

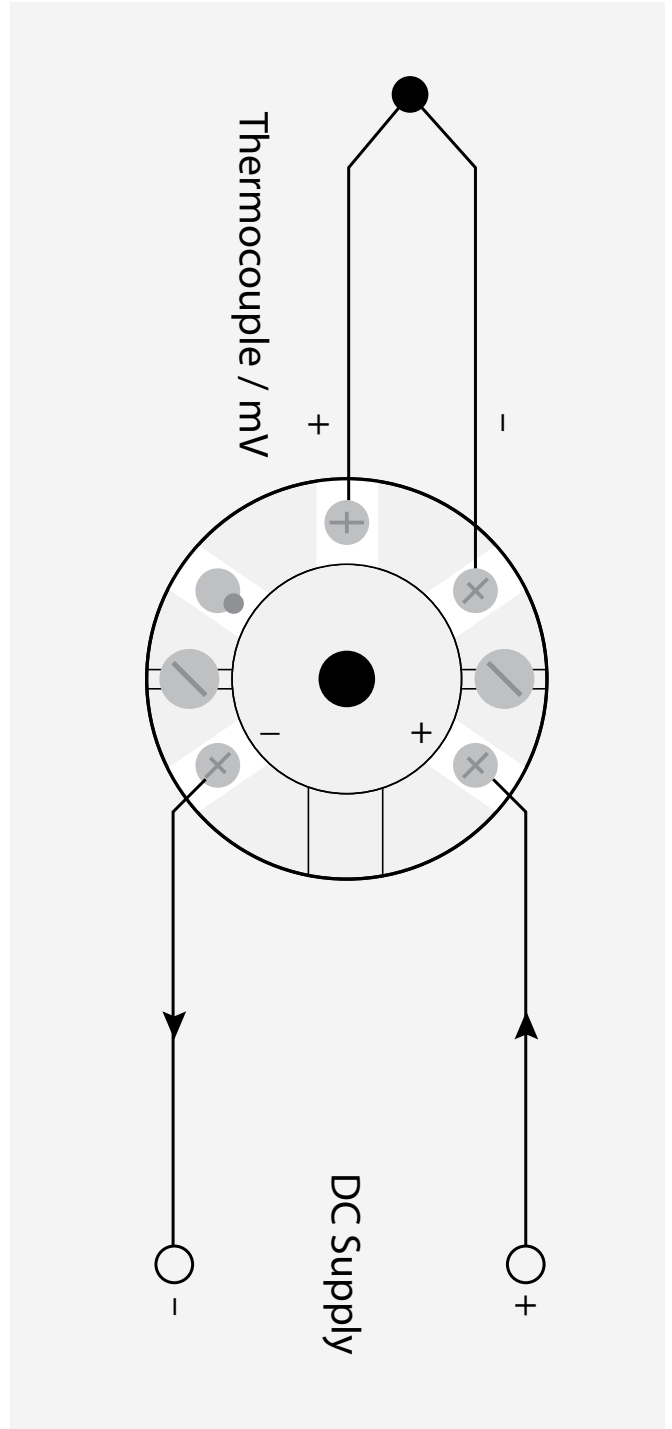
TTC200

Temperature Transmitter

Temperature Transmitters



The TTC200 is a head-mounted programmable transmitter designed for use thermocouple temperature sensors. The TTC200 can be programmed to accept thermocouple type K, J, N, E, T, R, S, L, U, B, C(W5), D(W3), G(W) plus mV INPUTS. PC configuration allows the selection of Sensor type, Range, Filter, Tag, Units and error signal direction. Additionally, it is possible to read live process data when connected to the PC, this allows for sensor offset and output alignment calibration, where values are entered to match the actual process thereby reducing system errors.



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Temperature Transmitter

Environmental Conditions

Specifications range	-40°C to +85°C
Calibration temperature	+20°C
Ambient Storage Temperature	-50 to 85 °C
Ambient Humidity Range	10 to 90 % RH noncondensing

Mechanical Specifications

Dimensions	Ø43.0 mm x 21.0 mm
Weight approx	40 g

Common Specifications

Thermocouple Types	Accuracy $\pm 0.1\%$ of full scale $\pm 0.5^\circ\text{C}$ (plus sensor error) K (-200 to 1370) J (-100 to 1200) E (-200 to 1000) N (-180 to 1300) L (-100 to 600) U (0 to 600) B (0 to 1800) C – D – W (0 to 2300)
	Accuracy $\pm 0.2\%$ of full scale $\pm 0.5^\circ\text{C}$ (plus sensor error) T (-200 to 400)
	Accuracy $\pm 0.1\%$ of full scale plus $\pm 0.5^\circ\text{C}$ (range 800 to 1600) R (0 to 1760, S (0 to 1760)
mV	Accuracy $\pm 0.02\%$ of full scale (-100 to 200) mV
Response time	Start up 5 seconds, Update 160 mS, Response 500 mS, Warm up 2 minutes.
Connections	Screw terminals 2.5 mm Maximum
SUPPLY	
Range	(10 to 30) VDC
Power	< 1W Full Power
Scaling	User signal to process value scaling, for simplified setup.
Filter	Adjustable time constant (0 to 100) Seconds.
User Linearisation (Profile)	(2 to 22) segments mV to process.
Process Units	4 Characters (signal input only)
Temperature units °C or °F	(TC inputs only)
Tag Number	20 Characters
Process Output	Range in process units
User offset	Enter sensor offset (Temperature mode only).
Active scaling	Set output process range against active sensor input

Input Specifications - Thermocouple mV Input

Standard T	Types K,J,E,N,T,R,S,L,U,B,C(w5),D(W3),G(W),library
mV	(-100 to 200) mV $\pm 0.02\%$ of full scale.
Thermal Drift	Thermocouple offset 0.1 °C/°C, span 0.05 °C/°C
Cold Junction	Range (-40 to 85) °C, Accuracy $\pm 0.2^\circ\text{C}$, $\pm 0.05^\circ\text{C}/^\circ\text{C}$

Output Specifications

Type	Two wire (4 to 20) mA current Loop
Range	(4 to 20) mA ; Upscale burnout 21.5 mA ; Downscale Burnout 3.8 mA
Accuracy	(mA Out/ 2000) or 5 uA which ever is the greater, Drift 1 uA/°C
Loop Effect	$\pm 0.2\text{ uA/ V}$
Max output load	TTC200 [(Vsupply-10)/20] K Ohms (Example 700 Ohms @ 24 V)
Loop Supply	(10 to 30) VDC

Approvals

EMC	EN 61326
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