TEMPERATURE | TRANSMITTERS | WALL PLATES



WALL PLATES Wall Plates with Transmitters

The ACI Transmitter Wall Plate Series features a two-wire, 4 to 20 mA loop powered output with optional 3-Wire voltage output signals available. All transmitters include Zero and Span adjustments for field calibration and are calibrated using NIST Certified Calibration equipment. We recommend the use of an 18 to 22 AWG shielded cable for all temperature transmitter installations to reduce the chances of noise being introduced onto the signal lines. The sensor assemblies are manufactured using colored Etched Teflon lead wires and ACI's proven double encapsulation process to eliminate the effects of moisture on the sensors as well as increase the thermal response times using our high quality, thermally conductive epoxy. The wall plate transmitters are designed to be mounted over a standard single gang junction box or hole in the wall and includes a foam pad to reduce the effects

of self-heating from the transmitter and thermal drafts from within the wall. For best accuracy, ACI recommends the use of the A/TTM Series Matched transmitters with 3 or 5 Point NIST Calibration Certificate, since they include a second calibration step in which the RTD and transmitter are calibrated together as a system. Optional tamper proof mounting screws and screw driver bits are available to keep people from removing the plates from the wall.

Applications: Space Temperature Sensing, Office Buildings, Hallways, Schools, Gyms, Manufacturing Plants, Clean Rooms, Pharmaceutical, Hospitals, Secure Installations

The ACI Transmitter Wall Plate Series is covered by ACI's Five (5) Year Limited Warranty. The warranty can be found in the front of ACI's Sensors & Transmitters catalog, as well as on ACI's web site, <u>workaci.com</u>.

PRODUCT SPECIFICATIONS

Transmitter Supply Voltage Supply Current:	+8.5 to 32 VDC (Reverse Polarity Protected) 25 mA minimum
	250 Ohm Load: +13.5 to 32 VDC 500 Ohm Load: +18.5 to 32 VDC
Maximum Load Resistance:	(Terminal Voltage - 8.5 V) 0.020 A
Output Signals:	Current: 4-20 mA (2-Wire Loop Powered) Voltage: 1-5 VDC or 2-10 VDC (3-Wires)
Calibrated Transmitter Accuracy Linearity ¹	: Temp. Spans < 500°F (260°C): +/- 0.2%
Temperature Drift ² :	Temp. Spans < 100°F (38°C): +/- 0.04%/°F Temp. Spans > 100°F (38°C): +/- 0.02%
TTM100/TTM1K Certification Points:	3 Point NIST: 20%, 50% & 80% of span 5 Point NIST: 20%, 35%, 50%, 65% & 80% of span
Warm Up Time Warm Up Drift:	10 minutes +/- 0.1%
Calibration Temperature Spans ¹ :	Minimum Temp. Span: 50°F (28°C) Maximum Temp. Span: 200°F (93°C)
Connections Wire Size:	Screw Terminal Blocks (Polarity Sensitive) 16 AWG (1.31 mm ²) to 26 AWG (0.129 mm ²)
Terminal Block Torque Rating:	0.37 ft-lb (0.5 N-3m) nominal
Sensor Type Sensor Curve Sensing Points:	Platinum RTD PTC (Positive Temperature Coefficient) One
Number Wires Wire Colors:	Two A/TT100/TTM100-SP: Brown/Brown A/TT1K/TTM1K-SP: Black/Black
Sensor Output @ 0°C (32°F):	A/TT100/TTM100-SP: 100 Ohms nominal A/TT1K/TTM1K-SP: 1000 Ohms nominal
RTD Tolerance Class Sensor Accuracy:	+/- 0.06% Class A (Tolerance Formula: +/- °C = $(0.15^{\circ}C + (0.002 * t))$
The folerance class Sensor Accuracy.	where $ t $ is the absolute value of temperature above or below 0°C in °C)
Din Standard Temperature Coefficient:	DIN EN 60751 (IEC 751) 3850 ppm / °C
Sensor Stability:	+/- 0.03% after 1000 Hours @ 300°C (572vF)
Response Time (63% Step Change):	20 Seconds nominal
Operating Temperature Range:	35°F to 160°F (1.5 to 71°C)
Storage Temperature Range:	-40 to 160°F (-40 to 71°C)
Operating Humidity Range:	5 to 90% RH, non-condensing
Plate Material:	430 Stainless Steel (Brushed Stainless Steel Finish)
Foam Pad Material Flammability Rating:	Neoprene/EPDM/SBR Polymer UL94-HBF; FMVSS-302; MIL-R-6130C
Lead Length Conductor Size:	14" (35.6 cm) 22 AWG (0.65 mm)
Lead Wire Insulation Wire Rating:	Etched Teflon (PTFE) Colored Leads Mil Spec 16878/4 Type E
Conductor Material:	Silver Plated Copper
Product Dimensions (L x W x D):	4.50" (114.3 mm) x 2.78" (70.6 mm) x 1.00" (25.4 mm)
Product Weight:	0.19 lbs. (86.2 g)
Agency Approvals:	RoHS2, WEEE
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Note¹: Transmitter's calibrated at 71°F (22°C) nominal | Note²: Temperature Drift is referenced to 71°F nominal calibration temperature

