7800 Series Product Selection Matrix

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

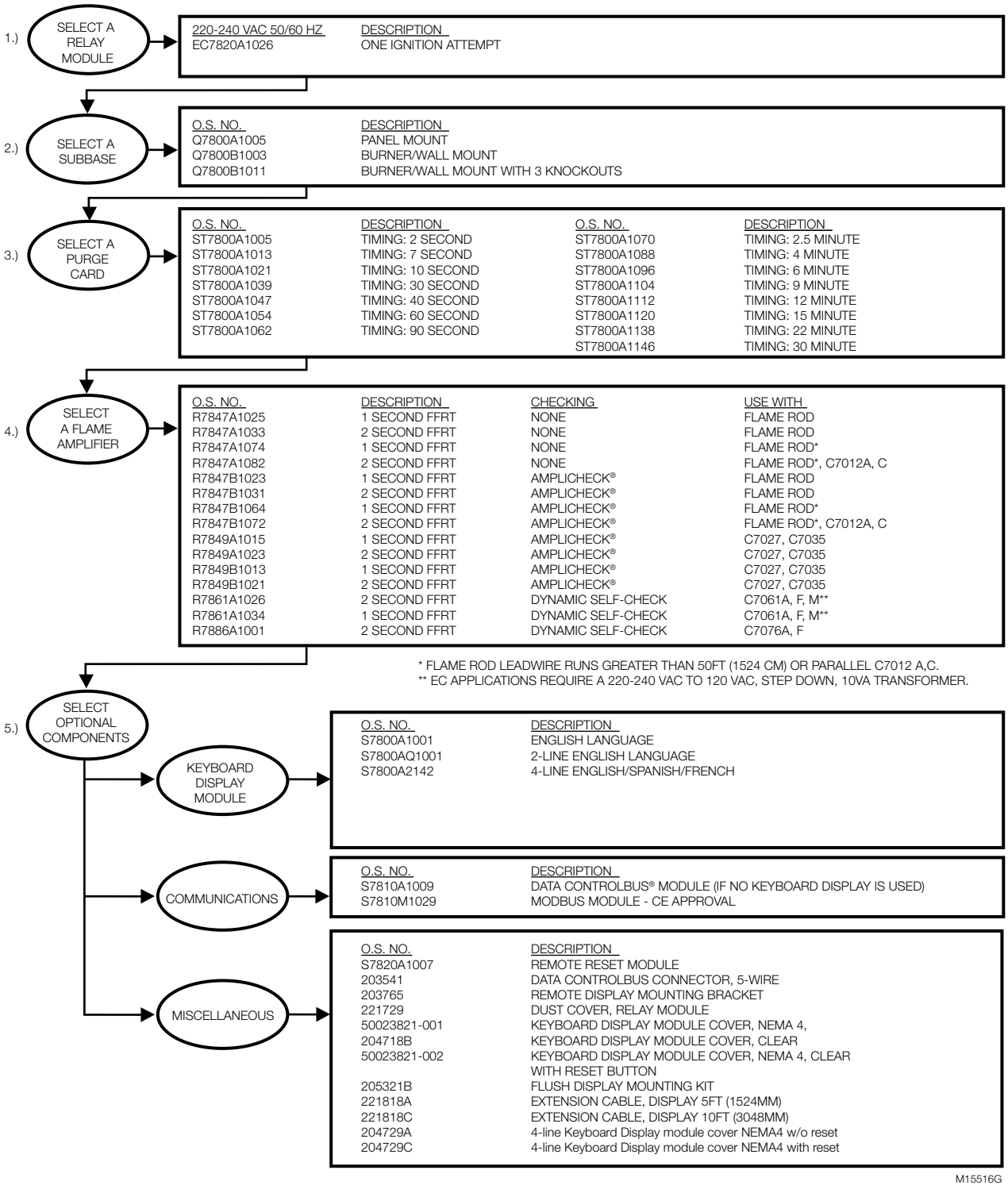
Use the following pages to select the following *required* devices:
Relay Module, 1 per burner
Subbase, 1 per relay module
Purge Timer Card, 1 per relay module
Flame Amplifier, 1 per relay module

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.

7800 Series Product Selection Matrix

PRODUCT SELECTION MATRIX FOR EC7820 PROGRAMMER RELAY MODULES:



1.) SELECT A RELAY MODULE

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

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	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.

5.) SELECT OPTIONAL COMPONENTS

KEYBOARD DISPLAY MODULE

O.S. NO.	DESCRIPTION
S7800A1001	ENGLISH LANGUAGE
S7800AQ1001	2-LINE ENGLISH LANGUAGE
S7800A2142	4-LINE ENGLISH/SPANISH/FRENCH

COMMUNICATIONS

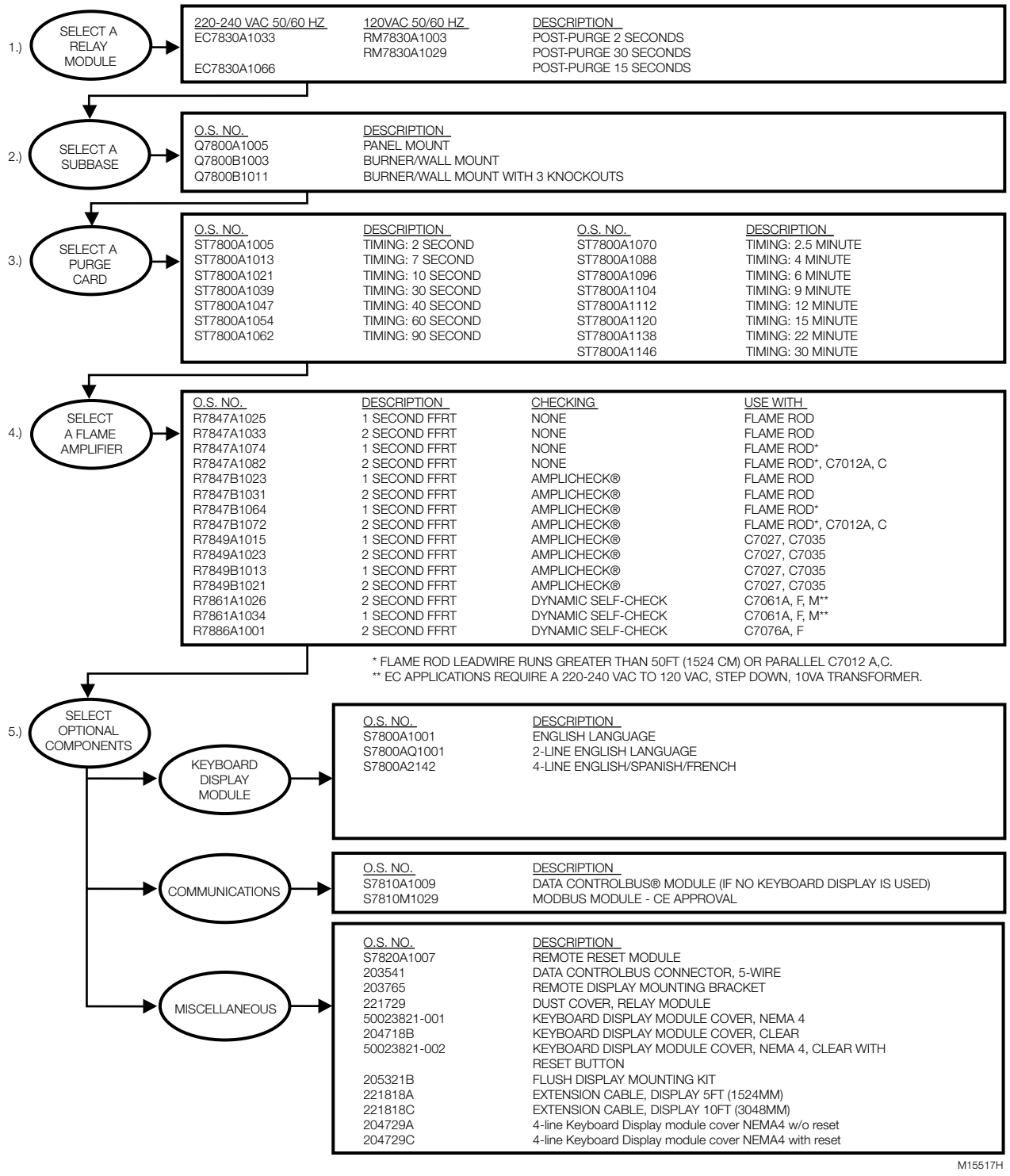
O.S. NO.	DESCRIPTION
S7810A1009	DATA CONTROLBUS® MODULE (IF NO KEYBOARD DISPLAY IS USED)
S7810M1029	MODBUS MODULE - CE APPROVAL

MISCELLANEOUS

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)
204729A	4-line Keyboard Display module cover NEMA4 w/o reset
204729C	4-line Keyboard Display module cover NEMA4 with reset

M15516G

PRODUCT SELECTION MATRIX FOR EC/RM7830 PROGRAMMER RELAY MODULES:



220-240 VAC 50/60 HZ	120VAC 50/60 HZ	DESCRIPTION
EC7830A1033	RM7830A1003	POST-PURGE 2 SECONDS
	RM7830A1029	POST-PURGE 30 SECONDS
EC7830A1066		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
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
S7800AQ1001	2-LINE ENGLISH LANGUAGE
S7800A2142	4-LINE ENGLISH/SPANISH/FRENCH

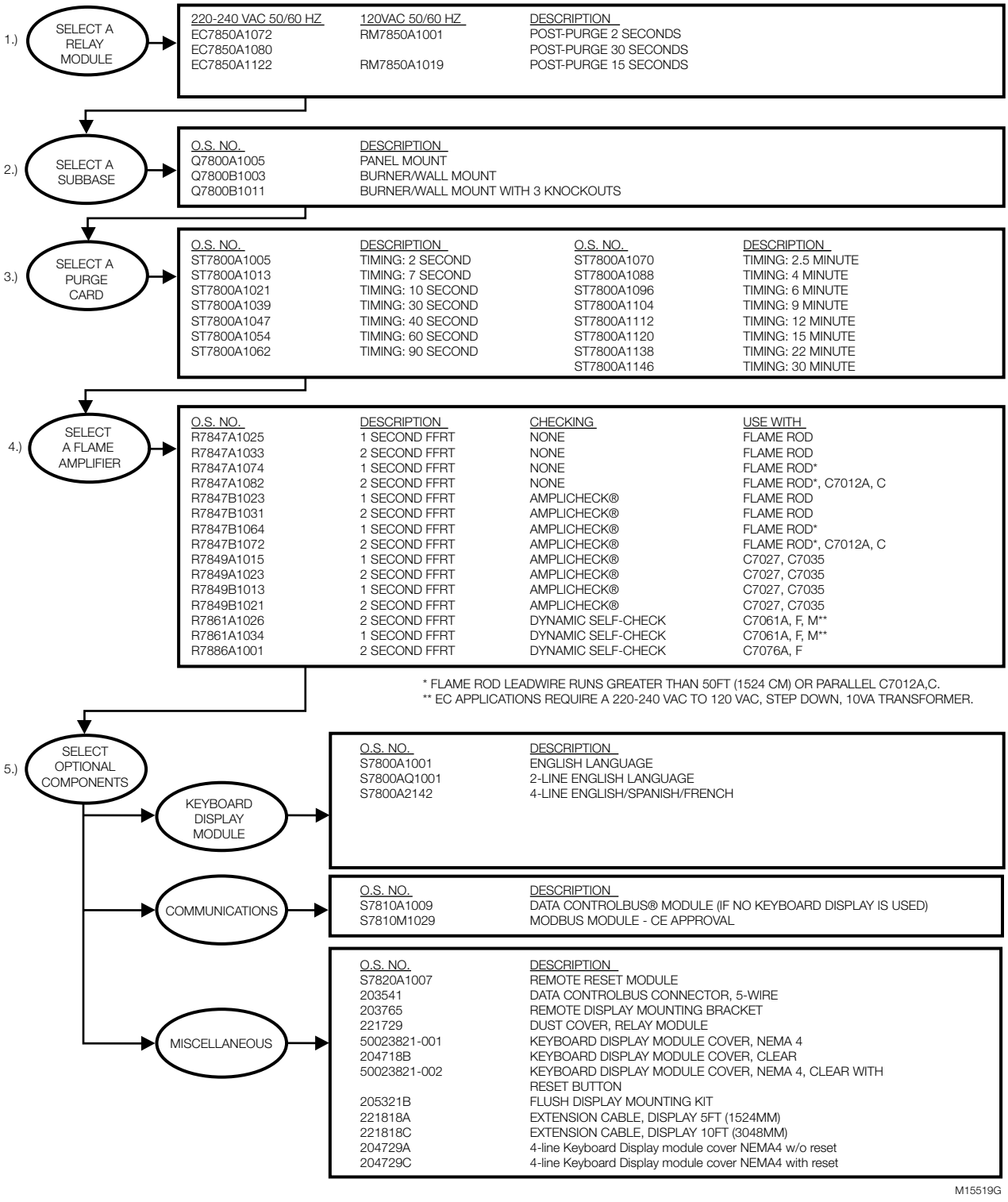
O.S. NO.	DESCRIPTION
S7810A1009	DATA CONTROLBUS® MODULE (IF NO KEYBOARD DISPLAY IS USED)
S7810M1029	MODBUS MODULE - CE APPROVAL

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)
204729A	4-line Keyboard Display module cover NEMA4 w/o reset
204729C	4-line Keyboard Display module cover NEMA4 with reset

M15517H

7800 Series Product Selection Matrix

PRODUCT SELECTION MATRIX FOR EC/RM7850 PROGRAMMER RELAY MODULES:



220-240 VAC 50/60 HZ	120VAC 50/60 HZ	DESCRIPTION
EC7850A1072	RM7850A1001	POST-PURGE 2 SECONDS
EC7850A1080		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
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 C7012A,C.
** EC APPLICATIONS REQUIRE A 220-240 VAC TO 120 VAC, STEP DOWN, 10VA TRANSFORMER.

