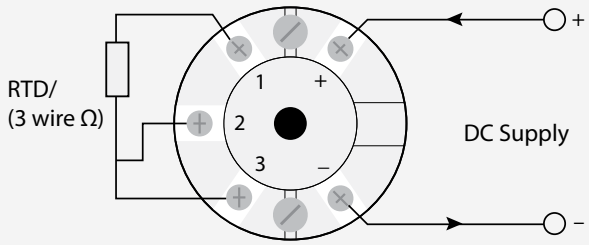
H&B SENSORS

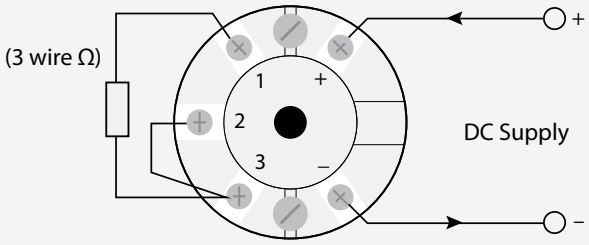
TTR200

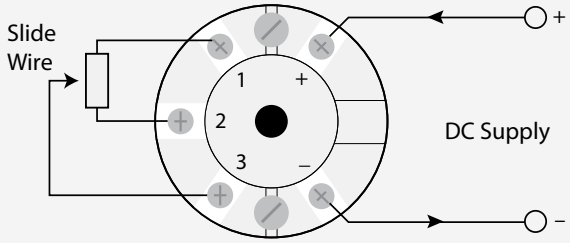
Temperature Transmitter

Temperature Transmitters

The TTR200 is a head-mounted programmable transmitter designed for use with RTD or slide wire sensors. The TTR200 can be programmed to accept Pt100, 500, 1000, Ni or Cu sensors as well as slide wire sensors up to 100 K Ω. Resistive sensors within the range of 10 to 10500 Ω can also be used. 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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TTR200

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 95 % RH noncondensing

Mechanical Specifications

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

Common Specifications

Accuracy	0.2°C + (°0.05% of reading) + (sensor)
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 - Resistance RTD Input

Standard RTD	PT100,PT500,PT1000, Cu100, Cu1000, Ni100, Ni120, Ni1000, Cu53, library
Slide wire	Pot range (1 to 100) KΩ , Signal (0 to 100) %, accuracy 0.1 %
Resistance	(10 to 500)Ω ± 0.055Ω , (500 to 2500)Ω ± 0.5 Ω, (2500 to 10500)Ω ±10.0 Ω
Thermal Drift	(0 to 500)Ω 0.013Ω /°C,(500 to 2500)Ω 0.063 Ω/°C, (2500 to 10500)Ω 0.27Ω/°C
Excitation current	< 200 uA
Lead effect	Max lead resistance 20Ω per leg, Effect 0.002 °C / Ω
Platinum IEC	Pt100 (-200 to 850), Pt500 (-200 to 750), Pt1000 (-200 to 600)

SENSORS RTD

Platinum IPTS-68	Pt100 (0.00391) + Pt100 (0.00392) (-200 to 630)
Ni100 DIN 0.00618	(-60 to 180) Ni120 0.00672 (-80 to 260)
Ni 1000	(-60 to 180) Ni1000 Tk5000 (-50 to 150)
Ni 507.5	(-80 to 360) Ni 604 (-200 to 200)
Cu 53	(-50 to 180) Cu100 0.00427 (-80 to 260)
Cu1000	(-80 to 260)
Silicon	KTY81-110 -120-121-122-150-210-220-221-222-250 (-55 to 175)
	KTY82-110 -120-121-122-150-210-220-221-222-250 (-55 to 175)
	KTY81-151, KTY82-151, KTY83-210-220-250-121-122 (-55 to 175)
	KTY84-130-150 (-40 to 300)

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	± 0.2 uA/ V
Max output load	TTR200 [(Vsupply-10)/20] K Ohms (Example 700 Ohms @ 24 V)
Loop Supply	(10 to 30) VDC

Approvals

EMC	EN 61326

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