

proSense™ TTD25 Series Temperature Transmitter

Automation Direct



TTD25N



TTD25C

Features

- High accuracy 2-wire temperature transmitter
- 1000 ohm, Class A platinum RTD sensing element
- 4-20mA analog output signal
- probes made of durable 316 stainless steel
- Temperature ranges of 0-100°C or 0-300°F

Agency Approvals

- cULus File number E 324411
- CE
- RoHS



Company Info.
PLCs
Field I/O
Software
C-more & other HMI
AC Drives
AC Motors
Power Transmiss.
Steppers/Servos
Motor Controls
Proximity Sensors
Photo Sensors
Limit Switches
Encoders
Current Sensors
Pressure Sensors
Temp. Sensors
Pushbuttons/Lights
Process
Relays/Timers
Comm.
Terminal Blocks & Wiring
Power
Circuit Protection
Enclosures
Tools
Appendix
Part Index

ProSense Temperature Transmitter Series						
Part Number	Description	Pcs/Pkg	Wt(lb)		Use With	Cable Assemblies
TTD25N-20-0100C-H	4-20 mA output, 8.3 mm (0.3") dia. probe, 1/4" NPT male port, 4-pin micro M12 plug. Temperature range: 0 to 100°C. Probe length 46.5mm (1.83 inches).	1	0.30		N/A	CD12L-0B-020-A0 CD12L-0B-020-C0 CD12M-0B-070-A1 CD12M-0B-070-C1 CDP12-0B-010-AA CDP12-0B-030-AA CDP12-0B-010-BB CDP12-0B-030-BB (order separately - see page 18-64 for specs)
TTD25N-20-0300F-H	4-20 mA output, 8.3 mm (0.3") dia. probe, 1/4" NPT male port, 4-pin micro M12 plug. Temperature range: 0 to 300°F. Probe length 46.5mm (1.83 inches).	1	0.30		N/A	
TTD25C-20-0100C-H	4-20 mA output, 6 mm (0.24") dia. probe, 4-pin micro M12 plug. Temperature range: 0 to 100°C.	1	0.30		CF06-25N	
TTD25C-20-0300F-H	4-20 mA output, 6 mm (0.24") dia. probe, 4-pin micro M12 plug. Temperature range: 0 to 300°F.	1	0.32		CF06-25N	

ProSense TTD25 Series Technical Specifications				
	TTD25N-20-0100C-H	TTD25N-20-0300F-H	TTD25C-20-0100C-H	TTD25C-20-0300F-H
Operating Voltage	10 to 30 VDC			
Electrical Connection	M12 connector; gold-plated contacts			
Process connection	1/4" MNPT			Use CF06-25N
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) Sourcing			
Maximum Load	720Ω at 24 VDC; Rmax = (Supply voltage - 9.6)*50			
Pressure Rating	4350 psi (300 bar)		725 (50 bar) (This value applies to the sensor only. For installation in adapters, use the adapter data sheet indications)	
Accuracy	± 0.3°C	± 0.4°C	± 0.3°C	± 0.4°C
Resolution	<0.02°C			
Measuring Element	1 x Pt 1000, to DIN EN 60751, class A			
Measuring Range	32 to 212°F (0 to 100°C)	0 to 300°F (-17.8 to 148.9°C)	32 to 212°F (0 to 100°C)	0 to 300°F (-17.8 to 148.9°C)
Dynamic Response (DIN EN 60751)	*to.5 = 1 sec/ to.9 = 3 sec		*to.5 = 1 sec/ to.9 = 3 sec	
Minimum Installation Depth	N/A		0.6 in (15 mm)	
Housing Material	Stainless steel (316S12); stainless steel (304S15); stainless steel (303S22); PA			
Materials (wetted parts)	Stainless steel (316S12)			
Ambient Temperature	-13 to 158°F (-25 to 70°C)			
Storage Temperature	-40 to 212°F (-40 to 100°C)			
Protection	IP 68 / IP 69K, Class III			
Insulation Resistance	> 100 MΩ (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 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			

* to.5 = a 50% of full scale change in output when immersed in water at 0.4m/s, to.9 = a 90% FS change.