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Automation Components, Inc.





ACCESSORIES ORDERING			
Model #	ltem #	Description	
A/TT100-SP-1	142559	TT100 Stainless Plate; 100 Ohm RTD; 1-5 VDC (3-Wire) Output; Foam Pad	
A/TT100-SP-2	118450	TT100 Stainless Plate; 100 Ohm RTD; 2-10 VDC (3-Wire) Output; Foam Pad	
A/TT100-SP-4	118451	TT100 Stainless Plate; 100 Ohm RTD; 4-20 mA (2-Wire) Output; Foam Pad	
A/TTM100-SP-1*	134459	TTM100 Matched Sensor/Transmitter; Stainless Plate; 1-5 VDC (3-Wire) Output, Foam Pad*	
A/TTM100-SP-2*	142560	TTM100 Matched Sensor/Transmitter; Stainless Plate; 2-10 VDC (3-Wire) Output, Foam Pad*	
A/TTM100-SP-4*	118904	TTM100 Matched Sensor/Transmitter; Stainless Plate; 4-20 mA (2-Wire) Output, Foam Pad*	
A/TT1K-SP-1	118661	TT1K Stainless Plate; 1K Ohm RTD; 1-5 VDC (3-Wire) Output; Foam Pad	
A/TT1K-SP-2	118663	TT1K Stainless Plate; 1K Ohm RTD; 2-10 VDC (3-Wire) Output; Foam Pad	
A/TT1K-SP-4	118664	TT1K Stainless Plate; 1K Ohm RTD; 4-20 mA (2-Wire) Output; Foam Pad	
A/TTM1K-SP-1*	142561	TTM1K Matched Sensor/Transmitter; Stainless Plate; 1-5 VDC (3-Wire) Output, Foam Pad*	
A/TTM1K-SP-2*	118982	TTM1K Matched Sensor/Transmitter; Stainless Plate; 2-10 VDC (3-Wire) Output, Foam Pad*	
A/TTM1K-SP-4*	118983	TTM1K Matched Sensor/Transmitter; Stainless Plate; 4-20 mA (2-Wire) Output, Foam Pad*	

CUSTOM ORDERING		
A. Sensor Series ¹ No Selection Required	A/	Α/
B. Model Series Select One (1)	TT100 = 100 Ω TTM100 = Matched 100 Ω^* TT1K = 1K Ω TTM1K = Matched 1K Ω^*	
C. Configuration No Selection Required	SP = 1 Gang Stainless Steel Wall Plate	SP
D. Output Signal Select One (1)	1 = 1 to 5 VDC 2 = 2 to 10 VDC 4 = 4 to 20 mA	
E. Calibrated Span	Specify Span in °F or °C (Best Accuracy in 100°F Increments ³)	

Note*: For TTM100 or TTM1k part numbers, the default NIST is 3 points | 5 points may be specified by using "-5PTNIST" at the end of any TTM part number.

ACCESSORIES ORDERING				
Model #	ltem #	Description		
A/TAMPER PROOF SCREWS	144865	Two (2) Screws, Tamper Proof, #6 x %", Zinc Plated, Flat Head, 1/8"		
SCREWDRIVER INSERT BIT	143067	Screwdriver Bit, Tamper Proof Screw, 5/4		

ACCESSORIES ORDERING (NIST)		
Model #	Description	
-5PTNIST	5 Point Calibration & Certificate for TTM parts	

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