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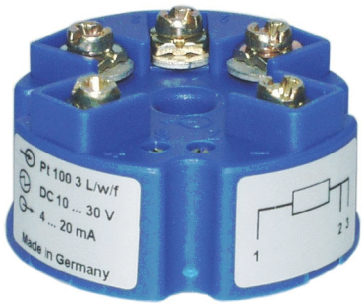
Temperature head-transmitter T 19

Output 4...20mA, for RTD (Pt100) sensors

Features



- Input Pt100
- Measuring range configurable,
  0-point und end value adjustable
- Output 4 ... 20mA, 2-wire system
- Direct mounting on temperature sensors
  with DIN-Terminal head type B *
- Sensor open- and crossfault monitoring
- Protection IP50

*Temperature sensor only with built-in head-transmitter deliverable

General

The temperature head-transmitter T19 was designed for installing in the head of temperature sensors. The current output guarantees trouble free signal transmission over a longer distance between the T19 and an evaluation unit. Different measurement ranges are configurable by setting intern soldering links.

Short information

Measuring range	Configuration with soldering links after removing bottom cover. Zero and end value of the measuring range are fine adjustable with trimpot´s
Sensor monitoring	Sensor open and crossfault will be indicated by over- or underflow of the 4-20 mA current signal.

Technical data

Power supply

Supply voltage	:	loop voltage 10 ... 30V
Operating temperature	:	-40 ... 85°C
Climatic class	:	GPF DIN 40040
max. rel. humidity	:	< 95% not condensed, acc. to DIN IEC 68-2-30 Var.2
Vibration	:	10 ... 2000 Hz 5g DIN IEC 68-2-6
Shock	:	acc. to DIN IEC 68-2-27 g_N = 15
CE - conformity	:	EN50 082-2

Input

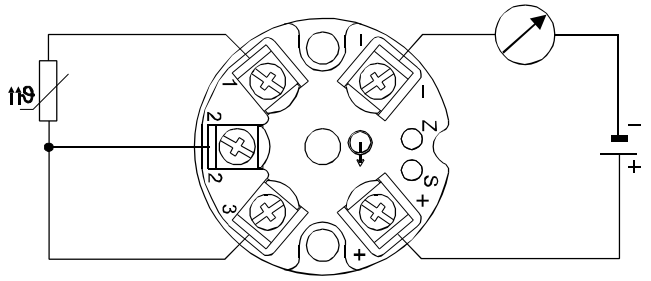
Pt100	:	DIN IEC 751, 2- or 3-wire connection
- Measuring range	:	-50 ... 400°C, see table1 page 3
- Temperature coefficient	:	± 0.2K / 10 Ω, 3 wire connection
- Max. line resistance	:	30 Ω each line, 3-line symmetric
- 0-point adjustment	:	type 1P0-1 ±10°C; 1P0-2 ±25°C; 1P0-3 ±30°C
- End value adjustment	:	appr. 10% of the measuring range

Output	:	4 ... 20mA, 2-wire loop powered
Pt100	:	temperature linear acc. to DIN IEC 751
- Accuracy	:	± 0.5%
- Linearization error	:	± 0.1%
- Break of line	:	output current < 3mA
- Cross fault	:	output current < 3mA
Max. burden	:	$R_A \leq (U_B - 10V) / 0{,}02A$ (R_A [Ohm] and U_B [V])

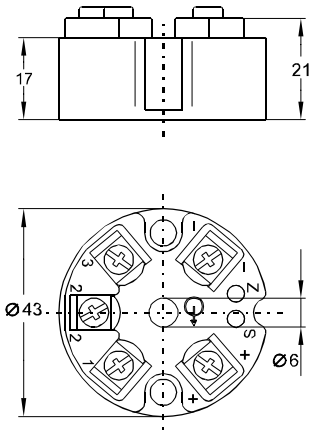
Case	:	Polyamide, with fibre glass
Weight	:	appr. 30g
Connection	:	Screw terminals with pressure plate, max. 1,5mm²
Protection	:	Case IP50, Terminals IP 00

Connection diagram

Input RTD, Pt100 4-20mA

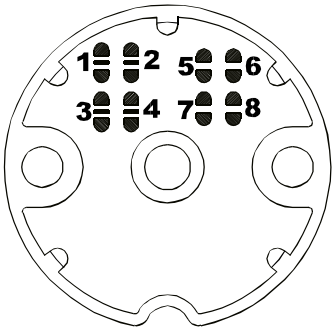


Dimensions

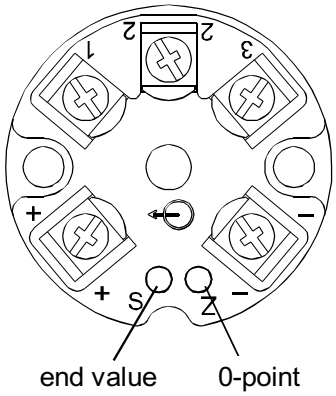


Position of soldering links and trimpots

bottom view



terminals



Configuration of the measuring range

1. open base lid and remove bottom cover
2. install soldering link acc. to table 1
3. connect simulator, fine adjust 0-point and end value

Table 1: measuring ranges; input RTD (Pt100) [°C]

Typ 19-10-1P0**-1**					Typ 19-10-1P0**-2**					Typ 19-10-1P0**-3**				
Range	Link				Range	Link				Range	Link			
-50 ... 50	**1 3**	**2**		**6**	-50 ... 200	**1 3**	**2**	**5 7**	**6 8**	-30 ... 30	**1 3**	**2**	**5 7**	**6 8**
0 ... 50	**1 3**	**2 4**		**8**	0 ... 200	**1 3**	**2 4**	**5**	**8**	-30 ... 50	**1**	**2**	**5 7**	**6 8**
0 ... 100	**1 3**	**2**			0 ... 250	**1 3**	**2**	**5 7**	**8**	0 ... 60	**1 3**	**2**	**5 7**	**8**
0 ... 120	**1**	**2**			0 ... 300	**1**	**2**	**5**		0 ... 80	**1**	**2**	**5 7**	**8**
0 ... 150	**1**		**7**	**8**	0 ... 350	**1**		**5**		0 ... 100	**1**		**5**	
0 ... 200			**7**		0 ... 400			**5 7**		0 ... 120			**5 7**	

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Table 2: measuring range and code for factory configuration

RTD (Pt100) [°C] (Code XX, order code point 3)					
Typ T19-10-1P0-1 - XX	Code (XX)	**Typ T19-10-1P0-2-XX**	Code (XX)	**Typ T19-10-1P0-3-XX**	Code (XX)
-50 ... 50	EA	-50 ... 200	EL	-30 ... 30	CA
0 ... 50	1A	0 ... 200	1L	- 30 ... 50	CB
0 ... 100	1E	0 ... 250	1M	0 ... 60	1C
0 ... 120	1F	0 ... 300	1N	0 ... 80	1D
0 ... 150	1H	0 ... 350	1P	0 ... 100	1E
0 ... 200	1L	0 ... 400	1Q	0 ... 120	1F

Order code

T19 - 10 - ☐ **0 -** ☐ **-** ☐ (1. 2. 3.)

1. Measuring input
1P Pt100

2. Measuring range
1 Pt100, -50 ... 200°C configurable*
2 Pt100, -50 ... 400°C configurable*
3 Pt100, -30 ... 120°C configurable*

3. Factory configuration
NK without
XX see table 2
(Measuring range labelled on the type plate)

* Stock types