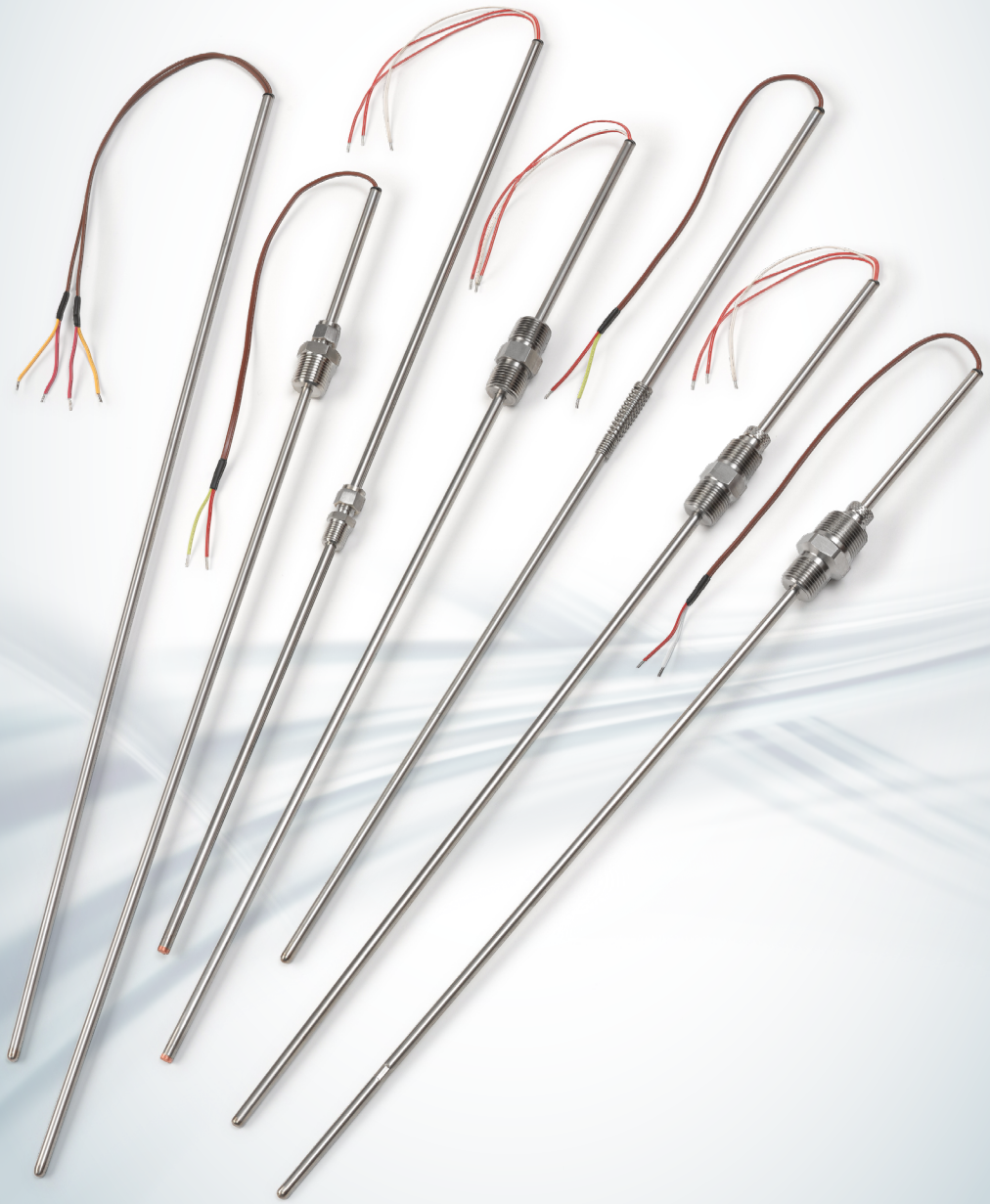
VARIABLE LENGTH
TEMPERATURE SENSOR ELEMENTS

Variable Length Temperature Sensor Elements

In the field, cut-to-length RTD and thermocouple temperature sensor (replacement) elements



