

# 5333D

## Temperature Transmitter

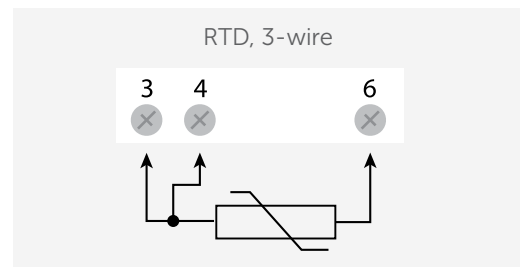
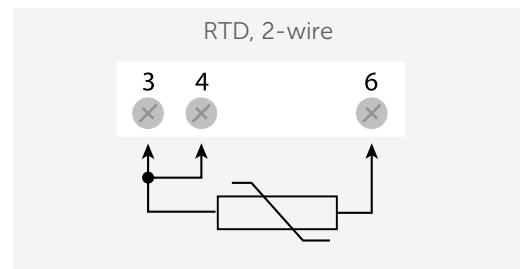
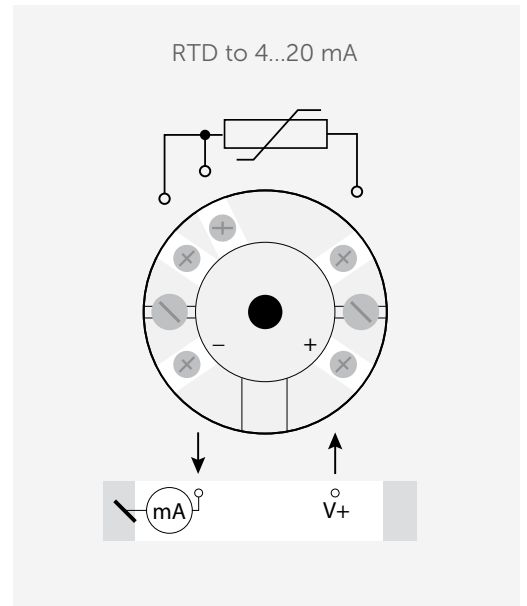
Temperature Transmitters



The 5333D 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 5333D 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...20mA / 16 mA
2-Wire output	4...20mA



# 5333D

## Temperature Transmitter

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

### Input Specifications

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

### Output Specifications

<b>Current output: Signal range</b>	4...20 mA
<b>Minimum signal range</b>	16 mA
<b>Updating time</b>	135 ms
<b>Load resistance, current output</b>	≤ (V <sub>supply</sub> - 8) / 0.023 [Ω]
<b>Load stability, current output</b>	≤ 0.01% of span/100 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

### Approvals

<b>EMC</b>	EN 61326-1
<b>ATEX</b>	KEMA 03ATEX1535
<b>FM</b>	2D5A7
<b>CSA</b>	1125003
<b>GOST R</b>	Yes
<b>GOST Ex</b>	Yes
<b>DNV Marine</b>	Stand. f. Certific. No. 2.4