Termination Kits - Industrial Wiring

nVent PYROTENAX

CONNECT AND PROTECT

For mineral insulated (MI) industrial wiring cable

PRODUCT OVERVIEW

nVent PYROTENAX Pyropak and QuickTerm termination kits are used to field-terminate copper and Alloy 825 sheathed MI wiring cables.

QUICKTERM TERMINATION KIT

The QuickTerm termination kit is used to field-terminate #6 AWG and larger single conductor copper-sheathed MI wiring cable in nonhazardous areas and is available in two versions. The size-for-size QuickTerm kit allows the MI solid conductor to be joined to an equal size flexible tail. The sized-up QuickTerm kit allows the MI solid conductor to be joined to a larger size flexible tail.

The QuickTerm kit contains enough material to terminate two cable ends and offers the following features and benefits:

- Reduces the time required to make the cable termination
- Includes a special connector to splice the solid MI conductor to a flexible tail
- Offers improved flexibility of the tail in the cabinet or enclosure

The flexible tail, supplied by the installer, must be compatible with the current rating of the circuit. The tail size selected will depend on whether a “Size-for-size” or a “Sized-up” QuickTerm is used (see "Table 1 QuickTerm Kit Configuration Information" for QuickTerm tail sizes). For further information on installing QuickTerm kits, refer to:

- Size-for-size QuickTerm Installation Instructions (H58290)
- Sized-up QuickTerm Installation Instructions (H58264)
- Service Entrance QuickTerm Termination Kit Installation Instructions (H58379)

PYROPAK TERMINATION KIT

Pyropak termination kits are available for all sizes of Alloy 825 and copper sheathed cables. They must be used to terminate all single and multiconductor Alloy 825 sheathed cables and all multiconductor and 10 AWG to 8 AWG single conductor copper sheathed cables.

Pyropak kits are approved for use in nonhazardous and hazardous areas. The cable end is sealed using either a mastic sealing compound or an epoxy sealing compound, depending on the temperature rating required. Each kit contains enough material to terminate two cable ends.

In areas where the potential for hydrocarbon flash fires may exist, a special fire protection hub is available to protect the termination for Alloy 825 sheathed wiring cables. The fire protection hub will protect the MI cable termination at temperatures up to 2000°F (1093°C) for up to 30 minutes.

To reduce installation time, MI wiring cables can be supplied with factory terminated ends. Copper-sheathed cables are supplied with brass gland connectors and the cable ends are sealed with an epoxy sealing compound. Further information on factory-terminated copper sheathed wiring cables can be found in the nVent PYROTENAX System 1850 data sheet (H57048) and the System 1850 Twisted Pair data sheet (H57473).

Factory-terminated Alloy 825 sheath cables are supplied with stainless-steel gland connectors and the cable ends are sealed with an epoxy sealing compound. Further information on factory-terminated Alloy 825 sheathed cables can be found in the nVent PYROTENAX System 2000 data sheet (H57049), System 2000 (Metric) data sheet (H57049A), System 2200 data sheet (H57050), and the System 2200 (Metric) data sheet (H57050A).

Commercial and industrial MI wiring cables are approved as a complete system only when used with the appropriate termination kit. The use of nonapproved components will compromise the reliability of the system and invalidate approvals and warranties.

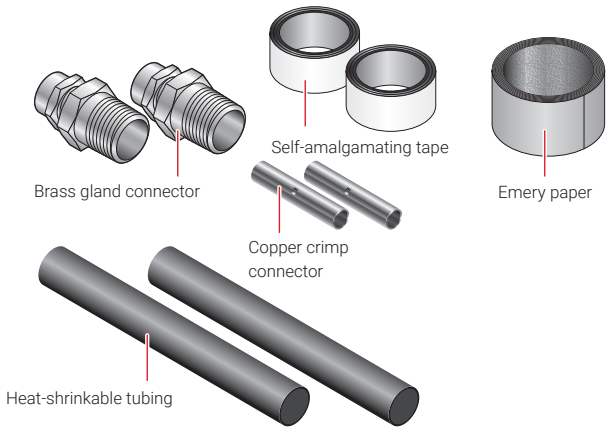
For more information on termination kits for MI cable, contact your nVent representative or call (800) 545-6258.