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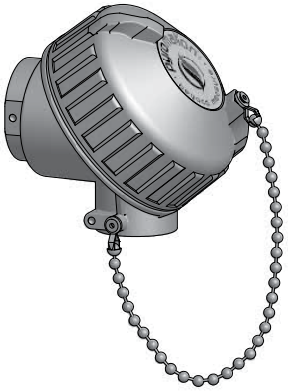
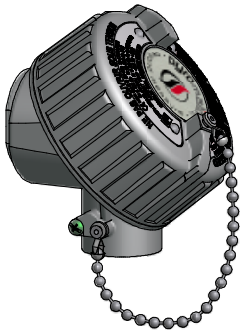


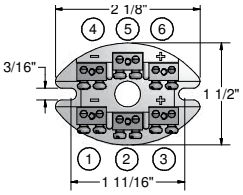
Aluminum Connection Head



Cast Iron Connection Head



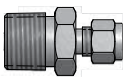
XP Connection Head



343 Block

Connection Heads

ORDER CODE	DESCRIPTION			
	Material	*Process Opening*	*Conduit Opening*	*Standard Gasket*
31C	Aluminum	1/2" NPT	3/4" NPT	Graphite
34C	Cast Iron	1/2" NPT	3/4" NPT	Graphite
93C	XP Aluminum	1/2" NPT	3/4" NPT	Buna N O-ring
Head Options				
GS	Internal ground screw			
OR	Buna N O-ring			
D2	Class I Division II Rated Head			
Terminal Blocks				
343-2	Terminal block with 2 brass terminals			
343-3	Terminal block with 3 brass terminals			
343-4	Terminal block with 4 brass terminals			
343-6	Terminal block with 6 brass terminals			



Compression Fittings

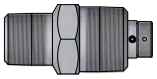
ASSY OPTION CODE	ORDER CODE	PART NUMBER	TUBE SIZE (inches)	PROCESS THREAD (inches)	NOMINAL LENGTH (inches)
Stainless Steel Re-Adjustable with FEP Ferrule					
12C	6108T-3C	17578	3/16 O.D.	1/2 NPT	1 3/4
12C	6108T-4C	17579	1/4 O.D.	1/2 NPT	1 3/4
12C	6108T-6C	17580	3/8 O.D.	1/2 NPT	1 3/4
Stainless Steel One-Time Adjustable with SS Ferrule					
05C	6008-3C	17243	3/16 O.D.	1/2 NPT	1 3/4
05C	6008-4C	12761	1/4 O.D.	1/2 NPT	1 3/4
05C	6008-6C	12764	3/8 O.D.	1/2 NPT	1 3/4



Machined Double Thread Hex Fittings

CODE	SHEATH SIZE (inches)	DESCRIPTION
316SS 1/2" NPT x 1/2" NPT		
8HN-CC-188-SC[1]	0.188	Self contained spring-loaded
8HN-CC-250-SC[1]	0.250	Self contained spring-loaded
[1] Requires snap-ring pliers to install.		



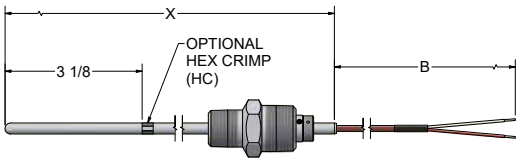




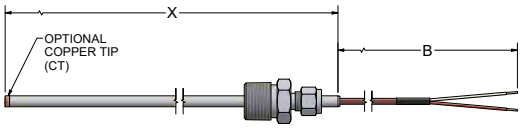
Re-Adjustable Spring-Loaded Fittings

ASSY OPTION CODE	ORDER CODE	PART NUMBER	TUBE SIZE (inches)	PROCESS THREAD (inches)	NOMINAL LENGTH (inches)
Stainless Steel Re-Adjustable Spring-Loaded Fittings with FEP Ferrule					
19C	6109TSL-3C	12795	3/16 O.D.	1/2 NPT	2 1/4
19C	6109TSL-4C	12796	1/4 O.D.	1/2 NPT	2 1/4
21C					
21CD					

Cut to length thermocouples are used as a replacement solution when a temperature sensor unexpectantly fails and a direct replacement is not readily available. They can be cut to a specific length in the field using a standard tube cutter. This design is ideal for maintenance technicians to customize a thermocouple to fit a variety of applications and installations, thus reducing downtime. The thermocouples listed on this page are supplied with a 316 stainless steel sheath and can be cut to any desired length 3 inches or over.



