Configuration Code HB01
General-Purpose Connection Heads and Options

The general-purpose, screw-cover connection heads listed below are NEMA/IP66 rated for indoor or outdoor use providing protection against dust, rain, splashing and hose-directed water. These Pyromation design-patented connection heads have easy access, one-turn caps; accept Pyromation 300 series and DIN terminal blocks and transmitters, and provides greater volume for ease of field wiring. Please refer to page AC-5 & 6 for additional head descriptions and complete specifications.

ALUMINUM

CAST IRON

POLYPROPYLENE

316 STAINLESS STEEL

ORDER CODES

Example Order Number: 1-1 **31C** - 1-2 **GS-OR** - 1-3 **343-3**

1-1 General-Purpose Aluminum

ORDER CODE	DESCRIPTION		
	Process Opening	*Conduit Opening*	*Standard Gasket*
31A	1/8" NPT	3/4" NPT	Graphite
31B	1/4" NPT	3/4" NPT	Graphite
31Q	3/8" NPT	3/4" NPT	Graphite
31C	1/2" NPT	3/4" NPT	Graphite
31D	3/4" NPT	3/4" NPT	Graphite
31E	1" NPT	3/4" NPT	Graphite

1-1 General-Purpose Cast Iron

ORDER CODE	DESCRIPTION		
	Process Opening	*Conduit Opening*	*Standard Gasket*
34C	1/2" NPT	3/4" NPT	Graphite
34D	3/4" NPT	3/4" NPT	Graphite
34E	1" NPT	3/4" NPT	Graphite

1-1 General-Purpose 316 Stainless Steel

ORDER CODE	DESCRIPTION		
	Process Opening	*Conduit Opening*	*Standard Gasket*
91C	1/2" NPT	3/4" NPT	Graphite
91D	3/4" NPT	3/4" NPT	Graphite

1-1 General-Purpose White Polypropolyene

ORDER CODE	DESCRIPTION		
	Process Opening	*Conduit Opening*	*Standard Gasket*
63C	1/2" NPT	3/4" NPT	Buna N O-ring

1-2 Head Options

ORDER CODE	DESCRIPTION
W [1]	White epoxy coating
PS	Process set screw
GS	Internal ground screw
OR	Buna N O-ring
HS	Security screw

[1] Only available on 31C

1-3 Terminal Blocks

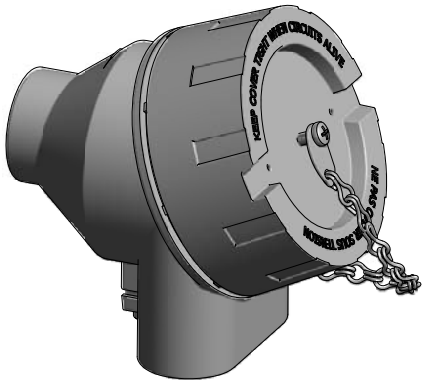
ORDER CODE	DESCRIPTION	CONDUCTOR SIZE
341	Single terminal block	Up to 8 AWG
342	Duplex terminal block	Up to 8 AWG
343-2	Triplex terminal block with 2 brass terminals	Up to 12 AWG
343-3	Triplex terminal block with 3 brass terminals	Up to 12 AWG
343-4	Triplex terminal block with 4 brass terminals	Up to 12 AWG
343-6	Triplex terminal block with 6 brass terminals	Up to 12 AWG

Refer to page AC-4 for block specifications.

Configuration Code HB01
Hazardous Location-Rated Connection Heads and Options

The hazardous location-rated connection heads shown below are designed for Class I, Division I locations. Please refer to page AC-7 for descriptions, specifications and ratings for each head. See the "Overview of NEC Hazardous Location Classifications and Methods of Protection" table in the Explosion-Proof (XP) Sensors section of the Pyromation catalog for complete definitions of ratings.

93 Series XP
Connection Heads



215807 Series XP
Connection Head

94 Series XP
Connection Heads

ORDER CODES

Example Order Number: 1-1 **93C** - 1-2 **341**

1-1 Explosion-Proof Aluminum

ORDER CODE	DESCRIPTION			Maximum Gas Group Rating
	Process Opening	*Conduit Opening*	*Standard Gasket*	
93C	1/2" NPT	3/4" NPT	Buna N O-ring	B
93D	3/4" NPT	3/4" NPT	Buna N O-ring	B

1-1 Explosion-Proof 316 Stainless Steel

ORDER CODE	DESCRIPTION			Maximum Gas Group Rating
	Process Opening	*Conduit Opening*	*Standard Gasket*	
94C	1/2" NPT	3/4" NPT	Buna N O-ring	A
94D	3/4" NPT	3/4" NPT	Buna N O-ring	A

1-1 Explosion-Proof Aluminum DIN Style

ORDER CODE	DESCRIPTION			Maximum Gas Group Rating
	Process Opening	*Conduit Opening*	*Standard Gasket*	
215807	1/2" NPT	3/4" NPT	Buna N O-ring	A

1-2 Ceramic Terminal Blocks[1]

ORDER CODE	DESCRIPTION	CONDUCTOR SIZE
341	Single terminal block	Up to 8 AWG
342	Duplex terminal block	Up to 8 AWG
343-2	Triplex terminal block with 2 brass terminals	Up to 12 AWG
343-3	Triplex terminal block with 3 brass terminals	Up to 12 AWG
343-4	Triplex terminal block with 4 brass terminals	Up to 12 AWG
343-6	Triplex terminal block with 6 brass terminals	Up to 12 AWG

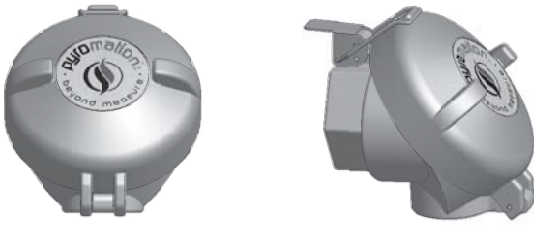
[1] Not available with 215807 head.

1-2 DIN Form B Style Ceramic Terminal Blocks

ORDER CODE	DESCRIPTION	CONDUCTOR SIZE
210304	Duplex terminal block	Up to 16 AWG
210332	Triplex terminal block with 2 brass terminals	Up to 16 AWG
210333	Triplex terminal block with 3 brass terminals	Up to 16 AWG
210334	Triplex terminal block with 4 brass terminals	Up to 16 AWG
210336	Triplex terminal block with 6 brass terminals	Up to 16 AWG

DIE-CAST ALUMINUM FLIP-TOP CONNECTION HEADS

The 49 series flip-top aluminum connection heads listed below meet NEMA 4 requirements for indoor or outdoor applications. The 49 series flip-top aluminum head utilize an EPDM O-ring seal with a maximum temperature rating of 400 ºF. The flip cover provides easy access to the terminals for wiring or maintenance. These connection heads accept the Pyromation 340 series terminal blocks, 400 series transmitters, and DIN Form B blocks and transmitters.



Example Order Number: 1-1 **49C** - 1-2 **GS** - 1-3 **343-3**

1-1 General-Purpose Aluminum Flip-Top

ORDER CODE	DESCRIPTION		
	Process Opening	***Conduit Opening***	***Standard Gasket***
49C	1/2" NPT	3/4" NPT	EPDM O-ring
49D	3/4" NPT	3/4" NPT	EPDM O-ring

1-2 Head Options

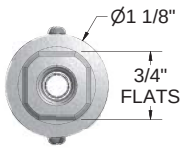
ORDER CODE	DESCRIPTION
GS	Internal ground screw

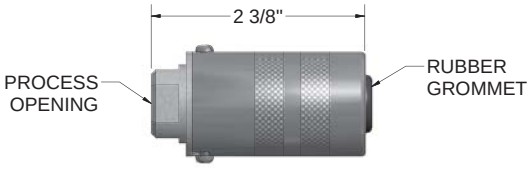
1-3 Terminal Blocks

ORDER CODE	DESCRIPTION	CONDUCTOR SIZE
341	Single terminal block	Up to 8 AWG
342	Duplex terminal block	Up to 8 AWG
343-2	Triplex terminal block with 2 brass terminals	Up to 12 AWG
343-3	Triplex terminal block with 3 brass terminals	Up to 12 AWG
343-4	Triplex terminal block with 4 brass terminals	Up to 12 AWG
343-6	Triplex terminal block with 6 brass terminals	Up to 12 AWG

MINIATURE NICKEL-PLATED STEEL CONNECTION HEADS

The miniature nickel-plated connection heads listed below are for indoor or outdoor non-hazardous locations. They provide some degree of protection from dust, rain, and splashing water. The heads come standard with an O-ring moisture seal where the cap connects to the body, and a rubber grommet where the wire exits the cap. The nickel plating provides good corrosion protection. The 362 series connection heads are available with a 1/8" NPT or 1/4" NPT process connections, along with 2-, 3-, or 4-terminal configurations.