TERMINATION KITS

	Copper-sheathed cables	Alloy 825 sheathed cables
Pyropak	Yes	Yes
QuickTerm (single conductor cables)	Yes*	No
Fire protection hubs	No	Yes

* Available for #6 AWG and larger cables

QUICKTERM TERMINATION KITS FOR SINGLE CONDUCTOR COPPER-SHEATHED CABLES



Termination type	Field termination (for two cable ends)
Seal type	Self-amalgamating tape
Temperature rating	194°F (90°C) maximum
Gland connector	Brass
Gland size	1/2", 3/4", 1", or 1-1/4" NPT depending on cable size
Cable configurations	For #6 AWG and larger single conductor copper-sheathed cables
Tail type and AWG size	Supplied by installer (see Table 1 for tail size) **Note: Use a cable certified for the application**

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Nonhazardous Locations

QUICKTERM KIT CATALOG NUMBER CONFIGURATOR

QTRM / BR / 125 / 500 / 1000 / 500 / 90 / NH / SE

QTRM

Gland material
BR = Brass

Gland thread size
050 = 1/2 in.
075 = 3/4 in.
100 = 1 in.
125 = 1-1/4 in.
(see Table 1)

MI cable AWG or KCMIL size
Example:
006 = 6 AWG
1-0 = 1/0 AWG
500 = 500 KCMIL
(see Table 1)

MI cable OD
Example: 0449 = 0.449 in.
1000 = 1.000 in.
(see Table 1)

Tail AWG or KCMIL size
Example:
006 = 6 AWG
1-0 = 1/0 AWG
500 = 500 KCMIL
(see Table 1)

Temperature rating
90 = 90°C

Approval classification
NH = Nonhazardous
NA = Nonapproved

Service entrance
SE = Yes
Blank = No

Example: Sized-up QuickTerm kit required for 1/3/0-621, single conductor # 3/0 AWG cable to use a 350 kcmil tail is:
Catalog No.: QTRM / BR / 075 / 3-0 / 0621 / 350 / 90 / NH

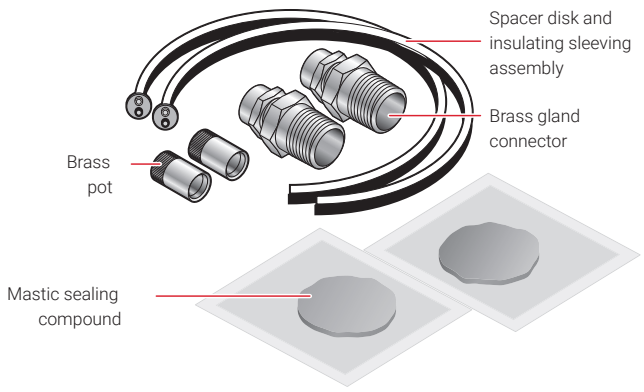
TABLE 1 QUICKTERM KIT CONFIGURATION INFORMATION

System 1850 - Fire-rated MI cable					
Common information for all QuickTerm kits					
MI cable reference number	Gland thread size (in)	MI cable size (AWG / kcmil)	MI cable diameter (in)	Tail size required for Sized-up QuickTerm[1] (AWG / kcmil)	Tail size required for Size-for-size QuickTerm[1] (AWG / kcmil)
1/6-340	1/2	6	0.340	2	6
1/4-402	1/2	4	0.402	1/0	4
1/3-449	3/4	3	0.449	2/0	3
1/2-449	3/4	2	0.449	3/0	2
1/1-496	3/4	1	0.496	4/0	1
1/1/0-512	3/4	1/0	0.512	4/0	1/0
1/2/0-580	3/4	2/0	0.580	250	2/0
1/3/0-621	1	3/0	0.621	350	3/0
1/4/0-684	1-1/4	4/0	0.684	500	4/0
1/250-746[2]	1-1/4	250	0.746	500 600	250
1/350-834[2]	1-1/4	350	0.834	500 750	350
1/500-1000	1-1/4	500	1.000	750	500

[1] Stranded conductor tail to be supplied by contractor / installer.
[2] Sized-up QuickTerm: select the appropriate tail size for application.

