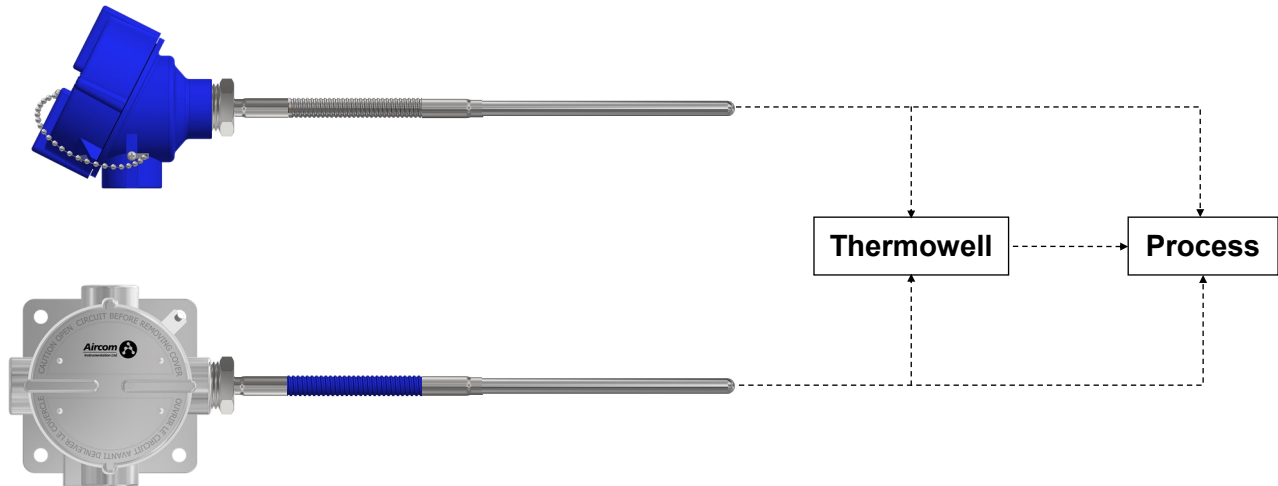


# RT11 Flex Armor RTD Assembly

Class I, Division 2, Groups A, B, C, D; Class I, Zone 2, Group IIC (Note 2); T6...T1



## Overview

### Description:

The RT11 flex armor RTD assembly is an RTD designed for use in hazardous locations. The RT11 is a customizable product that is model number configured and made to order.

The RT11 consists of a RTD sensor probe, complete with a connection head (enclosure) that may be provided with a terminal block, DIN rail, wire splice connectors, or internal transmitter. Flexible armor connects the sensor probe to the connection head and the use of a thermowell is optional.

### Features:

- Simple design that is used and accepted across multiple process industries.
- RT11 configuration options allow for many different arrangements to be configured for almost any temperature measurement application.

### Application:

- Hazardous location temperature measurement
- Industrial temperature measurement
- Process control
- Outdoor / indoor use

## Specifications

Accuracy RTD	Tolerance per IEC 60751 (DIN EN 60751)
T-Code	T6...T1
Electrical rating	30 Vdc, 1.0 A max
Ambient temperature	-50°C to +50°C (-58°F to +122°F)
Process temperature	-50°C to +450°C (-58°F to +842°F)
CSA Certificate of Compliance	1526478

### Note:

1. Specifications will depend on model code variants, and the values shown are the full rated model ranges.
2. Class I, Zone 2, Group IIC is US only.