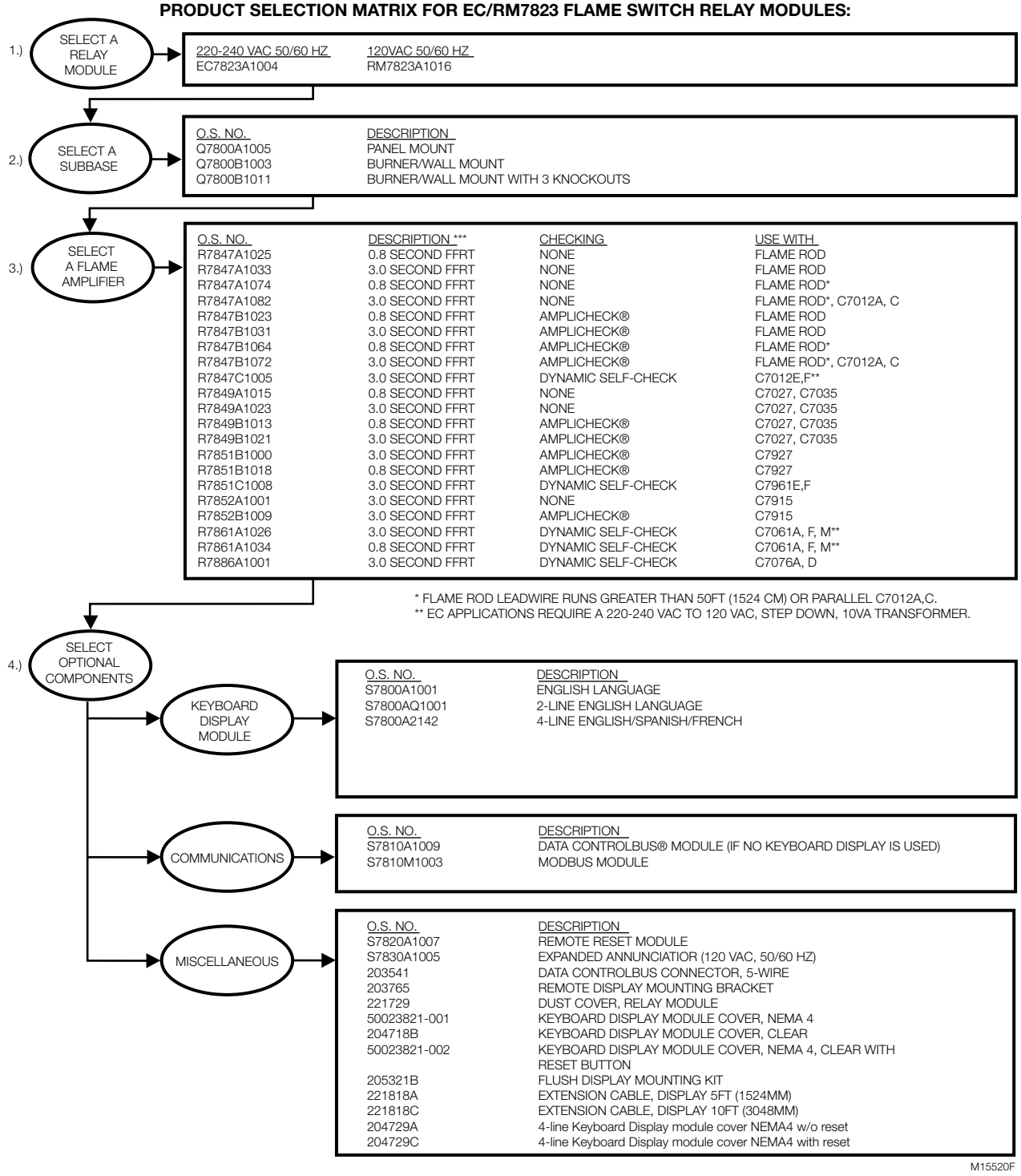
O.S. NO.	DESCRIPTION
S7800A1001	ENGLISH LANGUAGE
S7800AQ1001	2-LINE ENGLISH LANGUAGE
S7800A2142	4-LINE ENGLISH/SPANISH/FRENCH

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)
204729A	4-line Keyboard Display module cover NEMA4 w/o reset
204729C	4-line Keyboard Display module cover NEMA4 with reset

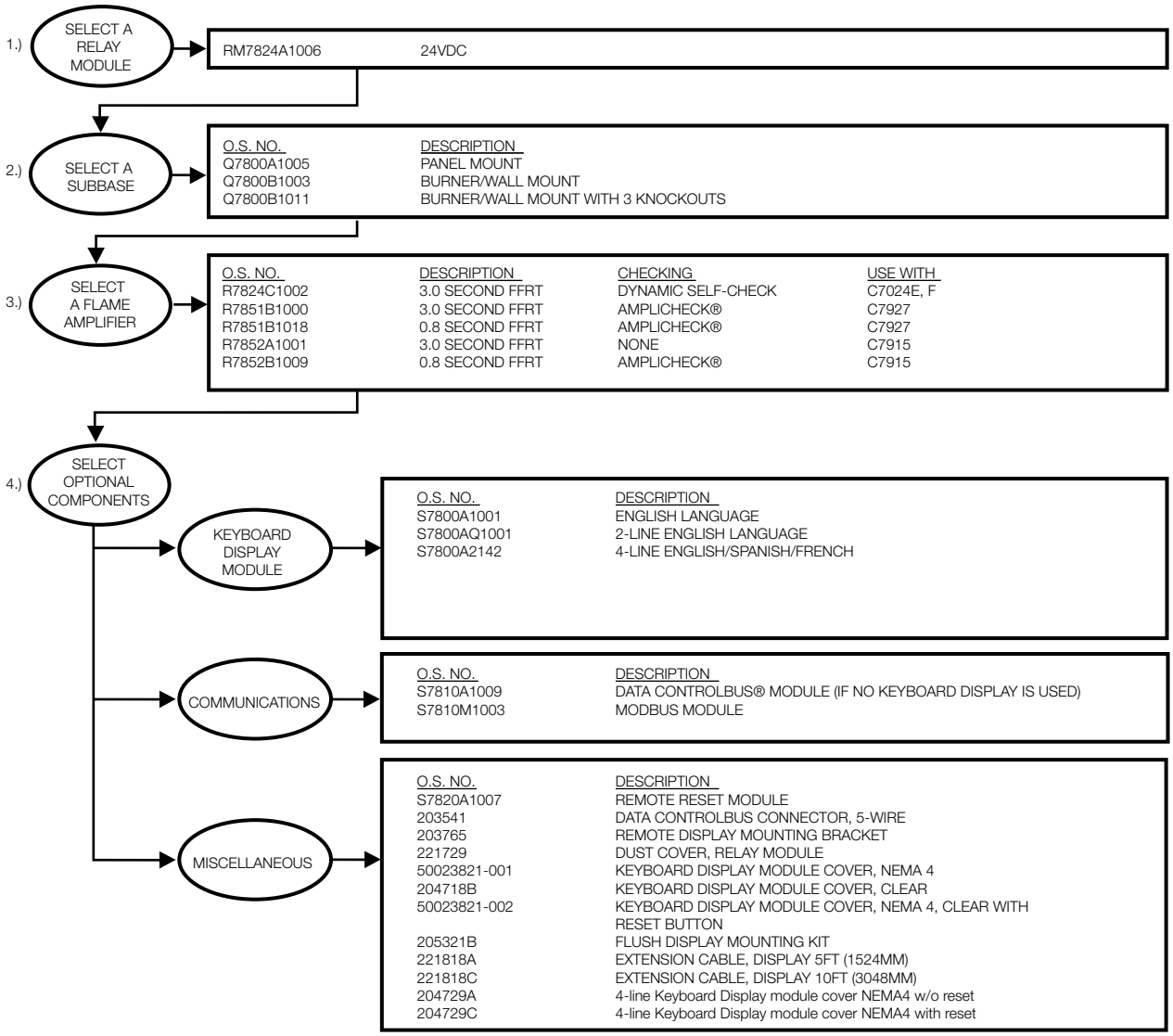
M15519G

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

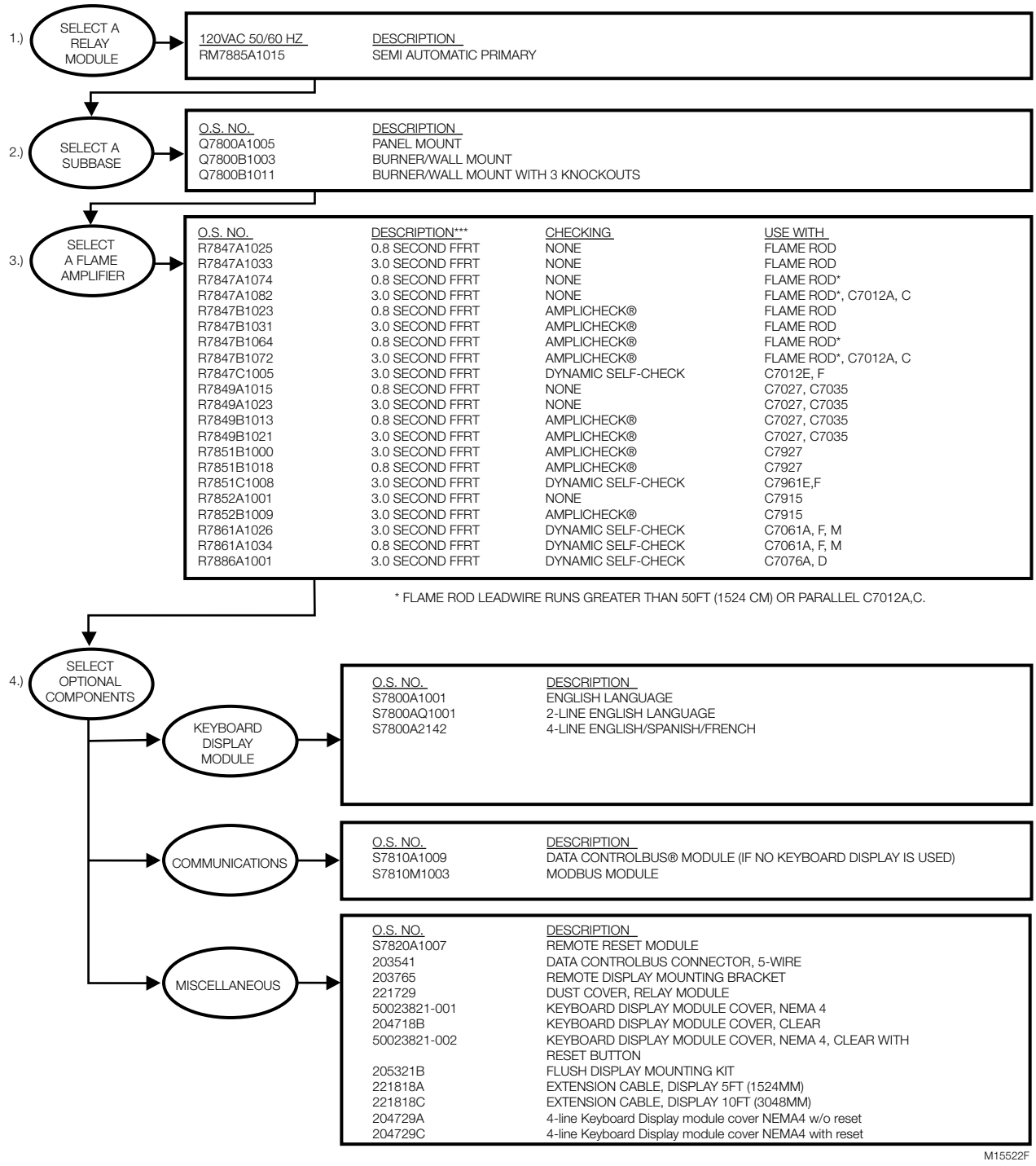


7800 Series Product Selection Matrix

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

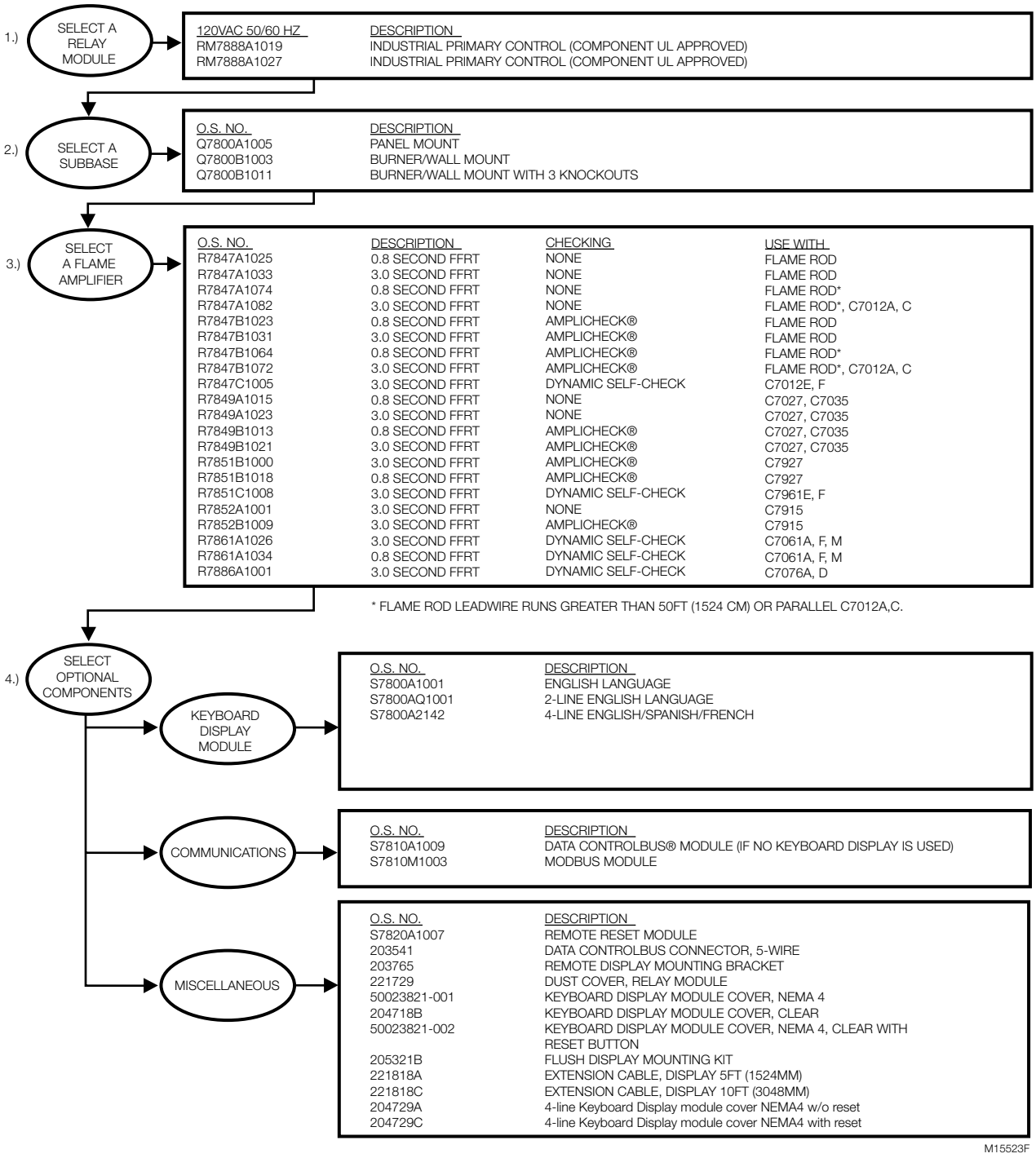


PRODUCT SELECTION MATRIX FOR RM7885 MANUAL START PRIMARY RELAY MODULES:

