

TT 04H

SMART TEMPERATURE TRANSMITTER



Features

- HART Compatible 4-20 mA current output
- Accept RTD and all types of thermocouple input
- Single & Dual sensor inputs
- Backlight LCD display with local operator interface
- Sensor Redundancy
- Peak Value Measurement / ΔT Measurement options
- ATEX (Exid) Certified

Description

Electronet Series TT-04H are temperature transmitters used for various industrial applications. It can accept input from RTD, all types of thermocouples & temperature signal is transmitted in the form of electrical 4 - 20 mA signal. The on-line temperature indication is provided through LCD. Span / Zero adjustments are easily accessible .



Technical Specifications

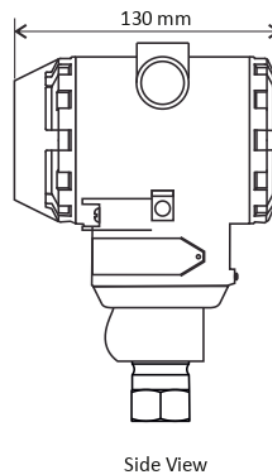
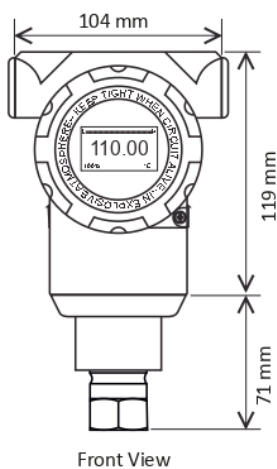
Performance Characteristics		
Type of Input	1) RTD (PT-100/PT-200)	2) Thermocouple (B, E, J, K, R, S, T)
	3) Resistance	4) millivolt (0 to 100 mV)
Output	4-20 mA with HART	
Display	LCD Display	
Isolation	1 kV between Input, Output & Power Supply	
Accuracy	$\pm 0.1\%$ F. S	
Power Supply	24V DC Two Wire Loop Powered	
Power Consumption	< 50 mW	
Response Time	< 300 mSec	
Temperature Coefficient	$\pm 0.01\%$ per $^{\circ}\text{C}$	
MOC Electronics Enclosure	Die Cast Aluminum / SS316	
Ambient Conditions	Temperature : -20 to 55°C , Humidity : 5 to 95% non condensing	
Electrical Connection	$\frac{1}{2}$ " NPT (F) / M20 X 1.5 (F) / DIN 43650 Connector	
Mounting	DIN Rail, Direct Line Mount & Pipe Mount	
Calibration	Software calibration	
Turn-on Time	Less than 5 seconds	
Power Supply Effect	Less than $\pm 0.005\%$ of span per volt	
Surge Protection	In-built	
EMC	EMC compliance with IEC-61000-4-3 & IEC-61000-4-6	
Repeatability	$\pm 0.1\%$	
Linearity	$\pm 0.05\%$ of Full Scale	
Stability	$\pm 0.2\%$ of URL / year	
Reverse Polarity	In-built provided	
Self Diagnosis	Sensor open indicator	
Certification	CE & Ex ATEX Certification : ATEX (II 2 GD Ex d IIC T6 Gb $-20^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$)	

Note: Accuracy specified is for RTD input, for other type of inputs please refer instruction manual.

Range Table

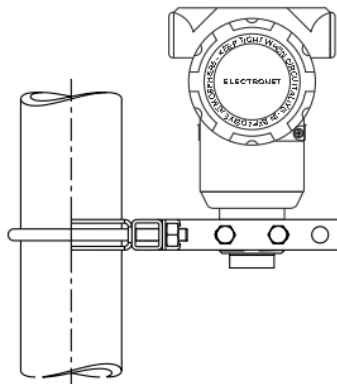
Sensor Options	Input Ranges		Recommended Min. Span		Accuracy
	°C	°F	°C	°F	
2-, 3-, 4-wire RTDs					
PT 100	-200 to 850	-392 to 1562	85	156	±0.1% of SPAN
PT 200	-200 to 850	-392 to 1562	85	156	±0.1% of SPAN
Thermocouples					
Type B	0 to 1000	0 to 1832	100	183	±0.25% of SPAN
Type E	-270 to 1000	-518 to 1832	100	183	±0.25% of SPAN
Type J	-210 to 1200	-410 to 2192	120	219	±0.25% of SPAN
Type K	-270 to 1370	-518 to 2498	137	249	±0.25% of SPAN
Type R	-50 to 1760	-122 to 3200	176	320	±0.25% of SPAN
Type S	-50 to 1760	-122 to 3200	176	320	±0.25% of SPAN
Type T	-270 to 400	-518 to 752	40	75	±0.25% of SPAN