# RT11 RTD Assembly Model Code

RT11 - T1 - T2 - T3 - T4 - T5 - T6 - T7 - T8 - T9

## RT11 RTD assembly with connection head and connection flexible armor extension

T1	Connection Head	Color	Material	Conduit Connection	Terminal Block	Type Rating
2ALT	Standard style	Blue	Aluminum epoxy coated	1x 3/4" NPT	Bakelite	Type 4X
1ALT	Standard style	Blue	Aluminum epoxy coated	1x 1/2" NPT	Bakelite	Type 4X
2ALTC	Standard style	Blue	Aluminum epoxy coated	1x 3/4" NPT	Ceramic	Type 4X
2ALW	Mounting holes	Grey	Aluminum epoxy coated	1x 3/4" NPT	Bakelite	Type 4X
2ALM	Multi connection	Blue	Aluminum epoxy coated	2x 3/4" NPT	Bakelite	Type 4X
2AL	Standard style	Grey	Aluminum	1x 3/4" NPT	Bakelite	Type 4
2SS	Standard style	Steel	Stainless steel	1x 3/4" NPT	Bakelite	Type 4X
Note	Refer to page 6 for additional options, details and other styles					

T2	Flex-Armor Extension	Lead Wire Ratings
AF	Flex armor over fiberglass lead wire	Fiberglass lead wire +485°C (+905°F)
AT	<b>Flex armor over Teflon lead wire</b>	<b>Teflon lead wire +260°C (+500°F)</b>
PT	Poly jacketed flex armor over Teflon lead wire	Teflon lead wire +260°C (+500°F) / Poly jacket +90°C (+194°C)
TT	Teflon jacketed flex armor over Teflon lead wire	Teflon lead wire / jacket +260°C (+500°F)

T3	Flex-Armor Extension "A" length (inches)	CSA Process Temperature Rating
"inches"	Specify length in inches	-50°C to +450°C (-58°F to +842°F), when "A" length is ≥ 8" length <sup>4</sup>

T4	Element Type
A	<b>100Ω Pt. 385 Class A (Class A tolerance ≤ +300°C (+572°F), Class B tolerance typically applies &gt;+300°C (+572°F))</b>
B	100Ω Pt. 385 1/10 Class B (1/10 DIN; tolerance typically applies ≤ +300°C (+572°F))
C	100Ω Platinum 392
D	120Ω Nickel 627 0.806Ω/°C
E	10Ω Copper 427 0.039Ω/°C
F	1000Ω Pt. 385 Class A

T5	Number of Elements
S	Single element
D	Dual element

Continued on page 3



# RT11 RTD Assembly Model Code

RT11 - T1 - T2 - T3 - T4 - T5 - T6 - T7 - T8 - T9

Continued from page 2

T6	Lead Wire Configuration
2	2 Wire
<b>3</b>	<b>3 Wire</b>
<b>4</b>	<b>4 Wire</b>

T7	Sensor Probe Construction	
<b>LT</b>	<b>Low temperature (-50 to +260°C) (-58°F to +500°F)</b>	Temperature values are for the RTD temperature sensor probe construction only. The CSA process and ambient temperature assembly ratings are dependant on connection head (T1) and flex-armor extension length (T3).
HT	High temperature (-50 to +482°C) (-58°F to +899°F)	
ET	Extreme temperature (-50 to +850°C) (-58°F to +1562°F)	
VT	Vibration construction (-50 to +482°C) (-58°F to +899°F)	
CT	Cryogenic temperature (-200 to +260°C) (-328°F to +500°F)	

T8	Sensor "L" Length (inches)
"inches"	Specify length in inches

T9	Sensor Sheath Diameter
18	1/8" (0.125")
36	3/16" (0.188")
<b>14</b>	<b>1/4" (0.250")</b>
38	3/8" (0.375")

**NOTES:**

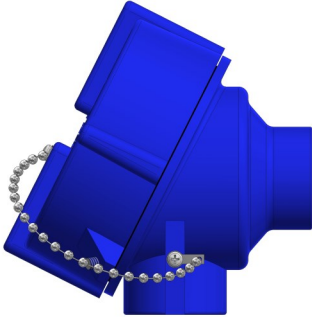
1. Part number example: RT11-2ALT-AT-36-A-S-3-LT-12-14
2. Reference page 4 for part outline and 5 for part dimensions
3. Bold text indicates most common part selections
4. The sensor temperature rating is based on the length not directly in contact with the process at its maximum temperature