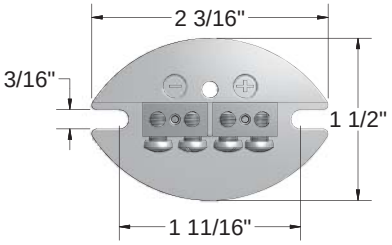
Example Order Number: 1-1 **364A**

1-1 Complete Head Assemblies

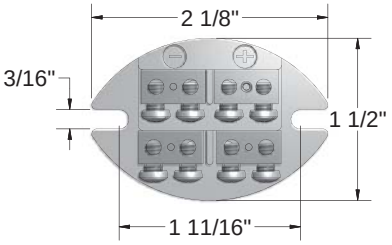
CODE	NO. OF TERMINALS	PROCESS OPENING (inches)	CODE	NO. OF TERMINALS	PROCESS OPENING (inches)
362A	2	1/8 NPT	362B	2	1/4 NPT
363A	3	1/8 NPT	363B	3	1/4 NPT
364A	4	1/8 NPT	364B	4	1/4 NPT

CERAMIC TERMINAL BLOCKS

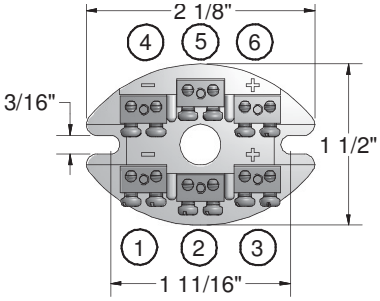
The terminal blocks, listed below, fit all Pyromation series 31, 34, 49, 63, 91 and 800 series connection heads. The terminal blocks are provided with a steatite ceramic base, brass terminal pieces, and stainless steel screws. These terminal blocks are not rated for high voltage use, but can be used in temperature sensor or low voltage Class 2 circuits. Series 341 and 342 terminal blocks accept up to an #8 gauge wire, and the series 343 accepts up to a #12 gauge wire.



Series 341



Series 342



Series 343

(See table for complete 343- Series)

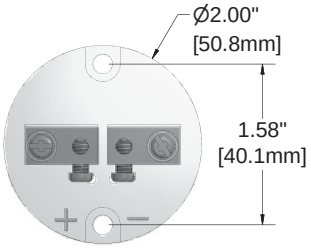
Terminal Blocks

CODE	DESCRIPTION	CONDUCTOR SIZE	TERMINAL POSITION AS SUPPLIED
341	Single terminal block	Up to 8 AWG	N/A
342	Duplex terminal block	Up to 8 AWG	N/A
343-2	Triplex terminal block with 2 brass terminals	Up to 12 AWG	①–③
343-3	Triplex terminal block with 3 brass terminals	Up to 12 AWG	②–④–⑥
343-4	Triplex terminal block with 4 brass terminals	Up to 12 AWG	①–③–④–⑥
343-6	Triplex terminal block with 6 brass terminals	Up to 12 AWG	All Positions

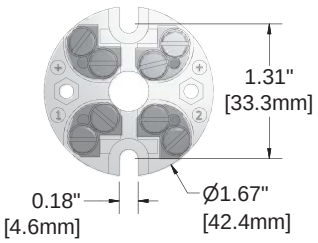
DIN FORM B STYLE CERAMIC TERMINAL BLOCKS

The DIN Style terminal blocks are 42 mm and 50 mm in diameter. The terminal blocks are supplied with a ceramic base. They can be provided in 2-, 3-, 4-, or 6-terminal configurations.

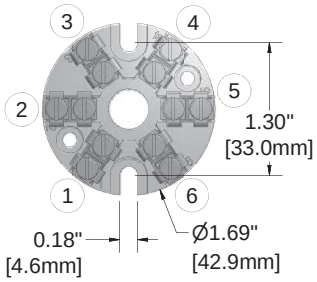
Dimensions In Inches [mm]



210412



210304



210336

(See table for complete 21033- Series)

Terminal Blocks

CODE	DESCRIPTION	CONDUCTOR SIZE	TERMINAL POSITIONS
210412[1]	2-Pole terminal block (8, 11, 14 AWG)	Up to 8 AWG	N/A
210304	4-Pole terminal block	Up to 16 AWG	N/A
210332	2-Pole terminal block	Up to 16 AWG	①–③
210333	3-Pole terminal block	Up to 16 AWG	①–③–⑤
210334	4-Pole terminal block	Up to 16 AWG	①–③–④–⑥
210336	6-Pole terminal block	Up to 16 AWG	All positions
[1] Not available with 215807			

These general-purpose connection heads are designed and manufactured by Pyromation. The enhanced connection head series design provides[1]:

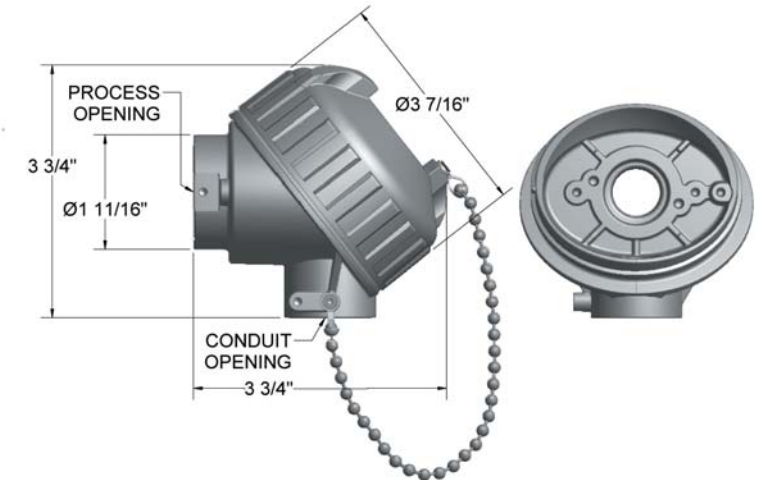
- Greater internal volume for easier wire termination and storage
- Elevated terminal block allowing easy access to terminals for attachment of extension wire
- Conduit stop to prevent damage to interior wiring/block/transmitter during installation
- Optional ground screw (not available on the polypropylene head) and process set screw positions
- Easy single-twist cap removal that maintains strong seal when closed

[1] The connection head series changes are not incorporated in the flip-top aluminum connection head.

GENERAL-PURPOSE, DIE-CAST ALUMINUM CONNECTION HEADS

The General-Purpose, Die-cast Aluminum connection heads are NEMA 4X/IP66 rated for indoor or outdoor use, providing protection against dust, rain, splashing and hose-directed water.

