PERFORMANCE MADE SMARTER

2-wire programmable transmitter

5333A

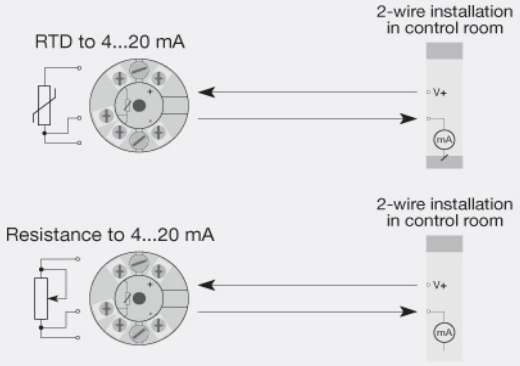
- RTD or Ohm input
- High measurement accuracy
- 3-wire connection
- Programmable sensor error value
- For DIN form B sensor head mounting

Application
- Linearized temperature measurement with Pt100...Pt1000 or Ni100...Ni1000 sensor.
- Conversion of linear resistance variation to a standard analog current signal, for instance from valves or Ohmic level sensors.

Technical characteristics
- Within a few seconds the user can program PR5333A to measure temperatures within all RTD ranges defined by the norms.
- The RTD and resistance inputs have cable compensation for 3-wire connection.

Mounting / installation
- For DIN form B sensor head or DIN rail mounting with the PR fitting type 8421.

Connections



Order:

Type
5333A

Environmental Conditions

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

Mechanical specifications

Dimensions	Ø 44 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 : 2007
Vibration: 2...25 Hz	±1.6 mm
Vibration: 25...100 Hz	±4 g

Common specifications

Supply

Supply voltage	8.0...35 VDC

Response time

Response time (programmable)	0.33...60 s
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
Accuracy	Better than 0.1% of selected range
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

Common input specifications

Max. offset	50% of selected max. value

RTD input

RTD type	Pt100, Ni100, lin. R
Cable resistance per wire (max.)	10 Ω
Sensor current	> 0.2 mA, < 0.4 mA
Effect of sensor cable resistance (3-wire)	< 0.002 Ω / Ω
Sensor error detection	Yes

Linear resistance input

Linear resistance min....max	0 Ω...10000 Ω

Output specifications

Current output

Signal range	4…20 mA
Min. signal range	16 mA
Load resistance	≤ (Vsupply - 8) / 0.023 [Ω]
Load stability	≤0.01% of span / 100 Ω
Sensor error indication	Programmable 3.5…23 mA
NAMUR NE 43 Upscale/Downscale	23 mA / 3.5 mA

Common output specifications

Updating time	135 ms
*of span	= of the presently selected range

Observed authority requirements

EMC	2004/108/EC

Approvals

ATEX 94/9/EC	KEMA 10ATEX0003 X
IECEx	DEK 13.0036X
INMETRO	DEKRA 13.0002 X
CCOE	P337392/3
EAC	TR-CU 020/2011
DNV Marine	Stand. f. Certific. No. 2.4