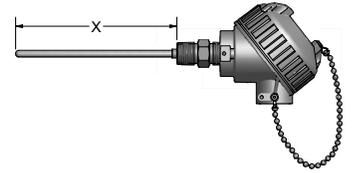
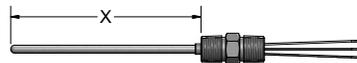
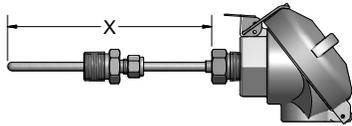


Fixed-Sheath RTD Assemblies with General-Purpose Connection Heads are provided with head mounting fittings that are welded or brazed to the sheath for direct immersion into a process. To order an assembly with an optional 4 to 20 mA transmitter, select the assembly below and the transmitter from the back of this section. The RTD assemblies are supplied with a 316 stainless steel sheath in several diameters. They are available in various tolerances and temperature ranges as noted below.



ORDER CODES

Example Order Number: **RBF185L 48 3 - 006(1/2) - 00 - 8HN 31, SB, T** Select Type and Range from back of section

1-0 100 Ω Platinum RTD Elements $\alpha = 0.00385 \text{ } ^\circ\text{C}^{-1}$

CODE	TOLERANCE ^[1]
<i>LOW RANGE WIRE WOUND (-200 to 200) °C</i>	
SINGLE	DUPLEX
R1T185L	R1T285L
Grade B	
R5T185L	R5T285L
(1/5) Class B	
<i>LOW RANGE THIN FILM (-50 to 200) °C</i>	
RBF185L	RBF285L
Class B	
RAF185L	RAF285L
Class A	
<i>HIGH RANGE WIRE WOUND (-200 to 600) °C</i>	
R1T185H	R1T285H
Grade B	
RAT185H	RAT285H
Class A	

[1] Refer to RTD tolerance information in the General Information section for calculations to determine specific tolerance at temperature.

1-1 Sheath Diameters

CODE	DIAMETERS (inches) 316 SS
28 ^[1]	1/8
38	3/16
48	1/4
68	3/8

[1] Not available in duplex

1-2 Element Connection

CODE	DESCRIPTION
2	2-wire element
3	3-wire element
4 ^[1]	4-wire element

[1] Not available in duplex or with 440 Series Transmitter

2-0 "X" Dimensions

Insert three digit "X" length in inches.

Sheath lengths over 72" will be shipped in a coiled configuration unless otherwise specified.

3-0 No Fitting

CODE	TYPE	NPT SIZE (inches)	PRESSURE-RATED	AVAILABLE SHEATH DIAMETERS (inches)
3-1 One-Time Adjustable Fittings				
01A	303 SS	1/8	NO	1/8, 3/16, 1/4
05A	316 SS	1/8	YES	1/8, 3/16, 1/4
05B	316 SS	1/4	YES	1/8, 3/16, 1/4, 3/8
05C	316 SS	1/2	YES	1/8, 1/4, 3/8
15A	Brass	1/8	NO	1/8, 3/16, 1/4
15B	Brass	1/4	NO	3/16, 1/4, 3/8
15C	Brass	1/2	NO	1/4, 3/8
14	Brass/Steel	Flange	NO	1/8, 3/16, 1/4, 3/8

3-2 Re-Adjustable Compression Fittings

CODE	TYPE	NPT SIZE (inches)	AVAILABLE SHEATH DIAMETERS (inches)
10A	303 SS	1/8	1/8, 3/16
10B	303 SS	1/4	1/4, 3/8
10C	303 SS	1/2	1/4, 3/8
12A	316 SS	1/8	1/8, 3/16, 1/4
12B	316 SS	1/4	1/8, 3/16, 1/4, 3/8
12C	316 SS	1/2	1/8, 1/4, 3/8
11A	Brass	1/8	1/8, 3/16, 1/4
11B	Brass	1/4	1/8, 3/16, 1/4, 3/8
11C	Brass	1/2	1/4, 3/8
19C	Spring-loaded SS well fitting	1/2	3/16, 1/4

Teflon® gland standard 204 °C [400 °F] max.

