeper® Ultraviolet Flame Detector

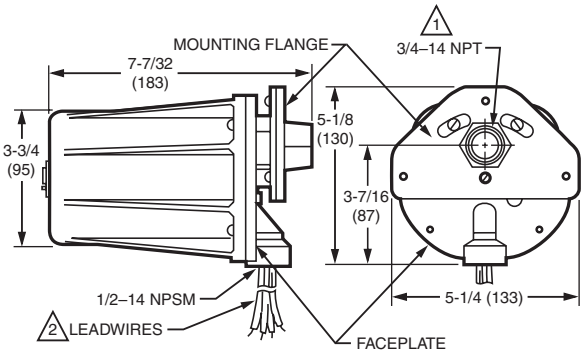
Solid state electronic flame detectors for use with Honeywell Flame Safeguard controls and amplifiers. Sense ultraviolet radiation produced by combustion of gas, oil, coal or other fuels.

- Mount horizontally, vertically or at any angle in between.
- Provide quick electrical hookup with threaded conduit fitting and color-coded leadwires.
- Reduced nuisance shutdowns by wiring two in parallel.
- C7012E1278 5 pin Brad Harrison type (formally 41307N) mating connector not supplied nor available through Honeywell.
- C7012A, E meets NEMA 4 standards with viewing window rated to 20 psi.
- C7012C, F has an explosion-proof housing for use in hazardous atmospheres with a viewing window rated to 100 psi.

Type: Ultraviolet, Purple Peeper
Application: Gas, Oil or Coal fired burners
Lead Length: 96 in. (2438 mm)
Power Consumption: 2.5 W
Approvals, CSA: Certified: Master Report LR95329-1
Approvals, Swiss RE: Acceptable
Approvals, Factory Mutual: Approved: Report No. 14740.01

Material Number	Frequency	Weight	NEMA Rating	Electrical Connections	Mounting	Electrical Ratings	Ambient Temperature Range	Approvals, Underwriters Laboratories Inc.	Approvals, Others	Includes	Used With
C7012A1145/U	50 Hz; 60 Hz	4.25 lb (1.9 kg)	NEMA 4	4 NEC Class 1 Color-coded lead wires.	3/4 in. NPT	120 Vac	25°F to 175°F (-4°C to +79°C)	Listed: File No. MP268, Guide No. MCCZ		Cast case and cover	Flame Amplifiers: R7247A, R7847A, R7257; Flame Amplifiers: R7247A, B; R7847A, B; R7257
C7012A1152/U	50 Hz; 60 Hz	4.25 lb (1.9 kg)	NEMA 4	4 NEC Class 1 Color-coded lead wires.	1 in. NPT	120 Vac	25°F to 175°F (-4°C to +79°C)	Listed: File No. MP268, Guide No. MCCZ		Cast case and cover	Flame Amplifiers: R7247A, B; R7847A, B; R7257
C7012A1160/U	50 Hz; 60 Hz	4.25 lb (1.9 kg)	NEMA 4	4 NEC Class 1 Color-coded lead wires.	1 in. NPT	120 Vac	-40°F to +175°F (-40°C to +79°C)	Listed: File No. MP268, Guide No. MCCZ		Cast case and cover	Flame Amplifiers: R7247A, B; R7847A, B; R7257
C7012A1186/U	50 Hz; 60 Hz	4.25 lb (1.9 kg)	NEMA 4	4 NEC Class 1 Color-coded lead wires.	3/4 in. NPT	208 Vac	25°F to 175°F (-4°C to +79°C)	Listed: File No. MP268, Guide No. MCCZ		Cast case and cover	Flame Amplifiers: R7247A, B; R7847A, B; R7257
C7012A1194/U	50 Hz; 60 Hz	4.25 lb (1.9 kg)	NEMA 4	4 NEC Class 1 Color-coded lead wires.	3/4 in. NPT	240 Vac	25°F to 175°F (-4°C to +79°C)	Listed: File No. MP268, Guide No. MCCZ		Cast case and cover	Flame Amplifiers: R7247A, B; R7847A, B; R7257
C7012A1202/U	50 Hz; 60 Hz	4.25 lb (1.9 kg)	NEMA 4	4 NEC Class 1 Color-coded lead wires.	3/4 in. NPT	100 Vac	25°F to 175°F (-4°C to +79°C)	Listed: File No. MP268, Guide No. MCCZ		Cast case and cover	Flame Amplifiers: R7247A, R7847A, R7257
C7012A1210/U	50 Hz; 60 Hz	4.25 lb (1.9 kg)	NEMA 4	4 NEC Class 1 Color-coded lead wires.	3/4 in. NPT	120 Vac	25°F to 175°F (-4°C to +79°C)	Listed: File No. MP268, Guide No. MCCZ		Cast case and cover	Flame Amplifiers: R7247A, R7847A, R7257
C7012C1042/U	50 Hz; 60 Hz	14.5 lb (6.6 kg)	Explosion Proof	4 NEC Class 1 Color-coded lead wires.	1 in. NPT	120 Vac	25°F to 175°F (-4°C to +79°C)	Listed: File No. E34649, Guide No. ZTSZ			Flame Amplifiers: R7247A, B; R7847A, B; R7257
C7012G1019/U	50 Hz	4.25 lb (1.9 kg)	NEMA 4	5 NEC Class 1 Color-coded lead wires.	3/4 in. NPT	220 Vac	25°F to 175°F (-4°C to +79°C)	Listed: File No. MP268, Guide No. MCCZ	Meets DIN Standards	Cast case and cover	Flame Amplifiers: R7247C, R7847C

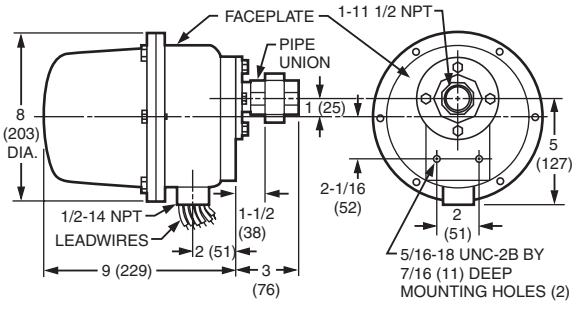
Dimensiions in inches (millimeters)



1 C7061A1046, C7061A1053: INCH NPT

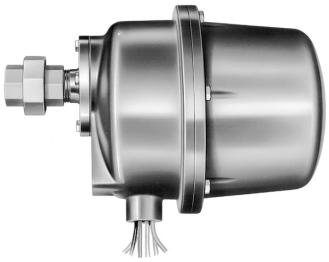
2 C7061A1038 AND C7061A1046: TYPE CONNECTOR.

M10167D



M1963A

C7012 Solid State Purple Peeper® Ultraviolet Flame Detector (Self-Checking)



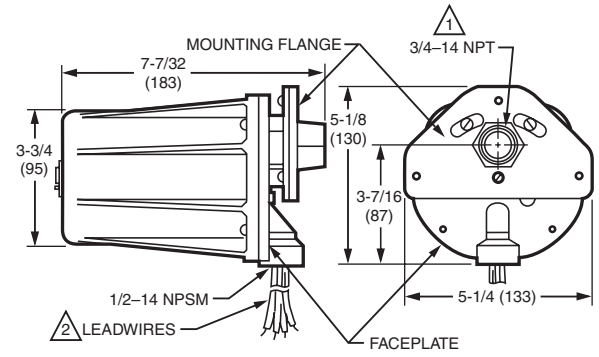
Solid state electronic flame detectors for use with Honeywell Flame Safeguard controls and amplifiers. Sense ultraviolet radiation produced by combustion of gas, oil, coal or other fuels.

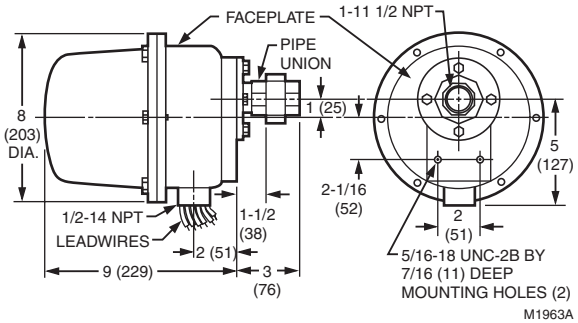
- Mount horizontally, vertically or at any angle in between.
- Provide quick electrical hookup with threaded conduit fitting and color-coded leadwires.
- Reduced nuisance shutdowns by wiring two in parallel.
- C7012E1278 5 pin Brad Harrison type (formally 41307N) mating connector not supplied nor available through Honeywell.
- C7012A, E meets NEMA 4 standards with viewing window rated to 20 psi.
- C7012C, F has an explosion-proof housing for use in hazardous atmospheres with a viewing window rated to 100 psi.

Type: Ultraviolet, Purple Peeper, Self-Checking
Application: Gas, Oil or Coal fired burners
Lead Length: 96 in. (2438 mm)
Power Consumption: 7.0 W
Approvals, CSA: Certified: Master Report LR95329-1
Approvals, Swiss RE: Acceptable
Approvals, Factory Mutual: Approved: Report No. 14740.01
Used With: Flame Amplifiers: R7247C, R7847C

Material Number	Frequency	Weight	NEMA Rating	Electrical Connections	Mounting	Electrical Ratings	Ambient Temperature Range	Approvals, Underwriters Laboratories Inc.	Approvals, Others	Includes
C7012E1104/U	50 Hz; 60 Hz	4.25 lb (1.9 kg)	NEMA 4	6 NEC Class 1 Color-coded lead wires.	3/4 in. NPT	120 Vac	-20°F to +175°F (-20°C to +79°C)	Listed: File No. MP268, Guide No. MCCZ		Cast case and cover
C7012E1112/U	50 Hz; 60 Hz	4.25 lb (1.9 kg)	NEMA 4	6 NEC Class 1 Color-coded lead wires.	1 in. NPT	120 Vac	-20°F to +175°F (-20°C to +79°C)	Listed: File No. MP268, Guide No. MCCZ		Cast case and cover
C7012E1120/U	50 Hz; 60 Hz	4.25 lb (1.9 kg)	NEMA 4	6 NEC Class 1 Color-coded lead wires.	1 in. NPT	120 Vac	-40°F to +175°F (-40°C to +79°C)	Listed: File No. MP268, Guide No. MCCZ		Cast case and cover
C7012E1146/U	50 Hz; 60 Hz	4.25 lb (1.9 kg)	NEMA 4	6 NEC Class 1 Color-coded lead wires.	3/4 in. NPT	208 Vac	-20°F to +175°F (-20°C to +79°C)	Listed: File No. MP268, Guide No. MCCZ		Cast case and cover, with Hot refractory tube
C7012E1153/U	50 Hz; 60 Hz	4.25 lb (1.9 kg)	NEMA 4	6 NEC Class 1 Color-coded lead wires.	3/4 in. NPT	240 Vac	-20°F to +175°F (-20°C to +79°C)	Listed: File No. MP268, Guide No. MCCZ		Cast case and cover
C7012E1187/U	50 Hz	4.25 lb (1.9 kg)	NEMA 4	6 NEC Class 1 Color-coded lead wires.	3/4 in. NPT	220 Vac	-20°F to +175°F (-20°C to +79°C)	Listed: File No. MP268, Guide No. MCCZ	DIN (Europe)	Cast case and cover
C7012E1195/U	50 Hz	4.25 lb (1.9 kg)	NEMA 4	6 NEC Class 1 Color-coded lead wires.	3/4 in. NPT	110 Vac	-20°F to +175°F (-20°C to +79°C)	Listed: File No. MP268, Guide No. MCCZ	BGC (Europe)	Cast case and cover
C7012E1203/U	50 Hz; 60 Hz	4.25 lb (1.9 kg)	NEMA 4	6 NEC Class 1 Color-coded lead wires.	3/4 in. NPT	240 Vac	-20°F to +175°F (-20°C to +79°C)	Listed: File No. MP268, Guide No. MCCZ	BGC (Europe)	Cast case and cover
C7012E1278/U	50 Hz; 60 Hz	4.25 lb (1.9 kg)	NEMA 4	Brad Harrison type number 41310 connector	1 in. NPT	120 Vac	-20°F to +175°F (-20°C to +79°C)	Listed: File No. MP268, Guide No. MCCZ		Cast case and cover
C7012F1052/U	50 Hz; 60 Hz	14.5 lb (6.6 kg)	Explosion Proof	6 NEC Class 1 Color-coded lead wires.	1 in. NPT	120 Vac	-20°F to +175°F (-20°C to +79°C)	Listed: File No. E34649, Guide No. ZTSZ		Explosion-proof, two piece, violet, cast aluminum enclosure

Dimensiions in inches (millimeters)



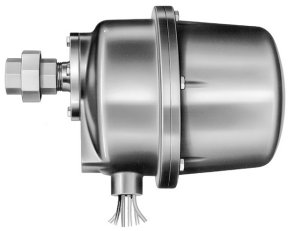


1 C7061A1046, C7061A1053: INCH NPT

2 C7061A1038 AND C7061A1046: TYPE CONNECTOR.

M10167D

C7024 Solid State Purple Peeper® Ultraviolet Flame Detector



24 Vdc solid state electronic flame detectors for sensing the ultraviolet radiation emitted by the combustion of most carbon containing fuels, such as natural gas, LP gases, and oil.

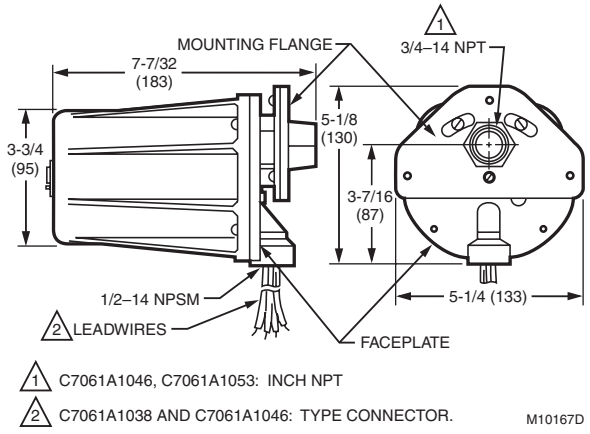
- Use with R7824C Dynamic Self-Check Flame Signal Amplifier.
- Circuitry provides low power consumption and high reliability.
- Mount horizontally, vertically or at any angle in between.
- Field-replaceable UV radiation sensing tube and quartz viewing window.
- Quick electrical installation with threaded conduit fitting and color-coded leadwires.
- Reduce nuisance shutdowns by wiring two in parallel.
- Oscillating shutter interrupts UV radiation using the R7824C amplifier.
- C7024E meets NEMA 4 standards with viewing window rated to 20 psi.
- C7024F has an explosion-proof housing for use in hazardous atmospheres with a viewing window rated to 100 psi.

Type: Ultraviolet, Purple Peeper, Self-Checking
Application: Coal fired burners; Gas fired burners; Oil fired burners
Lead Length: 96 in. (2438 mm)
Electrical Connections: Six NEC CLASS 1 color-coded leaders
Electrical Ratings: 24 Vdc
Power Consumption: 7.8 W maximum.

Ambient Temperature Range: -20°F to +175°F (-20°C to +79°C)
Approvals, CSA: Certified: Master Report LR95329-3
Used With: Flame Amplifiers: R7824C

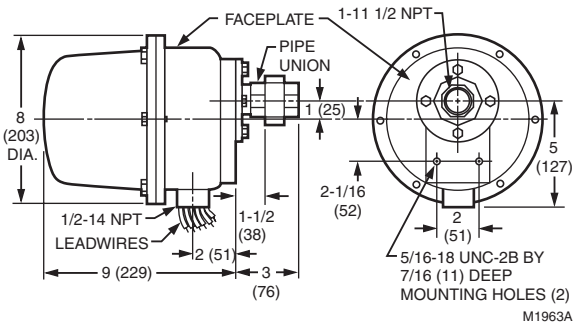
Accessories:
190971G/U – 24 Vdc Coil and Shutter Assembly for C7024E, F; C7961

Dimensiions in inches (millimeters)



1 C7061A1046, C7061A1053: INCH NPT
2 C7061A1038 AND C7061A1046: TYPE CONNECTOR.

M10167D



M1963A

Material Number	NEMA Rating	Mounting	Approximate, Dimensions	Weight	Approvals, Underwriters Laboratories Inc.	Includes	Comments
C7024E1001/U	NEMA 4	3/4 in. NPT	5 1/4 in. diameter (includes mounting flange) x 7 7/32 in. long (133 mm diameter (includes mounting flange) x 183 mm long)	4.25 lb (1.9 kg)	Component Recognized: File No. MP268	Cast case and cover	Flame Amplifiers: R7824C
C7024F1009/U	Explosion Proof	1 in. NPT	8 in. diameter x 12 in. long (203 mm diameter x 305 mm long)	14.5 lb (6.6 kg)	Component Recognized: For use in hazardous locations; Class 1 Groups C and D; Class 2, Groups E, F and G; File no. E34649		Flame Amplifiers: R7824C

C7027; C7044 Minipeeper Ultraviolet Flame Detector

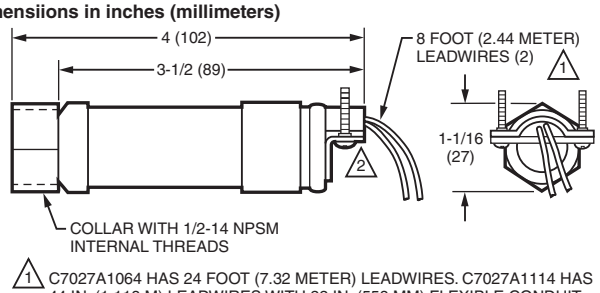
Compact Flame Detector for use with flame safeguard controls with ultraviolet amplifiers.

- Use with Honeywell Flame Safeguard primary safety controls and burners requiring ultraviolet flame detection.
- C7027 mounts on a 1/2 in. sighting pipe by using an integral collar.
- Detectors can be wired in parallel for difficult sighting applications.
- C7027 seals against pressures up to 5 psi (34.5 kPa) when correctly installed.
- Allows for blast tube mounting due to compact size.
- C7044 mounts with a two screw bracket.
- The C7044 UV sensor tube is enclosed in a stainless steel housing.
- C7044 has the capability of side or end viewing in flame monitoring applications.

Type: Ultraviolet, Minipeeper
Electrical Connections: 2 NEC Class 1 leadwires
Vibration: 0.5 G max
Approvals, Underwriters Laboratories Inc.: Listed: File No. MP268, Guide No. MCCZ
Approvals, CSA: Certified: Master Report LR95329-1
Approvals, Swiss RE: Acceptable
Approvals, Factory Mutual: Approved: Report No. 24181.03
Used With: Flame Amplifiers: R7249A, B, R7849A, B, R7749B, R7259, R7290

Material Number	Application	Lead Length	Mounting	Ambient Temperature Range	Approvals, Others	Includes	Comments
C7027A1023/U	Coal fired burners; Gas fired burners; Oil fired burners	96 in. (2438 mm)	Integral nut for 1/2 in. sighting pipe.	0°F to 215°F (-18°C to +102°C)			Detects ultraviolet radiation in flames
C7027A1031/U	Coal fired burners; Gas fired burners; Oil fired burners	96 in. (2438 mm)	Integral nut for 1/2 in. sighting pipe.	-40°F to 215°F (-40°C to 102°C)			Detects ultraviolet radiation in flames
C7027A1049/U	Coal fired burners; Gas fired burners; Oil fired burners	96 in. (2438 mm)	Integral nut for 1/2 in. sighting pipe.	0°F to 215°F (-18°C to +102°C)		1/2 in. NPT threaded spud connector.	Detects ultraviolet radiation in flames
C7027A1056/U	Coal fired burners; Gas fired burners; Oil fired burners	96 in. (2438 mm)	Integral nut for 1/2 in. sighting pipe.	0°F to 215°F (-18°C to +102°C)	DIN (Europe)		Detects ultraviolet radiation in flames
C7027A1064/U	Coal fired burners; Gas fired burners; Oil fired burners	288 in. (7315 mm)	Integral nut for 1/2 in. sighting pipe.	-40°F to 215°F (-40°C to 102°C)		1/2 in. NPT threaded spud connector.	Detects ultraviolet radiation in flames
C7027A1072/U	Coal fired burners; Gas fired burners; Oil fired burners	96 in. (2438 mm)	Integral nut for 1/2 in. sighting pipe.	-40°F to 215°F (-40°C to 102°C)		1/2 in. NPT threaded spud connector.	Detects ultraviolet radiation in flames
C7027A1080/U	Coal fired burners; Gas fired burners; Oil fired burners	96 in. (2438 mm)	Integral nut for 1/2 in. sighting pipe.	0°F to 215°F (-18°C to +102°C)		136733 Heat Block and 390427B bushing	Detects ultraviolet radiation in flames
C7027A1114/U	Coal fired burners; Gas fired burners; Oil fired burners	44 in. (1118 mm)	Integral nut for 1/2 in. sighting pipe.	0°F to 215°F (-18°C to +102°C)		installed 22" flexible conduit	Detects ultraviolet radiation in flames
C7027A1122/U	Oil fired burners; Gas fired burners; Coal fired burners	96 in. (2438 mm)	Integral nut for 1/2 in. sighting pipe.	-40°F to 215°F (-40°C to 102°C)		1/2 in. NPT threaded spud connector.	Detects ultraviolet radiation in flames
C7027A1130/U	Gas fired burners; Oil fired burners; Coal fired burners	96 in. (2438 mm)	Integral nut for 1/2 in. sighting pipe.	-40°F to +215°F (-40°C to +102°C)			Detects ultraviolet radiation in flames
C7044A1006/U	Coal fired burners; Gas fired burners; Oil fired burners	72 in. (1829 mm)	Mounting Bracket provided	0°F to 215°F (-18°C to +102°C)		Mounting bracket	Detects ultraviolet radiation in flames - Side Viewing

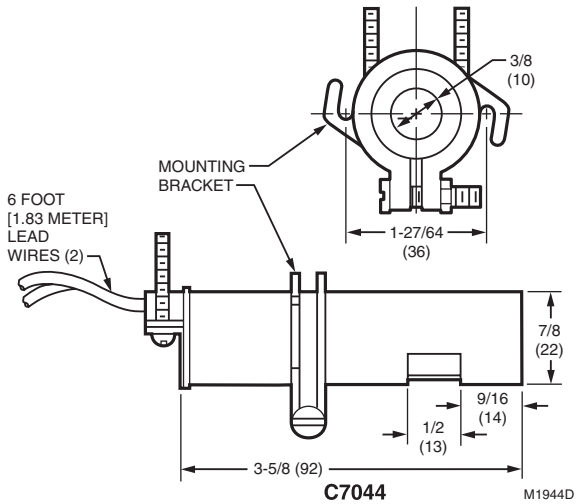
Dimensiions in inches (millimeters)



1 C7027A1064 HAS 24 FOOT (7.32 METER) LEADWIRES. C7027A1114 HAS 44 IN. (1.118 M) LEADWIRES WITH 22 IN. (558 MM) FLEXIBLE CONDUIT.

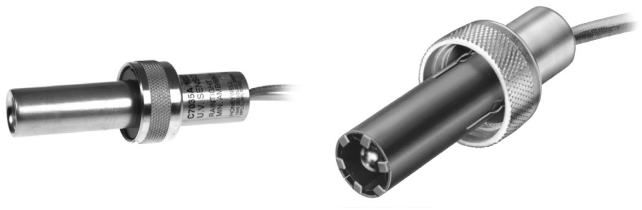
2 MODELS AVAILABLE WITH SPUD CONNECTOR (1/2-14 NPSM INTERNAL THREADS) INSTEAD OF CLAMP TYPE CONNECTOR.

C7027 M1943G



C7044 M1944D

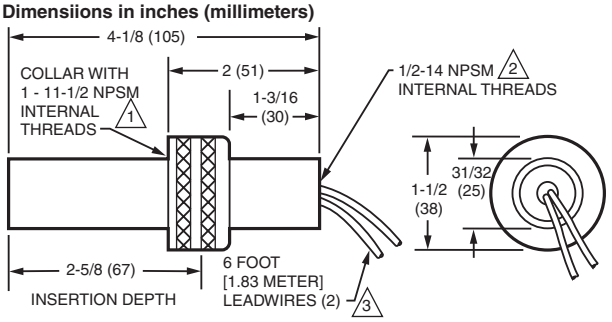
C7035 Minipeeper Ultraviolet Flame Detector



Compact flame detector for use with flame safeguard controls with ultraviolet amplifiers.

- Use with Honeywell Flame Safeguard primary safety controls and burners requiring ultraviolet flame detection.
- Mounts on a 1 in. sighting pipe by using an integral collar.
- Protects the sensing tube with a shield.
- Meets outdoor rain tight requirements of Underwriters Laboratories Inc., NEMA 4 and NEMA 4X.
- Wires in parallel for difficult sighting applications.
- Seals against pressures as high as 5 psi (34.5 kPa) when correctly installed.
- Field-replaceable ultraviolet sensing tube.

Dimensiions in inches (millimeters)



1 DIN APPROVED C7035A1064 HAS 1-11 BSP.P1 INTERNAL MOUNTING THREADS.

2 DIN APPROVED C7035A1064 HAS 1/2-14 BSP-F INTERNAL MOUNTING THREADS.

3 C7035A1056 HAS 12 FOOT (3.66 METER) LEADWIRES.

C7035 M1945E

Type: Ultraviolet, Minipeeper
NEMA Ratings: NEMA 3 and NEMA 4
Electrical Connections: 2 NEC Class 1 leadwires
Vibration: 0.5 G max
Mounting: Integral nut for 1 in. sighting pipe.
Approximate, Dimensions: 1 1/2 in. diameter x 4 1/8 in. long (38 mm diameter x 105 mm long)
Weight: 6 oz (0.17 kg)
Approvals, Underwriters Laboratories Inc.: Listed: File No. MP268, Guide No. MCCZ
Approvals, CSA: Certified: Master Report LR95329-1
Approvals, Swiss RE: Acceptable
Approvals, Factory Mutual: Approved: Report No. 24181.03
Comments: Detects ultraviolet radiation in flames
Used With: Flame Amplifiers: R7249A, B, R7849A, B, R7749B, R7259, R7290

Material Number	Application	Lead Length	Ambient Temperature Range	Approvals, Others	Includes
C7035A1023/U	Coal fired burners; Gas fired burners; Oil fired burners	72 in. (1829 mm)	0°F to 250°F (-18°C to +121°C)		
C7035A1031/U	Coal fired burners; Gas fired burners; Oil fired burners	72 in. (1829 mm)	-40°F to +250°F (-40°C to +121°C)		
C7035A1049/U	Coal fired burners; Gas fired burners; Oil fired burners	72 in. (1829 mm)	0°F to 250°F (-18°C to +121°C)	DIN (Europe)	
C7035A1056/U	Coal fired burners; Gas fired burners; Oil fired burners	144 in. (3658 mm)	-40°F to +250°F (-40°C to +121°C)		
C7035A1064/U	Coal fired burners; Gas fired burners; Oil fired burners	72 in. (1829 mm)	-40°F to +250°F (-40°C to +121°C)		
C7035A1080/U	Coal fired burners; Gas fired burners; Oil fired burners	72 in. (1829 mm)	0°F to 250°F (-18°C to +121°C)		600F leads
C7035A1098/U	Oil fired burners; Gas fired burners; Coal fired burners	72 in. (1829 mm)	-40°F to +250°F (-40°C to +121°C)		

C7061 Dynamic Self-Check Ultraviolet Flame Detector

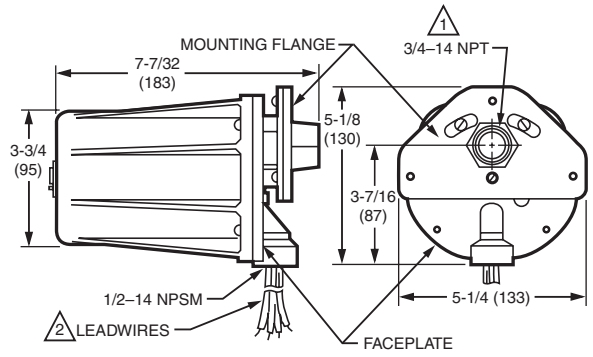
Dynamic self-checking flame detector used with R7861 Dynamic Self-check Amplifiers for sensing the ultraviolet radiation generated by the combustion of gas, oil, or other fuels.

- Oscillating shutter interrupts ultraviolet radiation reaching the UV sensor to provide the UV sensor tube checking function.
- Can be mounted horizontally, vertically or at any angle in between.
- The detector requires faceplate alignment and has integral locating reference points to assure proper operation of the shutter mechanism.
- Field replaceable ultraviolet sensing tube and quartz viewing window.
- Models with threaded conduit fitting and color-coded leadwires allow rapid electrical installation.
- C7061A1038 or A1046 5 pin Brad Harrison type (formally 41307N) mating connector not supplied nor available through Honeywell.
- Two detectors can be wired in parallel to reduce nuisance shutdowns in difficult flame sighting applications.
- Protective heat block built into mounting flange.
- -40°F (-40°C) rated ultraviolet sensing tube is supplied.
- C7061E meets NEMA 4 standards with viewing window rated to 20 psi.
- C7061F has an explosion-proof housing for use in hazardous atmospheres with a viewing window rated to 100 psi.

Type: Ultraviolet, Purple Peeper, Self-Checking
Application: Gas fired burners; Oil fired burners
Comments: Dynamic self-checking flame detector
Used With: Flame Amplifiers: R7861
Approvals, Underwriters Laboratories Inc.: C7061A, M-Listed: File No. MP268, Guide No. MCCZ; C7061F-Recognized: For use in hazardous locations, Class 1 Groups C and D; class 2, Groups E, F and G; File no. E34649
Approvals, CSA: Certified: Master Report LR95329-1
Approvals, Swiss RE: Acceptable
Approvals, Factory Mutual: Approved: Report No. 14740.01

Material Number	NEMA Rating	Lead Length	Electrical Connections	Mounting	Electrical Ratings	Frequency	Ambient Temperature Range	Approvals, Others
C7061A1004/U	NEMA 4	77 in. (1981 mm)	PVC jacketed cable	3/4 in. NPT	120 Vac	50 Hz; 60 Hz	-40°F to +175°F (-40°C to +79°C)	
C7061A1012/U	NEMA 4	96 in. (2438 mm)	Color-coded leadwires	3/4 in. NPT	120 Vac	51 Hz; 60 Hz	-40°F to +175°F (-40°C to +79°C)	
C7061A1020/U	NEMA 4		Terminal block	3/4 in. NPT	120 or 230 Vac	52 Hz; 60 Hz	-40°F to +175°F (-40°C to +79°C)	
C7061A1038/U	NEMA 4		Brad Harrison type number 41310 connector	3/4 in. NPT	120 Vac	53 Hz; 60 Hz	-40°F to +175°F (-40°C to +79°C)	
C7061A1046/U	NEMA 4		Brad Harrison type number 41310 connector	1 in. NPT	120 Vac	54 Hz; 60 Hz	-40°F to +175°F (-40°C to +79°C)	
C7061A1053/U	NEMA 4	96 in. (2438 mm)	Color-coded leadwires	1 in. NPT	120 Vac	55 Hz; 60 Hz	-40°F to +175°F (-40°C to +79°C)	
C7061F1003	Explosion Proof		Terminal block	1 in. NPT	120 or 230 Vac	56 Hz; 60 Hz	-40°F to +175°F (-40°C to +79°C)	CE and conforms to EEXD IIc
C7061F2001/U	Explosion Proof	96 in. (2438 mm)	Color-coded leadwires	1 in. NPT	120 Vac	57 Hz; 60 Hz	-40°F to +175°F (-40°C to +79°C)	
C7061M1008/U	NEMA 4	96 in. (2438 mm)	Color-coded leadwires	1 in. NPT	120 Vac	58 Hz; 60 Hz	-4°F to +175°F (-20°C to +79°C)	
C7061M1016/U	NEMA 4		Brad Harrison type number 41310 connector	1 in. NPT	120 Vac	59 Hz; 60 Hz	-4°F to +175°F (-20°C to +79°C)	

Dimensions for C7061A in inches (millimeters)

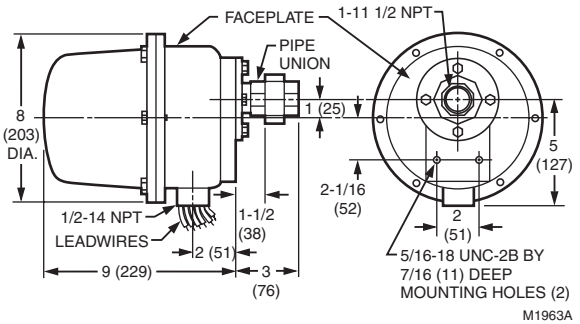


1 C7061A1046, C7061A1053: INCH NPT

2 C7061A1038 AND C7061A1046: TYPE CONNECTOR.

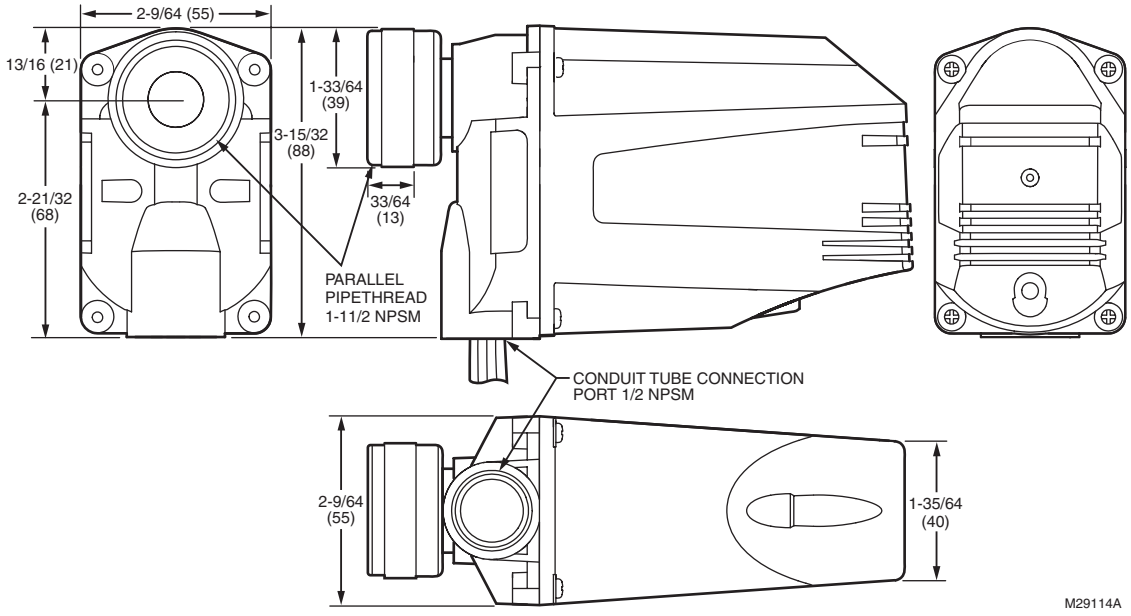
M10167D

Dimensions for C7061F in inches (millimeters)

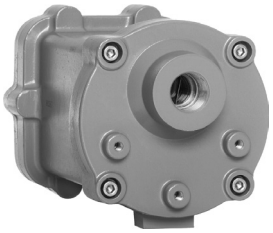


M1963A

Dimensions for C7061M in inches (millimeters)



C7076 Adjustable Sensitivity Ultraviolet Flame Detector



Solid state dynamic self check flame detectors for use with BC7000, R4140 or FSP5075 with R7476 Amplifier and 7800 SERIES with R7886 Amplifier.

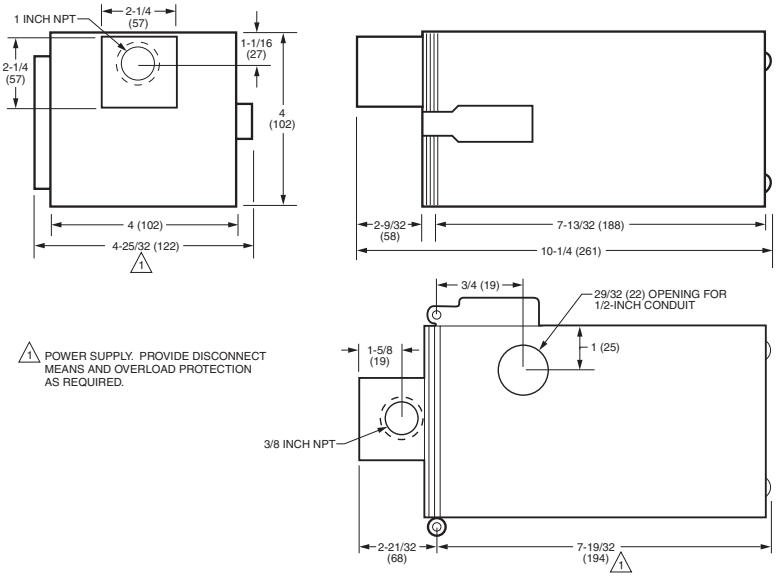
- Use Honeywell Flame Safeguard primary safety controls requiring adjustable sensitivity ultraviolet flame detection.
- Detect ultraviolet radiation from flames.
- Include dual sensitivity adjustment.
- C7076A meets NEMA 4 standards with viewing window rated to 20 psi.
- C7076D has an explosion-proof housing for use in hazardous atmospheres with a viewing window rated to 100 psi.

Type: Ultraviolet, Adjustable Sensitivity
Application: Gas fired burners; Oil fired burners
Electrical Connections: Terminal block
Vibration: 0.5 G max
Mounting: 1 in. NPT
Power Consumption: 7.0 W
Ambient Temperature Range: -40°F to +160°F (-40°C to +71°C)
Approvals, CSA: Certified: Master Report LR1620
Approvals, Swiss RE: Acceptable
Approvals, Factory Mutual: Approved: Report No. FM26980
Comments: Dynamic self-checking flame detector with adjustable sensitivity

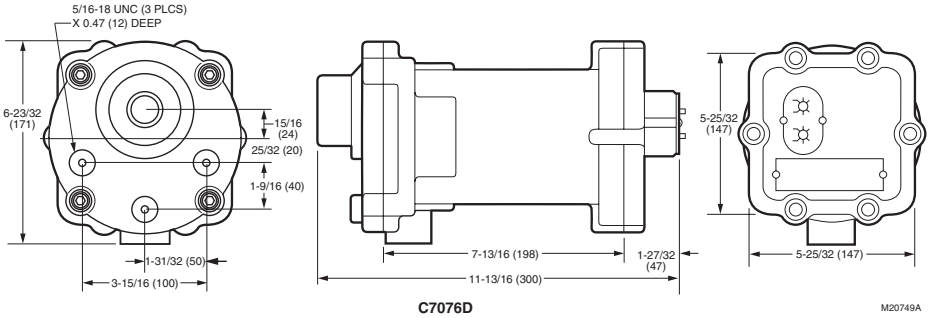
Used With: Flame Amplifiers: R7476, R7886

Replacement Parts:
190971F/U – 100 Vac Coil and Shutter Assembly for C7076A, D
190998A/U – Aspiration assembly for C7076A
191002R/U – 120 Vac Plug in Electronics less UV Sensing Tube for C7076D
191050/U – Quartz Viewing Window for C7076
191053/U – UV Sensing Tube for C7076

Dimensiions in inches (millimeters)



C7076A



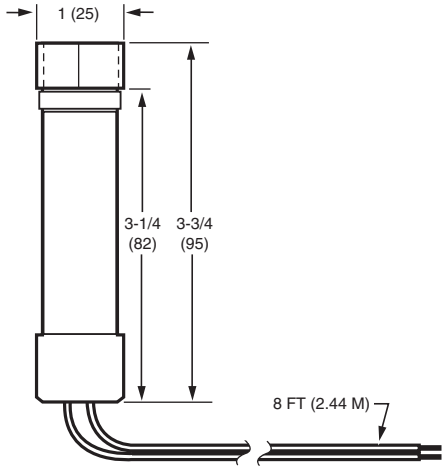
C7076D

M20749A

Material Number	NEMA Rating	Electrical Ratings	Frequency	Approximate, Dimensions	Weight	Approvals, Underwriters Laboratories Inc.	Approvals, Others
C7076A1007/U	NEMA 4	120 Vac	60 Hz	4 in. high x 4 in. wide x 10 1/4 in. deep (102 mm high x 102 mm wide x 261 mm deep)	6.6 lb (3 kg)	Listed: File No. MP268, Guide No. MCCZ	
C7076A1015/U	NEMA 4	100 Vac	50 Hz; 60 Hz	4 in. high x 4 in. wide x 10 1/4 in. deep (102 mm high x 102 mm wide x 261 mm deep)	6.6 lb (3 kg)	Listed: File No. MP268, Guide No. MCCZ	
C7076A1031/U	NEMA 4	220 Vac; 240 Vac	50 Hz; 60 Hz	4 in. high x 4 in. wide x 10 1/4 in. deep (102 mm high x 102 mm wide x 261 mm deep)	6.6 lb (3 kg)	Listed: File No. MP268, Guide No. MCCZ	
C7076D1027/U	NEMA 7	120 Vac	60 Hz	6 5/8 in. high x 6 3/16 in. wide x 11 3/4 in. deep (168 mm high x 158 mm wide x 300 mm deep)	17.6 lb (8 kg)	Listed: File No. E34649, Guide No. ZTSZ	Explosion Proof

C7927 Solid State Ultraviolet Flame Detector

Dimensiions in inches (millimeters)



C7927A1016 M24714

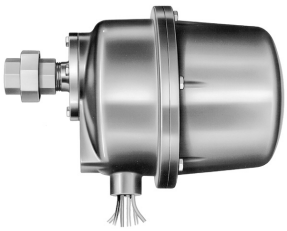
The Solid State Ultraviolet Flame Detectors, sense ultraviolet radiation emitted by combustion flames. The flame detectors are used with Honeywell flame safeguard controls to provide flame supervision for gas, oil, or combination gas-oil burners.

- Properly installed the flame detectors are pressure rated for 5 psi.
- Flame detector is used with only the R7851B Flame Amplifier and the 7800 SERIES controls.
- Has an integral collar threaded (internal 1/2-14 NPSM) for mounting on a one-half inch sight pipe.

Type: Ultraviolet, Minipeeper
Application: Gas, Oil, or combination burners-intermittent operation only (burner cycled at least once each 24 hours).
NEMA Rating: NEMA 1
Electrical Connections: 2 NEC Class 1 leadwires
Mounting: 1/2 in. NPT pipe mounting
Approximate, Dimensions: 1 in. diameter x 3 3/4 in. long (25 mm diameter x 95 mm long)
Approvals, Underwriters Laboratories Inc.: Component Recognized: File No. MP268
Approvals, CSA: Report 158158
Approvals, Swiss RE: Acceptable
Approvals, Factory Mutual: Approved: Report No. 3011020
Comments: Detects ultraviolet radiation in flames

Material Number	Lead Length	Ambient Temperature Range	Used With
C7927A1016/U	96 in. (2438 mm)	-40°F to +200°F (-40°C to +93°C)	Flame Amplifiers: R7851B

C7961 Dynamic Self-checking Solid State Ultraviolet Flame Detector



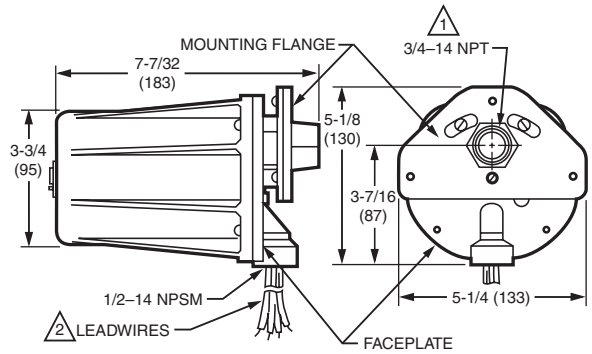
A self-checking flame detector using a solid state UV sensor to detect ultraviolet radiation in flames for supervision of gas, oil or combination gas-oil burners.

- Designed for use with 7800 series controls with the R7851C flame amp.
- Oscillating shutter interrupts ultraviolet radiation reaching the UV sensor to provide the solid state UV sensor checking function.
- Can be mounted horizontally, vertically or at any angle in between.
- The detector requires faceplate alignment and has integral locating reference points to assure proper operation of the shutter mechanism.
- Models available with threaded conduit fitting and color-coded leadwires allow rapid electrical installation.
- C7961E1022 or E1030 5 pin Brad Harrison type (formally 41307N) mating connector not supplied nor available through Honeywell.
- Incorporates UV sensor tube checking feature; used with R7851C1008 Dynamic Self-check Amplifiers.
- Protective heat block built into mounting flange.
- -40°F (-40°C) rated ultraviolet sensing cell is supplied.
- C7961E meets NEMA 4 standards with viewing window rated to 20 psi.
- C7961F has an explosion-proof housing for use in hazardous atmospheres with a viewing window rated to 100 psi.

Type: Ultraviolet, Self-Checking
Application: Gas, Oil or other fuels
Electrical Ratings: 120 Vac (-15% +10%)
Frequency: 50 Hz; 60 Hz
Ambient Temperature Range: -40°F to +175°F (-40°C to +80°C)

Approvals, Underwriters Laboratories Inc.: Component Recognized: File No. MP268
Comments: Detects ultraviolet radiation generated by combustion of gas, oil, or other fuels
Approvals, Swiss RE: Acceptable
Used With: R7851C Dynamic Self-Check Amplifier

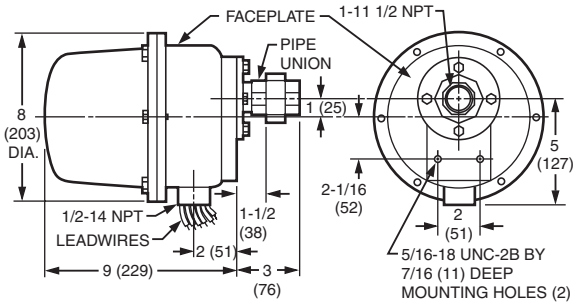
Dimensiions in inches (millimeters)



1 C7061A1046, C7061A1053: INCH NPT

2 C7061A1038 AND C7061A1046: TYPE CONNECTOR.

M10167D



M1963A

Material Number	NEMA Rating	Lead Length	Electrical Connections	Mounting	Approximate, Dimensions	Weight	Approvals, CSA	Approvals, Factory Mutual	Includes
C7961E1006/U	NEMA 4	96 in. (2438 mm)	NEC Class 1 color-coded	3/4 in. NPT	3 3/4 in. diameter (5 1/4 in. diameter including mounting flange) x 7 7/32 in. long (95 mm diameter (133 mm diameter including mounting flange) x 183 mm long)	2.6 lb (1.2 kg)	Certified: Pending	Pending	Quartz Viewing Window rated for 20 psi (138 kPa)
C7961E1014/U	NEMA 4	96 in. (2438 mm)	NEC Class 1 color-coded	1 in. NPT	3 3/4 in. diameter (5 1/4 in. diameter including mounting flange) x 7 7/32 in. long (95 mm diameter (133 mm diameter including mounting flange) x 183 mm long)	2.6 lb (1.2 kg)	Certified: Pending	Pending	Quartz Viewing Window rated for 20 psi (138 kPa)
C7961E1022/U	NEMA 4		5 pin Brad Harrison Type Connector	1 in. NPT	3 3/4 in. diameter (5 1/4 in. diameter including mounting flange) x 7 7/32 in. long (95 mm diameter (133 mm diameter including mounting flange) x 183 mm long)	2.6 lb (1.2 kg)	Certified: Pending	Pending	Quartz Viewing Window rated for 20 psi (138 kPa)
C7961E1030/U	NEMA 4		5 pin Brad Harrison Type Connector	3/4 in. NPT	3 3/4 in. diameter (5 1/4 in. diameter including mounting flange) x 7 7/32 in. long (95 mm diameter (133 mm diameter including mounting flange) x 183 mm long)	2.6 lb (1.2 kg)	Certified: Pending	Pending	Quartz Viewing Window rated for 20 psi (138 kPa)
C7961F1004/U	Explosion Proof	96 in. (2438 mm)	NEC Class 1 color-coded	1 in. NPT	8 in. diameter x 12 in. long (203 mm diameter x 305 mm long)	14.5 lb (6.6 kg)		Approved: Report No. 14740.01	Quartz Viewing Window rated for 100 psi

C7915 Infrared Flame Detector

The C7915 Combination mount Lead Sulfide cell senses infrared radiation from gas, oil, and coal or dual-fuel flames.
- Used for combination or dual-fuel applications.
- Detects pilot and main flame.
- Mounts quickly and easily on a standard 3/4 in. sighting pipe.
- Works where flame rod or rectifying photocell mounts are difficult to apply.

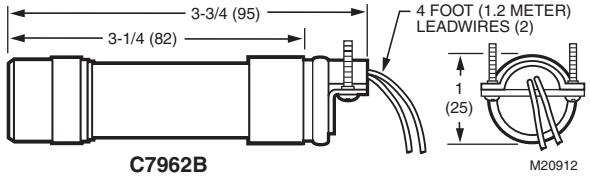
Type: Infrared (Lead Sulfide)
Application: Used for combination or dual-fuel applications
Electrical Connections: Two no. 18 AWG wires
Mounting: 3/4 in. NPT
Approvals, Underwriters Laboratories Inc.: Listed: File No. MP268, Guide No. MCCZ
Approvals, CSA: Certified: Master Report LR95329-1
Approvals, Swiss RE: Acceptable
Approvals, Factory Mutual: Approved: Report No. 24181.03
Comments: Infrared (Lead Sulfide) Flame Detector

Replacement Parts:
32007255-001/U – Lead Sulfide Cell for C7915
50019469-001/U – Magnifying Lens Assembly for C7915A

Material Number	Lead Length	Approximate, Dimensions	Ambient Temperature Range	Includes	Used With
C7915A1010/U	30 in. (762 mm)	1 1/4 in. diameter x 2 1/4 in. long (32 mm diameter x 58 mm long)	-20°F to 125°F operating range (-18°C to 52°C operating range)	With magnifying lens, 32007255-001 Cell	Flame Amplifiers: R7852
C7915A1028/U	48 in. (1219 mm)	1 1/4 in. diameter x 2 1/4 in. long (32 mm diameter x 58 mm long)	-20°F to 125°F operating range (-18°C to 52°C operating range)	With magnifying lens, 32007255-001 Cell, Orifice, heat block, and reducer bushing	Flame Amplifiers: R7852
C7915A1036/U	96 in. (2438 mm)	1 1/4 in. diameter x 2 1/4 in. long (32 mm diameter x 58 mm long)	-20°F to 125°F operating range (-18°C to 52°C operating range)	With magnifying lens, 32007255-001 Cell	Flame Amplifiers: R7852

C7962 Visible Light Flame Detector

Dimensiions in inches (millimeters)



C7962B

The C7962B Visible Light Flame Detector detects the visible light emitted by fuel oil combustion flames. The C7962B Detector is used with Honeywell Flame Safeguard controls to provide fuel oil flame supervision in commercial and industrial burners.
- Used with 7800 SERIES Flame Safeguard controls.
- Used with R7851B Flame Amplifier.
- Has an integral collar threaded (internal 1/2-14 NPSM) for mounting on 1/2 inch sight pipe.

Type: Visible Light Flame Detector
Application: Commercial, industrial oil burners
NEMA Ratings: NEMA 1
Electrical Connections: 2 NEC Class 1 leadwires
Vibration: 0.5 G max
Mounting: 1/2 in NPT pipe mounting
Approvals, Underwriters Laboratories Inc.: Component Recognized: File No. MP268
Approvals, CSA: Report 158158
Approvals, Swiss RE: Acceptable

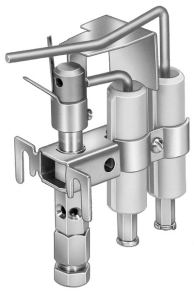
Accessories:
32007439-001/U – Mounting Bracket and screws for C7962B (3/8 in. NPT to 1/2 in. NPT)

Material Number	Lead Length	Approximate, Dimensions	Ambient Temperature Range	Includes	Used With
C7962B1002/U	96 in. (2438 mm)	1 in. diameter x 3 3/4 in. long (25 mm diameter x 95 mm long)	-40°F to +160°F (-40°C to +71°C)		Flame Amplifiers: R7851B
C7962B1010/U	96 in. (2438 mm)	1 in. diameter x 3 3/4 in. long (25 mm diameter x 95 mm long)	-40°F to +160°F (-40°C to +71°C)	32007439-001 Mounting Bracket and screws	Flame Amplifiers: R7851B

Optical Flame Detector Accessories or Parts

Material Number	Description	Used With
105172C/U	Pressure Seal-off Adapter (3/4 NPT) w/UV Quartz window for C7012, C7024, C7027, C7061	C7012, C7024, C7027, C7061; C7024; C7012; C7061
110634A/U	Magnifying Lens Assembly for C7015A	C7015
113228/U	UV Sensing Tube (-20°F to 175°F) for C7012; C7024	C7012; C7024
114372/U	Bulk Pack -20 PSI window for C7012E, F; C7024; C7061	C7024; C7012; C7061
114638/U	Rubber Washer (Red) for C7012A, E; C7024A; C7061A; C7961A	C7012; C7061; C7024
120739/U	Flange Gasket for C7012, C7024, C7061	C7024; C7012; C7061
120930/1662/F	Cover for C7012A,G, C7024E, C7061A, C7961E	C7012A,G, C7024E, C7061A, C7961E; C7012
120934-520/U	Mounting Flange (3/4") for C7012A, E; C7024A; C7061A; C7961E	C7012A,G, C7024E, C7061A, C7961E
122748/U	50 PSI Quartz Window for C7012, C7061	C7012; C7061; C7024
124198/U	Mounting Flange (1") for C7012A, E; C7024A; C7061A; C7961E	C7012A,G, C7024E, C7061A, C7961E
129464M/U	UV Power Tube (0°F to 250°F) for C7035	C7035
129464N/U	UV Power Tube (-40°F to 250°F) for C7035, C7061	C7061; C7035
129811B/U	Socket Assembly w/NPT threads	C7035
190971B/U	120 Vac Coil and Shutter Assembly for C7012E, F, C7061A, F	C7012E, F; C7061A, F
190971D/F	110 Vac 50 Hz Coil and Shutter Assembly for C7012E1187, 1195	C7012E
190971D/U	110 Vac 50 Hz Coil and Shutter Assembly for C7012E1187, 1195	C7012E
190971F/U	100 Vac Coil and Shutter Assembly for C7076A, D	C7076A, D
190971G/U	24 Vdc Coil and Shutter Assembly for C7024E, F; C7961	C7024;C7961
190998A/U	Aspiration assembly for C7076A	C7076A
190999/U	Grommet for C7076 Sensors	C7076
191002D/U	220/240 Vac Plug in Electronics less UV Sensing Tube for C7076A	C7076A
191002R/U	120 Vac Plug in Electronics less UV Sensing Tube for C7076D	C7076D
191050/U	Quartz Viewing Window for C7076	C7076
191053/U	UV Sensing Tube for C7076	C7076
191054/U	Housing Gasket for C7076	C7076
191203/0767/U	Hinge for C7076A	C7076
191284/U	Aluminum Shield for C7035	C7035
191702/U	Electronics less UV sensing tube for C7012F (120 Vac)	C7012F
32004080-001/U	120 Vac Electronics less UV Sensing Tube and Shutter for C7012C	C7012C
32004080-002/U	24 Vdc Plug in Electronics less UV Sensing Tube for C7024F	C7024F
32007255-001/U	Lead Sulfide Cell for C7915	C7915
32007439-001/U	Mounting Bracket and screws for C7962B (3/8 in. NPT to 1/2 in. NPT)	C7962B
390427B/U	Envelope with Reducer bushing (1/2" to 3/8" NPT)	C7027; C7015
50019469-001/U	Magnifying Lens Assembly for C7915A	C7915; C7015

Q179A, B Flame Rectifier Gas Pilots



Q179A, B Gas Pilot Burner Assemblies use the flame rectification principle to prove the flame. Q179A, B are used in conjunction with a suitable electronic flame safeguard control on industrial or commercial gas and gas pilot ignited oil burners.