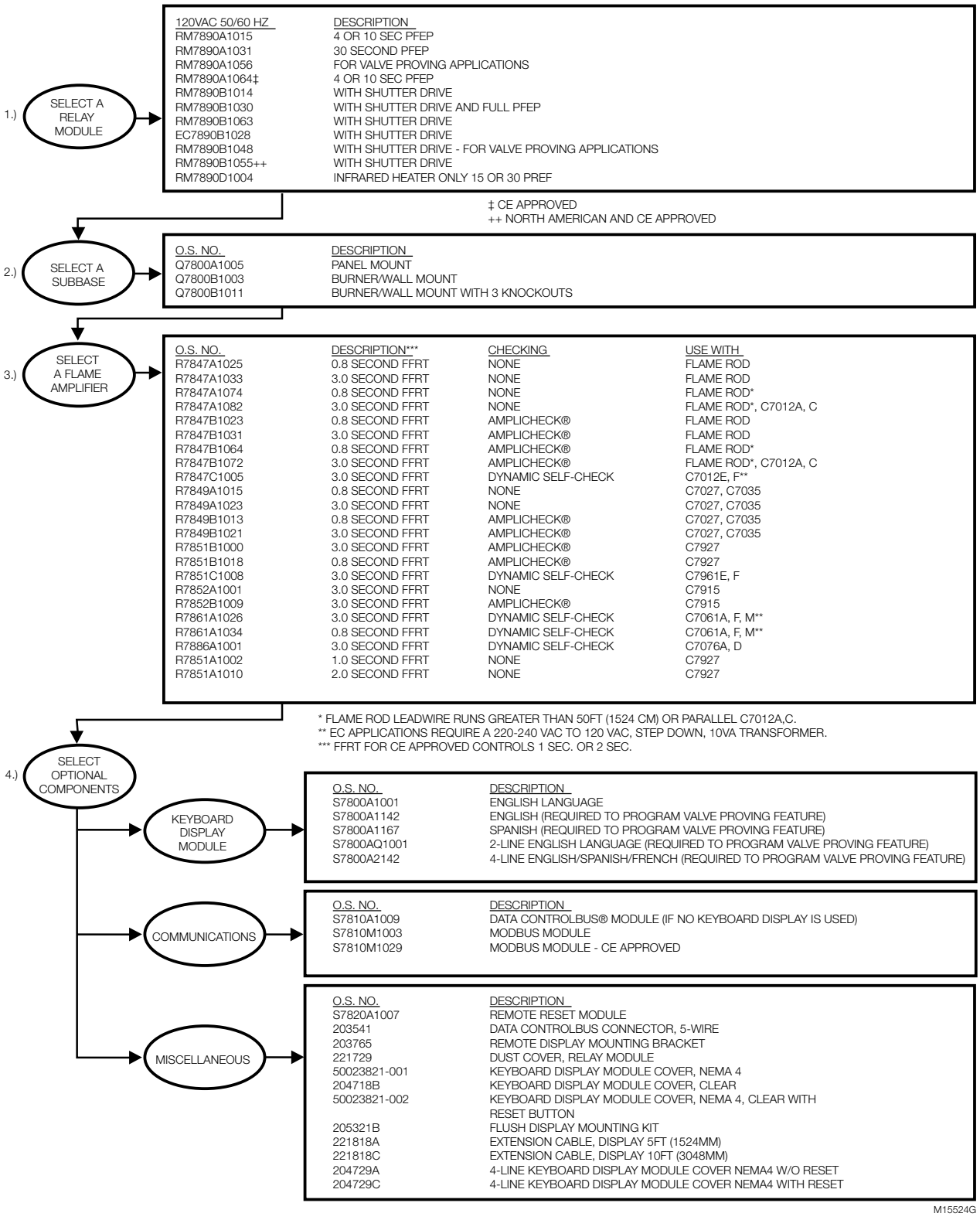


7800 Series Product Selection Matrix

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



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



120VAC 50/60 HZ	DESCRIPTION
RM7890A1015	4 OR 10 SEC PFEP
RM7890A1031	30 SECOND PFEP
RM7890A1056	FOR VALVE PROVING APPLICATIONS
RM7890A1064‡	4 OR 10 SEC PFEP
RM7890B1014	WITH SHUTTER DRIVE
RM7890B1030	WITH SHUTTER DRIVE AND FULL PFEP
RM7890B1063	WITH SHUTTER DRIVE
EC7890B1028	WITH SHUTTER DRIVE
RM7890B1048	WITH SHUTTER DRIVE - FOR VALVE PROVING APPLICATIONS
RM7890B1055++	WITH SHUTTER DRIVE
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
R7851B1018	0.8 SECOND FFRT	AMPLICHECK®	C7927
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
R7851A1002	1.0 SECOND FFRT	NONE	C7927
R7851A1010	2.0 SECOND FFRT	NONE	C7927

* 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
S7800A1142	ENGLISH (REQUIRED TO PROGRAM VALVE PROVING FEATURE)
S7800A1167	SPANISH (REQUIRED TO PROGRAM VALVE PROVING FEATURE)
S7800AQ1001	2-LINE ENGLISH LANGUAGE (REQUIRED TO PROGRAM VALVE PROVING FEATURE)
S7800A2142	4-LINE ENGLISH/SPANISH/FRENCH (REQUIRED TO PROGRAM VALVE PROVING FEATURE)

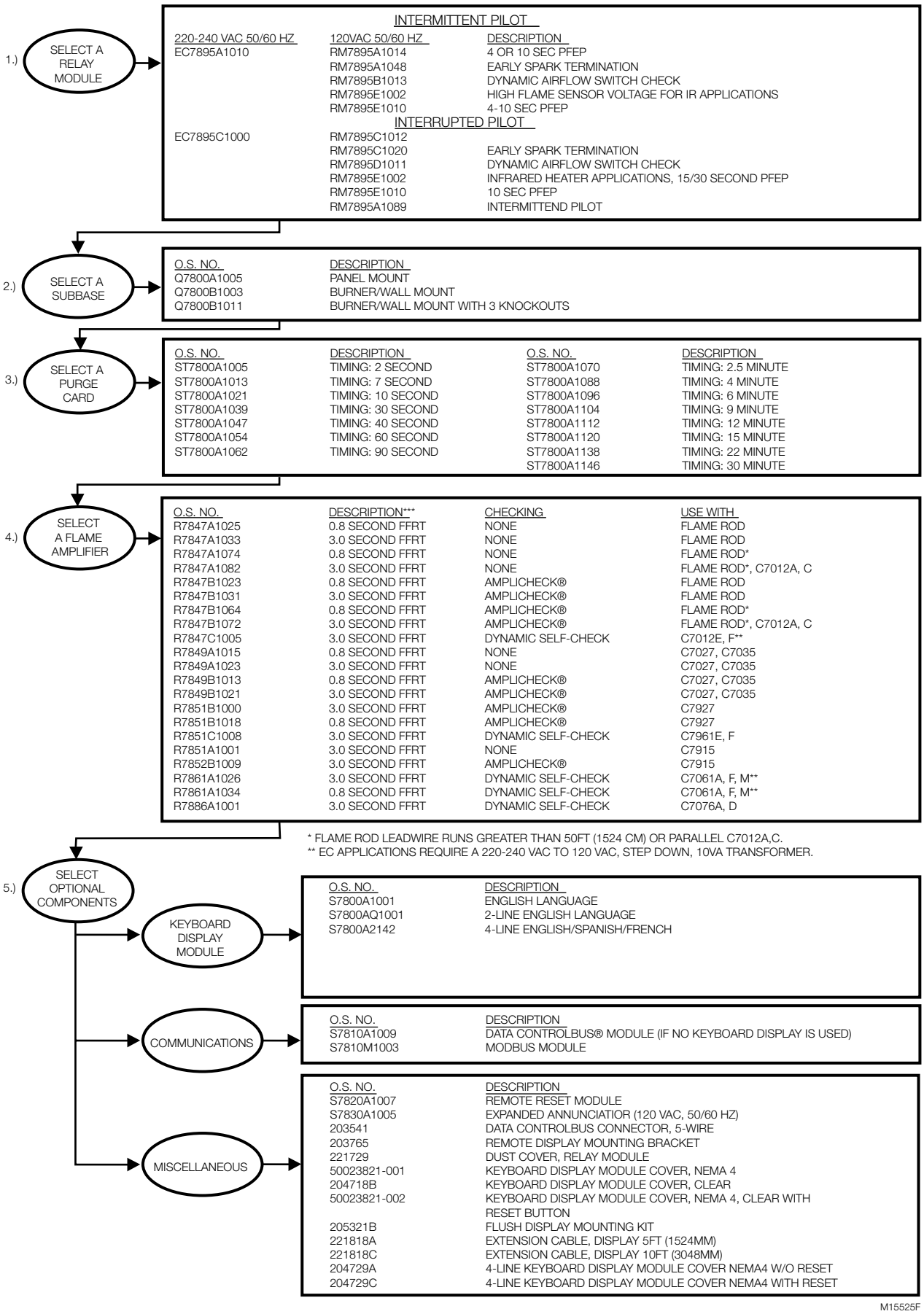
O.S. NO.	DESCRIPTION
S7810A1009	DATA CONTROLBUS® MODULE (IF NO KEYBOARD DISPLAY IS USED)
S7810M1003	MODBUS MODULE
S7810M1029	MODBUS MODULE - CE APPROVED

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)
204729A	4-LINE KEYBOARD DISPLAY MODULE COVER NEMA4 W/O RESET
204729C	4-LINE KEYBOARD DISPLAY MODULE COVER NEMA4 WITH RESET

M15524G

7800 Series 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	4 OR 10 SEC PFEP
	RM7895A1048	EARLY SPARK TERMINATION
	RM7895B1013	DYNAMIC AIRFLOW SWITCH CHECK
	RM7895E1002	HIGH FLAME SENSOR VOLTAGE FOR IR APPLICATIONS
	RM7895E1010	4-10 SEC PFEP
		INTERRUPTED PILOT
EC7895C1000	RM7895C1012	
	RM7895C1020	EARLY SPARK TERMINATION
	RM7895D1011	DYNAMIC AIRFLOW SWITCH CHECK
	RM7895E1002	INFRARED HEATER APPLICATIONS, 15/30 SECOND PFEP
	RM7895E1010	10 SEC PFEP
	RM7895A1089	INTERMITTEND PILOT

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
R7851B1018	0.8 SECOND FFRT	AMPLICHECK®	C7927
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
S7800AQ1001	2-LINE ENGLISH LANGUAGE
S7800A2142	4-LINE ENGLISH/SPANISH/FRENCH

COMMUNICATIONS

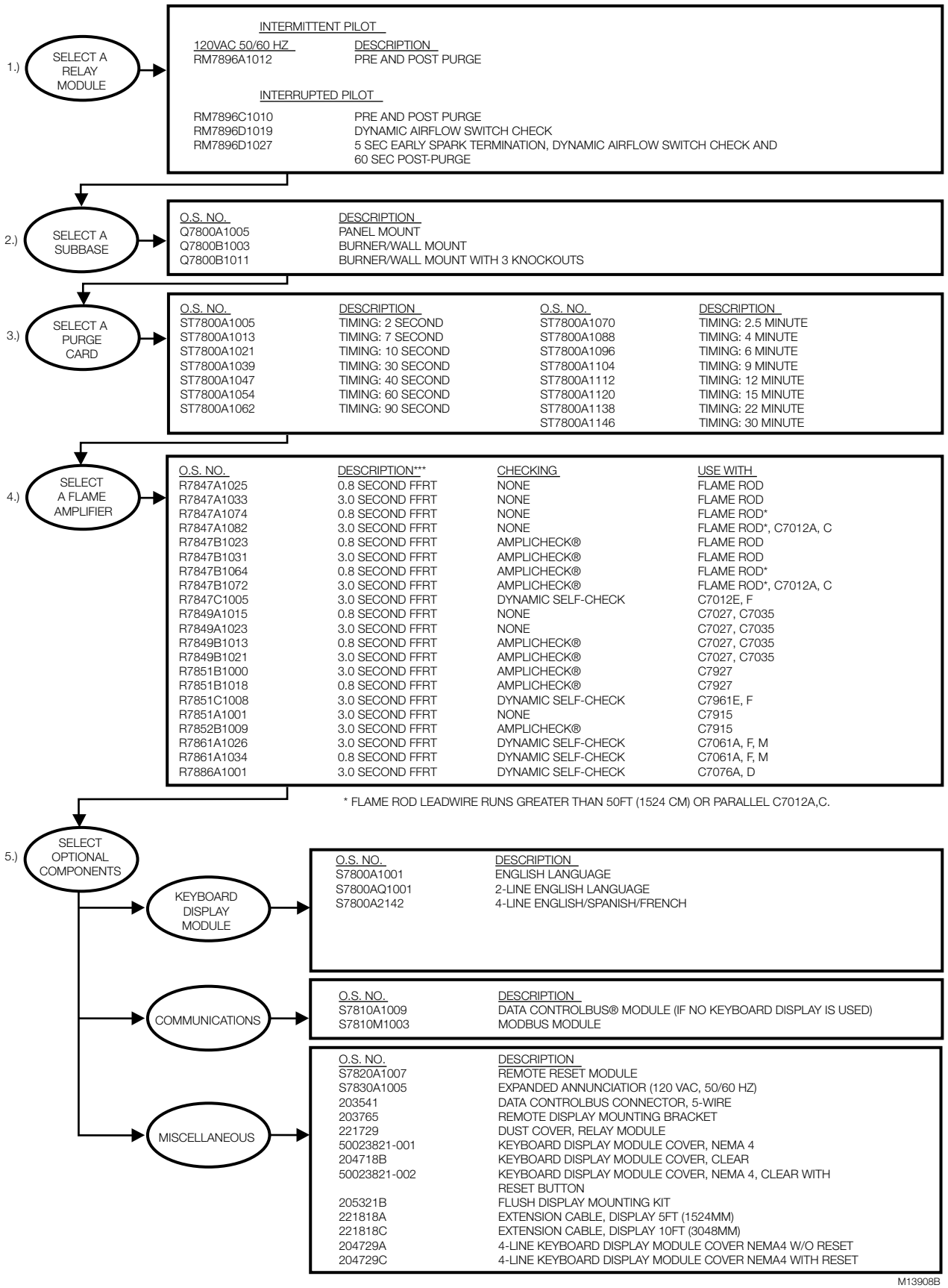
O.S. NO.	DESCRIPTION
S7810A1009	DATA CONTROLBUS® MODULE (IF NO KEYBOARD DISPLAY IS USED)
S7810M1003	MODBUS MODULE

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)
204729A	4-LINE KEYBOARD DISPLAY MODULE COVER NEMA4 W/O RESET
204729C	4-LINE KEYBOARD DISPLAY MODULE COVER NEMA4 WITH RESET

M15525F

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



1.) SELECT A RELAY MODULE

INTERMITTENT PILOT

120VAC 50/60 HZ	DESCRIPTION
RM7896A1012	PRE AND POST PURGE

INTERRUPTED PILOT

RM7896C1010	PRE AND POST PURGE
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
R7851B1018	0.8 SECOND FFRT	AMPLICHECK®	C7927
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
S7800AQ1001	2-LINE ENGLISH LANGUAGE
S7800A2142	4-LINE ENGLISH/SPANISH/FRENCH

COMMUNICATIONS

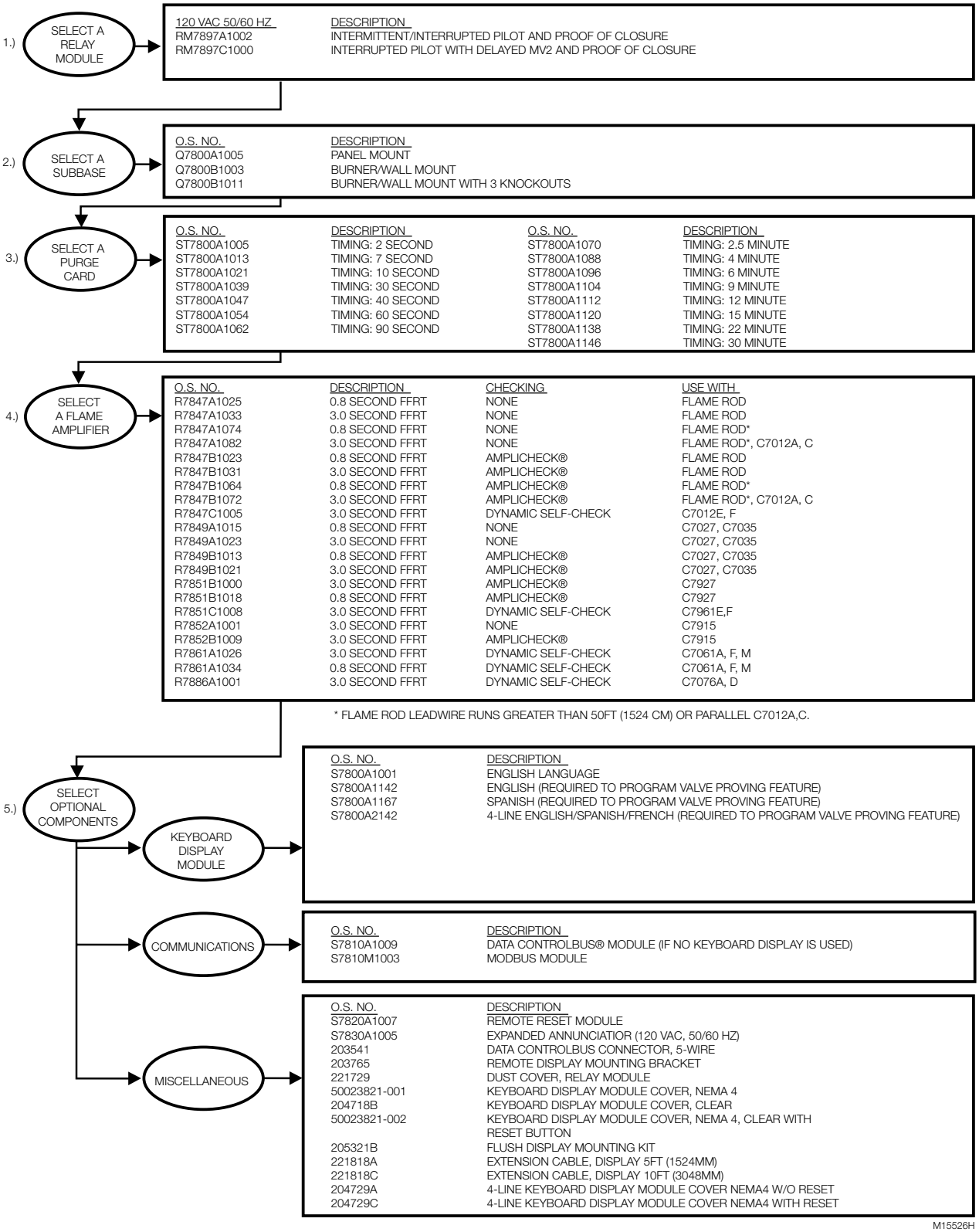
O.S. NO.	DESCRIPTION
S7810A1009	DATA CONTROLBUS® MODULE (IF NO KEYBOARD DISPLAY IS USED)
S7810M1003	MODBUS MODULE

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)
204729A	4-LINE KEYBOARD DISPLAY MODULE COVER NEMA4 W/O RESET
204729C	4-LINE KEYBOARD DISPLAY MODULE COVER NEMA4 WITH RESET

M13908B

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

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
R7851B1018	0.8 SECOND FFRT	AMPLICHECK®	C7927
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.

