



# The level switch for hygienic use

## Alfa Laval Level Switch

### Application

The Alfa Laval level switch is designed to fulfill the demands for precise level indication in the hygienic and pharmaceutical production. The main features are:

- Wetted parts in AISI 316L, stainless steel and PEEK
- Compact, and hygienic design
- Process temperature -40 to 200°C
- LED indicator integrated into the field housing
- Not influenced by foam
- Ideal for media registration through registration of changes in product dielectricity
- Quick teach-in option for difficult medias
- Maintenance free

### Working principle

The Alfa Laval level switch uses a high frequency signal sweep which is radiated from the sensor tip into the tank. The media will act as a virtual capacitor which, together with a coil in the sensor head, will form a circuit creating the switch point signal. This virtual capacity will depend on the di-electric value of the media which is well defined for most medias.



### TECHNICAL DATA

Accuracy repeatability: . . . . .  $\pm 1$  mm  
Hysteresis: . . . . .  $\pm 1$  mm  
Measures values w. dielectric values: . . . . .  $>1.5$   
Protection class: . . . . . IP67  
Max media pressure: . . . . . 40 bar

### Electrical data

Power supply: . . . . . 18-36 Vdc  
Power consumption max: . . . . . 70 mA  
Output: . . . . . Logic, PNP or NPN output  
Max output current: . . . . . 50 mA  
Electrical connection: . . . . . M12 plug or M16 cable gland  
Response time: . . . . .  $<0.1$  sec.

### Standard range

The Alfa Laval level switch is ideal for measurements in liquids as well as viscous, sticky fluids, such as honey, yoghurt and toothpaste. Even dry medias can be measured, eg. sugar or flour. The integrated electronics provide a digital logic signal and has incorporated automatic compensation of foam, bubbles, condensate as well as sticky media. Due to the high temperature limit the Alfa Laval level switch is also suitable for CIP and SIP processes. The hygienic installation is guaranteed by using one of the hygienic welding adapters offering a full flush able connection in the tank.

### PHYSICAL DATA

#### Materials

Surface roughness . . . . .  $Ra < 0.8 \mu m$   
Wetted parts . . . . . ( $Ra < 0.4 \mu m$  as an option)  
Wetted parts: . . . . . AISI 316L and PEEK  
Fieldhousing: . . . . . AISI 304

#### Operating temperature

Wetted parts: . . . . . -40 to 85°C (140°C  $< 1$  hour)  
With sliding connection: . . . . . -40 to 200°C  
Field house: . . . . . -40 to 115°C.

#### Weight

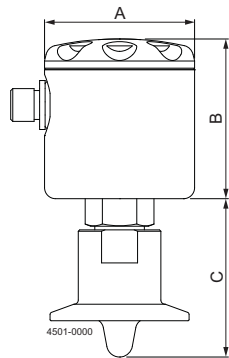
Sensor: . . . . . Approx. 500 gr.

#### Process connection

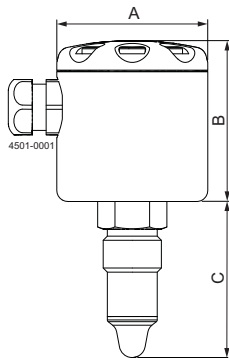
- Clamp DN38 (ISO2852)/Clamp DN40 (DIN32676)
- G1/2"
- G1/2" sliding connection 100 mm
- G1/2" sliding connection 250 mm
- DN25 (DIN11851)
- DN40 (DIN11851)
- DN50 (DIN11851)
- Hygienic Tank Connection HTC 1½"
- Hygienic Tank Connection HTC 2"
- Hygienic Tank Connection HTC 2½"
- Hygienic Tank Connection HTC 3"
- Hygienic Tank Connection HTC 4"

#### Certificate:

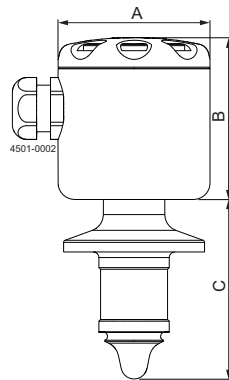
3.1 (Option) (FDA conformaty declaration for Peek materials included)