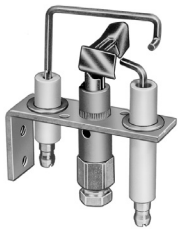
- Q179A is a gas pilot assembly (with a flame electrode rod) and ignition electrode, making it suitable for applications requiring an interrupted or intermittent electrically ignited gas pilot burner.
- Q179B has only the flame electrode and is suitable for use in continuous pilot applications.
- Primary aerated type burner is equipped with stainless steel fins that provide the proper flame rod area to ground area ratio for maximum flame signal and flame stabilization.
- Stainless steel electrode(s) are mounted in ceramic insulators, which permit electrode adjustment.
- Rajah connectors facilitate disconnecting (A1126 has terminal screws).
- Bracket permits side or end mounting.

Type of Gas: Natural gas; Gas consumption – 2.0 cfh (0.06 m3/hr)
Aeration: Primary
Compression Fitting Size: 1/4 in. compression coupling, 6.4 mm compression coupling
Mounting: side or end mount
Approximate, Dimensions: 4 5/8 in. high x 1 11/16 in. wide x 3 in. deep (118 mm high x 43 mm wide x 76 mm deep)

Approvals, Underwriters Laboratories Inc.: Listed: File No. MP268, Guide No. MCCZ
Approvals, CSA: Certified: File No. LR1620, Guide No. 140-A-2
Approvals, Factory Mutual: Approved: Report No. 22961

Material Number	Application	Orifice	Wiring Terminal Type	Tip Style	Includes	Used With
Q179A1001/U	For Intermittent or Interrupted Ignition	0.025 in. dia. (0.635 mm dia.)	Rajah	I	Flame electrode and ignition electrode	Q624 or other suitable ignition transformer.
Q179A1035/U	For Intermittent or Interrupted Ignition	0.025 in. dia. (0.635 mm dia.)	Rajah	45 degree right hand	Flame electrode and ignition electrode	Q624 or other suitable ignition transformer.
Q179A1050/U	For Intermittent or Interrupted Ignition	0.028 in. dia. (0.711 mm dia.)	Rajah	T	Flame electrode and ignition electrode	Q624 or other suitable ignition transformer.
Q179A1076/U	For Intermittent or Interrupted Ignition	0.028 in. dia. (0.711 mm dia.)	Rajah	45 degree Y	Flame electrode and ignition electrode	Q624 or other suitable ignition transformer.
Q179A1092/U	For Intermittent or Interrupted Ignition	0.028 in. dia. (0.711 mm dia.)	Rajah	45 degree T	Flame electrode and ignition electrode	Q624 or other suitable ignition transformer.
Q179A1118/U	For Intermittent or Interrupted Ignition	0.025 in. dia. (0.635 mm dia.)	Rajah	45 degree left hand	Flame electrode and ignition electrode	Q624 or other suitable ignition transformer.
Q179A1126/U	For Intermittent or Interrupted Ignition	0.025 in. dia. (0.635 mm dia.)	Screw Terminal	I	Flame electrode and ignition electrode with screw terminal connections	Q624 or other suitable ignition transformer.
Q179A1183/U	For Intermittent or Interrupted Ignition	0.025 in. dia. (0.635 mm dia.)	Rajah	I	Ignition Electrode Only	Q624 or other suitable ignition transformer.
Q179B1042/U	For Continuous (Standing) pilot	0.025 in. dia. (0.635 mm dia.)	Rajah	T	Flame electrode	
Q179B1109/U	For Continuous (Standing) pilot	0.025 in. dia. (0.635 mm dia.)	Rajah	45 degree left hand	Flame electrode	
Q179B1117/U	For Continuous (Standing) pilot	0.025 in. dia. (0.635 mm dia.)	Rajah	45 degree I	Flame electrode	

Q179C, D Miniature Rectifier Pilots



Q179C, D Gas Pilot Burner Assemblies use the flame rectification principle to prove the flame. Q179C, D are used in conjunction with a suitable electronic flame safeguard control on industrial or commercial gas and gas pilot ignited oil burners.

- Q179C is a gas pilot assembly (with a flame electrode rod) and ignition electrode, making it suitable for applications requiring an interrupted or intermittent electrically ignited gas pilot burner.
- Q179D has only the flame electrode and is suitable for use in continuous pilot applications.
- Primary aerated type burner is equipped with stainless steel fins that provide the proper flame rod area to ground area ratio for maximum flame signal and flame stabilization.
- Stainless steel electrode(s) are mounted in ceramic insulators, which permit electrode adjustment.
- Rajah connectors facilitate disconnecting.

Aeration: Primary
Compression Fitting Size: 1/4 in. compression coupling, 6.4 mm compression coupling
Wiring Terminal Type: Rajah

Approvals, Underwriters Laboratories Inc.: Component Recognized: File No. MH9928, Guide No. MCUR2
Approvals, CSA: Certified: Master Report LR95329-1

Material Number	Application	Mounting	Tip Style	Orifice	Approximate, Dimensions	Includes	Used With	Type of Gas
Q179C1009/U	For Intermittent or Interrupted Ignition	Dual Wing-Rear	D	0.026 in. dia. (0.66 mm dia.)	3 1/8 in. high x 2 7/16 in. wide x 1 in. deep (79 mm high x 62 mm wide x 25 mm deep)	Flame electrode and ignition electrode	Q624 or other suitable ignition transformer.	Natural
Q179C1025/U	For Intermittent or Interrupted Ignition	Single Wing-Rear	L	0.024 in. dia. (0.60 mm dia.)	3 1/8 in. high x 2 7/16 in. wide x 1 in. deep (79 mm high x 62 mm wide x 25 mm deep)	Flame electrode and ignition electrode	Q624 or other suitable ignition transformer.	Natural
Q179C1033/U	For Intermittent or Interrupted Ignition	Dual Wing-Left Side	D	0.026 in. dia. (0.66 mm dia.)	3 1/8 in. high x 3 1/32 in. wide x 1 in. deep (79 mm high x 77 mm wide x 25 mm deep)	Flame electrode and ignition electrode	Q624 or other suitable ignition transformer.	Natural
Q179C1041/U	For Intermittent or Interrupted Ignition	Dual Wing-Right Side	D	0.026 in. dia. (0.66 mm dia.)	3 1/8 in. high x 3 1/32 in. wide x 1 in. deep (79 mm high x 77 mm wide x 25 mm deep)	Flame electrode and ignition electrode	Q624 or other suitable ignition transformer.	Natural
Q179C1058/U	For Intermittent or Interrupted Ignition	Single Wing-Left Side	L	0.024 in. dia. (0.60 mm dia.)	3 1/8 in. high x 3 1/32 in. wide x 1 in. deep (79 mm high x 77 mm wide x 25 mm deep)	Flame electrode and ignition electrode	Q624 or other suitable ignition transformer.	Natural
Q179C1066/U	For Intermittent or Interrupted Ignition	Single Wing-Right Side	K	0.024 in. dia. (0.60 mm dia.)	3 1/8 in. high x 2 7/16 in. wide x 1 in. deep (79 mm high x 62 mm wide x 25 mm deep)	Flame electrode and ignition electrode	Q624 or other suitable ignition transformer.	Natural
Q179C1090/U	For Intermittent or Interrupted Ignition	Dual Wing-Rear	D	0.016 in. dia. (0.40 mm dia.)	3 1/8 in. high x 2 7/16 in. wide x 1 in. deep (79 mm high x 62 mm wide x 25 mm deep)	Flame electrode and ignition electrode	Q624 or other suitable ignition transformer.	LP
Q179D1008/U	For Continuous (Standing) pilot	Dual Wing-Rear	D	0.026 in. dia. (0.66 mm dia.)	3 1/8 in. high x 2 7/16 in. wide x 1 in. deep (79 mm high x 62 mm wide x 25 mm deep)	Flame electrode and thermocouple adapter	Q340 Thermocouple or Q313A Thermopile Generator.	Natural
Q179D1016/U	For Continuous (Standing) pilot	Dual Wing-Left Side	D	0.026 in. dia. (0.66 mm dia.)	3 1/8 in. high x 3 1/32 in. wide x 1 in. deep (79 mm high x 77 mm wide x 25 mm deep)	Flame electrode and thermocouple adapter	Q340 Thermocouple or Q313A Thermopile Generator.	Natural
Q179D1024/U	For Continuous (Standing) pilot	Dual Wing-Right Side	D	0.026 in. dia. (0.66 mm dia.)	3 1/8 in. high x 3 1/32 in. wide x 1 in. deep (79 mm high x 77 mm wide x 25 mm deep)	Flame electrode and thermocouple adapter	Q340 Thermocouple or Q313A Thermopile Generator.	Natural
Q179D1057/U	For Continuous (Standing) pilot	Single Wing-Left Side	L	0.024 in. dia. (0.60 mm dia.)	3 1/8 in. high x 3 1/32 in. wide x 1 in. deep (79 mm high x 77 mm wide x 25 mm deep)	Flame electrode and thermocouple adapter	Q340 Thermocouple or Q313A Thermopile Generator.	Natural

C7005 Flame Rectifier Pilots

Gas Pilot Burner Assemblies include a flame rod to prove the pilot flame. The assemblies are used with a suitable flame safeguard control on industrial or commercial gas burners or oil burners with gas pilots.

- Used with Honeywell controls using the flame rectification principle.
- C7005A is for continuous pilot applications.
- It includes an insulated flame rod, properly positioned relative to the flame retention type nozzle. C7005B is similar to C7005A, but includes an ignition electrode suitable for automatic, electric-spark ignition, gas pilot applications.
- Individually mounted flame rod and ignition electrode in ceramic insulators allow the head assembly to fit inside a 3-inch pipe.
- Stainless steel fins on the flame retention type pilot head provide the correct ratio of flame rod area to ground area for maximum flame signal, and are beneficial in stabilizing the pilot flame.
- Pilot flame retention nozzle and mixing tube are threaded internally, 1/2-14 NPT and 3/8-18 NPT, respectively, and can be assembled with standard pipe fittings.
- Pilot can be installed in vertical, horizontal, or inclined position.
- Rajah connectors facilitate electrical connections.

Connection Type: 1/2 in. NPT male thread Gas Fitting
Wiring Terminal Type: Rajah
Approximate, Dimensions: 3 in. diameter x 3 1/2 in. deep (76 mm diameter x 343 mm deep)
Approvals, Underwriters Laboratories Inc.: Listed: File No. MP268, Guide No. MCCZ

Approvals, CSA: Certified: File No. LR1620, Guide No. 140-A-2
Approvals, Factory Mutual: Approved: Report No. 24181.04
Approvals, Swiss RE: Acceptable

Material Number	Application	Orifice	Includes	Used With	Type of Gas
C7005A1037/U	For Continuous (Standing) pilot	0.052 in. dia.			Natural
C7005B1035/U	For automatic electrically ignited pilot	0.052 in. dia.	Ignition electrode	Q624 or other suitable ignition transformer.	Natural
C7005B1050/U	For automatic electrically ignited pilot	0.028 in. dia. (0.711 mm dia.)	Ignition electrode	Q624 or other suitable ignition transformer.	LP

Commercial Pilot Burners Parts or Accessories

Material Number	Description	Used With
100204B/U	This Natural Gas Venturi Mixing Tube is used for C7005A and B	C7005A, C7005B
101738/U	This Insulator for Flame rod or Igniter is used with C7005A and B	C7005A, C7005B
101738A/U	This Ignition Assembly, including; electrode, bracket and Rajah Connector, is used for C7005A and B	C7005A, C7005B
101738B/U	This Flame Rod Assembly, including; Kanthal Electrode, Bracket and Rajah Connector, is used for C7005A and B	C7005A, C7005B
101739/U	This 4 in. Kanthal Ignition Electrode is used for C7005A and B	C7005A, C7005B
101741/0020/U	This 7/8 in. long Rajah Connector, with plug end, is used for C7005A and B	C7005A, C7005B
101742/0021/U	This Electrode Mounting Clip is used for C7005A and B	C7005A, C7005B
101743/U	This Mounting Bracket is used for C7005A and B	C7005A, C7005B
103534/U	This 8 in. Kanthal flame electrode is used with C7005A and C7005B	C7005A, C7005B
104312/U	This Rajah Connector for Flame Electrode is used with Q179A and B	Q179A, Q179B
131065/U	131065 Adapts Q340 Thermal Couple to Q179B with 102462. Sold in custom packs	Q179A, Q179B
133451A/U	This T Port or LH 90 degree Flame Rod and Insulator, is used for Q179A and B	Q179A, Q179B
37356/520/U	This Rajah connector for ignition electrodes is used with Q179A, Q179B, Q179C, or Q179D	Q179A, Q179B, Q179C, Q179D
388146KD/U	This 0.016 in. diameter, LP Gas Spud Orifice, is used for Q179C and D. Sold in bulk packs	Q179C, Q179D
395390-13/U	This LP gas, 0.013 in. diameter Orifice, is used for Q179A and B	Q179A, Q179B
395390-28/U	This Natural gas, 0.028 in. diameter Orifice, is used for Q179A and B	Q179A, Q179B
R1061012/U	This Ignition cable or Flame Rod Cable is rated at 350°F, 20,000 volts R.M.S. and used with C7005B, Q179A and Q179C	C7005B, Q179A, Q179C
R1298020/U	This Cable Flame Rod Lead, is rated at 400°F, 600 volts R.M.S., and used with Q179	Q179

Q624 Solid State Ignition Transformer

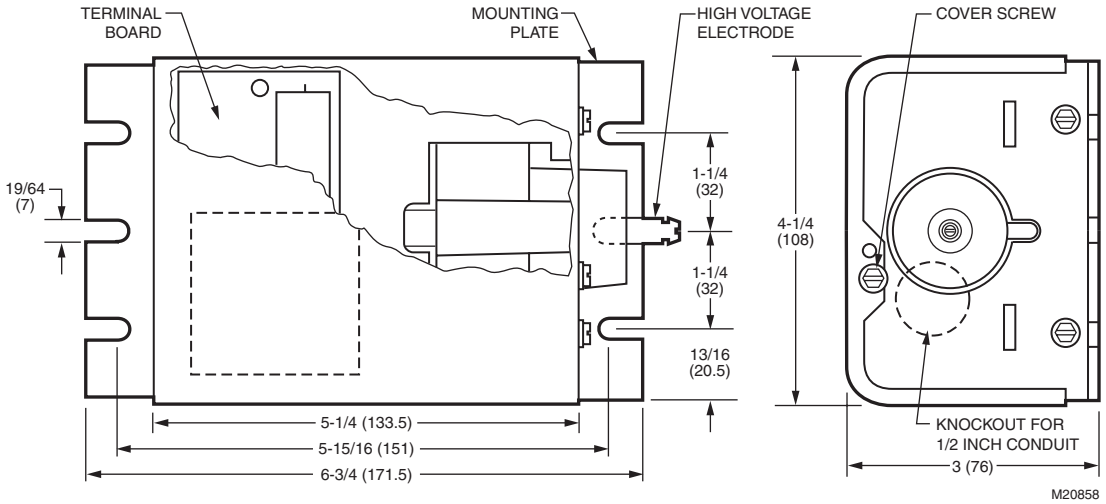
Used to ignite pilots on commercial or industrial gas burners.

- Ignite gas pilots with spark gaps up to 1/4 in. (6.5 mm).
- Reliable light off with 15,000 peak voltage.
- Prevent detection of the ignition spark when properly applied in a flame detection system with the C7027, C7035 or C7044 Minipeeper Ultraviolet Flame Detector.
- For use only in interrupted ignition applications.
- Mount in same space used by conventional ignition transformer.
- Light weight, 3 lbs. (1.4 kg) versus 8-1/2 lbs. (3.9 kg) for standard transformers.

Temperature Range: -40°F to +125°F
Approximate, Dimensions: 6 3/4 in. high x 4 1/4 in. wide x 3 in. deep (171.5 mm high x 108 mm wide x 76 mm deep)
Weight lb. (kg): 3 lb (1.4 kg)
Approvals, Underwriters Laboratories Inc.: Component Recognized
Approvals, CSA: Certified: File No. LR95329
Operating Humidity Range (% RH): 95% RH

Accessories:
32004766-001/U – 24 inch Ignition Cable for Q624 and Q652
32004766-002/U – 120 inch Ignition Cable used with Q624 and Q652
32004766-003/U – Ignition Cable for Q624 and Q652 (order by foot – enter the number of feet in the Quantity box)
32004766-004/U – 60 inch Ignition Cable with straight boots
32004766-005/U – 8 inch Ignition Cable w/90 degree and straight boot
32004766-006/U – 36 inch Ignition Cable w/90 degree and straight boot
50060793-001/U – 24 inch Ignition Cable for Q624 and Q652
50060793-002/U – 120 inch Ignition Cable used with Q624 and Q652
50060793-003/U – Ignition Cable for Q624 and Q652 (order by foot – enter the number of feet in the Quantity box)
50060793-004/U – 60 inch Ignition Cable with straight boots
50060793-005/U – 8 inch Ignition Cable w/90 degree and straight boot
50060793-006/U – 36 inch Ignition Cable w/90 degree and straight boot
50060793-007/U – 36 inch ignition cable w/90 degree boot on one end only
50060793-008/U – Ignition Cable w/90 degree boot on one end only
50060793-009/U – Ignition Cable w/90 degree boot on one end only
50060793-010/U – Ignition Cable w/90 degree boot on one end only
50060793-011/U – 19 inch Ignition Cable w/90 degree and ring end used with Q624 and Q652
50060793-012/U – 36 inch Ignition Cable with 90 degree boot and 1/4 in. spad terminal used with Q624 and Q652

Dimensions in inches (millimeters)



Material Number	Application	Voltage	Frequency
Q624A1014/U	Gas Ignition Transformer	120 Vac	50 Hz; 60 Hz

Q652 Solid State Spark Generator

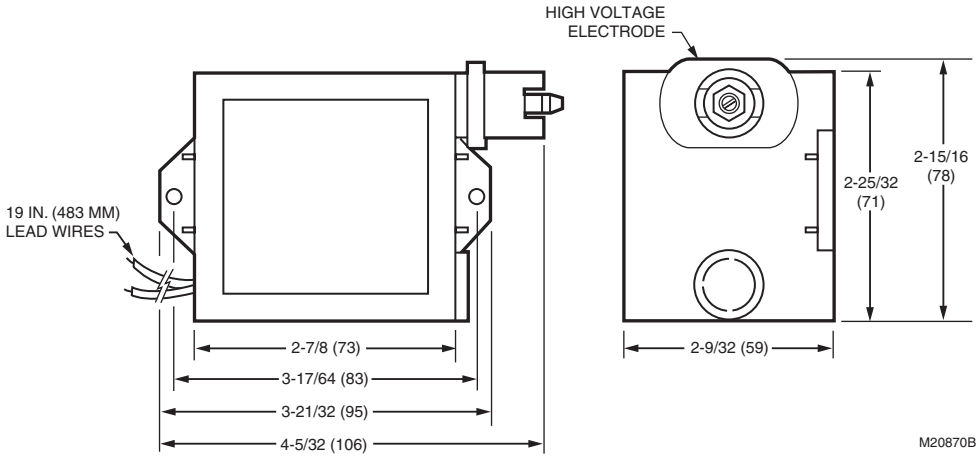
Used to ignite gas burners in commercial and industrial applications.

- Lightweight, 1 lb. (0.4 kg).
- Include single high voltage electrode for gas applications.
- For use with gas pilots with electrode spacings between 0.029 and 0.125 in.
- Secondary Peak Voltage: 14Kv rms at 21Khz.
- Mount in same space used by conventional ignition transformer.
- For use only in interrupted ignition applications.
- Prevent detection of the ignition spark when properly applied in a flame detection system with the C7027, C7035 or C7044 Minipeeper Ultraviolet Flame Detector.

Temperature Range: 14°F to 113°F
Approximate, Dimensions: 4 15/32 in. high x 2 15/16 in. wide x 2 9/32 in. deep (101.6 mm high x 77.5 mm wide x 58.4 mm deep)
Weight lb. (kg): 1 lb (0.45 kg)
Approvals, Underwriters Laboratories Inc.: Component Recognized File MH14381
Approvals, CSA: LA66894
Operating Humidity Range (% RH): 90% RH

Accessories:
32004766-001/U – 24 inch Ignition Cable for Q624 and Q652
32004766-002/U – 120 inch Ignition Cable used with Q624 and Q652
32004766-003/U – Ignition Cable for Q624 and Q652 (order by foot – enter the number of feet in the Quantity box)
32004766-004/U – 60 inch Ignition Cable with straight boots
32004766-005/U – 8 inch Ignition Cable w/90 degree and straight boot
32004766-006/U – 36 inch Ignition Cable w/90 degree and straight boot
50060793-001/U – 24 inch Ignition Cable for Q624 and Q652
50060793-002/U – 120 inch Ignition Cable used with Q624 and Q652
50060793-003/U – Ignition Cable for Q624 and Q652 (order by foot – enter the number of feet in the Quantity box)
50060793-004/U – 60 inch Ignition Cable with straight boots
50060793-005/U – 8 inch Ignition Cable w/90 degree and straight boot
50060793-006/U – 36 inch Ignition Cable w/90 degree and straight boot
50060793-007/U – 36 inch ignition cable w/90 degree boot on one end only
50060793-008/U – Ignition Cable w/90 degree boot on one end only
50060793-009/U – Ignition Cable w/90 degree boot on one end only
50060793-010/U – Ignition Cable w/90 degree boot on one end only
50060793-011/U – 19 inch Ignition Cable w/90 degree and ring end used with Q624 and Q652
50060793-012/U – 36 inch Ignition Cable with 90 degree boot and 1/4 in. spad terminal used with Q624 and Q652

Dimensions in inches (millimeters)



Material Number	Application	Voltage	Frequency
Q652B1006/U	Gas Ignition Transformer	120 Vac	60 Hz
Q652B1014/U	Solid State Ignitor Spark Generator-Gas Applications; 220V 60 Hz	220 Vac	60 Hz

Ignition Transformers

Ignition Transformer Accessories or Parts

Material Number	Description	Used With
134666/510/U	High voltage terminal insulator for Q652 and Q624	Q652; Q624
32004766-001/U	24 inch Ignition Cable for Q624 and Q652	Q652; Q624
32004766-002/U	120 inch Ignition Cable used with Q624 and Q652	Q652; Q624
32004766-003/U	Ignition Cable for Q624 and Q652 (order by foot – enter the number of feet in the Quantity box)	Q652; Q624
32004766-004/U	60 inch Ignition Cable with straight boots	Q652; Q624
32004766-005/U	8 inch Ignition Cable w/90 degree and straight boot	Q652; Q624
32004766-006/U	36 inch Ignition Cable w/90 degree and straight boot	Q652; Q624
32004766-007/U	36 inch ignition cable w/90 degree boot on one end only	Q652; Q624
32004766-008/U	Ignition Cable w/90 degree boot on one end only	Q652; Q624
32004766-009/U	Ignition Cable w/90 degree boot on one end only	Q652; Q624
32004766-010/U	Ignition Cable w/90 degree boot on one end only	Q652; Q624
32004766-011/U	19 inch Ignition Cable w/90 degree and ring end used with Q624 and Q652	Q652; Q624
32004766-012/U	36 inch ignition cable w/90 degree boot on one end only	Q652; Q624
4074BTN/U	Bag assembly consisting of washer (103218), cap terminal (135793) and ferrule (37356) for Q624	Q624A
50060793-001/U	24 inch Ignition Cable for Q624 and Q652	Q652; Q624
50060793-002/U	120 inch Ignition Cable used with Q624 and Q652	Q652; Q624
50060793-003/U	Ignition Cable for Q624 and Q652 (order by foot – enter the number of feet in the Quantity box)	Q652; Q624
50060793-004/U	60 inch Ignition Cable with straight boots	Q652; Q624
50060793-005/U	8 inch Ignition Cable w/90 degree and straight boot	Q652; Q624
50060793-006/U	36 inch Ignition Cable w/90 degree and straight boot	Q652; Q624
50060793-007/U	36 inch ignition cable w/90 degree boot on one end only	Q652; Q624
50060793-008/U	Ignition Cable w/90 degree boot on one end only	Q652; Q624
50060793-009/U	Ignition Cable w/90 degree boot on one end only	Q652; Q624
50060793-010/U	Ignition Cable w/90 degree boot on one end only	Q652; Q624
50060793-011/U	19 inch Ignition Cable w/90 degree and ring end used with Q624 and Q652	Q652; Q624
50060793-012/U	36 inch Ignition Cable with 90 degree boot and 1/4 in. spad terminal used with Q624 and Q652	Q652; Q624
50060793-013/U	48 inch Ignition Cable with 90 degree boot and 1/4 in. spad terminal used with Q624 and Q652	Q652; Q624

M9484D, E, F; M9494D, F Modutrol® IV Motors

Reversing, proportional motors used to drive burner firing rate valves, dampers or auxiliary equipment. Replaces M941A, C, D motors.

- Designed for flame safeguard applications in commercial/industrial oil or gas burner system.
- Vibration resistant electronic drive circuit.
- Regulated by three-wire proportional controller.
- Stroke is field-adjustable to 90 or 160 degrees.

Frequency: 50 Hz; 60 Hz
Stroke: Adjustable; 90 to 160 degrees, Symmetrical
Power Consumption: 15 W
Input Signal: 135 ohm
Shaft Dimensions: double-ended, 3/8 in. square (double-ended, 9.5 mm square)
Deadweight Load on Shaft: Either End – 200 lb (300 lb combined power and auxiliary shafts); 90.8 kg (136 kg combined power and auxiliary shafts)

Approximate, Dimensions: 6.45 in high x 5.5 in wide x 7.3 in deep (164 mm high x 140 mm wide x 185 mm deep)
Ambient Temperature Range: -40°F to +150°F (-40°C to +66°C)
Approvals, Underwriters Laboratories Inc.: Listed: File No. E4436, Guide No. XAPX for USA and Canada
Supply Voltage: 24 Vac

Accessories:
Q100B1006/U – Linkage to connect Modutrol motor to V51E Butterfly Valve. Includes 10 3/4 inch Linkage Rod.

Material Number	Torque Rating (lb-in.)	Torque Rating (Nm)	Additional Torque Ratings (lb-in.)	Additional Torque Ratings (Nm)	Internal Auxiliary Switch	Auxiliary Switch Setting	Auxiliary Switch Ratings	Switch Ratings	Timing	Factory Stroke Setting
M9484D1010/U	150 lb-in.	17 Nm	Breakaway – 300 lb-in.	Breakaway – 34.0 Nm				At 120 Vac – 7.2 AFL, 43.2 ALR, 40 VA pilot duty opposite contact; At 240 Vac – 3.6 AFL, 21.6 ALR, 40 VA pilot duty opposite contact	90 degree stroke – 30 seconds, 160 degree stroke – 60 seconds	160 degrees
M9484E1009/U	75 lb-in.	8.5 Nm	Breakaway – 150 lb-in.	Breakaway – 17.0 Nm	1	11 degrees	120 Vac – 7.2 AFL, 43.2 ALR, 40 VA pilot duty opposite contact; At 240 Vac – 3.6 AFL, 21.6 ALR, 40 VA pilot duty opposite contact		90 degree stroke – 15 seconds, 160 degree stroke – 30 seconds	90 degrees
M9484E1017/U	150 lb-in.	17 Nm	Breakaway – 300 lb-in.	Breakaway – 34.0 Nm	1	1 degree	120 Vac – 7.2 AFL, 43.2 ALR, 40 VA pilot duty opposite contact; At 240 Vac – 3.6 AFL, 21.6 ALR, 40 VA pilot duty opposite contact		90 degree stroke – 30 seconds, 160 degree stroke – 60 seconds	90 degrees
M9484E1033/U	150 lb-in.	17 Nm	Breakaway – 300 lb-in.	Breakaway – 34.0 Nm	1	7 degrees	120 Vac – 7.2 AFL, 43.2 ALR, 40 VA pilot duty opposite contact; At 240 Vac – 3.6 AFL, 21.6 ALR, 40 VA pilot duty opposite contact		90 degree stroke – 30 seconds, 160 degree stroke – 60 seconds	90 degrees
M9484F1007/U	150 lb-in.	17 Nm	Breakaway – 300 lb-in.	Breakaway – 34.0 Nm	2	7 and 80 degrees	120 Vac – 7.2 AFL, 43.2 ALR, 40 VA pilot duty opposite contact; At 240 Vac – 3.6 AFL, 21.6 ALR, 40 VA pilot duty opposite contact		90 degree stroke – 30 seconds, 160 degree stroke – 60 seconds	90 degrees
M9484F1023/U	75 lb-in.	8.5 Nm	Breakaway – 150 lb-in.	Breakaway – 17.0 Nm	2			At 120 Vac – 7.2 AFL, 43.2 ALR, 40 VA pilot duty opposite contact; At 240 Vac – 3.6 AFL, 21.6 ALR, 40 VA pilot duty opposite contact	90 degree stroke – 15 seconds, 160 degree stroke – 30 seconds	90 degrees

Firing Rate Motors and Linkages

Material Number	Torque Rating (lb-in.)	Torque Rating (Nm)	Additional Torque Ratings (lb-in.)	Additional Torque Ratings (Nm)	Internal Auxiliary Switch	Auxiliary Switch Setting	Auxiliary Switch Ratings	Switch Ratings	Timing	Factory Stroke Setting
M9484F1031/U	150 lb-in.	17 Nm	Breakaway – 300 lb-in.	Breakaway – 34.0 Nm	2	7 and 80 degrees	120 Vac – 7.2 AFL, 43.2 ALR, 40 VA pilot duty opposite contact; At 240 Vac – 3.6 AFL, 21.6 ALR, 40 VA pilot duty opposite contact		90 degree stroke – 30 seconds, 160 degree stroke – 60 seconds	90 degrees
M9484F1049/U	150 lb-in.	17 Nm	Breakaway – 300 lb-in.	Breakaway – 34.0 Nm	2	35 and 120 degrees	120 Vac – 7.2 AFL, 43.2 ALR, 40 VA pilot duty opposite contact; At 240 Vac – 3.6 AFL, 21.6 ALR, 40 VA pilot duty opposite contact		90 degree stroke – 30 seconds, 160 degree stroke – 60 seconds	160 degrees
M9484F1057/U	150 lb-in.	17 Nm	Breakaway – 300 lb-in.	Breakaway – 34.0 Nm	2			At 120 Vac – 7.2 AFL, 43.2 ALR, 40 VA pilot duty opposite contact; At 240 Vac – 3.6 AFL, 21.6 ALR, 40 VA pilot duty opposite contact	90 degree stroke – 30 seconds, 160 degree stroke – 53 seconds	
M9494D1000/U	300 lb-in.	34 Nm	Breakaway – 600 lb-in.	Breakaway – 68.0 Nm				At 120 Vac – 7.2 AFL, 43.2 ALR, 40 VA pilot duty opposite contact; At 240 Vac – 3.6 AFL, 21.6 ALR, 40 VA pilot duty opposite contact	90 degree stroke – 60 seconds, 160 degree stroke – 120 seconds	90 degrees
M9494F1003/U	300 lb-in.	34 Nm	Breakaway – 600 lb-in.	Breakaway – 68.0 Nm	2			At 120 Vac – 7.2 AFL, 43.2 ALR, 40 VA pilot duty opposite contact; At 240 Vac – 3.6 AFL, 21.6 ALR, 40 VA pilot duty opposite contact	90 degree stroke – 60 seconds, 160 degree stroke – 107 seconds	90 degrees

Q100 Butterfly Valve Linkages

Connects V51E valve to M9484 and M9494 Modutrol IV Motors with adapter plate.

- Fits all sizes of V51E Valves. Mounts easily.

Material Number	Linkage Type	Used with Actuator	Includes	Used With
Q100B1006/U	Butterfly Gas Valve	Modutrol Motor	10 3/4 in. Linkage Rod	all sizes V51E Gas Valve

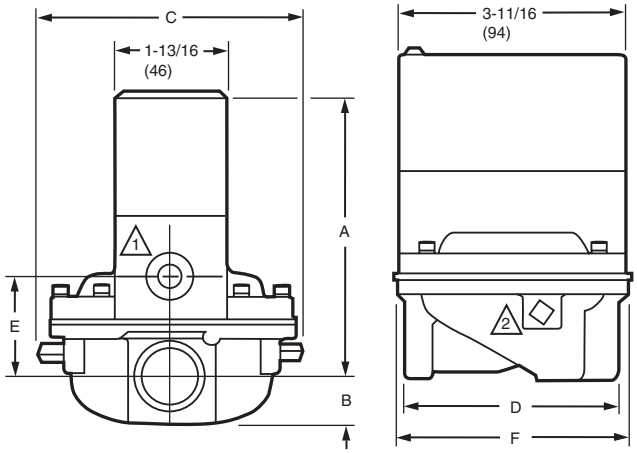
V48A; V88A Diaphragm Gas Valves

Solenoid-operated diaphragm valves provide slow opening and fast closing suitable for controlling natural, LP or manufactured gases. They are normally used on atmospheric boilers, commercial water heaters, and rooftop heaters.

- V48 for line voltage service; V88 for 24 Vac service.
- Close firmly with diaphragm that is both weight and spring loaded.
- Two second maximum closing time.
- Valve closes on power failure; recommended for final shutoff service.
- Set opening time with various sized bleed orifices or adjustable bleed valve.
- Use with LP, natural or manufactured gases.
- Made with cast aluminum in straight-through valve pattern.
- Valve position indicator available for 1-1/4 in. V48A2227.

Type of Fuel: Natural; LP; Manufactured
Bleed Tapping: 1/8-27 NPT
Body Pattern: Straight-through
Valve Opening Time: 5 sec max
Valve Closing Time: 2 sec max
Mounting: Upright (horizontal)
Materials: Body – Aluminum
Frequency: 60 Hz
Power Consumption: 9 W; 15 VA max
Electrical Connections: 6 in. Leadwires
Operating Temperature Range: 32°F to 125°F (0°C to 52°C)
Approvals, Underwriters Laboratories Inc.: File No. MH1639, Guide No. YIOZ
Approvals, CSA: Certificate No. 158158-2500005576 (Z21.21-CSA 6.5)

Dimensions in inches (millimeters)



VALVE SIZE (IN.)	APPROXIMATE DIMENSIONS											
	A		B		C		D		E		F	
	IN.	MM	IN.	MM	IN.	MM	IN.	MM	IN.	MM	IN.	MM
3/4	4-11/16	119.1	3/4	19.1	4-5/8	117.5	3-1/2	88.9	1-5/8	41.3	3-13/16	96.8
1	5-1/16	128.6	1	25.4	5	127.0	3-11/16	93.7	2-1/16	52.4	4-5/16	109.5
1-1/4	5-9/16	141.3	1-1/4	31.8	5-7/8	149.2	5-5/16	134.9	2-3/8	60.3	5-5/16	134.9
1-1/2	5-9/16	141.3	1-1/4	31.8	5-7/8	149.2	5-5/16	134.9	2-3/8	60.3	5-5/16	134.9
2	6-15/16	176.2	2-1/4	57.2	9-1/2	241.3	8-3/8	212.7	3-9/16	90.5	5-5/16	236.5
2-1/2	6-15/16	176.2	2-1/4	57.2	9-1/2	241.3	8-3/8	212.7	3-9/16	90.5	9-5/16	236.5
3	6-15/16	176.2	2-1/4	57.2	9-1/2	241.3	8-3/8	212.7	3-9/16	90.5	9-5/16	236.5

1 BLEED TAPPING: 1/8-27 NPT.

2 PILOT TAPING (2): 1/8-27 NPT FOR 3/4 THROUGH 1-1/2 IN. SIZES, 1/4-18 NPT FOR 2 THROUGH 3 IN. SIZES.

M8487A

Material Number	Pipe Size (inch)	Pipe Size (DN)	Pilot Tapping	Voltage	Approximate, Dimensions	Pressure Rating (psi)	Pressure Rating (kPa)	Current Ratings	Comments	Includes
V48A2151/U	3/4 in.	DN20	1/8-27 NPT	120 Vac	5 7/16 in. high x 3 13/16 in. wide x 4 5/8 in. deep (138 mm high x 97 mm wide x 118 mm deep)	1/2 psi	3.4 kPa	0.13 max amps at rated Vac/Hz		Ground terminal
V48A2169/U	1 in.	DN25	1/8-27 NPT	120 Vac	6 1/16 in. high x 4 5/16 in. wide x 5 in. deep (154 mm high x 127 mm wide x 109 mm deep)	1/2 psi	3.4 kPa	0.13 max amps at rated Vac/Hz		Ground terminal
V48A2177/U	1 1/4 in.	DN32	1/8-27 NPT	120 Vac	6 13/16 in. high x 5 5/16 in. wide x 5 7/8 in. deep (173 mm high x 135 mm wide x 149 mm deep)	1/2 psi	3.4 kPa	0.13 max amps at rated Vac/Hz		Ground terminal
V48A2185/U	1 1/2 in.	DN40	1/8-27 NPT	120 Vac	6 13/16 in. high x 5 5/16 in. wide x 5 7/8 in. deep (173 mm high x 135 mm wide x 149 mm deep)	1/2 psi	3.4 kPa	0.13 max amps at rated Vac/Hz		Ground terminal
V48A2227/U	1 1/4 in.	DN32	1/8-27 NPT	120 Vac	6 13/16 in. high x 5 5/16 in. wide x 5 7/8 in. deep (173 mm high x 135 mm wide x 149 mm deep)	1 psi	6.9 kPa	0.13 max amps at rated Vac/Hz	Includes position indicator	Ground terminal
V48A2243/U	2 in.	DN50	1/4-18 NPT	120 Vac	9 3/16 in. high x 9 5/16 in. wide x 9 1/2 in. deep (233 mm high x 237 mm wide x 241 mm deep)	1 psi	6.9 kPa	0.13 max amps at rated Vac/Hz		Ground terminal
V48A2250/U	2 1/2 in.	DN65	1/4-18 NPT	120 Vac	9 3/16 in. high x 9 5/16 in. wide x 9 1/2 in. deep (233 mm high x 237 mm wide x 241 mm deep)	1 psi	6.9 kPa	0.13 max amps at rated Vac/Hz		Ground terminal

Diaphragm Gas Valves

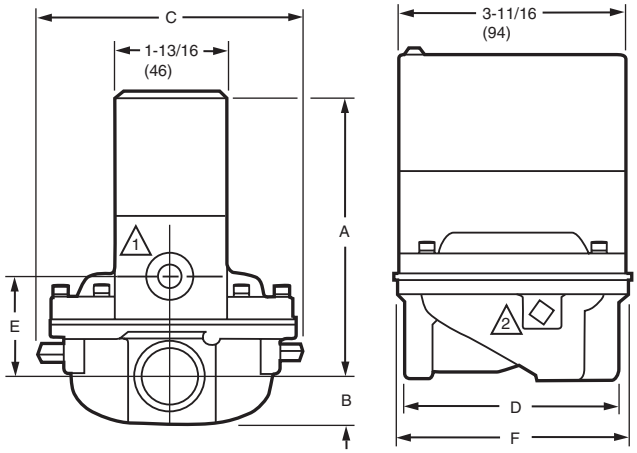
Material Number	Pipe Size (inch)	Pipe Size (DN)	Pilot Tapping	Voltage	Approximate, Dimensions	Pressure Rating (psi)	Pressure Rating (kPa)	Current Ratings	Comments	Includes
V48A2268/U	3 in.	DN80	1/4-18 NPT	120 Vac	9 3/16 in. high x 9 5/16 in. wide x 9 1/2 in. deep (233 mm high x 237 mm wide x 241 mm deep)	1 psi	6.9 kPa	0.13 max amps at rated Vac/Hz		Ground terminal
V48A2276/U	1 1/2 in.	DN40	1/8-27 NPT	120 Vac	6 13/16 in. high x 5 5/16 in. wide x 5 7/8 in. deep (173 mm high x 135 mm wide x 149 mm deep)	1 psi	6.9 kPa	0.13 max amps at rated Vac/Hz		Ground terminal
V48A2334/U	1 in.	DN25	1/8-27 NPT	120 Vac	6 1/16 in. high x 4 5/16 in. wide x 5 in. deep (154 mm high x 127 mm wide x 109 mm deep)	1 psi	6.9 kPa	0.13 max amps at rated Vac/Hz		Ground terminal
V48A2342/U	1 1/4 in.	DN32	1/8-27 NPT	120 Vac	6 13/16 in. high x 5 5/16 in. wide x 5 7/8 in. deep (173 mm high x 135 mm wide x 149 mm deep)	1 psi	6.9 kPa	0.13 max amps at rated Vac/Hz		Ground terminal
V88A1618/U	1 in.	DN25	1/8-27 NPT	24 Vac	6 1/16 in. high x 4 5/16 in. wide x 5 in. deep (154 mm high x 127 mm wide x 109 mm deep)	1/2 psi	3.4 kPa	0.62 max amps at rated Vac/Hz		
V88A1626/U	1 1/4 in.	DN32	1/8-27 NPT	24 Vac	6 13/16 in. high x 5 5/16 in. wide x 5 7/8 in. deep (173 mm high x 135 mm wide x 149 mm deep)	1/2 psi	3.4 kPa	0.62 max amps at rated Vac/Hz		
V88A1634/U	1 1/2 in.	DN40	1/8-27 NPT	24 Vac	6 13/16 in. high x 5 5/16 in. wide x 5 7/8 in. deep (173 mm high x 135 mm wide x 149 mm deep)	1/2 psi	3.4 kPa	0.62 max amps at rated Vac/Hz		
V88A1659/U	3/4 in.	DN20	1/8-27 NPT	24 Vac	5 7/16 in. high x 3 13/16 in. wide x 4 5/8 in. deep (138 mm high x 97 mm wide x 118 mm deep)	1/2 psi	3.4 kPa	0.62 max amps at rated Vac/Hz		
V88A1667/U	3/4 in.	DN20	1/8-27 NPT	24 Vac	5 7/16 in. high x 3 13/16 in. wide x 4 5/8 in. deep (138 mm high x 97 mm wide x 118 mm deep)	1 psi	6.9 kPa	0.62 max amps at rated Vac/Hz		
V88A1675/U	1 in.	DN25	1/8-27 NPT	24 Vac	6 1/16 in. high x 4 5/16 in. wide x 5 in. deep (154 mm high x 127 mm wide x 109 mm deep)	1 psi	6.9 kPa	0.62 max amps at rated Vac/Hz		
V88A1683/U	1 1/4 in.	DN32	1/8-27 NPT	24 Vac	6 13/16 in. high x 5 5/16 in. wide x 5 7/8 in. deep (173 mm high x 135 mm wide x 149 mm deep)	1 psi	6.9 kPa	0.62 max amps at rated Vac/Hz		
V88A1691/U	1 1/2 in.	DN40	1/8-27 NPT	24 Vac	6 13/16 in. high x 5 5/16 in. wide x 5 7/8 in. deep (173 mm high x 135 mm wide x 149 mm deep)	1 psi	6.9 kPa	0.62 max amps at rated Vac/Hz		
V88A1709/U	2 in.	DN50	1/4-18 NPT	24 Vac	9 3/16 in. high x 9 5/16 in. wide x 9 1/2 in. deep (233 mm high x 237 mm wide x 241 mm deep)	1 psi	6.9 kPa	0.62 max amps at rated Vac/Hz		
V88A1717/U	2 1/2 in.	DN65	1/4-18 NPT	24 Vac	9 3/16 in. high x 9 5/16 in. wide x 9 1/2 in. deep (233 mm high x 237 mm wide x 241 mm deep)	1 psi	6.9 kPa	0.62 max amps at rated Vac/Hz		

V88J High Temperature Diaphragm Gas Valves

Solenoid-operated diaphragm valves provide slow opening and fast closing suitable for controlling natural, LP or manufactured gases. They are normally used on atmospheric boilers, commercial water heaters, and rooftop heaters.

- Rated for 150°F (66°C) maximum temperature applications.
- V88 for 24 Vac service.
- Close firmly with diaphragm that is both weight and spring loaded.
- Two second maximum closing time.
- Valve closes on power failure; recommended for final shutoff service.
- Set opening time with various sized bleed orifices or adjustable bleed valve.
- Use with LP, natural or manufactured gases.
- Made with cast aluminum in straight-through valve pattern.

Dimensions in inches (millimeters)



VALVE SIZE (IN.)	APPROXIMATE DIMENSIONS											
	A		B		C		D		E		F	
	IN.	MM	IN.	MM	IN.	MM	IN.	MM	IN.	MM	IN.	MM
3/4	4-11/16	119.1	3/4	19.1	4-5/8	117.5	3-1/2	88.9	1-5/8	41.3	3-13/16	96.8
1	5-1/16	128.6	1	25.4	5	127.0	3-11/16	93.7	2-1/16	52.4	4-5/16	109.5
1-1/4	5-9/16	141.3	1-1/4	31.8	5-7/8	149.2	5-5/16	134.9	2-3/8	60.3	5-5/16	134.9
1-1/2	5-9/16	141.3	1-1/4	31.8	5-7/8	149.2	5-5/16	134.9	2-3/8	60.3	5-5/16	134.9
2	6-15/16	176.2	2-1/4	57.2	9-1/2	241.3	8-3/8	212.7	3-9/16	90.5	5-5/16	236.5
2-1/2	6-15/16	176.2	2-1/4	57.2	9-1/2	241.3	8-3/8	212.7	3-9/16	90.5	9-5/16	236.5
3	6-15/16	176.2	2-1/4	57.2	9-1/2	241.3	8-3/8	212.7	3-9/16	90.5	9-5/16	236.5

1 BLEED TAPPING: 1/8-27 NPT.

2 PILOT TAPING (2): 1/8-27 NPT FOR 3/4 THROUGH 1-1/2 IN. SIZES, 1/4-18 NPT FOR 2 THROUGH 3 IN. SIZES.

M8487A

Type of Fuel: Natural; LP; Manufactured
Bleed Tapping: 1/8-27 NPT
Pilot Tapping: 1/8-27 NPT
Body Pattern: Straight-through
Valve Opening Time: 5 sec max
Valve Closing Time: 2 sec max
Mounting: Upright (horizontal)
Materials: Body – Aluminum
Frequency: 60 Hz
Electrical Connections: 6 in. Leadwires
Operating Temperature Range: 32°F to 150°F (0°C to 66°C)
Approvals, Underwriters Laboratories Inc.: File No. MH1639, Guide No. YIOZ
Approvals, CSA: Certificate No. 158158-2500005576 (Z21.21-CSA 6.5)
Pressure Ratings (psi): 1 psi
Pressure Ratings (kPa): 6.9 kPa
Current Ratings: 0.62 max amps at rated Vac/Hz

Material Number	Pipe Size (inch)	Pipe Size (DN)	Voltage	Approximate, Dimensions	Power Consumption
V88J1006/U	1 in.	DN25	24 Vac	6 1/16 in. high x 4 5/16 in. wide x 5 in. deep (154 mm high x 127 mm wide x 109 mm deep)	9 W; 15 VA max
V88J1022/U	1 1/4 in.	DN32	24 Vac	6 13/16 in. high x 5 5/16 in. wide x 5 7/8 in. deep (173 mm high x 135 mm wide x 149 mm deep)	9 W; 15 VA max

V4943/V8943A On/Off Diaphragm Gas Valves

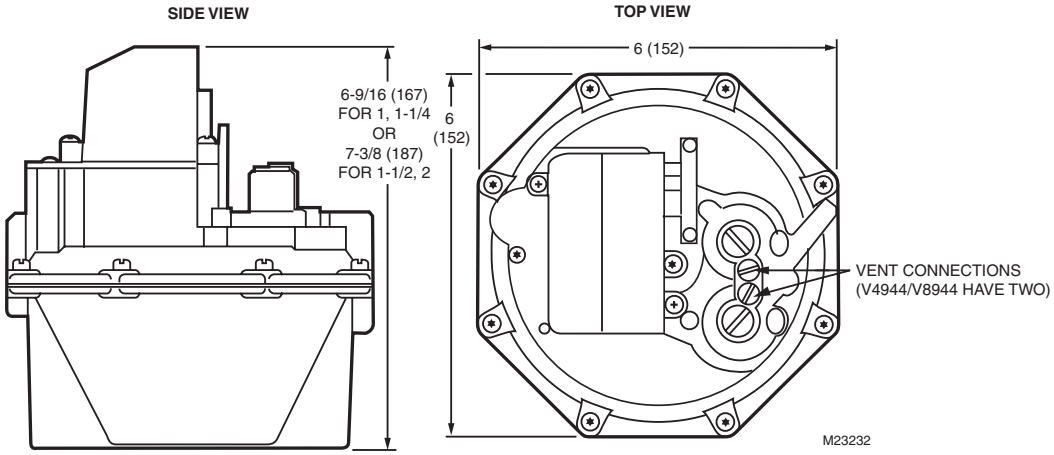
V4943A/V8943A are on/off diaphragm gas valve used on boilers, unit heaters, duct furnaces, makeup air and rooftop heaters.

- Designed for replacement for V4843A/V8843A Gas Valves.
- Suitable for use on atmospheric boilers, commercial water heaters, and rooftop heaters.
- V8943A/V4943A models are solenoid-operated diaphragm valves for on/off flow control of natural or LP gas.
- Valve body of die-cast aluminum with a straight-through pattern.
- V4943 are used with line voltage, on/off controllers; V8943A are used with 24 Vac thermostats or controllers.
- Valve closes on power failure; recommended for final shutoff service.

Type of Fuel: Natural; LP
Bleed Tapping: Internal Bleed
Pilot Tapping: 1/8-27 NPT
Body Pattern: Straight-through, non-offset
Opening Characteristics: Rapid Opening On-Off
Valve Opening Time: 6 sec max
Valve Closing Time: 3 sec max
Mounting: Upright (horizontal)
Materials: Body – Aluminum
Frequency: 60 Hz
Electrical Connections: 1/4 in. (6 mm) spade terminals (quick connects). 30 in. (762 mm) leadwires and cover for electrical conduit connection provided.