PYROPAK TERMINATION KITS FOR COPPER-SHEATHED CABLES

Mastic sealing compound



Termination type	Field termination (for two cable ends)
Pot type	Threaded pot/screw-on pot
Seal type	Mastic sealing compound
Temperature rating	

Maximum Temperature	Mastic	Tail Sleeving	Area Classification
105°C (221°F)	Standard	PVC	Hazardous and nonhazardous

Gland connector	Brass
Gland size	1/2", 3/4", 1", or 1-1/4" NPT depending on cable size
Cable configurations	For single and multiconductor cables
Standard tail length	12 in (30 cm) or 36 in (91 cm) (If longer tail lengths are required, contact nVent)
Tail AWG size	16 AWG – 500 kcmil solid

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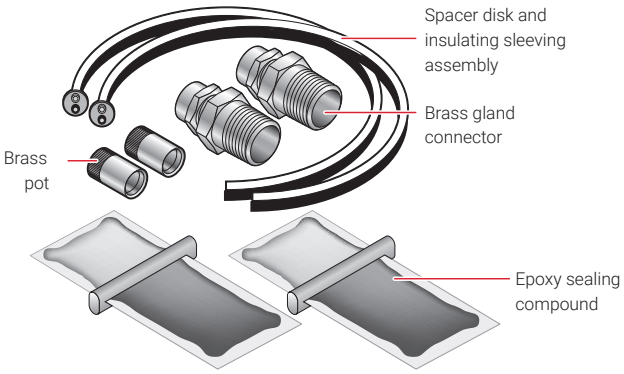
Nonhazardous Locations

Hazardous Locations
Class I, Div. 1 and 2, Groups A, B, C, D
Class II, Div. 1 and 2, Groups E, F, G
Class III

Epoxy sealing compound



Termination type	Field termination (for two cable ends)
Pot type	Threaded pot/screw-on pot
Seal type	Epoxy sealing compound
Temperature rating	

Maximum Temperature	Epoxy	Tail Sleeving	Area Classification
221°F (105°C)	Standard	PVC	Hazardous and nonhazardous
248°F (120°C)	Standard	Silicone fiberglass	Hazardous and nonhazardous
302°F (150°C)	Optional	Silicone fiberglass	Hazardous and nonhazardous
392°F (200°C)	Optional	Silicone fiberglass	Nonhazardous

Gland connector	Brass
Gland size	1/2", 3/4", 1", or 1-1/4" NPT depending on cable size
Cable configurations	For single and multiconductor cables
Standard tail length	12 in (30 cm) or 36 in (91 cm) (If longer tail lengths are required, contact nVent)
Tail AWG size	16 AWG – 500 kcmil solid

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Nonhazardous Locations

Hazardous Locations
Class I, Div. 1 and 2, Groups A, B, C, D
Class II, Div. 1 and 2, Groups E, F, G
Class III

Note: For field-terminated cables, tails are obtained by stripping back the cable sheath; refer to the product installation instructions for details.

PYROPAK KIT CATALOG NUMBER CONFIGURATOR FOR COPPER-SHEATHED CABLE

Imperial: PPAK / BR / 125 / T 1 G / 1000 / 105 / D1 / 01 / 500 / A036B012IN
or
Metric: PPAK / BR / M40 / T 1 G / 1000 / 105 / D1 / 01 / 500 / A091B030CM

PPAK

Gland material
BR = Brass

Gland thread size
050 = 1/2 in.; M20 = 20 mm
075 = 3/4 in.; M25 = 25 mm
100 = 1 in.; M32 = 32mm
125 = 1-1/4 in.; M40 = 40mm
(see Table 2)

Type of pot
T = Threaded pot/screw-on pot

Tail material
1 = PVC *
3 = Silicone fiberglass sleeving**

Sealing Compound
G = Green mastic compound
A = Standard epoxy
D = Optional epoxy

MI cable OD
Example: 0449 = 0.449 in.
1000 = 1.000 in.
(see Table 2)

Termination temperature rating (°C)
105 = T1A
120 = T3A
105 =T1D
150 =T3D HAZ AREAS (200 = NON-HAZ. AREAS)
105 = T1G
105 =T3G
Note: Use temperature shown dependng on pot, sleeving and sealing compound seleted.