OPTION 21CD



OPTION 05 OR 12

ORDER CODES

Example Order Number:

1-0	1-1	1-2		1-3		2-0		3-0		4-0		5-0
JP48		G	-	HC	-	024	-	VCL	-	21C	-	T3024	-	2

1-0 Thermocouple Type

CODE		T/C TYPE
SINGLE	*DUPLEX*	
JP	JJP	J
KP	KKP	K
TP	TTP	T
EP	EEP	E

1-1 Sheath Diameter

CODE	Diameter (Inches)
38	3/16"
48	1/4"
68	3/8"

1-2 Hot Junction

CODE	DESCRIPTION
G	Grounded
U	Ungrounded

1-3 Optional Tip Selection

CODE	DESCRIPTION
CT	Copper Tip
HC	Hex Crimp to secure inner tube

2-0 Sheath "X" Length

Specify "X" Length in Inches Using (3) Digits

5-0 Terminations

CODE	DESCRIPTION
2	2" split leads, 1/4" stripped

4-0 Extension Leadwire

CODE[1]	DESCRIPTION
T1_ _ _	Fluoropolymer insulation - solid conductor
T3_ _ _	Fluoropolymer insulation - stranded conductor
T3B_ _ _	Fluoropolymer insulation - stranded conductor - stainless steel overbraid
F3_ _ _	Fiberglass insulation - stranded conductor
F3B_ _ _	Fiberglass insulation - stranded conductor - stainless steel overbraid
K3_ _ _	Polyimide insulation - stranded conductor

[1] Insert wire code number and 3 digit "B" length code in inches

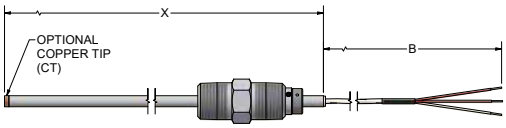
3-0 Sheath Fittings

CODE	DESCRIPTION	NPT Size
00	No Fitting	N/A
05C	316 SS One-time adjustable fitting	1/2"
12C	316 SS Readjustable fitting	1/2"
19C[1]	Spring-loaded SS well fitting	1/2"
SL_ _	Adjustable Spring	N/A
21C[1]	316 SS Readjustable spring-loaded fitting	1/2"
21CD[1]	316 SS Readjustable spring-loaded fitting	1/2" x 3/4"
SC-8HN23	Self-contained spring-loaded 1/2" x 1/2" NPT Stainless steel hex nipple	1/2"
SN-8HN23	Self-contained spring-loaded with Buna-N oil seal - 1/2" x 1/2" NPT Stainless steel hex nipple	1/2"

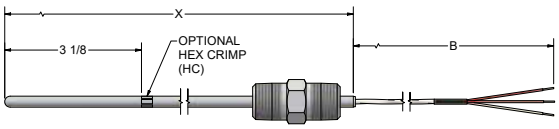
[1] Only available with 3/16" and 1/4" OD sheaths

Maximum T/C Temperature Limits:
Fiberglass insulated lead style: 482 °C [900 °F]
Fluoropolymer insulated lead style: 204 °C [400 °F]

Cut to length RTD sensors are used as a replacement solution when a temperature sensor unexpectantly fails and a direct replacement is not readily available. They can be cut to a specific length in the field using a standard tube cutter. This design is ideal for maintenance technicians to customize an RTD to fit a variety of applications and installations, thus reducing downtime. The RTD's listed on this page are supplied with a 316 stainless steel sheath and can be cut to any desired length 3 inches or over.