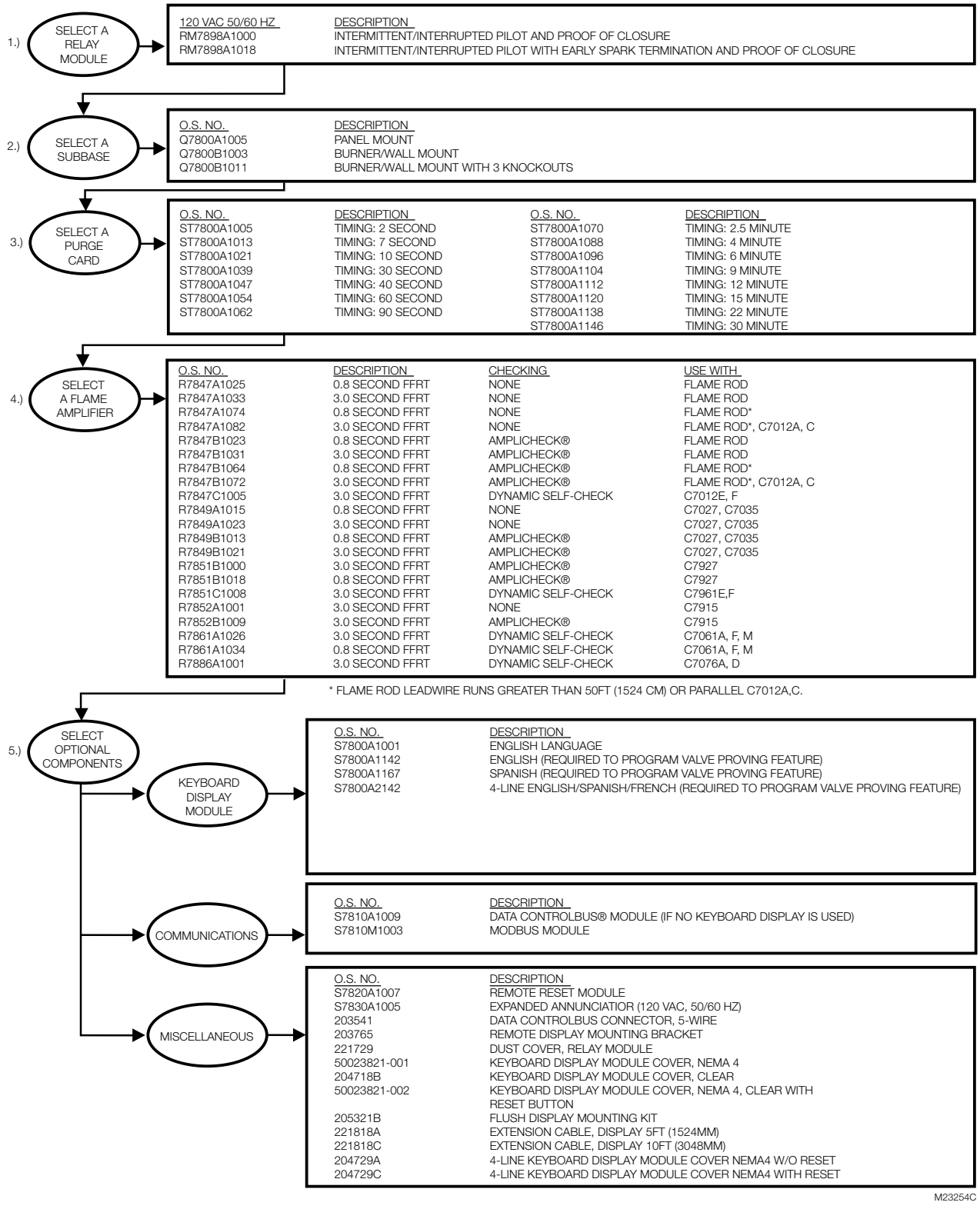
O.S. NO.	DESCRIPTION
S7800A1001	ENGLISH LANGUAGE
S7800A1142	ENGLISH (REQUIRED TO PROGRAM VALVE PROVING FEATURE)
S7800A1167	SPANISH (REQUIRED TO PROGRAM VALVE PROVING FEATURE)
S7800A2142	4-LINE ENGLISH/SPANISH/FRENCH (REQUIRED TO PROGRAM VALVE PROVING FEATURE)

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)
204729A	4-LINE KEYBOARD DISPLAY MODULE COVER NEMA4 W/O RESET
204729C	4-LINE KEYBOARD DISPLAY MODULE COVER NEMA4 WITH RESET

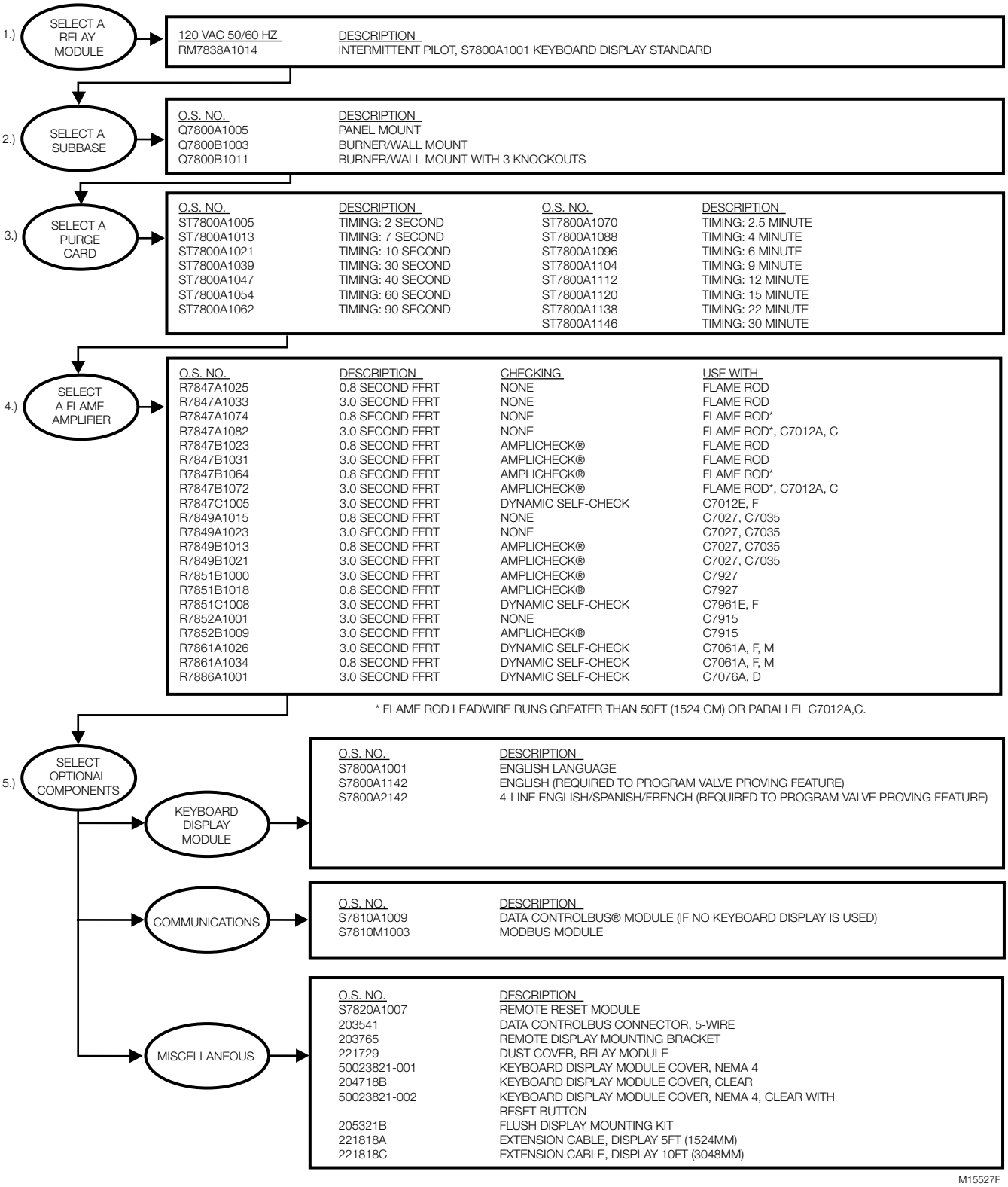
M15526H

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



7800 Series 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
R7851B1018	0.8 SECOND FFRT	AMPLICHECK®	C7927
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.

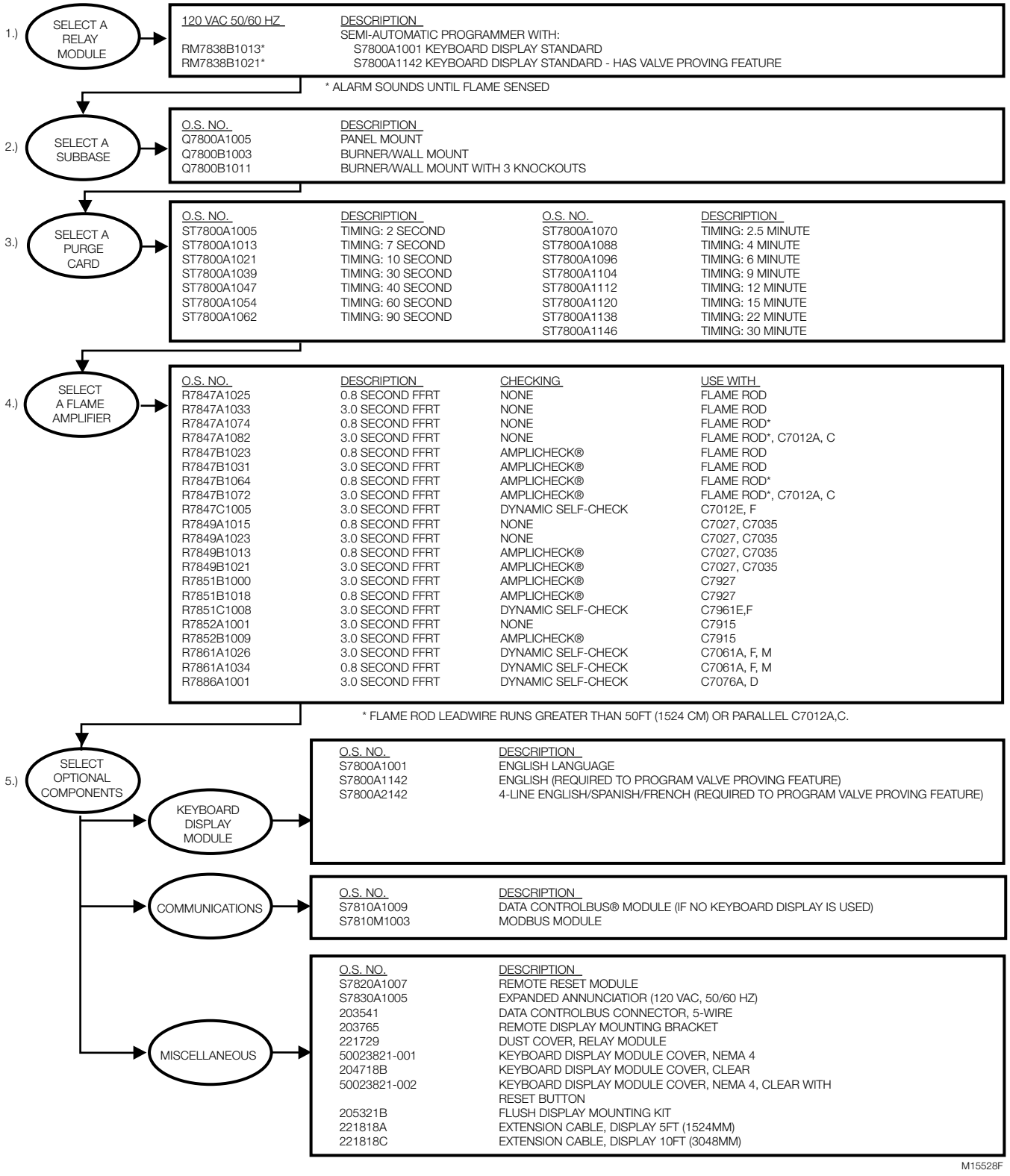
O.S. NO.	DESCRIPTION
S7800A1001	ENGLISH LANGUAGE
S7800A1142	ENGLISH (REQUIRED TO PROGRAM VALVE PROVING FEATURE)
S7800A2142	4-LINE ENGLISH/SPANISH/FRENCH (REQUIRED TO PROGRAM VALVE PROVING FEATURE)

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
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

