

# 5337A

## Temperature Transmitter



The 5337A is a high accuracy head-mounted programmable transmitter suitable for RTD and Thermocouple inputs. The transmitter has HART@7 Protocol communication and 4 to 20mA current output. The HART@7 Protocol offers long tag numbers of up to 32 characters and enhanced burst mode and event notification with time stamping. HART@ Protocol can be changed by configuration to either HART@5 or with HART@7 Protocol. Up to 63 transmitters (HART@7) can be connected in a multidrop communication setup.

### Connections:

#### Linear Resistance Input:

Type	Min. Value	Max. Value	Min. Span
Pt100	-200°C	+850°C	10°C
Ni100	-60°C	+250°C	10°C
Lin. R	0 Ω	7000 Ω	10 Ω

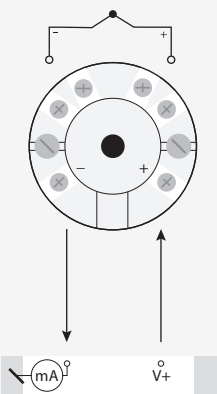
#### Thermocouple Input:

Type	Min. Temp.	Max. Temp.	Min. Span
B	0°C	+1820°C	100°C
E	-100°C	+1000°C	50°C
J	-100°C	+1200°C	50°C
K	-180°C	+1372°C	50°C
L	-200°C	+900°C	50°C
Lr	-200°C	+800°C	50°C
N	-180°C	+1300°C	50°C
R	-50°C	+1760°C	100°C
S	-50°C	+1760°C	100°C
T	-200°C	+400°C	50°C
U	-200°C	+600°C	50°C
W3	0°C	+2300°C	100°C
W5	0°C	+2300°C	100°C

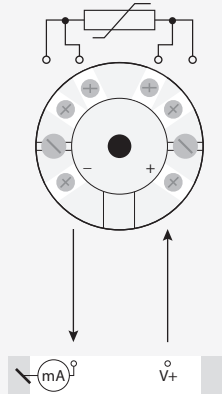
#### Output:

mA, signal range / min span	4...20mA / 16mA
2-Wire output	4...20mA

TC to 4...20 mA

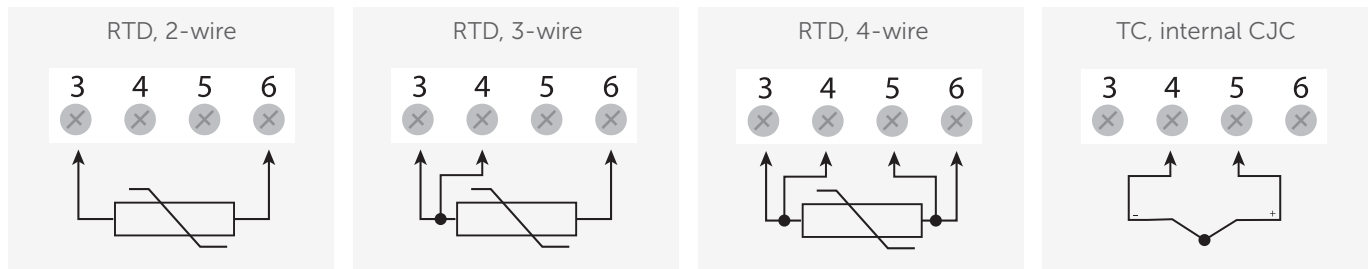


RTD to 4...20 mA



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### Environmental Conditions

<b>Specifications range</b>	-40°C to +85°C
<b>Calibration temperature</b>	+20°C to +28°C
<b>Relative humidity</b>	< 95% RH (non-cond.)
<b>Protection degree (enclosure/terminal)</b>	IP68 / IP00

### Mechanical Specifications

<b>Dimensions</b>	Ø44 mm x 20.2 mm
<b>Weight approx</b>	50 g
<b>Wire size</b>	1 x 1.5 mm <sup>2</sup> stranded wire
<b>Screw terminal torque</b>	0.4 Nm
<b>Vibration</b>	IEC 60068-2-6 Test FC
<b>Lloyd's specification no. 1</b>	4 g / 2...100 Hz

### Common Specifications

<b>Supply voltage</b>	8.0...35 VDC
<b>Voltage drop</b>	8.0 VDC
<b>Isolation voltage, test / working</b>	1.5kVAC / 50 VAC
<b>Communications interface</b>	Loop Link & HART
<b>Signal / noise ratio</b>	> 60 dB
<b>Response time (programmable)</b>	1...60 s
<b>EMC immunity influence</b>	≤0.01% of span
<b>Extended EMC immunity: NAMUR NE21, A criterion, burst</b>	≤+1% of span

### Input Specifications

<b>Max. offset</b>	50% of selected max. value
<b>RTD input</b>	Pt50, Pt100, Pt200, Pt500, Pt1000, Ni50, Ni100, Ni120, Ni1000
<b>Cable resistance per wire (max.), RTD</b>	5 Ω (up to 50 Ω per wire is possible with reduced measurement accuracy)
<b>Sensor current, RTD</b>	Nom. 0.2 mA
<b>TC input: Thermocouple type</b>	B, E, J, K, L, N, R, S, T, U, W3, W5

### Output Specifications

<b>Current output: Signal range</b>	4...20 mA
<b>Minimum signal range</b>	16 mA
<b>Updating time</b>	440 ms
<b>Load resistance, current output</b>	≤ (V <sub>supply</sub> - 8) / 0.023 [Ω]
<b>Sensor error detection, current output</b>	Programmable 3.5...23 mA
<b>NAMUR NE 43 Upscale/Downscale</b>	23 mA / 3.5 mA
<b>HART protocol revisions</b>	HART 5 and HART 7

### Approvals

<b>EMC</b>	EN 61326-1
<b>FM</b>	2D5A7
<b>CSA</b>	1125003
<b>INMETRO</b>	NCC 12.0844 X
<b>GOST R</b>	Yes
<b>DNV Marine</b>	Stand. f. Certific. No. 2.4