Operating Temperature Range: -40°F to +150°F (-40°C to +66°C)
Approvals, Underwriters Laboratories Inc.: File No. MH1639, Guide No. YIOZ (60 Hz only)
Approvals, CSA: Certificate No. 158158-1042930, Guide No. 3371-03, 83 (Z21.21, Z21.78)
Pressure Ratings (psi): 1/2 psi
Pressure Ratings (kPa): 3.4 kPa
Comments: (2) 30" leadwires
Current Ratings: 0.055 max amps at rated Vac/Hz

Dimensions in inches (millimeters)



Material Number	Pipe Size (inch)	Pipe Size (DN)	Voltage	Approximate, Dimensions	Power Consumption
V4943A1011/U	1 in.	DN25	120 Vac	6 9/16 in. high x 6 in. wide x 6 in. deep (167 mm high x 152 mm wide x 152 mm deep)	6 VA max
V4943A1029/U	1 1/4 in.	DN32	120 Vac	6 9/16 in. high x 6 in. wide x 6 in. deep (167 mm high x 152 mm wide x 152 mm deep)	6 VA max
V4943A1037/U	1 1/2 in.	DN40	120 Vac	7 3/8 in. high x 6 in. wide x 6 in. deep (187 mm high x 152 mm wide x 152 mm deep)	6 VA max
V4943A1045/U	2 in.	DN50	120 Vac	7 3/8 in. high x 6 in. wide x 6 in. deep (187 mm high x 152 mm wide x 152 mm deep)	6 VA max
V8943A1012/U	1 in.	DN25	24 Vac	6 9/16 in. high x 6 in. wide x 6 in. deep (167 mm high x 152 mm wide x 152 mm deep)	8 VA max
V8943A1020/U	1 1/4 in.	DN32	24 Vac	6 9/16 in. high x 6 in. wide x 6 in. deep (167 mm high x 152 mm wide x 152 mm deep)	8 VA max
V8943A1038/U	1 1/2 in.	DN40	24 Vac	7 3/8 in. high x 6 in. wide x 6 in. deep (187 mm high x 152 mm wide x 152 mm deep)	8 VA max
V8943A1046/U	2 in.	DN50	24 Vac	7 3/8 in. high x 6 in. wide x 6 in. deep (187 mm high x 152 mm wide x 152 mm deep)	8 VA max

V4943/V8943B, C, N Single Stage Pressure Regulating Valves

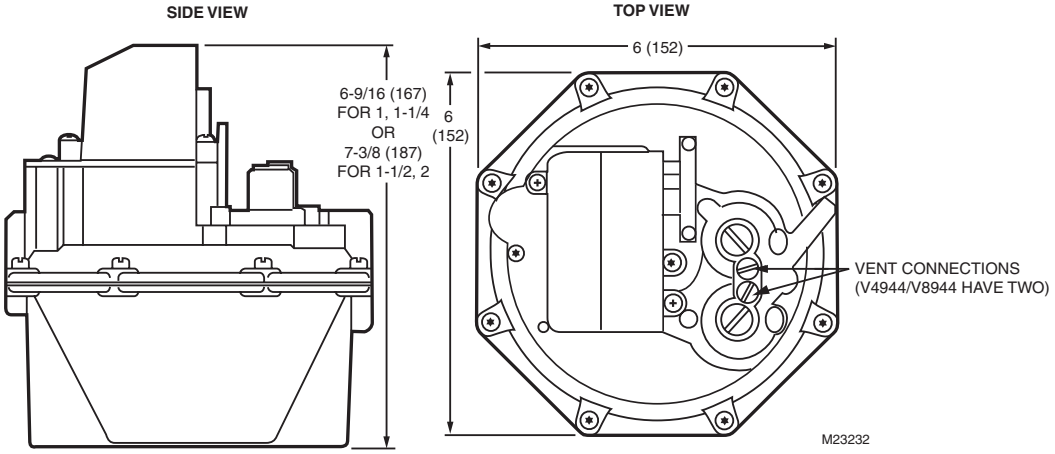
V4943B, N/8943B, C, N are Single-stage Pressure Regulating Valves. These valves are used on boilers, unit heaters, duct furnaces, makeup air and rooftop heaters.

- Designed for replacement for V4843/V8843 Gas Valves.
- Suitable for use on atmospheric boilers, commercial water heaters, and rooftop heaters.
- V4943/V8943B, C, N models are solenoid-operated diaphragm valves that combine the functions of safety shutoff and pressure regulation in a single unit.
- V4943/V8943B, N are for use with natural gas.
- V4943/V8943C are for use with LP gas.
- Valve body of die-cast aluminum with a straight-through pattern.
- V4943 are used with line voltage, on/off controllers; V8943 are used with 24 Vac thermostats or controllers.
- Valve closes on power failure; recommended for final shutoff service.

Bleed Tapping: 5/16-24 UNF
Pilot Tapping: 1/8-27 NPT
Body Pattern: Straight-through, non-offset
Valve Closing Time: 2 sec max
Mounting: Upright (horizontal)
Materials: Body – Aluminum
Frequency: 60 Hz
Electrical Connections: 1/4 in. (6 mm) spade terminals (quick connects). 30 in. (762 mm) leadwires and cover for electrical conduit connection provided.

Operating Temperature Range: -40°F to +150°F (-40°C to +66°C)
Approvals, Underwriters Laboratories Inc.: File No. MH1639, Guide No. YIOZ (60 Hz only)
Approvals, CSA: Certificate No. 158158-1042930, Guide No. 3302-01, 81 (Z21.21, Z21.78)
Pressure Ratings (psi): 1/2 psi
Pressure Ratings (kPa): 3.4 kPa
Comments: (2) 30" leadwires

Dimensions in inches (millimeter)



Material Number	Type of Fuel	Pipe Size (inch)	Pipe Size (DN)	Opening Characteristics	Voltage	Approximate, Dimensions	Valve Opening Time	Current Ratings	Pressure Regulator Setpoint (in. wc)	Power Consumption
V4943B1019/U	Natural	1 in.	DN25	Slow Opening 1-stage	120 Vac	6 9/16 in. high x 6 in. wide x 6 in. deep (167 mm high x 152 mm wide x 152 mm deep)	3 to 25 sec	0.055 max amps at rated Vac/Hz	Adj. Range, High Fire – 3 in. wc to 4.5 in. wc; Factory Setting, High Fire – 3.5 in. wc	6.6 VA max; 6.6 VA
V4943B1027/U	Natural	1 1/4 in.	DN32	Slow Opening 1-stage	120 Vac	6 9/16 in. high x 6 in. wide x 6 in. deep (167 mm high x 152 mm wide x 152 mm deep)	3 to 25 sec	0.055 max amps at rated Vac/Hz	Adj. Range, High Fire – 3 in. wc to 4.5 in. wc; Factory Setting, High Fire – 3.5 in. wc	6.6 VA max
V4943B1035/U	Natural	1 1/2 in.	DN40	Slow Opening 1-stage	120 Vac	7 3/8 in. high x 6 in. wide x 6 in. deep (187 mm high x 152 mm wide x 152 mm deep)	3 to 25 sec	0.055 max amps at rated Vac/Hz	Adj. Range, High Fire – 3 in. wc to 4.5 in. wc; Factory Setting, High Fire – 3.5 in. wc	6.6 VA max
V4943B1043/U	Natural	2 in.	DN50	Slow Opening 1-stage	120 Vac	7 3/8 in. high x 6 in. wide x 6 in. deep (187 mm high x 152 mm wide x 152 mm deep)	3 to 25 sec	0.055 max amps at rated Vac/Hz	Adj. Range, High Fire – 3 in. wc to 4.5 in. wc; Factory Setting, High Fire – 3.5 in. wc	6.6 VA max
V4943N1012/U	Natural	1 in.	DN25	Rapid Opening 1-stage	120 Vac	6 9/16 in. high x 6 in. wide x 6 in. deep (167 mm high x 152 mm wide x 152 mm deep)	6 sec max	0.055 max amps at rated Vac/Hz	Adj. Range, High Fire – 3 in. wc to 4.5 in. wc; Factory Setting, High Fire – 3.5 in. wc	6.6 VA max
V4943N1020/U	Natural	1 1/4 in.	DN32	Rapid Opening 1-stage	120 Vac	6 9/16 in. high x 6 in. wide x 6 in. deep (167 mm high x 152 mm wide x 152 mm deep)	6 sec max	0.055 max amps at rated Vac/Hz	Adj. Range, High Fire – 3 in. wc to 4.5 in. wc; Factory Setting, High Fire – 3.5 in. wc	6.6 VA max

Diaphragm Gas Valves

Material Number	Type of Fuel	Pipe Size (inch)	Pipe Size (DN)	Opening Characteristics	Voltage	Approximate, Dimensions	Valve Opening Time	Current Ratings	Pressure Regulator Setpoint (in. wc)	Power Consumption
V4943N1038/U	Natural	1 1/2 in.	DN40	Rapid Opening 1-stage	120 Vac	7 3/8 in. high x 6 in. wide x 6 in. deep (187 mm high x 152 mm wide x 152 mm deep)	6 sec max	0.055 max amps at rated Vac/Hz	Adj. Range, High Fire – 3 in. wc to 4.5 in. wc; Factory Setting, High Fire – 3.5 in. wc	6.6 VA max
V4943N1046/U	Natural	2 in.	DN50	Rapid Opening 1-stage	120 Vac	7 3/8 in. high x 6 in. wide x 6 in. deep (187 mm high x 152 mm wide x 152 mm deep)	6 sec max	0.055 max amps at rated Vac/Hz	Adj. Range, High Fire – 3 in. wc to 4.5 in. wc; Factory Setting, High Fire – 3.5 in. wc	6.6 VA max
V8943B1010/U	Natural	1 in.	DN25	Slow Opening 1-stage	24 Vac	6 9/16 in. high x 6 in. wide x 6 in. deep (167 mm high x 152 mm wide x 152 mm deep)	3 to 25 sec	0.363 max amps at rated Vac/Hz	Adj. Range, High Fire – 3 in. wc to 4.5 in. wc; Factory Setting, High Fire – 3.5 in. wc	9 VA max
V8943B1028/U	Natural	1 1/4 in.	DN32	Slow Opening 1-stage	24 Vac	6 9/16 in. high x 6 in. wide x 6 in. deep (167 mm high x 152 mm wide x 152 mm deep)	3 to 25 sec	0.363 max amps at rated Vac/Hz	Adj. Range, High Fire – 3 in. wc to 4.5 in. wc; Factory Setting, High Fire – 3.5 in. wc	9 VA max
V8943B1036/U	Natural	1 1/2 in.	DN40	Slow Opening 1-stage	24 Vac	7 3/8 in. high x 6 in. wide x 6 in. deep (187 mm high x 152 mm wide x 152 mm deep)	3 to 25 sec	0.363 max amps at rated Vac/Hz	Adj. Range, High Fire – 3 in. wc to 4.5 in. wc; Factory Setting, High Fire – 3.5 in. wc	9 VA max
V8943B1044/U	Natural	2 in.	DN50	Slow Opening 1-stage	24 Vac	7 3/8 in. high x 6 in. wide x 6 in. deep (187 mm high x 152 mm wide x 152 mm deep)	3 to 25 sec	0.363 max amps at rated Vac/Hz	Adj. Range, High Fire – 3 in. wc to 4.5 in. wc; Factory Setting, High Fire – 3.5 in. wc	9 VA max
V8943C1018/U	LP	1 in.	DN25	Slow Opening 1-stage	24 Vac	6 9/16 in. high x 6 in. wide x 6 in. deep (167 mm high x 152 mm wide x 152 mm deep)	3 to 25 sec	0.363 max amps at rated Vac/Hz	Adj. Range, High Fire – 8.8 in. wc to 11.5 in. wc; Factory Setting, High Fire – 10.0 in. wc	9 VA max
V8943C1026/U	LP	1 1/4 in.	DN32	Slow Opening 1-stage	24 Vac	6 9/16 in. high x 6 in. wide x 6 in. deep (167 mm high x 152 mm wide x 152 mm deep)	3 to 25 sec	0.363 max amps at rated Vac/Hz	Adj. Range, High Fire – 8.8 in. wc to 11.5 in. wc; Factory Setting, High Fire – 10.0 in. wc	9 VA max
V8943N1013/U	Natural	1 in.	DN25	Rapid Opening 1-stage	24 Vac	6 9/16 in. high x 6 in. wide x 6 in. deep (167 mm high x 152 mm wide x 152 mm deep)	6 sec max	0.363 max amps at rated Vac/Hz	Adj. Range, High Fire – 3 in. wc to 4.5 in. wc; Factory Setting, High Fire – 3.5 in. wc	9 VA max
V8943N1021/U	Natural	1 1/4 in.	DN32	Rapid Opening 1-stage	24 Vac	6 9/16 in. high x 6 in. wide x 6 in. deep (167 mm high x 152 mm wide x 152 mm deep)	6 sec max	0.363 max amps at rated Vac/Hz	Adj. Range, High Fire – 3 in. wc to 4.5 in. wc; Factory Setting, High Fire – 3.5 in. wc	9 VA max
V8943N1039/U	Natural	1 1/2 in.	DN40	Rapid Opening 1-stage	24 Vac	7 3/8 in. high x 6 in. wide x 6 in. deep (187 mm high x 152 mm wide x 152 mm deep)	6 sec max	0.363 max amps at rated Vac/Hz	Adj. Range, High Fire – 3 in. wc to 4.5 in. wc; Factory Setting, High Fire – 3.5 in. wc	9 VA max

V4944/V8944B, C, L, N Two Stage Pressure Regulating Gas Valves

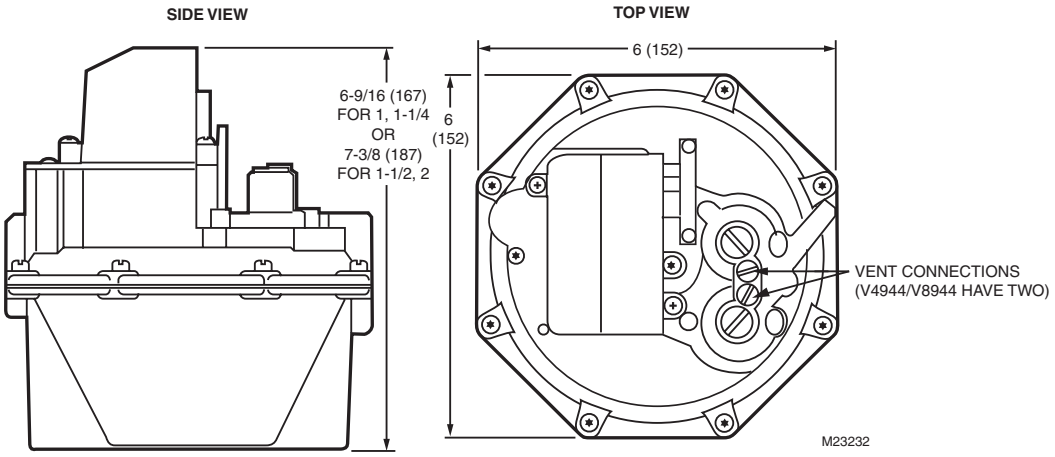
V4944B, L, N/8944B, C, L, N are Two-stage Pressure Regulating Gas Valves. These valves are used on boilers, unit heaters, duct furnaces, makeup air and rooftop heaters.

- Designed for replacement for V4844/V8844 Gas Valves.
- Suitable for use on atmospheric boilers, commercial water heaters, and rooftop heaters.
- V4944/V8944B, C, L, N models are solenoid-operated diaphragm valves that combine the functions of safety shutoff and pressure regulation in a single unit.
- V4944/V8944B, N are for use with natural gas.
- V4944/V8944C, L are for use with LP gas.
- Valve body of die-cast aluminum with a straight-through pattern.
- V4944 are used with line voltage, dual-stage controllers; V8944 are used with 24 Vac dual-stage thermostats or controllers.
- Valve closes on power failure; recommended for final shutoff service.

Bleed Tapping: Two 5/16-24 UNF
Pilot Tapping: 1/8-27 NPT
Body Pattern: Straight-through, non-offset
Valve Closing Time: 2 sec max
Mounting: Upright (horizontal)
Materials: Body – Aluminum
Voltage: V4944-120 Vac; V8944-24 Vac
Frequency: 60 Hz
Power Consumption: V4944-9 VA max; V8944-12.4 VA max
Electrical Connections: 1/4 in. (6 mm) spade terminals (quick connects), leadwires and cover for electrical conduit connection provided.

Operating Temperature Range: -40°F to +150°F (-40°C to +66°C)
Approvals, Underwriters Laboratories Inc.: File No. MH1639, Guide No. YIOZ (60 Hz only)
Approvals, CSA: Certificate No. 158158-1042930, Guide No. 3302-01, 81 (Z21.21, Z21.78)
Pressure Ratings (psi): 1/2 psi
Pressure Ratings (kPa): 3.4 kPa
Current Ratings: V4944-0.077 max amps at rated Vac/Hz; V8944-0.516 max amps at rated Vac/Hz

Dimensions in inches (millimeter)



Material Number	Type of Fuel	Pipe Size (inch)	Pipe Size (DN)	Opening Characteristics	Valve Opening Time	Pressure Regulator Setpoint (in. wc)	Comments
V4944B1018/U	Natural	1 in.	DN25	Slow Opening 2-stage	3 to 25 sec	Adj. Range, Low Fire – 0.8 in. wc to 2 in. wc; Adj. Range, High Fire – 3 in. wc to 4.5 in. wc; Factory Setting, Low Fire – 0.8 in. wc; Factory Setting, High Fire – 3.5 in. wc	(3) 30" leadwires
V4944B1026/U	Natural	1 1/4 in.	DN32	Slow Opening 2-stage	3 to 25 sec	Adj. Range, Low Fire – 0.8 in. wc to 2 in. wc; Adj. Range, High Fire – 3 in. wc to 4.5 in. wc; Factory Setting, Low Fire – 0.8 in. wc; Factory Setting, High Fire – 3.5 in. wc	(3) 30" leadwires
V4944B1059/U	Natural	1 in.	DN25	Slow Opening 2-stage	3 to 25 sec	Adj. Range, Low Fire – 0.8 in. wc to 2 in. wc; Adj. Range, High Fire – 3 in. wc to 4.5 in. wc; Factory Setting, Low Fire – 0.7 in. wc; Factory Setting, High Fire – 3.0 in. wc	(3) 30" leadwires
V4944B1075/U	Natural	1 in.	DN25	Slow Opening 2-stage	3 to 25 sec	Adj. Range, Low Fire – 1.6 in. wc to 4. in. wc; Adj. Range, High Fire – 3 in. wc to 4.5 in. wc; Factory Setting, Low Fire – 1.6 in. wc; Factory Setting, High Fire – 3.5 in. wc	
V4944B1091/U	Natural	1 1/2 in.	DN40	Slow Opening 2-stage	3 to 25 sec	Adj. Range, Low Fire – 1.6 in. wc to 4. in. wc; Adj. Range, High Fire – 3 in. wc to 4.5 in. wc; Factory Setting, Low Fire – 1.6 in. wc; Factory Setting, High Fire – 3.5 in. wc	
V4944L1024/U	LP	1 1/4 in.	DN32	Rapid Opening 2-stage	6 sec max	Adj. Range, Low Fire – 1.4 in. wc to 4.2 in. wc; Adj. Range, High Fire – 8.8 in. wc to 11.5 in. wc; Factory Setting, Low Fire – 1.4 in. wc; Factory Setting, High Fire – 10.0 in. wc	(3) 30" leadwires

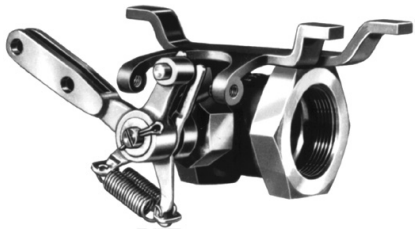
Diaphragm Gas Valves

Material Number	Type of Fuel	Pipe Size (inch)	Pipe Size (DN)	Opening Characteristics	Valve Opening Time	Pressure Regulator Setpoint (in. wc)	Comments
V4944N1011/U	Natural	1 in.	DN25	Rapid Opening 2-stage	6 sec max	Adj. Range, Low Fire – 0.8 in. wc to 2 in. wc; Adj. Range, High Fire – 3 in. wc to 4.5 in. wc; Factory Setting, Low Fire – 0.8 in. wc; Factory Setting, High Fire – 3.5 in. wc	(3) 30" leadwires
V4944N1029/U	Natural	1 1/4 in.	DN32	Rapid Opening 2-stage	6 sec max	Adj. Range, Low Fire – 0.8 in. wc to 2 in. wc; Adj. Range, High Fire – 3 in. wc to 4.5 in. wc; Factory Setting, Low Fire – 0.8 in. wc; Factory Setting, High Fire – 3.5 in. wc	(3) 30" leadwires
V4944N1037/U	Natural	1 1/2 in.	DN40	Rapid Opening 2-stage	6 sec max	Adj. Range, Low Fire – 0.8 in. wc to 2 in. wc; Adj. Range, High Fire – 3 in. wc to 4.5 in. wc; Factory Setting, Low Fire – 0.8 in. wc; Factory Setting, High Fire – 3.5 in. wc	(3) 30" leadwires
V4944N1045/U	Natural	2 in.	DN50	Rapid Opening 2-stage	6 sec max	Adj. Range, Low Fire – 0.8 in. wc to 2 in. wc; Adj. Range, High Fire – 3 in. wc to 4.5 in. wc; Factory Setting, Low Fire – 0.8 in. wc; Factory Setting, High Fire – 3.5 in. wc	(3) 30" leadwires
V4944N1060/U	Natural	1 1/4 in.	DN32	Rapid Opening 2-stage	6 sec max	Adj. Range, Low Fire – 0.8 in. wc to 2 in. wc; Adj. Range, High Fire – 3 in. wc to 4.5 in. wc; Factory Setting, Low Fire – 1.0 in. wc; Factory Setting, High Fire – 3.0 in. wc	(3) 85" leadwires
V8944B1019/U	Natural	1 in.	DN25	Slow Opening 2-stage	3 to 25 sec	Adj. Range, Low Fire – 0.8 in. wc to 2 in. wc; Adj. Range, High Fire – 3 in. wc to 4.5 in. wc; Factory Setting, Low Fire – 0.8 in. wc; Factory Setting, High Fire – 3.5 in. wc	(3) 30" leadwires
V8944B1027/U	Natural	1 1/4 in.	DN32	Slow Opening 2-stage	3 to 25 sec	Adj. Range, Low Fire – 0.8 in. wc to 2 in. wc; Adj. Range, High Fire – 3 in. wc to 4.5 in. wc; Factory Setting, Low Fire – 0.8 in. wc; Factory Setting, High Fire – 3.5 in. wc	(3) 30" leadwires
V8944B1035/U	Natural	1 1/2 in.	DN40	Slow Opening 2-stage	3 to 25 sec	Adj. Range, Low Fire – 0.8 in. wc to 2 in. wc; Adj. Range, High Fire – 3 in. wc to 4.5 in. wc; Factory Setting, Low Fire – 0.8 in. wc; Factory Setting, High Fire – 3.5 in. wc	(3) 30" leadwires
V8944B1043/U	Natural	2 in.	DN50	Slow Opening 2-stage	3 to 25 sec	Adj. Range, Low Fire – 0.8 in. wc to 2 in. wc; Adj. Range, High Fire – 3 in. wc to 4.5 in. wc; Factory Setting, Low Fire – 0.8 in. wc; Factory Setting, High Fire – 3.5 in. wc	(3) 30" leadwires
V8944C1017/U	LP	1 in.	DN25	Slow Opening 2-stage	3 to 25 sec	Adj. Range, Low Fire – 1.4 in. wc to 4.2 in. wc; Adj. Range, High Fire – 8.8 in. wc to 11.5 in. wc; Factory Setting, Low Fire – 1.4 in. wc; Factory Setting, High Fire – 10.0 in. wc	(3) 30" leadwires
V8944C1025/U	LP	1 1/4 in.	DN32	Slow Opening 2-stage	3 to 25 sec	Adj. Range, Low Fire – 1.4 in. wc to 4.2 in. wc; Adj. Range, High Fire – 8.8 in. wc to 11.5 in. wc; Factory Setting, Low Fire – 1.4 in. wc; Factory Setting, High Fire – 10.0 in. wc	(3) 30" leadwires
V8944C1033/U	LP	1 1/2 in.	DN40	Slow Opening 2-stage	3 to 25 sec	Adj. Range, Low Fire – 1.4 in. wc to 4.2 in. wc; Adj. Range, High Fire – 8.8 in. wc to 11.5 in. wc; Factory Setting, Low Fire – 1.4 in. wc; Factory Setting, High Fire – 10.0 in. wc	(3) 30" leadwires
V8944N1012/U	Natural	1 in.	DN25	Rapid Opening 2-stage	6 sec max	Adj. Range, Low Fire – 0.8 in. wc to 2 in. wc; Adj. Range, High Fire – 3 in. wc to 4.5 in. wc; Factory Setting, Low Fire – 0.8 in. wc; Factory Setting, High Fire – 3.5 in. wc	(3) 30" leadwires
V8944N1020/U	Natural	1 1/4 in.	DN32	Rapid Opening 2-stage	6 sec max	Adj. Range, Low Fire – 0.8 in. wc to 2 in. wc; Adj. Range, High Fire – 3 in. wc to 4.5 in. wc; Factory Setting, Low Fire – 0.8 in. wc; Factory Setting, High Fire – 3.5 in. wc	(3) 30" leadwires
V8944N1038/U	Natural	1 1/2 in.	DN40	Rapid Opening 2-stage	6 sec max	Adj. Range, Low Fire – 0.8 in. wc to 2 in. wc; Adj. Range, High Fire – 3 in. wc to 4.5 in. wc; Factory Setting, Low Fire – 0.8 in. wc; Factory Setting, High Fire – 3.5 in. wc	(3) 30" leadwires
V8944N1046/U	Natural	2 in.	DN50	Rapid Opening 2-stage	6 sec max	Adj. Range, Low Fire – 0.8 in. wc to 2 in. wc; Adj. Range, High Fire – 3 in. wc to 4.5 in. wc; Factory Setting, Low Fire – 0.8 in. wc; Factory Setting, High Fire – 3.5 in. wc	(3) 30" leadwires
V8944N1053/U	Natural	1 in.	DN25	Rapid Opening 2-stage	6 sec max	Adj. Range, Low Fire – 0.8 in. wc to 2 in. wc; Adj. Range, High Fire – 3 in. wc to 4.5 in. wc; Factory Setting, Low Fire – 1.2 in. wc; Factory Setting, High Fire – 3.5 in. wc	(3) 30" leadwires
V8944N1061/U	Natural	1 1/4 in.	DN32	Rapid Opening 2-stage	6 sec max	Adj. Range, Low Fire – 0.8 in. wc to 2 in. wc; Adj. Range, High Fire – 3 in. wc to 4.5 in. wc; Factory Setting, Low Fire – 1.2 in. wc; Factory Setting, High Fire – 3.5 in. wc	(3) 30" leadwires

Diaphragm Gas Valve Replacement Parts or Accessories

Material Number	Description	Used With
116930/U	24 Vac, 60 Hz Replacement Coil for V88A Solenoid Operated Valve	V88A
116931/U	120 V/60 Hz Replacement Coil for V48A Solenoid Operated Valve	V48; V48A
116932/U	220-240 V/50-60 Hz Replacement Coil for V48A Solenoid Operated Valve	V48A
118888/U	24V 60 Hz Replacement Coil for V88J	V88J
122160/U	Orifice - .018" for V48, V88	V48, V88
124674/U	Orifice - .011" for V48, V88	V48, V88
126590/U	Adjustable Bleed Valve Assembly for V48, V88, V4004. V8004. 1/8 in. NPT to 1/4 in. compression fitting	V48, V88
204480/U	Regulator vent pipe fitting to be used with V4843/V8843B, C, L, N and V4844/V8844B, C, L, N and V4943/V8943, V4944/V8944	V4843B; V4843C; V4843L; V4843N; V8843B; V8843C; V8843L; V8843N; V4844B; V4844C; V4844L; V4844N; V8844B; V8844C; V8844L; V8844N; V4943; V8943; V4944; V8944

V51 Butterfly Gas/Air Valve



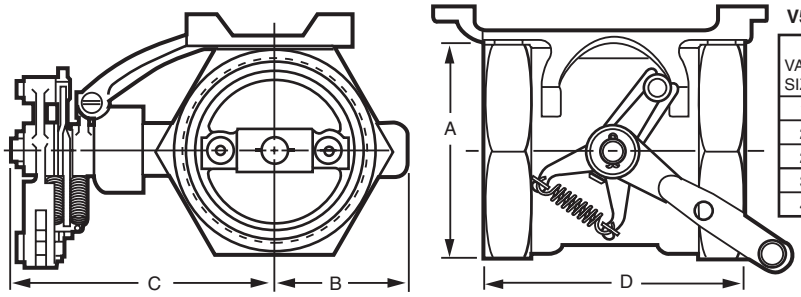
Provides modulating control of natural, manufactured, LP gases or air.

- Use in commercial and industrial installations where large amounts of gas must be closely controlled.
- NOT for use as safety shutoff valve.
- Adaptable to most modulating jobs.
- Modutrol motor, such as the M9484 or M9494, may be mounted directly on valve or close to it.
- Valve mechanism has strain release.
- Adjustable stroke over low fire-high fire range.
- Straight-through valve pattern.
- Rugged cast aluminum body provides durability and maintenance-free operation.

Type of Fuel: Air; natural; manufactured; LP
Body Pattern: Straight-through
Mounting: Motor shaft horizontal
Materials: Body – Aluminum
Operating Temperature Range: 32°F to 140°F (0°C to 60°C)
Approvals, Underwriters Laboratories Inc.: File No. MH5968 Vol. 1 Sec. 1, Guide no. MHKZ
Pressure Ratings (psi): 5 psi
Pressure Ratings (kPa): 34.5 kPa
Used With: Mod Motor with Q100 Linkage

Accessories:
32003396-001/U – V51E mounting kit for 1-1/2 and 2 in. valve actuators includes brackets and hardware
32003396-002/U – V51E mounting kit for 2-1/2, 3 and 4 in. valve actuators includes brackets and hardware
Q100B1006/U – Linkage to connect Modutrol motor to V51E Butterfly Valve. Includes 10 3/4 inch Linkage Rod.

Dimensions in inches (millimeter)



V51E DIMENSIONS

VALVE SIZE (in.)	A 1		B 1		C 2		D 1	
	in.	mm	in.	mm	in.	mm	in.	mm
1 1/2	2 21/32	67.5	1 9/16	39.7	4 1/4	108.0	3 1/32	77.0
2	3 5/32	80.2	1 13/16	46.0	4 1/4	108.0	3 17/32	89.7
2 1/2	3 27/32	97.6	2 5/16	58.7	4 13/16	122.2	4 23/32	119.9
3	4 1/32	102.4	2 25/64	60.7	5	127.0	4 23/32	119.9
4	5 21/64	135.3	3 5/32	80.2	5 3/8	136.5	5 17/64	133.8

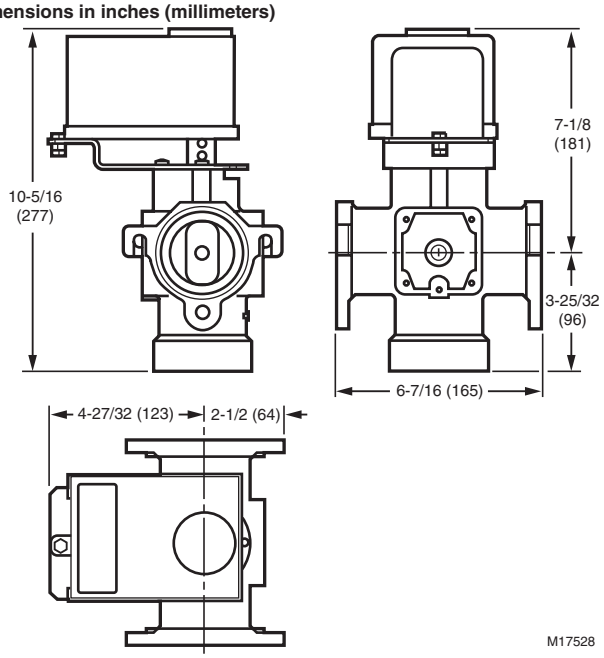
1 MAXIMUM DIMENSIONS.
2 NOMINAL DIMENSIONS.

M9532A

Material Number	Pipe Size (inch)	Pipe Size (DN)	Capacity (cfh)	Capacity (m^3/hr)	Pressure Tapping	Approximate, Dimensions
V51E1000/U	1 1/2 in.	DN40	4200 cfh	118.9 m3/hr	Inlet and outlet pressure taps – Two downstream 1/4 in. NPT taps	2 11/16 in. high x 3 1/16 in. wide x 5 13/16 in. deep (68 mm high x 77 mm wide x 148 mm deep)
V51E1018/U	2 in.	DN50	9210 cfh	260.7 m3/hr		3 3/16 in. high x 3 9/16 in. wide x 6 1/16 in. deep (80 mm high x 90 mm wide x 154 mm deep)
V51E1034/U	2 1/2 in.	DN65	8390 cfh	199.8 m3/hr		3 7/8 in. high x 4 3/4 in. wide x 7 1/8 in. deep (98 mm high x 120 mm wide x 181 mm deep)
V51E1059/U	3 in.	DN80	14640 cfh	414.5 m3/hr		4 1/16 in. high x 4 3/4 in. wide x 7 3/8 in. deep (102 mm high x 120 mm wide x 188 mm deep)
V51E1075/U	4 in.	DN100	33000 cfh	934.2 m3/hr		5 3/8 in. high x 5 1/4 in. wide x 8 9/16 in. deep (135 mm high x 134 mm wide x 217 mm deep)

V5197 Integrated Valve Train Butterfly Gas Valve

Dimensions in inches (millimeters)



The V5197A valve provides flow control of air, natural gas, liquid petroleum, & manufactured gases which require a high turn down ratio. The adjustment screw controls the maximum flow of gas, but keeps the linear modulating characteristics & stroke.

- Used with air, natural, manufactured or liquefied petroleum (LP) gases.
- For modulating applications that do not require final shutoff service of firing rate valve.
- Two valve body types (small and large) applicable to seven pipe sizes: Small body type for 3/4 in. (19 mm), 1 in. (25 mm), 1-1/4 in. (32 mm), 1-1/2 in. (38 mm) and 2 in. (51 mm) pipes, NPT or ISO 7 threads. Large body type for 2 in. (51 mm), 2-1/2 in. (64 mm) and 3 in. (76 mm) pipes, NPT or ISO 7 threads.
- Two downstream 1/4 in. NPT threaded pressure taps available.
- Accepts C6097 Pressure Switch mounted directly to flange (downstream pressure tap only).
- Unpainted cast aluminum body.
- Suitable for electric or pneumatic operators with the appropriate linkage.
- May be used with manufacturers own linkage and drive motor.
- Flow adjustment screw on bottom of valve controls maximum flow.
- Visual position indicator.

Type of Fuel: Air; natural; manufactured; LP
Pressure Tapping: Inlet and outlet pressure taps – Two downstream 1/4 in. NPT taps
Mounting: Directly bolted to Integrated Valve Train (IVT) components or IVT adapters
Materials: Body – Die-cast aluminum
Operating Temperature Range: -40°F to +150°F (-40°C to +66°C)
Approvals, Underwriters Laboratories Inc.: Component Listed
Approvals, CSA: Design Certified
Approvals, Swiss RE: Acceptable
Pressure Ratings (psi): 15 psi max
Pressure Ratings (kPa): 1 Bar

Material Number	Pipe Size (inch)	Pipe Size (DN)	Capacity (cfh)	Capacity (m^3/hr)	Approximate, Dimensions
V5197A1003	3/4 in.; 1 in.; 1 1/4 in.; 1 1/2 in.; 2 in.	DN20; DN25; DN32; DN40; DN50	2450 cfh for 3/4 in.; 3080 cfh for 1 in.; 4430 cfh for 1 1/4 in.; 5010 cfh for 1 1/2 in.; 5480 cfh for 2 in.	51 mm is 155/ 38 mm is 142/ 32 mm is 125/ 25 mm is 87/ 19 mm is 69	10 5/16 in. high x 6 7/16 in. wide x 7 11/32 in. deep (277 mm high x 165 mm wide x 187 mm deep)
V5197A1011	2 in.; 2 1/2 in.; 3 in.	DN65; DN80; DN50	12,600 cfh for 2 in.; 14,800 cfh for 2 1/2 in.; 16,900 cfh for 3 in.	76 mm is 478/ 64 mm is 419/ 51 mm is 356	12 11/16 in. high x 9 1/4 in. wide x 8 13/16 in. deep (322 mm high x 235 mm wide x 224 mm deep)

Firing Rate Gas Valve Parts

Material Number	Description	Used With
49084/0021/U	Adjusting arm for V51E.	V51E
49085B/U	Strain Release Assembly	V51E

Selection Chart: V5055 and V5097 Industrial Gas Valves with V4055, V4062 or V9055 Fluid Power Actuators

The chart below describes every model of V5055 or V5097 Valve in the left column, and every model of Fluid Power Actuator across the top. While it's possible to combine any valve with any actuator, we've marked the recommended valve/actuator combinations which cover most applications with a •.

Each valve described in the left column is available:

- In these sizes: 3/4 to 3 in. (NPT or parallel BSP). V5055A, B, C are also available in 4 in. size (flange connection only).
- With upstream and/or downstream tap.

Options available on some Fluid Power Actuators include:

- Damper arm shaft, with or without spring return.
- NEMA 4 enclosure.
- Fast or slow open time (13 or 26 seconds).
- Auxiliary switch.
- Valve seal overtravel interlock switch.

For complete specifications and ordering information on V5055 and V5097 Valves and V4055, V4062 and V9055 Fluid Power Actuators, refer to Index for specific page numbers.

Fluid Power Actuators/ Industrial Gas Valves			Standard pressure[a]			High Pressure[a]	
			V5055A, F[b], V5097A	V5055B, V5097B	V5055C, V5097C	V5055D, V5097D	V5055E, V5097E
Type	**Model**	**Pressure Rating[a]**	**On-Off**	**Characterized Guide[c]**	**VSOI[d]**	**On-Off**	**VSOI[d]**
V4055 On-Off	A, G[e]	Standard	•	•		•	
	B	High	•[f]	•[f]		•	
	D[d] F[d e]	Standard			•		•
	E[d]	High			•[f]		•
V4062 Hi-Lo-Off	A	Standard		•	•		
	B	High		•[f]	•[f]		•
	D[d]	Standard			•		
V9055 Modulating	A	Standard		•			
	D[d]	Standard			•		

[a] Refer to the table below for actual pressure ratings of the various combinations of valves and actuators.
[b] V5055F models meet EN161 leakage requirements.
[c] Characterized guide provides a more linear relationship between stem travel and gas flow. Check Honeywell form 70-8311 to verify that flow curve characteristics match application requirements.
[d] Valve Seal Overtravel Interlock. Valve has two shutoff seals, actuator has a proof-of-closure switch.
[e] V4055F, G models include switch for manual control.
[f] These combinations have higher pressure ratings; see the table below.

The following combinations of V5055 and V5097 Valves, and V4055, V4062 and V9055 Fluid Power Actuators are approved by these agencies.

Underwriters Laboratories, Inc: Listed: MH1639
V4055A/V5055A-E (3/4-4 in.) or V5097A-E (3/4-3 in.).
V4055B/V5055A-E (3/4-4 in.) or V5097A-E (3/4-3 in.).
V4055D/V5055A-E (3/4-4 in.) or V5097A-E (3/4-3 in.).
V4055E/V5055A-E (3/4-4 in.) or V5097A-E (3/4-3 in.).
V4055F/V5055A-E (3/4-4 in.[a]) or V5097A-E (3/4-3 in.).
V4055G/V5055A-E (3/4-4 in.[a]) or V5097A-E (3/4-3 in.).
V4062A, D/V5055A-E (3/4-4 in.) or V5097A-E (3/4-3 in.).
V9055A, D/V5055A, B, C, E (3/4-4 in.) or V5097A-E (3/4-3 in.).

Factory Mutual Approved: Report No. 20698, 20835, 21172 and 24061:

Valve Actuator Approvals:
V4055A/V5055A and V5097A.
V4055D/V5055C and V5097C.
V4055A/V5055B and V5097B.
V4055B/V5055D and V5097D.
V4055E/V5055E and V5097E.
V4055F/V5055C[a] and V5097C.
V4055G/V5055A, B[a] and V5097A, B.
V9055A/V5055B, C and V5097B, C.

[a] Manual reset safety shut-off valves.

Pressure Ratings of Valve-Actuator Combinations

Model	Pipe Size	Standard Pressure Actuators V4055A, D, F, G, V4062A, D, V9055A, D				High Pressure Actuators V4055B, E, V4062B			
		M.O.P.D. [a]		Max. Rated Pressure [b]		M.O.P.D. [a]		Max. Rated Pressure [b]	
Standard Pressure Valves V5055A, B, C, F, V5097A, B, C	3/4" to 1-1/2" [c]	5 PSI	340 mbar	15 PSI	1.0 Bar	15 PSI	1030 mbar	15 PSI	1.0 Bar
	2" to 3" [d]	5 PSI	340 mbar	15 PSI	1.0 Bar	15 PSI	1030 mbar	15 PSI	1.0 Bar
	4" flanged [e]	3 PSI	207 mbar	15 PSI	1.0 Bar	5 PSI	340 mbar	15 PSI	1.0 Bar
High Pressure Valves V5055D, E, V5097D, E	3/4" to 1-1/2" [c]	5 PSI	340 mbar	75 PSI	5.0 Bar	25 PSI	1720 mbar	75 PSI	5.0 Bar
	2" to 3" [d]	5 PSI	340 mbar	45 PSI	3.0 Bar	15 PSI	1030 mbar	45 PSI	3.0 Bar

[a] Max Operating Pressure Differential (UL) or Max Operating Pressure (CSA); maximum allowable pressure drop from inlet to outlet for proper operation.
[b] Max Rated Pressure (UL) or Max Close-off Pressure (CSA); maximum pressure that the valve can be exposed to without leakage or damage to the valve.
[c] Applies for small-body V5097 valves 3/4" up to 2" pipe size.
[d] Applies for large-body V5097 valves 2" up to 3" pipe size.
[e] V5055A, B, C only.

V4055A, B, D, E On-Off Fluid Power Gas Valve Actuator

Use in combination with V5055 or V5097 Gas Valves to control gas supply to commercial and industrial burners.

- Use where smooth light off is important.
- One-second maximum closing time.
- Continuously displays the valve position with a red indicator when open and a yellow indicator when closed.
- Mount in any position directly to valve bonnet with three setscrews.
- Provide final safety shutoff service when used with V5055 or V5097 Gas Valves.

Operating Temperature Ratings: 60 Hz Models: -40°F to +150°F (-40°C to +66°C). 50 Hz, 50/60 Hz Models: -10°F to +158°F (-23°C to +70°C).

Contact Ratings: V4055D, E ONLY-Proof of Closure (Factory Mutual) Switch – 9.8 AFL, 58.8 ALR, 1/2 hp; 4.9 AFL, 29.4 ALR, 1/2 hp

Used With: V5055; V5097 Gas Valves

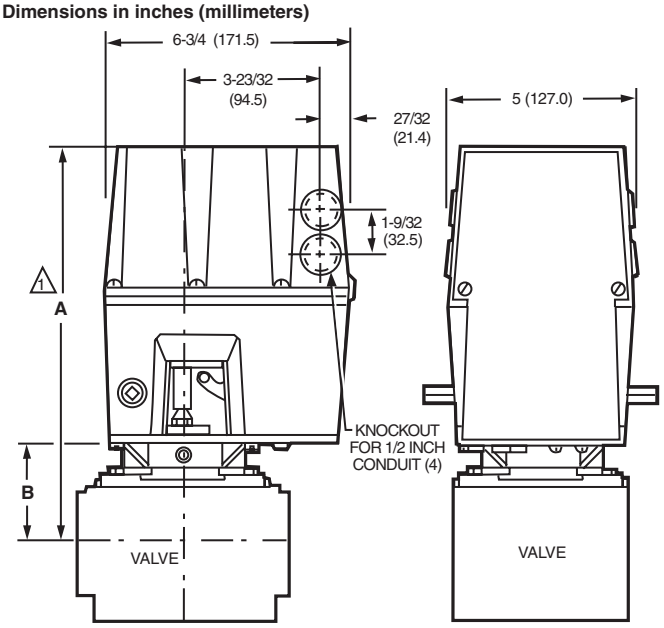
Approvals, CSA: When used with V5055 and V5097: Certified General listed File No. 158158, Class 3371 for USA and Canada

Approvals, Underwriters Laboratories Inc.: When used with V5055A-E (3/4 to 4 in.) or V5097A-E (3/4 to 3 in.): Listed, File No. MH1639 Guide No. YIOZ

Approvals, Factory Mutual: V4055A-When used with the V5055A, B or V5097A, B: Approved, Report Nos. 20698, 20835, 21172, and 24061; V4055B, D, E-When used with the V5055D or V5097D: Approved, Report Nos. 20698, 20835, 21172, and 24061

Approvals, Swiss RE: When used with V5055 or V5097: Acceptable

Dimensions in inches (millimeters)



1 ALLOW 4 IN. (101.6 MM) CLEARANCE FOR ACTUATOR REMOVAL.

VALVE SIZE INCH	V5055				V5097			
	DIM A		DIM B		DIM A		DIM B	
	IN.	MM	IN.	MM	IN.	MM	IN.	MM
3/4	11-1/8	282.6	2-3/4	69.9	11-1/8	283	2-3/4	70
1	11-1/8	282.6	2-3/4	69.9	11-1/8	283	2-3/4	70
1-1/4	11-1/8	282.6	2-3/4	69.9	11-1/8	283	2-3/4	70
1-1/2	11-1/8	282.6	2-3/4	69.9	11-1/8	283	2-3/4	70
2	11-1/4	285.8	2-7/8	73.0	11-3/4	298	3-3/8	86
2-1/2	11-3/4	298.5	3-3/8	85.7	11-3/4	298	3-3/8	86
3	11-3/4	298.5	3-3/8	85.7	11-3/4	298	3-3/8	86
4	14-1/8	358.8	5-13/16	147.6	—	—	—	—

M10981A

Material Number	Electrical Ratings	Frequency	Timing	Internal Auxiliary Switch	Maximum Safe Operating Pressure (psi)	Maximum Safe Operating Pressure (kPa)	Auxiliary Switch Ratings	Comments	Includes
V4055A1007/U	120 Vac	60 Hz	Opening – 26 sec; Closing – < 1 sec	No	5 psi	34 kPa			
V4055A1031/U	120 Vac	50 Hz; 60 Hz	Opening – 13 sec; Closing – < 1 sec	No	5 psi	34 kPa			
V4055A1064/U	120 Vac	50 Hz; 60 Hz	Opening – 26 sec; Closing – < 1 sec	No	5 psi	34 kPa			Damper Shaft
V4055A1080/U	240 Vac	50 Hz; 60 Hz	Opening – 26 sec; Closing – < 1 sec	No	5 psi	34 kPa			Damper Shaft
V4055A1098/U	120 Vac	50 Hz; 60 Hz	Opening – 13 sec; Closing – < 1 sec	No	5 psi	34 kPa			Damper Shaft
V4055A1114/U	240 Vac	50 Hz; 60 Hz	Opening – 13 sec; Closing – < 1 sec	No	5 psi	34 kPa			Damper Shaft
V4055A1296/U	120 Vac	60 Hz	Opening – 13 sec; Closing – < 1 sec	Yes - adjusted to 90% stroke	5 psi	34 kPa	120 Vac – 9.8 AFL, 58.8 ALR, 1/2 hp; 240 Vac – 4.9 AFL, 29.4 ALR, 1/2 hp		
V4055A1304/U	120 Vac	60 Hz	Opening – 26 sec; Closing – < 1 sec	No	5 psi	34 kPa			Damper Shaft with return spring installed
V4055A1312/U	120 Vac	60 Hz	Opening – 26 sec; Closing – < 1 sec	No	5 psi	34 kPa		Nema 4 Enclosure	
V4055B1021/U	120 Vac	60 Hz	Opening – 26 sec; Closing – < 1 sec	No	15 or 25 psi	103 or 172 kPa			Damper Shaft
V4055B1039/U	120 Vac	60 Hz	Opening – 13 sec; Closing – < 1 sec	No	15 or 25 psi	103 or 172 kPa			Damper Shaft

Gas Valve Actuators

Material Number	Electrical Ratings	Frequency	Timing	Internal Auxiliary Switch	Maximum Safe Operating Pressure (psi)	Maximum Safe Operating Pressure (kPa)	Auxiliary Switch Ratings	Comments	Includes
V4055B1088/U	220 Vac	50 Hz	Opening – 13 sec; Closing – < 1 sec	No	15 or 25 psi	103 or 172 kPa			
V4055D1001/U	120 Vac	60 Hz	Opening – 26 sec; Closing – < 1 sec	No	5 psi	34 kPa			Damper Shaft
V4055D1019/U	120 Vac	60 Hz	Opening – 13 sec; Closing – < 1 sec	No	5 psi	34 kPa			Damper Shaft
V4055D1027/U	120 Vac	60 Hz	Opening – 13 sec; Closing – < 1 sec	Yes	5 psi	34 kPa	120 Vac – 9.8 AFL, 58.8 ALR, 1/2 hp; 240 Vac – 4.9 AFL, 29.4 ALR, 1/2 hp	Nema 4 Enclosure	
V4055D1035/U	120 Vac	60 Hz	Opening – 13 sec; Closing – < 1 sec	Yes	5 psi	34 kPa	120 Vac – 9.8 AFL, 58.8 ALR, 1/2 hp; 240 Vac – 4.9 AFL, 29.4 ALR, 1/2 hp		
V4055D1043/U	120 Vac	60 Hz	Opening – 13 sec; Closing – < 1 sec	No	5 psi	34 kPa			
V4055E1016/U	120 Vac	60 Hz	Opening – 13 sec; Closing – < 1 sec	No	15 or 25 psi	103 or 172 kPa			Damper Shaft
V4055E1024/U	120 Vac	60 Hz	Opening – 26 sec; Closing – < 1 sec	Yes	15 or 25 psi	103 or 172 kPa	120 Vac – 9.8 AFL, 58.8 ALR, 1/2 hp; 240 Vac – 4.9 AFL, 29.4 ALR, 1/2 hp	Nema 4 Enclosure	Damper Shaft
V4055E1040/U	120 Vac	60 Hz	Opening – 13 sec; Closing – < 1 sec	No	15 or 25 psi	103 or 172 kPa		Nema 4 Enclosure	Damper Shaft

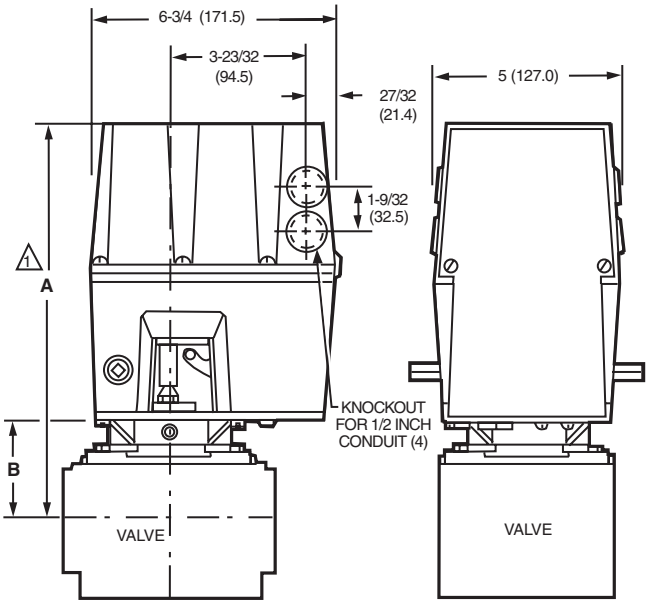
V4055F, G Manual Reset Safety Shut-off Gas Valve Actuators

Provide manual reset, safety shut-off functions as required on FM, IHEA-IRI and NFPA 86A,B,C industrial furnaces, ovens and kilns. Use with V5055 or V5097 Gas Valves to control gas supply.

- Close in one second maximum.
- Continuously displays the valve position with a red indicator when closed.
- Mount directly to valve bonnet with three setscrews.
- Provide final safety shutoff service when used with V5055 or V5097 Gas Valves.

Frequency: 60 Hz
Temperature Range: -40°F to +150°F (-40°C to +66°C)
Approvals, CSA: When used with V5055 and V5097: Certified General listed File No. 158158, Class 3371 for USA and Canada
Approvals, Underwriters Laboratories Inc.: When used with V5055A-E (3/4 to 4 in.) or V5097A-E (3/4 to 3 in.): Listed, File No. MH1639 Guide No. YIOZ
Approvals, Swiss RE: When used with V5055 or V5097: Acceptable

Dimensions in inches (millimeters)



1 ALLOW 4 IN. (101.6 MM) CLEARANCE FOR ACTUATOR REMOVAL.

VALVE SIZE INCH	V5055				V5097			
	DIM A		DIM B		DIM A		DIM B	
	IN.	MM	IN.	MM	IN.	MM	IN.	MM
3/4	11-1/8	282.6	2-3/4	69.9	11-1/8	283	2-3/4	70
1	11-1/8	282.6	2-3/4	69.9	11-1/8	283	2-3/4	70
1-1/4	11-1/8	282.6	2-3/4	69.9	11-1/8	283	2-3/4	70
1-1/2	11-1/8	282.6	2-3/4	69.9	11-1/8	283	2-3/4	70
2	11-1/4	285.8	2-7/8	73.0	11-3/4	298	3-3/8	86
2-1/2	11-3/4	298.5	3-3/8	85.7	11-3/4	298	3-3/8	86
3	11-3/4	298.5	3-3/8	85.7	11-3/4	298	3-3/8	86
4	14-1/8	358.8	5-13/16	147.6	—	—	—	—

M10981A

Material Number	Electrical Ratings	Internal Auxiliary Switch	Timing	Maximum Safe Operating Pressure (psi)	Maximum Safe Operating Pressure (kPa)	Contact Ratings	Description	Approvals, Factory Mutual	Used With
V4055F1006/U	120 Vac	No	Opening – 13 sec; Closing – < 1 sec	5 psi	34 kPa	Proof of Closure (Factory Mutual) Switch – 9.8 AFL, 58.8 ALR, 1/2 hp; 4.9 AFL, 29.4 ALR, 1/2 hp	Manual reset safety shutoff valve with proof of closure switch.	When used with the V5055D or V5097D: Approved, Report Nos. 20698, 20835, 21172, and 24061	V5034; V5055; V5097; VE5000
V4055G1004/U	120 Vac	No	Opening – 13 sec; Closing – < 1 sec	5 psi	34 kPa		Manual ON-OFF actuator normally used with V5055/V5907A, B valve bodies. Low pressure.	When used with the V5055A, B or V5097A, B: Approved, Report Nos. 20698, 20835, 21172, and 24061	V5034; V5055; V5097; VE5000

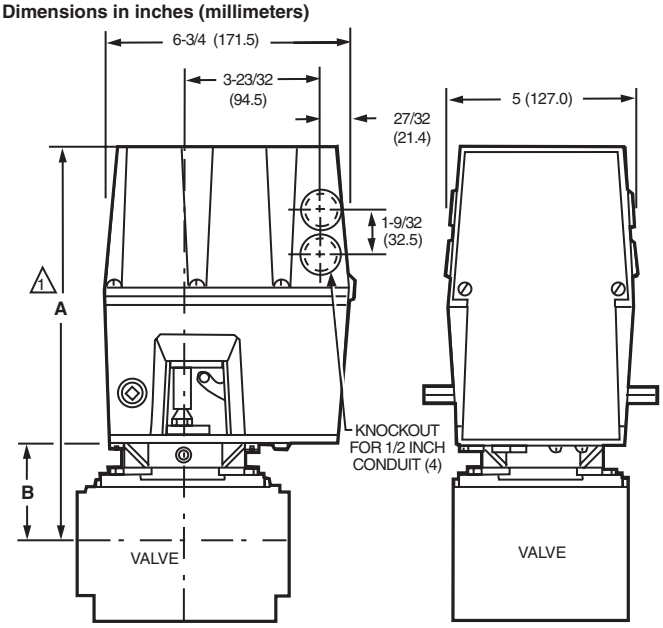
V4062 Off-Lo-Hi Fluid Power Gas Valve Actuators

Use with V5055 or V5097 Gas Valves to control gas supply for commercial and industrial burners. Valve opens to low fire position when power is applied; valve opens all the way on demand.