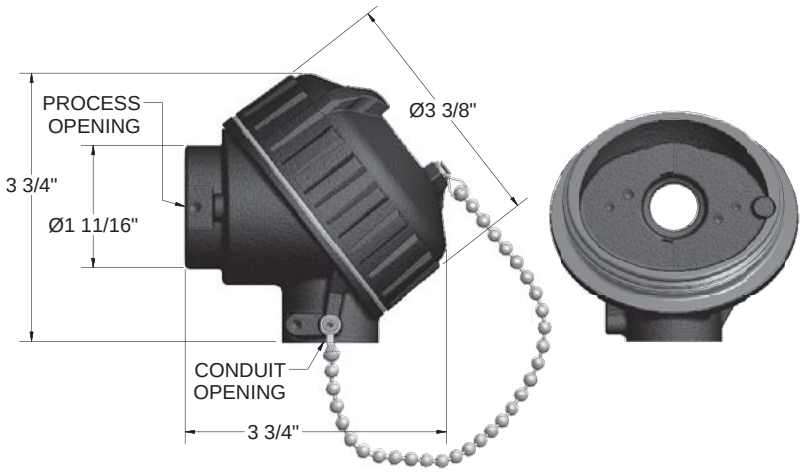
Some configurations are available in a white epoxy coating (which comes with an O-ring seal). All other units come with a standard graphite material gasket that provides good chemical stability, superior creep resistance and a maximum temperature rating of 825 ˚F. These heads accept Pyromation 340 series terminal blocks or 400 series transmitters and DIN Form B blocks or transmitters.



GENERAL-PURPOSE, CAST IRON CONNECTION HEADS

The General-Purpose, Cast Iron connection heads are NEMA 4X/IP66 rated for indoor or outdoor use, providing protection against dust, rain, splashing and hose-directed water.

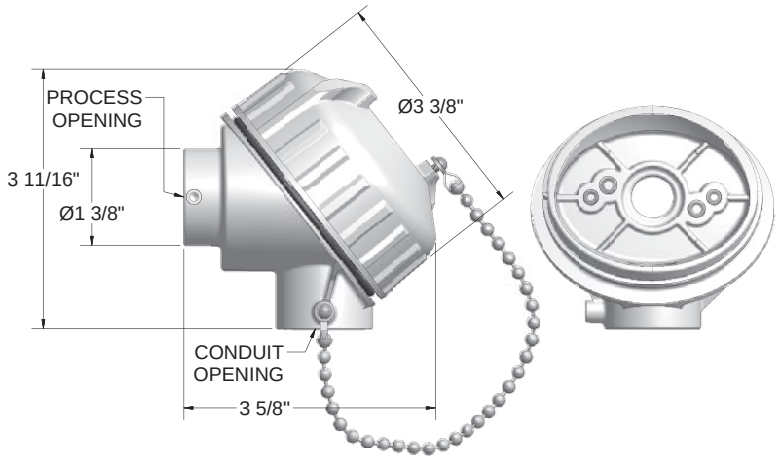
These heads have a black epoxy electrocoat that provides good corrosion- and chemical-resistance; however, it does not provide UV protection for outdoor applications. These heads include a standard graphite material gasket that provides good chemical stability, superior creep resistance and a maximum temperature rating of 825 ˚F. Pyromation 340 series terminal blocks or 400 series transmitters and DIN Form B blocks or transmitters can be mounted in these heads.



GENERAL-PURPOSE, POLYPROPYLENE (PLASTIC) CONNECTION HEADS

The plastic connection heads are molded from white polypropylene and include a stainless steel cap chain and pins. They have been tested and meet NEMA 4X wash-down and corrision requirements for indoor or outdoor use, providing protection against dust, rain, splashing and hose-directed water. The head material is FDA approved for food contact.

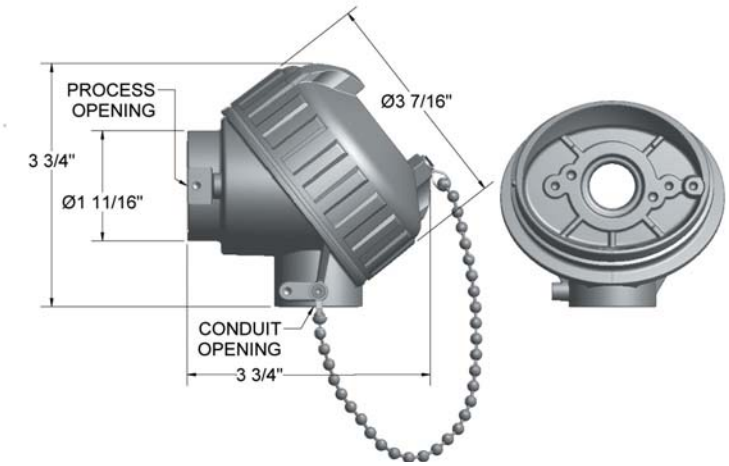
These heads come with an O-ring seal providing a maximum temperature rating of 250 ˚F. Each head has a ½" NPT process opening and a ¾" conduit opening. They will accept Pyromation 340 series blocks, 400 series transmitters and DIN Form B blocks or transmitters.



GENERAL-PURPOSE, STAINLESS STEEL CONNECTION HEADS

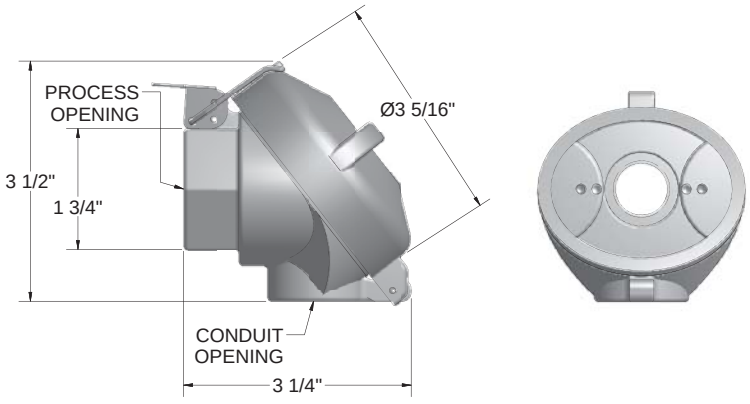
The General-Purpose, 316L Stainless Steel connection heads are NEMA 4X/IP66 rated for indoor or outdoor use, providing protection against dust, rain, splashing and hose-directed water.

The stainless steel heads offer excellent corrosion- and chemical-resistance. They include a standard graphite material gasket that provides good chemical stability, superior creep resistance and a maximum temperature rating of 825 ˚F. These heads accept Pyromation 340 series terminal blocks, 400 series transmitters and DIN Form B blocks or transmitters.



GENERAL-PURPOSE, FLIP-TOP ALUMINUM CONNECTION HEADS

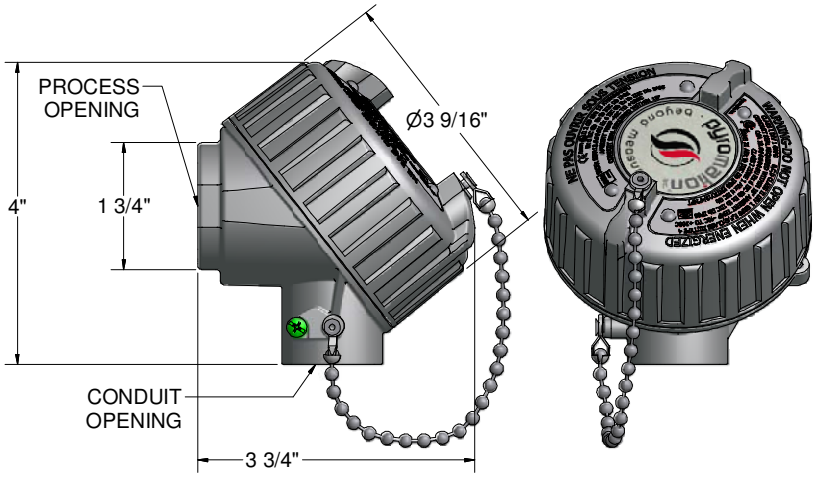
These Flip-Top, Die-cast Aluminum connection heads feature an easy-to-open, flip-top cap that is hinged on one side so the cap cannot be lost. These heads come with a standard O-ring that provides good chemical stability, excellent wet/steam sealing characteristics and a maximum temperature rating of 400 ˚F. The heads accept Pyromation 340 series terminal blocks, 400 series transmitters and DIN Form B blocks or transmitters.



