

Product information

Temperature probe

**Temperature sensor
GTL 142**



- Hygienic M12 process connection
- Hygienic design and easy-to-sterilize measuring point
- Sensor completely made of stainless steel

Characteristic

The temperature sensor GTL 142 is designed for temperature measurements in pipes or thin-walled tanks.

They can be used for example for process monitoring at tube curvatures, temperature measurements in pressure pipes or at measurements of pasty media in pipes.

The probes can be provided with different electric connections and with or without integrated head transmitter. The probes of design type "with neck tube" are applicable at permanent ambient temperatures up to 200 °C.

Specifications

Temperature ranges	: ambient:	-40..+80 °C
	: process:	-40..+200 °C
		CIP- / SIP-temperature: 140 °C < 30 min.
Measuring resistor	: Pt100	
Accuracy	: class A, class AA	
Electrical connection	: cable gland M16x1.5	
		M12 plug (1.4305)
Process connection	: hygienic M12	

Tightening torque	: 5..10 Nm
Insertion length	: 50, 100, 150, 250 mm
Sensor head	: Ø 59 mm
Spacer	: length 100 mm
Thermowell and sensor tip:	
Ø 6 mm, Ø 4 mm	thermowell without taper
Ø 3 mm	thermowell Ø 6 mm and sensor tip Ø 3 mm
Response time	: tip Ø 3 mm: $T_{90} \leq 1.5$ s
	tip Ø 4 mm: $T_{90} \leq 3.6$ s
	tip Ø 6 mm: $T_{90} \leq 7.4$ s
Operating pressure	: max. 10 bar
Material	
Sensor head	: 1.4305
Spacer	: 1.4305
Thermowell and sensor tip	: 1.4404
Protection class	: IP67 / IP69K
CE conformity	: EN 61326-1:2013 / -2-3:2013

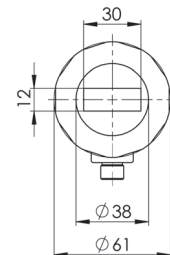
Transducer GTML1

Measuring range	: -10..+40 °C * / 0..50 °C * / 0..100 °C * 0..150 °C * / 0..200 °C * or freely in range -20..200 °C **
Power supply	: 10..30 V DC
Output	: analog, 4..20 mA, 2-wire
Output signal in case of error	: < 3.75 mA > 21.5 mA, selectable *
Filter	: integrated low-pass, 4-step *
Response time	: < 150 ms (filter 0), < 300 ms (filter 1) < 800 ms (filter 2), < 3 s (filter 3)
Ambient temperature	: -40..+70 °C
Accuracy	: < 0.2 % FS
Temperature drift	: < 0.01 % FS / K

Transducer GTML1 with on-site display

Transducer with integrated **on-site display (LCD)** only in combination with electric connection: cable connection M12 plug and integrated transducer (for further information see transducer GTML1).

Display	: 4-digit LCD
Displayed unit	: °C or °F, selectable *
Resolution	: 0.1 °C or 1 °C, selectable *
Background illumination	: activatable , deactivatable *
Ambient temperature	: -20..+60 °C



- * Programmable via GTL - Configuration tool (accessories) or buttons (only with on-site display)
- ** Programmable via GTL - Configuration tool (accessories)

Note: The default settings are marked in bold.

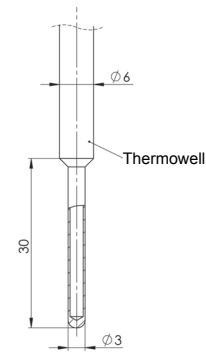
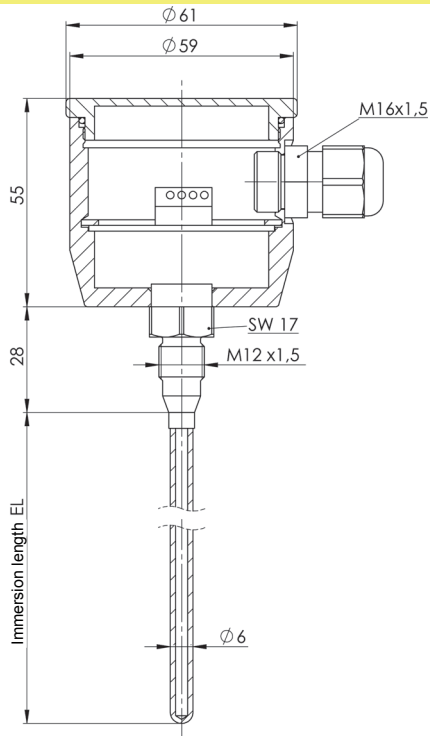
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Product information

