



## The temperature transmitter that fits in your hygienic process

### Alfa Laval Temperature Transmitter

#### Application

The Alfa Laval temperature transmitter is designed to fulfil the demands in hygienic and pharmaceutical production. The main features are:

- Wetted parts in AISI316L stainless steel
- Compact and hygienic design (3A / FDA and EHEDG compliant)
- Measuring range: -20 to 150°C
- Configurable touch display
- High accuracy < 0.1 °C

#### Standard range

The Alfa Laval temperature transmitter features as standard a stainless steel field housing in excellent finish, suitable for hygienic applications. All process connections are as standard hygienic connections with high cleanability and bacteria tightness, as an option wetted parts can be electropolished down to Ra < 0.4µm. The design of the sensor tip ensures low response times and accurate measurements. The output can be supplied either as a standard 4-20 mA, 4-20 mA/HART® output or Profi bus® PA interface.



#### TECHNICAL DATA

##### Temperature Transmitter accuracy

0 to 100 °C	< ±	0.39 °C
0 to 150 °C	< ±	0.48 °C
-10 to 100 °C	< ±	0.39 °C
-20 to 150 °C	< ±	0.48 °C

##### Measuring ranges

0 to 100 °C
0 to 150 °C
-10 to 100 °C
-20 to 150 °C

Resolution: . . . . . 12 bit  
 Protection class: . . . . . IP 67  
 with cable gland IP69K with M12 connector  
 Max media pressure: . . . . . 100 bar

##### Electrical data

Power supply: . . . . . 8 to 35 Vdc  
 Output temperature: . . . . . Pt100

4-20 mA,  
 4-20 mA HART®

Relay: . . . . . 2 galvanic insulated relays included in the display (60V/70 mA)

##### Certificates

- 3.1 certificate (option)
- Calibration certificate, 5 point calibration (option)

#### PHYSICAL DATA

Sensor length (L): . . . . . From 50 mm to 300 mm

##### Materials

Wetted parts: . . . . . AISI 316L  
 Fieldhouse: . . . . . AISI 304 and PEEK  
 Surface roughness:  
 Hygienic and non-hygienic versions: . . Ra ≤ 0.8 µm

##### Weight

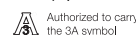
Sensor: . . . . . Approx. 500 gr.

##### Operating temperature

Wetted parts: . . . . . -50 to 250°C  
 Ambient temperature: . . . . . -20 to 85°C

##### Ambient temperature

P <sub>t</sub> output:	-40 - 160 °C
Transmitter without display:	-40 - 85 °C
Transmitter with display:	-30 - 80 °C
P <sub>t</sub> output:	-40 - 160 °C
Transmitter with display:	-40 - 85 °C
Electropolished (option):	Ra ≤ 0.4 µm



**Electrical connection:**

- M12, 5 pin (4-20 mA output only)
- M12, 8 pin (4-20 mA + relay output)
- M16 or M20 cable gland

**Process connections**

- Clamp DN38 (ISO2852) / Clamp DN40 (DIN32676)
- Clamp DN50 (ISO2852) / Clamp DN51 (DIN32676)
- G1/2"
- CFF (Clamp front flush)
- DN25 (DIN11851)
- DN40 (DIN11851)
- DN50 (DIN11851)
- HTC 1-1½"
- HTC 2"
- HTC 2½"
- HTC 3"
- HTC 4"

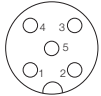
**Response time (measured in water)**

Sensor tip  $\varnothing 6$  mm: . . . . . 6.1sec.  
 Sensor tip  $\varnothing 4$  mm: . . . . . 1.5sec.

**Electrical installation with M12 connectors**

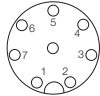
**M12 plug:**

**5-pin M12 connector**



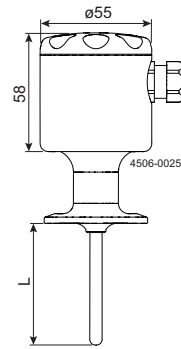
- 1: Brown Supply (+) (4...20 mA)
- 2: White Supply (-) (4...20 mA)
- 3: Blue
- 4: Black
- 5: Yellow/low/Green

**8-pin M12 connector with separated relay output**

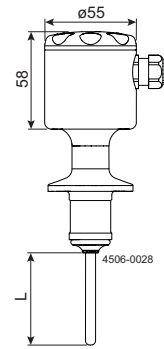


- 1: White n.c.
- 2: Brown Supply (+) (4...20 mA)
- 3: Green Relay 2
- 4: Yellow Relay 2
- 5: Grey Relay 1
- 6: Light red Relay 1
- 7: Blue Supply (-) (4...20 mA)
- 8: Red n.c.

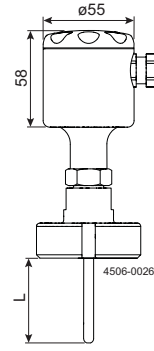
**Dimensions (mm)**



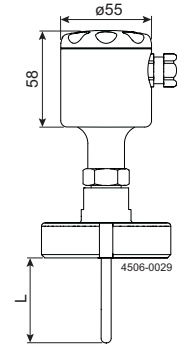
Clamp 1½" (ISO2858/DIN32676)  
TE67GX1XXXXXX



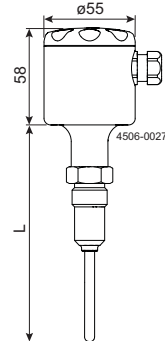
CFF  
TE67GDXXXXXXX



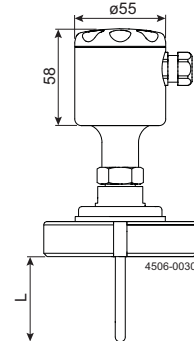
DN25 (DIN11851)  
TE67GXAXXXXXX



DN40 (DIN11851)  
TE67GXBXXXXX



G1" (ISO282)  
TE67GX4XXXXXX

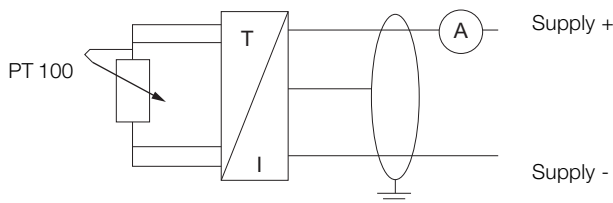


DN50 (DIN11851)  
TE67GXCXXXXXX

A	D	L
58	$\varnothing 55$	50-300

**Working principle**

The Alfa Laval temperature transmitter relies on a fast response Pt100 sensor tip. The sensor element is as standard a DIN A sensor element which is connected with 4 wires to the built-in transmitter. This ensures full resistance compensation and enables reliable and accurate measurements of process temperatures with a standard analogue output of 4-20 mA.



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**How to contact Alfa Laval**

Contact details for all countries are continually updated on our website. Please visit [www.alfalaval.com](http://www.alfalaval.com) to access the information direct.