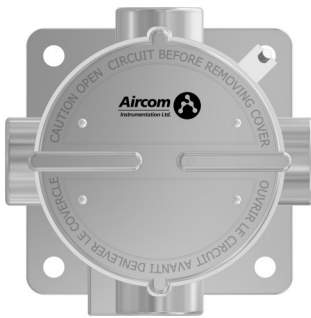
# RT11 RTD Assembly Outline

## Connection Head

2ALT



2ALW



2ALM



Refer to page 6 for further connection head styles, options, and details

## Flex-Armor Extension

AF - AT - TT



PT



## Sensor Probe (OD)

18  
(0.125")



36



14  
(0.250")



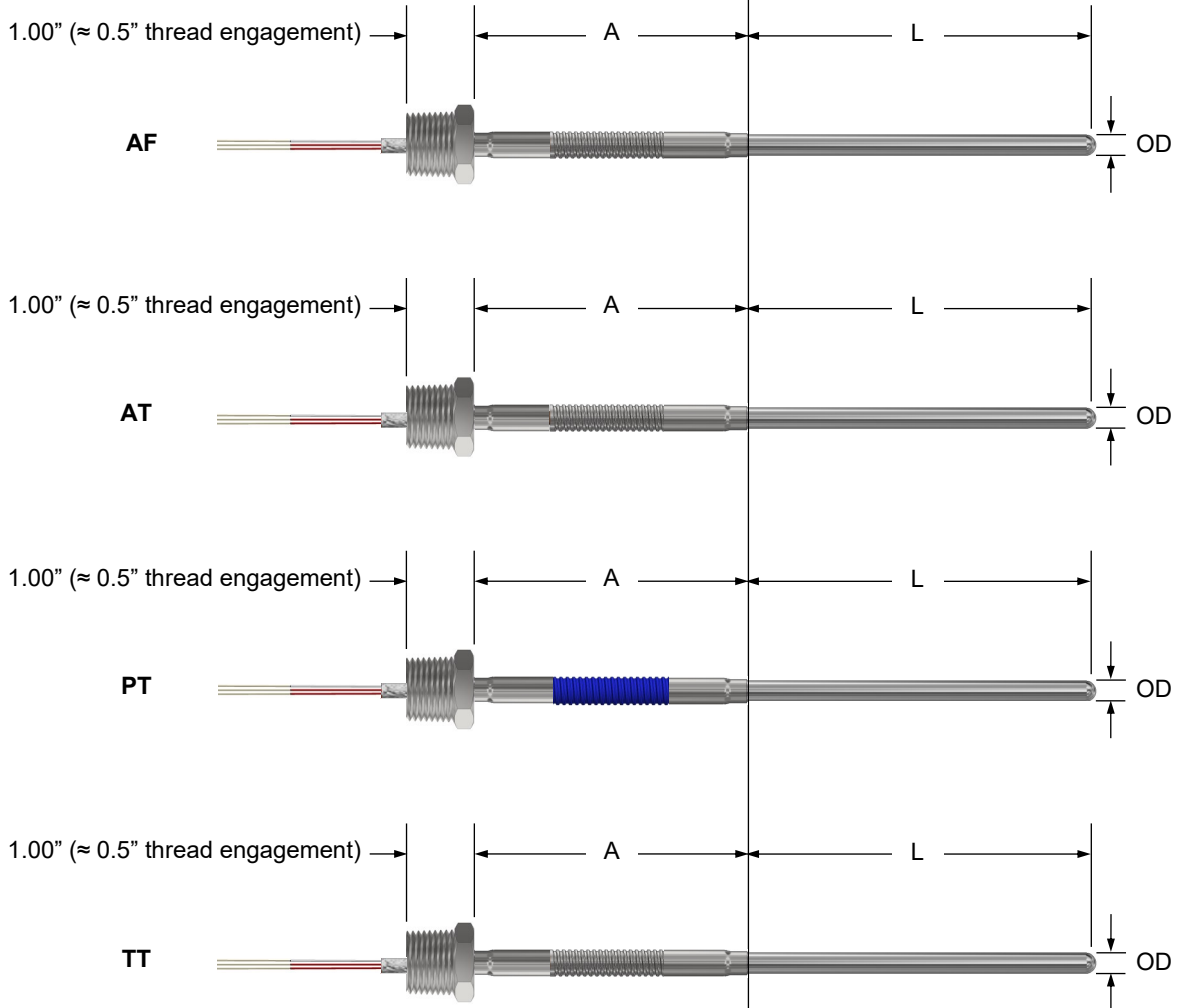
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# RT11 RTD Assembly Dimensions