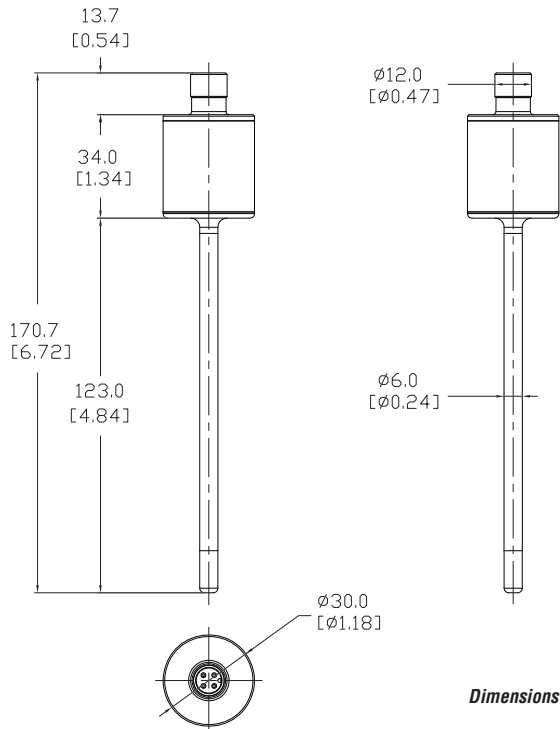


NOTE: CHECK THE CHEMICAL COMPATIBILITY OF THE SENSOR'S WETTED PARTS WITH THE MEDIUM TO BE MEASURED.
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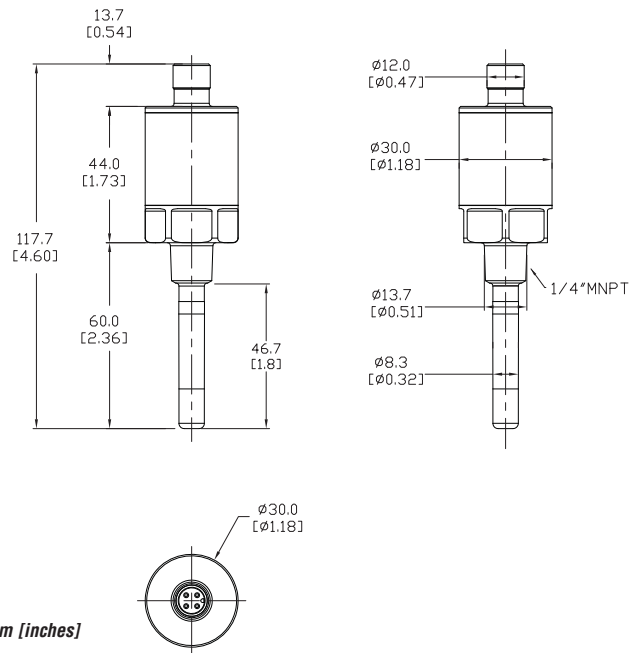
proSense™ TTD25 Temperature Transmitters

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TTD25C Series Dimensions



TTD25N Series Dimensions

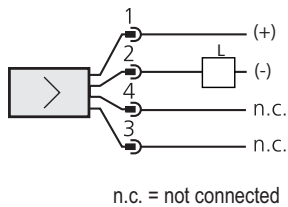
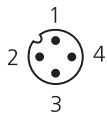


Dimensions shown mm [inches]



NOTE: USE PROSENSE COMPRESSION FITTING CF06-25N TO MOUNT TTD25C SERIES TEMPERATURE TRANSMITTER.