- Provide final safety shutoff service when used with V5055 or V5097 gas valve.
- One-second maximum closing time.
- Continuously displays the valve position with a red indicator when open and a yellow indicator when closed.
- Mount in any position directly to valve bonnet with three setscrews.
- Provide final safety shutoff service when used with V5055 or V5097 Gas Valves.

Electrical Ratings: 120 Vac
Frequency: 60 Hz
Maximum Safe Operating Pressure (psi): 5 psi
Maximum Safe Operating Pressure (kPa): 34 kPa
Temperature Range: -40°F to +150°F (-40°C to +66°C)
Used With: V5034; V5055; V5097; VE5000
Approvals, CSA: When used with V5055 and V5097: Certified General listed File No. 158158, Class 3371 for USA and Canada
Approvals, Underwriters Laboratories Inc.: When used with V5055A-E (3/4 to 4 in.) or V5097A-E (3/4 to 3 in.): Listed, File No. MH1639 Guide No. YIOZ
Approvals, Swiss RE: When used with V5055 or V5097: Acceptable

Dimensions in inches (millimeters)



1 ALLOW 4 IN. (101.6 MM) CLEARANCE FOR ACTUATOR REMOVAL.

VALVE SIZE INCH	V5055				V5097			
	DIM A		DIM B		DIM A		DIM B	
	IN.	MM	IN.	MM	IN.	MM	IN.	MM
3/4	11-1/8	282.6	2-3/4	69.9	11-1/8	283	2-3/4	70
1	11-1/8	282.6	2-3/4	69.9	11-1/8	283	2-3/4	70
1-1/4	11-1/8	282.6	2-3/4	69.9	11-1/8	283	2-3/4	70
1-1/2	11-1/8	282.6	2-3/4	69.9	11-1/8	283	2-3/4	70
2	11-1/4	285.8	2-7/8	73.0	11-3/4	298	3-3/8	86
2-1/2	11-3/4	298.5	3-3/8	85.7	11-3/4	298	3-3/8	86
3	11-3/4	298.5	3-3/8	85.7	11-3/4	298	3-3/8	86
4	14-1/8	358.8	5-13/16	147.6	—	—	—	—

M10981A

Material Number	Internal Auxiliary Switch	Timing	Contact Ratings	Auxiliary Switch Range	Description	Comments	Includes
V4062A1008/U	No	Opening – 26 sec; Closing – < 1 sec			Low pressure HI-LO-OFF actuator for use with V5055B and V5097B valve bodies		Damper Shaft
V4062A1123/U	Yes	Opening – 26 sec; Closing – < 1 sec		120 Vac – 9.8 AFL, 58.8 ALR, 1/2 hp; 240 Vac – 4.9 AFL, 29.4 ALR, 1/2 hp	Low pressure HI-LO-OFF actuator for use with V5055B and V5097B valve bodies		Damper Shaft with return spring installed
V4062A1131/U	No	Opening – 13 sec; Closing – < 1 sec			Low pressure HI-LO-OFF actuator for use with V5055B and V5097B valve bodies		Damper Shaft
V4062A1156/U	No	Opening – 26 sec; Closing – < 1 sec			Low pressure HI-LO-OFF actuator for use with V5055B and V5097B valve bodies	For Series 60 Floating Control	
V4062A1198/U	Yes - adjusted to 90 degree stroke	Opening – 13 sec; Closing – < 1 sec		120 Vac – 9.8 AFL, 58.8 ALR, 1/2 hp; 240 Vac – 4.9 AFL, 29.4 ALR, 1/2 hp	Low pressure HI-LO-OFF actuator for use with V5055B and V5097B valve bodies		Damper Shaft with return spring installed
V4062D1002/U	No	Opening – 26 sec; Closing – < 1 sec	Proof of Closure (Factory Mutual) Switch – 9.8 AFL, 58.8 ALR, 1/2 hp; 4.9 AFL, 29.4 ALR, 1/2 hp		HI-LO-OFF actuator with Proof of Closure normally used on V5055C, E/V5907C, E valve bodies (Low Pressure)		Damper Shaft
V4062D1010/U	No	Opening – 13 sec; Closing – < 1 sec	Proof of Closure (Factory Mutual) Switch – 9.8 AFL, 58.8 ALR, 1/2 hp; 4.9 AFL, 29.4 ALR, 1/2 hp		HI-LO-OFF actuator with Proof of Closure normally used on V5055C, E/V5907C, E valve bodies (Low Pressure)		Damper Shaft

V9055 Modulating Fluid Power Gas Valve Actuators

Use with V5055 or V5097 Gas Valves to control gas supply for commercial and industrial burners. Valve opens to low fire position when power is applied; valve opens all the way on demand.

- Include integral shaft to drive combustion air damper in unison with valve.
- One-second maximum closing time.
- Continuously displays the valve position with a red indicator when open and a yellow indicator when closed.
- Mount in any position directly to valve bonnet with three setscrews.
- Provide final safety shutoff service when used with V5055 or V5097 Gas Valves.

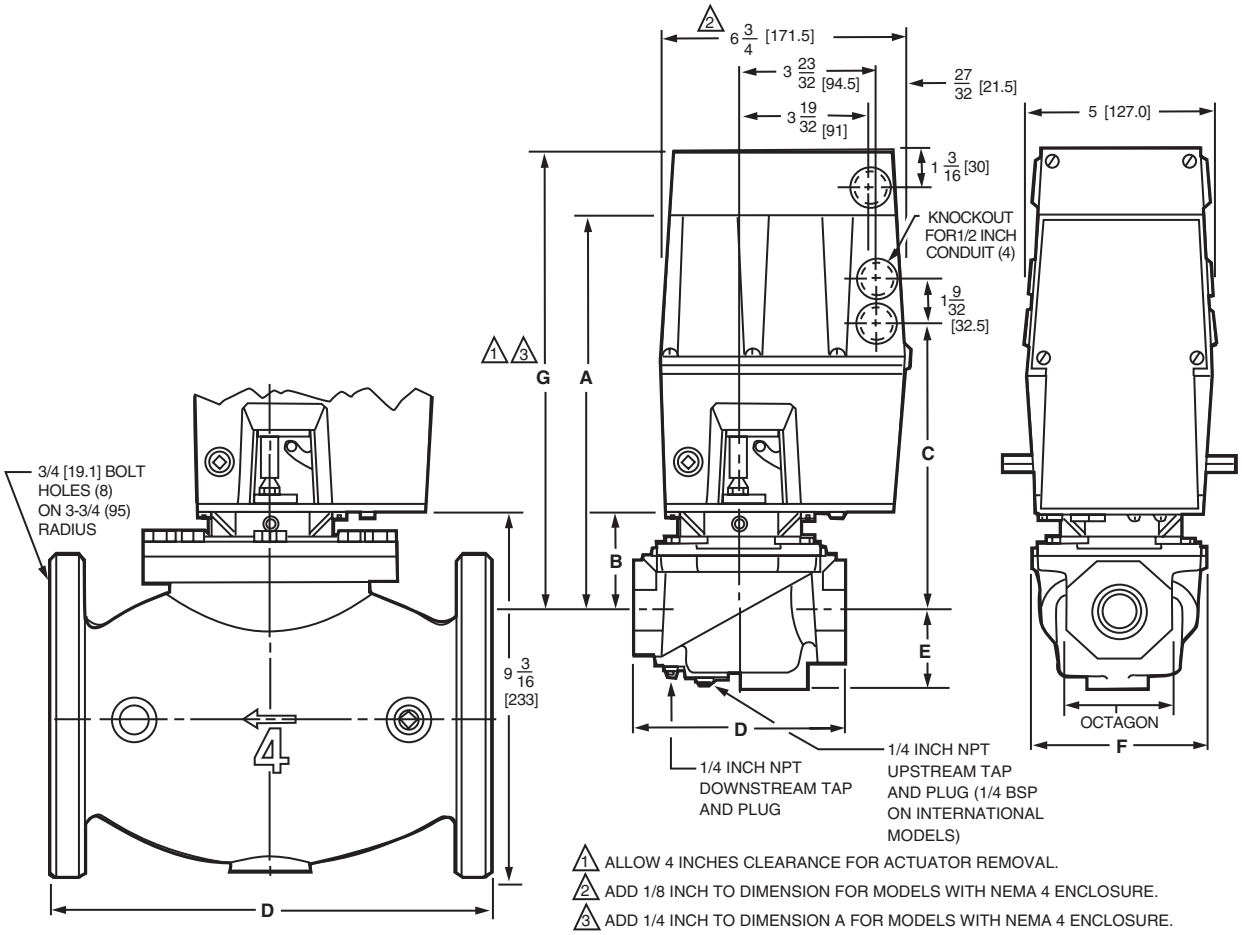
Frequency: 60 Hz
Temperature Range: -40°F to +125°F (-40°C to +52°C)
Internal Auxiliary Switch: No
Includes: Damper Shaft
Approvals, CSA: When used with V5055 and V5097: Certified General listed File No. 158158, Class 3371 for USA and Canada
Approvals, Underwriters Laboratories Inc.: When used with V5055A, B, C, E (3/4 to 4 in.) or V5097A-E (3/4 to 3 in.) Listed MH1696
Approvals, Swiss RE: When used with V5055 or V5097: Acceptable

Accessories:
203422C/U – 4-20 ma Adapter for V9055

Material Number	Electrical Ratings	Comments	Timing	Maximum Safe Operating Pressure (psi)	Maximum Safe Operating Pressure (kPa)	Contact Ratings	Description	Approvals, Factory Mutual	Used With
V9055A1055/U	120 Vac		Opening – 26 sec; Closing – < 1 sec	5 psi	34 kPa		Low pressure Modulating-OFF actuator for use with V5055B valve bodies	When used with the V5055B, C or V5097B, C: Approved, Report Nos. 20698, 20835, 21172, and 24061	V5034; V5055; V5097; VE5000
V9055A1063/U	120 Vac	Nema 4 Enclosure	Opening – 26 sec; Closing – < 1 sec	5 psi	34 kPa		Low pressure Modulating-OFF actuator for use with V5055B valve bodies	When used with the V5055B, C or V5097B, C: Approved, Report Nos. 20698, 20835, 21172, and 24061	V5034; V5055; V5097; VE5000
V9055D1000/U	120 Vac		Opening – 26 sec; Closing – < 1 sec	5 psi	34 kPa	Proof of Closure (Factory Mutual) Switch – 9.8 AFL, 58.8 ALR, 1/2 hp; 4.9 AFL, 29.4 ALR, 1/2 hp	Low pressure Modulating-OFF actuator with Proof of Closure normally used on V5055C, E/V5907C, E valve bodies.		V5034; V5055; V5097; VE5000

Gas Valve Actuators

Dimensions in inches (millimeters)



VALVE SIZE	DIM A		DIM B		DIM C		DIM D		DIM E		DIM F		DIM G		OCTAGON	
INCH	IN.	MM	IN.	MM	IN.	MM	IN.	MM	IN.	MM	IN.	MM	IN.	MM	IN.	MM
3/4	11-1/8	282.6	2-3/4	69.9	8-3/16	208.0	5-3/4	146.1	2-1/4	57.2	4-13/16	122.2	13-1/8	333.4	2-13/16	71.4
1	11-1/8	282.6	2-3/4	69.9	8-3/16	208.0	5-3/4	146.1	2-1/4	57.2	4-13/16	122.2	13-1/8	333.4	2-13/16	71.4
1-1/4	11-1/8	282.6	2-3/4	69.9	8-3/16	208.0	5-3/4	146.1	2-1/4	57.2	4-13/16	122.2	13-1/8	333.4	2-13/16	71.4
1-1/2	11-1/8	282.6	2-3/4	69.9	8-3/16	208.0	5-3/4	146.1	2-1/4	57.2	4-13/16	122.2	13-1/8	333.4	2-13/16	71.4
2	11-1/4	285.8	2-7/8	73.0	8-5/16	211.1	8-3/8	212.7	2-3/4	69.9	7-19/32	192.9	13-1/4	336.5	3-1/2	88.9
2-1/2	11-3/4	298.5	3-3/8	85.7	8-13/16	223.8	9-1/4	235.0	2-3/4	69.9	7-19/32	192.9	13-3/4	349.3	4-1/2	114.3
3	11-3/4	298.5	3-3/8	85.7	8-13/16	223.8	9-1/4	235.0	2-3/4	69.9	7-19/32	192.9	13-3/4	349.3	4-1/2	114.3
4	14-1/8	358.8	5-13/16	147.6	11-7/32	285.0	12-1/2	317.5	4-5/8	117.5	—	—	16-3/16	411.0	—	—

M7321

Fluid Actuator Accessories and Parts

Material Number	Description	Used With
133568/U	Auxiliary Switch (Adjustable Valve Position) for V4055, V4062 or V9055	V4055; V4062; V9055
133569/U	Replacement Pre-ignition Interlock (Proof of Closure) Switch for V4055D, E; V4062D or V9055D	V4055; V4062; V9055
203422C/U	4-20 ma Adapter for V9055	V9055
7616BR/U	Crank Arm assembly with clip for Damper Arm of V4055, V4062 or V9055	V4055; V4062; V9055

V5055 Industrial Gas Valves

Safety shutoff valves used with V4055, V4062 and V9055 fluid power actuators to control gas flow to commercial and industrial burners.

- Use with natural or LP gases.
- Mount directly in gas supply line.
- Include 1/4 in. NPT upstream and downstream taps and plug.
- 4 in. models have only flanged connections.
- V5055 normally closed valves are rated for final shutoff service safety shutoff.
- V5055A, C, D, E Valves are for On-Off service.
- V5055B Valve has a characterized guide and in combination with the V4055, V4062, and V9055 Fluid Power Actuators, provides slow-opening, hi-lo-off, and modulating functions respectively.
- V5055C, E, F Valves have a double seal and are used with V4055D, E Actuators to provide proof-of-closure switch and valve seal over-travel interlock.
- V5055D, E, F Valves are for high pressure applications.

Operating Temperature Range: -40°F to +150°F; When used with V9055 – -40°F to +125°F (-40°C to +66°C; When used with V9055 – -40°C to +52°C)
Approvals, Underwriters Laboratories Inc.: When used with V4055A, B, D, E, V4062, V9055: Listed, File No. MH1639 Guide No. YIOZ
Approvals, CSA: When used with V4055, V4062, and V5097: Certified General listed File No. 158158, Class 3371 for USA and Canada
Approvals, Swiss RE: When used with the V4055A, G and V9055A: Approved, Report Nos. 20698, 20835, 21172, and 24061
Used With: V9055; V4055; V4062

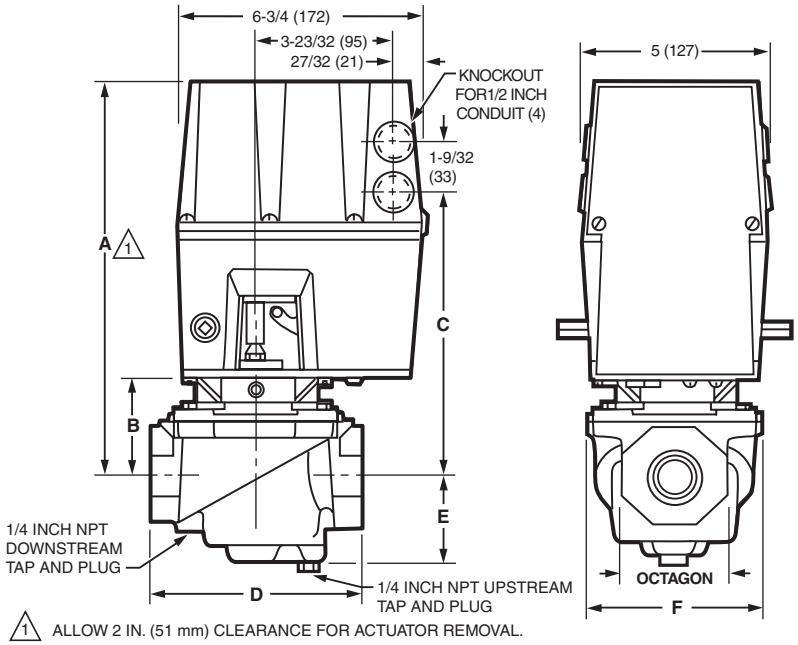
Material Number	Pipe Size (inch)	Pipe Size (DN)	Capacity (cfh)	Capacity (m^3/hr)	Connection Type	Maximum Operating Differential Pressure	Approvals, Factory Mutual	Comments	Includes
V5055A1004/U	1 in.	DN25	960 cfh	27.2 m^3/hr	NPT	With V4055A, D or V4062 – 5 psi (340 mbar); With V4055B or E – 15 psi (1 bar)	When used with the V4055A, G and V9055A: Approved, Report Nos. 20698, 20835, 21172, and 24061		1/4 in. -18 NPT upstream tap and plug, 1/4 in. -18 NPT downstream tap and plug
V5055A1012/U	1 1/4 in.	DN32	1406 cfh	39.8 m^3/hr	NPT	With V4055A, D or V4062 – 5 psi (340 mbar); With V4055B or E – 15 psi (1 bar)	When used with the V4055A, G and V9055A: Approved, Report Nos. 20698, 20835, 21172, and 24061		1/4 in. -18 NPT downstream tap and plug, 1/4 in. -18 NPT upstream tap and plug
V5055A1020/U	1 1/2 in.	DN40	1717 cfh	48.6 m^3/hr	NPT	With V4055A, D or V4062 – 5 psi (340 mbar); With V4055B or E – 15 psi (1 bar)	When used with the V4055A, G and V9055A: Approved, Report Nos. 20698, 20835, 21172, and 24061		1/4 in. -18 NPT downstream tap and plug, 1/4 in. -18 NPT upstream tap and plug
V5055A1038/U	2 in.	DN50	3620 cfh	102.5 m^3/hr	NPT	With V4055A, D or V4062 – 5 psi (340 mbar); With V4055B or E – 15 psi (1 bar)	When used with the V4055A, G and V9055A: Approved, Report Nos. 20698, 20835, 21172, and 24061		1/4 in. -18 NPT upstream tap and plug, 1/4 in. -18 NPT downstream tap and plug
V5055A1046/U	2 1/2 in.	DN65	4250 cfh	120 m^3/hr	NPT	With V4055A, D or V4062 – 5 psi (340 mbar); With V4055B or E – 15 psi (1 bar)	When used with the V4055A, G and V9055A: Approved, Report Nos. 20698, 20835, 21172, and 24061		1/4 in. -18 NPT upstream tap and plug, 1/4 in. -18 NPT downstream tap and plug
V5055A1053/U	3 in.	DN80	5230 cfh	148 m^3/hr	NPT	With V4055A, D or V4062 – 5 psi (340 mbar); With V4055B or E – 15 psi (1 bar)	When used with the V4055A, G and V9055A: Approved, Report Nos. 20698, 20835, 21172, and 24061		1/4 in. -18 NPT upstream tap and plug, 1/4 in. -18 NPT downstream tap and plug
V5055A1228/U	4 in.	DN100	10200 cfh	288.8 m^3/hr	Flanged	With V4055A, D or V4062 – 3 psi (20.7 kPa); With V4055B or E – 5 psi (340 mbar)	When used with the V4055A, G and V9055A: Approved, Report Nos. 20698, 20835, 21172, and 24061		1/4 in. -18 NPT upstream tap and plug, 1/4 in. -18 NPT downstream tap and plug
V5055A1343/U	3/4 in.	DN20	665 cfh		NPT	With V4055A, D or V4062 – 5 psi (340 mbar); With V4055B or E – 15 psi (1 bar)	When used with the V4055A, G and V9055A: Approved, Report Nos. 20698, 20835, 21172, and 24061		1/4 in. -18 NPT upstream tap and plug, 1/4 in. -18 NPT downstream tap and plug

Material Number	Pipe Size (inch)	Pipe Size (DN)	Capacity (cfh)	Capacity (m^3/hr)	Connection Type	Maximum Operating Differential Pressure	Approvals, Factory Mutual	Comments	Includes
V5055B1002/U	1 in.	DN25	960 cfh	27.2 m^3/hr	NPT	With V4055A, D or V4062 – 5 psi (340 mbar); With V4055B or E – 15 psi (1 bar)	When used with the V4055A, G and V9055A: Approved, Report Nos. 20698, 20835, 21172, and 24061		1/4 in. -18 NPT upstream tap and plug, 1/4 in. -18 NPT downstream tap and plug
V5055B1010/U	1 1/4 in.	DN32	1406 cfh	39.8 m^3/hr	NPT	With V4055A, D or V4062 – 5 psi (340 mbar); With V4055B or E – 15 psi (1 bar)	When used with the V4055A, G and V9055A: Approved, Report Nos. 20698, 20835, 21172, and 24061		1/4 in. -18 NPT downstream tap and plug, 1/4 in. -18 NPT upstream tap and plug
V5055B1028/U	1 1/2 in.	DN40	1717 cfh	48.6 m^3/hr	NPT	With V4055A, D or V4062 – 5 psi (340 mbar); With V4055B or E – 15 psi (1 bar)	When used with the V4055A, G and V9055A: Approved, Report Nos. 20698, 20835, 21172, and 24061		1/4 in. -18 NPT downstream tap and plug, 1/4 in. -18 NPT upstream tap and plug
V5055B1069/U	2 in.	DN50	3620 cfh	102.5 m^3/hr	NPT	With V4055A, D or V4062 – 5 psi (340 mbar); With V4055B or E – 15 psi (1 bar)	When used with the V4055A, G and V9055A: Approved, Report Nos. 20698, 20835, 21172, and 24061		1/4 in. -18 NPT upstream tap and plug, 1/4 in. -18 NPT downstream tap and plug
V5055B1077/U	2 1/2 in.	DN65	4250 cfh	120 m^3/hr	NPT	With V4055A, D or V4062 – 5 psi (340 mbar); With V4055B or E – 15 psi (1 bar)	When used with the V4055A, G and V9055A: Approved, Report Nos. 20698, 20835, 21172, and 24061		1/4 in. -18 NPT upstream tap and plug, 1/4 in. -18 NPT downstream tap and plug
V5055B1085/U	3 in.	DN80	5230 cfh	148 m^3/hr	NPT	With V4055A, D or V4062 – 5 psi (340 mbar); With V4055B or E – 15 psi (1 bar)	When used with the V4055A, G and V9055A: Approved, Report Nos. 20698, 20835, 21172, and 24061		1/4 in. -18 NPT upstream tap and plug, 1/4 in. -18 NPT downstream tap and plug
V5055B1150/U	4 in.	DN100	9180 cfh	259.9 m^3/hr	Flanged	With V4055A, D or V4062 – 3 psi (20.7 kPa); With V4055B or E – 5 psi (340 mbar)	When used with the V4055A, G and V9055A: Approved, Report Nos. 20698, 20835, 21172, and 24061		1/4 in. -18 NPT upstream tap and plug, 1/4 in. -18 NPT downstream tap and plug
V5055C1000/U	2 in.	DN50	3620 cfh	102.5 m^3/hr	NPT	With V4055A, D or V4062 – 5 psi (340 mbar); With V4055B or E – 15 psi (1 bar)	When used with the V4055D, F and V9055A: Approved, Report Nos. 20698, 20835, 21172, and 24061		1/4 in. -18 NPT upstream tap and plug, 1/4 in. -18 NPT downstream tap and plug
V5055C1018/U	2 1/2 in.	DN65	4250 cfh	120 m^3/hr	NPT	With V4055A, D or V4062 – 5 psi (340 mbar); With V4055B or E – 15 psi (1 bar)	When used with the V4055D, F and V9055A: Approved, Report Nos. 20698, 20835, 21172, and 24061		1/4 in. -18 NPT upstream tap and plug, 1/4 in. -18 NPT downstream tap and plug
V5055C1026/U	3 in.	DN80	5230 cfh	148 m^3/hr	NPT	With V4055A, D or V4062 – 5 psi (340 mbar); With V4055B or E – 15 psi (1 bar)	When used with the V4055D, F and V9055A: Approved, Report Nos. 20698, 20835, 21172, and 24061		1/4 in. -18 NPT downstream tap and plug, 1/4 in. -18 NPT upstream tap and plug
V5055C1034/U	1 in.	DN25	960 cfh	27.2 m^3/hr	NPT	With V4055A, D or V4062 – 5 psi (340 mbar); With V4055B or E – 15 psi (1 bar)	When used with the V4055D, F and V9055A: Approved, Report Nos. 20698, 20835, 21172, and 24061		1/4 in. -18 NPT upstream tap and plug, 1/4 in. -18 NPT downstream tap and plug
V5055C1042/U	1 1/4 in.	DN32	1406 cfh	39.8 m^3/hr	NPT	With V4055A, D or V4062 – 5 psi (340 mbar); With V4055B or E – 15 psi (1 bar)	When used with the V4055D, F and V9055A: Approved, Report Nos. 20698, 20835, 21172, and 24061		1/4 in. -18 NPT downstream tap and plug, 1/4 in. -18 NPT upstream tap and plug

Material Number	Pipe Size (inch)	Pipe Size (DN)	Capacity (cfh)	Capacity (m^3/hr)	Connection Type	Maximum Operating Differential Pressure	Approvals, Factory Mutual	Comments	Includes
V5055C1059/U	1 1/2 in.	DN40	1717 cfh	48.6 m^3/hr	NPT	With V4055A, D or V4062 – 5 psi (340 mbar); With V4055B or E – 15 psi (1 bar)	When used with the V4055D, F and V9055A: Approved, Report Nos. 20698, 20835, 21172, and 24061		1/4 in. -18 NPT upstream tap and plug, 1/4 in. -18 NPT downstream tap and plug
V5055C1109/U	4 in.	DN100	9180 cfh	259.9 m^3/hr	Flanged	With V4055A, D or V4062 – 3 psi (20.7 kPa); With V4055B or E – 5 psi (340 mbar)	When used with the V4055D, F and V9055A: Approved, Report Nos. 20698, 20835, 21172, and 24061		1/4 in. -18 NPT upstream tap and plug, 1/4 in. -18 NPT downstream tap and plug
V5055C1182/U	3/4 in.	DN20	665 cfh		NPT	With V4055A, D or V4062 – 5 psi (340 mbar); With V4055B or E – 15 psi (1 bar)	When used with the V4055D, F and V9055A: Approved, Report Nos. 20698, 20835, 21172, and 24061		1/4 in. -18 NPT downstream tap and plug, 1/4 in. -18 NPT upstream tap and plug
V5055D1008/U	1 in.	DN25	960 cfh	27.2 m^3/hr	NPT	With V4055A, D or V4062 – 5 psi (340 mbar); With V4055B or E – 25 psi (1.6 bar)	When used with the V4055B: Approved, Report Nos. 20698, 20835, 21172, and 24068		1/4 in. -18 NPT upstream tap and plug, 1/4 in. -18 NPT downstream tap and plug
V5055D1016/U	1 1/4 in.	DN32	1406 cfh	39.8 m^3/hr	NPT	With V4055A, D or V4062 – 5 psi (340 mbar); With V4055B or E – 25 psi (1.6 bar)	When used with the V4055B: Approved, Report Nos. 20698, 20835, 21172, and 24068		1/4 in. -18 NPT upstream tap and plug, 1/4 in. -18 NPT downstream tap and plug
V5055D1024/U	1 1/2 in.	DN40	1717 cfh	48.6 m^3/hr	NPT	With V4055A, D or V4062 – 5 psi (340 mbar); With V4055B or E – 25 psi (1.6 bar)	When used with the V4055B: Approved, Report Nos. 20698, 20835, 21172, and 24068		1/4 in. -18 NPT upstream tap and plug, 1/4 in. -18 NPT downstream tap and plug
V5055D1032/U	2 in.	DN50	3620 cfh	102.5 m^3/hr	NPT	With V4055A, D or V4062 – 5 psi (340 mbar); With V4055B or E – 15 psi (1 bar)	When used with the V4055B: Approved, Report Nos. 20698, 20835, 21172, and 24068		1/4 in. -18 NPT upstream tap and plug, 1/4 in. -18 NPT downstream tap and plug
V5055D1040/U	2 1/2 in.	DN65	4250 cfh	120 m^3/hr	NPT	With V4055A, D or V4062 – 5 psi (340 mbar); With V4055B or E – 15 psi (1 bar)	When used with the V4055B: Approved, Report Nos. 20698, 20835, 21172, and 24068		1/4 in. -18 NPT upstream tap and plug, 1/4 in. -18 NPT downstream tap and plug
V5055D1057/U	3 in.	DN80	5230 cfh		NPT	With V4055A, D or V4062 – 5 psi (340 mbar); With V4055B or E – 15 psi (1 bar)	When used with the V4055B: Approved, Report Nos. 20698, 20835, 21172, and 24068		1/4 in. -18 NPT upstream tap and plug, 1/4 in. -18 NPT downstream tap and plug
V5055D1065/U	3/4 in.	DN20	665 cfh		NPT	With V4055A, D or V4062 – 5 psi (340 mbar); With V4055B or E – 25 psi (1.6 bar)	When used with the V4055B: Approved, Report Nos. 20698, 20835, 21172, and 24068		1/4 in. -18 NPT upstream tap and plug, 1/4 in. -18 NPT downstream tap and plug
V5055E1005/U	2 in.	DN50	3620 cfh	102.5 m^3/hr	NPT	With V4055A, D or V4062 – 5 psi (340 mbar); With V4055B or E – 15 psi (1 bar)	When used with the V4055E: Approved, Report Nos. 20698, 20835, 21172, and 24068		1/4 in. -18 NPT upstream tap and plug, 1/4 in. -18 NPT downstream tap and plug
V5055E1013/U	2 1/2 in.	DN65	4250 cfh	120 m^3/hr	NPT	With V4055A, D or V4062 – 5 psi (340 mbar); With V4055B or E – 15 psi (1 bar)	When used with the V4055E: Approved, Report Nos. 20698, 20835, 21172, and 24068		1/4 in. -18 NPT downstream tap and plug, 1/4 in. -18 NPT upstream tap and plug
V5055E1021/U	3 in.	DN80	5230 cfh	148 m^3/hr	NPT	With V4055A, D or V4062 – 5 psi (340 mbar); With V4055B or E – 15 psi (1 bar)	When used with the V4055E: Approved, Report Nos. 20698, 20835, 21172, and 24068		1/4 in. -18 NPT downstream tap and plug, 1/4 in. -18 NPT upstream tap and plug
V5055E1039/U	1 in.	DN25	960 cfh	27.2 m^3/hr	NPT	With V4055A, D or V4062 – 5 psi (340 mbar); With V4055B or E – 25 psi (1.6 bar)	When used with the V4055E: Approved, Report Nos. 20698, 20835, 21172, and 24068		1/4 in. -18 NPT upstream tap and plug, 1/4 in. -18 NPT downstream tap and plug

Material Number	Pipe Size (inch)	Pipe Size (DN)	Capacity (cfh)	Capacity (m^3/hr)	Connection Type	Maximum Operating Differential Pressure	Approvals, Factory Mutual	Comments	Includes
V5055E1047/U	1 1/4 in.	DN32	1406 cfh	39.8 m^3/hr	NPT	With V4055A, D or V4062 – 5 psi (340 mbar); With V4055B or E – 25 psi (1.6 bar)	When used with the V4055E: Approved, Report Nos. 20698, 20835, 21172, and 24068		1/4 in. -18 NPT downstream tap and plug, 1/4 in. -18 NPT upstream tap and plug
V5055E1054/U	1 1/2 in.	DN40	1717 cfh	48.6 m^3/hr	NPT	With V4055A, D or V4062 – 5 psi (340 mbar); With V4055B or E – 25 psi (1.6 bar)	When used with the V4055E: Approved, Report Nos. 20698, 20835, 21172, and 24068		1/4 in. -18 NPT upstream tap and plug, 1/4 in. -18 NPT downstream tap and plug
V5055E1062/U	3/4 in.	DN20	665 cfh		NPT	With V4055A, D or V4062 – 5 psi (340 mbar); With V4055B or E – 25 psi (1.6 bar)	When used with the V4055E: Approved, Report Nos. 20698, 20835, 21172, and 24068		1/4 in. -18 NPT upstream tap and plug, 1/4 in. -18 NPT downstream tap and plug
V5055F1003/U	1 in.	DN25	960 cfh	27.2 m^3/hr	NPT	With V4055A, D or V4062 – 5 psi (340 mbar); With V4055B or E – 25 psi (1.6 bar)		Meets Intent of DIN Seat Leakage Requirements	1/4 in. -18 NPT downstream tap and plug, 1/4 in. -18 NPT upstream tap and plug
V5055F1011/U	1 1/2 in.	DN40	1717 cfh	48.6 m^3/hr	NPT	With V4055A, D or V4062 – 5 psi (340 mbar); With V4055B or E – 25 psi (1.6 bar)		Meets Intent of DIN Seat Leakage Requirements	1/4 in. -18 NPT downstream tap and plug, 1/4 in. -18 NPT upstream tap and plug
V5055F1037/U	1 1/4 in.	DN32	1406 cfh	39.8 m^3/hr	NPT	With V4055A, D or V4062 – 5 psi (340 mbar); With V4055B or E – 25 psi (1.6 bar)		Meets Intent of DIN Seat Leakage Requirements	1/4 in. -18 NPT downstream tap and plug, 1/4 in. -18 NPT upstream tap and plug

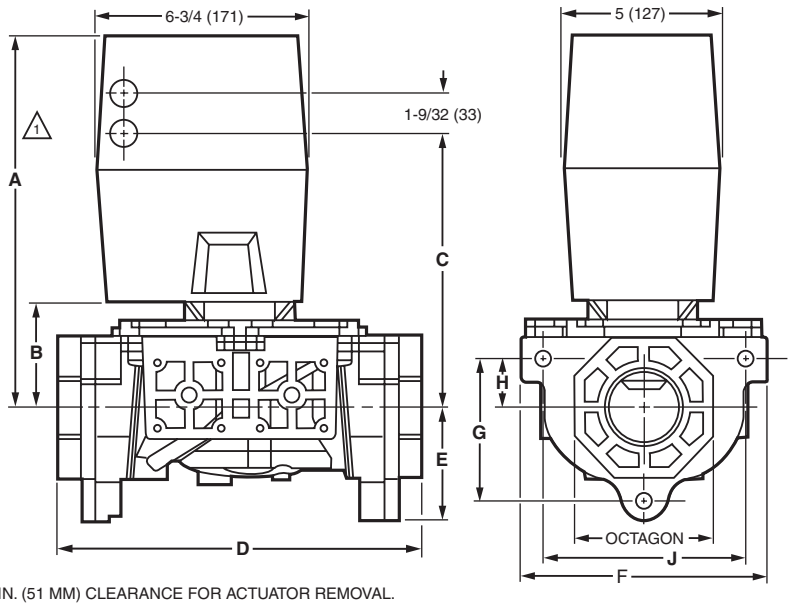
Dimensions in inches (millimeters)



1 ALLOW 2 IN. (51 mm) CLEARANCE FOR ACTUATOR REMOVAL.

VALVE SIZE INCH	DIM A		DIM B		DIM C		DIM D		DIM E		DIM F		OCTAGON	
	IN.	MM	IN.	MM	IN.	MM	IN.	MM	IN.	MM	IN.	MM	IN.	MM
3/4	11-1/8	283	2-3/4	70	8-3/16	208	5-3/4	146	2-1/4	57	4-7/8	124	2-13/16	71
1	11-1/8	283	2-3/4	70	8-3/16	208	5-3/4	146	2-1/4	57	4-7/8	124	2-13/16	71
1-1/4	11-1/8	283	2-3/4	70	8-3/16	208	5-3/4	146	2-1/4	57	4-7/8	124	2-13/16	71
1-1/2	11-1/8	283	2-3/4	70	8-3/16	208	5-3/4	146	2-1/4	57	4-7/8	124	2-13/16	71
2	11-1/4	286	2-7/8	73	8-5/16	211	8-3/8	213	2-3/4	70	7-19/32	193	3-1/2	89
2-1/2	11-3/4	299	3-3/8	86	8-13/16	224	9-1/4	235	2-3/4	70	7-19/32	193	4-1/2	114
3	11-3/4	299	3-3/8	86	8-13/16	224	9-1/4	235	2-3/4	70	7-19/32	193	4-1/2	114

M27268A



1 ALLOW 2 IN. (51 MM) CLEARANCE FOR ACTUATOR REMOVAL.

VALVE SIZE (IN.)	DIM. A		DIM. B		DIM. C		DIM. D		DIM. E		DIM. F		DIM. G		DIM. H		DIM. J		OCTAGON	
	IN.	MM	IN.	MM	IN.	MM	IN.	MM	IN.	MM	IN.	MM	IN.	MM	IN.	MM	IN.	MM	IN.	MM
3/4	11-1/8	283	2-3/4	70	8-3/16	208	8-1/4	210	2-7/16	62	5	127	2-5/16	58	7/8	23	3-15/16	100	2-13/16	71
1	11-1/8	283	2-3/4	70	8-3/16	208	8-1/4	210	2-7/16	62	5	127	2-5/16	58	7/8	23	3-15/16	100	2-13/16	71
1-1/4	11-1/8	283	2-3/4	70	8-3/16	208	8-1/4	210	2-7/16	62	5	127	2-5/16	58	7/8	23	3-15/16	100	2-13/16	71
1-1/2	11-1/8	283	2-3/4	70	8-3/16	208	8-1/4	210	2-7/16	62	5	127	2-5/16	58	7/8	23	3-15/16	100	2-13/16	71
2	11-3/4	298	3-3/8	86	8-5/16	211	11-3/4	298	3-5/8	91	8	203	4-7/16	113	1-1/2	38	6-1/2	165	4-1/2	114
2-1/2	11-3/4	298	3-3/8	86	8-5/16	211	11-3/4	298	3-5/8	91	8	203	4-7/16	113	1-1/2	38	6-1/2	165	4-1/2	114
3	11-3/4	298	3-3/8	86	8-5/16	211	11-3/4	298	3-5/8	91	8	203	4-7/16	113	1-1/2	38	6-1/2	165	4-1/2	114

M27581

V5097 Integrated Valve Train

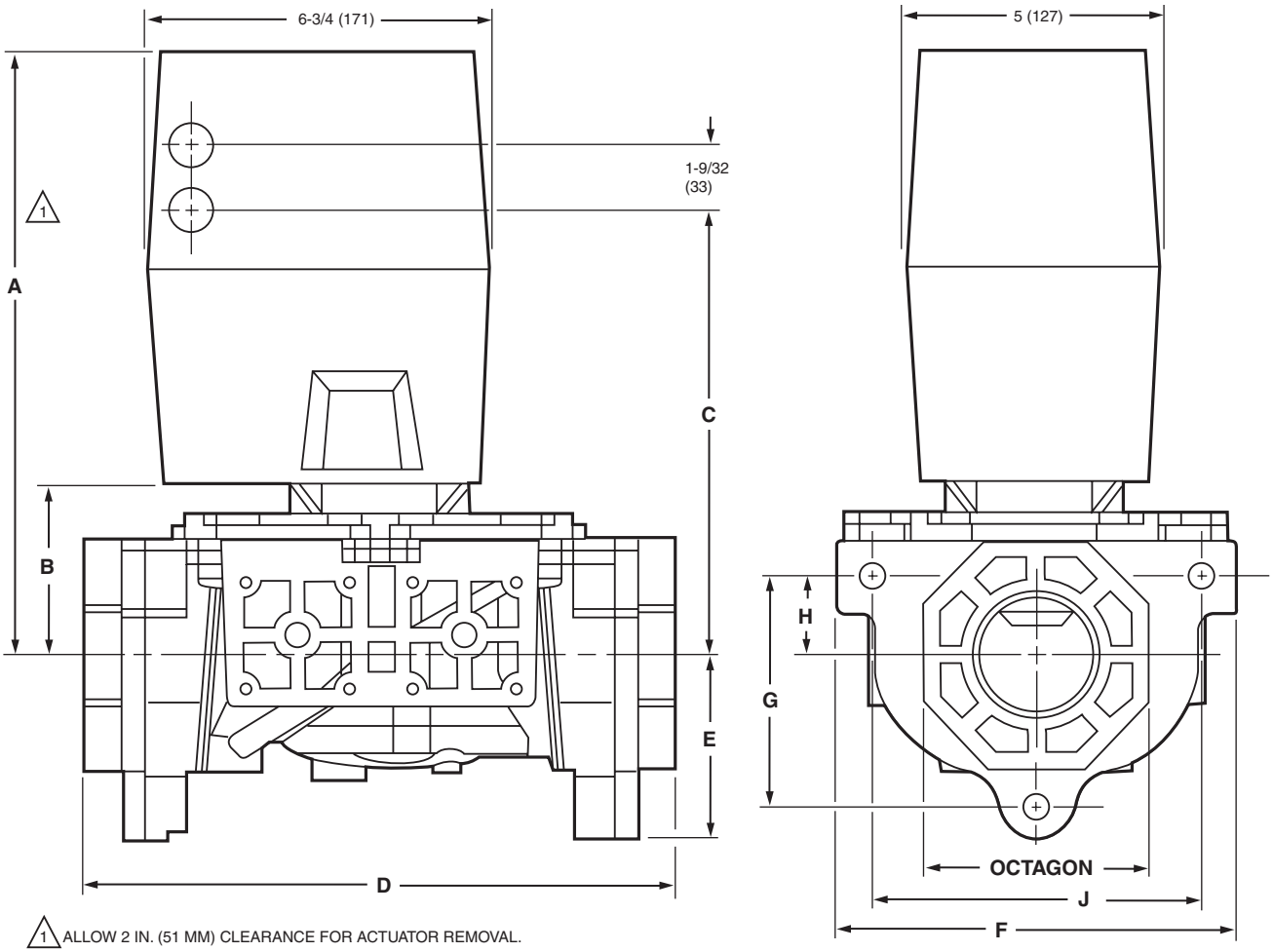
Safety shutoff valves used with V4055, V4062 and V9055 fluid power actuators to control gas flow to commercial and industrial burners.

- Use with natural or LP gases.
- Mount directly in gas supply line.
- Two Valve body types. Small body type for 3/4 in., 1 in., 1-1/4 in., 1-1/2 in., 2 in. pipes. Large body types for 2 in., 2-1/2 in. and 3 in. pipes.
- Seven pipe adapter sizes from 3/4 in. to 3 in. have NPT or BSP threaded connections.
- Provides three 1/4 in. upstream and two 1/4 in. downstream tap and plug.
- CE version provides an additional downstream tap and plug.
- Yellow SHUT indicator attached to the valve stem provides an indication of the valve closed position.
- V5097A, C, D, E Valves are for on-off service.
- V5097B Valve has a characterized guide and in combination with the V4055, V4062 and V9055 Fluid Power Actuators, provides slow-opening, HI-LO-OFF, and modulating functions, respectively.
- V5097C, E Valves have a double seal and are used with V4055D, E Actuators to provide proof-of-closure switch and valve seal over-travel interlock.
- Actuators to provide proof-of-closure switch and valve seal over-travel interlock.
- V5097D, E Valves are for high pressure applications.
- Two valve body types (small and large) applicable to server pipe size.

Operating Temperature Range: -40°F to +150°F; When used with V9055 – -40°F to +125°F (-40°C to +66°C; When used with V9055 – -40°C to +52°C)
Approvals, Underwriters Laboratories Inc.: When used with V4055A, B, D, E, V4062, V9055: Listed, File No. MH1639 Guide No. YIOZ
Approvals, CSA: When used with V4055, V4062, and V5097: Certified General listed File No. 158158, Class 3371 for USA and Canada
Approvals, Swiss RE: When used with the V4055A, G: Approved, Report Nos. 20698, 20835, 21172, and 24061
Approvals, CE: CE #E3070 (Gastec)
Comments: Select Proper Pipe Adapter
Includes: Three 1/4 in. -18 NPT upstream and two 1/4 in. -18 NPT downstream taps
Used With: V9055; V4055; V4062

Material Number	Pipe Size (inch)	Pipe Size (DN)	Capacity (cfh)	Capacity (m^3/hr)	Maximum Operating Differential Pressure	Integrated Valve Train Body Size	Approvals, Factory Mutual
V5097A1004/U	3/4 in. or 1 in. or 1 1/4 in. or 2 in.	DN20 or DN25 or DN32 or DN50	665 cfh to 3620 cfh	18.8 to 102.5 m^3/hr	With V4055A, D or V4062 – 5 psi (340 mbar); With V4055B or E – 15 psi (1 bar)	Small body	When used with the V4055A, G: Approved, Report Nos. 20698, 20835, 21172, and 24061
V5097A1012/U	2 in. or 2 1/2 in. or 3 in.	DN50 or DN65 or DN80	3620 cfh to 5230 cfh	102.5 to 148.0 m^3/hr	With V4055A, D or V4062 – 5 psi (340 mbar); With V4055B or E – 15 psi (1 bar)	Large body	When used with the V4055A, G: Approved, Report Nos. 20698, 20835, 21172, and 24061
V5097B1002/U	3/4 in. or 1 in. or 1 1/4 in. or 2 in.	DN20 or DN25 or DN32 or DN50	665 cfh to 3620 cfh		With V4055A, D or V4062 – 5 psi (340 mbar); With V4055B or E – 15 psi (1 bar)	Small body	When used with the V4055A, G and V9055A: Approved, Report Nos. 20698, 20835, 21172, and 24061
V5097B1010/U	2 in. or 2 1/2 in. or 3 in.	DN50 or DN65 or DN80	3620 cfh to 5230 cfh	102.5 to 148.0 m^3/hr	With V4055A, D or V4062 – 5 psi (340 mbar); With V4055B or E – 15 psi (1 bar)	Large body	When used with the V4055A, G and V9055A: Approved, Report Nos. 20698, 20835, 21172, and 24061
V5097C1000/U	3/4 in. or 1 in. or 1 1/4 in. or 2 in.	DN20 or DN25 or DN32 or DN50	665 cfh to 3620 cfh	18.8 to 102.5 m^3/hr	With V4055A, D or V4062 – 5 psi (340 mbar); With V4055B or E – 15 psi (1 bar)	Small body	When used with the V4055D, F and V9055A: Approved, Report Nos. 20698, 20835, 21172, and 24066
V5097C1018/U	2 in. or 2 1/2 in. or 3 in.	DN50 or DN65 or DN80	3620 cfh to 5230 cfh	102.5 to 148.0 m^3/hr	With V4055A, D or V4062 – 5 psi (340 mbar); With V4055B or E – 15 psi (1 bar)	Large body	When used with the V4055D, F and V9055A: Approved, Report Nos. 20698, 20835, 21172, and 24066
V5097D1008/U	3/4 in. or 1 in. or 1 1/4 in. or 2 in.	DN20 or DN25 or DN32 or DN50	665 cfh to 3620 cfh	18.8 to 102.5 m^3/hr	With V4055A, D or V4062 – 5 psi (340 mbar); With V4055B or E – 25 psi (1.6 bar)	Small body	When used with the V4055B: Approved, Report Nos. 20698, 20835, 21172, and 24068
V5097D1016/U	2 in. or 2 1/2 in. or 3 in.	DN50 or DN65 or DN80	3620 cfh to 5230 cfh	102.5 to 148.0 m^3/hr	With V4055A, D or V4062 – 5 psi (340 mbar); With V4055B or E – 15 psi (1 bar)	Large body	When used with the V4055B: Approved, Report Nos. 20698, 20835, 21172, and 24068
V5097E1005/U	3/4 in. or 1 in. or 1 1/4 in. or 2 in.	DN20 or DN25 or DN32 or DN50	665 cfh to 3620 cfh	18.8 to 102.5 m^3/hr	With V4055A, D or V4062 – 5 psi (340 mbar); With V4055B or E – 25 psi (1.6 bar)	Small body	When used with the V4055E: Approved, Report Nos. 20698, 20835, 21172, and 24068
V5097E1013/U	2 in. or 2 1/2 in. or 3 in.	DN50 or DN65 or DN80	3620 cfh to 5230 cfh	102.5 to 148.0 m^3/hr	With V4055A, D or V4062 – 5 psi (340 mbar); With V4055B or E – 15 psi (1 bar)	Large body	When used with the V4055E: Approved, Report Nos. 20698, 20835, 21172, and 24068

Dimensions in inches (millimeters)



1 ALLOW 2 IN. (51 MM) CLEARANCE FOR ACTUATOR REMOVAL.

VALVE SIZE (IN.)	DIM. A		DIM. B		DIM. C		DIM. D		DIM. E		DIM. F		DIM. G		DIM. H		DIM. J		OCTAGON	
	IN.	MM	IN.	MM	IN.	MM	IN.	MM	IN.	MM	IN.	MM	IN.	MM	IN.	MM	IN.	MM	IN.	MM
3/4	11-1/8	283	2-3/4	70	8-3/16	208	8-1/4	210	2-7/16	62	5	127	2-5/16	58	7/8	23	3-15/16	100	2-13/16	71
1	11-1/8	283	2-3/4	70	8-3/16	208	8-1/4	210	2-7/16	62	5	127	2-5/16	58	7/8	23	3-15/16	100	2-13/16	71
1-1/4	11-1/8	283	2-3/4	70	8-3/16	208	8-1/4	210	2-7/16	62	5	127	2-5/16	58	7/8	23	3-15/16	100	2-13/16	71
1-1/2	11-1/8	283	2-3/4	70	8-3/16	208	8-1/4	210	2-7/16	62	5	127	2-5/16	58	7/8	23	3-15/16	100	2-13/16	71
2	11-3/4	298	3-3/8	86	8-5/16	211	11-3/4	298	3-5/8	91	8	203	4-7/16	113	1-1/2	38	6-1/2	165	4-1/2	114
2-1/2	11-3/4	298	3-3/8	86	8-5/16	211	11-3/4	298	3-5/8	91	8	203	4-7/16	113	1-1/2	38	6-1/2	165	4-1/2	114
3	11-3/4	298	3-3/8	86	8-5/16	211	11-3/4	298	3-5/8	91	8	203	4-7/16	113	1-1/2	38	6-1/2	165	4-1/2	114

M11682B

Integrated Valve Train Pipe Adapters

Material Number	Pipe Size (inch)	Pipe Size (DN)	Connection Type	Integrated Valve Train Body Size	Description	Used With
32000109-001/U	3/4 in.	DN20	NPT	Small body	3/4 in. NPT Pipe Adapter Small Body Integrated Valve Train. Required for Valve Train Assembly.	V5097; V4297; V5197
32000109-002/U	1 in.	DN25	NPT	Small body	1 in. NPT Pipe Adapter Small Body Integrated Valve Train. Required for Valve Train Assembly.	V5097; V4297; V5197
32000109-003/U	1 1/4 in.	DN32	NPT	Small body	1 1/4 in. NPT Pipe Adapter Small Body Integrated Valve Train. Required for Valve Train Assembly.	V5097; V4297; V5197
32000109-004/U	1 1/2 in.	DN40	NPT	Small body	1 1/2 in. NPT Pipe Adapter Small Body Integrated Valve Train. Required for Valve Train Assembly.	V5097; V4297; V5197
32000109-005/U	2 in.	DN50	NPT	Small body	2 in. NPT Pipe Adapter Small Body Integrated Valve Train. Required for Valve Train Assembly.	V5097; V4297; V5197
32000109-006/U	3/4 in.	DN20	BSP	Small body	3/4 in. BSP Pipe Adapter Small Body Integrated Valve Train. Required for Valve Train Assembly.	V5097; V4297; V5197
32000109-007/U	1 in.	DN25	BSP	Small body	1 in. BSP Pipe Adapter Small Body Integrated Valve Train. Required for Valve Train Assembly.	V5097; V4297; V5197
32001605-001/U	2 in.	DN50	NPT	Large body	2 in. NPT Pipe Adapter Large Body Integrated Valve Train. Required for Valve Train Assembly.	V5097; V4297; V5197
32001605-002/U	2 1/2 in.	DN65	NPT	Large body	2 1/2 in. NPT Pipe Adapter Large Body Integrated Valve Train. Required for Valve Train Assembly.	V5097; V4297; V5197
32001605-003/U	3 in.	DN80	NPT	Large body	3 in. NPT Pipe Adapter Large Body Integrated Valve Train. Required for Valve Train Assembly.	V5097; V4297; V5197
32001605-004/U	2 in.	DN50	BSP	Large body	2 in. BSP Pipe Adapter Large Body Integrated Valve Train. Required for Valve Train Assembly.	V5097; V4297; V5197
32001605-005/U	2 1/2 in.	DN65	BSP	Large body	2 1/2 in. BSP Pipe Adapter Large Body Integrated Valve Train. Required for Valve Train Assembly.	V5097; V4297; V5197
32001605-006/U	3 in.	DN80	BSP	Large body	3 in. BSP Pipe Adapter Large Body Integrated Valve Train. Required for Valve Train Assembly.	V5097; V4297; V5197

V5055/5097 Replacement Parts or Accessories

Material Number	Description	Used With
133392A/U	O-Ring Assembly for 2 in., 2 1/2 in., and 3 in. V5055 valves	V5055/V5097 valves
133393A/U	O-Ring Assembly for 1 in., 1 1/4 in., and 1 1/2 in. V5055 valves	V5055/V5097 valves
133398AA/U	Replacement Bonnet Assembly with 133393A Seal Assembly for 3/4, 1, 1-1/4, 1-1/2 in. V5055A valves	V5055/V5097 valves
133398BA/U	Replacement Bonnet Assembly with 133393A Seal Assembly for 3/4, 1, 1-1/4, 1-1/2 in. V5055B valves	V5055/V5097 valves
133398CA/U	Replacement Bonnet Assembly, with 137253A replacement Seal Assembly for small body (3/4, 1, 1 1/2 in.) V5055/V5097C.	V5055/V5097 valves
133417AA/U	Replacement Bonnet Assembly with 133392A Seal Assembly for 2, 2 1/2, and 3 in. V5055A valves	V5055/V5097 valves
133417BA/U	Replacement Bonnet Assembly with 133392A Seal Assembly for 2, 2 1/2, and 3 in. V5055B valves	V5055/V5097 valves
133417CA/U	Bonnet Assembly for 2, 2 1/2, or 3 in. V5055C or V5097C valves	V5055C/V5097C valves
137253A/U	Replacement seal assembly. For 4 inch V5055.	V5055
4074EYE/U	Bag assembly for V5097 (large body) includes 6 ea bolts, nuts and washers.	Large Body V5097
4074EYF/U	Bag assembly for V5097 (small body) includes 6 ea bolts, nuts and washers.	Small Body V5097
4074EYK/U	Bag assembly for V5097 (small body) includes (2) O-rings, (1) grease capsule.	Small Body V5097
4074EYL/U	Bag assembly for V5097 (large body) includes (2) O-rings, (1) grease capsule.	Large Body V5097

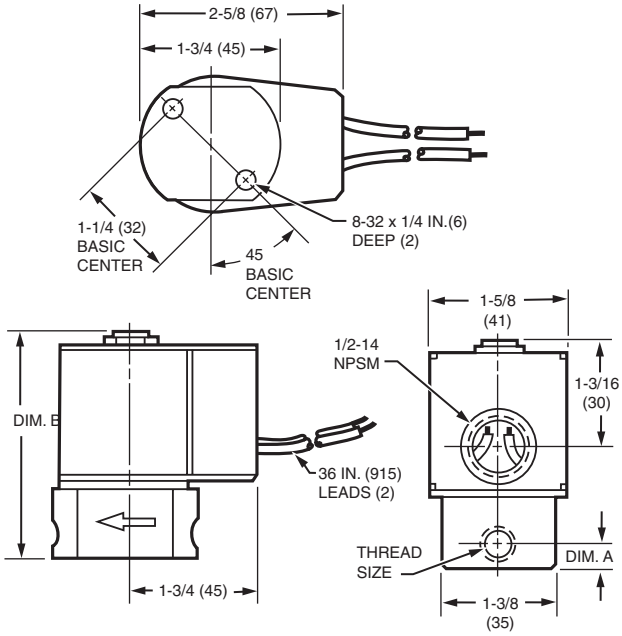
V4046C; V8046C Pilot Gas Valves

Provide on-off control of natural, LP and manufactured gases to pilot burners in industrial and commercial applications.