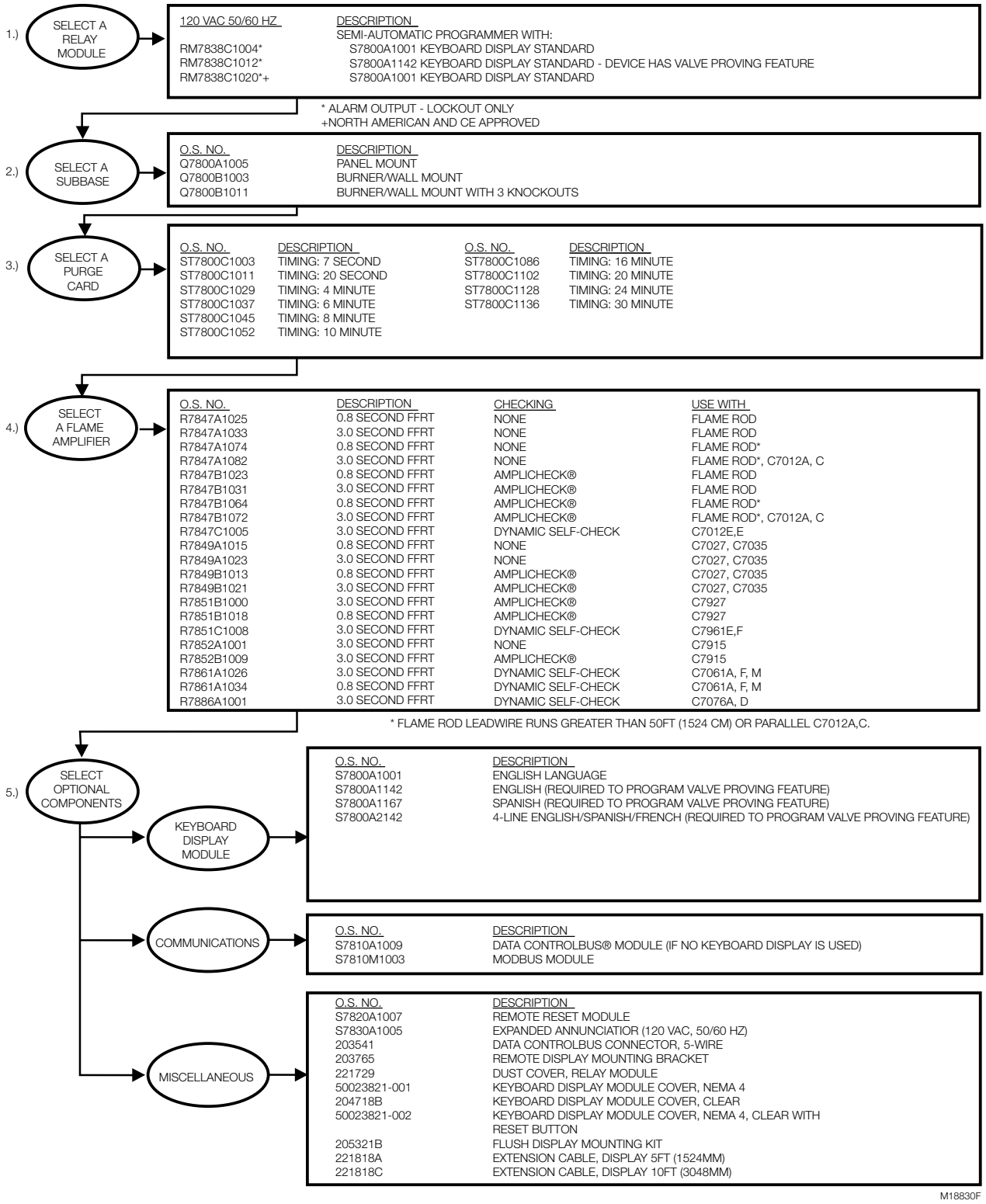
PRODUCT SELECTION MATRIX FOR RM7838B MANUAL START INDUSTRIAL PROGRAMMER RELAY MODULE:



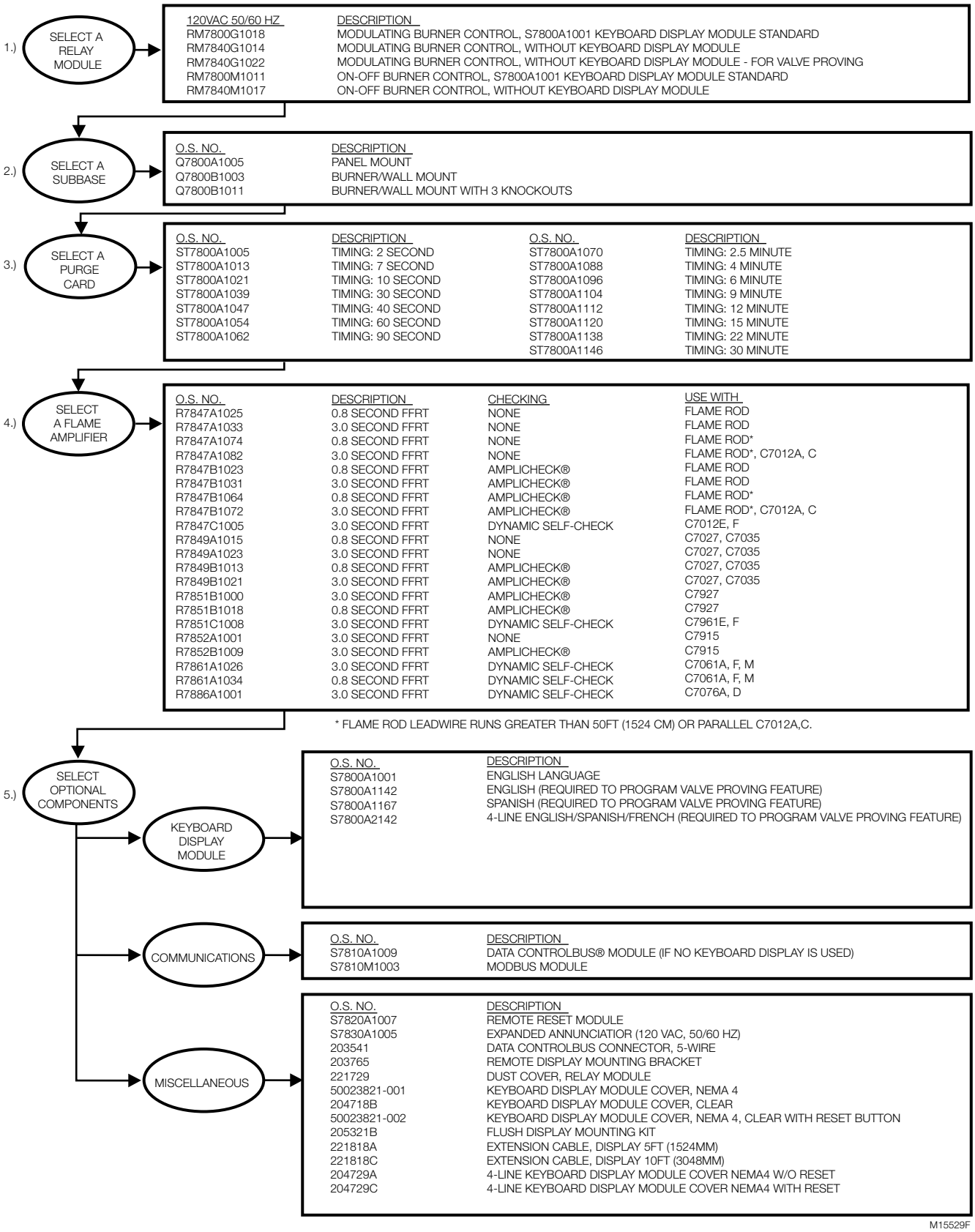
M15528F

7800 Series 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:



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

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
R7851B1018	0.8 SECOND FFRT	AMPLICHECK®	C7927
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
S7800A1142	ENGLISH (REQUIRED TO PROGRAM VALVE PROVING FEATURE)
S7800A1167	SPANISH (REQUIRED TO PROGRAM VALVE PROVING FEATURE)
S7800A2142	4-LINE ENGLISH/SPANISH/FRENCH (REQUIRED TO PROGRAM VALVE PROVING FEATURE)

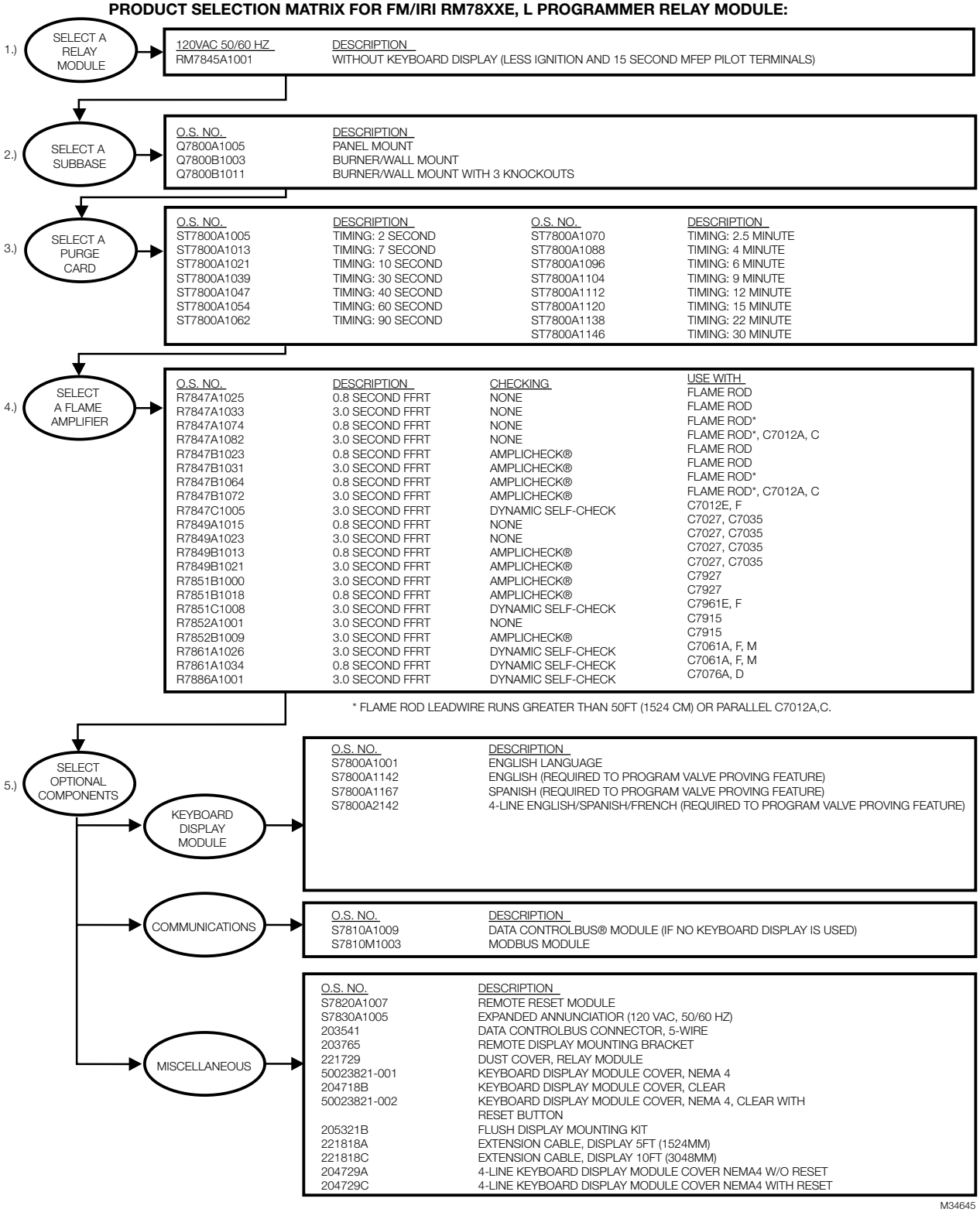
O.S. NO.	DESCRIPTION
S7810A1009	DATA CONTROLBUS® MODULE (IF NO KEYBOARD DISPLAY IS USED)
S7810M1003	MODBUS MODULE

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)
204729A	4-LINE KEYBOARD DISPLAY MODULE COVER NEMA4 W/O RESET
204729C	4-LINE KEYBOARD DISPLAY MODULE COVER NEMA4 WITH RESET

M15529F

7800 Series 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
R7851B1018	0.8 SECOND FFRT	AMPLICHECK®	C7927
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
S7800A1142	ENGLISH (REQUIRED TO PROGRAM VALVE PROVING FEATURE)
S7800A1167	SPANISH (REQUIRED TO PROGRAM VALVE PROVING FEATURE)
S7800A2142	4-LINE ENGLISH/SPANISH/FRENCH (REQUIRED TO PROGRAM VALVE PROVING FEATURE)

COMMUNICATIONS

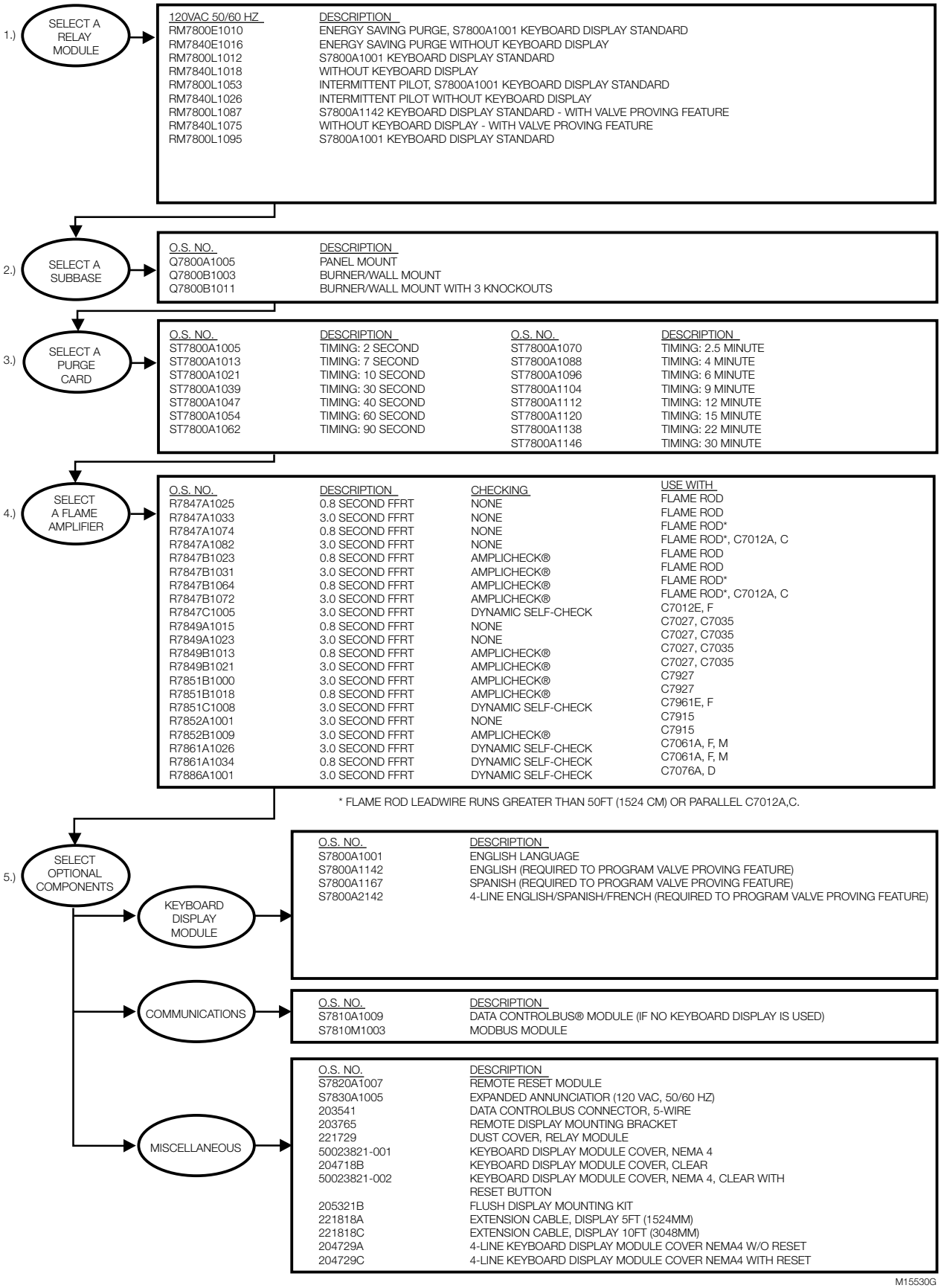
O.S. NO.	DESCRIPTION
S7810A1009	DATA CONTROLBUS® MODULE (IF NO KEYBOARD DISPLAY IS USED)
S7810M1003	MODBUS MODULE

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)
204729A	4-LINE KEYBOARD DISPLAY MODULE COVER NEMA4 W/O RESET
204729C	4-LINE KEYBOARD DISPLAY MODULE COVER NEMA4 WITH RESET

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
RM7800L1095	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
R7851B1018	0.8 SECOND FFRT	AMPLICHECK®	C7927
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
S7800A1142	ENGLISH (REQUIRED TO PROGRAM VALVE PROVING FEATURE)
S7800A1167	SPANISH (REQUIRED TO PROGRAM VALVE PROVING FEATURE)
S7800A2142	4-LINE ENGLISH/SPANISH/FRENCH (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)
204729A	4-LINE KEYBOARD DISPLAY MODULE COVER NEMA4 W/O RESET
204729C	4-LINE KEYBOARD DISPLAY MODULE COVER NEMA4 WITH RESET

M15530G

7800 Series Product Selection for legacy and competitor 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

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).*

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.