Wiring Diagram



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.

n.c. = not connected

proSense™ RTD Thermowells and Fittings

™AUTOMATIONDIRECT



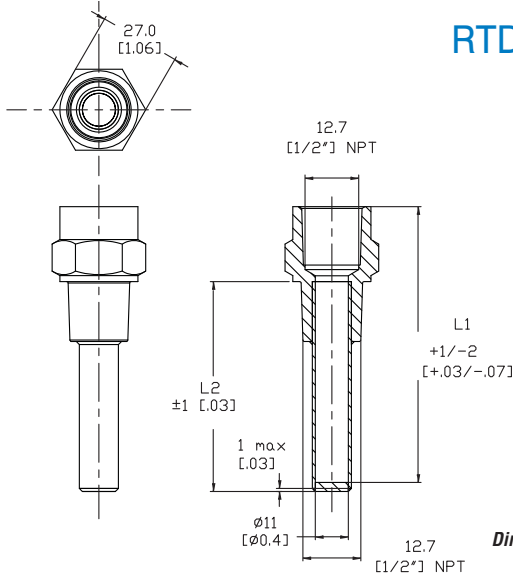
Features

- Thermowells for ProSense 10 mm diameter RTD probes
- All wetted parts are 316 stainless steel
- 600°F (315°C) temperature and 232 psi (16 bar) pressure rating
- CF10-50N fitting required to mount RTD probes in thermowell

ProSense Thermowells for RTDs					
Part Number	Description	Pcs/Pkg	Wt(lb)	Price	Use With
RTDTW-10-010-50N	RTD thermowell for 160 mm (6.3") long, 10 mm (0.39") diameter probe, 1/2" NPT male port	1	0.28	<-->	RTD0100-10-010-H CF10-50N
RTDTW-10-020-50N	RTD thermowell for 260 mm (10.2") long, 10 mm (0.39") diameter probe, 1/2" NPT male port	1	0.36	<-->	RTD0100-10-020-H CF10-50N
RTDTW-10-030-50N	RTD thermowell for 360 mm (14.2") long, 10 mm (0.39") diameter probe, 1/2" NPT male port	1	0.42	<-->	RTD0100-10-030-H CF10-50N
RTDTW-10-050-50N	RTD thermowell for 560 mm (22.0") long, 10 mm (0.39") diameter probe, 1/2" NPT male port	1	0.58	<-->	RTD0100-10-050-H CF10-50N



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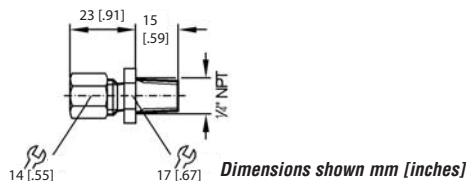
RTDTW Dimensions

Part Number	L 1	L 2
RTDW-10-010-50N	92 mm [3.62]	70 mm [2.75]
RTDW-10-020-50N	192 mm [7.55]	170 mm [6.69]
RTDW-10-030-50N	292 mm [11.48]	270 mm [10.6]
RTDW-10-050-50N	492 mm [19.37]	470 mm [18.47]

Dimensions shown mm [inches]

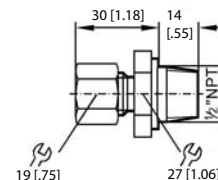
ProSense Compression Fittings for Temperature Probes					
Part Number	Description	Pcs/Pkg	Wt(lb)	Price	Use With
CF06-25N	0.25" NPT stainless steel (320S31) compression fitting for 6 mm diameter temperature probe. Pressure rating 725 psi (50 bar).	1	0.18	<-->	TTD25C-20-0100C-H TTD25C-20-0300F-H
CF10-50N	0.50" NPT stainless steel (320S31) compression fitting for 10 mm diameter temperature probe. Pressure rating 725 psi (50 bar).	1	0.20	<-->	RTD0100-10-010-H RTD0100-10-020-H RTD0100-10-030-H RTD0100-10-050-H

CF06-25N Dimensions



Dimensions shown mm [inches]

CF10-50N Dimensions



Dimensions shown mm [inches]