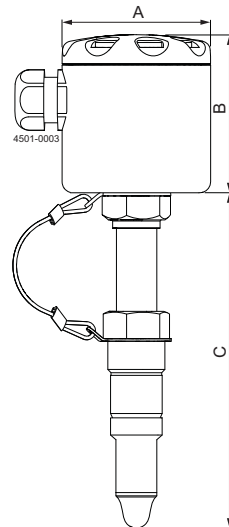
Clamp 1½"  
TE670x2xxxxxxx



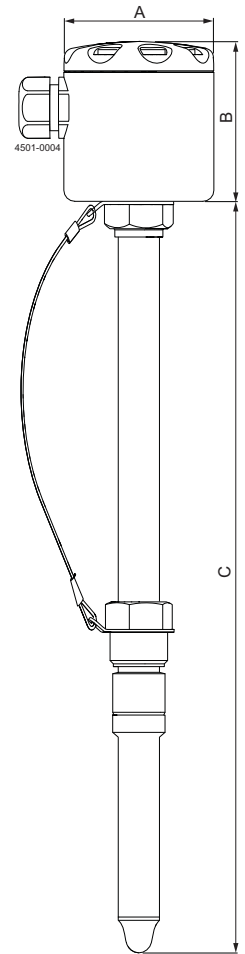
½" (ISO228)  
TE670x4xxxxxxx



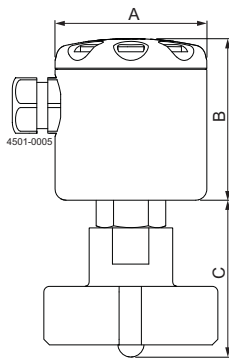
Clamp HTC  
TE670xDxxxxxxx



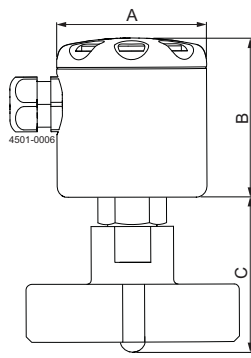
½" (ISO228)  
TE670xExxxxxxx



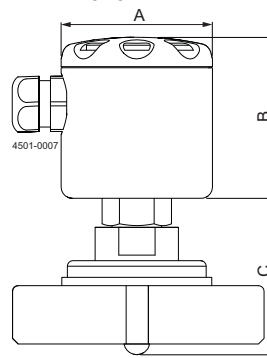
½" (ISO228)  
TE670xFxxxxxxx



Clamp DN25 (DIN11851)  
TE670xAxxxxxxx



Clamp DN40 (DIN11851)  
TE670xBxxxxxxx

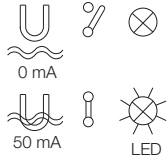


Clamp DN50 (DIN11851)  
TE670xCxxxxxxx

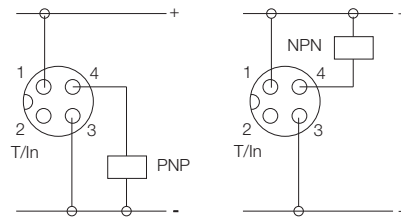
Dimensions (mm)	A	B	C
TE670x2xxxxxxx	ø55	58	57.5
TE670x4xxxxxxx	ø55	58	57.5
TE670xDxxxxxxx	ø55	58	57.5
TE670xExxxxxxx	ø55	58	100
TE670xAxxxxxxx	ø55	58	57.5
TE670xBxxxxxxx	ø55	58	57.5
TE670xCxxxxxxx	ø55	58	57.5
TE670xFxxxxxxx	ø55	58	250

**Electrical connections**

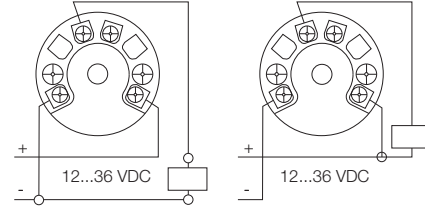
**Normally Open**



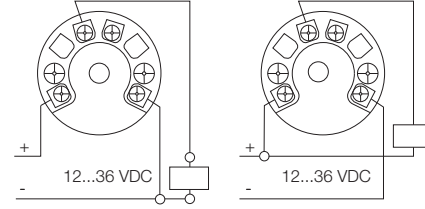
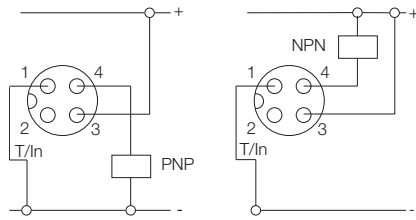
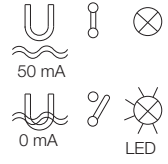
**M12 plug**



**Cable gland**



**Normally Closed**



- M12 plug:
- 1: Brown
  - 2: White
  - 3: Blue
  - 4: Black

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ESE01581EN 1507

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**How to contact Alfa Laval**

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