

Product information

Temperature probe

**Temperature probe  
 GTL 241**



GTL 241  
 standard

GTL 241  
 with neck  
 tube



- G 1/2" standard process connection hygienic
- Hygienic design and easy-to-sterilize measuring point
- Sensor completely made of stainless steel

**Characteristic**

The temperature probes GTL 241 and GTL 251 are designed for temperature measurements in pipes or tanks.

They can be used for example for monitoring the CIP / SIP procedures or temperature measurements in milk tanks.

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  | : ambience:                           | -40..+80 °C      |
|                     | : probe tip:                          | -40..+200 °C     |
|                     | : CIP- / SIP-temperature:             | 140 °C < 30 min. |
| Measuring resistor  | : Pt100                               |                  |
| Accuracy            | : class A, class AA                   |                  |
| Electric connection | : cable screwing M16x1.5 (PG)         |                  |
|                     | : cable connection M12- plug (1.4305) |                  |

|                    |                        |
|--------------------|------------------------|
| Process connection | : G 1/2                |
| Clamping torque    | : 5..20 Nm             |
| Fitting length     | : 50, 100, 150, 250 mm |
| Probe head         | : Ø 59 mm              |
| Neck tube          | : length 100 mm        |

**Protection tube and probe tip:**

|        |  |
|--------|--|
| Ø 6 mm | protection tube Ø 6 mm without taper                   |
| Ø 3 mm | protection tube Ø 6 mm and tapered<br>probe tip Ø 3 mm |

|               |                                      |
|---------------|--------------------------------------|
| Response time | : FS Ø 3 mm: T <sub>90</sub> ≤ 1.5 s |
|               | : FS Ø 6 mm: T <sub>90</sub> ≤ 7.4 s |

|                  |               |
|------------------|---------------|
| Working pressure | : max. 10 bar |
|------------------|---------------|

**Material**

|                         |          |
|-------------------------|----------|
| Probe head              | : 1.4305 |
| Neck tube               | : 1.4305 |
| Protection tube and tip | : 1.4404 |

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

**Transducer GTML1**

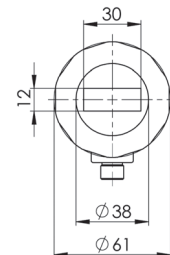
**Integrated head transmitter**

|                                |  |
|--------------------------------|--|
| Measuring range                | : -10..+40 °C * / 0..50 °C * / 0..100 °C *<br>0..150 °C * / 0..200 °C *<br>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)<br>< 800 ms (filter 2), < 3 s (filter 3)                          |
| Working 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 | : <b>activatable</b> , deactivatable * |
| Working temperature     | : -20..+60 °C                          |



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

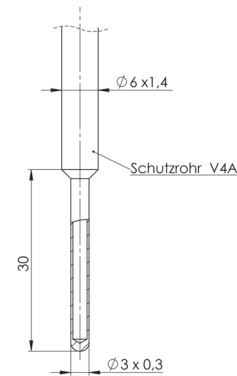
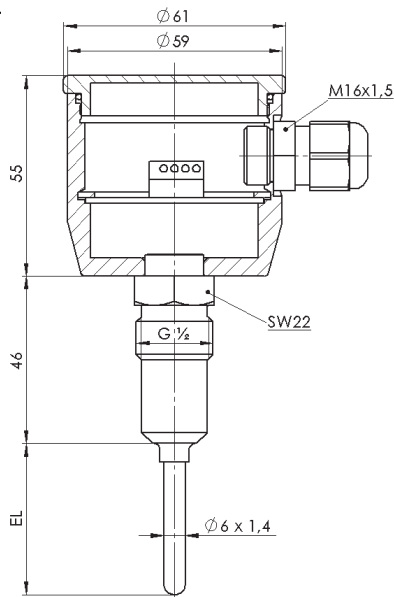
Note: The default settings are marked in **bold**.