- Magnetically operated, normally closed.
- Provide instantaneous action when energized.
- On power failure, valve closes in one second maximum.
- Use in any position, directly in pipe line or on support bracket.
- Replace the solenoid coil without removing the valve body from the piping connections.
- Straight-through valve pattern.
- Available in line voltage or low voltage models.

Type of Fuel: Air; natural; manufactured; LP
Body Pattern: Straight-through
Valve Opening Time: 1 sec max
Valve Closing Time: 1 sec max
Mounting: Directly in pipe or on support bracket
Materials: Body – Aluminum
Power Consumption: 8 W
Operating Temperature Range: -40°F to +125°F (-40°C to +52°C)
Approvals, Underwriters Laboratories Inc.: Listed: File No. MH1639, V3, S3 - Guide No. YIOZ
Approvals, CSA: Certificate No. 158158-2500006058, Guide No. C3371-03, 83
Approvals, Factory Mutual: Approved: Report No. 17450
Pressure Ratings (psi): 10 psi
Pressure Ratings (kPa): 68.9 kPa

Dimensions in inches (millimeters)



MODEL	BODY SIZE	THREAD SIZE	DIM. A		DIM. B	
			IN	MM	IN	MM
V4046C, V8046C	SMALL	1/8-27 NPT	5/16	8	2-3/4	70
	SMALL	1/4-18 NPT	3/8	10	3	76
	LARGE	1/4-18 NPT	1/2	13	3-1/4	83
	LARGE	3/8-18 NPT	1/2	13	3-1/4	83

M16595A

Material Number	Pipe Size (inch)	Capacity (cfh)	Capacity (m^3/hr)	Voltage	Frequency	Electrical Connections	Approvals, Swiss RE
V4046C1005/U	1/8 in.	20 cfh	0.57 m^3/hr	110 Vac; 120 Vac	50 Hz; 60 Hz	Two 36-in. leadwires and 1/2 in. conduit bushing	Acceptable
V4046C1021/U	1/4 in.	20 cfh	0.57 m^3/hr	110 Vac; 120 Vac	50 Hz; 60 Hz	Two 36-in. leadwires and 1/2 in. conduit bushing	Acceptable
V4046C1047/U	1/4 in.	55 cfh	1.56 m^3/hr	110 Vac; 120 Vac	50 Hz; 60 Hz	Two 36-in. leadwires and 1/2 in. conduit bushing	Acceptable
V4046C1054/U	3/8 in.	67 cfh	1.90 m^3/hr	110 Vac; 120 Vac	50 Hz; 60 Hz	Two 36-in. leadwires and 1/2 in. conduit bushing	Acceptable
V4046C1120/U	3/8 in.	67 cfh	1.90 m^3/hr	120 Vac	60 Hz	Two 10 ft. leadwires and 1/2 in. conduit bushing	Acceptable
V8046C1006/U	1/8 in.	20 cfh	0.57 m^3/hr	24 Vac	60 Hz	Two 36-in. leadwires and 1/2 in. conduit bushing	
V8046C1014/U	1/4 in.	20 cfh	0.57 m^3/hr	24 Vac	60 Hz	Two 36-in. leadwires and 1/2 in. conduit bushing	
V8046C1022/U	1/4 in.	55 cfh	1.56 m^3/hr	24 Vac	60 Hz	Two 36-in. leadwires and 1/2 in. conduit bushing	
V8046C1030/U	3/8 in.	67 cfh	1.90 m^3/hr	24 Vac	60 Hz	Two 36-in. leadwires and 1/2 in. conduit bushing	

V4295; V8295 Solenoid Gas Valves

V4295A/V8295A normally closed and V4295S/V8295S normally open (vent) solenoid gas valves, are suitable for furnaces, ovens, atmospheric burners, commercial water heaters, rooftop make-up air units, power burners, and commercial/industrial boilers.

- V8295A, S are used with 24 Vac controllers.
- V4295A, S are used with 120 Vac controllers.
- Positive close off of gas flow when de-energized.
- High valve spring force allows up to 0.7 psi back pressure at valve seat.
- No inlet pressure influence at valve seat.
- Inlet pressure changes do not affect ability to close valve.
- Low operating noise.
- Low rush-in current.
- Upstream and downstream taps allows tapping and testing pressure points.

Type of Fuel: Air; natural; manufactured; mixed; LP
Pressure Tapping: Inlet and outlet pressure taps – 1/4 in. NPT
Body Pattern: Straight-through, non-offset
Valve Opening Time:less than 1 sec
Valve Closing Time: less than 1 sec
Mounting: Vertical to 90 degrees from vertical

Materials: Body – Die-cast aluminum
Frequency: 50 Hz; 60 Hz
Electrical Connections: Screw terminals
Operating Temperature Range: -40°F to +140°F (-40°C to +60°C)
Approvals, Swiss RE: Acceptable
Approvals, Control Safety Devices: Acceptable

Material Number	Pipe Size (inch)	Pipe Size (DN)	Capacity (cfh)	Capacity (m^3/hr)	Voltage	Approximate, Dimensions	Current Ratings	Pressure Ratings (psi)	Pressure Ratings (kPa)	Approvals, Underwriters Laboratories Inc.	Approvals, CSA	Approvals, Factory Mutual
V4295A1015	1/2 in.	DN15	250 cfh	7.1 m^3/hr	120 Vac	4 7/16 in. high x 2 7/8 in. wide x 2 3/16 deep (113 mm high x 73 mm wide x 56 mm deep)	0.16 max amps at rated Vac/Hz	2 psi	13.8 kPa	Listed: File No. MH18476, V1, S1 - Guide No. YIOZ	Certificate No. 158158-1154280, Guide No. C3371-03, 04, 83	Approved: Report No. J.I.OD6A2. AF
V4295A1023	3/4 in.	DN20	645 cfh	18.3 m^3/hr	120 Vac	5 1/4 in. high x 3 7/16 in. wide x 2 3/4 in. deep (133 mm high x 87 mm wide x 70 mm deep)	0.16 max amps at rated Vac/Hz	2 psi	13.8 kPa	Listed: File No. MH18476, V1, S1 - Guide No. YIOZ	Certificate No. 158158-1154280, Guide No. C3371-03, 04, 83	Approved: Report No. J.I.OD6A2. AF
V4295A1031	1 in.	DN25	790 cfh	22.4 m^3/hr	120 Vac	5 1/4 in. high x 3 15/16 in. wide x 3 in. deep (133 mm high x 100 mm wide x 76 mm deep)	0.16 max amps at rated Vac/Hz	2 psi	13.8 kPa	Listed: File No. MH18476, V1, S1 - Guide No. YIOZ	Certificate No. 158158-1154280, Guide No. C3371-03, 04, 83	Approved: Report No. J.I.OD6A2. AF
V4295A1049	1 1/4 in.	DN32	1450 cfh	41.0 m^3/hr	120 Vac	8 in. high x 5 15/16 in. wide x 4 3/8 in. deep (203 mm high x 151 mm wide x 111 mm deep)	0.34 max amps at rated Vac/Hz	2 psi	13.8 kPa	Listed: File No. MH18476, V1, S1 - Guide No. YIOZ	Certificate No. 158158-1154280, Guide No. C3371-03, 04, 83	Approved: Report No. J.I.OD6A2. AF
V4295A1056	1 1/2 in.	DN40	2190 cfh	62.0 m^3/hr	120 Vac	8 3/8 in. high x 5 15/16 in. wide x 4 3/8 in. deep (213 mm high x 151 mm wide x 111 mm deep)	0.3 max amps at rated Vac/Hz	2 psi	13.8 kPa	Listed: File No. MH18476, V1, S1 - Guide No. YIOZ	Certificate No. 158158-1154280, Guide No. C3371-03, 04, 83	Approved: Report No. J.I.OD6A2. AF
V4295A1064	2 in.	DN50	3465 cfh	98.1 m^3/hr	120 Vac	8 3/8 in. high x 6 11/16 in. wide x 5 3/8 in. deep (213 mm high x 170 mm wide x 137 mm deep)	0.525 max amps at rated Vac/Hz	2 psi	13.8 kPa	Listed: File No. MH18476, V1, S1 - Guide No. YIOZ	Certificate No. 158158-1154280, Guide No. C3371-03, 04, 83	Approved: Report No. J.I.OD6A2. AF
V4295A1072	2 1/2 in.	DN65	5070 cfh	143.5 m^3/hr	120 Vac	12 3/4 in. high x 9 1/2 in wide x 7 7/8 in. deep (324 mm high x 241 mm wide x 200 mm deep)	0.575 max amps at rated Vac/Hz	2 psi	13.8 kPa	Listed: File No. MH18476, V1, S1 - Guide No. YIOZ	Certificate No. 158158-1154280, Guide No. C3371-03, 04, 83	Approved: Report No. J.I.OD6A2. AF
V4295A1080	3 in.	DN80	6100 cfh	172.7 m^3/hr	120 Vac	12 3/4 in. high x 9 1/2 in wide x 7 7/8 in. deep (324 mm high x 241 mm wide x 200 mm deep)	0.675 max amps at rated Vac/Hz	2 psi	13.8 kPa	Listed: File No. MH18476, V1, S1 - Guide No. YIOZ	Certificate No. 158158-1154280, Guide No. C3371-03, 04, 83	Approved: Report No. J.I.OD6A2. AF

Material Number	Pipe Size (inch)	Pipe Size (DN)	Capacity (cfh)	Capacity (m^3/hr)	Voltage	Approximate, Dimensions	Current Ratings	Pressure Ratings (psi)	Pressure Ratings (kPa)	Approvals, Underwriters Laboratories Inc.	Approvals, CSA	Approvals, Factory Mutual
V4295A1098	3/8 in.		210 cfh	5.9 m^3/hr	120 Vac	4 7/16 in. high x 2 7/8 in. wide x 2 3/16 deep (113 mm high x 73 mm wide x 56 mm deep)	0.16 max amps at rated Vac/Hz	5 psi	34.5 kPa	Listed: File No. MH18476, V1, S1 - Guide No. YIOZ	Certificate No. 158158-1154280, Guide No. C3371-03, 04, 83	Approved: Report No. J.I.OD6A2. AF
V4295A1106	1/2 in.	DN15	290 cfh	8.2 m^3/hr	120 Vac	4 7/16 in. high x 2 7/8 in. wide x 2 3/16 deep (113 mm high x 73 mm wide x 56 mm deep)	0.16 max amps at rated Vac/Hz	5 psi	34.5 kPa	Listed: File No. MH18476, V1, S1 - Guide No. YIOZ	Certificate No. 158158-1154280, Guide No. C3371-03, 04, 83	Approved: Report No. J.I.OD6A2. AF
V4295A1114	3/4 in.	DN20	610 cfh	17.3 m^3/hr	120 Vac	3 3/16 in. high x 3 7/16 in. wide x 2 3/4 in. deep (81 mm high x 87 mm wide x 70 mm deep)	0.2 max amps at rated Vac/Hz	5 psi	34.5 kPa	Listed: File No. MH18476, V1, S1 - Guide No. YIOZ	Certificate No. 158158-1154280, Guide No. C3371-03, 04, 83	Approved: Report No. J.I.OD6A2. AF
V4295A1122	1 in.	DN25	825 cfh	23.4 m^3/hr	120 Vac	6 5/16 in. high x 3 15/16 in. wide x 3 in. deep (160 mm high x 100 mm wide x 76 mm deep)	0.2 max amps at rated Vac/Hz	5 psi	34.5 kPa	Listed: File No. MH18476, V1, S1 - Guide No. YIOZ	Certificate No. 158158-1154280, Guide No. C3371-03, 04, 83	Approved: Report No. J.I.OD6A2. AF
V4295A1130	1 1/4 in.	DN32	1950 cfh	55.2 m^3/hr	120 Vac	8 9/16 in. high x 5 15/16 in. wide x 4 3/8 in. deep (217 mm high x 151 mm wide x 111 mm deep)	0.55 max amps at rated Vac/Hz	5 psi	34.5 kPa	Listed: File No. MH18476, V1, S1 - Guide No. YIOZ	Certificate No. 158158-1154280, Guide No. C3371-03, 04, 83	Approved: Report No. J.I.OD6A2. AF
V4295A1148/U	1 1/2 in.	DN40	2270 cfh	64.3 m^3/hr	120 Vac	8 9/16 in. high x 5 15/16 in. wide x 4 3/8 in. deep (217 mm high x 151 mm wide x 111 mm deep)	0.55 max amps at rated Vac/Hz	5 psi	34.5 kPa	Listed: File No. MH18476, V1, S1 - Guide No. YIOZ	Certificate No. 158158-1154280, Guide No. C3371-03, 04, 83	Approved: Report No. J.I.OD6A2. AF
V4295A1155	2 in.	DN50	3740 cfh	105.9 m^3/hr	120 Vac	9 3/16 in. high x 6 11/16 in. wide x 5 3/8 in. deep (233 mm high x 170 mm wide x 137 mm deep)	0.54 max amps at rated Vac/Hz	5 psi	34.5 kPa	Listed: File No. MH18476, V1, S1 - Guide No. YIOZ	Certificate No. 158158-1154280, Guide No. C3371-03, 04, 83	Approved: Report No. J.I.OD6A2. AF
V4295S1005	3/4 in.	DN20	350 cfh	9.9 m^3/hr	120 Vac	5 1/2 in. high x 3 7/16 in. wide x 2 3/4 in. deep (140 mm high x 87 mm wide x 70 mm deep)	0.16 max amps at rated Vac/Hz	2 psi	13.8 kPa	Listed: File No. MH18476, V1, S1 - Guide No. YIOZ	Certificate No. 158158-1154280, Guide No. C3371-03, 83	Approved: Report No. J.I.OD6A2. AF
V4295S1013	1 in.	DN25	420 cfh	11.9 m^3/hr	120 Vac	5 1/2 in. high x 3 15/16 in. wide x 3 in. deep (140 mm high x 100 mm wide x 76 mm deep)	0.16 max amps at rated Vac/Hz	2 psi	13.8 kPa	Listed: File No. MH18476, V1, S1 - Guide No. YIOZ	Certificate No. 158158-1154280, Guide No. C3371-03, 83	Approved: Report No. J.I.OD6A2. AF
V4295S1021	1 1/4 in.	DN32	1100 cfh	31.1 m^3/hr	120 Vac	8 3/4 in. high x 5 15/16 in. wide x 4 3/8 in. deep (222 mm high x 151 mm wide x 111 mm deep)	0.34 max amps at rated Vac/Hz	2 psi	13.8 kPa	Listed: File No. MH18476, V1, S1 - Guide No. YIOZ	Certificate No. 158158-1154280, Guide No. C3371-03, 83	Approved: Report No. J.I.OD6A2. AF
V8295A1016	1/2 in.	DN15	250 cfh	7.1 m^3/hr	24 Vac	4 7/16 in. high x 2 7/8 in. wide x 2 3/16 deep (113 mm high x 73 mm wide x 56 mm deep)	0.8 max amps at rated Vac/Hz	2 psi	13.8 kPa	Component Recognized; File No. YLOZ	Certificate No. 158158-1154280, Guide No. C3371-03, 85	Approved: 3/8 in., 1/2 in., 3/4 in. only
V8295A1024	3/4 in.	DN20	645 cfh	18.3 m^3/hr	24 Vac	5 1/4 in. high x 3 7/16 in. wide x 2 3/4 in. deep (133 mm high x 87 mm wide x 70 mm deep)	0.8 max amps at rated Vac/Hz	2 psi	13.8 kPa	Component Recognized; File No. YLOZ	Certificate No. 158158-1154280, Guide No. C3371-03, 85	Approved: 3/8 in., 1/2 in., 3/4 in. only
V8295A1032	1 in.	DN25	790 cfh	22.4 m^3/hr	24 Vac	5 1/4 in. high x 3 15/16 in. wide x 3 in. deep (133 mm high x 100 mm wide x 76 mm deep)	0.8 max amps at rated Vac/Hz	2 psi	13.8 kPa	Component Recognized; File No. YLOZ	Certificate No. 158158-1154280, Guide No. C3371-03, 85	Approved: 3/8 in., 1/2 in., 3/4 in. only

Solenoid Gas Valves

Material Number	Pipe Size (inch)	Pipe Size (DN)	Capacity (cfh)	Capacity (m^3/hr)	Voltage	Approximate, Dimensions	Current Ratings	Pressure Ratings (psi)	Pressure Ratings (kPa)	Approvals, Underwriters Laboratories Inc.	Approvals, CSA	Approvals, Factory Mutual
V8295A1040	1 1/4 in.	DN32	1450 cfh	41.0 m^3/hr	24 Vac	8 in. high x 5 15/16 in. wide x 4 3/8 in. deep (203 mm high x 151 mm wide x 111 mm deep)	1.6 max amps at rated Vac/Hz	2 psi	13.8 kPa	Component Recognized; File No. YLOZ	Certificate No. 158158-1154280, Guide No. C3371-03, 85	Approved: 3/8 in., 1/2 in., 3/4 in. only
V8295A1057	1 1/2 in.	DN40	2190 cfh	62.0 m^3/hr	24 Vac	8 3/8 in. high x 5 15/16 in. wide x 4 3/8 in. deep (213 mm high x 151 mm wide x 111 mm deep)	1.7 max amps at rated Vac/Hz	2 psi	13.8 kPa	Component Recognized; File No. YLOZ	Certificate No. 158158-1154280, Guide No. C3371-03, 85	Approved: 3/8 in., 1/2 in., 3/4 in. only
V8295A1065	2 in.	DN50	3465 cfh	98.1 m^3/hr	24 Vac	8 3/8 in. high x 6 11/16 in. wide x 5 3/8 in. deep (213 mm high x 170 mm wide x 137 mm deep)	2.8 max amps at rated Vac/Hz	2 psi	13.8 kPa	Component Recognized; File No. YLOZ	Certificate No. 158158-1154280, Guide No. C3371-03, 85	Approved: 3/8 in., 1/2 in., 3/4 in. only
V8295S1006	3/4 in.	DN20	350 cfh	9.9 m^3/hr	24 Vac	5 1/2 in. high x 3 7/16 in. wide x 2 3/4 in. deep (140 mm high x 87 mm wide x 70 mm deep)	0.8 max amps at rated Vac/Hz	2 psi	13.8 kPa	Component Recognized; File No. YLOZ	Certificate No. 158158-1154280, Guide No. C3371-03, 85	Approved: 3/8 in., 1/2 in., 3/4 in. only

V4297A Solenoid Safety Shut-off Valve for IVT

V4297A are normally closed solenoid gas valve. Suitable for use on furnaces, ovens, atmospheric burners, commercial water heaters, rooftop make-up air units, power burners, and commercial/industrial boilers.

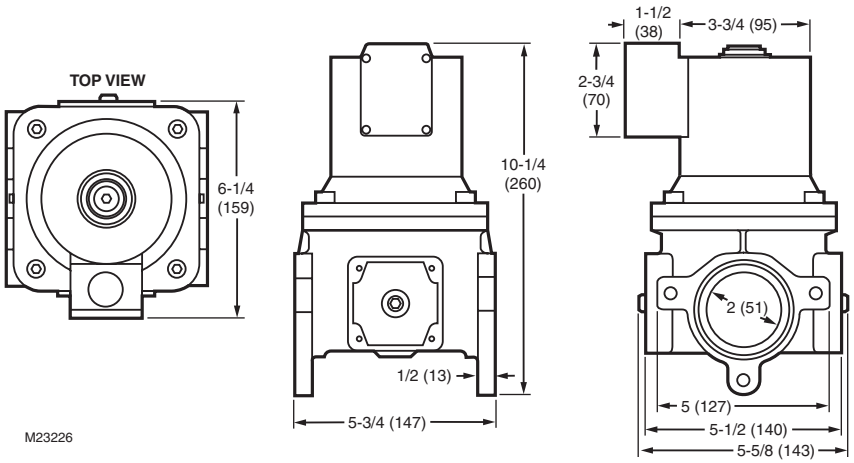
- V4297A are used with 120 Vac controllers.
- Positive close off of gas flow when de-energized.
- High valve spring force allows up to 0.7 psi back pressure at valve seat.
- No inlet pressure influence at valve seat.
- Inlet pressure changes do not affect ability to close valve.
- Low operating noise.
- Low rush-in current.
- Upstream and downstream taps allows tapping and testing pressure points.
- For use with the Integrated Valve Train.
- Accepts C6097 Pressure Switch mounted directly to flange (upstream pressure tap only).

Type of Fuel: Air; natural; manufactured; mixed; LP
Pressure Tapping: Inlet and outlet pressure taps – 1/4 in. NPT
Body Pattern: Straight-through, non-offset
Valve Opening Time: less than 1 sec
Valve Closing Time: less than 1 sec
Flanges: Required, Order Separately
Mounting: Directly bolted to Integrated Valve Train Components
Materials: Body – Die-cast aluminum
Voltage: 110 Vac; 120 Vac
Frequency: 50 Hz; 60 Hz
Electrical Connections: Screw terminals
Operating Temperature Range: -40°F to +130°F (-40°C to +54°C)
Approvals, Underwriters Laboratories Inc.: Listed: File No. MH18476, V1, S1 - Guide No. YIOZ

Approvals, CSA: Certificate No. 158158-1154280, Guide No. C3371-03, 04, 83
Approvals, Swiss RE: Acceptable
Pressure Ratings (psi): 5 psi
Pressure Ratings (kPa): 34.5 kPa

Replacement Parts:
4074EYF/U – Bag assembly for V5097 (small body) includes 6 ea bolts, nuts and washers.
4074EYK/U – Bag assembly for V5097 (small body) includes (2) O-rings, (1) grease capsule.

Dimensions in inches (millimeters)



Material Number	Pipe Size (inch)	Pipe Size (DN)	Capacity (cfh)	Capacity (m^3/hr)	Approximate, Dimensions	Integrated Valve Train Body Size	Current Ratings
V4297A1005	3/4 in. to 1 1/4 in.	DN20 or DN25 or DN32	650 cfh; 700 cfh; 780 cfh	19.8 m^3/hr	9 in. high x 5 3/4 in. wide x 5 5/8 in. deep (229 mm high x 147 mm wide x 143 mm deep)	Small body, small flow	0.2 max amps at rated Vac/Hz
V4297A1013	3/4 in. to 2 in.	DN20 or DN25 or DN32 or DN40 or DN50	1190 cfh; 1460 cfh; 2260 cfh; 2735 cfh; 3060 cfh		10 1/4 in. high x 5 3/4 in. wide x 5 5/8 in. deep (260 mm high x 147 mm wide x 143 mm deep)	Small body, large flow	0.5 max amps at rated Vac/Hz

V4297S Normally Open Vent Valve for IVT

V4297S are normally open (vent) solenoid gas valves. Suitable for use on furnaces, ovens, atmospheric burners, commercial water heaters, rooftop make-up air units, power burners, and commercial/industrial boilers.

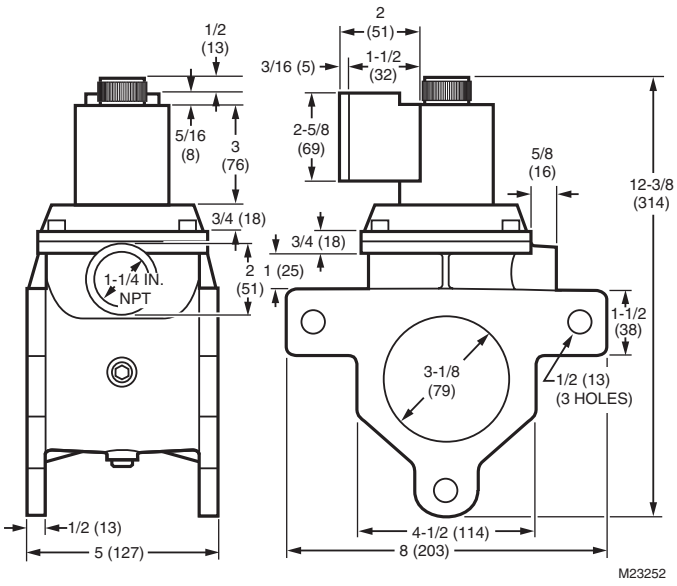
- V4297S is used with 120 Vac controllers.
- Low operating noise.
- Low rush-in current.
- Upstream and downstream taps allows tapping and testing pressure points.
- For use with the Integrated Valve Train.

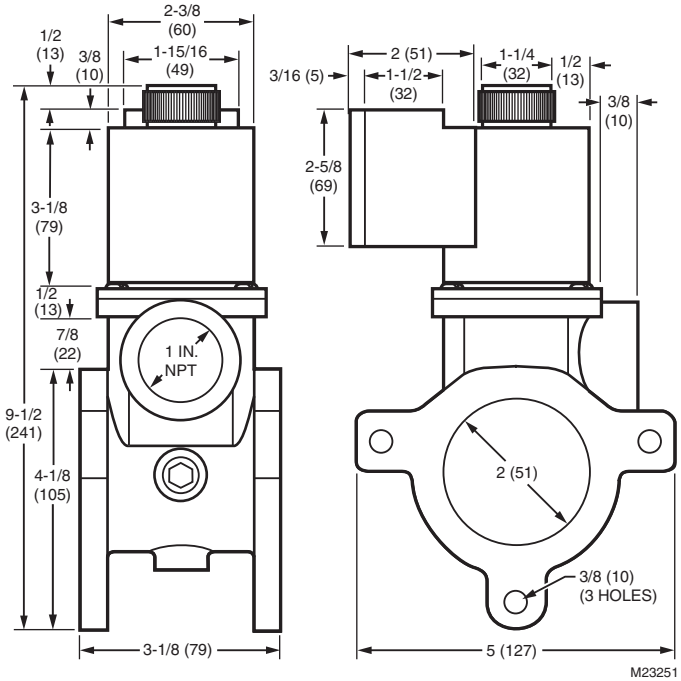
Type of Fuel: Air; natural; manufactured; mixed; LP
Pressure Tapping: Inlet and outlet pressure taps – 1/4 in. NPT
Body Pattern: Straight-through, non-offset
Valve Opening Time: less than 1 sec
Valve Closing Time: less than 1 sec
Flanges: Required for Stand Alone
Mounting: Directly bolted to Integrated Valve Train Components
Materials: Body – Die-cast aluminum
Voltage: 110 Vac; 120 Vac
Frequency: 50 Hz; 60 Hz
Electrical Connections: Screw terminals
Operating Temperature Range: -40°F to +145°F (-40°C to +63°C)
Approvals, Underwriters Laboratories Inc.: Listed: File No. MH18476, V1, S1 - Guide No. YIOZ

Approvals, CSA: Certificate No. 158158-1154280, Guide No. C3371-03, 04, 83
Approvals, Swiss RE: Acceptable
Pressure Ratings (psi): 5 psi
Pressure Ratings (kPa): 34.5 kPa

Replacement Parts:
4074EYF/U – Bag assembly for V5097 (small body) includes 6 ea bolts, nuts and washers.
4074EYK/U – Bag assembly for V5097 (small body) includes (2) O-rings, (1) grease capsule.
4074EYL/U – Bag assembly for V5097 (large body) includes (2) O-rings, (1) grease capsule.

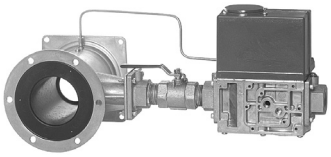
Dimensions in inches (millimeters)





Material Number	Pipe Size (DN)	Capacity (cfh)	Capacity (m^3/hr)	Approximate, Dimensions	Integrated Valve Train Body Size	Current Ratings
V4297S1003	DN25	714 cfh	20.2 m^3/hr	9 1/2 in. high x 3 1/8 in. wide x 5 in. deep (241 mm high x 79 mm wide x 127 mm deep)	Small body	0.2 max amps at rated Vac/Hz
V4297S1011	DN32	1115 cfh	31.6 m^3/hr	12 3/8 in. high x 5 in. wide x 8 in. deep (314 mm high x 127 mm wide x 203 mm deep)	Large body	0.34 max amps at rated Vac/Hz

V4730C; V4734C; V8730C Gas/Air Servo Regulated Gas Valves



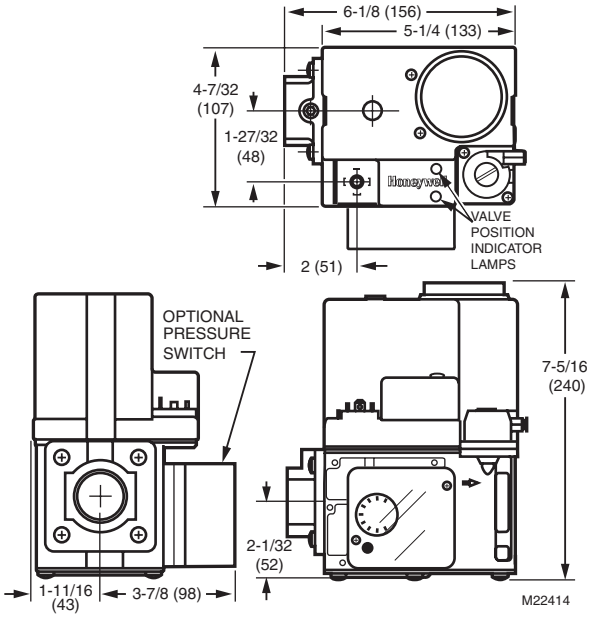
Body Pattern: Straight flange
Valve Opening Time: Dead time maximum: 1 second; First valve – < 1 second; Second valve – reaches 50% of the adjustable outlet pressure within 5 seconds
Materials: Body: Aluminum alloy, die-cast
Frequency: 50 Hz; 60 Hz
Ambient Temperature Range: 5°F to 140°F (-15°C to +60°C)
Approvals, Underwriters Laboratories Inc.: File No. MH18476
Approvals, CSA: File: Certificate No: 158158-1227192
Approvals, Others: Gas Appliance Directive: 90.396/EEC, PIN: 0063AT1198, Low Voltage Directive: 73/23/EEC, Electro Magnetic Compatibility Directive: 89/336/EEC
Maximum Safe Operating Pressure (psi): 0.5 psi (CSA approved), 1.45 psi for 120V; 1 psi for 24V (UL approved)
Maximum Operating Pressure (mbar): 200 mbar (UL approved) 100 mbar for 120V; 69 mbar for 24V (UL approved), 35 mbar (CSA approved)
Comments: The minimum load for which the system can be used is 14-17% of the reference load, which equals a minimum pressure differential of 0.2 in. wc (50 Pa) of the 1:1 venturi/servo regulator gas control.
Coil Insulation Solenoid Valves: Class H insulation system
Current Ratings: V1 Current Rating – 0.16A; V2 Current Rating – 0.16A; V1 + V2 Current Rating – 0.32A

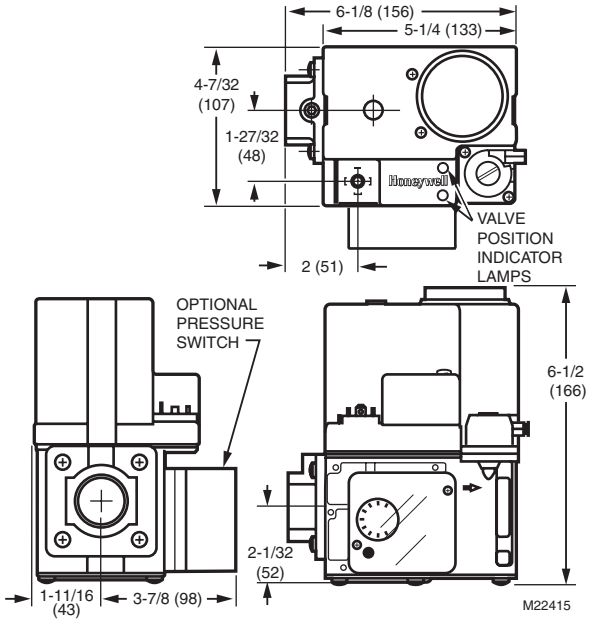
Material Number	Pipe Size (inch)	Capacity (kW)	Capacity (kBtuh)	Voltage	Electrical Connections	Pipe Connection	Includes	Max. Capacity with Strainer (cfh)
V4730C1006-0000	1/2 in.	Natural Gas 0.64 sp.gr – 22-150 KW	Natural Gas 0.64 sp.gr – 73-512 kBtuh	120 Vac (+10%, -15%)	Standard DIN plug connector with 36 in. (914 mm) leadwires, included.	1/8 in. (3mm) NPT pressure taps at inlet and outlet flanges. Six flange pressure taps connections are provided at the main body to mount either a pressure switch (low or high) or a Valve Proving System (VPS).	Mesh screen filter and 32006652-001 Flange kit. (Kit includes 1 pipe adapter, 1 O-ring, 4 mounting screws, 1 DIN connector and wiring harness kit.)	Nat. Gas (Delta P= 1 in. w.c.) – 221 cfh
V4730C1014-0000	3/4 in.	Natural Gas 0.64 sp.gr – 43-300 KW	Natural Gas 0.64 sp.gr – 146-1024 kBtuh	120 Vac (+10%, -15%)	Standard DIN plug connector with 36 in. (914 mm) leadwires, included.	1/8 in. (3mm) NPT pressure taps at inlet and outlet flanges. Six flange pressure taps connections are provided at the main body to mount either a pressure switch (low or high) or a Valve Proving System (VPS).	Mesh screen filter and 32006652-002 Flange kit. (Kit includes 1 pipe adapter, 1 O-ring, 4 mounting screws, 1 DIN connector and wiring harness kit.)	Nat. Gas (Delta P= 1 in. w.c.) – 1024 cfh
V4730C1022-0000	1 in.	Natural Gas 0.64 sp.gr – 43-300 KW	Natural Gas 0.64 sp.gr – 146-1024 kBtuh	120 Vac (+10%, -15%)	Standard DIN plug connector with 36 in. (914 mm) leadwires, included.	1/8 in. (3mm) NPT pressure taps at inlet and outlet flanges. Six flange pressure taps connections are provided at the main body to mount either a pressure switch (low or high) or a Valve Proving System (VPS).	Mesh screen filter and 32006652-003 Flange kit. (Kit includes 1 pipe adapter, 1 O-ring, 4 mounting screws, 1 DIN connector and wiring harness kit.)	Nat. Gas (Delta P= 1 in. w.c.) – 1024 cfh
V4730C1030-0000	1 1/4 in.	Natural Gas 0.64 sp.gr – 55-382 KW when used with VMU335, 71-500KW	Natural Gas 0.64 sp.gr – 185-1300 kBtuh when used with VMU335,245-1710 kBtuh	120 Vac (+10%, -15%)	Standard DIN plug connector with 36 in. (914 mm) leadwires, included.	1/8 in. (3mm) NPT pressure taps at inlet and outlet flanges. Six flange pressure taps connections are provided at the main body to mount either a pressure switch (low or high) or a Valve Proving System (VPS).	Mesh screen filter and 32006652-004 Flange kit. (Kit includes 1 pipe adapter, 1 O-ring, 4 mounting screws, 1 DIN connector and wiring harness kit.)	Nat. Gas (Delta P= 1 in. w.c.) – 1300 cfh

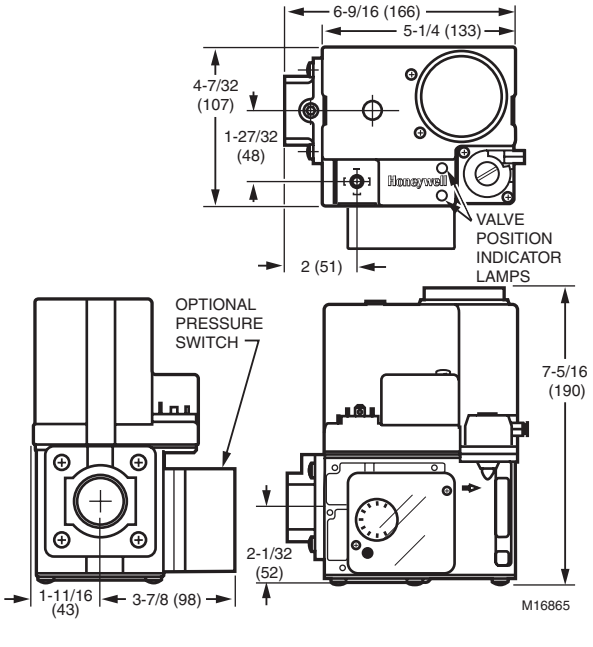
Servo Regulated Gas Valves

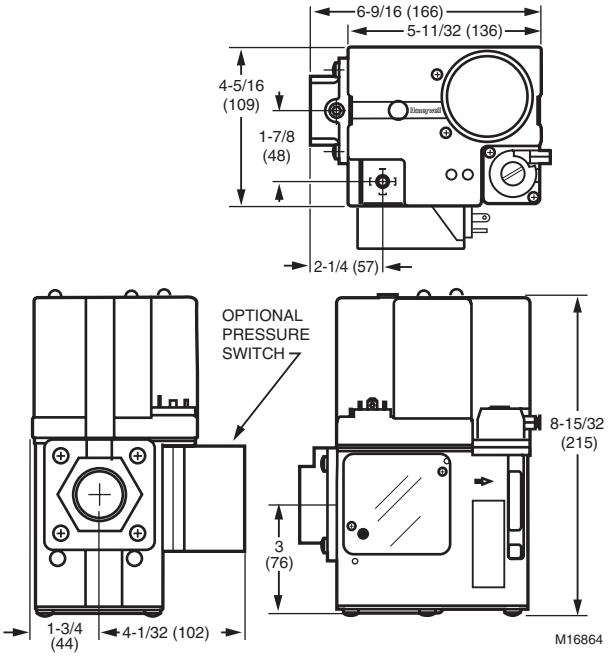
Material Number	Pipe Size (inch)	Capacity (kW)	Capacity (kBtuh)	Voltage	Electrical Connections	Pipe Connection	Includes	Max. Capacity with Strainer (cfh)
V4734C1002-0000	1 1/4 in.	Natural Gas 0.64 sp.gr – 97-680 KW when used with VMU680	Natural Gas 0.64 sp.gr – 326-2287 kBtuh when used with VMU680	120 Vac (+10%, -15%)			Mesh screen filter and 32006652-004 Flange kit. (Kit includes 1 pipe adapter, 1 O-ring, 4 mounting screws, 1 DIN connector and wiring harness kit.)	
V8730C1007-0000	1/2 in.	Natural Gas 0.64 sp.gr – 22-150 KW	Natural Gas 0.64 sp.gr – 73-512 kBtuh	24 Vac (+10%, -15%)	Standard DIN plug connector with 36 in. (914 mm) leadwires, included.	1/8 in. (3mm) NPT pressure taps at inlet and outlet flanges. Six flange pressure taps connections are provided at the main body to mount either a pressure switch (low or high) or a Valve Proving System (VPS).	Mesh screen filter and 32006652-001 Flange kit. (Kit includes 1 pipe adapter, 1 O-ring, 4 mounting screws, 1 DIN connector and wiring harness kit.)	Nat. Gas (Delta P= 1 in. w.c.) – 221 cfh
V8730C1015-0000	3/4 in.	Natural Gas 0.64 sp.gr – 43-300 KW	Natural Gas 0.64 sp.gr – 146-1024 kBtuh	24 Vac (+10%, -15%)	Standard DIN plug connector with 36 in. (914 mm) leadwires, included.	1/8 in. (3mm) NPT pressure taps at inlet and outlet flanges. Six flange pressure taps connections are provided at the main body to mount either a pressure switch (low or high) or a Valve Proving System (VPS).	Mesh screen filter and 32006652-002 Flange kit. (Kit includes 1 pipe adapter, 1 O-ring, 4 mounting screws, 1 DIN connector and wiring harness kit.)	Nat. Gas (Delta P= 1 in. w.c.) – 1024 cfh
V8730C1023-0000	1 in.	Natural Gas 0.64 sp.gr – 43-300 KW	Natural Gas 0.64 sp.gr – 146-1024 kBtuh	24 Vac (+10%, -15%)	Standard DIN plug connector with 36 in. (914 mm) leadwires, included.	1/8 in. (3mm) NPT pressure taps at inlet and outlet flanges. Six flange pressure taps connections are provided at the main body to mount either a pressure switch (low or high) or a Valve Proving System (VPS).	Mesh screen filter and 32006652-003 Flange kit. (Kit includes 1 pipe adapter, 1 O-ring, 4 mounting screws, 1 DIN connector and wiring harness kit.)	Nat. Gas (Delta P= 1 in. w.c.) – 1024 cfh
V8730C1031-0000	1 1/4 in.	Natural Gas 0.64 sp.gr – 55-382 KW when used with VMU335, 71-500 KW	Natural Gas 0.64 sp.gr – 185-1300 kBtuh when used with VMU335, 245-1710 kBtuh	24 Vac (+10%, -15%)	Standard DIN plug connector with 36 in. (914 mm) leadwires, included.	1/8 in. (3mm) NPT pressure taps at inlet and outlet flanges. Six flange pressure taps connections are provided at the main body to mount either a pressure switch (low or high) or a Valve Proving System (VPS).	Mesh screen filter and 32006652-004 Flange kit. (Kit includes 1 pipe adapter, 1 O-ring, 4 mounting screws, 1 DIN connector and wiring harness kit.)	Nat. Gas (Delta P= 1 in. w.c.) – 1300 cfh

Dimensions in inches (millimeters)









V4730C; V4734C; V8730C Accessories and Parts

Material Number	Description
50002653-001/U	Manual Shut-Off Valve Kit (1 in. NPT or smaller valves)

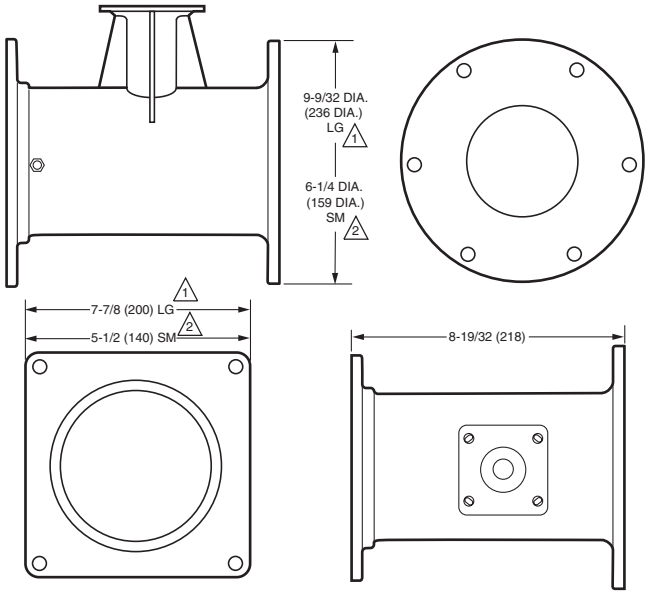
Venturi Mixing Unit

The venturi mixing unit (VMU), combined with the V4730C/ V8730C gas valves and specific direct current (dc) fan, has been developed for modulating premix appliances like gas burners and gas boilers.

- All adjustment and test points are accessible from one side.
- Has a wide modulation band (14 to 100% of the boiler load).
- Flexible mounting positions of gas control to venturi manifold and venturi manifold to fan.
- Two stainless steel sensing tubes are provided for use with or without manual safety shutoff valve.

Materials: Housing: Aluminum, Venturi: Statically dissipative statcon PF, Seals: Rubber (NBR).
Ambient Temperature Range: 32°F to 212°F (0°C to 100°C)
Approvals, Underwriters Laboratories Inc.: File No. MH18476
Approvals, CSA: File: Certificate No: 158158-1227192
Pipe Connection: Four M5 screws and a rubber O-ring are provided with the venturi to assemble it to the V4730C/V8730C gas valve. The stainless steel tube provided with the venturi has to be connected between the venturi inlet (connection provided) and the gas valve regulator. Longer sensing tube for use with manual safety shutoff valve (KTTBA002). Shorter sensing tube for use without manual safety shutoff valve (KTTBA001).
Current Ratings: V1 Current Rating – 0.16A; V2 Current Rating – 0.16A; V1 + V2 Current Rating – 0.32A

Dimensions in inches (millimeters)



1 LG (LARGE) IS VENTURI MIXING UNIT VMU500.

2 SM (SMALL) ARE VENTURI MIXING UNITS VMU150/300/335.

M22417D

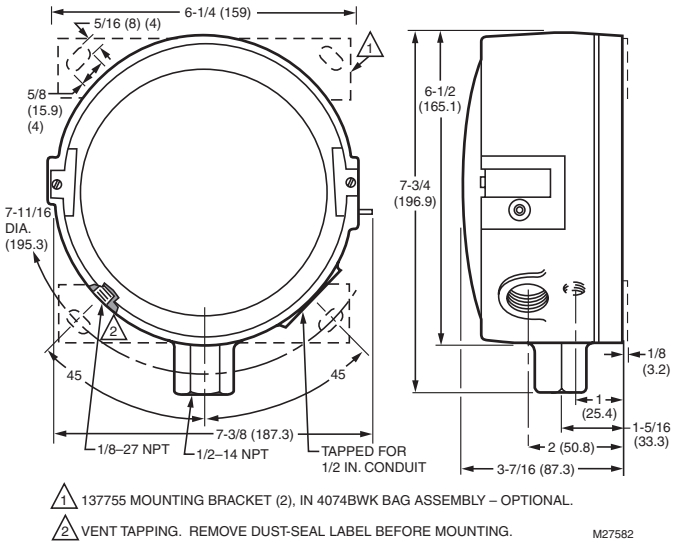
Material Number	Body Pattern	Maximum Safe Operating Pressure (psi)	Maximum Operating Pressure (mbar)	Comments	Reference Load
VMU150A1011	Straight flange	2.9 psi (UL approved), 1/2 psi (CSA approved)	200 mbar (UL approved), 35 mbar (CSA approved)	Pressure Drop: Approximately 3.2 in. wc (800 Pa) across the venturi at reference load. The minimum load for which the system can be used is 14-17% of the reference load, which equals a minimum pressure differential of 0.2 in. wc (50 Pa) of the 1:1 venturi/servo regulator gas control.	150 kW (512,000 Btuh)
VMU185A1084	Straight flange	1/2 psi (CSA approved; 2.9 psi (UL approved)	35 mbar (CSA approved), 200 mbar (UL approved)	Pressure Drop: Approximately 3.2 in. wc (800 Pa) across the venturi at reference load. The minimum load for which the system can be used is 14-17% of the reference load, which equals a minimum pressure differential of 0.2 in. wc (50 Pa) of the 1:1 venturi/servo regulator gas control.	185 kW (632,000 Btuh)
VMU300A1046	Straight flange	2.9 psi (UL approved), 1/2 psi (CSA approved)	200 mbar (UL approved), 35 mbar (CSA approved)	Pressure Drop: Approximately 3.2 in. wc (800 Pa) across the venturi at reference load. The minimum load for which the system can be used is 14-17% of the reference load, which equals a minimum pressure differential of 0.2 in. wc (50 Pa) of the 1:1 venturi/servo regulator gas control.	300 kW (1,024,000 Btuh)
VMU335A1018	Straight flange	2.9 psi (UL approved), 1/2 psi (CSA approved)	200 mbar (UL approved), 35 mbar (CSA approved)	Pressure Drop: Approximately 3.2 in. wc (800 Pa) across the venturi at reference load. The minimum load for which the system can be used is 14-17% of the reference load, which equals a minimum pressure differential of 0.2 in. wc (50 Pa) of the 1:1 venturi/servo regulator gas control.	335 kW (1,143,000 Btuh)
VMU500A1033	Straight flange	2.9 psi (UL approved), 1/2 psi (CSA approved)	200 mbar (UL approved), 35 mbar (CSA approved)	Pressure Drop: Approximately 3.2 in. wc (800 Pa) across the venturi at reference load. The minimum load for which the system can be used is 14-17% of the reference load, which equals a minimum pressure differential of 0.2 in. wc (50 Pa) of the 1:1 venturi/servo regulator gas control.	500 kW (1,706,500 Btuh)
VMU680A1017	Straight flange	2.9 psi (UL approved), 1/2 psi (CSA approved)	200 mbar (UL approved), 35 mbar (CSA approved)	Pressure Drop: Approximately 3.2 in. wc (800 Pa) across the venturi at reference load. The minimum load for which the system can be used is 14-17% of the reference load, which equals a minimum pressure differential of 0.2 in. wc (50 Pa) of the 1:1 venturi/servo regulator gas control.	680 kW (2,320,840 Btuh)

C437D, E 2000 Series Gas Pressure Switches

C437D, E Series 2000 Gas Pressure Switches are pressure-actuated devices used in industrial gas systems for safety shutoff. Series 2000 models have snap acting MicroSwitch™ snap switches to open a circuit on pressure rise or drop.

- C437 models have direct- and reverse-acting SPST (non-mercury) switching.
- Models intended for lockout applications must be manually reset before resuming operation.
- Models with pressure range of 1 to 26 in. wc (0.25 to 6.5 kPa) compensate for momentary surges in gas pressure with a restrictive orifice in inlet pressure channel.
- Impede tampering and provide dust-resistant operation with enclosed setting.
- Increase strength of control diaphragm with Buna N fiber-reinforced material.
- Two Buna-N fiber-reinforced seal-off diaphragms for added reliability.
- Clear glass cover allows observation of interior mechanism to aid in setting and checkout.

