

proSense® TTD Series Temperature Transmitters

Overview



- Converts ProSense RTD0100 Series RTD temperature probe output to 4-20mA signal
- High accuracy 2-wire or 3-wire 4-20mA temperature transmitter
- M12 quick-disconnect for fast mounting
- 3 available temperature ranges
- 3-year warranty
- LED indication of loop current



Note: Above photo shows assembled unit with TTD Transmitter and RTD0100 Probe

ProSense Temperature Transmitter TTD Series					
Part Number	Description	Pcs/Pkg	Wt (lb)	Price	Cable Assemblies*
TTD-20-N40160F-H	Temperature transmitter, 4-20mA output, over temperature range of -40°F to 160°F (-40°C to 71.1°C)	1	0.25	\$65.00	CD12L-0B-020-A0 CD12L-0B-020-C0 CD12M-0B-070-A1 CD12M-0B-070-C1
TTD-20-N40300F-H	Temperature transmitter, 4-20mA output, over temperature range of -40°F to 300°F (-40°C to 148.8°C)	1	0.25	\$65.00	CDP12-0B-010-AA CDP12-0B-030-AA CDP12-0B-010-BB CDP12-0B-030-BB

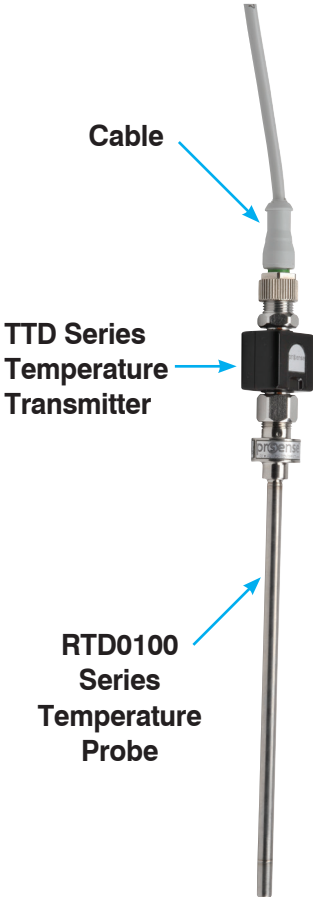
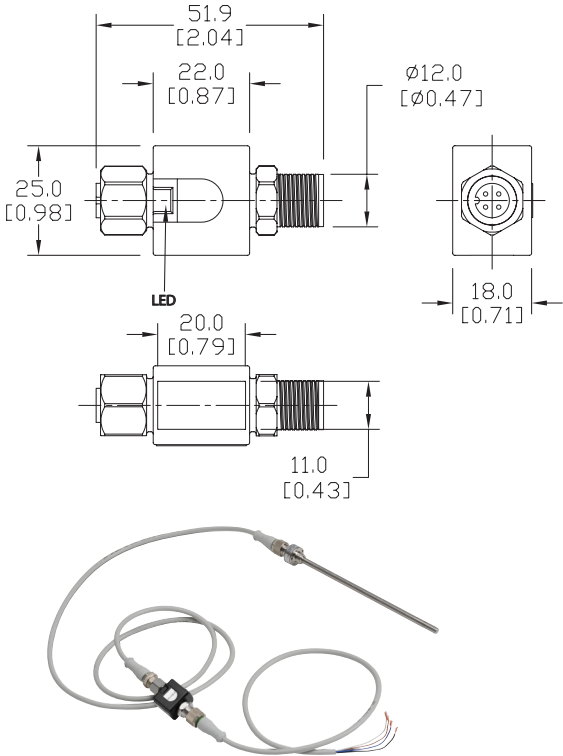
* Order separately - See proximity sensor section for cable specs.