3-3 Fixed Bushings^[1]

CODE	MOUNTING THREAD NPT (inches)	AVAILABLE SHEATH DIAMETERS (inches)
316 SS		
8A __ ^[2]	1/8	1/8, 3/16, 1/4
8B __ ^[2]	1/4	1/8, 3/16, 1/4, 3/8
8C __ ^[2]	1/2	1/8, 3/16, 1/4, 3/8
8D __ ^[2]	3/4	1/8, 3/16, 1/4, 3/8

[1] Requires Table 4, Option 9HP Selection
[2] When ordering fixed bushings, specify order code above plus insert length "U", as measured from hot tip to bottom of threaded bushing.
EXAMPLE: order code 8A06 is 1/8" NPT, 316 SS bushing located 6" from hot tip.

4-0 Head Mounting Fittings

CODE	DESCRIPTION
6HN	1/2" x 1/2" NPT steel hex nipple 1" "E" length
8HN	1/2" x 1/2" NPT stainless steel hex nipple 1" "E" length
9HP	1/2" NPT stainless steel bushing (no process threads)
8RNDC	3/4" x 1/2" NPT stainless steel hex nipple

4-1 Head and Sheath Terminations

CODE	DESCRIPTION
22	3" Individual Teflon® leads with terminal pins
31	Aluminum screw-cover head
34	Cast iron screw-cover head
35T-642A	(4 to 20) mA HART® Field Transmitter with aluminum general-purpose housing
49	Flip-top aluminum head
63	White polypropylene screw-cover head
91	316 L stainless steel screw-cover head

4-2 Options

W ^[1]	Epoxy Coating
GS	Ground screw
I	Stainless tag
NB	1/2" NPT nylon conduit reducer bushing
SB	1/2" NPT conduit reducer bushing
T-440	(4 to 20) mA head-mounted RTD transmitter
T-441	(4 to 20) mA isolated head-mounted transmitter
T-442	(4 to 20) mA isolated Hart® head-mounted transmitter

See transmitter ordering information in back of section.

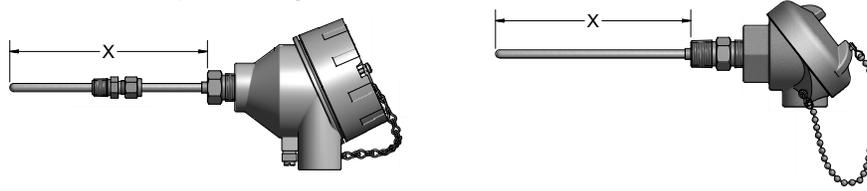
[1] Available with option 31 only.

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Hart® is a registered trademark of Hart Scientific Foundation.

SENSORS WITH CONNECTION HEADS

Configuration Code GP01 Fixed-Sheath RTD Assemblies with Explosion-Proof Connection Heads

Fixed-Sheath RTD Assemblies with Explosion-Proof Connection Heads are provided with head mounting fittings that are welded or brazed to the sheath for direct immersion into a process. To order an assembly with an option 4 to 20 mA transmitter, select the assembly below and the transmitter from the back of this section. The RTD assemblies are supplied with a 316 stainless steel sheath in several diameters. They are available in various tolerances and temperature ranges as noted below.



ORDER CODES

Example Order Number: **RAF185L 48 3 - 012(1/2) - 00 - 8HN 72, SB, T-** Select Type and Range from back of section

1-0 100 Ω Platinum RTD Elements α = 0.003 85 °C⁻¹

CODE		TOLERANCE ^[1]
LOW RANGE WIRE WOUND (-200 to 200) °C		
SINGLE	DUPLEX	
R1T185L	R1T285L	Grade B
R5T185L	R5T285L	(1/5) Class B
LOW RANGE THIN FILM (-50 to 200) °C		
RBF185L	RBF285L	Class B
RAF185L	RAF285L	Class A
HIGH RANGE WIRE WOUND (-200 to 600) °C		
R1T185H	R1T285H	Grade B
RAT185H	RAT285H	Class A

[1] Refer to RTD tolerance information in the General Information section for calculations to determine specific tolerance at temperature.