**Product information**

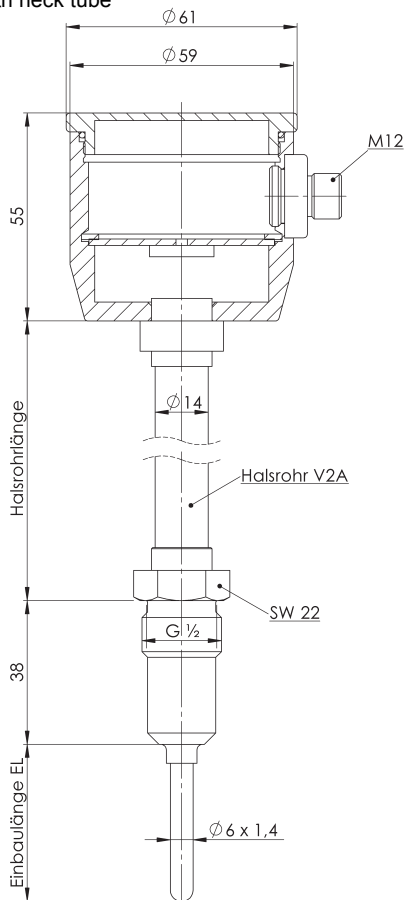
**Temperature probe**

**Dimensions**

GTL 24 standard



GTL 241 with neck tube

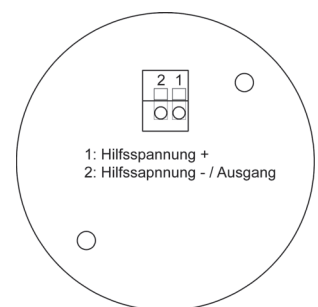
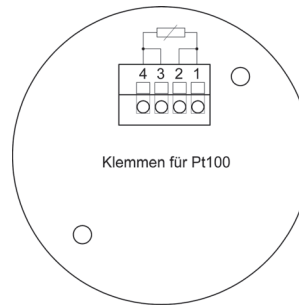


**Connection**

Electric connection: cable screwing M16x1.5 (PG)

without transducer (4-wire):

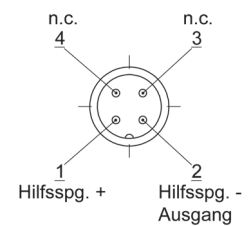
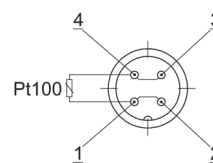
with transducer (2-wire):



Electric connection: cable connection M12-plug (1.4305)

without transducer (4-wire):

with transducer (2-wire):



continued on next page

## Product information

## Temperature probe

### Product key

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

|   |   |
|---|---|
| <b>1. Design type</b>   |   |
| 241   | without neck tube   |
| <b>2. Electric connection</b>   |   |
| P   | cable screwing M16x1.5 (PG)   |
| V   | V2A cable screwing M16x1.5 (PG)   |
| M   | cable connection M12-plug   |
| <b>3. Fitting length EL</b>   |   |
| 0050  | 50 mm   |
| 0100  | 100 mm  |
| 0150  | 150 mm  |
| 0250  | 250 mm  |
| xxxx  | any EL in mm<br>(surcharge from 250 mm for each 100 mm started, up to max. fitting length:<br>Ø 6: max. 1000 mm)  |
| <b>4. Diameter protection tube and probe tip</b>  |   |
| 6   | Ø 6 mm, without taper   |
| 3   | Ø 6 mm, with tapered probe tip Ø 3 mm   |
| <b>5. Accuracy class</b>  |   |
| A   | class A   |
| D   | class AA (1/3 class B)  |
| <b>6. Transducer</b>  |   |
| 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  |
| <b>7. Measuring range</b>   |   |
| 0   | without transducer  |
| 1   | measuring range -10..+40 °C<br>(-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<br>(not possible for head transducer T19),<br>state special measuring range separately e.g.:<br>0..75 °C or -20..+30 °C<br>Mind the minimum range of 50 °C. |
| <b>8. Option</b>  |   |
| 00  | without Option  |
| H   | with neck tube  |
| <b>9. Certificate DIN EN 10204 (indicate only when required, multiple responses possible)</b> |   |
| WZ2.2   | factory certification 2.2   |
| APZMAT  | acceptance test certificate 3.1 for material<br>(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 electric connection: cable connection M12 plug.

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