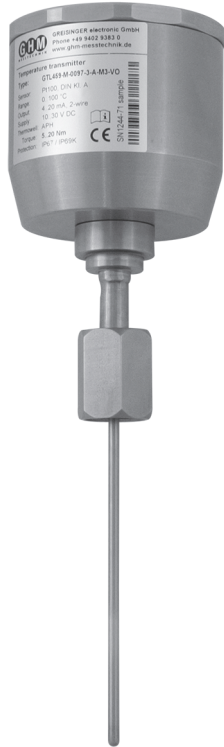


Product information

Temperature probe

**Temperature sensor
 GTL 459**



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

Specifications

- Temperature ranges : ambience: -40..+80 °C
 sensor tip: -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 : immersion sleeve, G 3/8 outside thread
 suitable adapter and weld-in sleeves
 APHG12, APHK25, APHZ18
 (see accessories page 64)



- Tightening torque : hand-tight
- Insertion length : 37, 83, 97, 160 mm
- Sensor head : Ø 59 mm

Thermowell and sensor tip:

- Ø 3 mm : protection tube 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 (V2A)
- Thermowell and tip : 1.4404 (V4A)
- Union nut : 1.4408 (V4A)

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

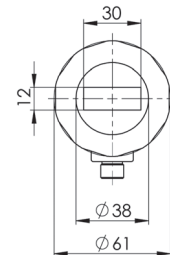
Transducer GMTL1

- 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

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)

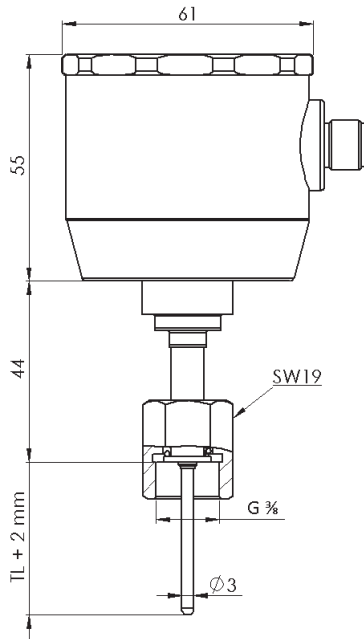
Note: The default settings are marked in **bold**.

continued on next page

Product information

Temperature probe

Dimensions



Product key

1. 2. 3. 4. 5. 6. 7. 8. 9.
 GTL - - - - - - -

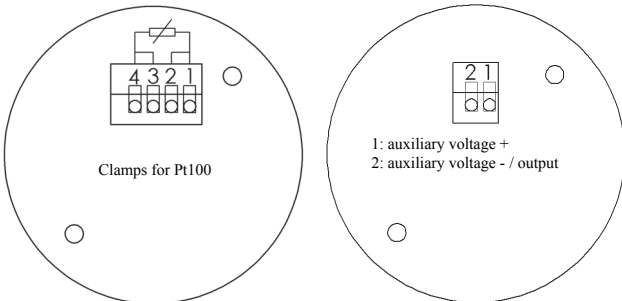
1. Design type	459 G 3/8 with union nut
2. Electrical connection	P cable gland M16x1.5 V V2A cable gland M16x1.5 M M12-plug
3. Immersion length TL	0037 37 mm 0083 83 mm 0097 97 mm 0160 160 mm xxxx any TL in mm: from 200 mm till max. 500 mm, (surcharge from 200 mm for each 100 mm started)
4. Diameter thermowell and sensor tip	3 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)

Connection

Electrical connection: cable gland M16x1.5

without transducer (4-wire):

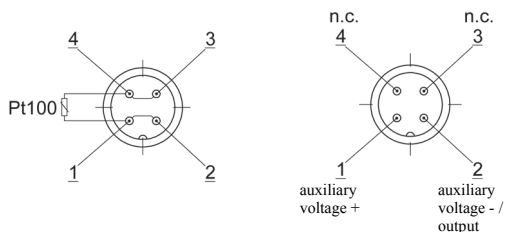
with transducer (2-wire):



Electrical connection: M12-plug (1.4305)

without transducer (4-wire):

with transducer (2-wire):



Notes on on-site display (LCD): Permanently integrated transducer GTML1 (programmable) with on-site display only in combination with electrical connection: M12 plug. Information on suitable adapter and weld-in sleeves can be found in section Accessories.