ProSense TTD Series Technical Specifications			
	TTD-20-N40160F-H	TTD-20-N40300F-H	TTD-20-30300F-H
Operating Voltage	20 to 32 VDC		
Electrical Connection	M12 connector; gold-plated contacts (torque 5 to 13 in/lbs)		
Short-Circuit Protection	Yes (non-latching)		
Overload Protection	Yes		
Reverse Polarity Protection	Yes		
Analog Output	4 to 20 mA (min/max 3.85 to 22 mA)		
Maximum Load	Rmax: 300 Ω		
Accuracy	± 0.3°C + (± 0.1 % span)		
Resolution	± 0.3°C + (± 0.1 % span)		
Measuring - Display [ms] / Cycle [ms]	100		
Scaled Range	-40°F to 160°F (-40°C to 71.1°C)	-40°F to 300°F (-40°C to 148.8°C)	30°F to 300°F (-1.1°C to 148.8°C)
Dynamic Response (DIN EN 60751)	*t0.5 + 1 sec. / t0.9 = 3 sec.		
Housing Material	Polyamide PACM 12 (TROGAMID); PED; sealing:FPM (Viton); nut: stainless steel 316L / 1.4404; connector: TPU (urethane)		
Ambient Temperature	-13°F to 158°F (-25°C to 70°C)		
Storage Temperature	-40°F to 185°F (-40°C to 85°C)		
Protection	IP 67		
Insulation Resistance	> 100MΩ / 500 VDC		
Shock Resistance	50g (DIN / IEC 68-2-27, 11ms)		
Vibration Resistance	20g (DIN / EN 68-2-6, (10 to 2000 Hz)		
EMC	EN 61326		
EN 61000-4-2 ESD	4 kV CD / 8 kV AD		
EN 61000-4-3 HF Radiated	10 V/m		
EN 61000-4-4 Burst	2 kV		
EN 61000-4-5 Surge	1 kV		
EN 61000-4-6 HF Conducted	10 V		
Power-On Delay Time	1 sec.		
Agency Approvals	UL 508 listed, File # E324411, CE, RoHS		

proense® TTD Series Temperature Transmitter

Dimensions

mm [inches]



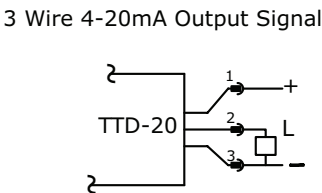
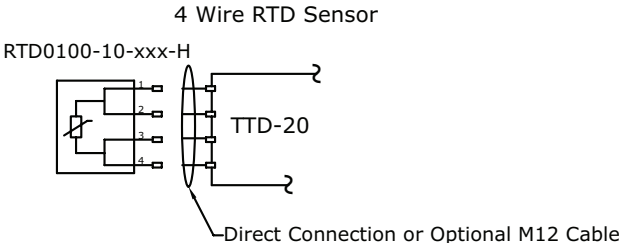
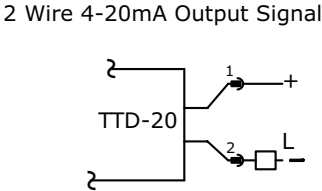
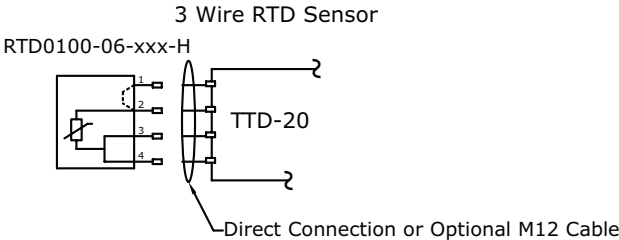
Note: The TTD transmitter can be located remotely from the RTD0100 probe by using an additional patch cable.

Wiring

INPUT SENSOR CONNECTION

OUTPUT SIGNAL CONNECTION

Cable Assembly Wiring Colors:
 Pin 1 - Brown
 Pin 2 - White
 Pin 3 - Blue
 Pin 4 - Black
 Note: Wiring colors are based on AutomationDirect CD12L and CD12M 4-pole cable assemblies.



prosense® RTD Probes with M12 Cable Connector



Overview

- All temperature sensors are pre-built stock items
- 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 160 mm, 260 mm, 360 mm, and 560 mm
- 4-pin M12 cable connector plug for simplified wiring
- 3-year warranty



