

5333A

Temperature Transmitter

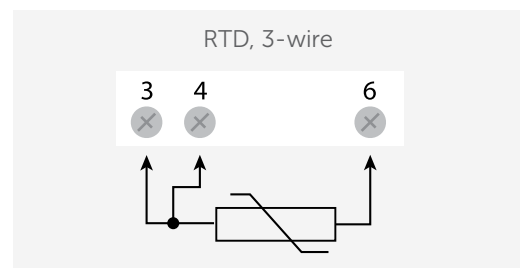
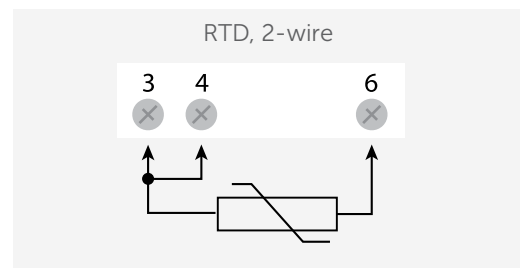
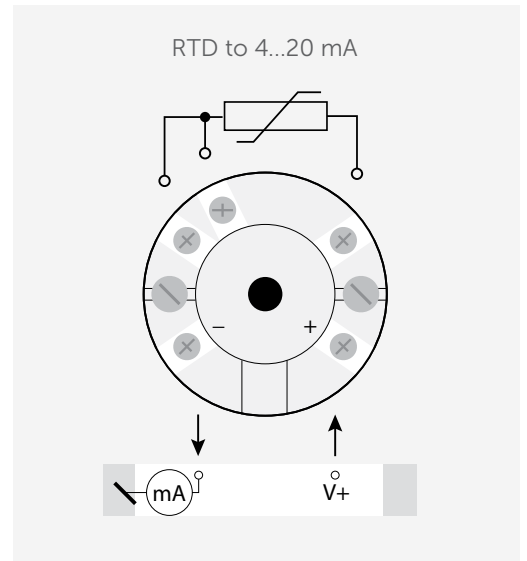
Temperature Transmitters



The 5333A is a high accuracy head-mounted programmable transmitter suitable for Pt100/Pt1000, Ni100 or Ohmic inputs. The transmitter is loop powered and converts the input signal into a 4 to 20mA current output. The 5333A is also Namur NE43 compliant and can be programmed for Upscale or Downscale sensor error detection. The RTD and resistance inputs have cable compensation for 3-wire connections

Input:			
Type	Min. Value	Max. Value	Min. Span
Pt100/1000	-200°C	+850°C	25°C
Ni100	-60°C	+250°C	25°C
Lin. R	0 Ω	10000 Ω	30 Ω

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



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Environmental Conditions

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

Mechanical Specifications

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

Common Specifications

Supply voltage	8.0...35 VDC
Internal consumption	25 mW...0.8 W
Voltage drop	8.0 VDC
Warm-up time	5 min.
Communications interface	Loop Link
Signal / noise ratio	Min. 60 dB
Response time (programmable)	0.33...60 s
Signal dynamics, input	19 bit
Signal dynamics, output	16 bit
Effect of supply voltage change	< 0.005% of span / VDC
EMC immunity influence	< ±0.5% of span

Input Specifications

Maximum offset	50% of selected max. value
RTD input	Pt100...Pt1000, Ni100, Lin. R
Cable resistance per wire (max.), RTD	10 Ω
Sensor current, RTD	> 0.2 mA, < 0.4 mA
Effect of sensor cable resistance (3-wire), RTD	< 0.002 Ω / Ω
Sensor error detection, RTD	Yes

Output Specifications

Current output: Signal range	4...20 mA
Minimum signal range	16 mA
Updating time	135 ms
Load resistance, current output	≤ (Vsupply - 8) / 0.023 [Ω]
Load stability, current output	≤ 0.01% of span/100 Ω
Sensor error detection, current output	Programmable 3.5...23 mA
NAMUR NE 43 Upscale/Downscale	23 mA / 3.5 mA

Approvals

EMC	EN 61326-1
ATEX	KEMA 10ATEX0003X
GOST R	Yes
DNV Marine	Stand. f. Certific. No. 2.4