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Dimensions

GTL 142

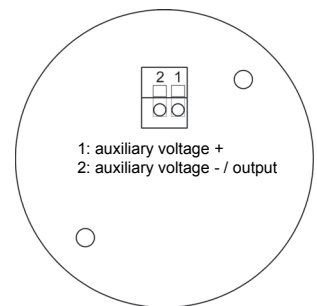
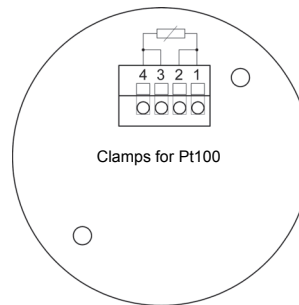


Connection

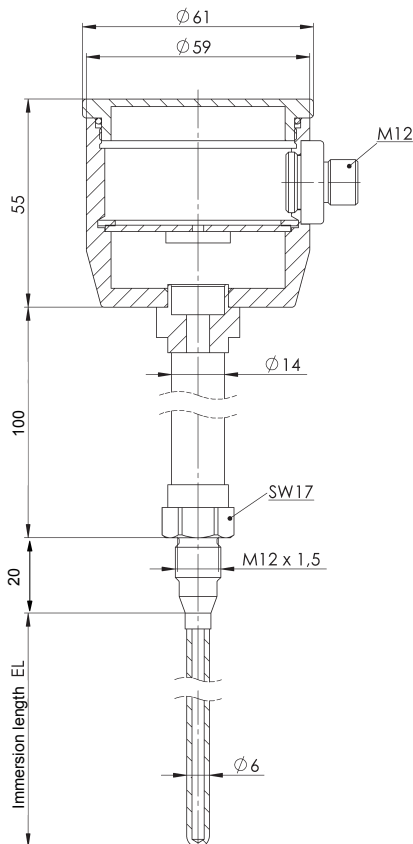
Electrical connection: cable gland M16x1.5 (PG)

without transducer (4-wire):

with transducer (2-wire):



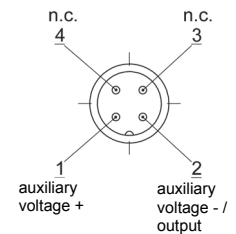
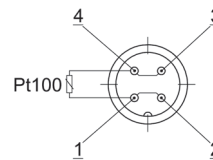
GTL 142 with spacer



Electrical connection: M12-plug (1.4305)

without transducer (4-wire):

with transducer (2-wire):



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Product information

Temperature probe

Product key

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1. Design type	
142	with hygienic M12 process connection
2. Electric connection	
P	cable gland M16x1.5
V	V2A cable gland M16x1.5
M	M12-plug
3. Immersion length EL	
0020	20 mm
0050	50 mm
0100	100 mm
0150	150 mm
0250	250 mm
xxxx	any EL in mm (surcharge from 250 mm for each 100 mm started, up to max. immersion length: Ø 6: max. 1000 mm; Ø 4: max. 500 mm)
4. Diameter thermowell and sensor tip	
6	Ø 6 mm, without taper
4	Ø 4 mm, without taper
3	Ø 6 mm, with tapered probe tip Ø 3 mm
5. Accuracy class	
A	class A
D	class AA (1/3 class B)
6. Transducer	
0	without transducer
M	permanently integrated transducer GTML1, without display
V	permanently integrated transducer GTML1, on-site display (LCD)
R	exchangeable head transducer RT420
T	exchangeable head transducer T19
7. Measuring range	
0	without transducer
1	measuring range -10..+40 °C (-50..+50 °C for head transducer T19)
2	measuring range 0..50 °C
3	measuring range 0..100 °C
4	measuring range 0..150 °C
5	measuring range 0..200 °C
B	transducer with special measuring range in °C (not possible for head transducer T19), state special measuring range separately e.g.: 0..75 °C or -20..+30 °C; Mind the minimum range of 50 °C.
8. Option	
00	without option
H	with spacer
9. Certificate DIN EN 10204 (indicate only when required, multiple responses possible)	
WZ2.2	factory certification 2.2
APZMAT	acceptance test certificate 3.1 for material (in contact with products)
APZ2P	acceptance test certificate 3.1 with 2 measuring points (0°C / 70°C)
APZ3P	acceptance test certificate 3.1 with 3 measuring points (0°C, 70°C + 1 test point freely selectable)
APZ4P	acceptance test certificate 3.1 with 4 measuring points (0°C, 70°C + 2 test points freely selectable)

Notes on on-site display (LCD):

Permanently integrated transducer GTML1 (programmable) with on-site display only in combination with electrical connection: cable connection M12 plug.

Information on suitable weld-in sleeves can be found in product information GHMadapt/Accessories.