These connection heads are designed for use in hazardous locations; places where flammable or explosive conditions exist. The following connection head types meet CSA or FM standards for hazardous locations and, depending on application, can be used as part of explosion-proof (XP) temperature sensor assemblies in Class I, Division I hazardous locations.

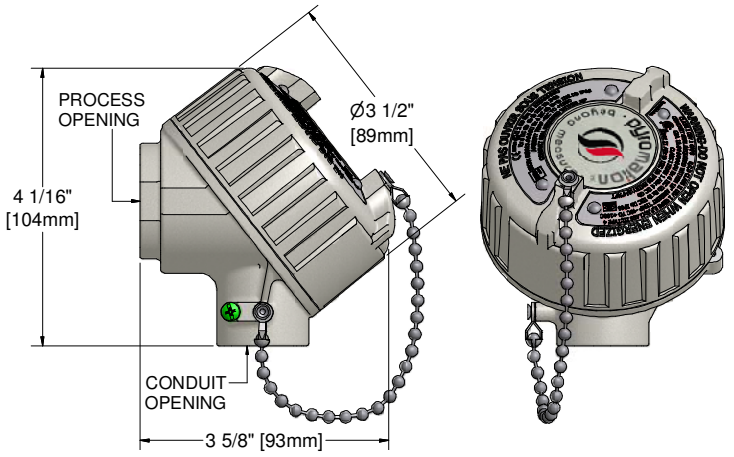
93 SERIES ALUMINUM CONNECTION HEADS

The series 93 connection heads are FM and CSA listed and meet the requirements for Class I, Division I Groups B, C and D; Class II Groups E, F and G. These connection heads accommodate any of the 340 series or DIN Form B terminal blocks and a variety of transmitters including Pyromation head-mounted transmitters. These heads also are NEMA 4 and IP66 rated.



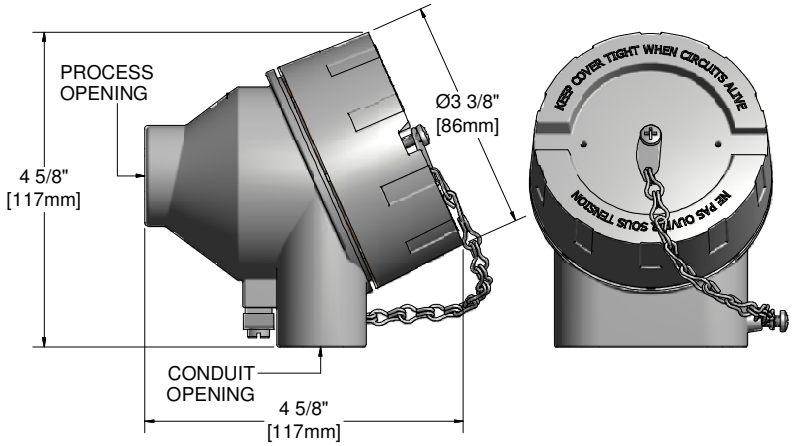
94 SERIES 316L STAINLESS STEEL SCREW-COVER CONNECTION HEADS

The series 94 connection heads are FM and CSA listed and meet the requirements for Class I, Division I Groups A, B, C and D; Class II Groups E, F and G. These connection heads accommodate any of the 340 series or DIN Form B terminal blocks and a variety of transmitters including Pyromation head-mounted transmitters. These heads also are NEMA 4X and IP66 rated.



DIN STYLE SCREW-COVER CONNECTION HEADS

The 215807 is an aluminum DIN Style connection head with a ½" NPT process opening and a ¾" conduit connection. The second conduit opening is built-in for optional dual access. It is also FM and CSA listed. This head meets the requirements for Class I, Division I Groups A, B, C and D for use in hazardous locations as outlined by the National Electrical Code (NEC). These heads meet NEMA 4 requirements.



STANDARD and MINIATURE PLUGS and JACKS

FIG. 1

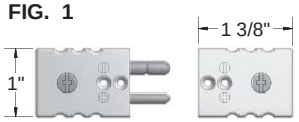


FIG. 2

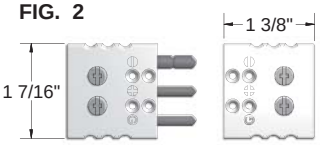


FIG. 3

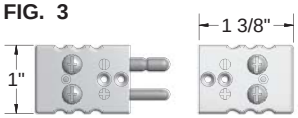


FIG. 4

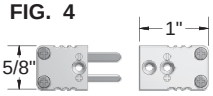
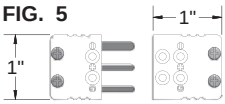


FIG. 5



EXAMPLE ORDER NUMBER: 81J or 81J-H

Standard Plugs

CODE		DESCRIPTION			
STANDARD PLUGS	*STANDARD JACKS*	NO. PINS	PIN TYPE	TEMP RATING	FIG. NO.
81[1]	82[1]	2	Hollow	200 ºC	1
81U[1] - 3	82[1] - 3	3	Hollow	200 °C	2
81[1] - H	82[1] - H	2	Hollow	350 °C	1
2 Pin JAB - In Connectors					
81[1] - J	82[1] - J	14 ga. max		200 °C	3
61K - E	62K - E	8 ga. max		177 °C	3
[1] = Insert calibration code J, K, T, E, N, R, S, or U					

EXAMPLE ORDER NUMBER: 84K-H

Miniature Plugs

CODE		DESCRIPTION		
MINIATURE PLUGS	*MINIATURE JACKS*	NO. PINS	TEMP RATING	FIG. NO.
83[1]	84[1]	2	200 ºC	4
83U[1] - 3	84[1] - 3	3	200 °C	5
[1] Insert calibration code J, K, T, E, N, R, S, or U				

MOUNTING HARDWARE FOR PLUGS AND JACKS

FIG. 6

FIG. 7

FIG. 9

FIG. 8

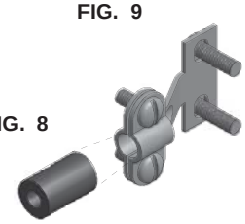


FIG. 11

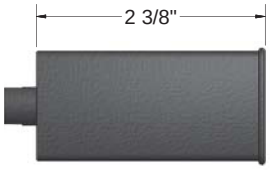


FIG. 10

EXAMPLE ORDER NUMBER: 8S1 or 8S2-2

Mounting Hardware

CODE	DESCRIPTION	FIG. NO.
8S1	Std. size cable clamp for 200 and 350 °C connectors	9
8S2 - [1]	Std. size brass crimp adaptor for 200 and 350 °C connectors	6
8S3 - [1]	Std. size compression bracket for 200 and 350 °C connectors	7
8M1	Mini cable clamp	9
8M2 - [1]	Mini brass crimp adaptor	6
[1] = Insert tube size code where required 1 = 1/16" 2 = 1/8" 3 = 3/16" 4 = 1/4" (1/4" O.D. is not available with mini brass crimp)		

Miscellaneous Hardware

CODE	DESCRIPTION	FIG. NO.
Standard Connectors		
811	Rubber boot for 200 °F connectors	11
816	Wire grommet for 200 °F connectors	10
629	Cable clamp bushing	8
Miniature Connectors		
821	Wire grommet	10
831	Rubber boot	11
629	Cable clamp bushing	8

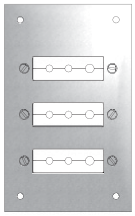
THERMOCOUPLE AND RTD JACK PANELS FOR FS CONDUIT BOX MOUNTING

All listed panels are 2(3/4)" w x 4(1/2)" h aluminum plates

FIG. 1

FIG. 2

FIG. 3



EXAMPLE ORDER NUMBER: FMF-K-3

Thermocouple Jack Panels

CODE		DESCRIPTION	
STANDARD SIZE	*MINIATURE SIZE*	NO. CIRCUITS	FIG. NO.
FSB - [1] - 1	FMF - [1] - 1	1	1
FSB - [1] - 2	FMF - [1] - 2	2	1
FSB - [1] - 3	FMF - [1] - 3	3	1
FSB - [1] - 4	FMF - [1] - 4	4	1
FSB - [1] - 5	FMF - [1] - 5	5	1
FSF - [1] - 6	FMF - [1] - 6	6	1
[1] = Insert calibration code J,K,T,E,N,R,S, or U (type N supplied in standard size only).			

