

pro^{sense}® RTD Probes with M12 Cable Connector



Overview

- 100 ohm platinum RTD element
- Class A accuracy
- 316 stainless steel sheath to protect from harsh sensing applications
- 6 mm (0.24") diameter 3-wire or 10 mm (0.4") diameter 4-wire probes
- Probe lengths of 30mm, 50mm, 100mm, 150mm, 160 mm, 260 mm, 360 mm, and 560 mm
- Process connections include 1/4" or 1/2" male NPT threads, 3-A approved sanitary CIP tri-clamp, or compression fitting for adjustable insertion depth.
- 4-pin M12 cable connector plug for simplified wiring



(RTD1 & RTD1-S models)

(RTD100 models)



(RTD1-S models)

RTD Probes With M12 Cable Connector

Part Number	Wt(lb)	Price	Type	Diameter	Length	Temperature Sensing Range	Process Connection	Thermowell (purchased separately)	Drawing Link
RTD0100-06-010-H	0.10		Pt100, 3-wire	6mm (0.24")	160mm (6.3")	-40 to 302°F (-40 to 150°C)	None, use compression fitting (CF06-25N purchased separately)	RTDTW-06-010-50N CF06-25N	PDF
RTD0100-06-020-H	0.20	260mm (10.24")			RTDTW-06-020-50N CF06-25N			PDF	
RTD0100-06-030-H	0.30	360mm (14.17")			RTDTW-06-030-50N CF06-25N			PDF	
RTD0100-10-010-H	0.10		Pt100 4-wire	10mm (0.4")	160mm (6.3")			None, use compression fitting (CF10-50N purchased separately)	RTDTW-10-010-50N CF10-50N
RTD1-25N-030-H	0.2		Pt100, 3-wire	6mm (0.24")	30mm (1.18")	-58 to 302°F (-50 to 150°C)	1/4" Male NPT	None	PDF
RTD1-25N-050-H	0.21	50mm (1.97")			PDF				
RTD1-25N-100-H	0.22	100mm (3.94")			PDF				
RTD1-25N-150-H	0.23	150mm (5.91")			PDF				
RTD1-50N-030-H	0.3	30mm (1.18")			1/2" Male NPT				PDF
RTD1-50N-050-H	0.31	50mm (1.97")							PDF
RTD1-50N-100-H	0.32	100mm (3.94")				TW04-0x	PDF		
RTD1-50N-150-H	0.33	150mm (5.91")			TW06-0x	PDF			
RTD1-S15-030-H	0.41				1-1/2" Sanitary CIP Tri-Clamp (3-A)	30mm (1.18")	None	PDF	
RTD1-S15-050-H	0.42	50mm (1.97")				PDF			
RTD1-S15-100-H	0.44	100mm (3.94")				PDF			
RTD1-S15-150-H	0.44	150mm (5.91")				PDF			



Scan the QR Code above or click to view the RTD1 Series product insert.

pro^{sense}® RTD Probes with M12 Cable Connector

RTD Probes With M12 Cable Connector Technical Specifications		
Series	RTD0100 Series	RTD1 Series
Sensing Element	Single 100 ohm platinum (Pt100), TCR = 0.00385 Ω/Ω/°C	
Initial Accuracy	DIN EN 60751, Class A, ± (0.15 + 0.002[t])°C	
Probe Diameter	6mm (0.24") or 10mm (0.4")	6mm (0.24")
Minimum Installation Depth	15mm (0.6")	30mm (1.2")
Response Time	*t _{0.5} = 1 sec/ t _{0.9} = 3 sec (DIN EN 60751)	*t _{0.5} = <1 sec/ t _{0.9} = <2 sec (DIN EN 60751)
Electrical Connection	4-pin M12 quick disconnect	
Housing Material	Stainless steel (316L)	Stainless steel (304)
Materials (Wetted Parts)	Stainless steel (316L)	Stainless steel (316L)
Protection	IP68 or IP 69K with appropriately rated cable	IP66/67 or IP69K with appropriately rated cable
Ambient Temperature	-13 to 176°F (-25 to 80°C)	-40 to 185°F (-40 to 85°C)
Process Temperature	-40 to 302°F (-40 to 150°C)	-58 to 302°F (-50 to 150°C)
Storage Temperature	-40 to 212°F (-40 to 100°C)	-40 to 185°F (-40 to 85°C)
Pressure Rating	2320 psig (160 bar) maximum	With NPT process connection, 1450 psig (100bar) maximum With Sanitary Tri-clamp process connection, 232 psig (16bar) maximum
Certifications	cULus, CE	cURus, CE, 3-A (RTD1-S models only)