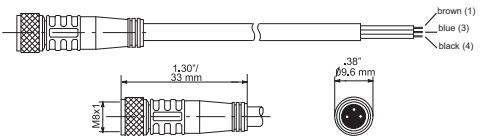
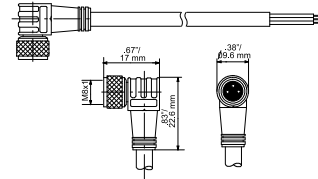
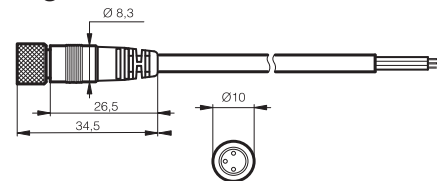
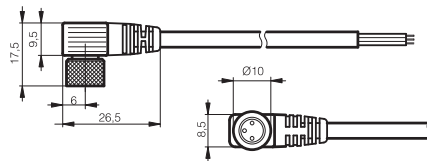
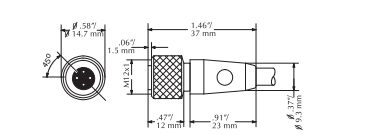
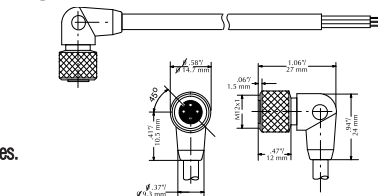
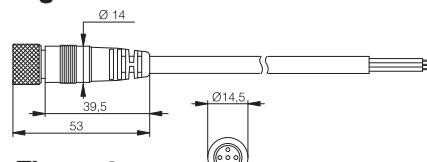
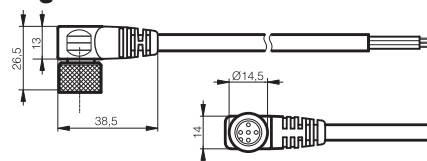
Photoelectric Sensors Accessories: Cables

Cables with quick-disconnect plugs



- Industry standard axial and right-angle M8/M12 screw-lock connectors. The cables listed below can be used with extension cables
- 2m, 5m, and 7m cable lengths
- PVC (polyvinyl chloride) jacket for typical industrial applications
- PUR (polyurethane) jacket for oily and direct sunlight applications
- IP67 rated

Dimensions

Figure 1

Figure 2

Figure 3

Figure 4

Figure 5

Figure 6

Figure 7

Figure 8


M8 Quick-Disconnect Cables						
Part Number	Length	Poles	Connector	Jacket	Dimensions	
M8 Quick-Disconnects						
CD08-0A-020-A1	2m (6.5ft.)	3	Axial	PVC	Figure 1	
CD08-0A-020-C1	2m (6.5ft.)	3	Right-angle	PVC	Figure 2	
CD08-0A-050-A1	5m (16.4ft.)	3	Axial	PVC	Figure 3	
CD08-0C-050-A1	5m (16.4ft.)	3	Axial	PUR	Figure 3	
CD08-0A-050-C1	5m (16.4ft.)	3	Right-angle	PVC	Figure 4	
CD08-0C-050-C1	5m (16.4ft.)	3	Right-angle	PUR	Figure 4	
CD08-0A-070-A1	7m (23ft.)	3	Axial	PVC	Figure 1	
CD08-0A-070-C1	7m (23ft.)	3	Right-angle	PVC	Figure 2	

M12 Quick-Disconnect Cables						
Part Number	Length	Poles	Connector	Jacket	Dimensions	
M12 Quick-Disconnects						
CD12L-0B-020-A0	2m (6.5ft.)	4	Axial	PVC	Figure 5	
CD12L-0B-020-C0	2m (6.5ft.)	4	Right-angle	PVC	Figure 6	
CD12M-0B-050-A1*	5m (16.4ft.)	3	Axial	PVC	Figure 7	
CD12M-0D-050-A1*	5m (16.4ft.)	3	Axial	PUR	Figure 7	
CD12M-0B-050-C1*	5m (16.4ft.)	3	Right-angle	PVC	Figure 8	
CD12M-0D-050-C1*	5m (16.4ft.)	3	Right-angle	PUR	Figure 8	
CD12M-0B-070-A1	7m (23ft.)	4	Axial	PVC	Figure 5	
CD12M-0B-070-C1	7m (23ft.)	4	Right-angle	PVC	Figure 6	

* Note: Do not use with: DM, FA, QX, SS, SSF, MS and MSF series photoelectric sensors. These sensors require 4-pole cables.