Tail length both ends & unit of measure
Imperial example:
A036B012IN = 36" tail end "A", 12" tail end "B"
Metric example:
A091B030CM = 91 cm tail end "A", 30 cm tail end "B"
Note: A Pyropak kit includes material to terminate both ends of a cable run. Select tail length for each end.

AWG or KCMIL size
Example:
016 = 16 AWG
1-0 = 1/0 AWG
500 = 500 KCMIL
(see Table 2)

Number of conductors
Example:
01 = 1 conductor
04 = 4 conductors
10 = 10 conductors

Area classification
D1 = Class I, Div 1 & 2, Groups A, B, C & D
Class II, Div 1 & 2, Groups E, F & G
Class III
D2 = Class I, Div 2, Groups A, B, C & D
Class II, Div 2, Groups E, F & G
Class III

NA = Nonapproved
NH = Nonhazardous (select if temperature =200)

Note:
* PVC sleeving is standard
** Select Silicone fiberglass sleeving if termination will be exposed to temperatures between 105°C and 200°C

Legend
D1 = Division 1
D2 = Division 2
NA= Nonapproved
NH= Nonhazardous

Example: Pyropak kit required for 4/14-465, four-conductor, # 14 AWG cable, for Class I, Div 1, with 12 in PVC insulated tails on both ends, and using standard epoxy sealing compound is:
Catalog No.: PPAK / BR / 075 / T1A / 0465 / 105 / D1 / 04 / 014 / A012B012IN

TABLE 2 PYROPAK KIT CONFIGURATION INFORMATION FOR COPPER-SHEATHED CABLES

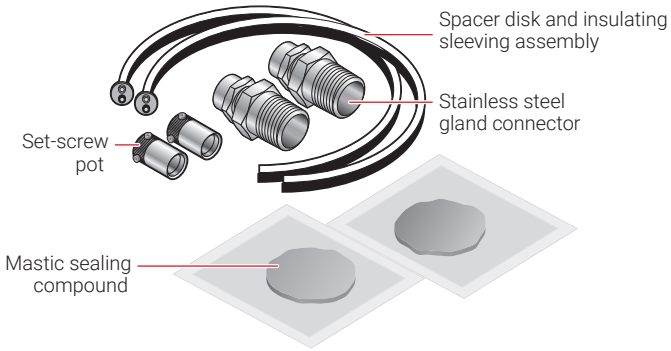
System 1850 – Fire-rated MI cable			
MI Cable reference number	**Gland thread size (in)**	**MI cable diameter (in)**	**MI cable size (AWG/kcmil)**
Single conductor			
1/10-277	1/2	0.277	10
1/8-298	1/2	0.298	8
1/6-340	1/2	0.340	6
1/4-402	1/2	0.402	4
1/3-449	3/4	0.449	3
1/2-449	3/4	0.449	2
1/1-496	3/4	0.496	1
1/1/0-512	3/4	0.512	1/0
1/2/0-580	3/4	0.580	2/0
1/3/0-621	1	0.621	3/0
1/4/0-684	1-1/4	0.684	4/0
1/250-746	1-1/4	0.746	250
1/350-834	1-1/4	0.834	350
1/500-1000	1-1/4	1.000	500
Two conductor			
2/16-340	1/2	0.340	16
2/14-371	1/2	0.371	14
2/12-402	1/2	0.402	12
2/10-449	3/4	0.449	10
2/8-512	3/4	0.512	8
2/6-590	3/4	0.590	6
2/4-684	1	0.684	4
2/3-768	1-1/4	0.768	3
2/2-865	1-1/4	0.865	2
2/1-975	1-1/4	0.975	1
Three conductor			
3/16-355	1/2	0.355	16
3/14-387	1/2	0.387	14
3/12-480	3/4	0.480	12
3/10-480	3/4	0.480	10
3/8-590	3/4	0.590	8
3/6-621	3/4	0.621	6
3/4-746	1-1/4	0.746	4
3/3-834	1-1/4	0.834	3
Four conductor			
4/16-387	1/2	0.387	16
4/14-465	3/4	0.465	14
4/12-465	3/4	0.465	12
4/10-590	3/4	0.590	10
4/8-590	3/4	0.590	8
4/6-730	1-1/4	0.730	6

