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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 roughnes:
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_t output:	-40 - 160 °C
Transmitter without display:	-40 - 85 °C
Transmitter with display:	-30 - 80 °C
P_t output:	-40 - 160 °C
Transmitter wit display	-40 - 85 °C
Elctropolished (option:	Ra ≤ 0.4 µm

Authorized to carry the 3A symbol

CE

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”

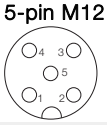
Response time (measured in water)

Sensor tip ø6 mm: . . . . . 6.1sec.
Sensor tip ø4 mm: . . . . . 1.5sec.

Electrical installation with M12 connectors

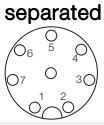
M12 plug:

5-pin M12 connector



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

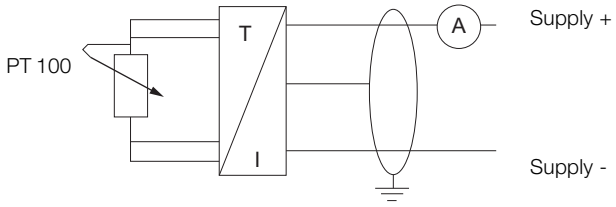
8-pin M12 connector with separated relay output



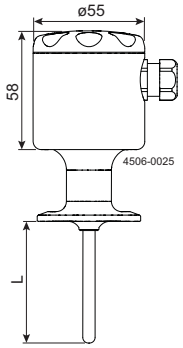
1: White	n.c.	
2: Brown	Supply (+)	(4...20 mA)
3: Green	Relay 2	
4: Yellow	Relay 2	
5: Grey	Relay 1	
6: Light red	Relay 1	
7: Blue	Supply (-)	(4...20 mA)
8: Red	n.c.	

Working principle

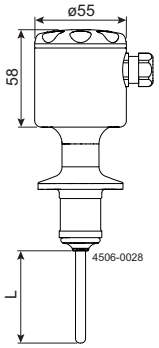
The Alfa Laval temperature transmitter relies on a fast response Pt100 sensor tip. The sensor element is as standard a DIN A sensor element which is connected with 4 wires to the build in transmitter.
This ensures full resistance compensation and enables reliable and accurate measurements of process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



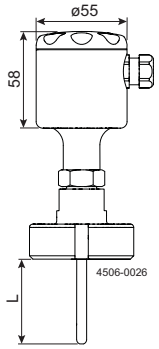
Dimensions (mm)



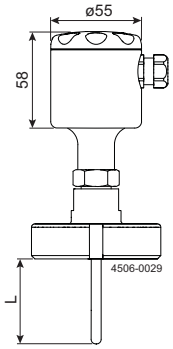
Clamp 1½” (ISO2858/DIN32676)
TE67GX1XXXXXXX



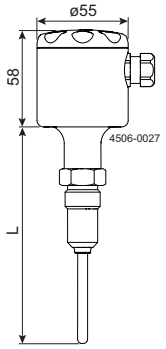
CFF
TE67GXDXXXXXXX



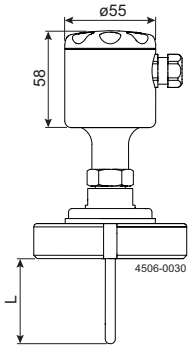
DN25 (DIN11851)
TE67GXAXXXXXXX



DN40 (DIN11851)
TE67GXBXXXXXXX



G1" (ISO282)
TE67GX4XXXXXXX



DN50 (DIN11851)
TE67GXCXXXXXXX

A	D	L
58	ø55	50-300