

TT/TC series – Temperature transmitters and switches



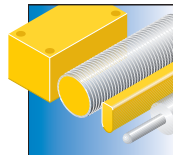
Devices of the TT and the TC series are available with or without probe. The types without probe take any Pt100 (4-wire) probe of the TP series.

The TT temperature transmitters are set to 0...+150 °C by default. The processed signal is provided via an analog current output, 4...20 mA (2-wire). The TC devices feature a switching output, switch and release point are set by default. Customized settings are available on request.

Features

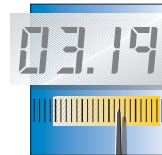
- Operating range -50...+500 °C
- Customized settings
- Transmitters with analog current output 4...20 mA (2-wire), default temperature range 0...+150 °C
- Sensor with PNP output (NO), customized switch and release point

Properties



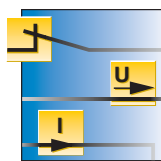
Design

Compact, cylindrical, Ø29 mm



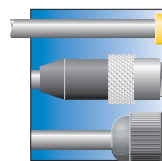
Measuring ranges

-50 ...+500 °C



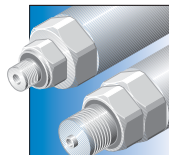
Electrical versions

Analog current output 4...20 mA (2-wire) or PNP switching output (NO)



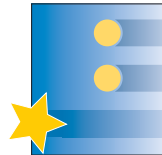
Electrical connections

4-pole M12 x 1 plug connection



Mechanical connections

Standard thread, compression fitting or thermowell, depending on the probe



Special features

Customized temperature range, many connection possibilities for the probe

Processing unit without probe – Current output (2-wire)



Type	TT-100-LI6-H1140	Short-circuit protection	yes
Temperature operating range	-50...+500 °C	Reverse polarity protection	yes
Accuracy (Lin. + Hys. + Rep.)	0.1% of final value BSL	Load	1.2 kΩ
Ambient temperature	-40...+85 °C	Protection class	IP67
Storage temperature	-40...+85 °C	Housing material	stainless steel, V4A 1.4401 (AISI 316)
Measuring element	for connection to probes of the TP series	Pressure resistance	100 bar
Response time	dependent on connected temperature sensor	Electrical connection	connector, M12 x 1
Operating voltage	8...35 VDC	Wiring diagram	w104
No-load current I₀	20 mA	Dimension drawing	d481
Current output	4...20 mA		

Transmitter with compact probe Ø 3 mm – Current output (2-wire)



General data		Short-circuit protection	yes
Temperature operating range	0...150 °C	Reverse polarity protection	yes
Accuracy (Lin. + Hys. + Rep.)	0.1% of final value BSL	Load	1.2 kΩ
Ambient temperature	-40...+85 °C	Protection class	IP67
Storage temperature	-40...+85 °C	Housing material	stainless steel, V4A 1.4401 (AISI 316)
Measuring element	Pt-100 platinum measuring element, DIN EN 60 751	Sensor material	stainless steel, AISI 316
Accuracy	Class A	Pressure resistance	100 bar
Operating voltage	8...35 VDC	Electrical connection	connector, M12 x 1
No-load current I₀	20 mA	Mechanical connection	G1/8" male thread
Current output	4...20 mA		

Types and data – selection table

Type	Immersion depth	w	d
TT-103A-G1/8-LI6-H1140-L013	13 mm	w104	d482
TT-103A-G1/8-LI6-H1140-L024	24 mm	w104	d483

Transmitter with rod-shaped probe Ø 6 mm – Current output (2-wire)




General data			
Temperature operating range	0...150 °C	Short-circuit protection	yes
Accuracy (Lin. + Hys. + Rep.)	0.1% of final value BSL	Reverse polarity protection	yes
Ambient temperature	-40...+85 °C	Load	1.2 kΩ
Storage temperature	-40...+85 °C	Protection class	IP67
Measuring element	Pt-100 platinum measuring element, DIN EN 60 751	Housing material	stainless steel, V4A 1.4401 (AISI 316)
Accuracy	Class A	Sensor material	stainless steel, AISI 316
Operating voltage	8...35 VDC	Pressure resistance	100 bar
No-load current I₀	20 mA	Electrical connection	connector, M12 x 1
Current output	4...20 mA	Mechanical connection	for compression ferrule fittings, protective tubing or direct mounting

Types and data – selection table

Type	Immersion depth	w	d
TT-206A-CF-LI6-H1140-L0100	100 mm	w104	d484
TT-206A-CF-LI6-H1140-L0150	150 mm	w104	d485

Processing unit without probe – Switching output



General data			
Temperature operating range	-50...500 °C	Operating voltage	15...30 VDC
Accuracy (Lin. + Hys. + Rep.)	0.1% of final value BSL	Short-circuit protection	yes
Switching point accuracy	0.5 °C	Reverse polarity protection	yes
Switch point SP1	customized	Output function	 , PNP
Release point rP1	customized	Rated operational current	0.1 A
Ambient temperature	-40...+85 °C	Protection class	IP67
Storage temperature	-40...+85 °C	Housing material	stainless steel, V4A 1.4401 (AISI 316)
Measuring element	for connection to probes of the TP series	Pressure resistance	100 bar
Response time	dependent on connected temperature sensor	Electrical connection	connector, M12 x 1

Types and data – selection table

Type	w	d
TC-100-AP6-H1140	w105	d481
TC-100-AP6-H1140/S713	w105	d481

Transmitter with compact probe Ø 3 mm – Switching output



General data

Temperature operating range	0...150 °C	Short-circuit protection	yes
Accuracy (Lin. + Hys. + Rep.)	0.1% of final value BSL	Reverse polarity protection	yes
Switching point accuracy	0.5 °C	Output function	—, PNP
Switch point SP1	customized	Rated operational current	0.1 A
Release point rP1	customized	Protection class	IP67
Ambient temperature	-40...+85 °C	Housing material	stainless steel, V4A 1.4401 (AISI 316)
Storage temperature	-40...+85 °C	Sensor material	stainless steel, AISI 316
Measuring element	Pt-100 platinum measuring element, DIN EN 60 751	Pressure resistance	100 bar
Accuracy	Class A	Electrical connection	connector, M12 x 1
Operating voltage	15...30 VDC	Mechanical connection	G1/8" male thread

Types and data – selection table

Type	Immersion depth	w	d
TC-103A-G1/8-AP6-H1140-L013	13 mm	w105	d482
TC-103A-G1/8-AP6-H1140-L024	24 mm	w105	d483

