

HBS4100

Temperature Transmitter



The HBS4100 is a high accuracy head-mounted programmable transmitter suitable for a RTD Pt100 input. The temperature transmitter is loop powered and converts the input signal into a 4 to 20mA current output.

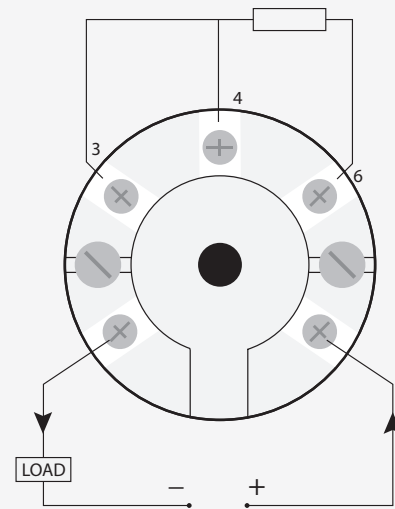
The RTD input types and ranges including upscale or downscale sensor error detection can be programmed using the configuration kit HBSUSB1.

Linear Resistance Input:

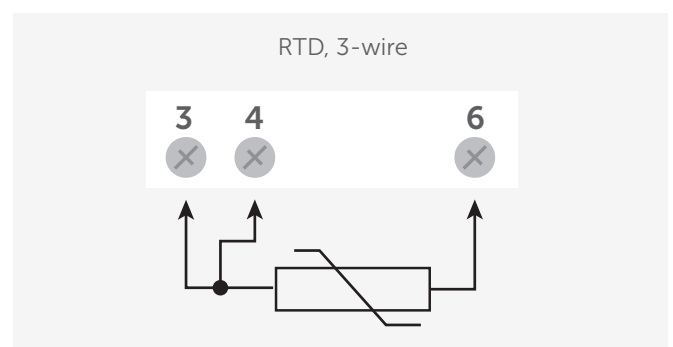
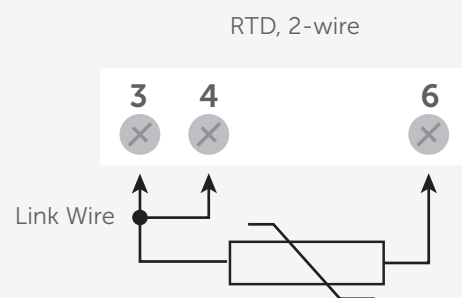
Type	Min. Value	Max. Value	Min. Span
Pt100	-195°C	+845°C	25°C

Output:

mA, signal range	4 to 20mA
2-Wire output	4 to 20mA
Maximum output	21.5mA (High Burnout Condition)
Minimum output	< 3.9mA (Low Burnout Condition)



Connections:



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Environmental Conditions

Specifications range	-40°C to +85°C
Calibration temperature	+20°C
Ambient Storage Temperature	(-50 to 100) °C
Ambient Humidity Range	(10 to 90) % RH non-condensing

Mechanical Specifications

Dimensions	Ø43.0 mm x 21.3 mm
Weight approx	40 g

Common Specifications

Update time	500 ms
Response Time	1 second
Start up time	4 seconds (I out < 4 mA during start up)
Warm-up time	1 minute to full accuracy
Power Supply	(10 to 30) Volts dc

Input Specifications - RTD (Pt100)

Sensor Type	Pt100 100R @ 0°C 2 or 3 Wire
Sensor Range	(-195 to +845) °C (18 to 390) Ohm
Sensor Connection	Screw terminal
Minimum span	25 °C
Linearisation	BS EN 60751(IEC 751) standard / JISC 1604
Measurement Accuracy	0.2 °C ± 0.05% of Reading
Thermal Drift	±0.02 °C / °C
Excitation current	<200 uA
Lead Resistance effect	0.002 °C / Ohm
Maximum lead Resistance	20 Ohms per leg

Output Specifications

Output Type	2 wire (4 to 20) mA current loop
Output range	(4.0 to 20.0) mA
Output Connection	Screw Terminal
Maximum output	21.5mA (in high burnout condition)
Minimum output	<3.9 mA (in low burnout condition)
Accuracy	(mA output /2000) or 5 uA (Whichever is the greater)
Loop Voltage effect	0.2 uA / V
Thermal drift	±2 uA / °C
Maximum output load	[(Vsupply-10)/21]K Ohms (Example: 700 Ohms @ 24V)

Approvals

EMC

EN 61326