TABLE 2 PYROPAK KIT CONFIGURATION INFORMATION FOR COPPER-SHEATHED CABLES

System 1850 – Fire-rated MI cable			
MI Cable reference number	**Gland thread size (in)**	**MI cable diameter (in)**	**MI cable size (AWG/kcmil)**
Seven conductor			
7/16-449	3/4	0.449	16
7/14-496	3/4	0.496	14
7/12-543	3/4	0.543	12
7/10-621	1	0.621	10
7/8-710	1-1/4	0.710	8
Twisted pair (two conductor)			
2/18-215T	1/2	0.215	18
2/16-246T	1/2	0.246	16
Shielded twisted pair (two conductor)			
2/18-324TS	3/4	0.324	18
2/16-364TS	3/4	0.364	16

PYROPAK TERMINATION KITS FOR ALLOY 825 SHEATHED CABLES

Mastic sealing compound



Termination type	Field termination (for two cable ends)
Pot type	Set-screw pot
Seal type	Mastic sealing compound

Temperature rating

Maximum Temperature	Mastic	Tail Sleeving	Area Classification
105°C (221°F)	Standard	PVC	Hazardous and nonhazardous

Gland connector	Stainless steel
Gland size	1/2", 3/4", 1", or 1-1/4" NPT depending on cable size
Cable configurations	For single and multiconductor cables
Standard tail length	12 in (30 cm) or 36 in (91 cm) (If longer tail lengths are required, contact nVent)
Tail AWG size	16 AWG – 2 AWG solid

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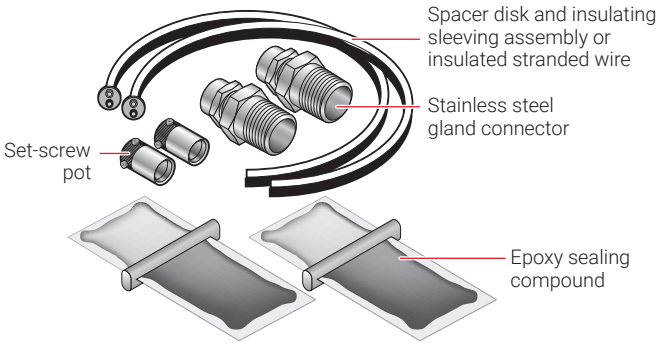
Nonhazardous Locations

Hazardous Locations

Class I, Div. 1 and 2, Groups A, B, C, D
Class II, Div. 1 and 2, Groups E, F, G
Class III

Epoxy sealing compound



Termination type	Field termination (for two cable ends)
Pot type	Set-screw pot
Seal type	Epoxy sealing compound

Temperature rating

Maximum Temperature	Epoxy	Tail Sleeving	Area Classification
221°F (105°C)	Standard	PVC	Hazardous and nonhazardous
248°F (120°C)	Standard	High temperature insulated stranded wire or silicone fiberglass	Hazardous and nonhazardous
302°F (150°C)	Optional	High temperature insulated stranded wire or silicone fiberglass	Hazardous and nonhazardous
392°F (200°C)	Optional	High temperature insulated stranded wire or silicone fiberglass	Nonhazardous

Gland connector	Stainless steel
Gland size	1/2", 3/4", 1", or 1-1/4" NPT depending on cable size
Cable configurations	For single and multiconductor cables
Standard tail length	12 in (30 cm) or 36 in (91 cm) (If longer tail lengths are required, contact nVent) **Note**: **High temperature insulated stranded wire is available in 16 AWG to 6 AWG sizes only.**
Tail AWG size	16 AWG – 2 AWG solid (16 AWG to 6 AWG stranded when using high temperature insulated stranded wire tails)

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Nonhazardous Locations

Hazardous Locations

Class I, Div. 1 and 2, Groups A, B, C, D
Class II, Div. 1 and 2, Groups E, F, G
Class III

Note: For field-terminated cables using PVC or silicone fiberglass sleeving, tails are obtained by stripping back the cable sheath. High temperature insulated stranded wire tails must be brazed on to the MI cable solid conductor. Refer to the product installation instructions for details.