RTD Probes With M12 Cable Connector									
Part Number	Pcs/Pkg	Wt(lb)	Price	Type	Diameter	Length	Temperature Sensing Range	Mounting Fitting	Thermowell
RTD0100-06-010-H	1	0.10	\$29.00	PT 100, 3-wire	0.24 inch (6 mm)	6.3 inch (160 mm)	-40 to 302°F (-40 to 150°C), Wiring connection limited to -13 to 176°F (-25 to 80°C)	CF06-25N	RTDTW-06-010-50N CF06-25N
RTD0100-06-020-H	1	0.20	\$30.00	PT 100 3-wire	0.24 inch (6 mm)	10.2 inch (260 mm)		CF06-25N	RTDTW-06-020-50N CF06-25N
RTD0100-06-030-H	1	0.30	\$33.25	PT 100 3-wire	0.24 inch (6 mm)	14.2 inch (360 mm)		CF06-25N	RTDTW-06-030-50N CF06-25N
RTD0100-10-010-H	1	0.10	\$29.00	PT 100 4-wire	10 mm (0.4 inch)	160 mm (6.3 inch)		CF10-50N	RTDTW-10-010-50N CF10-50N

RTD Probes With M12 Cable Connector Technical Specifications	
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	6 mm (0.24") or 10 mm (0.4"), 316 stainless steel sheath with single RTD element, 316 stainless steel wiring connection
Minimum Installation Depth	0.6" (15 mm)
Response Time	*t _{0.5} = 1 sec/ t _{0.9} = 3 sec (DIN EN 60751)
Wiring	M12 connector; gold-plated contacts, IP 68 / IP 69K, Class III

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



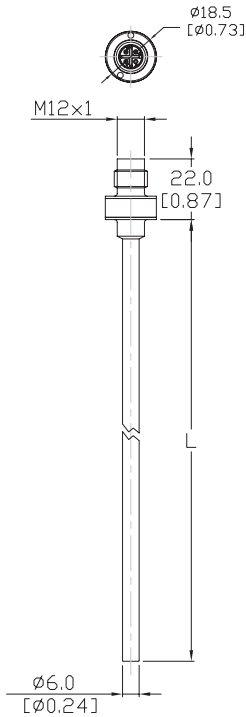
NOTE: CHECK THE CHEMICAL COMPATIBILITY OF THE SENSOR'S WETTED PARTS WITH THE MEDIUM TO BE MEASURED.
www.automationdirect.com/static/specs/prosensechemresistance.pdf

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

Dimensions

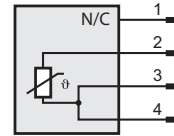
mm [inches]

RTD0100-06 Series



Part Number	Length	L
RTD0100-06-010-H	160 mm	[6.3]
RTD0100-06-020-H	260 mm	[10.2]
RTD0100-06-030-H	360 mm	[14.2]

Wiring Information



Cable Assembly Wiring Colors:

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

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

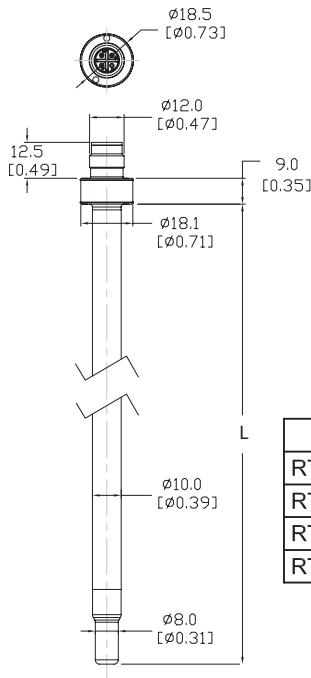


NOTE: MOUNT 0.24 (6 MM) INCH DIAMETER RTDs BY USING PROSENSE RTD^{TW} SERIES THERMOWELLS AND / OR CF06-25N COMPRESSION FITTING.

Dimensions

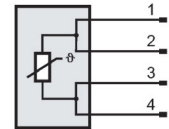
mm [inches]

RTD0100-10 Series



Part Number	Length	L
RTD0100-10-010-H	160 mm	[6.3]
RTD0100-10-020-H	260 mm	[10.2]
RTD0100-10-030-H	360 mm	[14.2]
RTD0100-10-050-H	560 mm	[22.0]

Wiring Information



Cable Assembly Wiring Colors:

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

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



NOTE: MOUNT 10MM DIAMETER RTDs BY USING PROSENSE RTD^{TW} SERIES THERMOWELLS AND / OR CF10-50N COMPRESSION FITTING.