Temperature transmitter with IO-Link-TTB

Application / Specified Usage

The two-wire input flex-hybrid transmitter TTB converts the temperature signal of the resistance thermometer into a scaled analog and digital signal (IO-Link and 4...20 mA) proportional to the temperature, whereby the two-wire loop is conducting both the power supply (voltage) and the output signal (current). The module directly can be mounted into the connecting head of the temperature sensor (e.g. TSB series). By mounting the transmitter directly at the point of measurement no additional converter in a cabinet system is necessary, this resulting in the advantages of low installation costs, uncomplicated wiring and high noise immunity.

Features

- Installation into the sensor head (e.g. TSB)
- Fully potted module
- Connection directly to the PLC
- Temperature linear 4...20 mA signal
- Easy plug and play with IO-Link connectivity
- Flex-hybrid technology
  - H: Transmitter with analog or IO-Link output
  - D: Transmitter with analog or IO-Link output and display option
- Easy exchangable
- Transmitter in Polyamide housing

Options / Accessories

- Special measurement ranges
- 2-, 3- or 4-wire connection with max. 3000 mm probe length
- Programmable with any IO-Link master

Communication

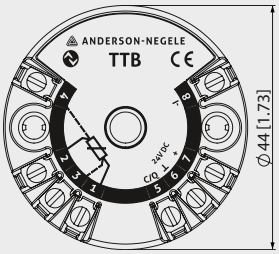
IO-Link 4...20 mA

Transmitter TTB

Transmitter TTB.H, TTB.D		
Temperature ranges	ambient (with Display) storage	-40...85 °C (-40...185 °F) 0...70 °C (32...158 °F) -55...90 °C (-67...194 °F)
Measuring ranges		standard °C: -10...40, 0...50 / 100 / 150 / 200 / 250 °C standard °F: 0...100 / 150 /200 / 250 / 300, 30...230 °F custom ranges programable
Accuracy	input repeatability	≤ 0.1 K (at ambient ≤ 85 °C (185 °F)) ≤ 0.05 K
Temperature drift	typical maximum	5 mK/K (at 25 °C (77 °F)) 10 mK/K (at 25 °C (77 °F))
Adjustments	damping offset slope	0...120 s ≤ ±10 K ≤ ±25 %
Digital output	 digital resolution master cycle time power supply	IO-Link 0.01 K ≥ 51.2 ms 18...30 V DC according to IO-Link
Analog output	signal accuracy temperature drift typical temperature drift max effect of supply voltage variations maximum load resistance power supply	4...20 mA, 2 wire ≤ 0.05 % of upper range limit 0.0005 %/K (at 25 °C (77 °F)) 0.003 %/K (at 25 °C (77 °F)) < 0.001 %/V (at 24 V DC) R ≤ (V DC - 12 V) : 0.024 A (at 25 °C (77 °F)) 12...30 V DC

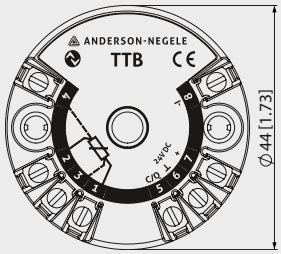
Connection with IO-Link output

1: RTD
2: RTD
3: RTD
4: RTD
5: IO-Link
6: - power supply (4...20 mA)
7: + power supply (24 V DC)
8: not connected



Connection with 4...20 mA output

1: RTD
2: RTD
3: RTD
4: RTD
5: not connected
6: not connected
7: + power supply (24 V DC)
8: - power supply (4...20 mA)



Order Code

TTB Temperature transmitter Big

Transmitter
- **H** Hybrid: analog and IO-Link
- **D** Hybrid: analog and IO-Link, display optional

RTD type
- **0** Pt100
- **1** Pt1000

Wiring type
- **2** 2-wire
- **3** 3-wire
- **4** 4-wire

Temperature range
- **00C** Unit °C (only with IO-Link transmitter)
- **00F** Unit °F (only with IO-Link transmitter)
- **00K** Unit K (only with IO-Link transmitter)
- **04C** -10...40 °C
- **05C** 0...50 °C
- **10C** 0...100 °C
- **15C** 0...150 °C
- **20C** 0...200 °C
- **25C** 0...250 °C
- **10F** 0...100 °F
- **15F** 0...150 °F
- **20F** 0...200 °F
- **23F** 30...230 °F
- **25F** 0...250 °F
- **M00** TTB custom configuration

TTB / H / 0 / 2 / 00C

Note on IO-Link

Information on parameters and events are available on our website:

www.anderson-negele.com/iodd

Click on the IO-Link icon to open the website.

Click or Scan

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