

Temperature probe with double-Pt100 Head Ø 18 mm



- Hygienic design and easy-to-sterilize measuring point
- Sensor completely made of stainless steel
- Redundant temperature measurement in one sensor

Characteristic

The temperature probes are designed for temperature monitoring in pipes and tanks, temperature measurements in steam and pressure pipes and for monitoring of CIP- / SIP- processes.

The probes can be provided with different electric connections and with or without integrated head transmitter.

Specifications

Temperature ranges	: ambience:	-40..+80 °C
	probe tip:	-40..+200 °C
	CIP- / SIP-temperature:	140 °C < 30 min.
Measuring resistor	: 2 x Pt100	
Accuracy	: class A, class AA	
Process connection	: M12, G ½, G ½ standard, without thread, G ¾	
Clamping torque	: M12 - 5..10 Nm	
	: G ½ - 5..20 Nm	
	: G ¾ - hand-tight	
Fitting length	: 50, 100, 150, 250 mm	
Probe head	: Ø 18 mm	
Protection tube and probe tip:		
Ø 6 mm	protection tube without taper	
Ø 4 mm	Ø 4 mm, without taper (only for M12 thread hygienic)	
Ø 3 mm	protection tube Ø 6 mm and tapered probe tip Ø 3 mm	
Response time	: FS Ø 3 mm: T ₉₀ ≤ 1.5 s	
	FS Ø 4 mm: T ₉₀ ≤ 3.6 s	
	FS Ø 6 mm: T ₉₀ ≤ 7.4 s	
Working pressure	: max. 10 bar	
Material		
Probe head	: 1.4305 (V2A)	
Protection tube and tip	: 1.4404 (V4A)	
Protection class	: IP67 / IP69K	
CE conformity	: EN 61326-1:2006 / -2-3:2006	

Transducer GTML2

Integrated head transmitter

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
Measuring output	: analog, 4..20 mA, 2-wire
Output signal in case of error	: < 3.75 mA or > 21.5 mA, selectable *
Filter	: integrated low-pass, 4-step *
Reaction time	: < 150 ms (filter 0), < 300 ms (filter 1) < 800 ms (filter 2), < 3 s (filter 3)
Working temperature	: -40..+70 °C
Accuracy	: < 0.2 % FS
Temperature drift	: < 0.01 % FS / K

* Programmable via GTL - Configuration tool (accessories)

Note: The default settings are marked in **bold**.

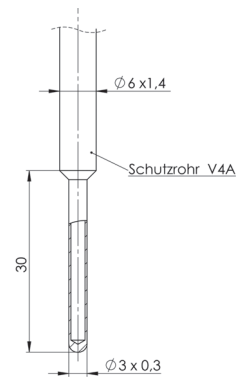
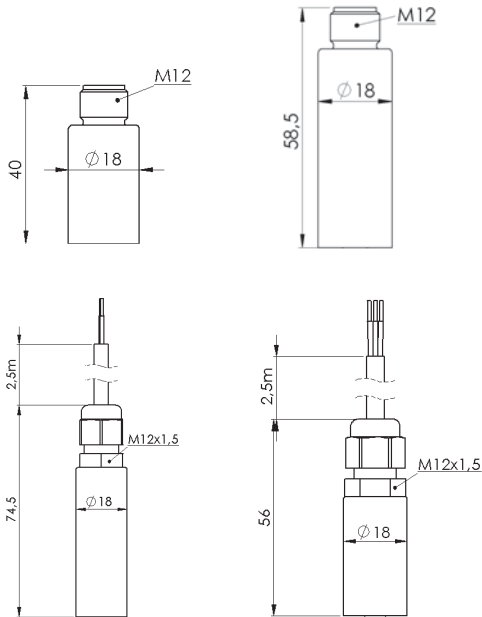
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Product information

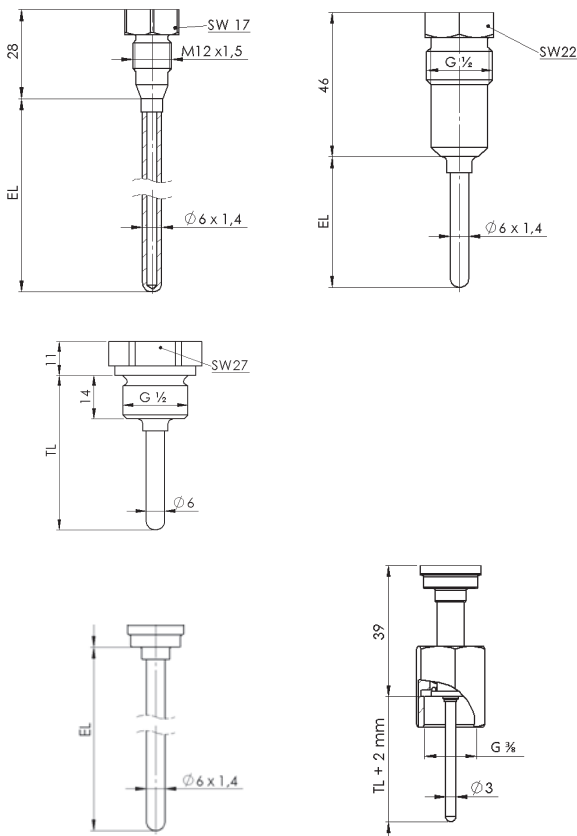
Hygienic Design

Dimensions

Probe head



Process connection



Connection

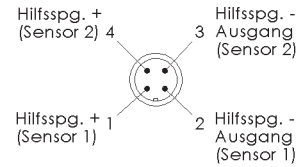
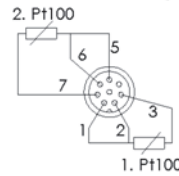
Electric connection: cable connection M12-plug

without transducer:

with transducer:

with 1 x 8-Pol-M12-plug:

with 1 x MR-plug:



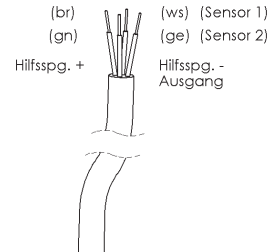
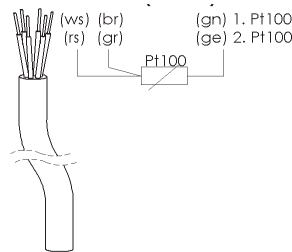
Electric connection: fixed cable (PVC)

without transducer:

with transducer:

2 x Pt100 (3-wire):

2 x Pt100:



Option

TK with Teflon cable up to 200 °C

Product information

Hygienic Design

Product key

1. 2. 3. 4. 5. 6. 7.
GTL - - - - - -

1. Design type	
162.2	thread M12 hygienic, connection via 8-pole M12-plug, no transducer
162M.2	thread M12 hygienic, connection via M12-plug, 2 x integrated transducer
182.2	thread M12 hygienic, connection via fixed cable (PVC) 2.5 m, no transducer
182M.2	thread M12 hygienic, connection via fixed cable (PVC) 2.5 m, 2 x integrated transducer
261.2	thread G ½ hygienic, connection via 8- pole M12-plug, no transducer
261M.2	thread G ½ hygienic, connection via M12-plug, 2 x integrated transducer
281.2	thread G ½ hygienic, connection via fixed cable (PVC) 2.5 m, no transducer
281M.2	thread G ½ hygienic, connection via fixed cable (PVC) 2.5 m, 2 x integrated transducer
260.2	thread G ½ standard, connection via 8- pole M12-plug, no transducer
260M.2	thread G ½ standard, connection via M12-plug, 2 x integrated transducer
280.2	thread G ½ standard, connection via fixed cable (PVC) 2.5 m, no transducer
280M.2	thread G ½ standard, connection via fixed cable (PVC) 2.5 m, 2 x integrated transducer
369.2	without thread, connection via 8- pole M12-plug, no transducer
369M.2	without thread, connection via M12-plug, 2 x integrated transducer
389.2	without thread, connection via fixed cable (PVC) 2.5 m, no transducer
389M.2	without thread, connection via fixed cable (PVC) 2.5 m, 2 x integrated transducer
479.2	G ¾ with union nut, connection via 8- pole M12-plug, no transducer
479M.2	G ¾ with union nut, connection via M12-plug, 2 x integrated transducer
499.2	G ¾ with union nut, connection via fixed cable (PVC) 2.5 m, no transducer
499M.2	G ¾ with union nut, connection via fixed cable (PVC) 2.5 m, 2 x integrated transducer
2. Fitting length EL or immersion length TL (not for design type with G ¾ thread: see product information GTL 479)	
0050	50 mm
0100	100 mm
0150	150 mm
0250	250 mm
xxxx	any EL in mm (e.g. 320 = 320 mm) Ø 6: max. 1000 mm, Ø 4: max. 500 mm

3. Diameter protection tube and probe tip (not for design type with G ¾ thread: see product information GTL 479)	
6	Ø 6 mm, without taper
4	Ø 4 mm, without taper
3	Ø 6 mm, with tapered probe tip Ø 3 mm
4. Accuracy class	
A	class A
D	class AA (1/3 class B)
5. 1st transducer GTML2 (programmable)	
00	without transducer
M1	measuring range -10..+40 °C
M2	measuring range 0..50 °C
M3	measuring range 0..100 °C
M4	measuring range 0..150 °C
M5	measuring range 0..200 °C
MB	transducer with special measuring range in °C (state special measuring range separately e.g.: 0..75 °C or -20..+30 °C) Mind the minimum range of 50 °C.
6. 2nd Transducer GTML2 (programmable)	
00	without transducer
M1	measuring range -10..+40 °C
M2	measuring range 0..50 °C
M3	measuring range 0..100 °C
M4	measuring range 0..150 °C
M5	measuring range 0..200 °C
MB	transducer with special measuring range in °C (state special measuring range separately e.g.: 0..75 °C or -20..+30 °C) Mind the minimum range of 50 °C.
7. Option	
00	without option
TK	Teflon cable for connection via fixed cable (not for design type with M12 plug)

Note:

- 1) Information on suitable compression fittings and weld-in sleeves can be found in product information GH*Madapt*/Accessories.
- 2) For the configuration of the second transducer via GTL Configuration tool at design type 1 x cable connection M12 plug a connection cable KM4P-GTL34 is necessary (see accessories at the end of this PI).

Information on suitable weld-in sleeves for "thread M12 hygienic" and "thread G ½ hygienic" can be found in product information GH-*Madapt*/Accessories. Suitable compression fittings for design type "without thread" can be found in chapter accessories at page 63. Suitable adapter / weld-in sleeves for design type "G ¾ with union nut" can be found in chapter accessories at page 64 and for design type "G ½ standard" at page 65.