PYROPAK KIT CATALOG NUMBER CONFIGURATOR FOR ALLOY 825 SHEATHED CABLE

Metric: **PPAK / SS / M40 / G 1 A / 0700 / 105 / D1 / 10 / 014 / A091B030CM**
or
Imperial: **PPAK / SS / 125 / G 1 A / 0700 / 105 / D1 / 10 / 014 / A036B012IN**

PPAK

Gland material
SS = Stainless steel

Gland thread size
050 = 1/2 in.; M20 = 20 mm .
075 = 3/4 in.; M25 = 25 mm .
100 = 1 in.; M32 = 32 mm
114 = 1-1/4 in.; M40 = 40 mm.
(see Table 3)

Type of pots
G = Grub screw pot (set-screw pot)
T = Threaded pot/screw-on pot
Note: "G" (set-screw pot) is standard: "T" (threaded pot) must be drilled out slightly larger than cable diameter and requires the use of oxy-acetylene equipment to install the pot.

Tail material
1 = PVC*
2 = High temp. insulated stranded wire tails**
3 = Silicone fiberglass***

Sealing Compound
G = Green mastic compound
A = Standard epoxy
D = Optional epoxy

MI cable OD
Example: 0465 = 0.465 in.
0700 = 0.700 in.
(see Table 3)

Termination temperature rating (°C)
105 = T1A
120 = T2A
120 = T3A
105 = T1D
150 = T2D HAZ, AREAS (200 = NON-HAZ, AREAS)
150 = T3D HAZ, AREAS (200 = NON-HAZ, AREAS)
105 = T1G
105 = T3G
105 = G1A
120 = G2A
120 = G3A
105 = G1D
150 = G2D HAZ, AREAS (200 = NON-HAZ, AREAS)
150 = G3D HAZ, AREAS (200 = NON-HAZ, AREAS)
105 = G1G
105 = G3G
* Use temperature shown depending on pot, sleeving and sealing compound selected.

Tail length both ends & unit of measure
Imperial example:
A036B012IN = 36" tail end "A", 12" tail end "B"
Metric example:
A091B030CM = 91 cm tail end "A", 30 cm tail end "B"
Note: A Pyropak kit includes material to terminate both ends of a cable run. Select tail length for each end.

AWG size
Example:
016 = 16 AWG
002 = 2 AWG
(see Table 3)

Number of conductors
Example:
04 = 4 conductors
10 = 10 conductors

Area classification
D1 = Class I, Div 1 & 2, Groups A, B, C & D
Class II, Div 1&2, Groups E, F & G
Class III
Note: For D1 locations, epoxy sealing compound is normally supplied.

D2 = Class I, Div 2, Groups A, B, C & D
Class II, Div 2, Groups E, F & G
Class III

NA = Nonapproved
NH = Nonhazardous (select if temperature = 200)

Note:
* PVC sleeving is standard
** High temperature insulated stranded wire tails available for 16 AWG to 6 AWG sizes only and must be brazed to MI cable solid conductor (requires oxy-acetylene equipment)
*** Select Silicone fiberglass sleeving instead of PVC sleeving if termination will be exposed to temperatures between 105°C and 200°C (oxy-acetylene equipment is not required)

Legend
D1 = Division 1
D2 = Division 2
NA= Nonapproved
NH= Nonhazardous

Example: Pyropak kit required for 590-8/2NC825, two-conductor, # 8 AWG cable, for Class I, Div 1, with 12 in PVC insulated tails on both ends, and using set-screw pot filled with standard epoxy sealing compound is:

Catalog No.: PPAK / SS / 100 / G1A / 0590 / 105 / D1 / 02 / 008 / A012B012IN

TABLE 3 PYROPAK KIT CONFIGURATION INFORMATION FOR ALLOY 825 SHEATHED CABLES

	System 2000 – Fire-rated MI cable		
MI Cable reference number	**Gland thread size (in)**	**MI cable diameter (in)**	**MI cable size (AWG)**
Single conductor			
253-14/1NC825	1/2	0.253	14
286-12/1NC825	1/2	0.286	12
319-10/1NC825	1/2	0.319	10
355-8/1NC825	1/2	0.355	8
387-6/1NC825	1/2	0.387	6
434-4/1NC825	3/4	0.434	4
480-3/1NC825	3/4	0.480	3
527-2/1NC825	3/4	0.527	2
Two conductor			
418-14/2NC825	3/4	0.418	14
465-12/2NC825	3/4	0.465	12
527-10/2NC825	3/4	0.527	10
590-8/2NC825	1	0.590	8
Three conductor			
418-16/3NC825	3/4	0.418	16
465-14/3NC825	3/4	0.465	14
496-12/3NC825	3/4	0.496	12
543-10/3NC825	3/4	0.543	10
637-8/3NC825	1	0.637	8
Four conductor			
496-14/4NC825	3/4	0.496	14
527-12/4NC825	3/4	0.527	12
590-10/4NC825	1	0.590	10
684-8/4NC825	1	0.684	8
Seven conductor			
590-14/7NC825	1	0.590	14
637-12/7NC825	1	0.637	12

TABLE 3 PYROPAK KIT CONFIGURATION INFORMATION FOR ALLOY 825 SHEATHED CABLES

System 2200 – Fire-rated MI cable			
MI Cable reference number	**Gland thread size (in)**	**MI cable diameter (in)**	**MI cable size (AWG)**
Two conductor			
355-16/2NI825	1/2	0.355	16
402-14/2NI825	1/2	0.402	14
Three conductor			
387-16/3NI825	1/2	0.387	16
418-14/3NI825	3/4	0.418	14
434-13/3NI825	3/4	0.434	13
465-12/3NI825	3/4	0.465	12
527-10/3NI825	3/4	0.527	10
Four conductor			
465-14/4NI825	3/4	0.465	14
496-12/4NI825	3/4	0.496	12
590-10/4NI825	1	0.590	10
637-8/4NI825	1	0.637	8
Five conductor			
590-11/5NI825	1	0.590	11
714-7/5NI825	1-1/4	0.714	7
810-5/5NI825	1-1/4	0.810	5
Seven conductor			
496-16/7NI825	3/4	0.496	16
543-14/7NI825	1	0.543	14
590-13/7NI825	1	0.590	13
Eight conductor			
684-11/8NI825	1	0.684	11
Ten conductor			
700-14/10NI825	1-1/4	0.700	14

FIRE PROTECTION HUB FOR ALLOY 825 SHEATHED CABLE TERMINATIONS

Temperature rating	2000°F (1093°C) for 30 minutes based on UL 1709 rapid-rise time-temperature curve when subjected to a heat flux of 65,000 BTU/ft^2 hr (200 kW/m^2)
Cable configurations	For all single and multiconductor Alloy 825 sheath cables
Material	Intumescent epoxy
Dimensions	6 in long x 3.5 in diameter (15.2 cm long x 8.9 cm diameter)

Order reference	Description
KMHUB215-293	Gland protector for 0.215" - 0.293" OD cable
KMHUB294-418	Gland protector for 0.294" - 0.418" OD cable
KMHUB419-500	Gland protector for 0.419" - 0.500" OD cable
KMHUB500-543	Gland protector for 0.501" - 0.543" OD cable
KMHUB544-605	Gland protector for 0.544" - 0.605" OD cable
KMHUB606-730	Gland protector for 0.606" - 0.730" OD cable
KMHUB731-855	Gland protector for 0.731" - 0.855" OD cable

Note: Specify MI cable reference number along with fire protection hub order reference when ordering this part.

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