Dimensions in inches (millimeters)

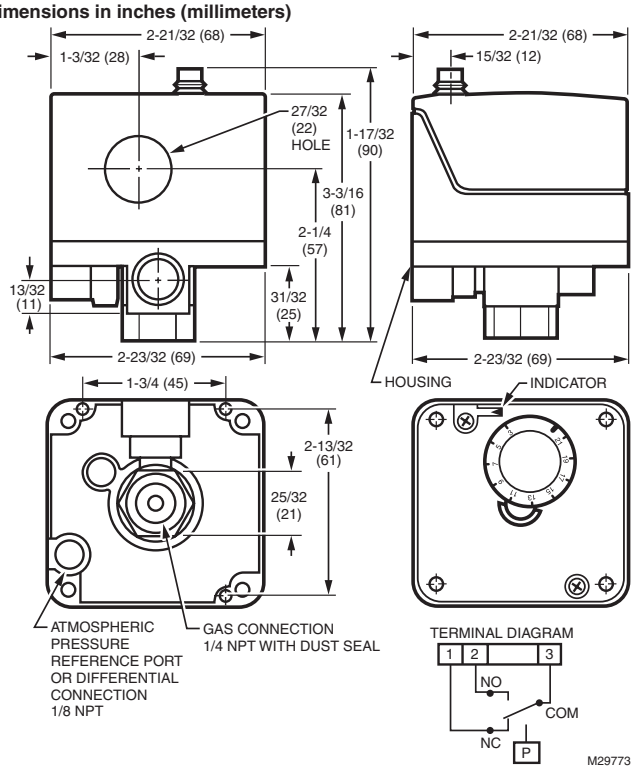


Application: Industrial gas system applications for safety shutoff, pressure control, or differential-pressure control.
Switch Operation: Manual Reset
Sensor Element: BUNA N Diaphragm
Materials: Case: Die-cast aluminum
Approximate, Dimensions: 7 3/4 in. high x 6 1/4 in. wide x 3 7/16 in. deep (197 mm high x 159 mm wide x 87 mm deep)
Operating Temperature Range: 32°F to 125°F (0°C to 52°C)
Temperature Ratings: 125°F - Maximum Ambient (52°C - Maximum Ambient)
Electrical Connections: Screw terminals
Contact Ratings: 120 Vac Switch Contact – 8.0 AFL, 48.0 ALR, 10.0 A resistive; 240 Vac Switch Contact – 5.1 AFL, 30.6 ALR, 5.0 A resistive
Pipe Connection: Main or High Pressure – 1/2 in. NPT internal thread; Vent or Low pressure – 1/8 in. NPT internal thread
Approvals, Underwriters Laboratories Inc.: Listed: File No. MP2168, Guide No. MFHX
Approvals, CSA: Certified: File No. LR1620, Guide No. 380-W-1.16
Approvals, Factory Mutual: Approved: Report No. 22018, 24127, J.I.IF4A3.AF
Approvals, Swiss RE: Acceptable

Material Number	Operating Range (psi)	Operating Range (kPa)	Differential Pressure Range (psi)	Differential Pressure Range (kPa)	Differential Type	Switching Action
C437D2003/U	1 to 26 in. wc; 5.0 psi - Maximum Sustained	0.5 to 7.0 kPa; 34.5 kPa - Maximum Sustained	1 3/4 in. wc	0.44 kPa	Subtractive	SPST, break on rise, non-mercury
C437D2011/U	1/2 to 5 psi; 15.0 psi - Maximum Sustained	3.0 to 35 kPa; 103.4 kPa - Maximum Sustained	1/2 psi	3.45 kPa	Subtractive	SPST, break on rise, non-mercury
C437D2029/U	1 to 10 psi; 30.0 psi - Maximum Sustained	5.0 to 70.0 kPa; 206.8 kPa - Maximum Sustained	1 psi	6.89 kPa	Subtractive	SPST, break on rise, non-mercury
C437E2002/U	1 to 26 in. wc; 5.0 psi - Maximum Sustained	0.5 to 7.0 kPa; 34.5 kPa - Maximum Sustained	1 3/4 in. wc	0.44 kPa	Additive	SPST, Break on Fall, non-mercury
C437E2010/U	1/2 to 5 psi; 15.0 psi - Maximum Sustained	3.0 to 35 kPa; 103.4 kPa - Maximum Sustained	1/2 psi	3.45 kPa	Additive	SPST, Break on Fall, non-mercury
C437E2028/U	1 to 10 psi; 30.0 psi - Maximum Sustained	5.0 to 70.0 kPa; 206.8 kPa - Maximum Sustained	1 psi	6.89 kPa	Additive	SPST, Break on Fall, non-mercury
C437E2036/U	0.5 to 5.5 in. wc; 3.0 psi - Maximum Sustained	0.1 to 1.4 kPa; 20.7 kPa - Maximum Sustained	0.25 in. wc	0.06 kPa	Additive	SPST, Break on Fall, non-mercury

C6097 Pressure Switch

Dimensions in inches (millimeters)



Pressure Switches are safety devices used in positive-pressure or differential-pressure systems to sense gas or air pressure systems.

- For use with natural gas, liquid propane (LP) gas, or air.
- Diaphragm-actuated safety-limit switch.
- Switch can be wired to turn on alarm.
- C6097A models break control circuit at setpoint on pressure fall.
- C6097B models break control circuit at setpoint on pressure rise.
- Lockout with manual reset and recycle options.
- Lockout models have external manual reset button.
- Removable transparent cover protects scaleplate and adjusting knob.
- Pipe tappings allow selection of positive pressure (air only) or venting connections (NPT mount only).
- 1/4 in. NPT or flange mount models for direct mounting to Honeywell Integrated Valve Train.
- Optional switch position indicator lamp available.
- IP54 enclosure standard.
- Ranges: 0.4 to 5 in. wc, 3 to 21 in. wc, 12 to 60 in. wc or 1.5 to 7 psi.
- Surge orifice.
- Integral vent limiter on all models.

Application: Safety devices used in positive-pressure or differential-pressure systems to sense gas or air pressure changes
Operating Temperature Range: -40°F to +140°F (-40°C to +60°C)
Electrical Connections: Screw terminals
Electrical Ratings: Ignition Transformer: 540 VA, Pilot Valve: 50 VA. Main Valve: 400 VA with 2-1/2 times inrush
Contact Ratings: 120 Vac Switch Contact – 3.0 AFL, 18.0 ALR, 5.0 A resistive; 240 Vac Switch Contact – 3.0 AFL, 18.0 ALR, 5.0 A resistive
Approvals, Underwriters Laboratories Inc.: Component Listed, MP 2168-8-1
Approvals, CSA: File # 95329 Certificate 2632-01
Approvals, Factory Mutual: JI 2D4A1.AF
Approvals, Swiss RE: Acceptable
Approvals, Others: CSD-1 AFB: Acceptable

Material Number	Operating Range (psi)	Operating Range (kPa)	Differential Pressure Range (psi)	Differential Pressure Range (kPa)	Differential Type	Switch Operation	Switching Action	Approximate, Dimensions	Pipe Connection	Mounting
C6097A1004/U	0.4 to 5 in. wc	0.10 to 1.25 kPa	0.16 in. wc Nominal; 0.24 in. wc Maximum	0.04 kPa Nominal; 0.06 kPa Maximum	Additive	Auto recycle	Break on pressure fall	3 3/16 in. high x 2 23/32 in. wide x 2 23/32 in. deep (81 mm high x 69 mm wide x 69 mm deep)	Vent or Low pressure – 1/8 in. NPT internal thread	1/4 in. NPT internal thread
C6097A1012/U	3 to 21 in. wc	0.7 to 5.2 kPa	max. 2.4 in. wc @ min. setpoint; max. 4.2 in. wc @ max. setpoint	max. 0.60 kPa @ min. setpoint; max. 1.05 kPa @ max. setpoint	Additive	Manual Reset	Break on pressure fall	3 17/32 in. high x 2 23/32 in. wide x 2 23/32 in. deep (90 mm high x 69 mm wide x 69 mm deep)	Vent or Low pressure – 1/8 in. NPT internal thread	1/4 in. NPT internal thread
C6097A1020/U	3 to 21 in. wc	0.7 to 5.2 kPa	max. 2.4 in. wc @ min. setpoint; max. 4.2 in. wc @ max. setpoint	max. 0.60 kPa @ min. setpoint; max. 1.05 kPa @ max. setpoint	Additive	Manual Reset	Break on pressure fall	2 19/32 in. high x 2 23/32 in. wide x 2 23/32 in. deep (66 mm high x 69 mm wide x 69 mm deep)		Flange Mount
C6097A1038/U	12 to 60 in. wc	3.0 to 15 kPa	max. 10 in. wc @ min. setpoint; max. 12 in. wc @ max. setpoint	max. 2.5 kPa @ min. setpoint; max. 3.0 kPa @ max. setpoint	Additive	Manual Reset	Break on pressure fall	3 17/32 in. high x 2 23/32 in. wide x 2 23/32 in. deep (90 mm high x 69 mm wide x 69 mm deep)	Vent or Low pressure – 1/8 in. NPT internal thread	1/4 in. NPT internal thread

Material Number	Operating Range (psi)	Operating Range (kPa)	Differential Pressure Range (psi)	Differential Pressure Range (kPa)	Differential Type	Switch Operation	Switching Action	Approximate, Dimensions	Pipe Connection	Mounting
C6097A1046/U	12 to 60 in. wc	3.0 to 15 kPa	max. 10 in. wc @ min. setpoint; max. 12 in. wc @ max. setpoint	max. 2.5 kPa @ min. setpoint; max. 3.0 kPa @ max. setpoint:	Additive	Manual Reset	Break on pressure fall	2 19/32 in. high x 2 23/32 in. wide x 2 23/32 in. deep (66 mm high x 69 mm wide x 69 mm deep)		Flange Mount
C6097A1053/U	3 to 21 in. wc	0.7 to 5.2 kPa	0.24 in. wc Nominal; 0.48 in. wc Maximum	0.06 kPa Nominal; 0.12 kPa Maximum	Additive	Auto recycle	Break on pressure fall	3 3/16 in. high x 2 23/32 in. wide x 2 23/32 in. deep (81 mm high x 69 mm wide x 69 mm deep)	Vent or Low pressure – 1/8 in. NPT internal thread	1/4 in. NPT internal thread
C6097A1061/U	3 to 21 in. wc	0.7 to 5.2 kPa	0.24 in. wc Nominal; 0.48 in. wc Maximum	0.06 kPa Nominal; 0.12 kPa Maximum	Additive	Auto recycle	Break on pressure fall	2 1/4 in. high x 2 23/32 in. wide x 2 23/32 in. deep (57 mm high x 69 mm wide x 69 mm deep)		Flange Mount
C6097A1079/U	12 to 60 in. wc	3.0 to 15 kPa	1.1 in. wc Nominal; 2.4 in. wc Maximum	0.27 kPa Nominal; 0.60 kPa Maximum	Additive	Auto recycle	Break on pressure fall	3 3/16 in. high x 2 23/32 in. wide x 2 23/32 in. deep (81 mm high x 69 mm wide x 69 mm deep)	Vent or Low pressure – 1/8 in. NPT internal thread	1/4 in. NPT internal thread
C6097A1087/U	12 to 60 in. wc	3.0 to 15 kPa	1.1 in. wc Nominal; 2.4 in. wc Maximum	0.27 kPa Nominal; 0.60 kPa Maximum	Additive	Auto recycle	Break on pressure fall	2 1/4 in. high x 2 23/32 in. wide x 2 23/32 in. deep (57 mm high x 69 mm wide x 69 mm deep)		Flange Mount
C6097A1095/U	0.4 to 5 in. wc	0.10 to 1.25 kPa	max. 0.6 in. wc @ min. setpoint; max. 0.25 in. wc @ max. setpoint	max. 0.15 kPa @ min. setpoint; max. 0.25 kPa @ max. setpoint	Additive	Manual Reset	Break on pressure fall	3 17/32 in. high x 2 23/32 in. wide x 2 23/32 in. deep (90 mm high x 69 mm wide x 69 mm deep)	Vent or Low pressure – 1/8 in. NPT internal thread	1/4 in. NPT internal thread
C6097A1103/U	1.5 to 7 psi	10.3 to 48 kPa	max. 1.1 psi @ min. setpoint; max. 1.4 psi @ max. setpoint	max. 7.6 kPa @ min. setpoint; max. 9.6 kPa @ max. setpoint	Additive	Manual Reset	Break on pressure fall	2 19/32 in. high x 2 23/32 in. wide x 2 23/32 in. deep (66 mm high x 69 mm wide x 69 mm deep)		Flange Mount
C6097A1111/U	1.5 to 7 psi	10.3 to 48 kPa	max. 1.1 psi @ min. setpoint; max. 1.4 psi @ max. setpoint	max. 7.6 kPa @ min. setpoint; max. 9.6 kPa @ max. setpoint	Additive	Manual Reset	Break on pressure fall	3 17/32 in. high x 2 23/32 in. wide x 2 23/32 in. deep (90 mm high x 69 mm wide x 69 mm deep)	Vent or Low pressure – 1/8 in. NPT internal thread	1/4 in. NPT internal thread
C6097A1129/U	1.5 to 7 psi	10.3 to 48 kPa	0.1 psi Nominal; 0.3 psi Maximum	0.69 kPa Nominal; 2.07 kPa Maximum	Additive	Auto recycle	Break on pressure fall	2 1/4 in. high x 2 23/32 in. wide x 2 23/32 in. deep (57 mm high x 69 mm wide x 69 mm deep)		Flange Mount
C6097A1137/U	1.5 to 7 psi	10.3 to 48 kPa	0.1 psi Nominal; 0.3 psi Maximum	0.69 kPa Nominal; 2.07 kPa Maximum	Additive	Auto recycle	Break on pressure fall	3 3/16 in. high x 2 23/32 in. wide x 2 23/32 in. deep (81 mm high x 69 mm wide x 69 mm deep)	Vent or Low pressure – 1/8 in. NPT internal thread	1/4 in. NPT internal thread
C6097A1210/U	0.4 to 5 in. wc	0.10 to 1.25 kPa	0.16 in. wc Nominal; 0.24 in. wc Maximum	0.04 kPa Nominal; 0.06 kPa Maximum	Additive	Auto recycle	Break on pressure fall	2 1/4 in. high x 2 23/32 in. wide x 2 23/32 in. deep (57 mm high x 69 mm wide x 69 mm deep)		Flange Mount
C6097A1228/U	0.4 to 5 in. wc	0.10 to 1.25 kPa	max. 0.6 in. wc @ min. setpoint; max. 0.25 in. wc @ max. setpoint	max. 0.15 kPa @ min. setpoint; max. 0.25 kPa @ max. setpoint	Additive	Manual Reset	Break on pressure fall	3 17/32 in. high x 2 23/32 in. wide x 2 23/32 in. deep (90 mm high x 69 mm wide x 69 mm deep)	Vent or Low pressure – 1/8 in. NPT internal thread	Flange Mount

Pressure Switches

Material Number	Operating Range (psi)	Operating Range (kPa)	Differential Pressure Range (psi)	Differential Pressure Range (kPa)	Differential Type	Switch Operation	Switching Action	Approximate, Dimensions	Pipe Connection	Mounting
C6097B1002/U	12 to 60 in. wc	3.0 to 15 kPa	max. 10 in. wc @ min. setpoint; max. 12 in. wc @ max. setpoint	max. 2.5 kPa @ min. setpoint; max. 3.0 kPa @ max. setpoint	Subtractive	Manual Reset	Break on pressure rise	3 17/32 in. high x 2 23/32 in. wide x 2 23/32 in. deep (90 mm high x 69 mm wide x 69 mm deep)	Vent or Low pressure – 1/8 in. NPT internal thread	1/4 in. NPT internal thread
C6097B1010/U	12 to 60 in. wc	3.0 to 15 kPa	max. 10 in. wc @ min. setpoint; max. 12 in. wc @ max. setpoint	max. 2.5 kPa @ min. setpoint; max. 3.0 kPa @ max. setpoint	Subtractive	Manual Reset	Break on pressure rise	2 19/32 in. high x 2 23/32 in. wide x 2 23/32 in. deep (66 mm high x 69 mm wide x 69 mm deep)		Flange Mount
C6097B1028/U	3 to 21 in. wc	0.7 to 5.2 kPa	max. 2.4 in. wc @ min. setpoint; max. 4.2 in. wc @ max. setpoint	max. 0.60 kPa @ min. setpoint; max. 1.05 kPa @ max. setpoint	Subtractive	Manual Reset	Break on pressure rise	3 17/32 in. high x 2 23/32 in. wide x 2 23/32 in. deep (90 mm high x 69 mm wide x 69 mm deep)	Vent or Low pressure – 1/8 in. NPT internal thread	1/4 in. NPT internal thread
C6097B1036/U	3 to 21 in. wc	0.7 to 5.2 kPa	max. 2.4 in. wc @ min. setpoint; max. 4.2 in. wc @ max. setpoint	max. 0.60 kPa @ min. setpoint; max. 1.05 kPa @ max. setpoint	Subtractive	Manual Reset	Break on pressure rise	2 19/32 in. high x 2 23/32 in. wide x 2 23/32 in. deep (66 mm high x 69 mm wide x 69 mm deep)		Flange Mount
C6097B1044/U	1.5 to 7 psi	10.3 to 48 kPa	max. 1.1 in. wc @ min. setpoint; max. 1.4 in. wc @ max. setpoint	max. 7.6 kPa @ min. setpoint; max. 9.6 kPa @ max. setpoint	Subtractive	Manual Reset	Break on pressure rise	2 19/32 in. high x 2 23/32 in. wide x 2 23/32 in. deep (66 mm high x 69 mm wide x 69 mm deep)		Flange Mount
C6097B1051/U	1.5 to 7 psi	10.3 to 48 kPa	max. 1.1 in. wc @ min. setpoint; max. 1.4 in. wc @ max. setpoint	max. 7.6 kPa @ min. setpoint; max. 9.6 kPa @ max. setpoint	Subtractive	Manual Reset	Break on pressure rise	3 3/16 in. high x 2 23/32 in. wide x 2 23/32 in. deep (81 mm high x 69 mm wide x 69 mm deep)	Vent or Low pressure – 1/8 in. NPT internal thread	1/4 in. NPT internal thread
C6097B1069/U	3 to 21 in. wc	0.7 to 5.2 kPa	0.24 in. wc Nominal; 0.48 in. wc Maximum	0.06 kPa Nominal; 0.12 kPa Maximum	Subtractive	Auto recycle	Break on pressure rise	2 1/4 in. high x 2 23/32 in. wide x 2 23/32 in. deep (57 mm high x 69 mm wide x 69 mm deep)		Flange Mount
C6097B1077/U	12 to 60 in. wc	3.0 to 15 kPa	1.1 in. wc Nominal; 2.4 in. wc Maximum	0.27 kPa Nominal; 0.60 kPa Maximum	Subtractive	Auto recycle	Break on pressure rise	2 1/4 in. high x 2 23/32 in. wide x 2 23/32 in. deep (57 mm high x 69 mm wide x 69 mm deep)		Flange Mount
C6097B1085/U	12 to 60 in. wc	3.0 to 15 kPa	1.1 in. wc Nominal; 2.4 in. wc Maximum	0.27 kPa Nominal; 0.60 kPa Maximum	Subtractive	Auto recycle	Break on pressure rise	3 3/16 in. high x 2 23/32 in. wide x 2 23/32 in. deep (81 mm high x 69 mm wide x 69 mm deep)	Vent or Low pressure – 1/8 in. NPT internal thread	1/4 in. NPT internal thread
C6097B1093/U	1.5 to 7 psi	10.3 to 48 kPa	0.1 psi Nominal; 0.3 psi Maximum	0.69 kPa Nominal; 2.07 kPa Maximum	Subtractive	Auto recycle	Break on pressure rise	2 1/4 in. high x 2 23/32 in. wide x 2 23/32 in. deep (57 mm high x 69 mm wide x 69 mm deep)		Flange Mount
C6097B1101/U	1.5 to 7 psi	10.3 to 48 kPa	0.1 psi Nominal; 0.3 psi Maximum	0.69 kPa Nominal; 2.07 kPa Maximum	Subtractive	Auto recycle	Break on pressure rise	3 3/16 in. high x 2 23/32 in. wide x 2 23/32 in. deep (81 mm high x 69 mm wide x 69 mm deep)	Vent or Low pressure – 1/8 in. NPT internal thread	1/4 in. NPT internal thread
C6097B1119/U	3 to 21 in. wc	0.7 to 5.2 kPa	0.24 in. wc Nominal; 0.48 in. wc Maximum	0.06 kPa Nominal; 0.12 kPa Maximum	Subtractive	Auto recycle	Break on pressure rise	3 3/16 in. high x 2 23/32 in. wide x 2 23/32 in. deep (81 mm high x 69 mm wide x 69 mm deep)	Vent or Low pressure – 1/8 in. NPT internal thread	1/4 in. NPT internal thread

L404F Pressuretrol® Controllers

Provide operating control with automatic limit protection for pressure systems up to 300 psi (2068 kPa).

- Use with steam, air, noncombustible gases, or fluids non-corrosive to pressure sensing element.
- Models have snap-acting switching to open or close a circuit on pressure rise.
- Have adjustable differentials.
- Adjustments are made by screws on top of case.
- Mount using 1/4 inch -18 NPT internal pipe threads or surface mount through base of case.
- Ground screw terminal.

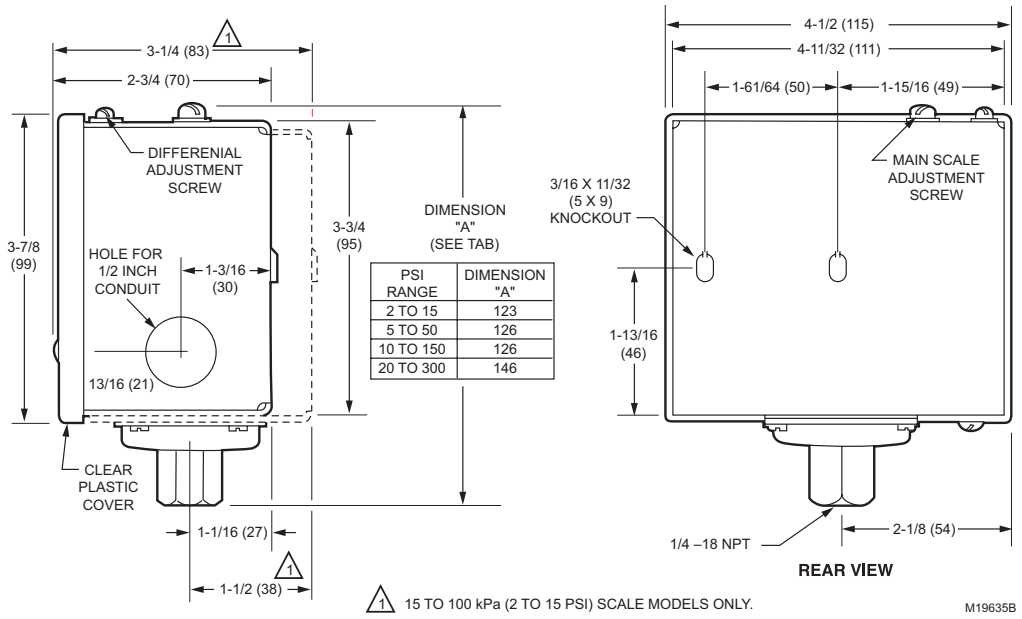
Application: Provide control of steam, air, non-combustible gases or non-corrosive fluids
Differential Type: Subtractive
Mounting: 1/4 inch-18 NPT internal thread connection on diaphragm assembly, 1/4 -19 BSPT internal thread on models with BSPT ground screw; or surface mount through back of case
Switch Operation: Auto recycle
Sensor Element: Stainless steel diaphragm standard; Brass Bellows on models with 20 to 300 psi
Operating Temperature Range: -35°F to +150°F (-37°C to +66°C)
Electrical Connections: Screw terminals

Contact Ratings: 120 Vac Switch Contact – 8.0 AFL, 48.0 ALR, 10.0 A resistive; 240 Vac Switch Contact – 5.1 AFL, 30.6 ALR, 5.0 A resistive
Pipe Connection - Main or High Pressure: 1/4 inch-18 NPT internal thread standard; 1/4 -19 BSPT internal thread on models with BSPT ground screw
Approvals, Underwriters Laboratories Inc.: Listed: File No. MP466, Guide No. MBPR
Approvals, CSA: Certified: File No. LR1620, Guide No. 400-E-O; or Certified: File No. LR95329 for Miss-wiring Compliant models
Approvals, Swiss RE: Acceptable

Material Number	Operating Range (psi)	Operating Range (kPa)	Maximum Sustained Pressure (psi)	Maximum Sustained Pressure (kPa)	Differential Pressure Range (psi)	Differential Pressure Range (kPa)	Switching Action	Includes	Comments
L404F1060/U	2 to 15 psi	14 to 103 kPa	25 psi	172 kPa	2 to 6 psi	14 to 41 kPa	SPDT snap action, make R-W, break R-B on pressure rise		
L404F1078/U	5 to 50 psi	35 to 345 kPa	85 psi	586 kPa	6 to 14 psi	41 to 97 kPa	SPDT snap action, make R-W, break R-B on pressure rise		
L404F1094/U	20 to 300 psi	138 to 2068 kPa	350 psi	2413 kPa	20 to 50 psi	138 to 345 kPa	SPDT snap action, make R-W, break R-B on pressure rise		
L404F1102/U	10 to 150 psi	69 to 1034 kPa	225 psi	1151 kPa	10 to 22 psi	60 to 152 kPa	SPDT snap action, make R-W, break R-B on pressure rise		
L404F1219/U	2 to 15 psi	14 to 103 kPa	25 psi	172 kPa	2 to 6 psi	14 to 41 kPa	SPDT snap action, make R-W, break R-B on pressure rise	BSPT ground screw and European Enclosure	
L404F1227/U	10 to 150 psi	69 to 1034 kPa	225 psi	1151 kPa	10 to 22 psi	60 to 152 kPa	SPDT snap action, make R-W, break R-B on pressure rise	BSPT ground screw and European Enclosure	
L404F1235/U	20 to 300 psi	138 to 2068 kPa	350 psi	2413 kPa	20 to 50 psi	138 to 345 kPa	SPDT snap action, make R-W, break R-B on pressure rise	BSPT ground screw and European Enclosure	
L404F1243/U	5 to 50 psi	35 to 345 kPa	85 psi	586 kPa	6 to 14 psi	41 to 97 kPa	SPDT snap action, make R-W, break R-B on pressure rise	BSPT ground screw and European Enclosure	
L404F1367/U	1 to 8 psi	7 to 55 kPa	25 psi	172 kPa	0.75 to 2 psi	5 to 14 kPa	Snap switch breaks R-B (closes R-W) on pressure rise. Make-on devices omit terminal B.		Range Stop installed at 8 PSI
L404F1375/U	5 to 50 psi	35 to 350 kPa	85 psi	586 kPa	6 to 14 psi	40 to 100 kPa	Snap switch makes R-W on pressure rise	Miss-wiring Compliant (less B terminal)	
L404F1383/U	10 to 150 psi	70 to 1035 kPa	225 psi	1151 kPa	10 to 22 psi	70 to 150 kPa	Snap switch makes R-W on pressure rise	Miss-wiring Compliant (less B terminal)	
L404F1391/U	20 to 300 psi	140 to 2070 kPa	350 psi	2413 kPa	20 to 50 psi	140 to 345 kPa	Snap switch makes R-W on pressure rise	Miss-wiring Compliant (less B terminal)	
L404F1409/U	2 to 15 psi	14 to 103 kPa	25 psi	172 kPa	2 to 6 psi	15 to 40 kPa	Snap switch makes R-W on pressure rise	Miss-wiring Compliant (less B terminal)	

Pressure and Limit Controllers

Dimensions in inches (millimeters)



PSI RANGE	DIMENSION "A"
2 TO 15	123
5 TO 50	126
10 TO 150	126
20 TO 300	146

L404T, V Oil Pressuretrol® Limit Controllers

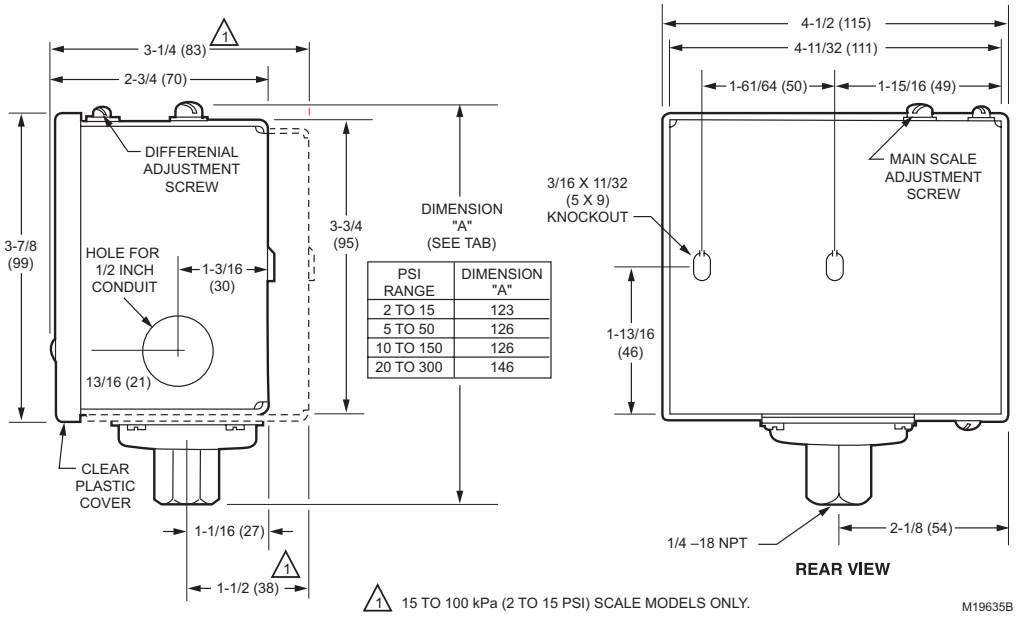
Oil pressure sensing devices for use on oil burner systems using any type of fuel oil, including heavy pretreated oils.

- Clear plastic cover allows observation of the pressure settings.
- Models have snap-acting switching to open or close a circuit on pressure rise.
- L404T High pressure limit, break a circuit on oil pressure rise above setpoint.
- L404V Low Pressure limit, makes a circuit on oil pressure rise above setpoint.
- Adjustments are made by screws on top of case.
- Mount using 1/4 inch -18 NPT internal pipe threads or surface mount through base of case.
- Ground screw terminal.

Application: Oil pressure limit switch for fuel oil, including heavy oil applications
Differential Type: Subtractive
Mounting: 1/4 in. NPT internal thread or surface mount through back of case
Switch Operation: Auto recycle
Sensor Element: Stainless Steel diaphragm
Approximate, Dimensions: 4 31/32 in. high x 4 1/2 in. wide x 2 3/4 in. deep (126 mm high x 114 mm wide x 70 mm deep)

Operating Temperature Range: -35°F to +150°F (-37°C to +66°C)
Electrical Connections: Screw terminals
Contact Ratings: 120 Vac Switch Contact – 8.0 AFL, 48.0 ALR, 10.0 A resistive; 240 Vac Switch Contact – 5.1 AFL, 30.6 ALR, 5.0 A resistive;
Pipe Connection: Main or High Pressure – 1/4 in. NPT internal thread
Approvals, Underwriters Laboratories Inc.: Listed: File No. MP2168, Guide No. MFHX
Approvals, CSA: Certified: File No. LR95329

Dimensions in inches (millimeters)



PSI RANGE	DIMENSION "A"
2 TO 15	123
5 TO 50	126
10 TO 150	126
20 TO 300	146

1 15 TO 100 kPa (2 TO 15 PSI) SCALE MODELS ONLY.

M19635B

Material Number	Operating Range (psi)	Operating Range (kPa)	Differential Pressure Range (psi)	Differential Pressure Range (kPa)	Switching Action	Includes
L404T1055/U	5 to 50 psi; 85 psi - Maximum Sustained	35 to 350 kPa; 586 kPa - Maximum Sustained	6 to 14 psi	40 to 100 kPa	SPST snap-acting break on pressure rise	
L404T1063/U	10 to 150 psi; 225 psi - Maximum Sustained	70 to 1035 kPa; 1151 kPa - Maximum Sustained	10 to 22 psi	70 to 150 kPa	SPST snap-acting break on pressure rise	
L404V1087/U	10 to 150 psi; 225 psi - Maximum Sustained	70 to 1035 kPa; 1151 kPa - Maximum Sustained	10 to 22 psi	70 to 150 kPa	Snap switch makes R-W on pressure rise	Miss-wiring Compliant (less B terminal)
L404V1095/U	5 to 50 psi; 85 psi - Maximum Sustained	35 to 350 kPa; 586 kPa - Maximum Sustained	6 to 14 psi	40 to 100 kPa	Snap switch makes R-W on pressure rise	Miss-wiring Compliant (less B terminal)

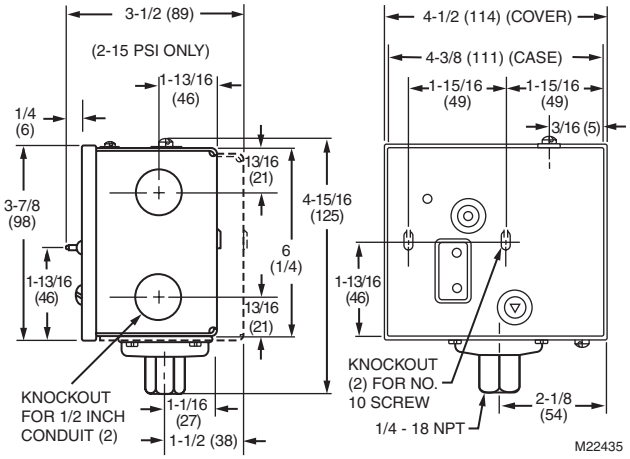
L4079 Pressuretrol® Limit Controllers

High pressure limit switches.

- Stainless steel diaphragm for use with steam, air, noncombustible gases and fluids non-corrosive to stainless steel.
- L4079W is for Oil Applications.
- Micro Switch™ snap-acting switches open automatically on pressure rise; must be manually reset.
- Mount using 1/4 in. NPT female fitting on diaphragm assembly or surface mount through back of case.

Mounting: 1/4 in. NPT internal thread or surface mount through back of case
Sensor Element: Stainless Steel diaphragm
Approximate, Dimensions: 5 in. high x 4 1/2 in. wide x 3 1/2 in. deep. (127 mm high x 114 mm wide x 89 mm deep.)
Temperature Ratings: 150°F - Maximum Ambient (66°C - Maximum Ambient)
Electrical Connections: Screw terminals
Contact Ratings: 120 Vac Switch Contact – 9.8 AFL, 58.8 ALR; 240 Vac Switch Contact – 4.9 AFL, 29.4 ALR
Pipe Connection: Main or High Pressure – 1/4 in. NPT internal thread
Approvals, Underwriters Laboratories Inc.: Listed: File No. MP466, Guide No. MBPR
Approvals, Swiss RE: Acceptable

Dimensions in inches (millimeters)



Material Number	Application	Operating Range (psi)	Operating Range (kPa)	Switch Operation	Switching Action
L4079A1035/U	Provide limit control of steam, air, non-combustible gases or non-corrosive fluids	2 to 15 psi; 25 psi - Maximum Sustained	14 to 103 kPa; 172 kPa - Maximum Sustained	Manual Reset	SPST (two) break simultaneously on pressure rise
L4079A1050/U	Provide limit control of steam, air, non-combustible gases or non-corrosive fluids	10 to 150 psi; 225 psi - Maximum Sustained	69 to 1034 kPa; 1151 kPa - Maximum Sustained	Manual Reset	SPST (two) break simultaneously on pressure rise
L4079B1033/U	Provide limit control of steam, air, non-combustible gases or non-corrosive fluids	2 to 15 psi; 25 psi - Maximum Sustained	14 to 103 kPa; 172 kPa - Maximum Sustained	Manual Reset	SPST break on pressure rise
L4079B1041/U	Provide limit control of steam, air, non-combustible gases or non-corrosive fluids	10 to 150 psi; 225 psi - Maximum Sustained	70 to 1035 kPa; 1151 kPa - Maximum Sustained	Manual Reset	SPST break on pressure rise
L4079B1058/U	Provide limit control of steam, air, non-combustible gases or non-corrosive fluids	5 to 50 psi; 85 psi - Maximum Sustained	35 to 350 kPa; 586 kPa - Maximum Sustained	Manual Reset	SPST break on pressure rise
L4079B1066/U	Provide limit control of steam, air, non-combustible gases or non-corrosive fluids	20 to 300 psi; 350 psi - Maximum Sustained	140 to 2070 kPa; 2413 kPa - Maximum Sustained	Manual Reset	SPST break on pressure rise
L4079W1000/U	High oil pressure limit switch for heavy oil applications.	10 to 150 psi; 225 psi - Maximum Sustained	35 to 350 kPa; 1151 kPa - Maximum Sustained	Manual Reset	SPST break on pressure rise - Oil Applications

L408J Vaporstat® Controllers

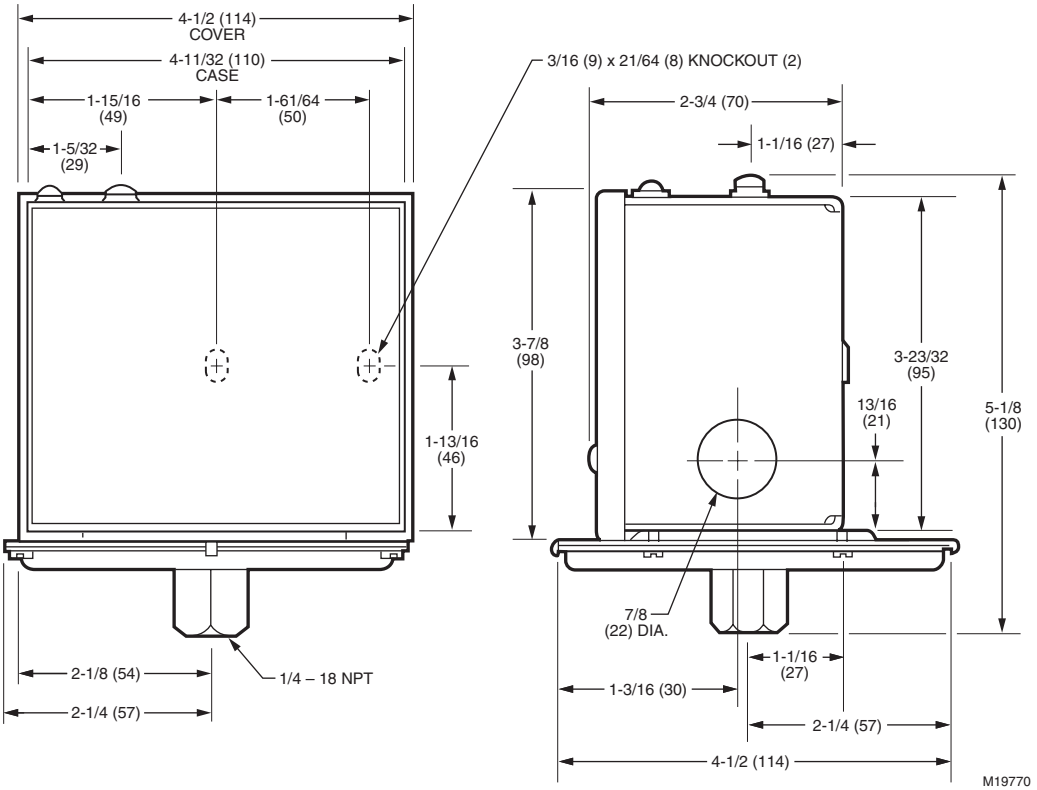
Provide operating control and automatic high limit protection for vapor heating systems with pressures up to 4 psi (8 kPa). All models have Microswitch snap switches to open or close a circuit on a pressure rise.

- Stainless steel diaphragm for use with liquids, air, noncombustible gases, ammonia, oxygen, distilled water and similar media.
- Provide SPDT switching.
- Clear plastic cover allows observation of the pressure settings.
- Mount using hexagonal fitting with 1/4 in. NPT internal threads for direct mounting to the 14026 (steel) or 50024585-001 (brass) Steam Trap (siphon loop).
- Ground Screw terminal.

Application: Provide operating control and automatic limit protection for pressure systems with pressures up to 4 psi (8 kPa)
Differential Type: Subtractive
Mounting: 1/4 in. NPT internal thread or surface mount through back of case
Sensor Element: Stainless Steel diaphragm
Approximate, Dimensions: 5 1/8 in. high x 4 1/2 in. wide x 4 1/2 in. deep. (130 mm high x 114 mm wide x 114 mm deep.)
Operating Temperature Range: -35°F to +150°F (-37°C to +66°C)

Electrical Connections: Screw terminals
Contact Ratings: 120 Vac Switch Contact – 8.0 AFL, 48.0 ALR, 10.0 A resistive; 240 Vac Switch Contact – 5.1 AFL, 30.6 ALR, 5.0 A resistive
Pipe Connection: Main or High Pressure – 1/4 in. NPT internal thread
Approvals, Underwriters Laboratories Inc.: Listed: File No. MP466, Guide No. MBPR
Approvals, CSA: Certified: File No. LR1620, Guide No. 400-E-O
Approvals, Swiss RE: Acceptable

Dimensions in inches (millimeters)



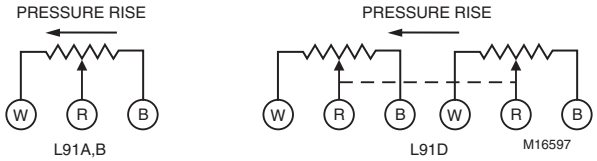
Material Number	Operating Range (psi)	Operating Range (kPa)	Differential Pressure Range (psi)	Differential Pressure Range (kPa)	Switch Operation	Switching Action	Comments
L408J1009/U	0 to 16 oz/in2	0 to 6.9 kPa	2 to 16 oz/in2	0.9 to 6.9 kPa	Auto recycle	SPDT make R-W, break R-B on pressure rise	
L408J1017/U	0 to 4 psi	0 to 28 kPa	2 to 16 oz/in2	0.9 to 6.9 kPa	Auto recycle	SPDT make R-W, break R-B on pressure rise	
L408J1025/U	0 to 16 oz/in2	0 to 6.9 kPa	2 to 16 oz/in2	0.9 to 6.9 kPa	Auto recycle	SPST make on pressure rise Only	Miss-wiring Compliant
L408J1033/U	0 to 4 psi	0 to 28 kPa	2 to 16 oz/in2	0.9 to 6.9 kPa	Auto recycle	SPST make on pressure rise Only	Miss-wiring Compliant

L91 Proportional Pressuretrol® Controllers

Modulating pressure operating control for regulation of liquid or air and other non-corrosive gases.

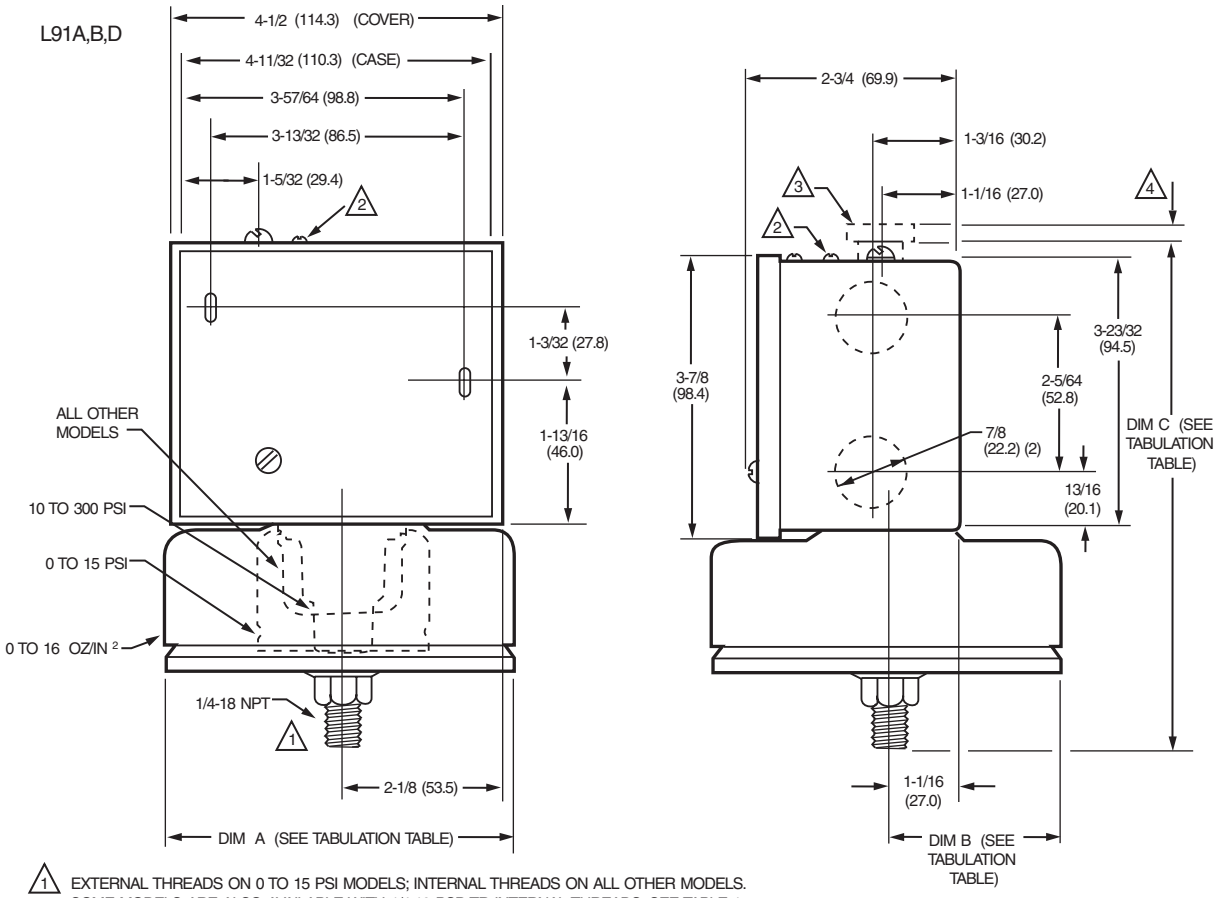
- Use with steam, air, noncombustible gases, or other fluids non-corrosive to the brass or phos-bronze (300 psi models) bellows.
- Do NOT use with combustible mediums or any medium chemically harmful to phos-bronze bellows (10-300 psi models) or brass bellows (all other pressure range models).

Application: Modulating pressure control for regulation of liquid, air, or other non-corrosive gases.
Switch Operation: Modulating
Operating Temperature Range: 32°F to 150°F (0°C to 66°C)
Electrical Connections: Screw terminals
Pipe Connection: Main or High Pressure – 1/4 in. NPT external thread



Material Number	Operating Range (psi)	Operating Range (kPa)	Differential Pressure Range (psi)	Differential Pressure Range (kPa)	Mounting	Sensor Element	Approximate, Dimensions	Modulation Output
L91A1037/U	0 to 15 psi; 25 psi - Maximum Sustained	0 to 103 kPa; 172 kPa - Maximum Sustained	0.5 psi	3.4 kPa	optional surface mount through back of case	Brass bellows	6 7/8 in. high x 4 1/2 in. wide x 2 7/8 in. deep (175 mm high x 114 mm wide x 73 mm deep)	Single potentiometer, 140 ohms
L91A1052/U	5 to 150 psi; 225 psi - Maximum Sustained	34 to 1034 kPa; 1151 kPa - Maximum Sustained	5 psi	34 kPa	optional surface mount through back of case	Brass bellows	5 3/4 in. high x 4 1/2 in. wide x 2 3/4 in. deep (146 mm high x 114 mm wide x 70 mm deep)	Single potentiometer, 140 ohms
L91A1078/U	10 to 300 psi; 325 psi - Maximum Sustained	69 to 2068 kPa; 2241 kPa - Maximum Sustained	12 psi	83 kPa	optional surface mount through back of case	Phos-bronze bellows	6 1/16 in. high x 4 1/2 in. wide x 2 3/4 in. deep (154 mm high x 114 mm wide x 70 mm deep)	Single potentiometer, 140 ohms
L91A1136/U	10 to 300 psi; 325 psi - Maximum Sustained	69 to 2068 kPa; 2241 kPa - Maximum Sustained	12 psi	83 kPa	optional surface mount through back of case	Phos-bronze bellows	6 1/16 in. high x 4 1/2 in. wide x 2 3/4 in. deep (154 mm high x 114 mm wide x 70 mm deep)	Single potentiometer, 140 ohms
L91B1035/U	0 to 15 psi; 25 psi - Maximum Sustained	0 to 103 kPa; 172 kPa - Maximum Sustained	1.5 to 12 psi	10 to 83 kPa	optional surface mount through back of case	Brass bellows	6 7/8 in. high x 4 1/2 in. wide x 2 7/8 in. deep (175 mm high x 114 mm wide x 73 mm deep)	Single potentiometer, 140 ohms
L91B1050/U	5 to 150 psi; 225 psi - Maximum Sustained	34 to 1034 kPa; 1151 kPa - Maximum Sustained	5 to 23 psi	35 to 160 kPa	optional surface mount through back of case	Brass bellows	5 3/4 in. high x 4 1/2 in. wide x 2 3/4 in. deep (146 mm high x 114 mm wide x 70 mm deep)	Single potentiometer, 140 ohms
L91B1068/U	10 to 300 psi; 325 psi - Maximum Sustained	69 to 2068 kPa; 2241 kPa - Maximum Sustained	28 to 110 psi	193 to 758 kPa	optional surface mount through back of case	Phos-bronze bellows	6 1/16 in. high x 4 1/2 in. wide x 2 3/4 in. deep (154 mm high x 114 mm wide x 70 mm deep)	Single potentiometer, 140 ohms
L91B1100/U	5 to 150 psi; 225 psi - Maximum Sustained	0 - 1 MPa; 1151 kPa - Maximum Sustained	5 to 23 psi	35 to 160 kPa	1/4 in BSP-TR thread Mounting	Brass bellows	5 3/4 in. high x 4 1/2 in. wide x 2 3/4 in. deep (146 mm high x 114 mm wide x 70 mm deep)	Single potentiometer, 135 ohms
L91B1118/U	10 to 300 psi; 325 psi - Maximum Sustained	0 - 2 MPa; 2241 kPa - Maximum Sustained	28 to 110 psi	193 to 758 kPa	1/4 in BSP-TR thread Mounting	Phos-bronze bellows	6 1/16 in. high x 4 1/2 in. wide x 2 3/4 in. deep (154 mm high x 114 mm wide x 70 mm deep)	Single potentiometer, 140 ohms
L91B1241/U	10 to 300 psi; 325 psi - Maximum Sustained	69 to 2068 kPa; 2241 kPa - Maximum Sustained	12 to 48 psi	85 to 330 kPa	optional surface mount through back of case	Phos-bronze bellows	6 1/16 in. high x 4 1/2 in. wide x 2 3/4 in. deep (154 mm high x 114 mm wide x 70 mm deep)	Single potentiometer, 140 ohms
L91D1015/U	0 to 15 psi; 25 psi - Maximum Sustained	0 to 103 kPa; 172 kPa - Maximum Sustained	1.5 to 12 psi	10 to 83 kPa	optional surface mount through back of case	Brass bellows	6 7/8 in. high x 4 1/2 in. wide x 2 7/8 in. deep (175 mm high x 114 mm wide x 73 mm deep)	Dual potentiometer, 140 ohms
L91D1031/U	5 to 150 psi; 225 psi - Maximum Sustained	34 to 1034 kPa; 1151 kPa - Maximum Sustained	11 to 52 psi	76 to 359 kPa	optional surface mount through back of case	Brass bellows	5 3/4 in. high x 4 1/2 in. wide x 2 3/4 in. deep (146 mm high x 114 mm wide x 70 mm deep)	Dual potentiometer, 140 ohms

Dimensions in inches (millimeters)



1 EXTERNAL THREADS ON 0 TO 15 PSI MODELS; INTERNAL THREADS ON ALL OTHER MODELS. SOME MODELS ARE ALSO AVAILABLE WITH 1/4-19 BSP-TR INTERNAL THREADS; SEE TABLE 1.

2 PROPORTIONING RANGE ADJUSTING SCREW ON L91B,D MODELS ONLY.

3 33312B KNURLED ADJUSTMENT SCREW KNOB, 7/8 IN. [22.2 MM] DIAMETER,. KNOB IS INCLUDED WITH 10 TO 300 PSI [0.07 TO .07 MPa] MODELS; OPTIONAL ACCESSORY FOR OTHER MODELS.

4 FOR 10 TO 300 PSI [0.07 TO 2.07 MPa] MODELS. DIM C INCLUDES THE KNURLED ADJUSTMENT KNOB.

TABULATION OF DIMENSIONS A, B, AND C

OPERATING RANGE		DIM A		DIM B		DIM C	
CUSTOMARY UNITS	METRIC UNITS	IN.	MM	IN.	MM	IN.	MM
0 TO 15 PSI	0 TO 103 kPa	2-7/16	61.9	1-7/32	31.0	6-7/8	174.6
5 TO 150 PSI	0.03 TO 1.03 MPa	1-5/8	41.3	13/16	20.6	5-3/4	146.1
10 TO 300 PSI	0.07 to 2.07 MPa	1-1/4	31.8	5/8	15.9	6-1/16 4	154.0 4

M29781

P7810 Pressure Control

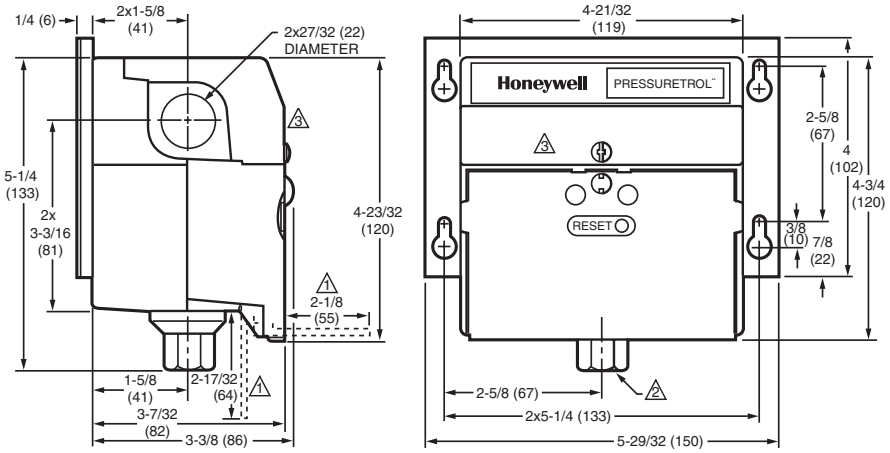
Line voltage pressure controller that provides automatic operating control, automatic limit protection, manual reset limit protection, and 4-20 mA modulating firing rate control for pressure systems up to 300 psi.

