

Product information

Temperature - Hygienic Design

**Temperature sensor
 GTL 479 / 479M
 GTL 499 / 499M**

Tighting torque : hand-tight
 Immersion length : 37, 83, 97, 160 mm
 Sensor head : Ø 18 mm

Thermowell and sensor tip:

Ø 3 mm : thermowell Ø 3 mm
 Response time : $T_{90} \leq 1.5$ s (without immersion sleeve)
 $T_{90} \leq 15$ s (with immersion sleeve: The use of heat transfer paste is recommended, because this can reduce the stated time by up to 50 %)

Operating pressure : max. 10 bar

Material

Sensor head : 1.4305
 Thermowell and sensor tip : 1.4404
 Union nut : 1.4408

Protection class : IP67 / IP69K
 CE conformity : EN 61326-1:2013 / -2-3:2013

Design type

	GTL 479 / 479M	GTL 499 / 499M
Electrical connection	M12-plug, 4-pin (1.4305)	fixed cable 2.5 m LIYY 499: 4 x 0.25 mm ² 499M: 2 x 0.25 mm ²



In combination with APH G12



- G 3/8" union nut
- Hygienic design and easy-to-sterilize measuring point
- Sensor completely made of stainless steel

Characteristic

The temperature sensors are designed for temperature monitoring in pipes and tanks, temperature measurements in steam and pressure pipes (closed process) and for monitoring of CIP- / SIP- processes.

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

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
 Process connection : immersion sleeve, G 3/8" outside thread suitable adapter and weld-in sleeves APHG12, APHK25, APHZ18 (see accessories page 64)



Transducer GTML2 (only for GTL 479M / GTL 499M)

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** or > 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

* Programmable via GTL - Configuration tool (accessories)

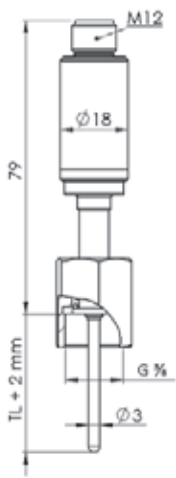
Note: The default settings are marked in **bold**.

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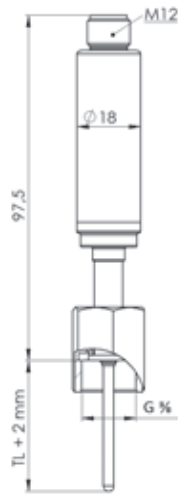
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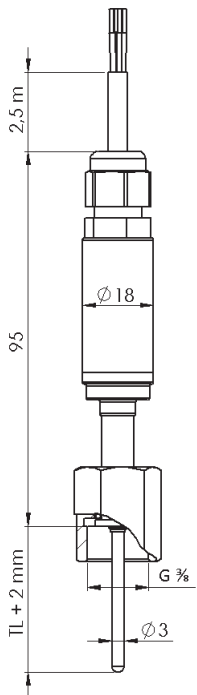
Dimensions



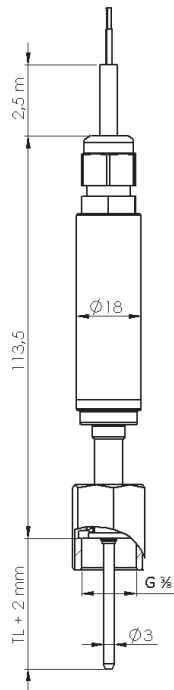
GTL 479



GTL 479M



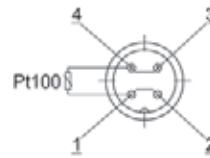
GTL 499



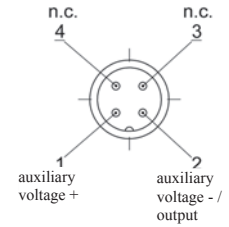
GTL 499M

Connection

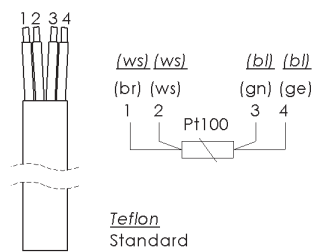
Design type GTL 479 or GTL 479M:
 without transducer (4-wire):



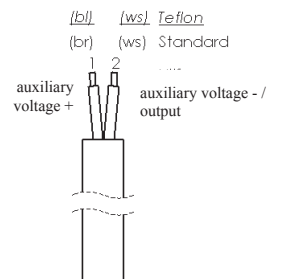
with transducer (2-wire):



Design type GTL 499 or GTL 499M:
 without transducer (4-wire):



with transducer (2-wire):



Option

TK	Design type GTL 499 and GTL 499M with Teflon cable GTL 499: 4 x 0.14 mm ² / GTL 499M: 2 x 0.14 mm ² Teflon cable up to 200 °C
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Product information

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Product key

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

1. Design type (electrical connection)	
479	M12-plug
479M	M12-plug with integrated transducer
499	fixed cable (PVC) connection 2.5m
499M	fixed cable (PVC) connection 2.5m, with integrated transducer
2. Immersion length TL	
0037	37 mm
0083	83 mm
0097	97 mm
0160	160 mm
xxxx	any TL in mm: from 200 mm till max. 500 mm, (surcharge from 200 mm for each 100 mm started)
3. Diameter thermowell and sensor tip	
3	Ø 3 mm
4. Accuracy class	
A	class A
D	class AA (1/3 class B)
5. Transducer GTML2 (programmable) ONLY for design types 479M and 499M	
00	without transducer (design types 369 / 389)
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. Option	
00	without option
H	with spacer
TK	Teflon cable for connection via fixed cable (only available for 499 and 499M) (surcharge per meter)
7. 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)

Information on suitable adapter and weld-in sleeves can be found in section Accessories.