REPLACEMENT 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:

Commercial/Industrial Combustion Controls

7800 Series Burner Controls

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.

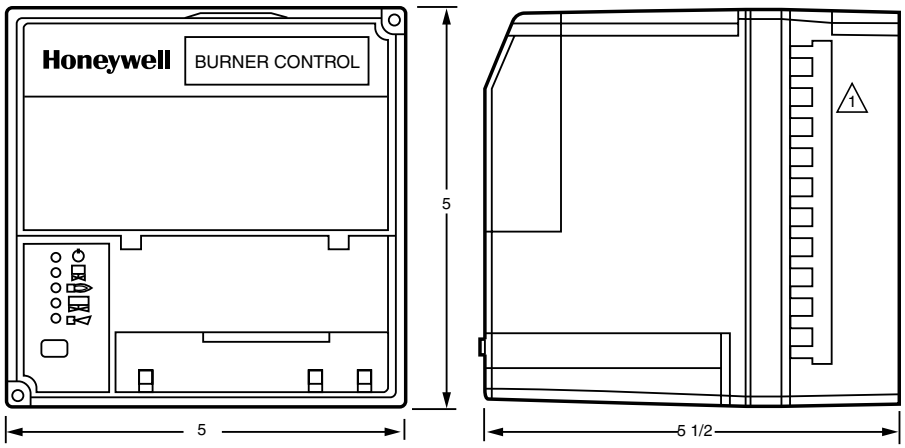
- Access for external electrical voltage checks.
- Application flexibility and communication interface capability.
- Five LEDs provide sequence information.
- Five function Run/Test Switch. Interchangeable plug-in amplifiers.
- Local or remote annunciation of operation and fault information (optional).
- 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

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.

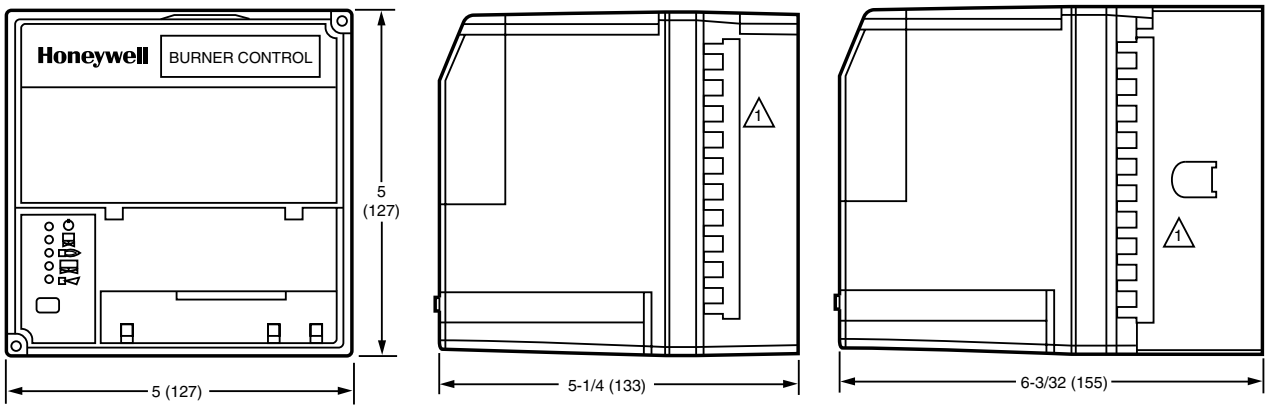
- Access for external electrical voltage checks.
- Application flexibility and communication interface capability.
- Five LEDs provide sequence information.
- Five function Run/Test Switch.
- Interchangeable plug-in amplifiers.
- Local or remote annunciation of operation and fault information (optional).
- 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
EC7830A1066/U	220 to 240 Vac (+10, -15%)	60 Hz (±10%), 50 Hz	15 sec	On/Off Power Burner
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
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).

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.

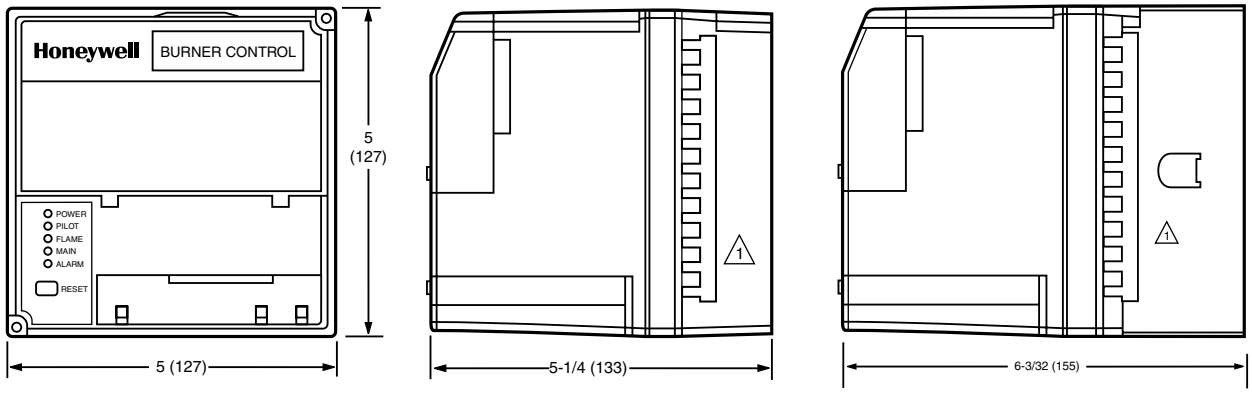
- Functions include automatic burner sequencing, flame supervision, system status indication, system or self-diagnostics and trouble shooting.
- Access for external electrical voltage checks.
- Application flexibility and communication interface capability.
- Five LEDs provide sequence information.
- 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, FCC: FCC Part 15, Class B, Emissions.
Approvals, Swiss RE: Acceptable
Approvals, Factory Mutual: Report No. 1V9AO.AF.

SIL3 Capable

Dimensions in inches (millimeters)



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.

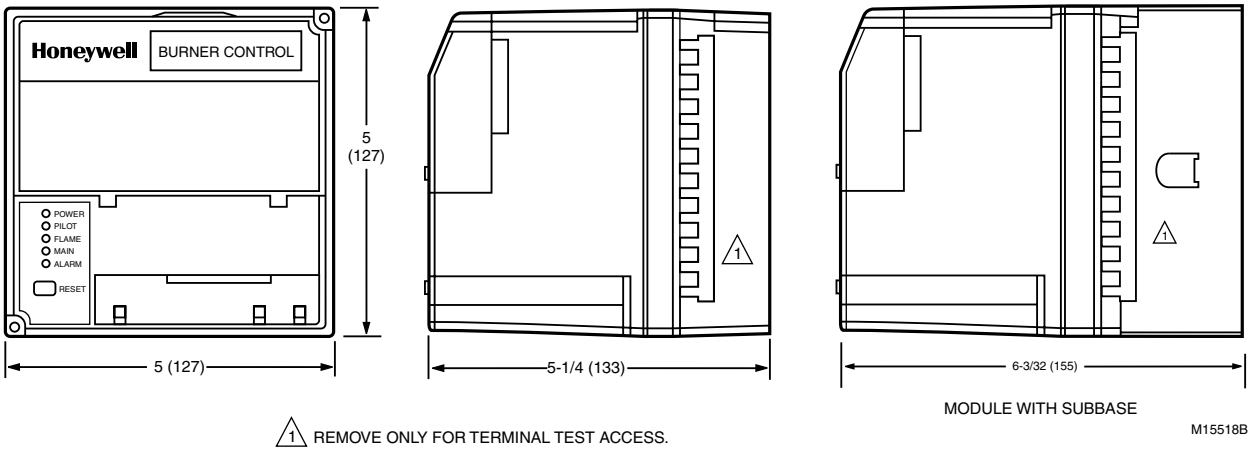
- Functions include automatic burner sequencing, flame supervision, system status indication, system or self-diagnostics and trouble shooting.
- Access for external electrical voltage checks.
- Application flexibility and communication interface capability.
- Five LEDs provide sequence information. Power 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)

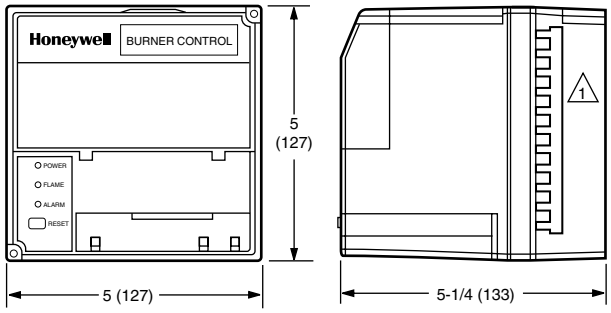


1 REMOVE ONLY FOR TERMINAL TEST ACCESS.

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.

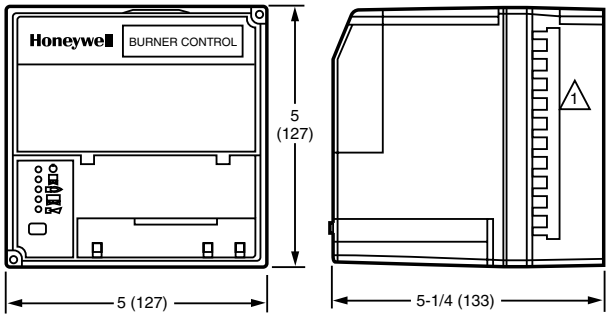
- Can be fitted with any 7800 Series Amplifier to provide relay action from two single pole, double throw (SPDT) relays when flame is present or not present. RM7823A and EC7823 are a flame detector relays only.
- Suitable primary control must be used to provide safe-start check, safety lockout, load 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 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, 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.

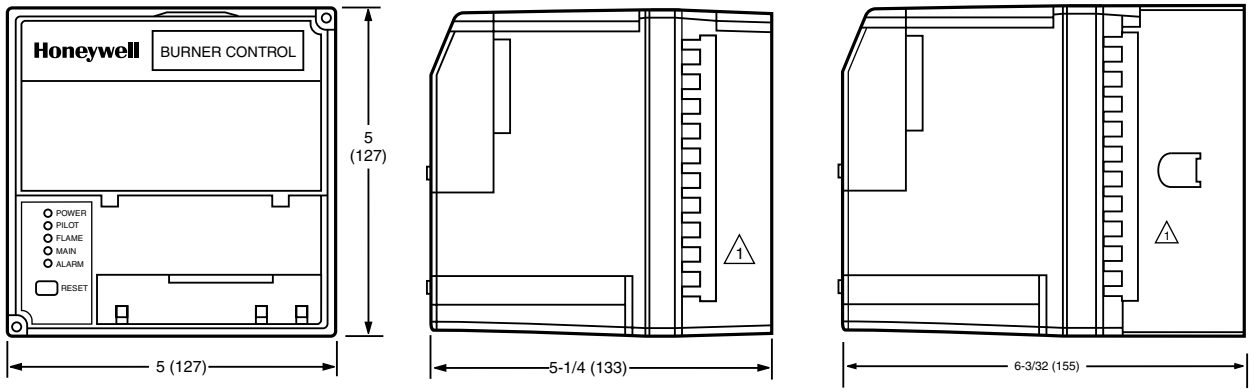
- Functions include purge, burner pilot startup, flame supervision, system status indication, system or self diagnosis and troubleshooting.
- Delays admission of fuel to combustion chamber until pilot flame has been proven and then monitors the flame through the run period while providing system status 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, 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)



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.

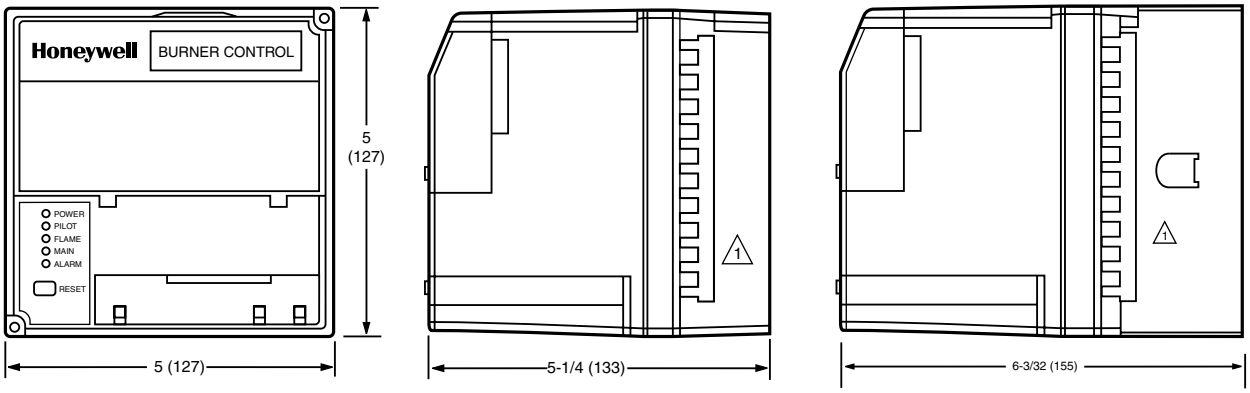
- Functions include purge, burner pilot startup, flame supervision, system status indication, system or self diagnosis and troubleshooting.
- Delays admission of fuel to combustion chamber until pilot flame has been proven and then monitors the flame through the run period while providing system status 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, 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)



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.

