

SANITARY REMOTE DIGITAL THERMOMETER/TRANSMITTER

Reotemp's Sanitary Remote Digital Thermometer/Transmitter is a high accuracy thermometer with digital display. It features an IP67/NEMA 4X enclosure, clean-in-place connection, and a 5 year battery life (Note: 4-20mA models are loop powered 9-36VDC). The Digital Thermometer is perfect for brewing, food, beverage and pharmaceutical applications where a high accuracy digital readout is required. The remote model is well suited for mounting the display away from a high temperature or hard to reach process.



Certified



Accuracy



Custom Logo



Made in USA

FEATURES / BENEFITS

- 3-A Conformance Certificate Included
- High Accuracy 1,000Ω RTD (Class A)
- Water Resistant IP67/NEMA 4X
- 5 Year Battery Life (4-20mA Models are Loop Powered)
- 4-20 mA Output Available (Loop Powered 9-36VDC)

SPECIFICATIONS

Accuracy	$\pm (0.72 + 0.002 \times t - 32) ^\circ\text{F}$, $\pm (0.40 + 0.002 \times t) ^\circ\text{C}$, where t = temperature. Example: At 32°F accuracy is $\pm 0.72 ^\circ\text{F}$.
Sensing Element	RTD, Type Pt1000Ω, Class A
Temperature Ranges	-58°F to 392°F (-50°C to 200°C) or -328°F to 1112°F (-200°C to 600°C)
Output (Optional)	4-20 mA, M12 Connector, Loop Powered 9-35 VDC
Refresh Rate	3 Seconds
Display	4-digit LCD, 1/2" Height
Display Resolution	See Table 1
RFI Effect	1% or Less Typical
Temperature Effect	<0.01% FS/°C
Ambient Temp. Range	32°F to 122°F (0°C to 50°C)
Storage Temp. Range	-4°F to 158°F (-20°C to 70°C)
Housing Material	Stainless Steel 316
Wetted Finish	Ra 32 Max. / Ra 20 Max.(Optional)
Lens	Polycarbonate (Standard) or Glass
Probe Material	316 Stainless Steel
Weight	12 oz., Varies by Configuration
Environmental Protection	NEMA 4X/IP67
Power	1 x 3.6V AA Battery (M12 is loop powered 9-36 VDC.)
Battery Life	5 Years Minimum in Continuous Mode, (Note: 4-20mA Models are Loop Powered 9-36 VDC, No Battery Option)

Electronic Display Temperature Limit If the temperature of the electronics in the display housing exceeds 122°F (50°C), permanent damage to the display will occur. A remote mount is recommended for high temperature applications.

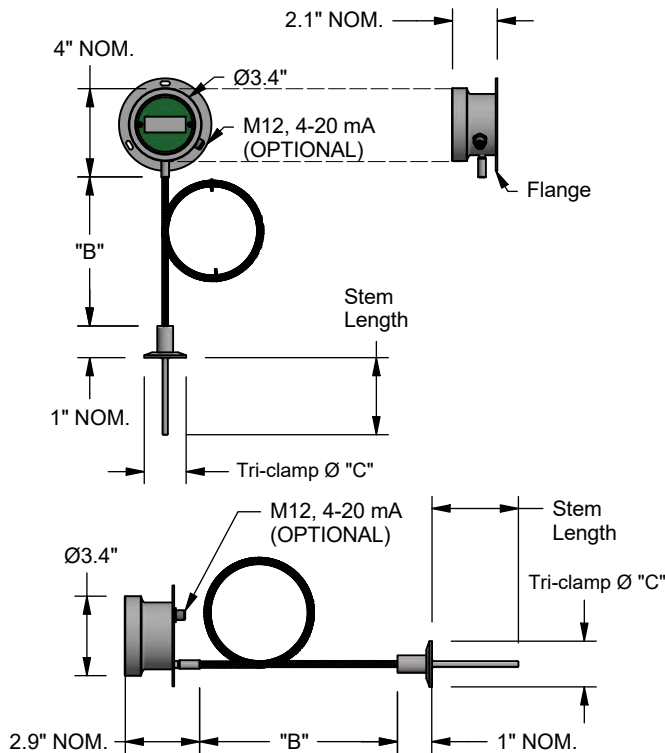


Table 1: Display Resolution

Model	Range	Decimal Point
Standard Temp, Displays Decimal	-58°F to 392°F (-50°C to 200°C)	Yes
Extended Temp, No Decimal	-328°F to 1112°F (-200°C to 600°C)	No

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BUILD YOUR DIGITAL THERMOMETER: Choose options to build a part number. For example: **DTRBXTA010C1A240A-R3**