Assembly Overview

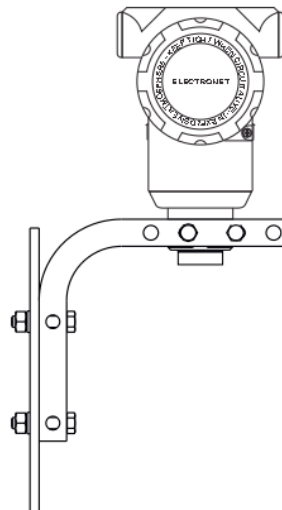


Mounting Details

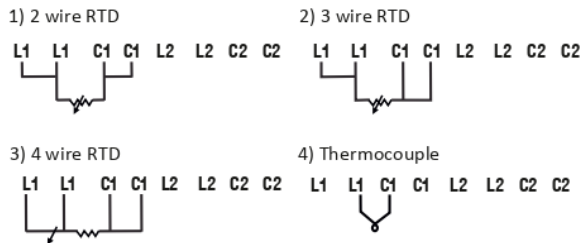
Pipe Mounting



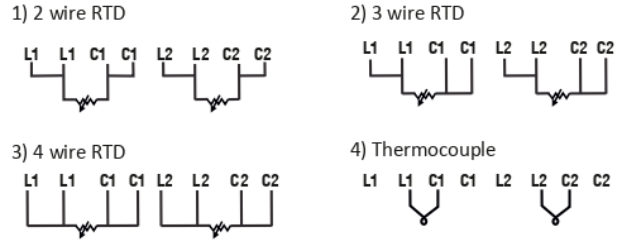
Panel Mounting



Single Sensor Connection Diagram



Dual Sensor Connection Diagram



Ordering Information

Sample Order Code : TT04H- TX1-A1-B1-C1-D1-E1-F1-G1

Parameter		Code	Description
TX	Transmitter Mounting Type	TX 1	DIN Rail
		TX 2	2 Inch Pipe Mount
A	Type of Input	A1	RTD
		A2	Thermocouple
		A3	Resistance
		A4	Milivolt (0 to 100 mV)
B	Type of Input Sensor 1	B1	RTD PT-100
		B2	RTD PT-200
		B3	Thermocouple B-Type
		B4	Thermocouple E-Type
		B5	Thermocouple J-Type
		B6	Thermocouple K-Type
		B7	Thermocouple R-Type
		B8	Thermocouple S-Type
		B9	Thermocouple T-Type
		BX	NA
Note : ▪ Due to our continuous product revisions, design specification & model numbers are subject to change without notice. ▪ The stated transmitters do not include temperature sensors. ▪ Any requirement of sensors should be mentioned separately. ▪ Accuracy defined at Lab Conditions. ▪ For other requirement please consult factory. ▪ This product is meant for laboratory/Process application only and not for custody transfer application.			

Parameter		Code	Description
C	Type of Input Sensor 2	C1	RTD PT-100
		C2	RTD PT-200
		C3	Thermocouple B-Type
		C4	Thermocouple E-Type
		C5	Thermocouple J-Type
		C6	Thermocouple K-Type
		C7	Thermocouple R-Type
		C8	Thermocouple S-Type
		C9	Thermocouple T-Type
		CX	NA
D	Electronics Enclosure	D1	Weather Proof IP 67
		D2	ATEX (II 2 GD Ex d IIC T6 Gb -20°C ≤ Ta ≤ +60°C)
E	MOC Electronics Enclosure	E1	Die Cast Aluminium
		E2	SS316
		E3	ABS Plastic (for Din Rail Mounting Enclosure)
F	Electrical Connection	F1	M 20 x 1.5 (F)
		F2	½” NPT (F)
G	Output	G1	4 to 20 mA
		G2	4 to 20 mA with HART

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