- May be used with steam, air, non-combustible gases or fluids that will not corrode the pressure sensing element.
- Models available in 15, 150, 300 psi maximum setpoints.
- LED indicators show limit function/lockout.
- Reset function easily accessible under cover.
- Clear cover allows setpoint and differentials to be read (but not adjusted) without opening the cover.

Application: On-off, Modulate and Limit Control
Sensor Element: Stainless Steel, solid state sensor
Materials: Case: Plastic
Approximate, Dimensions: 5 1/4 in. high x 4 21/32 in. wide x 3 3/8 in. deep (133 mm high x 119 mm wide x 86 mm deep)
Voltage: 120 Vac
Frequency: 50 Hz; 60 Hz
Power Consumption: 3.6 W, 4.7 VA @ 50Hz; 3.3 W, 4.0 VA @ 60 Hz
Operating Temperature Range: 32°F to 140°F (0°C to +60°C)
Operating Humidity Range (% RH): 5 to 95% RH, non-condensing
Electrical Connections: Screw terminals

Contact Ratings: 120 Vac Switch Contact – 9.8 AFL, 58.8 ALR, 10.0 A resistive
Pipe Connection: Main or High Pressure – 1/2 in. NPT internal thread
Approvals, Underwriters Laboratories Inc.: Listed: File No. MP268, Guide No. MCCZ
Approvals, CSA: Certified: File No. LR95329-6
Approvals, Factory Mutual: Approved: Report No. J.I.2D3A6AF
Modulation Output: 4 mA to 20 mA

Dimensions in inches (millimeters)



1 DIMENSIONS WITH DOOR IN OPEN POSITION.
2 PIPE THREAD IS 1/4 INCH NATIONAL PIPE THREAD FOR P7810A,B; 1/2 INCH NATIONAL PIPE THREAD FOR P7810C,D.
3 WIRING COMPARTMENT ACCESS COVER.

M23225

Material Number	Operating Range (psi)	Operating Range (kPa)	Differential Pressure Range (psi)	Differential Pressure Range (kPa)	Switching Action
P7810C1000/U	0 to 15 psi; 22.5 psi - Maximum Sustained	0 to 103 kPa; 155 kPa - Maximum Sustained	2 to 10 psi	14 to 69 kPa	Break on pressure rise
P7810C1018/U	0 to 150 psi; 225 psi - Maximum Sustained	0 to 1034 kPa; 1151 kPa - Maximum Sustained	5 to 20 psi	35 to 135 kPa	Break on pressure rise
P7810C1026/U	0 to 300 psi; 450 psi - Maximum Sustained	0 to 2068 kPa; 3103 kPa - Maximum Sustained	15 to 50 psi	103 to 340 kPa	Break on pressure rise

7911C Pressure Control

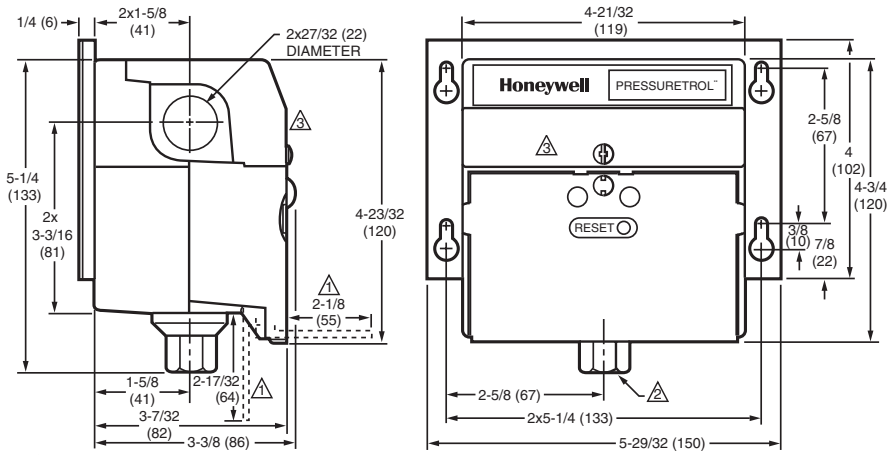
Line voltage pressure controller that provides automatic operating control, automatic limit protection, manual reset limit protection, and 4-20 mA pressure value for pressure systems up to 300 psi.

- May be used with steam, air, non-combustible gases or fluids that will not corrode the pressure sensing element.
- Models available in 15, 150, 300 psi maximum setpoints.
- LED indicators show limit function/lockout.
- Reset function easily accessible under cover.
- Clear cover allows setpoint and differentials to be read (but not adjusted) without opening the cover.

Application: On-off control, Limit Control and 4–20 mA Pressure Value
Sensor Element: Stainless Steel, solid state sensor
Materials: Case: Plastic
Approximate, Dimensions: 5 1/4 in. high x 4 21/32 in. wide x 3 3/8 in. deep (133 mm high x 119 mm wide x 86 mm deep)
Voltage: 120 Vac
Frequency: 50 Hz; 60 Hz
Power Consumption: 3.6 W, 4.7 VA @ 50Hz; 3.3 W, 4.0 VA @ 60 Hz
Operating Temperature Range: 32°F to 140°F (0°C to +60°C)
Operating Humidity Range (% RH): 5 to 95% RH, non-condensing
Electrical Connections: Screw terminals

Contact Ratings: 120 Vac Switch Contact – 9.8 AFL, 58.8 ALR, 10.0 A resistive
Pipe Connection: Main or High Pressure – 1/2 in. NPT internal thread
Approvals, Underwriters Laboratories Inc.: Listed: File No. MP268, Guide No. MCCZ
Approvals, CSA: Certified: File No. LR95329-6
Approvals, Factory Mutual: Approved: Report No. J.I.2D3A6AF
Modulation Output: 4 mA to 20 mA

Dimensions in inches (millimeters)



1 DIMENSIONS WITH DOOR IN OPEN POSITION.
2 PIPE THREAD IS 1/4 INCH NATIONAL PIPE THREAD FOR P7810A,B; 1/2 INCH NATIONAL PIPE THREAD FOR P7810C,D.
3 WIRING COMPARTMENT ACCESS COVER.

M23225

Material Number	Operating Range (psi)	Operating Range (kPa)	Differential Pressure Range (psi)	Differential Pressure Range (kPa)	Switching Action
P7911C1002/U	0 to 15 psi; 22.5 psi - Maximum Sustained	0 to 103 kPa; 155 kPa - Maximum Sustained	2 to 10 psi	14 to 69 kPa	Break on pressure rise
P7911C1010/U	0 to 150 psi; 225 psi - Maximum Sustained	0 to 1034 kPa; 1151 kPa - Maximum Sustained	5 to 20 psi	35 to 135 kPa	Break on pressure rise
P7911C1028/U	0 to 300 psi; 450 psi - Maximum Sustained	0 to 2068 kPa; 3103 kPa - Maximum Sustained	15 to 50 psi	103 to 340 kPa	Break on pressure rise

Pressure Controls and Limits Accessories

Material Number	Description	Used With
106729/U	C437, C637 Glass Lens, 6" diameter	C437, C637
129178E/U	Cover Assembly	L404, L604
137632/U	C437, C637 Paper Lens Gasket	C437, C637
139870/U	C437, C637 Lens Gasket for Rainproof Models	C437, C637
139870A/U	Glass lens with rubber gasket for NEMA 3 C437 and C637.	C437, C637
14026/U	Steam Trap “Black Iron Siphon Loop” for L404, L408, L91 or P7810A, B	L404, L91, L604
209731A/U	1/2 in. NPT Brass Siphon Loop for P7810C, D	P7810C, P7810D
23176CB/U	L91 Potentiometer - 135 ohm	L91
23176CF/U	L91 Potentiometer - 135 ohm	L91
32003039-001/U	C6097 Lamp Kit, Position Indication	C6097
32003040-001/U	C6097 Cover, Recycle Model	C6097
32003041-001/U	C6097 Cover, Manual Reset Model	C6097
4074BWJ/U	Pressure Control/Limits, Limit Stop Assembly - to limit setpoint. Includes 129564 Range Stop, 107194 Range Stop Screw and 23466 Wrench.	L404, L604, L91, L4079
50024585-001/U	Steam Trap “1/4 in. NPT Brass Siphon Loop” for L404, L408, or L91	L404, L91, L604

RM7895 On-Off Primary Control with Prepurge

Microprocessor-based integrated primary burner control for automatically fired gas, oil, or combination fuel single burner applications. Provides level of safety, functional capability and features beyond conventional controls.

- Functions include automatic burner sequencing, flame supervision, system status indication, system or self-diagnostics and troubleshooting
- Subbase, amplifier, and prepurge timer are required for operation
- Options include PC interface using ModBus™, keyboard display module, Data ControlBus™ Module, remote display module and first-out expanded annunciator
- Five LEDs provide sequence information
- Interchangeable plug-in flame amplifiers
- Optional local or remote annunciation of operation and fault information
- Nonvolatile memory retains history files and sequencing status after power loss
- Optional remote reset capability
- Optional report generation using Modbus™
- Selectable relight or lockout on loss of flame
- Airflow switch check

Honeywell	RA890, R4795, R7795	All 120 V models.
Fireye	M-Series	

IMPORTANT: *For on-off, gas-fired systems, some authorities having jurisdiction prohibit the wiring of any limit or operating contacts in series with the main fuel valve(s).*

DIRECTIONS:

1. Disconnect all power to programmer.
2. Remove old programmer from subbase (trade-in to Honeywell Authorized Flame Safeguard Distributor).
3. Mark all wires on subbase; i.e., wires connected to terminal "1" should be marked "1." Disconnect wires as they are marked.
4. Remove old subbase.
5. Mount Q7800A Subbase.
6. Connect wires to subbase per attached cross reference. Pay close attention to footnotes. For example: to convert a Fireye UVM-2 to a RM7895, the wire marked "A" would connect to terminal #9 on the Q7800. The wire marked "8" would connect to Q7800 terminal #8.
7. A superscript letter, such as "a" designates a footnote. Study these footnotes carefully.
8. Plug in the RM7895. Make sure you select the proper ST7800A Purge Timer and Detector for the application.
9. There are 2 wires on the amplifier section of the RM7895, which are used to select the desired trial for ignition timing and mode (lock-out or recycle). Refer to the RM7895 instruction sheet (form 66-1090) for assistance with proper selection.
10. If a low voltage controller is used on the RA890 or UVM-1, remove it and replace it with a line voltage controller. The line voltage controller should be connected in series with the limits.
11. If a low voltage airflow switch is used on the RM7895, it must be replaced with a line voltage airflow switch.
12. The following models are recommended for replacements:

Honeywell Device to be Replaced	Replace With	Amplifier
RA890E, F	RM7895A	R7847A
RA890G	RM7895A	R7849A
R4795A, D/W-R7290 AMP	RM7895A	
R4795A, D/W-R7289 AMP	RM7895B	R7847A
R7795A	RM7895A	R7849
R7795B	RM7895A	R7847
R7795C	RM7895C	R7849
R7796D	RM7895C	R7847
R4140P	RM7895C	R7847A or R7849A
R4140Y	RM7895A	
Fireye Device to be Replaced	**Replace With**	**Amplifier**
TFM1, 2, 3H	RM7895A	R7847A
UVM1, 2, 3, 3H		R7849A
UVM5	RM7895C	R7849A

CONVERSION CHART FOR RM7895 120 VOLT ONLY

Q7800 TERMINAL	L1	L2	3	4	6	7	8	9	10	21	F	G
Programmer to be Converted												
RA890 (All)	1[a]	2	[c]	[b, d]	6	[b]	3[d]	5	4	—	F	G
R4795 (All)	[a]	2	[c]	8, 7	1	6[b]	3	5	4	—	F	G
R7795A, B	L1	L2	9	8	16	3	5	6	18	—	F	G
R7795C, D	L1	L2	9	8	16	3	5	6	18	7	F	G
R4140P	L1	L2	A	M	3	P	5	7	—	6	S1	S2
R4140Y	L1	L2	9	8	4	3	6	7	5	—	F[e]	G
Fireye: UVM/TFM (All models)/MII	1	1	A	8	7	6	3	5	4	—	S2[f]	S1
UVM-1 (Prior to 1968)	[a]	2	A	[b, d]	1	[b]	3	5	4	—	S[f]	S
UVM-2 (Prior to 1968), All others	[a]	2	A	8	1	6	3	5	4	—	S[f]	S

[a] Connect power to terminal L1.
[b] If no airflow switch is used, jumper Q7800 terminal 6 to 7.
[c] Replace low voltage alarm (if used) with line voltage alarm. Connect alarm directly to Q7800 terminal 3.
[d] On power burners, identify burner motor wire on terminal 3 and connect it to Q7800 terminal 4.
[e] Select amplifier to match detector being used.
[f] On UVM models, the detector must be changed to a Honeywell C7027 or C7035.

RA890F Protectorelay™ Primary Control

Primary control provides solid state, electronic flame safeguard protection for industrial and commercial single or dual fuel burners for rectification type flame detection.

- Uses rectification principle of electronic flame detection.
- Replaces RA890E in most applications and mounts on same Q270A1024 Subbase.
- Recycles if flame signal lost while in Run. Failure to establish pilot results in a lockout.
- Safe-start check prevents start-up if flame-simulating failure occurs in flame detector circuit.
- Includes built-in protection against ignition crossover in flame rod systems.
- Includes SPDT alarm contacts.
- Solid state circuitry.
- Mounts and removes easily through use of captive mounting screws.
- Mounting base is made of strong thermoplastic.

Application: Primary control for rectification application (Flame Rod for example)
Frequency: 50 Hz; 60 Hz
Temperature Range: 60 Hz models -20°F to +115°F, 50 Hz models -20°F to +105°F (50 Hz Models -29°C to +41°C, 60 Hz Models -29°C to +46°C)
Approximate, Dimensions: 5 in. high x 5 in. wide x 4 3/4 in. deep (including subbase) (127 mm high x 127 mm wide x 121 mm deep (including subbase))
Approvals, Underwriters Laboratories Inc.: UL Listed: 120V models only; File No. MP268, Guide No. MCCZ
Approvals, CSA: CSA Certified: 120V models only; File No. LR1620
Approvals, Factory Mutual: Approved: Report No. 17678, 19417, 19784

Material Number	Voltage	Flame Failure Response Time (sec)	Alarm Relay Switching	Safety Switch Timing	Description
RA890F1270/U	120 Vac	0.8 sec	SPDT	15 seconds	Rectification, with alarm contacts
RA890F1288/U	120 Vac	3.0 sec	SPDT	15 seconds	Rectification, with alarm contacts
RA890F1296/U	208 Vac	3.0 sec	SPDT	15 seconds	Rectification, with alarm contacts
RA890F1304/U	220 Vac	0.8 sec	SPDT	15 seconds	Rectification, with alarm contacts
RA890F1338/U	120 Vac	0.8 sec	SPDT	30 seconds	Rectification, with alarm contacts
RA890F1346/U	120 Vac	3.0 sec	SPDT	30 seconds	Rectification, with alarm contacts
RA890F1387/U	240 Vac	3.0 sec	SPDT	15 seconds	Rectification, with alarm contacts
RA890F1478/U	120 Vac	0.8 sec	SPDT	15 seconds	Rectification, with alarm contacts, fast safe start check.

RA890G Protectorelay™ Primary Control

Primary control provides solid state, electronic flame safeguard protection for industrial and commercial single or dual fuel burners applications using Ultraviolet flame detectors.

- Design for interrupted ignition with intermittent pilot on gas burners, and interrupted or intermittent ignition on oil burners.
- Use with a C7027, C7035 or C7044 Minipeeper Ultraviolet Flame Detector for flame sensing.
- Recycles if flame signal lost while in Run. Failure to establish pilot results in a lockout.
- Safe-start check prevents start-up if flame-simulating failure occurs in flame detector circuit.
- Includes SPDT alarm contacts.
- Solid state circuitry, eliminates warm-up and increases resistance to vibration.
- Mounts and removes easily through use of captive mounting screws.
- Mounting base is made of strong thermoplastic.

Application: Either a line or low voltage controller can be used
Frequency: 50 Hz; 60 Hz
Temperature Range: 60 Hz models -20°F to +115°F, 50 Hz models -20°F to +105°F (50 Hz Models -29°C to +41°C, 60 Hz Models -29°C to +46°C)
Approximate, Dimensions: 5 in. high x 5 in. wide x 4 3/4 in. deep (including subbase) (127 mm high x 127 mm wide x 121 mm deep (including subbase))
Approvals, Underwriters Laboratories Inc.: UL Listed: 120V models only; File No. MP268, Guide No. MCCZ
Approvals, CSA: CSA Certified: 120V models only; File No. LR9S329
Approvals, Factory Mutual: Approved: Report No. 22013

Material Number	Voltage	Flame Failure Response Time (sec)	Alarm Relay Switching	Safety Switch Timing	Description
RA890G1229/U	120 Vac	0.8 sec	SPDT	15 seconds	Ultraviolet, with alarm contacts
RA890G1245/U	220 Vac	0.8 sec	SPDT	15 seconds	Ultraviolet, with alarm contacts
RA890G1260/U	120 Vac	3.0 sec	SPDT	15 seconds	Ultraviolet, with alarm contacts
RA890G1286/U	240 Vac	3.0 sec	SPDT	15 seconds	Ultraviolet, with alarm contacts

Q270 Wiring Mount Base

Application: Wiring Mounting Base for RA890, R4795

Material Number	Description	Used With
Q270A1024/U	Wiring Mounting Base for RA890, R4795	RA890, R4795

A7800 Tester

Provides quick operational check of the 7800 SERIES System components.

- Allows testing different 7800 SERIES devices using configuration plugs and functional switches to simulate interlocks and control functions.
- Indicator lamps represent outputs as activated.

Application: Tester
Voltage: 120 Vac
Frequency: 50 Hz; 60 Hz
Temperature Range: -30°F to +150°F (-34.5°C to +65°C)

Material Number	Required Components	Includes	Used With
A7800A1010/U	Configuration Plugs, Included	Configuration Plugs	7800 SERIES Relay Modules with Valve Proving System or New Optical Detector Amplifiers

A7800 and DSP2672 Replacement Parts

Material Number	Application	Used With	Comments
203579A/U	Tester; DSP2672 RM7800/40/45 (non VPS side) Configuration Plug	RM7800; RM7840	Configures A7800 and DSP2672
203579B/U	Tester; DSP2672 RM7838A Configuration Plug		Configures A7800 and DSP2672
203579C/U	Tester; DSP2672 RM7838B, C Configuration Plug		Configures A7800 and DSP2672
203579D/U	Tester; DSP2672 RM7885A Configuration Plug		Configures A7800 and DSP2672
203579E/U	Tester; DSP2672 RM7890 (non VPS models) Configuration Plug		Configures A7800 and DSP2672
203579F/U	Tester; DSP2672 RM7895, 96, 97, 98 (non VPS side) Configuration Plug		Configures A7800 and DSP2672
203579G/U	Tester; DSP2672 RM7823 Configuration Plug		Configures A7800 and DSP2672
203579H	Tester; DSP2672 RM7865 Configuration Plug		Configures A7800 and DSP2672
203579J/U	Tester; DSP2672 RM7838B, C (VPS) Configuration Plug	A7800A1010 Tester	Configures A7800 and DSP2672
203579K/U	Tester; DSP2672 RM7890 (VPS) Configuration Plug	A7800A1010 Tester	
203579L/U	Tester; DSP2672 RM7800/40G,L (VPS side) Configuration Plug	A7800A1010 Tester	
203579M/U	Tester; DSP2672 RM7898 (VPS Side) Configuration Plug	A7800A1010 Tester	

Demonstrators or Trainers

DSP3452

DSP3956

DSP3981

DSP3564U

The DSP3452 is designed for training and demonstration of Honeywell Burner and Boiler Controls with auxiliary devices that are typically used with commercial and industrial burners. It demonstrates the wiring and operation of primary safety controls.

- The trainer can be used with Honeywell primary controls or programming controls (not included with the trainer).
- The nine trouble switches simulate a range of faults from a burned out pilot valve to a faulty flame detector to an inoperative firing rate motor.
- The trainer measures 20 1/2 in. x 32 in. x 12 1/2 in. It weighs approximately 30 lbs.

Color: Black

Material Number	Application	Voltage	Frequency	Approximate, Dimensions	Required Components	Includes	Used With	Comments
DSP3452/U	Primaries, Programmers or 7800 Series Trainer	120 Vac	50 Hz; 60 Hz	20 1/2 in. x 32 in. x 12 1/2 in.	Devices for wiring and training	jumper wires, propane gas hose with regulator, detector mounting adapters	Primaries, Programmers and 7800 SERIES Relay Modules	Complete Flame Safeguard Training Package
DSP3564/U	ControlLink FAR Trainer/Demonstrator	120 Vac	50 Hz; 60 Hz			Relay Module, R7999 Control and 3 ML Motors; Relay Module, R7999 Control and 4 ML Motors	ControLinks Fuel Air Ratio controls	
DSP3956/U	ControLink FAR Configuration Toolkit					ZM Software; USB-485 Converter with cable and Connector for Controlinks	ControLinks Fuel Air Ratio controls	
DSP3981/U	For Controlinks Configuration and Monitoring	120 Vac	50 Hz; 60 Hz				ControLinks Fuel Air Ratio controls	With S7999D Touchscreen for FAR Monitoring or Programming

SOLA Demonstrators

The DSP3943 is used as a SOLA commissioning or monitoring tool when a System or Local Operator Interface is not required for operation. The DSP contains the S7999B1026 touchscreen display which uses a wizardlike process to assist you through the commissioning process.

The DSP3980 contains an S7999D1006 Touchscreen Display to commission or monitor the SOLA system when a System or Local Operator Interface is not required for operation. The DSP3980 includes the power supply for operation and cable with connector for the SOLA system. A USB storage drive is provided to save display screen snapshots or trending information.

Voltage: 120 Vac
Color: Black

Material Number	Application	Frequency	Includes	Used With	Comments
DSP3943/U	Demonstrator, SOLA	60 Hz	S7910A1001 SOLA HC; S7999 Touchscreen Display; S7910 Keyboard display, system switches and ports		
DSP3980/U	Demonstrator	50 Hz; 60 Hz		SOLA Controls	Touchscreen for R7910/R7911 SOLA Monitoring or Programming

Flame Simulator

Flame simulators simplify the troubleshooting of flame safeguard controls by providing a quick method to check the flame detection function.

Material Number	Application	Color	Comments	Used With
123514A/U	Flame Simulator, Rectification Flame Amplifiers	Brown	Applications with test jack in G circuit	R4075B; R4181A; R4138A, B; R7253A; R8169B; R7257A; R7247A; R7847A
203659/U	Simulates C7027, C7035, C7044 Flame Simulators for 7800 SERIES	Purple	Simulates Minipeeper Flame Detectors	7800 SERIES Relay modules

FSP1535 Tester

Provides quick operational check of Honeywell RA890 or R4795 nonprogramming primary controls.

- Includes indicator lights that visually represent functions of ignition, pilot and main valve as unit simulates system operation.
- Eliminates need to operate entire system.
- Tests units with rated voltage from 100 to 240, 50/60 Hz by connecting line cord to the rated voltage.

Voltage: 120 Vacor 240 Vac
Frequency: 50 Hz; 60 Hz

Material Number	Application	Used With
FSP1535/U	Tester	RA890; R4795

FSP5004 Tester

A Tester that provides quick operational check of most Honeywell BC7000, R4140, R7140 and R4150 programmers and R7795 primary controls (order 198355A adapter separately).

- Includes indicator lights that visually represent control functions of programmer as unit simulates system operation.
- Works with 120 Vac, 60 Hz controls.
- Use to test some Gordon-Piatt programmers.
- Cannot be used to test some R4140 and R4150 models due to design or wiring differences. Reference the list at right to see if you have one of the controls that CANNOT be tested. If you do, check these out using the instructions provided in their respective instruction manuals.
- R4150/R4140/BC7000/R7795/R7140 Tester (120V only). Provides a quick operational check.

Voltage: 120 Vac
Frequency: 50 Hz; 60 Hz

Material Number	Application	Comments	Used With
FSP5004/U	Tester	DO NOT USE WITH: BC7000L1018, BC7000L1034, BC7000L1063; R4140D1004, R4140E1001, R4140M1079, or non-120 Vac R4140 models	BC7000; R4140; R7795; R7140

Signal Processors

P531; P532 3-channel, Signal Processors

The P532/P531 supports three separate viewing heads, two S55XBE and one S70X. Independent 2 x SPDT Flame On relay contacts are provided for each viewing head (6 total). 0-20 or 4-20mA scalable analog output also provided for each viewing head. SIL 3 capable.

- 3 channels.
- Two SPDT flame relay outputs, one SPDT self-check relay output and one N.O. alarm relay output per channel.
- FM and CSA approved.
- Monitor the UV and IR flame component simultaneously or separately when using the S550B/BE.
- Monitor 3 viewing heads simultaneously.
- Independent configuration for each viewing head.
- 2 sets of configuration data per viewing head.
- Viewing head temperature indication.
- Automatic set-up functionality.
- Automatic viewing head detection.
- Modbus and RS422 protocol compatible.
- NEMA 1 Enclosure Rated.

Output: 4-20mA
Communications: ModBus and RS422 Compatible
Mounting: Cabinet mounting tabs
Connection Type: Removable terminals
Dimensions: 4.3 in. wide x 5.8 in. deep x 5.5 in. high (109 mm wide x 147 mm deep x 117 mm high)
Approvals, CSA: Approved (Temperature Range -40 to 158°F; -40 to 70°C)
Approvals, Factory Mutual: Approved (Temperature Range -40 to 158°F; -40 to 70°C)
Used With: S550BE, S552BE, S556BE, S70X, S80X viewing heads

Material Number	Description	Application	Keypad	Status Monitoring	Electrical Ratings	Frequency	Required Components
P531AC	AC Signal Processor	Signal Processor with 3 channels without keypad	Use KP532U keypad	LEDs	85-264 Vac + 24 Vdc backup	50 Hz; 60 Hz	Appropriate Flame Detector
P531DC	DC Signal Processor	Signal Processor with 3 channels without keypad	Use KP532U keypad	LEDs	22-26 Vdc+ 24 Vdc backup		Appropriate Flame Detector
P532AC	AC Signal Processor	Signal Processor with 3 channels and keypad	Integrated	tri-color display	85-264 Vac + 24 Vdc backup	50 Hz; 60 Hz	Appropriate Flame Detector
P532DC	DC Signal Processor	Signal Processor with 3 channels and keypad	Integrated	tri-color display	22-26 Vdc+ 24 Vdc backup		Appropriate Flame Detector
P532UI	Program module/keypad used with the P531	Program module/keypad used with the P531					

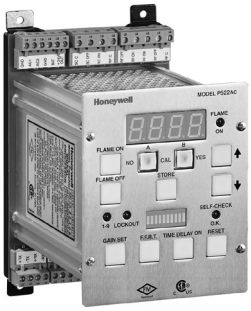
600U Flame Rod Signal Processor

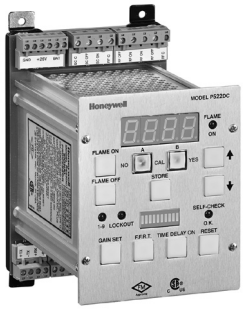
Model 600 Ultra Flame Rod is a reliable Flame Detecting system based on the proven principle of measuring rectified current flow through a flame rod when a flame touches it. The Model 600 Flame Detector measures the rectified current and closes the flame relay if the current exceeds the value for the flame-on set-point.

Output: 175 Vac for flame rod
Mounting: DIN rail, 35mm
Connection Type: Removable terminals
Dimensions: 2-63/64 in. wide x 3-1/4 in. deep x 5-31/64 in. high (76 mm wide x 83 mm deep x 139 mm high)
Used With: Flame Rod

Material Number	Description	Application	Keypad	Status Monitoring	Electrical Ratings	Frequency
600U	Flame rod signal processor with DPDT flame relay contacts, DPST ignition transformer relay or ignition coil drive	Flame rod signal processor	Integrated	LEDs	85 to 132Vac or 170 to 264Vac	50 Hz; 60 Hz

P522 Signal Processor with 2 Channels and Keypad





The P522 supports two switched (not simultaneously) S55XBE viewing heads. 2 x SPDT Flame On relay contacts and 0-20 or 4-20mA scalable analog output is also provided. SIL 3 capable.

- 2 channels.
- Integrated keypad.
- Two SPDT flame relay outputs and one SPDT self-check relay output.
- FM and CSA approved.
- Flame failure response and time delay on set-up.
- Connect 2 viewing heads, monitoring 1 at a time.
- Independent configuration for each viewing head.
- 2 sets of configuration data per viewing head.
- Viewing head temperature indication.
- Modbus and RS422 protocol compatible.
- NEMA 1 Enclosure Rating.

Application: Signal Processor with 2 channels and keypad
Keypad: Integrated
Status Monitoring: LEDs
Output: 4-20mA
Communications: ModBus and RS422 Compatible
Mounting: Cabinet mounting tabs
Connection Type: Removable terminals

Dimensions: 4.3 in. wide x 6.4 in. deep x 6.7 in. high (109 mm wide x 162 mm deep x 170 mm high)
Approvals, CSA: Approved
Approvals, Factory Mutual: Approved (Temperature Range -32 to +122°F; 0 to +50°C)

Material Number	Description	Electrical Ratings	Frequency	Used With	Required Components
P522AC	AC Signal Processor	85-264 Vac + 24 Vdc backup	50 Hz; 60 Hz	S550B/BE, S552B/BE, S556B/BE viewing heads	Appropriate Flame Detector
P522DC	DC Signal Processor	22-26 Vdc+ 24 Vdc backup		S550B/BE, S552B/BE, S556B/BE viewing heads	Appropriate Flame Detector

WATCHDOGIIIBE Flare Stack Signal Processor

The P222 is used with S256BE viewing head for remote monitoring of flare flame. 2 x SPDT Flame On relay contacts for T1 timer and 1 x SPDT for T2 timer. 0-20 or 4-20mA scalable analog output is also provided. Two timers are included for flame delay off settings one 0 to 60 seconds (T1) and one 0 to 3600 seconds (T2).

Application: Flare Stack signal processor with 1 channel and keypad
Keypad: Integrated
Status Monitoring: LEDs
Output: 0/4-20mA
Communications: ModBus and RS422 Compatible
Mounting: Cabinet mounting tabs
Connection Type: Removable terminals

Dimensions: 4.3 in. wide x 6.4 in. deep x 6.7 in. high (109 mm wide x 162 mm deep x 170 mm high)
Approvals, QPS: Approved

Material Number	Description	Electrical Ratings	Frequency	Used With	Required Components
P222	Watchdog Signal Processor	85-264 Vac + 24 VDC backup	50 Hz; 60 Hz	S256BE WATCHDOGIIIBE flare stack viewing head	Appropriate Flame Detector
WATCHDOGIIIBE	Kit consisting of P222 processor, S256BE Viewing Head, and ASY55XBE 50' cable with overmolded and wired ends.	85-264 Vac	50 Hz; 60 Hz		

Signal Processors

S256BE Flare Stack Viewing Head

S256BE is a UV flare stack viewing head/flame detector, that detects the presence or absence of flame at the flare stack tip. Used for continuous UV flare stack monitoring to ensure no unburned toxic or waste gas releases into the atmosphere.

- Not adversely affected by Gamma Rays or X-Rays.
- Solar blind.
- Ground mounted, up to 1000 feet away from flare stack tip.
- UV gain selection of 0-99.
- Digital display.
- Quick disconnect plug.
- Easy to install with no plant shutdown.
- NEMA 4X / IP67 enclosure rating.
- Ambient temperature: -40°F to +140°F (-40°C to +70°C).
- 22-26 VDC supplied by signal processor.
- Used with P222 signal processor.

Application: Flame Detector for use with P222 processor
NEMA Rating: 4X
Electrical Connections: Quick disconnect plug
Mounting: 2" Pipe mount
Electrical Ratings: 22 to 26Vdc from signal processor
Dimensions: 3.7 in. wide x 20.3 in. deep x 13.7 in. high (94 mm wide x 516 mm deep x 348 mm deep)

Ambient Temperature Range: -40 to 140°F (-40 to 60°C)
Approvals, QPS: QPS to CSA 22.2
Environmental, Electrical, or Ingress Protection Rating: IP67
Comments: One color monitoring
Used With: P222 Processor

Material Number	UV Gain Adjustment	IR Gain Adjustment	Digital Displays	Description
S256BE	0-99		Yes (1)	UV viewing head for use with P222

700 Signal Processor with 1 Channel

The 700 supports one UV or IR viewing head model S70X or S80X. 2 x SPDT Flame On relay contacts and 0-20 or 4-20mA scalable analog output is also provided. SIL 3 capable.

- 1 channel.
- Two SPDT flame relay outputs and one SPDT self-check relay output.
- FM and CSA approved.
- Status LEDs.
- DIN rail mounting.
- Modbus and RS422 protocol compatible.
- NEMA 1 Enclosure Rating.

Application: Signal processor with 1 channel and keypad
Status Monitoring: LEDs
Output: 4-20mA
Communications: ModBus and RS422 Compatible
Mounting: DIN rail
Connection Type: Removable terminals

Dimensions: 2.9 in. wide x 3.3 in. deep x 5.5 in. high (74 mm wide x 84 mm deep x 140 mm high)
Approvals, CSA: Approved
Approvals, Factory Mutual: Approved (Temperature Range 32 to 140°F; 0 to 60°C)

Material Number	Description	Keypad	Electrical Ratings	Frequency	Used With	Required Components
700ACSP	AC Signal Processor	Integrated	85-264 Vac	50 Hz; 60 Hz	All models of S702, S706, S802, S806 viewing heads	Appropriate Flame Detector
700DCSP	DC Signal Processor	Integrated	22-26 Vdc		All models of S702, S706, S802, S806 viewing heads	Appropriate Flame Detector

All-in-One Viewing Head and Processor

U2-101xS and U2-101xS PF are integrated viewing head and processor (All in One) with integral touch screen for operator interface. One Normally Open Flame relay contact and one Normally Open Fault relay contact is provided for interlock. 0-20 or 4-20 mA scalable analog output is also provided. Power input is 24 VDC @120 mA. Temperature sensor is included that provides display in degree F and C. System is self checking (no mechanical shutter) fit for use in SIL3 application. Approvals include (IP66), Class I Div 1 (IEC Ex d-ATEX Zone 1) for PF version and Class I, Div 2 (IEC Ex nA) for quick disconnect type models. For remote monitoring and configuration, FLAMETOOL –HMI (support 32 loops) or FLAMETOOL-PC (Supports 248 loops) is available. Available models are UVtron only (clean gases), IR only (oil and coal), UVtron, IR and UVSS (for all fuels- all applications including SRU, Kiln etc.).

Application: Combination DC signal processor and dual UV/IR Viewing head
Keypad: Integrated
Electrical Ratings: 22-26 Vdc
Output: 4-20mA
Communications: ModBus and RS422 Compatible
Dimensions: 4.3 in. wide x 5.8 in. deep x 5.5 in. high (109 mm wide x 147 mm deep x 117 mm high)

Approvals, CSA: Approved (Temperature Range -40 to 158°F; -40 to 70°C)
Approvals, Factory Mutual: Approved (Temperature Range -40 to 158°F; -40 to 70°C)
Approvals, Others: SIL3 (Temperature Range -40 to 158°F; -40 to 70°C), INMETRO, EN298 & KTL

Material Number	Description	Status Monitoring	Mounting	Connection Type	Used With	Required Components
Combination DC signal processor and dual UV/IR/UVSS Viewing head						
U2-1010S	Combination DC signal processor and dual UV/IR Viewing head.	LED for each sensor, flame relay, and self check.	1" NPT process connection	12 pin connector		Cable and connector, PT adapter and purge air coupler sold separately.
U2-1010S-PF	Combination DC signal processor and dual UV/IR Viewing head with 10-ft pigtail.	LED for each sensor, flame relay, and self check.	1" NPT process connection	pigtail, 10-ft (3m)		PT adapter and purge air coupler sold separately.
U2-1010S-PF-050	Combination DC signal processor and dual UV/IR Viewing head with 50-ft (15m) pigtail.	LED for each sensor, flame relay, and self check.	1" NPT process connection	pigtail, 50-ft (15m)		PT adapter and purge air coupler sold separately.
U2-1010S-PF-100	Combination DC signal processor and dual UV/IR Viewing head with 100-ft (30m) pigtail.	LED for each sensor, flame relay, and self check.	1" NPT process connection	pigtail, 100-ft (30m)		PT adapter and purge air coupler sold separately.
Combination DC signal processor and IR Viewing head						
U2-1012S	Combination DC signal processor and IR Viewing head.	LED for each sensor, flame relay, and self check.	1" NPT process connection	12 pin connector		Cable and connector, PT adapter and purge air coupler sold separately.
U2-1012S-PF	Combination DC signal processor and IR Viewing head with 10-ft pigtail. Pipe fitting connection.	LED for each sensor, flame relay, and self check.	1" NPT process connection	pigtail, 10-ft (3m)		PT adapter and purge air coupler sold separately.
Combination DC signal processor and UV Viewing head						
U2-1016S	Combination DC signal processor and UV Viewing head.	LED for each sensor, flame relay, and self check.	1" NPT process connection	12 pin connector		Cable and connector, PT adapter and purge air coupler sold separately.
U2-1016S-PF	Combination DC signal processor and UV Viewing head with 10-ft pigtail. Pipe fitting connection.	LED for each sensor, flame relay, and self check.	1" NPT process connection	pigtail, 10-ft (3m)		PT adapter and purge air coupler sold separately.
Combination DC signal processor and dual UV/IR Viewing head						
U2-1018S	Combination DC signal processor and dual UV/ IR Viewing head	LED for each sensor, flame relay, and self check.	1" NPT process connection	12 pin connector		Cable and connector, PT adapter and purge air coupler sold separately.
U2-1018S-PF	Combination DC signal processor and dual UV/ IR Viewing head with 10-ft pigtail. Pipe fitting connection.	LED for each sensor, flame relay, and self check.	1" NPT process connection	pigtail, 10-ft (3m)		PT adapter and purge air coupler sold separately.

Viewing Heads

700 and 800 Series Viewing Heads

Available in single sensor only, UVTron or IR. Options include quick disconnect with two LEDs or factory installed cable.

Application: Flame Detector for Oil Fired burners
Mounting: 1/2" NPTF or 1" NPTF with 1/4" NPT Purge connection
Electrical Ratings: 22 to 26Vdc from signal processor
Sight Pipe (NPT): 1/2 in.
Purge Air Pipe (NPT): 1/4 in.
Ambient Temperature Range: -40 to 149°F (-40 to 65°C)

Approvals, CSA: Approved CSA, FM, IEC Ex, KCS, INMETRO,, SIL3 (Temp rating -40 to 149°F/-40 to 65°C)
Approvals, Factory Mutual: Approved
Environmental, Electrical, or Ingress Protection Rating: IP64
Required Components: Order ASY785 (50foot) or ASY785-200 (200ft) for molded, shielded cable assemblies. ASY785 or ASY785-200 are recommended for new installations.

Material Number	Type	Electrical Connections	Shutter	UV Gain Adjustment	IR Gain Adjustment	Dimensions	Comments	Used With
S702	IR Compact viewing head with 15-foot cable	Quick disconnect plug	Electronic		1-9	2.0 in. wide x 9.7 in. deep x 2.0 in. high (51 mm wide x 246 mm deep x 51 mm high)	Removable connector cover for diagnostic LED viewing during installation.	Use with 700 AC SP or 700DC SP
S702PF	IR Compact viewing head with 10-foot pigtail	Factory installed cable	Electronic		1-9	2.0 in. wide x 9.7 in. deep x 2.0 in. high (51 mm wide x 246 mm deep x 51 mm high)		Use with 700 AC SP or 700DC SP
S706	UV Compact viewing head with 15-foot cable	Quick disconnect plug	Electronic	1-9		2.0 in. wide x 9.7 in. deep x 2.0 in. high (51 mm wide x 246 mm deep x 51 mm high)	Removable connector cover for diagnostic LED viewing during installation.	Use with 700 AC SP or 700DC SP
S706PF	UV Compact viewing head with 10-foot pigtail	Factory installed cable	Electronic	1-9		2.0 in. wide x 9.7 in. deep x 2.0 in. high (51 mm wide x 246 mm deep x 51 mm high)		Use with 700 AC SP or 700DC SP
S802	IR Compact viewing head with 15-foot cable	Quick disconnect plug	Electronic		1-9	1.8 in. wide x 9.2 in. deep x 1.8 in. high (46 mm wide x 234 mm deep x 46 mm high)	Removable connector cover for diagnostic LED viewing during installation.	Use with 700 AC SP or 700DC SP
S806	UV Compact viewing head with 15-foot cable	Quick disconnect plug	Electronic	1-9		1.8 in. wide x 9.2 in. deep x 1.8 in. high (46 mm wide x 234 mm deep x 46 mm high)	Removable connector cover for diagnostic LED viewing during installation.	Use with 700 AC SP or 700DC SP

S55xBE Series Viewing Heads

The S550BE is provided with UVTron and IR sensors. System is self checking, no mechanical shutters, not adversely affected by X or Gamma rays generated by pipe check welding. Suitable for all fuel flames, single or multiple fuels. Optional pipe fitting (PF) versions provided with factory installed cable. Suitable for hazardous location duty. SIL 3 capable.

- Not adversely affected by Gamma Rays or X-Rays.
- Mount in any orientation.
- IR gain selection of 0-699.
- UV gain selection of 0-99.
- 2 digital displays.
- Quick disconnect plug.
- Parameters stored in signal processor EEPROM.
- Ultraviolet and infrared with electronic shutter.
- Ambient Temperature: -40°F to +149°F (-40°C to +65°C)
- 22-26 VDC supplied by signal processor.
- CSA Rated IP64 Enclosure.
- Used with P532, P532, P531, P531, P522, P522 signal processors.

Application: Flame Detector for All fuels multiple burners
Mounting: 1" NPTF burner front with 1/2" purge connection
Electrical Ratings: 22 to 26Vdc from signal processor
Sight Pipe (NPT): 1 in.
Purge Air Pipe (NPT): 1/2 in.
Dimensions: 4.1 in. wide x 8.1 in. deep x 5.4 in. high (104 mm wide x 206 mm deep x 137 mm high)
Ambient Temperature Range: -40 to 158°F (-40 to 70°C)
Approvals, CSA: Approved CSA
Approvals, Others: SIL3 (Temp rating -40 to 149°F/ -40 to 65°C) IECEx IEC: Approved, KCS, INMETRO, EAC (S550BE Only)
Approvals, Factory Mutual: Approved
Environmental, Electrical, or Ingress Protection Rating: IP64
Used With: P522, P531 and P532 Processors

Material Number	Type	Electrical Connections	Shutter	UV Gain Adjustment	IR Gain Adjustment	Digital Displays	Comments	Required Components
Flame Detector for All fuels multiple burners								
S550BE	UV/IR Viewing Head	Quick disconnect plug	Electronic of IR only	0-99	0-699	Yes (2)	2 digit display for UV and IR	Use with molded cable ASY55XBE, ASY55XBE-100, ASY55XBE-200 or ASY55XBE-300. P522 or P532 signal processor.
S550BE-PF	UV/IR Viewing Head	10 foot pigtail	Electronic of IR only	0-99	0-699	Yes (2)	2 digit display for UV and IR	Factory installed 10' cable. P522 or P532 signal processor.
Flame Detector for Gas multiple Burners								
S556BE	UV Viewing Head with Digital Display	Quick disconnect plug		0-99		Yes (1)	2 digit display for UV	Use with molded cable ASY55XBE, ASY55XBE-100, ASY55XBE-200 or ASY55XBE-300. P522 or P532 signal processor.
S556BE-PF	UV Viewing Head with Digital Display	10 foot pigtail		0-99		Yes (1)	2 digit display for UV and IR	P522 or P532 signal processor.
Flame Detector for Oil and Coal multiple burners								
S552BE	IR Viewing Head	Quick disconnect plug	Electronic		0-699	Yes (1)	2 digit display for IR	Use with molded cable ASY55XBE, ASY55XBE-100, ASY55XBE-200 or ASY55XBE-300. P522 or P532 signal processor.
S552BE-PF	IR Viewing Head	10 foot pigtail	Electronic		0-699	Yes (1)	2 digit display for IR	P522 or P532 signal processor.

GHE Igniter System

The GHE High Energy Ignitor is a non fouling high energy device, designed to directly ignite all gaseous fuels. The GHE High Tension Ignitor is designed to provide reliable ignition and or warm up when and where required. It can be applied to boiler applications from industrial to utility lime and cement kiln heaters, etc.

GHE Igniter System - GHE1-3

1-3 MMBtu/Hr capacity, 1-7/8" O.D. pilot igniter; 2' to 10' lengths available in 1' increments. Includes 3/4" x 36" gas inlet and 1" x 36" flexible stainless steel air inlet hoses and high energy probe igniter. 12 joule powerpack, igniter cable and enclosures are available options.

Configurable Options

- Igniter Length (in feet):
  2, 3, 4, 5, 6, 7, 8, 9, 10
- Igniter Cable (in feet):
  10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20
- Mounting:
  Flange
- Powerpack:
  No, Yes
- Enclosure:
  None, NEMA 4, NEMA 4X, NEMA 12

GHE Igniter System - GHE2-5

2-5 MMBtu/Hr capacity, 2-7/8" O.D. pilot igniter; 2' to 10' lengths available in 1' increments. Includes 3/4" x 36" gas inlet and 1-1/2" x 36" flexible stainless steel air inlet hoses and high energy probe igniter. 12 joule powerpack, igniter cable and enclosures are available options.

Configurable Options

- Igniter Length (in feet):
  2, 3, 4, 5, 6, 7, 8, 9, 10
- Igniter Cable (in feet):
  None, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20
- Mounting:
  Flange, Quick Disconnect
- Powerpack:
  No, Yes
- Enclosure:
  None, NEMA 4, NEMA 4X, NEMA 12

GHE Igniter System Accessoires

HV-HT
Replacement high energy probe igniter internal cable; 2'-10' lengths available in 1' increments.

Configurable Options

- Igniter Length (in feet):
  2, 3, 4, 5, 6, 7, 8, 9, 10

IGN-CPC-10
Replacement high enrgy probe igniter external cable; 10'-20' lengths available in 1' increments.

Configurable Options

- Cable Length (in feet):
  10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20

IPASS
High energy probe igniter assembly, includes probe igniter, cable, stainless steel sheath and junction box. 2' - 10' lengths available in 1' increments.

Configurable Options

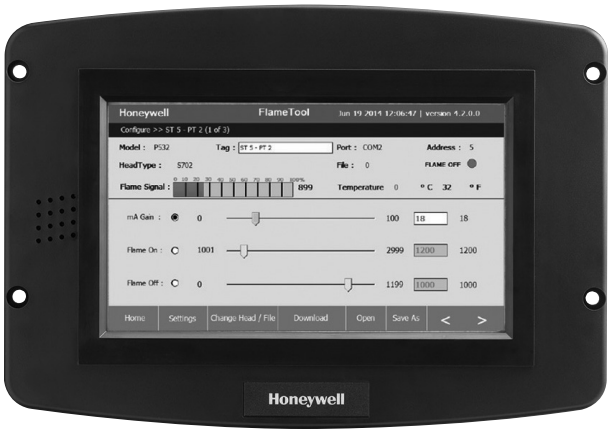
- Igniter Length (in feet):
  2, 3, 4, 5, 6, 7, 8, 9, 10

GT-LITE
Replacement high energy probe igniter.

IGN-CPC-LB
Replacement high energy probe junction box.

POWERPACK-12-CS
Replacement dual voltage 12 joule power pack.

FlameTools



The Honeywell FlameTools PC monitoring software and touchscreen display enables remote configuration, monitoring, and diagnostics for multiple signal processors, up to 32 loops for HMI and 248 loops for PC.