3-Wire RTD Jack Panels

CODE	DESCRIPTION	
STANDARD SIZE	NO. CIRCUITS	FIG. NO.
FSF - U - 1 - T	1	3
FSF - U - 2 - T	2	3
FSF - U - 3 - T	3	3
FSF - U - 4 - T	4	3
FSF - U - 5 - T	5	3
FSF - U - 6 - T	6	3
Above panels are 3-pin connections.		

FS Conduit Boxes For Above Jack Panels

CODE	BOX MATERIAL	MAX. NUMBER OF CIRCUITS	CONDUIT OPENING (inches)	FIG. NO.
638	Diecast aluminum	4	3/4 NPT	2
640	Diecast aluminum	5	3/4 NPT	2
639	Glass/nylon	6	3/4 NPT	2

THERMOCOUPLE AND RTD JACK PANELS

FIG. 4

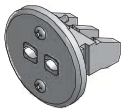


FIG. 5

FIG. 6

EXAMPLE ORDER NUMBER: SSB-T-8

Thermocouple Jack Panels

CODE		DESCRIPTION	
STANDARD SIZE	*MINIATURE SIZE*	NO. CIRCUITS	FIG. NO
82 - [1] - R	84 - [1] - R	1	4
SSB - [1] - 6	SMF - [1] - 6	6	5
SSB - [1] - 8	SMF - [1] - 8	8	5
SSB - [1] - 10	SMF - [1] - 10	10	5
SSB - [1] - 12	SMF - [1] - 12	12	5
[1] = Insert calibration code J,K,T,E,N,R,S, or U. (type N supplied in standard size only)			

3-Wire RTD Jack Panels

CODE	DESCRIPTION	
STANDARD SIZE	NO. CIRCUITS	FIG. NO
SSF - U - 6 - T	6	6
SSF - U - 8 - T	8	6
SSF - U - 10 - T	10	6
SSF - U - 12 - T	12	6
Above panels are 3-pin connections.		

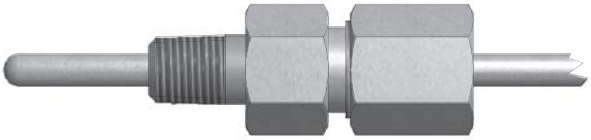
Jack Panels Dimensions

NO. CIRCUITS	WIDTH (inches)	LENGTH (inches)	WIDTH (inches)	LENGTH (inches)
	STANDARD SIZE		*MINIATURE SIZE*	
6	3 1/4	5 3/4	2	5
8	3 1/4	7 1/4	2	6
10	3 1/4	8 3/4	2	7 1/4
12	3 1/4	10 1/4	2	8 1/2
1	Conduit knockout sizes for round panel jacks. Standard size: 3/4"Miniature size: 1/2"			

Standard and miniature jack panels can be custom designed to provide other dimensions, number of jacks, or mixed calibrations. Consult factory for availability.

pyromation inc.

RE-ADJUSTABLE COMPRESSION FITTINGS



Stainless Steel with FEP Ferrule

CODE	TUBE SIZE (inches)	PROCESS THREAD (inches)	LENGTH (inches)
6109T-1A	1/16 O.D.	1/8 NPT	1 1/4
6109T-2A	1/8 O.D.	1/8 NPT	1 1/4
6109T-3A	3/16 O.D.	1/8 NPT	1 1/4
6109T-4B	1/4 O.D.	1/4 NPT	2 1/2
6109T-6B	3/8 O.D.	1/4 NPT	2 1/2
6109T-4C	1/4 O.D.	1/2 NPT	2 1/2
6109T-6C	3/8 O.D.	1/2 NPT	2 1/2

Stainless Steel Re-Adjustable Spring-Loaded Well Fittings with FEP Ferrule

CODE	TUBE SIZE (inches	PROCESS THREAD (inches)	LENGTH (inches)
6109TSL-3C	3/16 O.D.	1/2 NPT	2 3/8
6109TSL-4C	1/4 O.D.	1/2 NPT	2 3/8

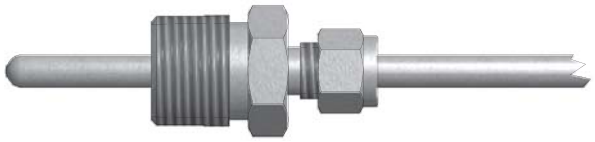
Brass with FEP Ferrule

CODE	TUBE SIZE (inches)	PROCESS THREAD (inches)	LENGTH (inches)
6122T-1A	1/16 O.D.	1/8 NPT	1
6122T-2A	1/8 O.D.	1/8 NPT	1 1/4
6122T-3A	3/16 O.D.	1/8 NPT	1 1/4
6122T-2B	1/8 O.D.	1/4 NPT	1 3/8
6122T-3B	3/16 O.D.	1/4 NPT	1 1/2
6122T-4B	1/4 O.D.	1/4 NPT	1 1/2
6122T-6B	3/8 O.D.	1/4 NPT	1 9/16
6122T-4C	1/4 O.D.	1/2 NPT	1 13/16
6122T-6C	3/8 O.D.	1/2 NPT	1 13/16

Ferrule Temperature Ratings

CODE	MATERIAL	MAX. TEMP.
N	Neoprene	200 °F
T	FEP	450 °F
L	Lava	1600 °F
Substitute ferrule code N or L for the letter T for fittings supplied with other than FEP ferrules.		

ONE-TIME ADJUSTABLE COMPRESSION FITTINGS



Stainless Steel with SS Ferrule

CODE	TUBE SIZE (inches)	PROCESS THREAD (inches)	LENGTH (inches)
6009-1A	1/16 O.D.	1/8 NPT	1 1/4
6009-2A	1/8 O.D.	1/8 NPT	1 1/4
6009-3A	3/16 O.D.	1/8 NPT	1 1/4
6009-4A	1/4 O.D.	1/8 NPT	1 1/4
6008-2B	1/8 O.D.	1/4 NPT	1 7/16
6008-3B	3/16 O.D.	1/4 NPT	1 1/2
6008-4B	1/4 O.D.	1/4 NPT	1 9/16
6008-6B	3/8 O.D.	1/4 NPT	1 5/8
6008-2C	1/8 O.D.	1/2 NPT	1 5/8
6008-4C	1/4 O.D.	1/2 NPT	1 3/4
6008-6C	3/8 O.D.	1/2 NPT	1 7/8

Brass with Brass Ferrule

CODE	TUBE SIZE (inches)	PROCESS THREAD (inches)	LENGTH (inches)
6022-2A	1/8 O.D.	1/8 NPT	1 1/16
6022-3A	3/16 O.D.	1/8 NPT	1 1/16
6022-4A	1/4 O.D.	1/8 NPT	1 3/16
6022-3B	3/16 O.D.	1/4 NPT	1 3/16
6022-4B	1/4 O.D.	1/4 NPT	1 1/4
6022-6B	3/8 O.D.	1/4 NPT	1 5/16
6022-4C	1/4 O.D.	1/2 NPT	1 3/8
6022-6C	3/8 O.D.	1/2 NPT	1 1/2

