

Transmitter for temperature
for compact thermometers, programmable,
SIEMENS Sitrans TH100 SLIM
Type series PA2430



Application area

- Food industry
- Pharmaceuticals
- Biotechnology

Features

- Transmitter for
 - resistance thermometer MiniTherm
 - resistance thermometer Clamp-on technology
- Output signal: 4...20 mA, temperature linear
- Input Pt100 per DIN EN 60751
- Measuring range -60...+160 °C
- Programmable
- Error signal following sensor breakage
- Electrical connection circular connector M12

Options

- Programmable via PC-Software

Application

The transmitter for Pt100 converts a temperature dependent change of resistance into a standard load-independent current signal systems. The housing has a diameter of only 18 mms. The circular connector M12 is part of the housing.

Technical data

Mechanical design

dimensions	see dimensional drawing
material	case stainless steel 316L
degree of protection	IP 67 per DIN EN 60529
weight	42 g
electrical connection	circular connector M12 (4-pin)
tightening torque	max. 2 Nm

Input

Resistance thermometer

measured variable	temperature
sensor type	Pt100 per DIN EN 60751
characteristic curve	temperature-linear
type of connection	2-, 3- or 4-wire technology
resolution	14 bit
measuring accuracy	< 0.25 °C
repeatability	< 0.1 °C
measuring current	approx. 0.4 mA
measuring cycle	< 0.7 s
measuring range	-60...+160 °C
measuring span	25...220 °C
unit	°C or °F
offset	programmable: -100...+100 °C
line resistance	max. 20 Ω (total from feeder and return conductor)
noise rejection	50 and 60 Hz

Output

output signal	4...20 mA, 2-wire technology
auxiliary power	8.5...36 V DC
max. load	($U_{\text{aux}} - 8.5 \text{ V}$)/0.023 A
overrange	3.6...23 mA, infinitely adjustable (default range: 3.84...20.5 mA)
error signal (following sensor breakage)	3.6...23 mA, infinitely adjustable (default range: 22.8 mA)
damping time	0...30 s
protection	against reversed polarity
resolution	12 bit
accuracy at 23°C	< 0.1 % of span
temperature effect	< 0.13 %/10 °C
effect of auxiliary power	< 0.02 % of span/V
effect of load impedance	< 0.055 % of max. span/100 Ω
long-term drift	• < 0.025 % of max. span in the first month • < 0.035 % of max. span after one year • < 0.05 % of max. span after 5 years

Ambient condition

ambient temperature range	-20...+80 °C
storage temperature range	-20...+80 °C
relative humidity	98 %, with condensation

Electromagnetic compatibility

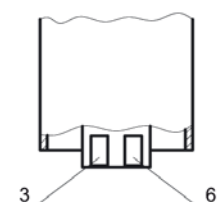
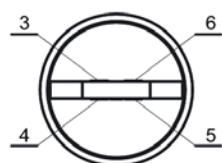
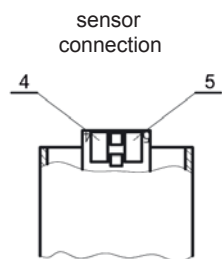
according to EN 61326 and NAMUR NE21

Software Requirements (SIPROM T)

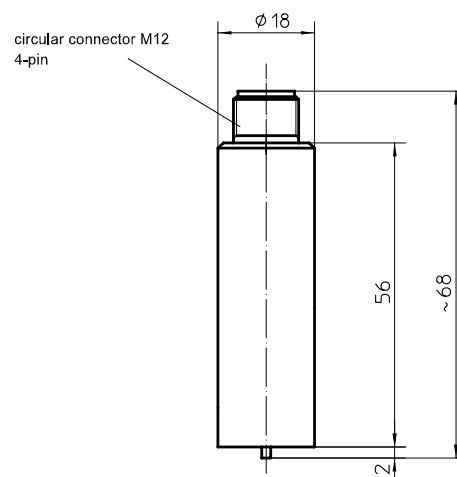
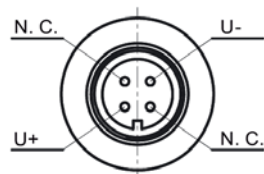
PC operating system:	Windows ME, 2000 und XP Windows 7 Windows 8
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Dimensions

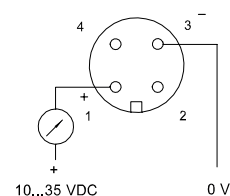
case Ø 18 mm
height (with circular connector M12) approx. 66 mm



auxiliary power U



Connection diagram transmitter



2-wire technology 4...20 mA

Order details

Transmitter for temperature, programmable, SIEMENS Sitrans TH100 SLIM			PA2430
standard configuration	measuring range	0...100 °C	F11
	error signal (following sensor breakage)	22.8 mA	
	damping	0.0 s	
custom made configuration	measuring range	· -60...160 °C (span 25...220 °C), acc. to customer specification	F12
	error signal (following sensor breakage)	· infinitely adjustable (3.6...23 mA), standard 22.8 mA other values acc. to customer specification	
	damping	· infinitely adjustable (0...30 s), standard 0.0 s other values acc. to customer specification	
output signal	· 4...20 mA, 2-wire technology		H1
order code (example):			PA2430 F11 H1
accessories			
modem with USB interface (PA2430 compatibel to SITRANS TH100)			MC1250