Cable Specifications	M8		M12	
Length	2m (6.5ft.)/ 7m (23ft.)	5m (16.4ft.)	2m (6.5ft.)/ 7m (23ft.)	5m (16.4ft.)
Nominal Voltage	50VAC/75VDC	60VAC/75VDC	300VAC	60VAC/75VDC
Nominal Current	4A	1.5A	4A	1.5A
Protection Degree	IEC IP67		IEC IP67	
Contact Body Material	ABS	PUR	ABS	PUR
Housing Material	PUR		PUR	
Contacts Material	CuSn	CuZn	CuSn	CuZn
Conductors Section	0.34mm ²		0.34mm ²	
Ø Outer Cable	5mm		5mm	
Temperature Range	-25° to +70°C (-13° to 158°F)		-25° to +70°C (-13° to 158°F)	

Photoelectric Sensors Accessories: Extension Cables



Extension cables with quick-disconnect plugs on each end

Available extension cables include:

- Industry standard M8 and M12 screw-lock connectors
- Axial and right-angle connector models
- 1m and 3m cable lengths
- PVC (polyvinyl chloride) jacket for typical industrial applications
- IP67 rated

Dimensions

Figure 1

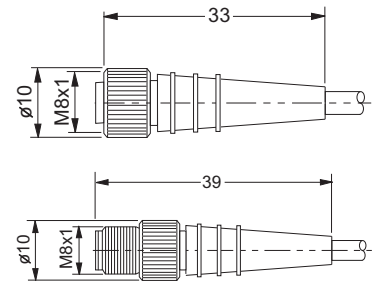


Figure 2

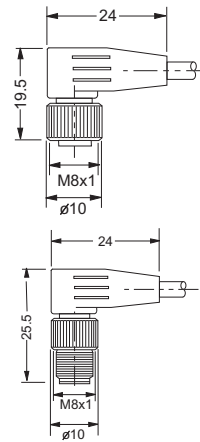


Figure 3

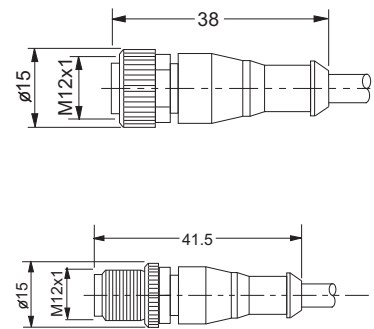
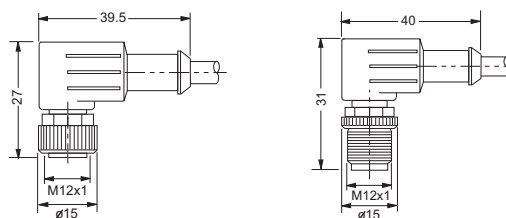


Figure 4



M8 Extension Cables with Quick-Disconnect on each end						
Part Number	Length	Poles	Connectors	Jacket	Dimensions	
M8 Quick-Disconnect Extension Cables						
CDP08-0A-010-AA	1m (3.28ft.)	3	2 Axial	PVC	Figure 1	
CDP08-0A-010-BB	1m (3.28ft.)	3	2 Right-angle	PVC	Figure 2	
CDP08-0A-030-AA	3m (9.84ft.)	3	2 Axial	PVC	Figure 1	
CDP08-0A-030-BB	3m (9.84ft.)	3	2 Right-angle	PVC	Figure 2	