FIG. 1

FIG. 2

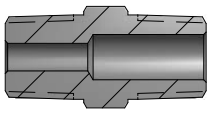


FIG. 3

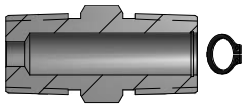


FIG. 4

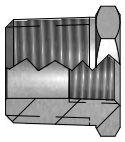


FIG. 5

Machined Double Thread Hex Fittings

CODE	SHEATH SIZE (inches)	DESCRIPTION	FIG. NO
CARBON STEEL 1/2" NPT x 1/2" NPT			
6HN-CC-125-B	0.125	Braze hub	1
6HN-CC-188-B	0.188	Braze hub	1
6HN-CC-250-B	0.250	Braze hub	1
6HN-CC-375-B	0.375	Braze hub	1
6HN-CC-188-SL	0.188	Spring-loaded	2
6HN-CC-250-SL	0.250	Spring-loaded	2
6HN-CC-188-SC[1]	0.188	Self contained spring-loaded	3
6HN-CC-250-SC[1]	0.250	Self contained spring-loaded	3
316SS 1/2" NPT x 1/2" NPT			
8HN-CC-125-W	0.125	Weld hub	1
8HN-CC-188-W	0.188	Weld hub	1
8HN-CC-250-W	0.250	Weld hub	1
8HN-CC-375-W	0.375	Weld hub	1
8HN-CC-188-SL	0.188	Spring-loaded	2
8HN-CC-250-SL	0.250	Spring-loaded	2
8HN-CC-188-SC[1]	0.188	Self contained spring-loaded	3
8HN-CC-250-SC[1]	0.250	Self contained spring-loaded	3
316SS 3/4" NPT x 1/2" NPT			
8HN-DC-250-W	0.250	Weld hub	1
[1] Requires snap-ring pliers to install.			

Hex Head Reducing Bushings

CODE		THREAD SIZE (inches)	LENGTH (inches)	FIG. NO
BRASS	*316SS*			
22RB-BA	8RB-BA	1/4 NPT x 1/8 NPT	11/16	4
22RB-CA	8RB-CA	1/2 NPT x 1/8 NPT	15/16	4
22RB-CB	8RB-CB	1/2 NPT x 1/4 NPT	15/16	4
22RB-DC	8RB-DC	3/4 NPT x 1/2 NPT	1	4
	8RB-EC	1 NPT x 1/2 NPT	1 3/16	4
	8RB-ED	1 NPT x 3/4 NPT	1 3/16	4
	8RB-FC	1 1/4 NPT x 1/2 NPT	1 1/8	4
	679	1 1/4-18 NEF x 1/2 NPT	15/16	4

Pipe Nipples (Schedule 40)

CODE		THREAD (inches)	LENGTH (inches)	FIG. NO
CARBON STEEL	*316SS*			
6PN - C - CL	8PN - C - CL	1/2 NPT	1	5
6PN - C - 2	8PN - C - 2	1/2 NPT	2	5
6PN - C - 3	8PN - C - 3	1/2 NPT	3	5
6PN - C - 4	8PN - C - 4	1/2 NPT	4	5
6PN - C - 5	8PN - C - 5	1/2 NPT	5	5
6PN - C - 6	8PN - C - 6	1/2 NPT	6	5

FIG. 6

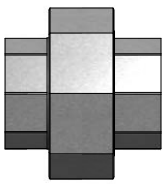
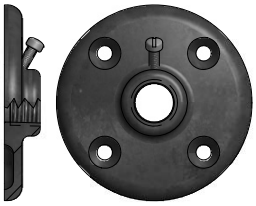


FIG. 7

FIG. 8

FIG. 9



Union Fittings

CODE	NPT SIZE (inches)	DESCRIPTION	FITTING MATERIAL	FIG. NO
6FU - C	1/2	Female union-150#	Malleable iron	6
8FU - C	1/2	Female union-150#	316 SS	6
6FU - C - X	1/2	Explosion-proof female union	Zinc plated steel	6
6UE - C	1/2	90° union elbow-150#	Malleable iron	7

Malleable Iron Mounting Flanges

CODE	NPT PIPE SIZE (inches)	DESCRIPTION	FIG. NO
6FF - B	1/4	Internal threads	8
6FF - C	1/2		8
6FF - D	3/4		8
6FF - E	1		8
6BF - B	1/4	Slip fit bore for indicated pipe size	9
6BF - C	1/2		9
6BF - D	3/4		9
6BF - E	1		9

BARE WIRE, INSULATORS, TERMINAL and SPADE LUGS

Bare Base Metal Thermocouple Wire

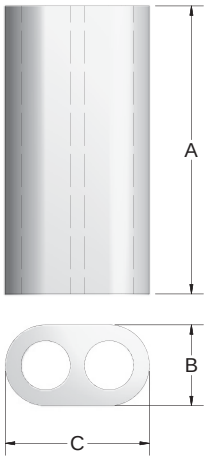
CODE	TYPE / POL.	MATERIAL	GA.	FT. / LB.
JP08B	J (+)	Iron	8	23
JN08B	J (-)	Constantan	8	20
JP14B	J (+)	Iron	14	91
JN14B	J (-)	Constantan	14	80
JP20B	J (+)	Iron	20	365
JN20B	J (-)	Constantan	20	323
KP08B	K (+)	Chromel®	8	21
KN08B	K (-)	Alumel®	8	21
KP14B	K (+)	Chromel®	14	83
KN14B	K (-)	Alumel®	14	83
KP20B	K (+)	Chromel®	20	333
KN20B	K (-)	Alumel®	20	333

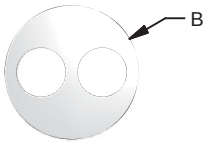
Bare Noble Metal Thermocouple Wire

CODE	TYPE / POL.	MATERIAL	GA.	IN. / TROY OZ.
RP24B	R (+)	Plat. 13% Rh	24	309
SP24B	S (+)	Plat. 10% Rh	24	302
PN24B	R S (-)	Pure Platinum	24	282
RP26B	R (+)	Plat. 13% Rh	26	482
SP26B	S (+)	Plat. 10% Rh	26	473
PN26B	R S (-)	Pure Platinum	26	440

NOTES: All wire supplied bright annealed. Wire orders must be for equal amounts of both legs. All listed wire is supplied as standard limits of error.

INSULATOR DIMENSIONS





Cordierite Insulators (2250 ºF max)

CODE	STYLE	GA.	A DIM. (inches)	B DIM. (inches)	C DIM. (inches)	NO BORE(S)
408-1C	Oval	8	1	0.281	0.500	2
408-1R	Round	8	1	0.465		2
408-3C	Oval	8	3	0.281	0.500	2
408-3R	Round	8	3	0.465		2
408-12S[1]	Fish spine	8	12	0.260		1
411-1C	Oval	11	1	0.218	0.375	2
411-3C	Oval	11	3	0.218	0.375	2
414-1C	Oval	14	1	0.188	0.313	2
414-1R	Round	14	1	0.250		2
414-3C	Oval	14	3	0.188	0.313	2
414-12S[1]	Fish spine	14	12	0.200		1
420-1C	Oval	20	1	0.188	0.172	2

[1] 12S fish spine insulators supplied in continuous 12" sleeves.

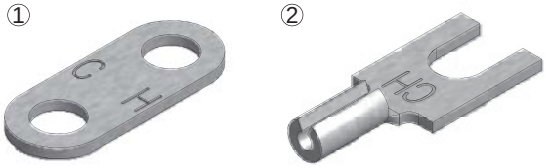
Alumina Insulators (3400 ºF max)

CODE	STYLE	GA.	A DIM. (inches)	B DIM. (inches)	C DIM. (inches)	NO BORE(S)
424-12	Round	24	12	0.188		4
424-18	Round	24	18	0.188		4
424-24	Round	24	24	0.188		4
424-30	Round	24	30	0.188		4

Thermocouple Alloy Terminal and Spade Lugs

TERMINAL LUG CODE [1]	SPADE LUG CODE [2]	ANSI LETTER DESIGNATION	THERMOCOUPLE ALLOY
460053	460060	KP, EP	Chromel®
460052	460059	KN	Alumel®
460056	460063	JP	Iron
460054	460061	JN, EN, TN	Constantan
460055	460062	TP, RP, SP	Copper
460051	460116	RN, SN	Alloy #11

① ②



[1] Terminal lugs fit Cinch Jones Series #141 and equivalent Barrier terminal blocks with 27/64" screw spacing and #6-32 terminal screws.
[2] Spade lugs are crimp-on style to fit #6-32 terminal screws and 18 awg. wire or smaller.