**Flex-Armor Extension**

**Sensor Probe**



Refer to page 6 for connection head dimensions

NOTE:  
1. Assemblies are supplied with 6" to 8" of lead wire

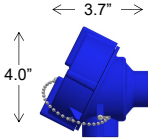
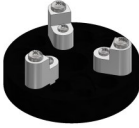

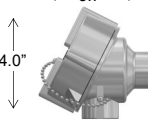
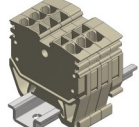



Section: RTD Sensor Probes & Assemblies  
File: RTD-Assembly-RT11-1

Aircom Instrumentation Ltd.  
9328 - 37 Avenue NW  
Edmonton, AB T6E 5K3  
Ph: (780) 434-6916  
Sales@AircomInstrumentation.com  
www.AircomInstrumentation.com

# RT11 Connection Heads

## Model, Outline, and Dimensions

Outline & Dimensions	Model	Connection (NPT)		Material & Type	Ambient Temperature	Terminal Block Options
		Instrument	Conduit			
	1ALT	1/2"	1x 1/2" <sup>2</sup>	Cast aluminum epoxy coated Buna O-ring  Type 4X		 Bakelite - <u>standard</u> Screw terminals to suit sensor configuration.
	2ALT	1/2"	1x 3/4"			
	3ALT	3/4"	1x 3/4"			
	1SS	1/2"	1x 1/2" <sup>2</sup>	316 stainless steel Buna O-ring Type 4X	-50°C to +85°C (-58°F to +185°F) (+125°C (+257°F) Canada only)	 Ceramic - optional Screw terminals to suit sensor configuration Add suffix "C" to connection head model number.
	2SS	1/2"	1x 3/4"			
	3SS	3/4"	1x 3/4"			
	1AL	1/2"	1x 1/2" <sup>2</sup>	Cast aluminum Buna O-ring Type 4		 Clamp technology - optional DIN mounted clamp technology terminals to suit sensor configuration Add suffix "D" to connection head model number.
	2AL	1/2"	1x 3/4"			
	3AL	3/4"	1x 3/4"			
	1ALW	1/2" <sup>2</sup>	1x 1/2" <sup>2</sup>	Cast aluminum epoxy coated Buna O-ring Type 4X	-40°C to +85°C (-40°F to +185°F)	 Splice technology - optional Wire splicing connectors contained loosely within connection head. Add suffix "S" to connection head model number.
	2ALW	1/2" <sup>2</sup>	1x 3/4"			
	3ALW	3/4"	1x 3/4"			
	4ALW	3/4"	2x 3/4"			
	1ALM	1/2"	2x 1/2"			
	2ALM	1/2"	2x 3/4"			
	3ALM	3/4"	2x 3/4"			

### NOTES:

1. Ambient ratings are of the connection head only, temperature assembly ambient rating is typically -50°C to +50°C (-58°F to +122°F)
2. May be supplied with an approved 3/4" x 1/2" NPT reducer bushing
3. Type ratings are for enclosure component of assembly ONLY and not full assembly