M12 Extension Cables with Quick-Disconnect on each end						
Part Number	Length	Poles	Connectors	Jacket	Dimensions	
M12 Quick-disconnect Extension Cables						
CDP12-0B-010-AA	1m (3.28ft.)	4	2 Axial	PVC	Figure 3	
CDP12-0B-010-BB	1m (3.28ft.)	4	2 Right-angle	PVC	Figure 4	
CDP12-0B-030-AA	3m (9.84ft.)	4	2 Axial	PVC	Figure 3	
CDP12-0B-030-BB	3m (9.84ft.)	4	2 Right-angle	PVC	Figure 4	

Cable Specifications	M8 / M12
Length	1m (3.28ft.)/ 3m (9.84ft.)
Nominal Voltage	50VAC/75VDC
Nominal Current	4A
Protection Degree	IEC IP67
Contact Body Material	ABS
Housing Material	PUR
Contacts Material	CuSn
Conductors Section	0.34mm ²
Ø Outer Cable	5mm
Temperature Range	-25° to +70°C (-13° to 158°F)

Photoelectric Sensors Accessories: Cables

Cables with quick-disconnect plugs for DFT/DFP Models

Do not use extension cables with the cable listed below. The physical pin configurations do not match.

Available cables include:

- Industry standard M8 screw-lock connectors
- Axial and right-angle connector models
- 2m, 5m and 10m cable lengths
- PVC (polyvinyl chloride) jacket for typical industrial applications
- IP68 rated



M8 Cables with Quick-Disconnect

Part Number	Length	Poles	Connectors	Jacket	Dimensions
M8 Quick-Disconnects					
CD08-0G-020-A1	2m (6.56ft.)	4	Axial	PVC	Figure 1
CD08-0W-020-C1	2m (6.56ft.)	4	Right-angle	PVC	Figure 2
CD08-0G-050-A1	5m (16.4ft.)	4	Axial	PVC	Figure 1
CD08-0W-050-C1	5m (16.4ft.)	4	Right-angle	PVC	Figure 2
CD08-0G-100-A1	10m (32.8ft.)	4	Axial	PVC	Figure 1
CD08-0W-100-C1	10m (32.8ft.)	4	Right-angle	PVC	Figure 2

Cable Specifications	M8
Length	2m (6.56ft.) 5m (16.4ft.) 10m (32.8ft.)
Nominal Voltage	30VAC/30VDC
Nominal Current	4A
Protection Degree	IEC IP67
Contact Body Material	ABS
Housing Material	PUR
Contacts Material	CuSn
Conductors Section	0.25mm ²
Ø Outer Cable	4.5mm
Temperature Range	-5° to +70°C (23° to 158°F)

Dimensions (mm)

Figure 1

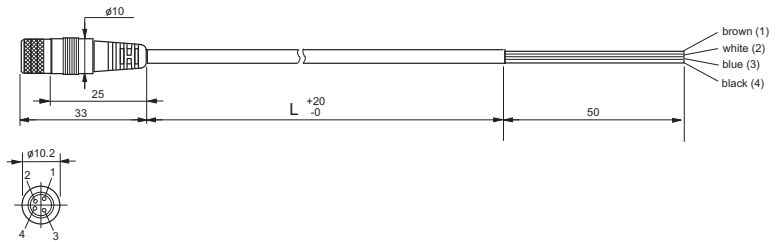
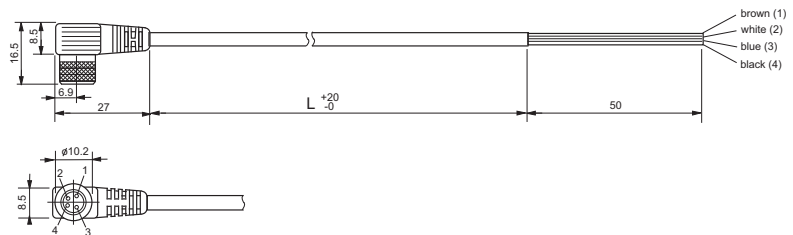


Figure 2



Use these cables if the sensor pin configuration looks like the connector pin-out below.