* t_{0.5} = a 50% of full scale change in output when immersed in water flowing at 0.4m/s, t_{0.9} = a 90% FS change.

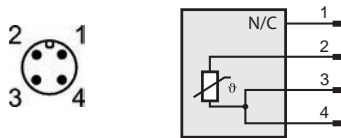


NOTE: CHECK THE CHEMICAL COMPATIBILITY OF THE SENSOR'S WETTED PARTS WITH THE MEDIUM TO BE MEASURED.



NOTE: RESPONSE TIME WILL BE SLOWER WHEN INSTALLED IN A THERMOWELL. BE SURE TO INSTALL THE PROBE SO THAT IT CONTACTS THE END OF THE THERMOWELL FOR FASTER RESPONSE. THERMAL COMPOUND MAY BE USED DEPENDING ON APPLICATION.

Wiring Information RTD0100-06 & RTD1 Series



Wiring Information RTD0100-10 Series



Note: wiring colors are based on AutomationDirect CD12L and CD12M 4-pole cable assemblies.

Cable Assembly Wiring Colors:

- Pin 1 - Brown**
- Pin 2 - White**
- Pin 3 - Blue**
- Pin 4 - Black**

pro^{sense} Thermowells for RTD Probes and Transmitters with M12 Cable Connector



Overview

- All thermowells are pre-built stock items
- Thermowells for ProSense RTD and transmitter probes with M12 cable connector
- All wetted parts are 316 stainless steel
- 600°F (315°C) temperature and 232 psi (16 bar) pressure rating
- CF06-25N or CF10-50N fitting required to mount probes in thermowell
- 3-year warranty



Thermowells for RTD and Transmitter Probes with M12 Cable Connector										
Part Number	Pcs/Pkg	Wt(lb)	Price	I.D.	Overall Length	Male Process Threads	Female Probe Threads	Wetted Material	Temperature/Pressure Rating	Use With
RTDTW-06-010-50N	1	0.10			113mm (4.4")					XTP-160-N40140F XTP-160-0300F XTP-160-0100C RTD0100-06-010-H CF06-25N
RTDTW-06-020-50N	1	0.20		7 mm (0.28")	213mm (8.4")		1/4" NPT			XTP-260-N40140F XTP-260-0300F XTP-260-0100C RTD0100-06-020-H CF06-25N
RTDTW-06-030-50N	1	0.30			313mm (12.3")	1/2" NPT		316 SS	600°F (315°C) max; 232 psi (16 bar) max	XTP-360-N40140F XTP-360-0300F XTP-360-0100C RTD0100-06-030-H CF06-25N
RTDTW-10-010-50N	1	0.10			92mm (3.62")					RTD0100-10-010-H CF10-50N
RTDTW-10-030-50N	1	0.22		11 mm (0.43")	292mm (11.48")		1/2" NPT			CF10-50N

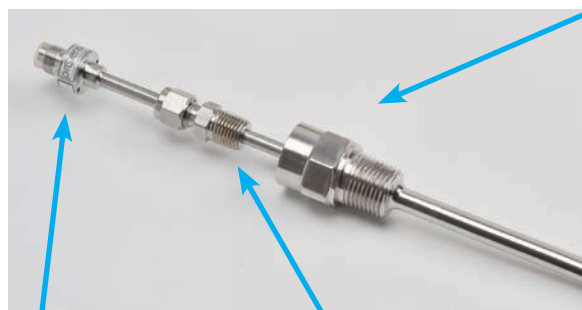


NOTE: CHECK THE CHEMICAL COMPATIBILITY OF THE THERMOWELL'S WETTED PARTS WITH THE MEDIUM TO BE MEASURED.