OPTION 21C



OPTION 8HN

ORDER CODES

Example Order Number:

1-0	1-1	1-2	1-3	2-0	3-0	4-0	5-0
R1T185L48	3	- CT	- 024	- VCL	- 21C	- T3024	- 2

1-0 Platinum RTD Elements (α = 0.003 85 °C⁻¹)

CODE		TOLERANCE	TEMP RANGE
SINGLE	*DUPLEX*		
R1T185L	R1T285L	100 ohm Grade B	(-200 to 200) °C
R3T185L	R3T285L	100 ohm Class AA	(-50 to 200) °C
R5T185L	R5T285L	100 ohm Class B	(-30 to 150) °C
RBF185L	RBF285L	100 ohm (⅓) Class B	(-50 to 200) °C
RAF185L	RAF285L	100 ohm Class A	(-30 to 200) °C
RBF195L	RBF295L	1000 ohm Class B	(-50 to 200) °C

1-1 Sheath Diameters (inches) 316 Stainless Steel

CODE	DIAMETER
38	3/16"
48	1/4"
68	3/8"

1-2 Element Connection

CODE	DESCRIPTION
2	2 wire
3	3 wire
4	4 wire

1-3 Optional Tip Selection

CODE	DESCRIPTION
CT	Copper Tip
HC	Hex Crimp to secure inner tube

2-0 Sheath "X" Length

Specify "X" Length in Inches Using (3) Digits

5-0 Terminations

CODE	DESCRIPTION
2	2" split leads, 1/4" stripped

4-0 RTD Extension Leadwire

CODE[1]	DESCRIPTION
T3J_ _ _	Fluoropolymer insulation - individual leads - stranded conductor
T3_ _ _	Fluoropolymer insulation - stranded conductor
T3B_ _ _	Fluoropolymer insulation - stranded conductor - stainless steel overbraid
F3J_ _ _	Fiberglass insulation - individual leads - stranded conductor
F3_ _ _	Fiberglass insulation - stranded conductor
F3B_ _ _	Fiberglass insulation - stranded conductor - stainless steel overbraid
K3J_ _ _	Polyimide insulation - individual leads - stranded conductor
K3_ _ _	Polyimide insulation - stranded conductor
K3B_ _ _	Polyimide insulation - stranded conductor - stainless steel overbraid
[1] Insert wire code number and 3 digit "B" length code in inches	

3-0 Sheath Fittings

CODE	DESCRIPTION	NPT Size
00	No Fitting	N/A
05C	316 SS One-time adjustable fitting	1/2"
12C	316 SS Readjustable fitting	1/2"
19C[1]	Spring-loaded SS well fitting	1/2"
SL_ _	Adjustable Spring	N/A
21C[1]	316 SS Readjustable spring-loaded fitting	1/2"
21CD[1]	316 SS Readjustable spring-loaded fitting	1/2" x 3/4"
SC-8HN23	Self-contained spring-loaded 1/2" x 1/2" NPT Stainless steel hex nipple	1/2"
SN-8HN23	Self-contained spring-loaded with Buna-N oil seal - 1/2" x 1/2" NPT Stainless steel hex nipple	1/2"
[1] Only available with 3/16" and 1/4" OD sheaths		

Introduction

Variable length temperature sensors are used as a replacement solution when a temperature sensor unexpectedly fails and a direct replacement is not readily available. They can be cut to a specific length in the field using a standard tube cutter. This design is ideal for maintenance technicians, allowing them to customize a temperature sensor to fit a variety of applications and installations, thus reducing downtime. The lengths available, which can be cut to any desired distance three inches or longer, allow for inventory simplicity and lower volume (as opposed to keeping dozens of finished sensors of varying lengths in stock).

These variable length replacement sensors are available as stand-alone tube and wire elements, or with a variety of sheath fitting options. Connection heads with ceramic terminal block configurations are also available.

- RTD and thermocouple designs
- 316 stainless steel sheath material as standard
- Cut to any desired length 3 inches or over
- Variety of sheath diameters available
- Fast response copper tip options
- Multiple fitting options
- Adjustable spring-loaded fitting designs
- Connection head and terminal block accessories



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Operating since 1962, Pyromation is the premier temperature sensor manufacturer in North America. From RTDs and thermocouples to thermowells, connection heads, accessories and complete assemblies, Pyromation can make the right temperature sensor for your process and deliver it faster than anyone in the industry. A broad product line, industry experience, friendly customer service and quick delivery make Pyromation the best choice for your temperature measurement applications. For more information, please call us or visit www.pyromation.com.

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