COMPLETE COMPENSATED TERMINAL BLOCKS

EXAMPLE ORDER NUMBER: 26 - 240 - 08

Terminal Block Thermocouple Type

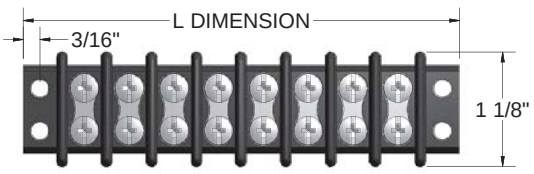
PREFIX CODE	T/C TYPE	THERMOCOUPLE ALLOY	
		POSITIVE	*NEGATIVE*
26 - 220	E	Chromel®	Constantan
26 - 230	J	Iron	Constantan
26 - 240	K	Chromel®	Alumel®
26 - 250	R-S	Copper	Alloy #11
26 - 260	T	Copper	Constantan
26 - 270	U	Copper	Copper

Consult factory for combination blocks.

Number of Circuits

SUFFIX CODE	CIRCUITS (TERMINALS)	L DIMENSION (inches)
02	2 (4)	2 1/2
04	4 (8)	4 1/2
05	5 (10)	5 3/8
06	6 (12)	6
08	8 (16)	7 3/4
10	10 (20)	9 1/2

Consult factory for other number of circuits.



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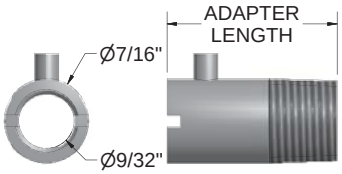
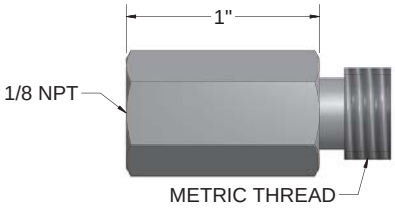
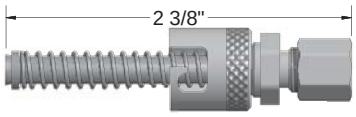




NICKEL PLATED BRASS COMPRESSION FITTING



Bayonet Fitting Adapters

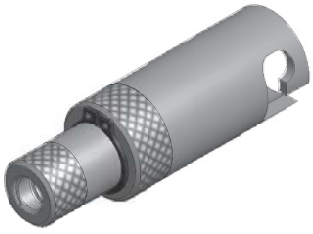
CODE	LENGTH (inches)	THREAD (inches)
705-0.88	7/8	1/8 NPT
705-1.25	1 1/4	1/8 NPT
705-1.5	1 1/2	1/8 NPT
705-2	2	1/8 NPT
705-2.25	2 1/4	1/8 NPT
705-2.5	2 1/2	1/8 NPT
705-3.5	3 1/2	1/8 NPT
735-0.88	7/8	3/8 - 24
735-1.5	1 1/2	3/8 - 24
735-2.5	2 1/2	3/8 - 24
735-3.5	3 1/2	3/8 - 24
The plated steel bayonet adapter accommodates the bayonet lock cap assembly to bottom the hot junction in holes in machine walls, cylinder, or dies.		

Metric to 1/8" NPT Adapters

CODE	METRIC THREAD (mm)
40001	10 x 1.5
40002	12 x 1
40003	12 x 1.5
40004	14 x 1.5
40005	14 x 2
Adds 1" to bayonet adapter length.	

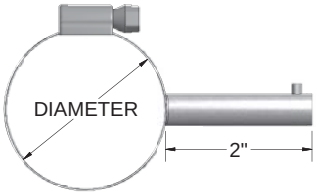
Adjustable Bayonet Cap

CODE	SHEATH SIZE (inches)	DESCRIPTION
718	1/16	Adjustable bayonet cap and spring
728	1/8	

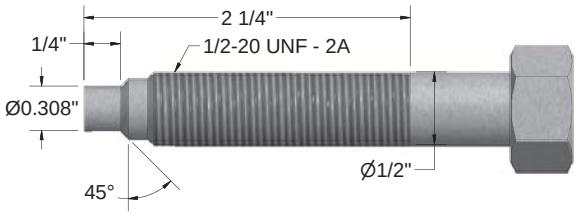


Positive Bottoming Indicating Bayonet Cap

CODE	DESCRIPTION
D702 - A - 2	Adjustable bayonet cap for 0.210" O.D. flex with red bottoming indication.



BLANK MELT BOLT



Pipe Clamp Adapters

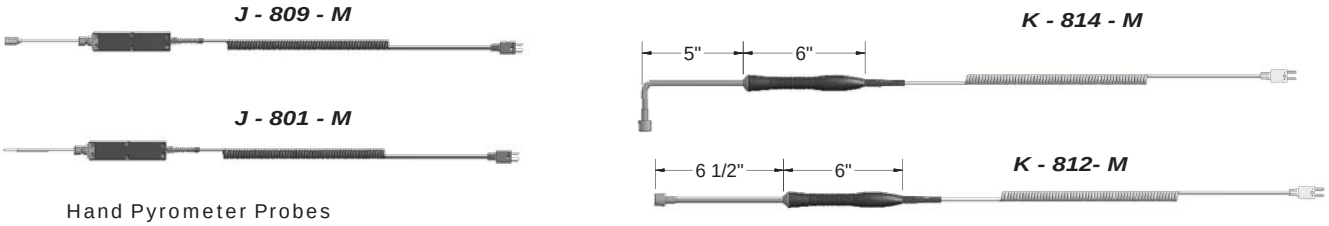
CODE	CLAMP DIA. MIN. / MAX. (inches)	PIPE SIZE (inches)	PIPE DIAMETER (inches)
PCA-075	11/16 - 1 1/4	1/2 - 3/4 IPS	0.840 - 1.050
PCA-150	1 1/16 - 2	1 - 1 1/2 IPS	1.315 - 1.900
PCA-250	2 1/16 - 3	2 - 2 1/2 IPS	2.375 - 2.875
PCA-350	3 5/16 - 4 1/4	3 - 3 1/2 IPS	3.500 - 4.000
PCA-400	4 1/8 - 7	4 IPS	4.500
Use 2(3/4)" sensor 'A' dimension when using fixed bayonet type thermocouples with above adapters.			

Blank Melt Bolts

CODE	DESCRIPTION
743	3" blank bolt
746	6" blank bolt

HANDHELD THERMOCOUPLE PROBES

The hand pyrometer thermocouple probes listed below are suitable for use in many process and laboratory applications for "spot checking" temperatures of a variety of products and air flows. The probes are designed for use with Pyromation's and other manufacturers' handheld pyrometers. All probes are supplied with retractable coiled cordset leads with an expandable length of 5 feet.



Hand Pyrometer Probes

CODES COMPLETE ASSEMBLY	PROBE STYLE	DESCRIPTION
J - 801 - M	Insertion probe	1/8" x 3" long sheath w/ a 1/16" x 3/4" long hypodermic needle tip
J - 803 - M	General-purpose probe	1/8" O.D. x 6" long pointed sheath
J - 805 - M	Heavy-duty general purpose	3/16" O.D. x 6" long pointed sheath
J - 809 - M	Air / gas shielded tip	1/8" O.D. x 6" long w/radiation shield
[1]K-812-M	Surface probe - straight	Heavy-Duty, Fast-Responding Tip 6 1/2" long
[1]K-814-M	Surface probe - 90° bend	Heavy-Duty, Fast-Responding Tip 6 1/2" long

[1] Only Available in Type "K"

To order other calibrations, change prefix letter to J or T.
All probes are supplied with 316 Stainless Steel sheaths.
To order thermocouples with sheath lengths other than what is specified, add the letter "X" after the calibration prefix and specify length. Example: JX-803-M X=12

MOLTEN NON-FERROUS METAL LANCES AND THERMOCOUPLE TIPS

FIG. 1

FIG. 2

FIG. 3

Lances and Tips

CODE	DESCRIPTION	FIG. NO.
26 - 101P[1]	Ladle type, straight lance handle with plastic grip, 43" long	1
26 - 501P [1]	Furnace type, 90° lance handle with plastic grip, 43" long	2
26 - 501T - 8	8" Type K 446SS thermocouple tip with 43" leads	3
26 - 501T - 12	12" Type K 446SS thermocouple tip with 43" leads	3
26 - 501T - 15	15" Type K 446SS thermocouple tip with 43" leads	3
26 - 501T - 18	18" Type K 446SS thermocouple tip with 43" leads	3
[1] Does not include sensor.		