NOTE: RESPONSE TIME WILL BE SLOWER WHEN INSTALLED IN A THERMOWELL. BE SURE TO INSTALL THE PROBE SO THAT IT CONTACTS THE END OF THE THERMOWELL FOR FASTER RESPONSE.. THERMAL COMPOUND MAY BE USED DEPENDING ON APPLICATION

Probe & Thermowell Assembly Example



RTD0100 Series or XTP Series Probe

CF06-25N or CF10-50N Compression Fitting

RTDTW Series Thermowell

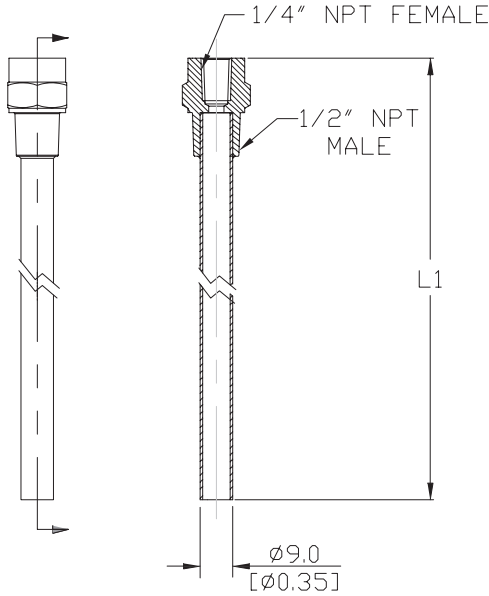
Note: Once tightened compression fitting cannot be re-adjusted

Thermowells for RTD Probes and Transmitters with M12 Cable Connector

Dimensions

inches [mm]

RTDTW-06 Series



Part Number	L1
RTDTW-06-010-50N	113mm [4.4]
RTDTW-06-020-50N	213mm [8.4]
RTDTW-06-030-50N	313mm [12.3]

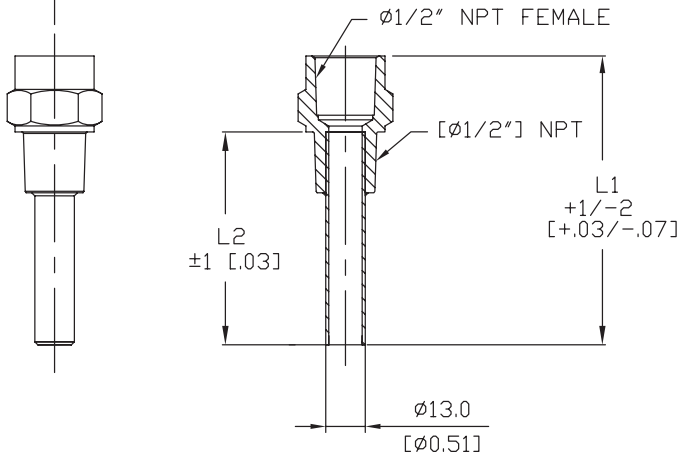
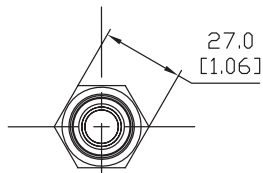
*Torque threads to 40 lb-ft [54.23 Nm]**

** Torque values are for reference. Actual torque required for a proper seal of NPT threads is influenced by tolerance, sealant, lubricant, etc.*

Dimensions

inches [mm]

RTDTW-10 Series



Part Number	L1	L2
RTDTW-10-010-50N	92mm [3.62]	70mm [2.75]
RTDTW-10-030-50N	292mm [11.48]	270mm [10.6]

*Torque threads to 40 lb-ft [54.23 Nm]**