Material Number	Application	Description	Used With	Comments
FLAMETOOLS-HMI/U	For all series 700, 500 and U2S	Remote programming and logging using touchscreen system. Uses Honeywell S7999 display	All 700, 500 and U2S family	Supports multiple loops
FLAMETOOLS-PC	For all series 700, 500 and U2S	Remote programming and logging using user PC. Supports Windows 7 and 8, includes RS232 converter cable and manual	All 700, 500 and U2S family	Supports multiple loops

Industrial Flame Monitoring Accessories

Material Number	Application	Description	Used With	
700-1	Swivel Mount	Swivel Mount, 1" NPT to 1/2" NPT	S700 and S800 Viewing heads	
700-2	Swivel Mount	Swivel mount for S700 and S800 series viewing heads. Flanged connection to 1/2 in. NPTM connection.	S700 and S800 series viewing heads	
700-3	Swivel Mount	Swivel mount for S700 and S800 series viewing heads. 1/2 in. NPTF to 1/2 in. NPTM connection.	S700 and S800 series viewing heads	
700ACC	Model S700 viewing head cooling jacket	Model S700 viewing head cooling jacket. Use with vortex coolers.	Vortex coolers	
700DA	Delrin adapter replacement	Delrin adapter replacement for S700 series viewing heads. 1/2 in. NPTF process and 1/4 in. NPTF purge connections.	S700 series viewing heads	
700DA-1	Delrin adapter replacement	Delrin adapter replacement for S700 series viewing heads. 1 in. NPTF process and 1/4 in. NPTF purge connections.	S700 series viewing heads	
700RAA	Model S700/S800 viewing head right angle adapter	Model S700/S800 viewing head right angle adapter. 1/2 in. NPTF to 1/2 in. NPTM connection.		
700UA	Ultem heat insulating adapter	Ultem heat insulating adapter for S700 series viewing heads. 1/2 in. NPTF process and 1/4 in. NPTF purge connections.	S700 series viewing heads	
800ACC	Model S800 viewing head cooling jacket	Model S800 viewing head cooling jacket. Use with vortex coolers.	Vortex coolers	

Material Number	Application	Description	Used With	
800ACC-RING	Adapter ring	Adapter ring to fit 800 viewing head to 700ACC cooling jacket and 700CRLT cable restraint.	800 viewing head to 700ACC cooling jacket and 700CRLT cable restraint	
800DA	Delrin adapter replacement	Delrin adapter replacement for S800 series viewing heads. 1/2 in. NPTF process and 1/4 in. NPTF purge connections.	S800 series viewing heads	
800UA	Ultem heat insulating adapter	Ultem heat insulating adapter for S800 series viewing heads. 1/2 in. NPTF process and 1/4 in. NPTF purge connections.	S800 series viewing heads	
ACC55XBE	Air cooling canister for Model S55XBE viewing heads	Air cooling canister for Model S55XBE viewing heads. 1/4 inch air inlet port. Use with vortex coolers.	Model S55XBE viewing heads; Vortex coolers	
ASY55XBE	Model S55xBE viewing head installation.	Cable Assembly, 50 foot C330S with overmolded S55xBE connector. Includes 50 foot 4 conductor cable with foil/braid shield and coupling nut tied to shield. Use with Model S55xBE Viewing Heads	Model S55xBE Viewing Heads	
ASY55XBE-50	Model S55xBE viewing head installation.	Cable Assembly, 50 foot C330S with overmolded S55xBE connector. Includes 50 foot 4 conductor cable with foil/braid shield and coupling nut tied to shield. Use with Model S55xBE Viewing Heads	Model S55xBE Viewing Heads	
ASY55XBE-100	Model S55xBE viewing head installation	Cable Assembly, 100 foot C330S with overmolded S55xBE connector. Includes 200 foot 4 conductor cable with foil/braid shield and coupling nut tied to shield. Use with Model S55xBE Viewing Heads	Model S55xBE Viewing Heads	
ASY55XBE-200	Model S55xBE viewing head installation.	Cable Assembly, 200 foot C330S with overmolded S55xBE connector. Includes 200 foot 4 conductor cable with foil/braid shield and coupling nut tied to shield. Use with Model S55xBE Viewing Heads	Model S55xBE Viewing Heads	
ASY55XBE-300	Model S55xBE viewing head installation	Cable Assembly, 300 foot C330S with overmolded S55xBE connector. Includes 300 foot 4 conductor cable with foil/braid shield and coupling nut tied to shield. Use with Model S55xBE Viewing Heads	Model S55xBE Viewing Heads	
ASY785	Model S70x/S80x viewing head installation.	Cable Assembly, 50 foot C330S with pre-wired S70x/S80x connector. Includes 50 foot 4 conductor, 22g cable with drain, foil/braid shield and connector housing tied to shield. Use with Model S70x/S80x Viewing Heads	Model S70x/S80x Viewing Heads	
ASY785-200	Model S70x/S80x viewing head installation.	Cable Assembly, 200 foot C330S with pre-wired S70x/S80x connector. Includes 50 foot 4 conductor, 22g cable with drain, foil/braid shield and connector housing tied to shield. Used with Model S70x/S80x Viewing Heads	Model S70x/S80x Viewing Heads	
ASY786	Model S70x/S80x viewing head installation.	Field Wireable Shielded Connector for S70x/S80x Viewing Heads. Used with Model S70x/S80x Viewing Heads	Model S70x/S80x Viewing Heads	

IFM Accessories

Material Number	Application	Description	Used With	
ASYU2S	Cable for U2S Series	Factory molded cable 50 feet (15 m) long with 12 conductors	U2S models only	
ASYU2S-100	Cable for U2S Series	Factory molded cable 100 feet (30 m) long with 12 conductors	U2S models only	
ASYU2S-200	Cable for U2S Series	Factory molded cable 200 feet (60 m) long with 12 conductors	U2S models only	
ASYU2S-300	Cable for U2S Series	Factory molded cable 300 feet (90 m) long with 12 conductors	U2S models only	
C22S	Field extension cable for U2S	12 conductor cable with braided shield for use with all U2S combination DC signal processor and viewing heads. Sold per foot.	U2S models only. Used with -pf models for cable extension.	
C330S	4 Conductor Cable with braided shield for S70x, S80x and S55xBE Viewing heads	4 Conductor Cable with braided shield for all Iris viewing heads	S55xBE, S70x/S80x viewing heads, P522, and P53x signal processors.	
M3204	Vortex air cooler, model 3204.	Vortex air cooler, model 3204 -4SCFM (113SLPM) for maximum refrigeration 275 BTU/HR (69 Kcal/hr)	All cooling jackets	
M3208	Vortex air cooler, model 3208.	Vortex air cooler, model 3208 -8SCFM (227 SLPM) for maximum refrigeration 550 BTU/HR (139 Kcal/hr)	All cooling jackets	
M3210	Vortex air cooler, model 3210.	Vortex air cooler, model 3210 -10 SCFM (283SLPM) for maximum refrigeration 650 BTU/HR (164 Kcal/hr)	All cooling jackets	
M4025	Vortex air cooler, model 4025.	Vortex air cooler, for cabinet model 4025 - maximum refrigeration 1700 BTU/HR (428 Kcal/hr)	For processor cabinet cooling	
M-701-1	Swivel Mount	Swivel mount, 2 in. pipe slip-on to 1 in. NPT connection.	All viewing heads- S70x with DA-1	
M-701-2	Swivel Mount	Swivel Mount, 2" NPT to 1" NPT	All viewing heads- S70X with DA-1	
M-701-2-FLG	Flanged swivel mount	Flanged swivel mount, 2 in. flanged to 1 in. NPTF.	All viewing heads- S70X with DA-1	
M-701-2-SS	Swivel Mount	Swivel mount, 2 in. NPT female to 1 in. NPT female, Stainless steel construction.	All viewing heads- S70X with DA-1	
M-701-3	Flanged swivel mount	Flanged swivel mount, 3-bolt, 4.5 in. flanged to 1 in. NPTF.	All viewing heads- S70X with DA-1	

Material Number	Application	Description	Used With	
M-701-3P	Swivel Mount	Swivel mount, 3 in. NPTF to 1 in. NPTF connection.	All viewing heads- S70X with DA-1	
M-701-4	Swivel Mount	Swivel mount, 2-bolt to 1 in. NPTF connection.	All viewing heads- S70X with DA-1	
M-702-6	Orifice and retaining ring set.	Orifice and retaining ring set. Used for all viewing heads.	Used for all viewing heads.	
PT-GA1	High temperature gasket for 1 in. locking coupler.	High temperature gasket for 1 in. locking coupler.	1 in. locking coupler	
PT-QL1	Quartz lens for 1 in. locking coupler.	Quartz lens for 1 in. locking coupler.	1 in. locking coupler	
R-518-08	Viewing Head S256 Quick Disconnect Plug	Viewing Head S256 Quick Disconnect Plug	WDIII S256 viewing head	
R-518-11	Model S55xBE viewing head installation.	S55xBE Field Wireable Cable with 6-8mm cable bushing for use with C330S cable. Includes Field wireable with proper bushing size to provide IP seal with C330S cable. No shield at connector, less robust version. Used with Model S55xBE Viewing Heads	Model S55xBE viewing head, and C330S cable.	
R-518-12	Heat Block-1" NPT	All viewing heads with 1" NPTF connection	All viewing heads with 1" NPTF connection	
R-518-13	Heat insulating nipple for S70X/S80X series viewing heads.	1/2 in. NPT Ultem heat insulating nipple for S70X/S80X series viewing heads.	S70X/S80X series viewing heads	

IFM Accessories

Material Number	Application	Description	Used With	
R-518-CL12-HTG	Locking coupler	1 in. NPT locking coupler with high temperature gasket. Must be used with R-518-PT12 or R-518-PT12L	All viewing head that has 1" NPTF	
R-518-CL12-PG	Locking quick disconnect/cam and groove coupler adapter	1 in. NPT aluminum locking quick disconnect/cam and groove coupler adapter with 1/2 in. NPT purge. Must be used with R-518-PT12 and R-518-PT12L	All viewing head that has 1" NPTF	
R-518-CL13-HTG	Locking coupler	1/2 in. NPT locking coupler with high temperature gasket. Must be used with R-518-PT13 or R-518-PT13L	All viewing heads that have 1/2" NPTF connection	
R-518-PT12	Insulating locking coupler adapter	1 in. NPT Ultem insulating locking coupler adapter. Used with U2S processor/viewing head.	1 in. NPT Ultem insulating locking coupler adapter use with R-518-CL12-HTG and R-518-CL12PG	
R-518-PT12L	Locking coupler adapter with quartz lens.	1 in. NPT Ultem locking coupler adapter with quartz lens.	1 in. NPT Ultem insulating locking coupler adapter with quartz lens for use with R-518-CL12-HTG and R-518-CL12PG	
R-518-PT13	Locking coupler adapter only.	1/2 in. NPT Ultem insulating locking coupler adapter use with R-518-CL13-HTG and R-518-CL13HTG		
R-518-PT13L	Locking coupler adapter with quartz lens.	1/2 in. NPT Ultem locking coupler adapter with quartz lens.		
UVSOURCE	Testing any UV based system	Ultraviolet light source battery operated	Test for any UV tube based system	

Fiberoptic System

The Fiberoptic System is a configure to order item. Please contact Honeywell Customer Care at (765) 254-1041 for assistance with configuring and placing your order.

Fiberoptics - FASA

5' to 20' fiber optics assembly for IR or UV flame detection, available in 1' increments. Outer carrier assembly for 3" schedule 40 threaded pipe stub w/ 1" NPT purge air inlet and 3' flexible section. Inner carrier assembly w/ quick-disconnect to outer carrier, 1/2" NPT purge air inlet and 3' flexible section. Adapter included for S55xBE/U2S, S70x or S80x viewing heads.

Configurable Options

- Application:
  IR (Glass), UV (Quartz)
- Lens Cartridge:
  Straight Connection, 9° Connection*
- Fiber Optic Length (in feet):
  5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20
- Viewing Head:
  S55x/U2S, S70x, S80x
- Adapter Type:
  Aluminum Y Purge, Delrin Straight, Delrin Y Purge

Note: not all adapter types are available for all viewing heads.

* 9° Connection only available for use in rigid assemblies by special order.

Fiberoptics - FASA-INT

5' to 20' fiber optics assembly for IR or UV flame detection, available in 1' increments. Inner carrier assembly w/ quick-disconnect to outer carrier, 1/2" NPT purge air inlet and 3' flexible section. Adapter included for S55xBE/U2S, S70x or S80x viewing heads. Replacement fiber optic bundles also available (select "No" for Inner Assembly Required).

Configurable Options

- Application:
  IR (Glass), UV (Quartz)
- Inner Assembly Required:
  No, Yes
- Lens Cartridge:
  Straight Connection, 9° Connection*
- Fiber Optic Length (in feet):
  5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20
- Viewing Head:
  S55x/U2S, S70x, S80x
- Adapter Type:
  Aluminum Y Purge, Delrin Straight, Delrin Y Purge

Note: not all adapter types are available for all viewing heads.

* 9° Connection only available for use in rigid assemblies by special order.

Material Number	Application	Description	Used With	
FLEX-HOSE	Hose for fiber optics assembly.	1/2 in. NPT x 36 in. long flex hose for fiber optics assembly.		
FOLC-9C	Fiber optic lens cartridge and coupler	Fiber optic lens cartridge and coupler - 9 degree viewing angle	FASA and FASA-INT	
FOLC-HS	Replacement fiber optic lens cartridge mounting hood/lens housing	Replacement fiber optic lens cartridge mounting hood/ lens housing with 1/2 inch NPT connection.		
FOLC-SC	Fiber optic lens cartridge and coupler	Fiber optic lens cartridge and coupler - straight connection.		

Fiberoptic System

Material Number	Application	Description	Used With	
S550FOAD	Fiber optics adapter viewing head side	Fiber optics adapter for S55XB/S55XBE viewing head and U2S models.	S55XB/S55XBE viewing heads, and U2S models	
S550FOADY-FT	Fiber optics adapter	Fiber optics adapter with air purge connection for all viewing heads with 1" NPT connection	S55XB/S55XBE viewing heads, and U2S models	
S550FOADY-FT-AL	Fiber optics adapter	Fiber optics adapter with air purge connection for all viewing heads with 1" NPT connection	S55XB/S55XBE viewing heads, and U2S models	
S592-OR	Spare Parts for FOLC-SC and FOLC-9C	Metal O-Ring Spare Parts for FOLC-SC and FOLC-9C	FOLC-SC and FOLC-9C	
S592-PC	Spare Parts for FOLC-SC and FOLC-9C	Fiber assembly quartz lens (plano/convex) for FOLC-SC and FOLC-9C	FOLC-SC and FOLC-9C	
S592-PP	Spare Parts for FOLC-SC and FOLC-9C	Plano/Plano window For FOLC-SC and FOLC-9C	FOLC-SC and FOLC-9C	
S592-RR	Spare Parts for FOLC-SC and FOLC-9C	Retainer clip for FOLC-SC and FOLC-9C	FOLC-SC and FOLC-9C	
S700FOAD	Fiber optics adapter	Fiber optics adapter for S70X viewing heads.	Any 1/2" viewing head/ FASA	
S800FOAD	Fiber optics adapter	Fiber optics adapter for S80X viewing heads.	S80X viewing heads	

Honeywell Environmental and Energy Solutions Maintains ISO 9001:2008 Registration

What is ISO?

ISO is the International Organization for Standardization. ISO standards used to apply only to manufacturing, but now can be applied to many types of businesses. This promotes a common standard for accessing systems worldwide.

What does ISO 9001 registration involve?

ISO 9001 is part of the ISO 9000 family. Registration is evidence that a Quality Management System has been put in place to verify that customer requirements are being identified and met. This means that an Organization has demonstrated the capability to define, document, and control the processes that define the product or service being supplied. Continuous improvement is assured through the preventive and corrective actions that result from a comprehensive system of Internal Audits and Agency (3rd party) Audits.

Registration focuses on the concept of companies using a process approach to quality management. ISO requires that companies meet some very specific requirements, which include defining the process used and controls for each level of every process, from design, through delivery of the finished product or service. Systems, procedures and documentation are required for all processes.

Each facility must be registered separately since it is the quality management system of each facility that is registered, not the products that are manufactured by the system.

Characteristics of ISO Compliant Businesses

ISO management system standards provide the organization with a model to follow in setting up and operating the management system. This model incorporates the features on which experts in the field have reached a consensus as representing the international state of the art. A management system, which follows the model - or “conforms to the standard” - is built on a firm foundation of state-of-the-art practices. It is a well-organized operation with trained and motivated people. It continually rethinks how it runs its business and focuses on meeting and exceeding customer specifications through eliminating non-value-added functions.

It welcomes outside auditors who review its processes and ensure continual improvement against a universally recognized standard of performance.

What does Honeywell ISO registration offer you?

It offers the confidence and peace of mind that the Honeywell quality system requires production processes that meet highest standards for consistency and control, which translates to consistent product quality.

Honeywell ISO Registered Facilities

Many of the products described in this catalog are built in ISO registered facilities.

The following facilities are registered under ISO 9001:2008 registered by Quality Management Institute; Certificate # CERT-0067107:

ACS ECC – Golden Valley Facility
1985 Douglas Drive North
Golden Valley, MN 55422-3992
USA
File No: 014498

Honeywell International ACS ECC (West Coast Operations)
2055 Dublin Drive
San Diego, CA 92154-8203
USA
File No: 014499

Honeywell International Manufacturas de Chihuahua S de RL de CV
Avenida Cristobal Colon #11364 Complejo Ind. Chihuahua
Chihuahua, C.P. 31136
México
File No: 014501

Honeywell International ACS ECC (Mexhon)
Mexhon S.A. de C.V. Blvd. Insurgentes No. 8503-2
Tijuana, Baja, CA
México
File No: 014504

Honeywell International Inc., A Delaware Corporation ACS ECC
304 S. Chicago Avenue
Freeport, IL 61032
USA
File No: 014587

Honeywell International Inc., A Delaware Corporation
25 E. Spring Street
Freeport, IL 61032
USA
File No: 014588

Honeywell International Manufacturas de Chihuahua S de RL de CV
Ave. Parque Industrial Juárez #3328
Parque Industrial Juárez
Juárez, Chihuahua 32630
México
File No: 1065696

Order Specification Number System

TYPE LETTER	TYPE NUMBER	SUFFIX LETTER	OS NUMBER
V	4055	A	1007

The type letter is the single letter, or two letter group, which begins the model number. This letter usually indicates the general type of device involved, however, some product model numbers may not follow these designations exactly. If you have questions about a particular product designation, please contact your Honeywell sales representative. A list of type letters used is shown below (some may fit in more than one category):

- A — Testers.
- AT — Transformers.
- BC — Microcomputer burner control system.
- C or CS — Combustion controls; sensors.
- D or DM — Dampers.
- DSP — Demonstrators.
- EL — Lighting controls.
- ER — Energy recovery ventilators.
- F — Electronic air cleaners.
- H — Humidity controls, including combination temperature and humidity controllers.
- L, LA or LS — Limit controllers.
- M — Motors.
- P — Pressure controllers.
- PM — Program modules.
- Q — Accessories.
- QS — Communication interface modules.
- R, RA or RW — Relays.
- RM — Primary controls.
- S — Switches and ignition modules.
- ST — Electronic fan timers.
- SV — Integrated controls.
- T, TA or TS — Thermostats and remote bulb temperature controllers.
- TG — Thermostat guards.
- V, VR, VS or VW — Valves.
- W — Load control panels, accessories.
- Y — Package sets.
- ZM — Software packages.

Summary of Honeywell Control Series Designations

Series Designation	Controller Type	Controller Action	Relay or Valve Type	Motor Action	Example
Series 20	3-wire, low voltage (2-position)	Makes circuit to start; makes second circuit to stop.	—	Low voltage; rotates 180 to open, continues 180 to close; stops on power interruption.	V2045
Series 40	2-wire, line voltage (2-position)	Makes circuit to start; breaks it to stop.	Line voltage coil circuit; makes (opens) when powered; breaks (closes) when power interrupted.	Line voltage; motor drives open when powered; spring returns on power interruption.	T42, L4064, L4008
Series 50	Mechanical (nonelectrical) series.				V5011
Series 60	3-wire, line voltage (2-position)	Makes circuit to start; makes second circuit to stop.	—	Old style—line voltage equivalent to series 20. New style—line or low voltage drives open when powered open; reverses and drives closed when powered closed; stops on power interruption.	M6284
Series 70	Electronic series.				M7285, C7031
Series 80	2-wire, low voltage (2-position)	Makes circuit to start; breaks it to stop.	Low voltage coil circuit; makes (opens) when powered; breaks (closes) when power interrupted.	Low voltage; motor drives open when powered; spring return closed on power interruption.	T87, L8124
Series 90	3-wire, low voltage (modulating)	Varies resistance between common terminal and two end terminals in response to controlled variable.	—	Low voltage; motor modulates position in response to changes in controlled variable signaled by controller.	T921, M9164, W899

Approval Bodies

Most of the devices described in this catalog have been approved or listed by one or more of the approval bodies listed below.

Underwriters Laboratories Inc.

Underwriters Laboratories Inc., is a Limited Liability Corporation (LLC) that examines and tests devices, systems and materials. Its membership represents a broad cross section of industry, education, and government.

Field inspectors for Underwriters Laboratories Inc., do not normally inspect equipment installed on job sites, but restrict their activities entirely to periodic inspections of products coming off manufacturers' assembly lines.

The three general categories of acceptance of a product by Underwriters Laboratories Inc., are:

1. Listing
2. Component Recognition
3. Classification

Listed devices are structurally and functionally complete and suitable for field installation.

Component Recognized devices are incomplete in some way that makes them unsuitable for general field installation. They are intended to be factory installed as part of some other piece of equipment.

Classified devices or products have been evaluated as to specific hazards only.

Underwriters Laboratories of Canada can also provide certification services to Canadian standards, which is displayed as a "c" adjacent to the UL mark (cUL).

CSA - Canadian Standards Association

The Canadian Standards Association is a not-for-profit, membership-based, non-governmental organization which provides a national standardizing body for Canada.

The Canadian Standards Association Testing Laboratories, inaugurated in May 1940, is a division of the Canadian Standards Association, and is recognized as a testing and investigating agency by Inspection Authorities and by Fire Marshals and Fire Commissioners throughout Canada.

The Canadian Standards Association Laboratories test and examine electrical products submitted for approval in compliance with pertinent Canadian Standards Association codes and standards.

The Canadian Standards Association now includes International Approval Services (IAS).

CSA can also provide certification services to UL standards, which is indicated by a "US" adjacent to the CSA mark.

International Approval Services—U.S.

IAS, now part of CSA and no longer known as IAS, is the testing organization of the American gas industry with laboratories in Cleveland, Ohio and Irvine, Calif. The CSA sponsors the American National Standards Institute Z21 and Z83 Committees on standards for gas-fired equipment.

Any manufacturer of gas appliances or gas appliance accessories may submit their products to the Laboratories and secure certification of their designs upon compliance with the appropriate national standards. Upon such compliance, the manufacturer is granted an Appliance Certificate or an Accessory Certificate and is permitted to display the trademarked Laboratories' Certification Seal or trademarked Laboratories' Certification Symbol on the appliance or accessory.

International Approval Services—Canada

IAS, now part of CSA and no longer known as IAS, represents all segments of the Canadian gas industry, has been accredited by the Standards Council of Canada and the Standards Advisory Committee to prepare National Standards in the area of equipment for use with natural gas and propane. CSA has laboratories in Toronto, Canada.

Each standard is intended to be used within the scope of the standard by the manufacturing sector, those applying the equipment or those responsible for its application. It is the responsibility of the user to determine in each case that the standard is suitable for the application.

IAS operates a certification program for gas appliances, equipment, and accessories.

Canadian Gas Association (CGA), is now part of CSA and is no longer known as CGA, although some legacy products still may display the CGA mark.

American Gas Association (AGA) is also now part of CSA and is no longer known as AGA, although some legacy products still may display the AGA mark.

Factory Mutual

Factory Mutual is an association of mutual insurance companies dedicated to loss prevention. Through its research arm, the Factory Mutual Research Corporation, it investigates means of preventing and minimizing fire and other losses. Factory Mutual Laboratories test and approve two broad categories of devices and materials:

1. Those used for the control or prevention of property damage.
2. Those that in themselves would present serious hazards if not properly designed.

Factory Mutual Acceptance refers to a specific installation or arrangement of equipment. Installations using approved devices, if found satisfactory following review of plans and inspection of completed work, are "accepted."

A continuing follow-up program is carried out through periodic plant inspections and reports of performance in actual use.

CE Mark ("Conformité Européene" European Self-Certification mark)

CE marking is mandatory for products covered by one or more Directives. The manufacturer must apply the CE mark and declare conformity to the applicable Directives in order to bring a product on the market in the European Community. CE marking requirements vary from Directive to Directive, and even within Directives.

Some of the Directives (e.g. Gas Appliance Directive) require third party testing by Notified Bodies, in which case a product surveillance contract with a Notified Body is also mandatory. Other Directives can be satisfied by Declarations of Conformity provided by the manufacturer as a result of internal testing and documentation.

C-Tick

The Australian C-Tick mark is intended for use on products that comply with EMC standards. The C-Tick mark is a certification trademark registered to the ACA by the Trademarks Office and is only to be used in accordance with conditions laid down by the ACA (Australian Communications Authority). The C-Tick mark is valid for both countries and may be applied by either a New Zealand supplier or an Australian supplier.

AGA – Australia Gas Association

AGA reviews a product's CE Mark EMC report and/or Declarations and issues a certificate allowing import into Australia and New Zealand.

The approved product will bear the C-Tick mark with the assigned number of the importer.

Reference Information

Date Code

A date code is stamped on each device to identify the date of manufacture.

In October 1975, Honeywell adopted the industry standard date code system of a 4-digit code. The first 2 digits indicate the year; the second 2 digits indicate the week of the year. EXAMPLE: 7812—the last week of March 1978.

For devices manufactured before October 1975, the following date code was used. If the letter "R" is added as a third letter, it indicates a repair date.

A January	G July	H 1962	Z 1970
B February	H August	G 1963	Y 1971
C March	I September	F 1964	X 1972
D April	J October	E 1965	W 1973
E May	K November	D 1966	V 1974
F June	L December	C 1967	U 1975
		B 1968	T 1976
		A 1969	

Terms of Payment and Prices

Contact your local Honeywell TRADELINE Wholesaler or Authorized Distributor for your discount and terms of payment.

Taxes

The amount of any and all present or future taxes or other government charges upon the production, shipment, installation or sale of the equipment covered hereby, including use or occupation taxes, shall be added to the price and paid by the Purchaser; or in lieu thereof, the Purchaser shall furnish the Company with a tax-exemption certificate acceptable to the taxing authorities.

International Controls

Some Honeywell controls are available with Celsius scales and/or at 110/220V, 50 Hz. For information on the availability of these devices, contact:

Commercial/Industrial Combustion Controls
Honeywell International Inc., MN10-181B
1985 Douglas Drive North
Golden Valley, MN 55422-3992

All other controls and systems:
International Marketing MN10-131A
Honeywell International Inc.
1985 Douglas Drive North
Golden Valley, MN 55422-3992

Horsepower Ratings

Ratings of Honeywell controls listed herein are in amperes, and correspond generally to the values for various horsepowers as shown in this chart. Full load ratings are taken from the National Electrical Code, 1978 edition; locked motor ratings are 6 times full load rating (ac) or 10 times full load rating (dc).

All motors do not necessarily come within the maximum ampere ratings shown in the table, and control devices must be used which have a rating equal to, or greater than, the actual motor running and starting currents.

Approximate Horsepower	120V		240V	
	Full Load	Locked Rotor	Full Load	Locked Rotor
1/6 ac dc	4.4 —	26.4 —	2.2 —	13.2 —
1/4 ac dc	5.8 3.1	34.8 31.0	2.9 1.6	17.4 16.0
1/3 ac dc	7.2 4.1	43.2 41.0	3.6 2.0	21.6 20.0
1/2 ac dc	9.8 5.4	58.8 54.0	4.9 2.7	29.4 27.0
3/4 ac dc	13.8 7.6	82.8 76.0	6.9 3.8	41.4 38.0
1 ac dc	16.0 9.5	96.0 95.0	8.0 4.7	48.0 47.0
1 to 1-1/2 ac dc	20.0 13.2	120.0 132.0	10.0 6.6	60.0 66.0
2 ac dc	24.0 17.0	144.0 170.0	12.0 8.5	72.0 85.0
3 ac dc	34.0 25.0	204.0 250.0	17.0 12.2	102.0 122.0

NEMA Standard Classification Code for Flame Safeguard Enclosures

NEMA 1—General purpose. For indoor protection, where conditions are not unusually severe.

NEMA 2—Driptight. Designed to exclude falling moisture or dirt. Particularly applicable to cooling rooms, laundries, etc., where condensation is prevalent. For indoor use.

NEMA 3—Weather Resistant (weatherproof). For outdoor use; designed to withstand all normal exposure to natural elements. Controls mounted on pullout racks for easy access. With rain hood and weather seals.

NEMA 4—Watertight. Withstands water pressure from 1 in. hose nozzle, 65 gallons per minute, from distance of not less than 10 ft. for five minutes. Suitable for maritime applications, breweries, etc.

NEMA 5—Dust-tight. Equipped with dust-tight gaskets. Suitable for mills and other high-dust atmospheres.

NEMA 6—Submersible. For submerged operation under specified pressures and time.

NEMA 7—Hazardous Locations, National Electrical Code Class 1 (circuit breaks in air).

NEMA 8—Hazardous Locations, National Electrical Code Class 1 (circuit breaks immersed in oil).

NEMA 9—Hazardous Locations, National Electrical Code Class 2.

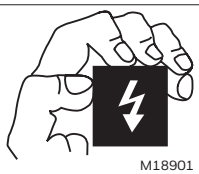
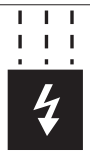
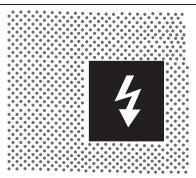
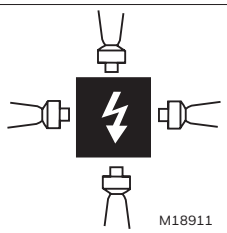
NEMA 10—Explosion-proof. Meets U.S. Bureau of Mines requirements for explosive atmospheres.

NEMA 11—Acid or Fume Resistant. Provides for immersion of enclosed equipment in oil.

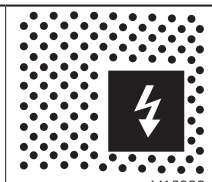
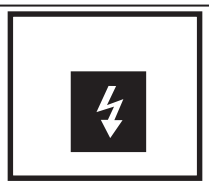
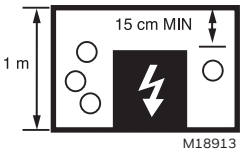
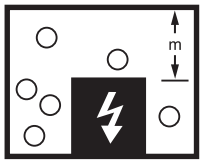
NEMA 12—Industrial Use. Excludes oils, dust, moisture, to satisfy individual requirements.

IP Standard Classification

- The IP classification system is used to indicate the degree of protection provided by the housings of electrical products operating on low and middle voltages (up to 1000 V ~ and 1500 V =).
- A classification consists of the letters IP followed by two digits which indicate conformity with test conditions as defined in the table below.

First Digit			Second Digit		
Protection against Solid Objects			Protection against Water		
IP		Tests	IP		Tests
0	M18900	No special protection	0	M18900	No special protection
1	 M18901	A large surface of the body, such as a hand (but no protection against deliberate access). Solid objects exceeding 50 mm in diameter.	1	 M18907	Dripping water (vertically falling drops) shall have no harmful effect.
2	M18902	Fingers or similar objects not exceeding 80 mm in length. Solid objects exceeding 12 mm in diameter.	2	M18908	Vertically dripping water shall have no harmful effect when the enclosure is tilted at any angle up to 15° from its normal position.
3	M18903	Tools, wires etc., of diameter or thickness greater than 2.5 mm. Solid objects exceeding 2.5 mm in diameter.	3	M18909	Water falling as a spray at an angle up to 60° from the vertical shall have no harmful effect.
4	M18904	Wires or strips of thickness greater than 1.0 mm. Solid objects exceeding 1.0 mm in diameter.	4	M18910	Water splashed against the enclosure from any direction shall have no harmful effect.
5	 M18905	Ingress of dust is not totally prevented by dust does not enter in sufficient quantity to interfere with satisfactory operation of the equipment.	5	 M18911	Water projected by a nozzle against the enclosure from any direction shall have no harmful effect.

Reference Information

First Digit			Second Digit		
Protection against Solid Objects			Protection against Water		
IP		Tests	IP		Tests
6	 M18906	No ingress of dust	6	 M18912	Water from heavy seas or water projected in powerful jets shall not enter the enclosure in harmful quantities.
			7	 M18913	Ingress of water in a harmful quantity shall not be possible when the enclosure is immersed in water under defined conditions of pressure and time.
			8	 M18914	The equipment is suitable for continuous submersion in water under conditions which shall be specified by the manufacturer. NOTE: Normally, this will mean that the equipment is heretically sealed. However with certain types of equipment is can mean that water can enter but only in such a manner that it produces no harmful effects.

Conversion of Pressure Units

(Convert by multiplying value in known pressure units by factor listed under required pressure unit.)

Known Pressure Unit	Required Pressure Unit								
	Kilo-pascals	Pounds per sq in.	Ounces per sq in.	Millimeters of Mercury	Kilograms per sq cm	Inches of Water	Inches of Mercury	Feet of Water	Centimeters of Water
Centimeters of Water	0.0981	0.0142	0.227	0.735	0.000999	0.394	0.0289	0.0328	—
Feet of Water	2.99	0.433	6.94	22.4	0.0305	12.0	0.883	—	30.5
Inches of Mercury	3.39	0.491	7.86	25.4	0.0345	13.6	—	1.13	34.6
Inches of Water	0.249	0.0361	0.578	1.87	0.00254	—	0.0735	0.0833	2.54
Kilograms per sq cm	98.1	14.2	228.0	735.0	—	394.0	29.0	32.8	1000.0
Millimeters of Mercury	0.133	0.0193	0.308	—	0.00136	0.535	0.0394	0.0446	1.36
Ounces per sq in.	0.431	0.0625	—	8.24	0.00439	1.73	0.128	0.144	4.40
Pounds per sq in.	6.89	—	16.0	51.7	0.0703	27.7	2.04	2.31	70.4
Kilo-pascals	—	0.145	2.32	7.52	0.010	4.02	0.295	0.334	10.2

Absolute Pressure = Gauge Pressure +14.74 psi.

Capacities

Most gas capacities listed in this catalog are stated for natural gas, based on 1,000 Btu per cu ft, 0.64 sp. gr. nat. gas, at a pressure drop of 1.0 in. w.c. (37.3 MJ/m^3, 0.64 sp. gr. at a pressure drop of 0.25 kPa).

To calculate the Btu/h capacity for other gases, multiply the listed Btu/h capacity by the conversion factor.

Total Heating Value for Gas X		At sp. gr.	Conversion Factor (multiply)
Btu/cu ft	MJ/m^3		
500 to 800	18.7 to 29.8	0.60	0.516[a]
800 to 950	29.8 to 35.4	0.70	0.765[a]
2500	93.3	1.53 (LP gas)	1.62

[a] Nominal conversion factor for range of total heat value.

For gases not listed in table, use one of the following formulas:

$$\left(\frac{\text{Btu/h Capacity}}{(0.64 \text{ sp. gr.})}\right)\left(\sqrt{\frac{0.64}{\text{sp. gr. gas X}}}\right)\left(\frac{\text{Btu/cu ft (MJ/m}^3\text{ gas X)}}{\text{1000 Btu/cu ft (37.3 MJ/m}^3\text{)}}\right) = \text{Btu/h Capacity gas X}$$

or

$$\left(\frac{\text{Btu/h Capacity}}{(\text{gas A})}\right)\left(\sqrt{\frac{\text{sp. gr. gas A}}{\text{sp. gr. gas B}}}\right)\left(\frac{\text{Btu/cu ft (MJ/m}^3\text{) gas B}}{\text{Btu/cu ft (MJ/m}^3\text{) gas A}}\right) = \text{Btu/h Capacity gas B}$$

M18317

Power & Heat

1 Btu	776 ft-lb 0.293 Watt-hr 252 cal
1 cal	0.003968 Btu 0.0011619 Watt-hr
1 Btu/h	0.293 Watt 4.2 cal/min
1 Watt	3.413 Btu/h
1 Watt-hr	3.413 Btu
1 kW (1000 Watts)	3413 Btu/h
1 kW-hr	3413 Btu
1 hp	0.746 kW 2544.65 Btu/h 33,000 ft-lb./min
1 Bohp[a]	9.809 kW 33,479 Btu/h 34.5 lb of steam per hour

[a] Boiler Output Horsepower is the equivalent of the heat required to evaporate 34.5 lb of water per hour into dry, saturated steam at 212°F.

Btu Contents of Fuels

Grade or Type	Unit	Btu
No. 1 Oil	Gallon	137,400
No. 2 Oil	Gallon	139,600
No. 3 Oil	Gallon	141,800
No. 4 Oil	Gallon	145,100
No. 5 Oil	Gallon	148,800
No. 6 Oil	Gallon	152,400
Nat. Gas	cu ft	950 to 1,150
Propane	cu ft	2,550
Butane	cu ft	3,200

Commercial/Industrial Combustion Conversion Factors

Simplified method of determining combustion air required to completely burn a given amount of fuel.

$$\text{Cf/h Air} = \frac{\text{Btu/hr input}}{100}$$

M18318

To correct gas volume from one set of conditions to another.

$$\frac{P_1 V_1}{T_1} = \frac{P_2 V_2}{T_2}$$

P = Absolute pressure.

= 14.7 + gauge psi.

T = Absolute temperature in -R = 460.

V = Volume in any consistent terms.

Normally useful for determining standard cubic feet of fuel consumed when metering pressure is other than standard; e.g., gas passing through a volumetric gas meter at 5 psig. (The heating value of fuel gases is based on Btu/cf at standard gas conditions.)

Turndown ratio of fixed area burner.

$$\text{T.D.} = \sqrt{\frac{\text{Maximum Pressure Drop across Burner}}{\text{Minimum Pressure Drop across Burner}}} = \frac{\text{Maximum Firing Rate}}{\text{Minimum Firing Rate}}$$

M18319

Where pressure drops are expressed in the same units.

Relationship between flow capacity at a specified pressure drop and C_v factor.

C_v = Flow Factor. Defined as the amount of water at 60°F in gallons per minute which will flow through a valve in the open position with a pressure drop through the valve of 1 pound per square inch.

For capacity conversion to gases the following may be used for pressure ratios less than critical ratios.

$$Q = 1360\, C_v \sqrt{\frac{(P_1 - P_2)\, P_2}{GT}}$$

M18320

Q = Standard cubic feet per hour at 14.7 psia and 60°F.

P_1 = Inlet pressure, psia.

P_2 = Outlet pressure, psia.

T = Absolute temperature in -R = -F+460.

G = Specific gravity of the gas.

Video is a very effective medium to use for both technical training and product familiarization. Many of the programs described here are relatively short and make a nice addition to a service meeting or formal class on HVAC controls. These tapes have been widely used in a number of applications such as:

- *At the distributor's counter* – to help answer questions and show technicians how to use new products
- *At service meetings* – to review new service procedures at the beginning of a season
- *In the classroom* – to provide students with authoritative information direct from the manufacturer

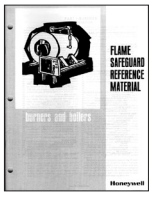
Commercial HVAC Controls

In Control With Solid State

This three-part DVD covers solid state economizer control systems, and features the H705A Enthalpy Controller, the M7415A Actuator, W7459 Economizer Logic Module, C7400 Air Sensor and C7150 Discharge Air Sensor. Separate parts cover Operation (12:00), Installation (15:00), and Checkout and Troubleshooting (8:00). 35:00 **VT34/U** **$15.00**

Training Booklets

Training Booklets



Burners and Boilers

Descriptions of various types of commercial and industrial gas, oil, and coal burners and their operation. Also boilers classified by construction and size. A comprehensive and understandable introduction to the subject. *65 pages* **70-8107** **$9.10**

Orderable in packs of 5 from: http://literature.honeywell.com/

Service Publications

Service Handbooks

Honeywell Service Data Manual

Formerly known as the Service Handbook Library, these manuals have been completely updated and published in a new 8-1/2 x 11 in. format to make even more service information available to technicians working on residential and light commercial heating and air conditioning equipment and controls.

71-97932 **$42.80**

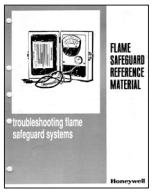
Orderable in packs of 5 from: http://literature.honeywell.com/

- **Gas Controls Service Manual**
  All of the technical data and service information needed to safely and efficiently check and repair gas burner controls systems. Includes combination gas controls manufactured in the last 30 years for furnace, boiler and other heating appliance manufacturers, as well as service replacement controls.
- **Gas Electronic Ignition Controls Service Manual**
  Principles of controlling gas heating equipment including intermittent pilot, direct spark ignition and hot surface ignition. Model numbers and specifications for obsolete as well as currently manufactured controls, with information on making replacements of special models made for equipment manufacturers with universal replacement models available for service work. Includes troubleshooting flowcharts for old and new controls.
- **Oil Controls Service Manual**
  Control of oil burners is undergoing a major change as manufacturers are transitioning from electromechanical and electronic controls to microelectronic oil primary controls. This manual includes information on these controls as well as older devices that have been used for years.
- **Commercial Controls Service Manual**
  Introduction and fundamentals of electric and electronic controls used on commercial packaged and other light commercial equipment. Includes: motors and actuators, linkages, dampers and valves, electromechanical controllers, electronic sensors, electromechanical economizers, electronic solid state economizers, reset systems and fan coil systems.

RA890, R4795 and R7795 Service Handbook

Wiring and checkout, normal operation summary, flame current check, flame simulator, final checkout, service notes and test equipment. *59 pages*

70-8610/U **$1.42**



Troubleshooting Flame Safeguard Systems

Generalized troubleshooting information for the controls used on large burners and boilers. Information on recurring shutdowns, random shutdowns, measuring flame signal. Ten commandments for the burner service person, checking system operation and periodic maintenance. *11 pages*

70-8626 **$17.55**

Orderable in packs of 25 from: http://literature.honeywell.com/

FSG Textbook, “Flame Safeguard Controls: A Honeywell Textbook” 2nd edition
The most comprehensive and popular Flame Safeguard textbook available in our industry. It’s where the beginners begin and where the “Old Pros” return year after year and problem after problem.

Textbook

FSG Textbook, “Flame Safeguard Controls: A Honeywell Textbook”, *362 pages*

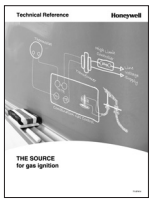
Contents: **71-97558/U** **$22.50**

- *Introduction to Flame Safeguard* – Flame Safeguard functions and controls.
- *Combustion* – explanation of fuel types and flame characteristics.
- *Burners and Boilers* – description of representative burners and boilers.
- *Flame Rod Application* – design and installation of flame rods and rectification systems.
- *Optical Detector Applications* – description, operation, application and checkout of detectors; covering rectifying photocells, infrared, and ultraviolet detectors.
- *Primary Controls* – capabilities and operation of primary controls (RA890, R4795 and R7795) used on smaller burners
- *Programming Controls* – capabilities and operation of programming controls (R4140 and BC7000 Microcomputer Programmable Controls.
- *Troubleshooting FSG Systems* – outlines systematic procedures for isolating common Flame Safeguard problems.
- *Service Equipment* – description and operation of testers, simulators and meters.
- *Auxiliary Equipment* – description, operation, application and checkout of pressure and temperature controllers.
- *Valves and Valve Trains* – description and application of typical Flame Safeguard valves and valve trains.
- *Sizing and Application of Large Gas Valves* – principles and procedures for selecting gas valves (includes selection nomographs).
- *Firing Rate Controls* – covers methods for controlling firing rate, firing rate sequences, programmer switching, motors and valves.
- *Glossary* – Flame Safeguard terminology.

Reference Manuals

These reference manuals are collations of Honeywell publications used to apply, install and service various categories of control products. Combined they represent virtually all of the technical information Honeywell publishes on its residential and light commercial electric and electronic controls.

Reference Manuals



THE SOURCE Reference Material for Gas Ignition

These are the publications used with *The Source* gas ignition technical training program.

- **THE SOURCE Technical Reference**
  A compilation of all the specification data, installation and service publications on Honeywell's residential gas ignition controls such as gas valves, ignition modules and electronic fan timers. *634 pages, 2004*

  71-97414 **$33.69**

Orderable in packs of 5 from: http://literature.honeywell.com/

- **THE SOURCE Class Notes and Lab Exercises**
  Reproductions of the visuals used in *The Source* classroom training program along with the lab exercises that make up Honeywell's popular training program on gas ignition controls. *114 pages, 2003*

  71-97162 **$118.75**

Orderable in packs of 25 from: http://literature.honeywell.com/

The Firing Line

A comprehensive manual designed to facilitate the upgrading and replacement of burner and boiler controls in commercial and industrial applications. Extensive information on approval bodies to explain what type of controls are required to meet various codes. Subjects include how to sell control modernization, how to sell replacement, conversion wiring, handy survey guides and worksheets.

70-8900/U **$125.00**

The Firing Line CD-ROM Version

The CD-ROM version of The Firing Line is a comprehensive reference media designed to facilitate the upgrade/replacement of burner and boiler controls in commercial and industrial applications. *1996*

66-1081/U **$25.00**

Flame Safeguard Reference Manual

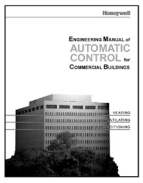
Specification sheet collation on: primary controls, programming controls, gas valves, flame sensors, FSG motors, ignition transformers, pressure controls/limits, reset controls, multiple boiler controls, low water cutoff, and feed water valve.

66-1004/U **$135.00**

7800 Series Burner Control Manual

This manual contains promotional literature, features/functions/benefits, product selection submittal information, programmers, semi-automatic programmers, primaries, semiautomatic primaries, subbases, amplifiers, purge cards, optional components, expanded annunciator, communications, tester, accessories, conversion wiring diagrams, diagnostics, and troubleshooting, and cross references. In 3-ring poly binder.

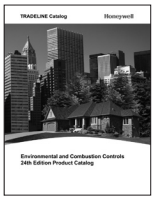
66-1065/U **$55.00**



Engineering Manual of Automatic Control for Commercial Buildings - Soft cover

The 21st edition of this widely used and extremely valuable manual. Now includes direct digital control and operator workstations, as well as other current control technology and strategies. The 500+ pages guide the reader through the fundamentals of control system theory, direct digital control, building management systems and a dozen other disciplines essential to proper environmental control in buildings. In this edition, microprocessor controls are shown in most of the control applications, rather than pneumatic, electric or electronic controls, to reflect the trends in today's industry. Also included is new information on indoor air quality and district heating. Often referred to as the "Gray Manual," this technical resource has been a standard among engineering design professionals since it was first published in 1934. *Revised 1997*

77-1100/U **$24.00**



Honeywell TRADELINE Catalog

Recently updated, this product catalog is an education in itself—over 1,000 pages of specifications and application information on Honeywell's residential, light commercial and burner and boiler controls. Included are Home Control products, Water Control products, Building Control products, Indoor Air Quality Products, Pneumatic Controls and Flame Safeguard Products.

70-8911/U **$7.00**

A lab trainer requires the student to actually perform point-to-point wiring to achieve a properly functioned control system.

Demonstrators

DSP3564 ControLinks™ Demonstrator

The DSP3564 is designed for use in training on the Honeywell ControLinks™ Fuel Air Control System.

DSP3564/U **$1,575.00**

The demonstrator contains the following items:

- One RM7800L1012
- One ST7800A1021
- One R7999A1005
- Four ML7999A1003
- One 1-5K Pot
- Six SPST Toggle Switches
- One R7847A1033
- One Q7800A1005
- One Q7999A1006
- Six Indicator Lights
- One 2-1K Pot
- One Carrying Case with handle (22" x 16" x 6")

DSP3981 ControLinks FAR Configuration Toolkit

The DSP3981 Toolkit includes USB-485 Converter with cable and Connector for ControLinks; ZM Software

DSP3981/U **$2,277.75**

DSP3943 SOLA Demonstrator

The DSP3943 is used as a SOLA commissioning or monitoring tool when a System or Local Operator Interface is not required for operation. The DSP contains the S7999B1026 touchscreen display which uses a wizard-like process to assist you through the commissioning process.

DSP3944/U **$4,791.03**

DSP3980 SOLA Demonstrator

The DSP3980 contains an S7999D1006 Touchscreen Display to commission or monitor the SOLA system when a System or Local Operator Interface is not required for operation. The DSP3980 includes the power supply for operation and cable with connector for the SOLA system. A USB storage drive is provided to save display screen snapshots or trending information.

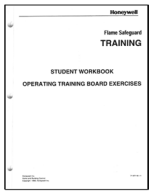
DSP3980/U

Burner and Boiler Controls Demonstrator Instructors Manual

This Manual is the Instructor's version of the Operating Training Board Exercises for the DSP3472.

71-97117 **$66.08**

Orderable in packs of 25 from: http://literature.honeywell.com/



Burner and Boiler Controls Demonstrator Student Workbook

This Manual contains the Operating Training Board Exercises for the student for the DSP3472.

71-97116 **$66.08**

Orderable in packs of 25 from: http://literature.honeywell.com/

Ordering Information

Order online
You can order online at http://customer.honeywell.com
If you are already a Honeywell customer, please login with your name and password. You can then go to the quick order form and fill it out to place your order.

Some products are available through the Print-On-Demand site at http://Literature.honeywell.com

Shipping
All U.S. orders for training materials are shipped freight collect, UPS ground. Please pay with a credit card and the charges will be added to your total.

Expedited Orders
When requested, we will expedite an order and ship by air, but you must pay by credit card and you will be billed for the shipping costs.

International Orders
International orders *MUST be* placed through your local Honeywell subsidiary. They can advise you on ordering and shipping procedures. We cannot accept or ship international orders.

Returns
Returned items are accepted within four months of purchase. There are no cash refunds, and a $30 restocking fee *per item* will be deducted from your credit. You are responsible for return shipping costs. The address for returns is printed on the bill of lading. Please call or fax in advance of your return and provide a list of the items that you are returning and a reason as to why you are returning them.

Form of Payment
For online orders, payment must be made by VISA, MasterCard, or American Express card or a company purchase order.

Inquiries
If it is necessary to contact us regarding your order, please provide the following information:

The date the order was placed, your account number, the web order number (found on the order confirmation) and the reference number.

Contact us at:

Honeywell International Inc.
MN10-131A
1985 Douglas Drive North
Golden Valley, MN 55422
FAX: 800-356-0149
PHONE: 763-954-5720

Note: Please allow 1 to 2 weeks to process and fill your order.

ENVIRONMENTAL AND ENERGY SOLUTIONS WARRANTY POLICY

Honeywell warrants the products in this catalog (except those parts designated on Honeywell's price lists as not covered by this warranty) to be free from defects due to workmanship or materials, under normal use and service, for the following warranty periods.

Sixty (60) months from date of installation

- Prestige®, Prestige® IAQ, Lyric Thermostat, VisionPRO®, Commercial VisionPRO®, CommercialPRO®, FocusPRO®, Wireless FocusPRO®, PRO 4000, PRO 3000, LineVoltPRO™, Digital Round™, and Modern Round ™ (T87K, N) Series Thermostats with a date code of 0501 or later
- Air Cleaners, Humidifiers, Ventilators, Ultraviolet Treatment and Zoning products with a date code of 0501 or later, excluding replacement maintenance parts
- Indoor air quality products F50, F52, F300, F200, F150, UV100E, HE225, HE265, HE365, with date codes of 0452 or earlier, excluding replacement maintenance parts
- MS, MN and fast acting 2-position Direct Coupled Actuators
- JADE economizer when used with Honeywell sensors and actuators
- AquaPUMP circulating pump
- C7189R RedLINK Wireless Indoor Air Sensor
- C7061 UV Detector

Sixty (60) months from date of manufacture

- Access and Video Systems power supplies

Thirty-six (36) months from date of shipment

- Variable frequency drive devices (VFD) and accessories

Thirty-six (36) months from date of installation

- AUBE branded thermostats, timers, and switches

Twenty-four (24) months from date of installation

- SuitePRO thermostats
- PRO 2000 and PRO 1000 thermostats
- Other Honeywell indoor air quality and zoning products with a date code of 0452 or earlier, unless otherwise specified
- AQ2000 Aquatrol panels and AQ1000 thermostats
- RedLINK Entry/Exit Remote
- RedLINK Vent Boost Remote

Twenty-four (24) months from date of manufacture

- Pan-Tilt-Zoom Domes for Access and Video Systems

Eighteen (18) months from date of shipment,

- All WEBs building automation and security parts, unless specified otherwise (warranty replacement parts will be warranted for 90 days or the balance of the original warranty period, whichever is longer)

Twelve (12) months from date of installation

- Water Solutions products
- Other Honeywell thermostats and thermostats with a date code of 0452 or earlier, unless specified otherwise
- RedLINK Wireless Outdoor Air Sensor
- RedLNK Portable Comfort Control
- RedLINK Internet Gateway

Twelve (12) months from date of shipment

- Building automation security accessories

Twelve (12) months from date of manufacture

- Keyboards, Controllers and other Access and Video System accessories.

Ninety (90) days from date of manufacture

- IR Halogen bulbs for Access and Video Systems

The warranty period for all other products is twelve (12) months from date of installation.

If a product is defective due to workmanship or materials, is removed within the applicable warranty period, and is returned to Honeywell in accordance with the procedure described below, Honeywell will, at its option, either repair, replace or credit the customer for the purchase price of the product, in accordance with the procedure described below. This warranty extends only to persons or organizations who purchase products in this catalog for resale.

The expressed warranty above constitutes the entire warranty of Honeywell with respect to the products in this catalog and IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL HONEYWELL BE RESPONSIBLE FOR ANY CONSEQUENTIAL DAMAGES OF ANY NATURE WHATSOEVER.

INSTRUCTIONS—INSTALLING OR SERVICING CONTRACTOR OR DEALER

When replacing a Honeywell product under warranty, including those products furnished on original heating and/or cooling equipment, you should rely on your local Honeywell Wholesaler or Distributor for prompt and efficient product replacement service.

No warranty claim for product replacement or credit will be honored by Honeywell without a completed return authorization form or a manual return authorization form issued by Honeywell Customer Care.

INSTRUCTIONS—WHOLESALER OR DISTRIBUTOR

The following will apply to the return of any product to Honeywell under this warranty, except any products which are not variable frequency drives or WEBS and are:

i. identified with a Honeywell Return Authorization Form (obtained from the B2B website at Customer.Honeywell.com)
ii. display the Return Authorization Form number and return address label on the outside of the return carton. Make sure a copy of the form is enclosed in the return carton
iii. packed separately from other returns and protected from shipping damage;
iv. have certification by the installer or servicing dealer that the product was removed, due to failure, within the applicable warranty period;
v. are received transportation pre-paid at the facility listed on the shipping and/or packing slip.
vi. and are found by Honeywell's inspection to be defective in workmanship or materials under normal use and service

will be handled in accordance with one of the two following procedures, as specified by the customer making the return.

1. CREDIT PROCEDURE. Honeywell will issue credit, at Honeywell's lowest wholesaler net price in effect at the time of the return (as set forth on Honeywell's then current price sheet) or at the actual invoice amount if a copy of that invoice is attached to the packing list. (TRADELINE Replacement Exchange Products will be at Honeywell's lowest replacement exchange net price in effect at the time of such return, as shown on Honeywell's then current price sheet.) Honeywell reserves the right to disallow this credit option in cases of warranty abuse.
2. REPLACEMENT PROCEDURE. Warranty replacement procedure must be used for in-warranty emergency replacement orders. Customer will not be credited for items not meeting warranty criteria as outlined by policy. Please return the defective item to the address listed on the return authorization form.

List Water Solutions products on a separate Return Goods Order form, marked "Water Solutions".

All new and unused VBN control ball valves MUST be approved by your Honeywell sales representative before returned.

WEBs return products must be processed through WEBs Customer Care. Defective hardware products under warranty have to be returned to Tridium in Richmond, VA. Security Access and Video products must have prior authorization.

All VFD warranty return products must be coordinated through the Commercial Components Hotline (1-888-516-9347 option 4) staff and VFD Warranty and Repair Program Coordinator (ECC-VFD Coordinator). All VFD warranty returns must have prior authorization and must be returned to the specified Honeywell VFD Service Center.

The warranty will not be honored if:

i. product is damaged or missing parts or accessory items including batteries.
ii. product exhibits evidence of field misapplications.

Final disposition of any warranty claim will be determined solely by Honeywell. If inspection by Honeywell does not disclose any defect covered by the warranty, the product will be returned or scrapped as instructed by the customer and Honeywell's regular service charges will apply. Products returned to the customer may be sent shipping charges collect.

If you have any questions relative to product returns to Honeywell, contact your Customer Care Representative:

Honeywell International Inc.
Customer Care MN10-131A
1985 Douglas Drive
Golden Valley, MN 55422
1-888-793-8193

SPECIAL MESSAGE TO INDUSTRIAL USERS AND BUILDING OWNERS

Thank you for using Honeywell products.

As a user, when you purchase a Honeywell product from this catalog you should expect performance from the product and, if it fails, replacement of the product by the installing dealer.

Typically, you will have purchased a Honeywell product under the following circumstances:

1. To modernize or refurbish your existing commercial and/or process control system.
2. You have purchased new commercial and/or process heating, cooling, air cleaning or humidification equipment that is furnished with Honeywell controls or components (refer to your owner's manual furnished with the equipment).
3. A control has failed on your existing commercial and/or process heating and/or cooling equipment and is replaced by a Honeywell TRADELINE product.

With few exceptions, you utilize the services of a competent plumbing, heating and/or cooling dealer/contractor for new or replacement work performed.

Although our warranty does not extend to you, Honeywell does extend a warranty to your supplier. Your supplier can rely on its local Honeywell Wholesaler/Distributor or Honeywell for prompt replacement.

If you have any questions, need additional information or would like to comment on Honeywell's products or services, please write or phone:

Honeywell International Inc.
Customer Care MN10-131A
1985 Douglas Drive North
Golden Valley, MN 55422-4386
1-888-793-8193

or check your telephone directory (white pages) for one of many Honeywell field sales offices.

For More Information

The Honeywell Thermal Solutions family of products includes Honeywell Combustion Safety, Honeywell Combustion Service, Eclipse, Exothermics, Hauck, Kromschröder and Maxon. To learn more about our products, visit ThermalSolutions.honeywell.com or contact your Honeywell Sales Engineer.

Honeywell Process Solutions
Honeywell Thermal Solutions (HTS)
1250 West Sam Houston Parkway
South Houston, TX 77042

ThermalSolutions.honeywell.com

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