MODEL	MOUNTING	STYLE	4-20 mA OUTPUT LOCATION	CAPILLARY TYPE	CAPILLARY LENGTH "B"	PROCESS CONNECTION "C"
DTR Digital Remote Reading Thermometer	B = Back Flange F = Front Flange M = Rear Mounting Bracket	A = Back Connect X = Bottom Connect E = Explosion Proof Enclosure (Bottom Connect Only, Battery Powered Only, B Mounting Required)	N = None (Battery Operated) S = M12 Upper Back (A & X Style Only, Loop Powered 9-36VDC) T = M12 Right Side (A & X Style Only, Loop Powered 9-36VDC) U = M12 Left Side (A & X Style Only, Loop Powered 9-36VDC) V = M12 Top Side (A & X Style Only, Loop Powered 9-36VDC) W = M12 Bottom Side (A Style Only, Loop Powered 9-36VDC)	A = Stainless Steel Armor V = Stainless Steel Overbraid P = Stainless Steel Armor with PVC Coating T = Stainless Steel Armor With Teflon Coating	??? = Enter Length in Feet. Example: 010 = 10 feet of Capillary.	C = 1.5" Tri-Clamp L = 2" Tri-Clamp A = 2.5" Tri-Clamp P = 3" Tri-Clamp M = 3/4" Tri-Clamp K = 4" Tri-Clamp

M12 Wiring Diagram for 4-20 mA Output Option

TEMPERATURE RANGE	STEM DIAMETER	STEM LENGTH	RTD	OPTIONS
1	A	240	A	-R3

Code	Temp. Range	Resolution
1	-58°F to 392°F	0.1°
2	-50°C to 200°C	0.1°
3	-328°F to 1112°F	1°
4	-200°C to 600°C	1°

Straight Stems
A = 1/4" Diameter (Standard)
F = 3/8" Diameter

Fast Response Stems
B = 3/8" Diameter Reduced to 3/16" Diameter Tip

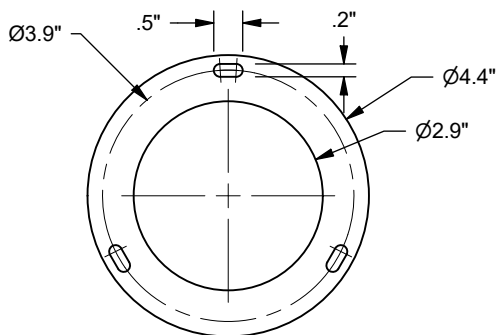
025 = 2.5"
040 = 4"
060 = 6"
090 = 9"
120 = 12"
150 = 15"
180 = 18"
240 = 24"
300 = 30"
360 = 36"
??? = Custom stem length in inches.

Millimeter Stem Lengths
M???? = Use a code beginning in M to specify a mm stem length ex: 100mm = M0100

A = Class A RTD, 1,000Ω

- TS = Stainless Steel Tag
- RA = Ra 20 Max Wetted Finish with Certificate
- R3 = Calibration Certification, 3 Points (32°F, 100°F, 190°F)
- R1 = Calibration Certification, 1 Point (100°F)
- C3 = Calibration Certification, 3 Points (Customer Picks)
- C1 = Calibration Certification, 1 Point (Customer Picks)
- CL = Custom Logo Dial

For additional options see page 147.



Flange Drawing



Explosion Proof Head

Note: Thermowells should be used whenever the stem or bulb would be exposed to pressure, corrosion, velocity, abrasion or shear forces. Thermowells also make it possible to remove the thermometer without losing pressure or the contents of the process.

Explosion Proof Head Approvals: FM Approved Enclosure Only: CL. I. GR. A,B,C,D; CL. II. GR E,F,G; CL. III.; Type 4X. For CSA Class I, Group A, conduit seal is required within 18 inches. CL. I, ZONE 1, ATEX: d IIC, IP66. ATEX: II 2GD Ex d tD A21 IIC, FTZU 04 ATEX 0265U. IECEx FMG 06.0003U, Ex d II C, IP68.

SANITARY

THERMOCOUPLE & RTD OPTIONS

		Thermocouple	RTD	Digital Thermometers	Handheld Digital
CERTIFICATION OPTIONS					
-R1	1 Point Calibration Certification, Reotemp Chooses	✓	✓	✓	✓
-R3	3 Point Calibration Certification, Reotemp Chooses	✓	✓	✓	✓
-C1	1 Point Calibration Certification, Customer Chooses	✓	✓	✓	✓
-C3	3 Point Calibration Certification, Customer Chooses	✓	✓	✓	✓
-CC	Certificate of Conformance	✓	✓	✓	✓
-CS	NIST Calibration Sticker (No Logged Points)	✓	✓	✓	✓
OTHER OPTIONS					
-VB	Hi-Vibration	N/A	✓	✓	✓
-AC	Hi-Accuracy	N/A	✓	N/A	N/A
-PS	Pointed Stem	✓	✓	✓	✓
-TF	Teflon Coating	✓	✓	✓	✓
-SS	316 SS stem	N/A	STD	✓	✓
-NL	No Logo	✓	✓	✓	✓
-HT	Heat Transfer Compound (2 oz)	✓	✓	✓	N/A
-GL	Plain Glass Lens	N/A	N/A	✓	✓
-CL	Custom Logo Dial	N/A	N/A	✓	✓
-BP	Replacement Battery Pack	N/A	N/A	✓	✓
-WD	White Dial	N/A	N/A	✓	✓
-AS	Allows to Fit 1-1/4-18 Industrial Thermowell	✓	✓	✓	N/A
TAG OPTION					
-TS	Stainless Steel Tag (1-10 Characters)			✓	
-TM	Stainless Steel Tag (11-80 Characters)			✓	
-TP	Paper Tag			✓	

✓	Indicates that the option is available with this model.
N/A	Indicates the option is not available with this model.
STD	Indicates standard options with no additional cost.