1-1 Sheath Diameters

CODE	DIAMETERS (inches) 316 SS
28 ^[1]	1/8
38	3/16
48	1/4
68	3/8

[1] Not available in duplex

1-2 Element Connection

CODE	DESCRIPTION
2	2-wire element
3	3-wire element
4 ^[1]	4-wire element

[1] Not available in duplex or with 440 Series Transmitter

2-0 "X" Dimensions

Insert three digit "X" length in inches.

Sheath lengths over 72" will be shipped in a coiled configuration unless otherwise specified.

3-0 No Fitting

CODE	00
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3-1 One-Time Adjustable Fittings

CODE	TYPE	NPT SIZE (inches)	PRESSURE-RATED	AVAILABLE SHEATH DIAMETERS (inches)
01A	303 SS	1/8	NO	1/8, 3/16, 1/4
05A	316 SS	1/8	YES	1/8, 3/16, 1/4
05B	316 SS	1/4	YES	1/8, 3/16, 1/4, 3/8
05C	316 SS	1/2	YES	1/8, 1/4, 3/8
15A	Brass	1/8	NO	1/8, 3/16, 1/4
15B	Brass	1/4	NO	3/16, 1/4, 3/8
15C	Brass	1/2	NO	1/4, 3/8
14	Brass/Steel	Flange	NO	1/8, 3/16, 1/4, 3/8

3-2 Re-Adjustable Compression Fittings

CODE	TYPE	NPT SIZE (inches)	AVAILABLE SHEATH DIAMETERS (inches)
10A	303 SS	1/8	1/8, 3/16
10B	303 SS	1/4	1/4, 3/8
10C	303 SS	1/2	1/4, 3/8
12A	316 SS	1/8	1/8, 3/16, 1/4
12B	316 SS	1/4	1/8, 3/16, 1/4, 3/8
12C	316 SS	1/2	1/8, 1/4, 3/8
11A	Brass	1/8	1/8, 3/16, 1/4
11B	Brass	1/4	1/8, 3/16, 1/4, 3/8
11C	Brass	1/2	1/4, 3/8
19C	Spring-loaded SS well fitting	1/2	3/16, 1/4

Teflon® gland standard 204 °C [400 °F] max.

3-3 Fixed Bushings^[1]

CODE	MOUNTING THREAD NPT (inches)	AVAILABLE SHEATH DIAMETERS (inches)
8A__ ^[1]	1/8	1/8, 3/16, 1/4
8B__ ^[1]	1/4	1/8, 3/16, 1/4, 3/8
8C__ ^[1]	1/2	1/8, 3/16, 1/4, 3/8
8D__ ^[1]	3/4	1/8, 3/16, 1/4, 3/8

[1] Requires Table 4, Option 9HP Selection

[2] When ordering fixed bushings, specify order code above plus insert length "U", as measured from hot tip to bottom of threaded bushing. EXAMPLE: order code 8A06 is 1/8" NPT, 316 SS bushing located 6" from hot tip.

4-0 Head Mounting Fittings

CODE	DESCRIPTION
6HN	1/2" x 1/2" NPT steel hex nipple 1" "E" length
8HN	1/2" x 1/2" NPT stainless steel hex nipple 1" "E" length
9HP	1/2" NPT stainless steel bushing (no process threads)
8RND	3/4" x 1/2" NPT stainless steel hex nipple

4-1 Head Terminations

CODE	DESCRIPTION
71	Cast iron/aluminum explosion-proof head, Group C
72	DIN form B aluminum explosion-proof head, Group B
74	DIN form B aluminum explosion-proof head, Group A
81	316L stainless steel explosion-proof head, Group C
82	DIN form B 316 stainless steel explosion-proof head, Group B

4-2 Options

SB	1/2" NPT conduit reducer bushing
I	Stainless tag
T-440 ^[1]	(4 to 20) mA head-mounted RTD transmitter
T-441 ^[2]	(4 to 20) mA isolated head-mounted transmitter
T-442 ^[2]	(4 to 20) mA isolated Hart® head-mounted transmitter

See transmitter ordering information in back of section.

[1] Available with option 71, 81 only.

[2] Available with option 72, 74, 82 only.

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