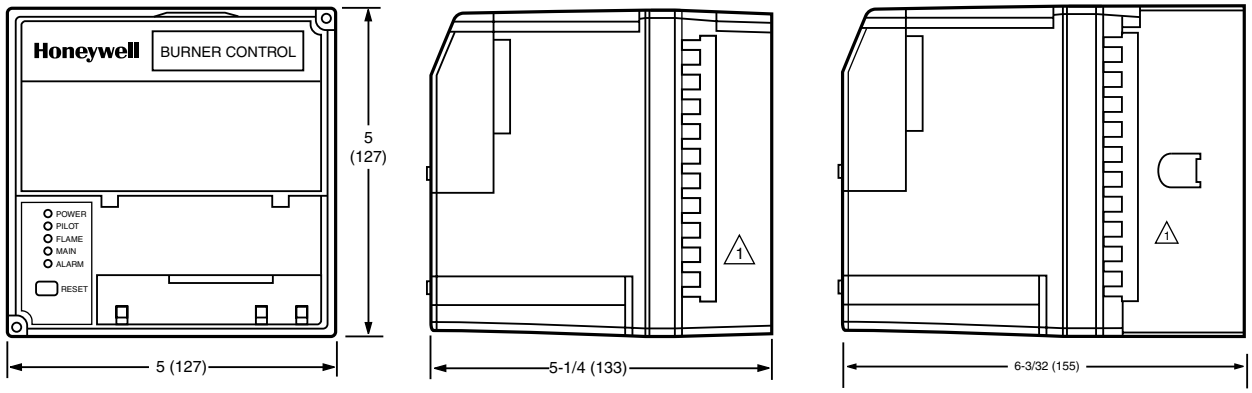
- Functions include purge, burner pilot startup, flame supervision, system status indication, system or self diagnosis and troubleshooting.
- Delays admission of fuel to combustion chamber until pilot flame has been proven and then monitors the flame through the run period while providing system status 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

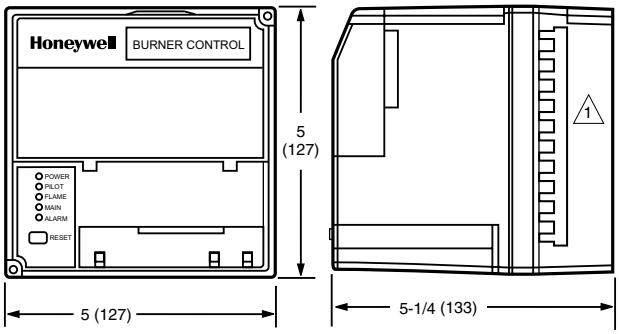
1 REMOVE ONLY FOR TERMINAL TEST ACCESS.

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.

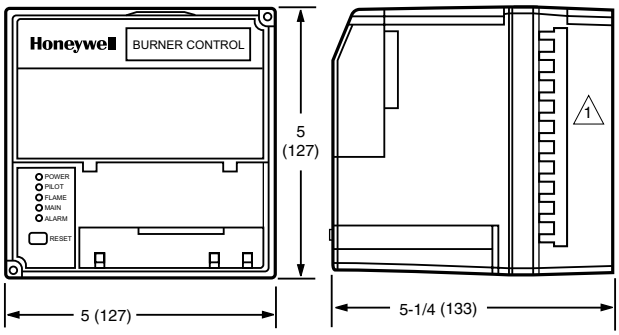
Application: Programming Control
Preignition: Yes
PrePurge: Determined by ST7800A Purge Timer Card
PostPurge: 15 sec
Early Spark Termination: Yes, 5 sec
Required Components: Q7800A, B Universal Wiring Subbases. R7847, R7848, R7849, R7851, R7852, R7861, or R7886 Flame Signal Amplifier. ST7800A Plug-in 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, 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)



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.

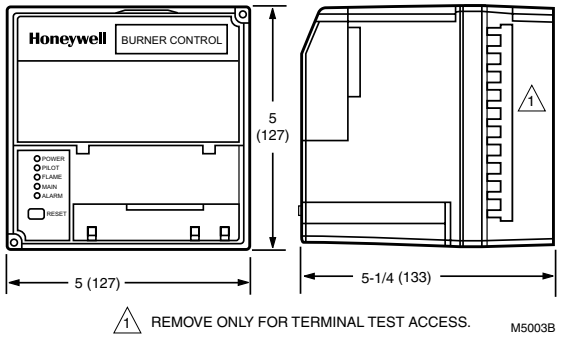
Application: Programming Control w/VPS
Preignition: Yes
PrePurge: Determined by ST7800A Purge Timer Card
PostPurge: programmed with S7800A1142 display
Early Spark Termination: Yes, 5 sec
Required Components: Q7800A, B Universal Wiring Subbases. R7847, R7848, R7849, R7851, R7852, R7861, or R7886 Flame 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.

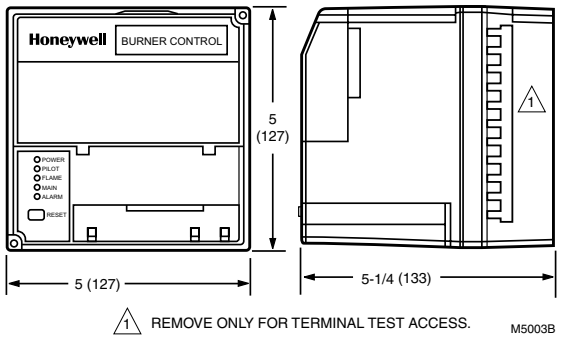
- Functions include automatic burner sequencing, flame supervision, system status indication, system or self-diagnostics and troubleshooting.
- Access for external electrical voltage checks.
- Application flexibility and communication interface capability.
- Five LEDs provide sequence information.
- 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, 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 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.

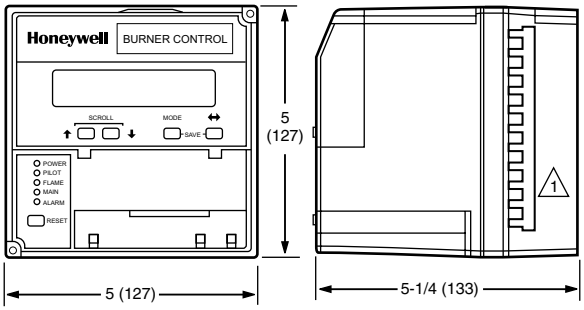
- Functions include flame supervision, system status indication, system or self-diagnostics and troubleshooting.
- Adaptable to continuous firing, high-low or modulating firing rate for semi-automatic burner sequencing.
- Operates with the following: Torch-ignited main burner or torch-ignited pilot using 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, 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

Dimensions in inches (millimeters)



1 REMOVE ONLY FOR TERMINAL TEST ACCESS. M9494

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

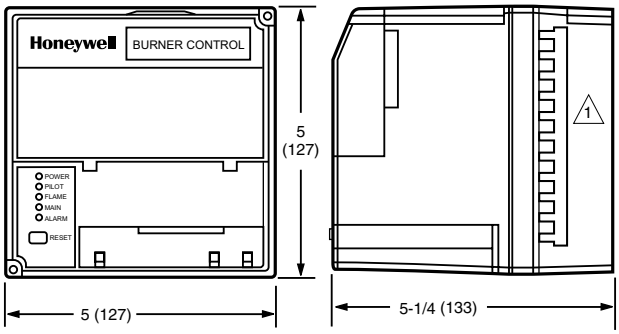
- Functions include automatic burner startup sequencing, five user selectable run sequences, four line-voltage sequence control inputs, flame supervision, system status indication, system or self-diagnostics and troubleshooting.
- Requires a relay module, subbase, and amplifier for operation.
- Options 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.

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, 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.

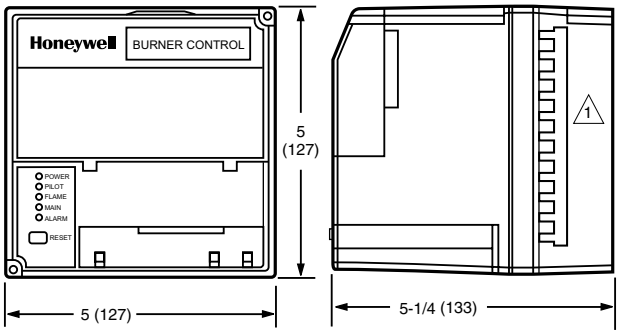
Application: On-Off Primary Control w/VPS
Preignition: Yes
Required Components: Q7800A, B Universal Wiring Subbases. R7847, R7848, R7849, R7851, R7852, R7861, or R7886 Flame Signal Amplifier.
Voltage: 120 Vac (+10, -15%)
Frequency: 50 Hz; 60 Hz (±10%)
Pilot Type: intermittent
Vibration: 0.5 G environment
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, 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
EC7890B1028/U	220 to 240 Vac (+10, -15%)	4 or 10 sec			Report No. 1V9A0.AF.		Includes Shutter Drive Capability
RM7890A1015/U	120 Vac (+10, -15%)	4 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 or 10 sec			Report No. 1D0A1.AF	GASTEC: CE-63AP3070/1, Approved to EN298.	
RM7890B1014/U	120 Vac (+10, -15%)	4 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 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 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 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
RM7890B1048	120 Vac (+10, -15%)	4 or 10 sec	Component Recognized, File No. MP268; Guide No. MCCZ.		Report No. OX4A5.AF.		Includes Shutter Drive Capability
RM7890B1063	120 Vac (+10, -15%)	4 or 10 sec	Component Recognized, File No. MP268; Guide No. MCCZ.				Includes Shutter Drive Capability

RA890 Replacement Options using RM/EC7890 Components

The Honeywell RA890 Protectorelay® Flame Safeguard product line has reached end-of-life and is going to go obsolete the first quarter of 2020. Critical components have become difficult to source, limiting our ability to continue to build and offer this line to our customers.

Obsolete Products	Replacement Products
The RA890 line of products will be replaced with comparable models in the RM/EC7800 SERIES*	
Group A RA890G1245/U, RA890F1304/U, RA890G1278/U, RA890G1040/U, RA890G1260/U, RA890F1288/U.	**Group A** 6 replacement kits that covers most RA890 applications. (see below for details on replacement kit sku numbers)
Group B RA890F1296/U, RA890F1270/U, RA890F1411/U, RA890G1286/U, RA890G1229/U, RA890F1346/U, RA890F1338/U, RA890F1718/U, RA890G1336/U, RA890F1387/U, RA890F1478/U	**Group B** Replacement components must be ordered separately. To replace the RA890 the following will be required: RM/EC7890 Flame Relay R78xx Flame Amplifier Q7800F1004/U Subbase adapter please reference below charts for replacement options

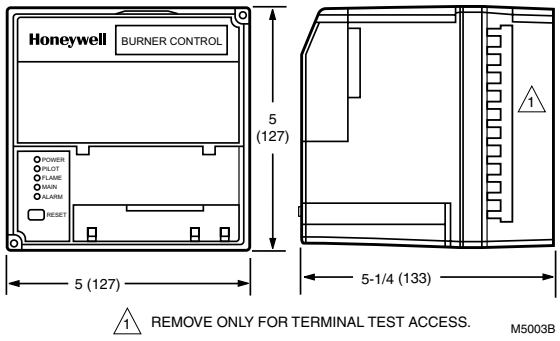
Replacement components

RA890 MODEL	RELAY MODULE	SUBBASE	FLAME AMPLIFIER	REPLACEMENT OPTIONS	NOTES
RA890G1245/U	EC7890B1028/U	Q7800F1004/U	R7849A1015/U	RA890K1245/U	Order KIT
RA890F1304/U	EC7890B1028/U	Q7800F1004/U	R7847A1025/U	RA890K1304/U	Order KIT
RA890G1278/U	EC7890B1028/U	Q7800F1004/U	R7849A1023/U	RA890K1278/U	Order KIT
RA890G1040/U	RM7890B1063/U	Q7800F1004/U	R7849A1023/U	RA890K1040/U	Order KIT
RA890G1260/U	RM7890A1015/U	Q7800F1004/U	R7849A1023/U	RA890K1260/U	Order KIT
RA890F1288/U	RM7890A1015/U	Q7800F1004/U	R7847A1033/U	RA890K1288/U	Order KIT
RA890F1296/U	EC7890B1028/U	Q7800F1004/U	R7847A1033/U	Relay/Subbase/Flame Amp	Order Separately
RA890F1270/U	RM7890A1015/U	Q7800F1004/U	R7847A1025/U	Relay/Subbase/Flame Amp	Order Separately
RA890F1411/U	RM7890B1063/U	Q7800F1004/U	R7847A1033/U	Relay/Subbase/Flame Amp	Order Separately
RA890G1286/U	EC7890B1028/U	Q7800F1004/U	R7849A1023/U	Relay/Subbase/Flame Amp	Order Separately
RA890G1229/U	RM7890A1015/U	Q7800F1004/U	R7849A1015/U	Relay/Subbase/Flame Amp	Order Separately
RA890F1346/U	RM7890A1031/U	Q7800F1004/U	R7847A1033/U	Relay/Subbase/Flame Amp	Order Separately
RA890F1338/U	RM7890A1031/U	Q7800F1004/U	R7847A1025/U	Relay/Subbase/Flame Amp	Order Separately
RA890F1718/U	RM7890A1031/U	Q7800F1004/U	R7847A1033/U	Relay/Subbase/Flame Amp	Order Separately
RA890G1336/U	RM7890A1015/U	Q7800F1004/U	R7849A1023/U	Relay/Subbase/Flame Amp	Order Separately
RA890F1387/U	EC7890B1028/U	Q7800F1004/U	R7847A1033/U	Relay/Subbase/Flame Amp	Order Separately
RA890F1478/U	RM7890A1015/U	Q7800F1004/U	R7847A1025/U	Relay/Subbase/Flame Amp	Order Separately

* Please contact your regional Honeywell sales representative for more information on replacement parts ordering process.

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.

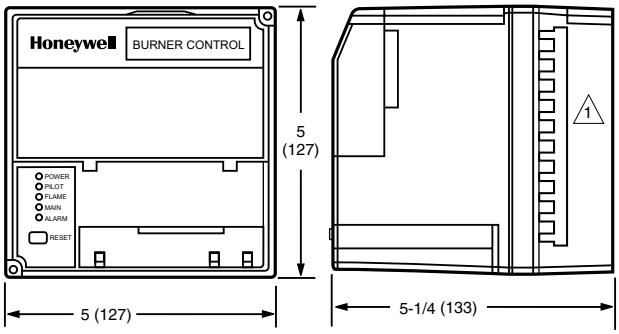
- Functions include automatic burner sequencing, flame supervision, system status indication, system or self diagnostics and troubleshooting.
- Subbase, amplifier, and prepurge timer are required for operation.
- Options include PC interface, keyboard display module, DATA CONTROLBUS™ MODULE, remote display 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 or 10 sec				Report No. 1D0A1.AF	
EC7895C1000/U	220 to 240 Vac (+10, -15%)	interrupted		Yes	10 sec	4 or 10 sec				Report No. 1D0A1.AF	
RM7895A1014/U	120 Vac (+10, -15%)	intermittent		No	Intermittent	4 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 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 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 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 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 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
RM7895E1010	120 Vac (+10, -15%)	intermittent		No	Intermittent	15 or 30 sec	Component Recognized, File No. MP268; Guide No. MCCZ.	Certified, File No. LR95329-3.	Acceptable: CSD-1		
RM7895A1089	100 Vac (+10, -15%)	intermittent	Dynamic	No	Intermittent	4 or 10 sec	Component Recognized, File No. MP268; Guide No. MCCZ.	Certified, File No. LR95329-3.	Acceptable: CSD-1	Report No. OX4A5.AF	100 V version for Japan

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

Dimensions in inches (millimeters)



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, 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, 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, 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

Q7800 22 Terminal Universal Wiring Subbases

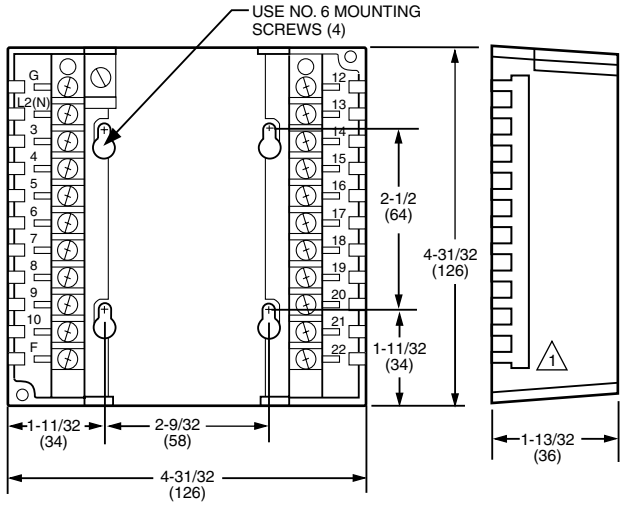
Burner, panel or wall mount subbases for 7800 SERIES relay modules and S7830A Expanded Annunciator.