FIG. 1

FIG. 2

Nylon Weatherproof Cord Grips

CODE	CABLE SIZE RANGE (inches)	NPT SIZE (inches)
1399	0.197 to 0.348	1/2

Stainless Steel Square Lock Flexible Armor

CODE	I.D. (inches)	O.D. (inches)	COATING	FIG. NO.
FX188SL	3/16	0.275	None	1
FX125SL	1/8	0.207	None	1
FX250SL	1/4	0.345	None	1
FX188SLP	3/16	0.328	PVC (black)	2
FX188SLF	3/16	0.313	FEP (white)	2

FIG. 3

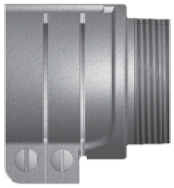


FIG. 4

Holding Fixtures for Silicon Carbide Tubes

CODE	DESCRIPTION	FIG. NO.
18J SERIES TUBES		
370006	3/4" NPT x 1(7/8)" I.D.	3
18JC SERIES TUBES		
370007	Support casting with flange	4

Coil Cords

CODE	DESCRIPTION	RETRACTED LENGTH (inches)	EXTENDED LENGTH (inches)
[1]32060-0	Polyurethane outer, PVC inner, 2 free ends,stripped	12	60
[1]32120-0	Polyurethane outer, PVC inner, 2 free ends,stripped	24	120
RTD32060-0	Polyurethane outer, PVC inner, 3 conductor with 2 free ends,stripped	12	60
[1] Insert calibration code: J, K, T, E, R, S, U Consult factory for availability of other lengths			

FIG. 6

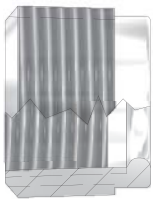
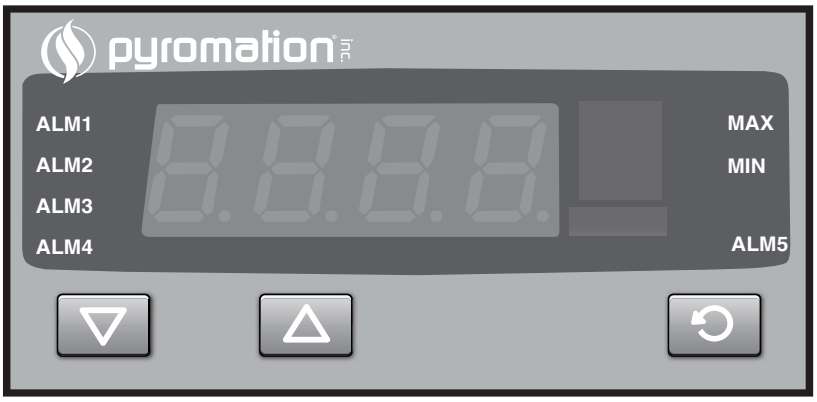


FIG. 7

Miscellaneous Items

CODE	DESCRIPTION	FIG. NO.
440017	3/4 oz. silicone rubber head sealant (RTV)	
440040	10cc heat transfer compound (300 °F max)	
6EB - DC	3/4" x 1/2" reducing face bushing	6
710	1/2" box connector	7

The Series 810 1/8 DIN Panel Indicator is loaded with standard and optional features that provide a flexible and economical solution for almost any application. Customize the unit with just the functions your application requires, minimizing your cost. Features flexible input/output options and large LED display. The digital indicator is fitted with one latchable relay as standard. Plug-in modules allow two additional relays, process variable retransmission, or transmitter power supply. Each alarm has its own LED indicator for fast identification of alarms. Configuration can be modified in the field through the front panel or through use of a computer interface.



Features and Benefits

- Four-digit LED display
- Up To 3 Alarms
- Transmitter power supply option
- Min/Max value hold
- Engineering units
- PC configuration
- Process variable retransmit option

TECHNICAL DATA

General

Output Configuration	Up to 3 total, max 3 for alarms, max 1 for retransmit of PV, max 1 transmitter power supply
Alarm Types	Process high, process low, direct acting, process high, process low reverse and logical OR
Human Interface	3 button operation, 4 digit 13 mm high red display, plus set-up alarm, min and max indicators
PC Configuration	Off-line configuration from serial port to dedicated configuration socket

Output and Options

Alarms Relay(s)	Contacts: SPDT 2 resistive at 240 V ac, > 500,000 operations, latching or non-latching
Retransmit Output	(0 to 20) mA or (4 to 20) mA, (0 to 10) V or (0 to 5) V into 500 Ω min. Accuracy typically ± 0.25%
Transmitter Power Supply	(20 to 28) V dc (24 V nominal) max load 910 Ω (22 mA at 20 V)

Inputs

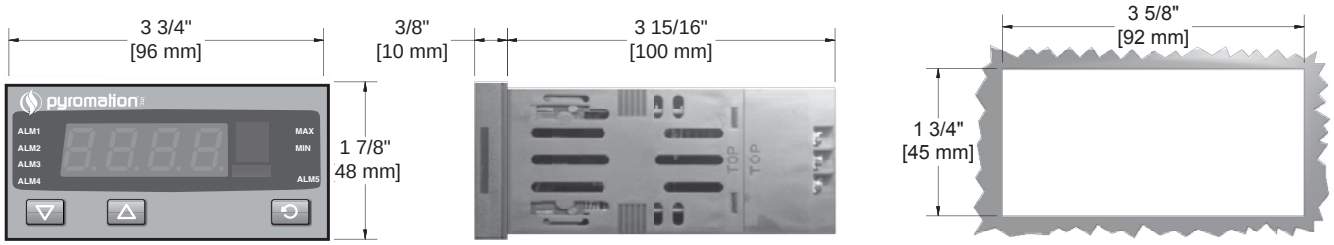
Thermocouple Types	J,K,R,S,T,B,L, & N
RTD	3-wire Pt100 (α = 0.003 85 $^{o}C^{-1}$), 50 Ω per lead maximum (balanced)
DC Linear	(0 to 20) mA or (4 to 20) mA, (0 to 50) mV or (10 to 50) mV, (0 to 5) V or (1 to 5) V, (0 to 10) V or (2 to 10) V. Scalable -1999 to 9999, decimal point available
Impedance	> 100 MΩ for Thermocouple and mV ranges, 47 KΩ for V ranges and 4.7 Ω for mA ranges
Accuracy	± 0.25% of input span ± 1 LSD (T/C CJC better than 0.7 ^{o}C)
Sampling	4 s, 14 bit resolution (approximately)
Sensor Break Detection	< 2 second (except zero based DC ranges), high alarms activate (low for RTD, mA or V)

Operating Conditions

Temperature & RH	(0 to 55) ˚C, 20% to 95% RH non-condensing, (-20 to 80) ˚C for storage
Power supply	(100 to 240) V ac 50/60 Hz 7.5VA
Front Panel Protection	IEC IP66 (Behind panel protection is IP20)

Approvals

CE marked	Unit complies with the legal requirements set forth by the EU regulations.
c UL us	UL recognized component.



ORDER CODES

Example Order Number: 810 - 1 1 - 00

1

CODE	DESCRIPTION
810	(100 to 240) V ac

3

CODE	DESCRIPTION
0	Not Fitted
1	Relay
8	Transmitter Power Supply

2

CODE	DESCRIPTION
0	Not fitted
1	Relay
7	(4 to 20) mA Retransmit

4

CODE	DESCRIPTION
00	Non-Configured