- 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

Q7800A dimensions in inches (millimeters)



1 OPTIONAL TERMINAL TEST ACCESS COVER.

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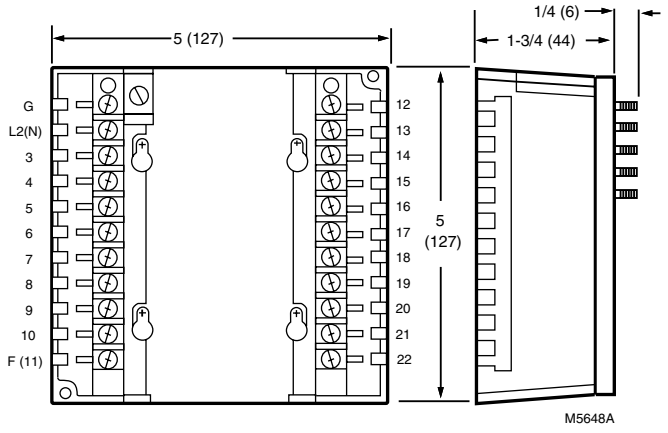
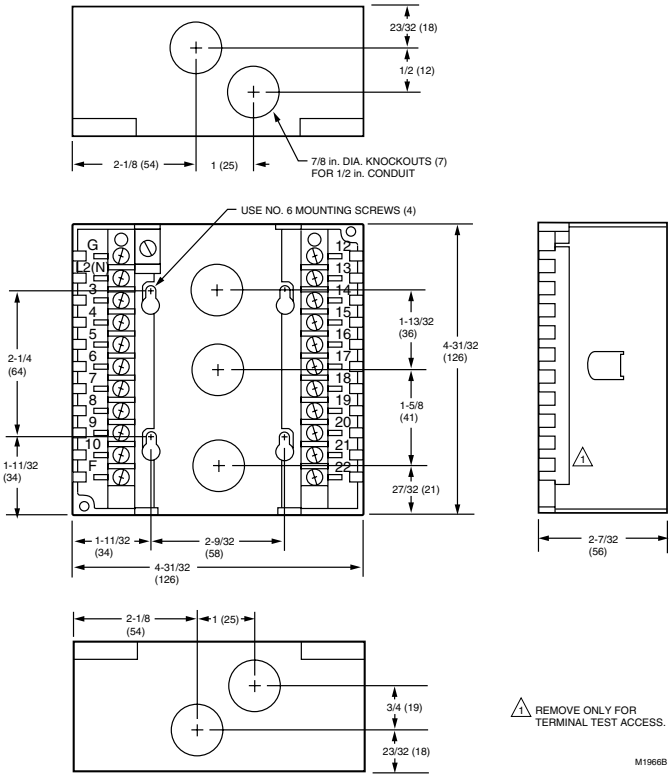
Q7800F dimensions in inches (millimeters)

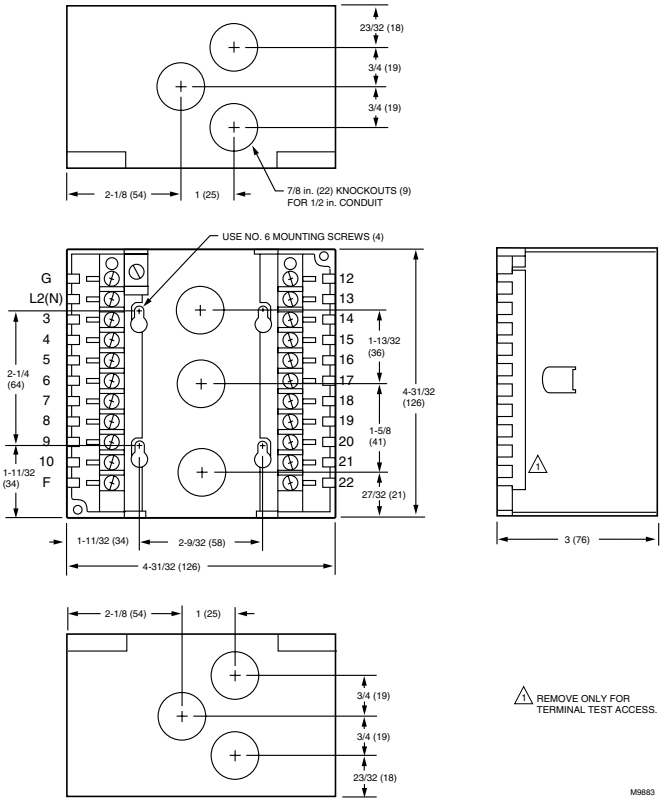


M5648A

Q7800B1003 dimensions in inches (millimeters)

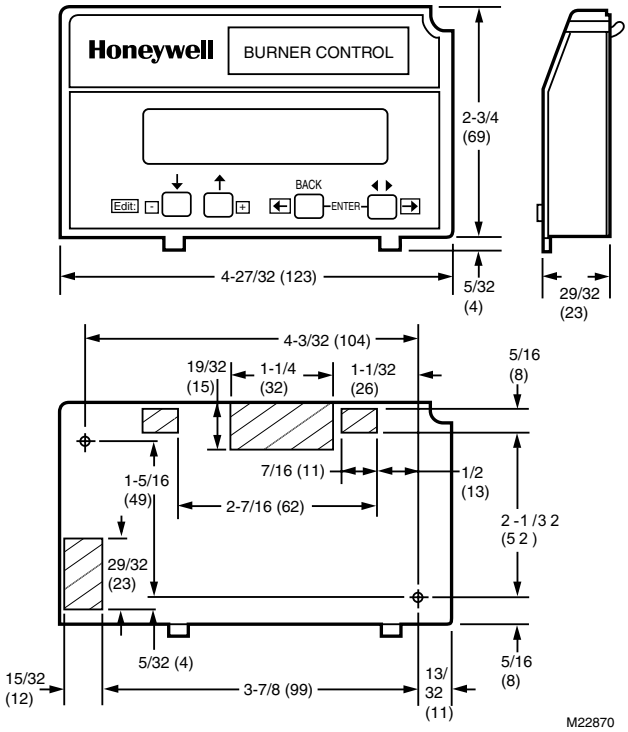


Q7800B1011 dimensions in inches (millimeters)



S7800 Keyboard Display Module

Dimensions in inches (millimeters)



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.

Material Number	Voltage	Comments
S7800A1001/U	13 Vdc peak fullwave rectified (+20/-15%).	English Language

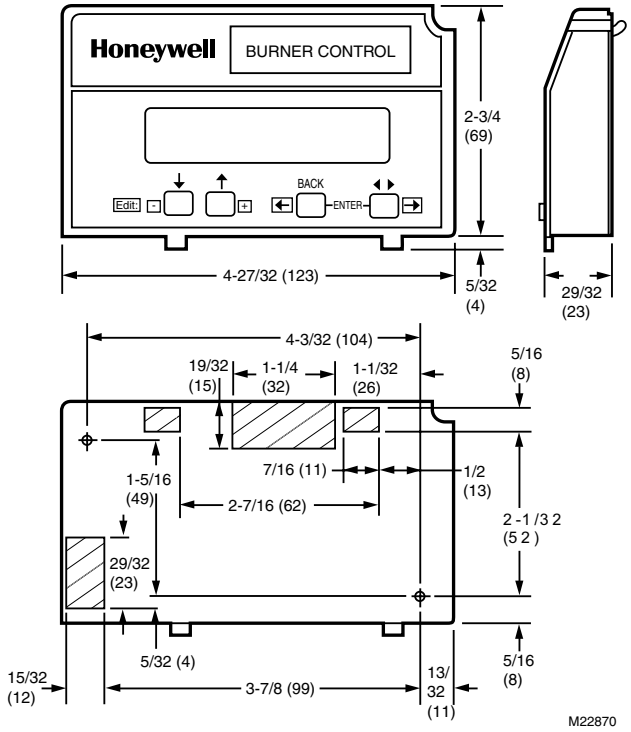
S7800 Keyboard Display Module for VP Programming

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.

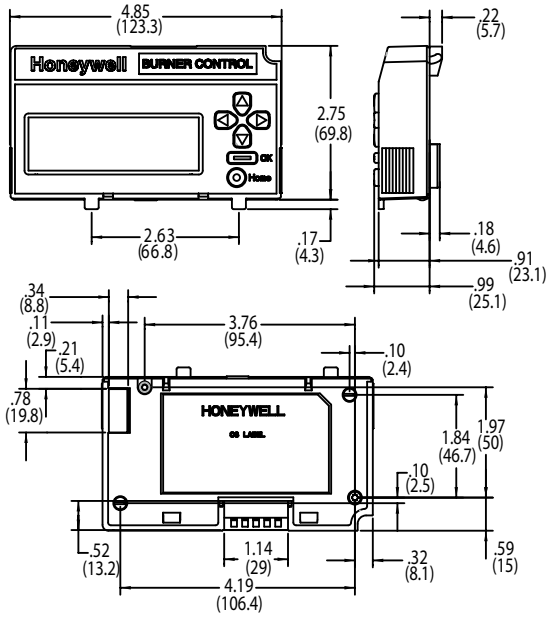
Dimensions in inches (millimeters)



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

S7800 Keyboard Display Module 4-LINE LCD

Dimensions in inches (millimeters)



The S7800A2142 Keyboard Display Module is the newest and most intuitive way to interact with any 7800 Series Flame Relay module. The new display is packed full of features and best of all – it's compatible with all 7800 SERIES burner controls.

- Larger, easier to read hi-contrast backlit display
- View current system status, firstout remote annunciation, remote reset, report generation, fault information, burner control data, and real-time system
- Diagnostics with plain text explanations of how to fix potential lock-out issues.
- 3 language options with one part number – English, Spanish and French.

The new display offers many pass code protected enhancements including:

- Valve Proving Feature - Allows for programming the Valve Proving Control feature and timing.
- Post Purge Feature - Allows for programming the post purge time.
- Expanded Annunciator Set Up - Allows for naming the S7830 Expanded Annunciator terminals to match your system's drawings.

Application: Keyboard Display 4-line LCD
Vibration: 0.5 G environment
Operating Temperature: 0°F (-18°C) to +140°F (+60°C).
Storage Temperature: -22°F (-30°C) to +158°F (+70°C).
Humidity: 85% relative humidity continuous, noncondensing.
UL NEMA Class 4 rating when P/N 204729A, C NEMA 4 Cover is used.
Weight lb. (kg): 4 oz (0.12 kg)
Approvals, Underwriters Laboratories Inc.: File No. MP268, guide No. MCCZ.
Approvals, FCC: FCC Part 15, Class B, Emissions.
Approvals, Factory Mutual: Report No. J.I.1V9A0.AF. IRI: Acceptable.
Approvals, EN 60730

Material Number	Voltage	Comments
S7800A2142/U	13 Vdc peak fullwave rectified (+20/-15%).	English, Spanish and French Language with Valve Proving, Post-purge, "Call Service", and Expanded Annunciator programming ability

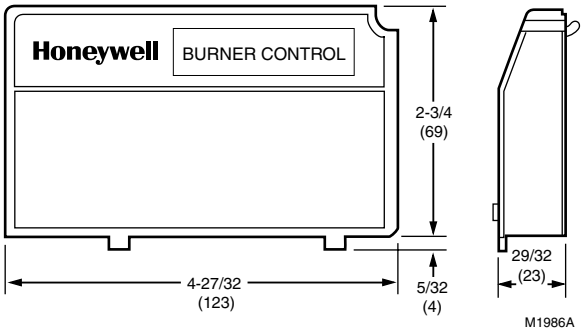
S7810A Data ControlBus™ Module

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

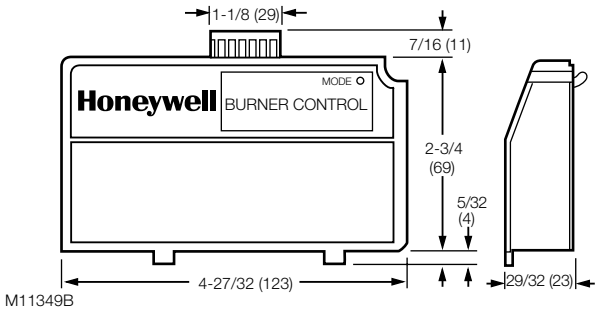
S7810M ModBus Module

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

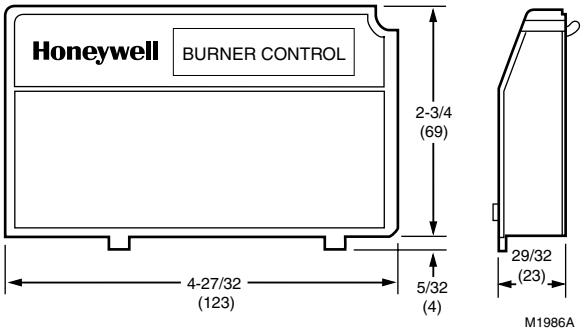
S7820 Remote Reset Module

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.

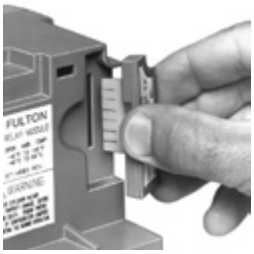
Vibration: 0.5 G environment
Shipping and Storage Temperature Range: -40°F to +140°F (-40°C to +60°C)
Approximate, Dimensions: 4 27/32 in. wide x 2 29/32 in. high x 29/32 in. deep (123 mm wide x 73 mm high x 23 mm deep)
Weight lb. (kg): 3 oz (0.09 kg)
Approvals, Underwriters Laboratories Inc.: Component 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

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

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	
204729A	NEMA 4 Cover Assembly for S7800A KDM	S7800 Display 4-line LCD	
204729C	NEMA 4 Cover Assembly for S7800A KDM with reset button	S7800 Display 4-line LCD	

7800 SERIES 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 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 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 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 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 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 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 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 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 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 or 3.0 sec	None (standard)	7800 SERIES Relay Modules	Gas, oil, coal: Infrared (lead sulfide) C7015	Color: Red
R7849A1015/U	Ultraviolet	0.8 or 1.0 sec	None (standard)	7800 SERIES Relay Modules	Gas, Oil: Minipeeper C7027A, C7035A, C7044	Color: Purple
R7849A1023/U	Ultraviolet	2.0 or 3.0 sec	None (standard)	7800 SERIES Relay Modules	Gas, Oil: Minipeeper C7027A, C7035A, C7044	Color: Purple
R7849B1013/U	Ultraviolet	0.8 or 1.0 sec	Ampli-Check	7800 SERIES Relay Modules	Gas, Oil: Minipeeper C7027A, C7035A, C7044	Color: Purple
R7849B1021/U	Ultraviolet	2.0 or 3.0 sec	Ampli-Check	7800 SERIES Relay Modules	Gas, Oil: Minipeeper C7027A, C7035A, C7044	Color: Purple
R7851B1000/U	Optical	2.0 or 3.0 sec	Ampli-Check	7800 SERIES Relay Modules	Gas, Oil, Coal: Optical (UV, Visible Light) C7927, C7962B	Color: White
R7851B1018/U	Optical	0.8 or 1.0 sec	Ampli-Check	7800 SERIES Relay Modules	Gas, Oil, Coal: Optical (UV, Visible Light) C7927, C7962B	Color: White
R7851C1008/U	Optical	2.0 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 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 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 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 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 or 3.0 sec	Dynamic Self-Check	7800 SERIES Relay Modules	Gas, oil, coal: Adjustable Sensitivity Ultraviolet Flame Sensor C7076	Color: Blue

Flame Amplifier Accessories

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