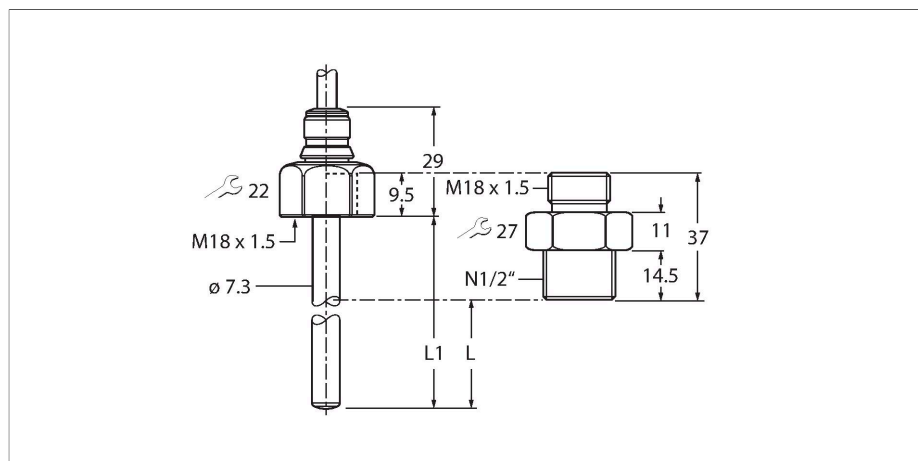


# FP100-300L-16-NAEX-2M

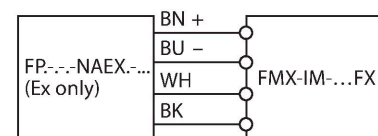
## Flow Meter – Immersion Sensor without Integrated Processing Unit



### Features

- Screw-in adapter with process connection NPT 1/2" male thread included in delivery
- Housing material: 1.4571 (316Ti)
- Immersion depth 16.9 mm
- Flow monitoring for liquid media
- Protection classes IP66, IP67 and IP69K
- Cable connection
- ATEX category II 1 G, Ex Zone 0
- ATEX category II 1 D, Ex Zone 20

### Wiring diagram



### Technical data

Type	FP100-300L-16-NAEX-2M
ID	100001066
Medium temperature	-25...+85 °C
<b>Application area</b>	
Mounting conditions	Immersion sensor
Application area	liquids
Bar length (L1)	45 mm
Immersion depth (L)	16.9 mm, When using the supplied adapter
Pressure resistance	300 bar
Response time T09	6 s
Response time T05	3 s
Standard flow range	3...300 cm/s
Extended flow range	Any axial alignment of the sensor rod in the medium
Extended flow range comment	1...300 cm/s
Extended flow range comment	Directed inflow to punch mark ±20 °
Temperature gradient	≤ 300 K/min
Important note	For Ex applications, the values specified in the corresponding Ex certificates (ATEX, IECEx, UL, etc.) apply.
Device marking	<ul style="list-style-type: none"> <li>⊠ II 1 G Ex ia IIC T6...T4 Ga</li> <li>⊠ II 1 D Ex ia IIIC T101°C...T136°C Da</li> </ul>
Ignition protection category	Gas Ex ia IIC; dust Ex ia IIIC
Internal capacitance (C)/inductance (L)	Negligibly small
Ex approval acc. to conformity certificate	IBExU17ATEX1149
<b>Mechanical data</b>	
Housing material	Stainless steel, 1.4571 (AISI 316Ti)

### Functional principle

The flow sensor functions according to the calorimetric principle. The distinctive feature of this principle is that the flow rate correlates directly to the thermal loss of energy in the probe. The increased loss of energy is therefore a direct measure of an increased flow rate.

## Technical data

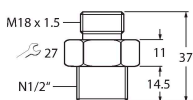
Adapter material	Stainless steel 1.4571 (316Ti)
Materials (contact with media)	Stainless steel 1.4571 (AISI 316Ti), FKM O-ring
Process connection sensor	M18 x 1.5 female thread
Process connection adapter	M18 x 1.5 male thread; 1/2" NPT male thread
Electrical connection	Cable
Protection class	IP66 IP67 IP69K
<b>Environmental conditions</b>	
Ambient temperature	-40...+85 °C
Storage temperature	-40...+80 °C
Shock resistance	50 g (11 ms) DIN EN 60068-2-27
Vibration resistance	20 G (55...2000 Hz) DIN EN 60068-2-6
<b>Tests/approvals</b>	
Approvals	CE ATEX IECEX cULus
UL registration number	E516036
MTTF	120 years acc. to SN 29500 (Ed. 99) 40 °C

## Accessories

FAA-A1-1.4571

100001987

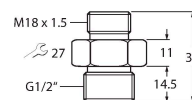
Screw-in adapter for immersion sensors from the series FS.., FP..; material: Stainless steel 1.4571 (316Ti); process connection: N1/2"



FAA-80-1.4571

100001988

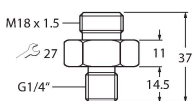
Screw-in adapter for immersion sensors from the series FS.., FP..; material: Stainless steel 1.4571 (316Ti); process connection: G1/2"



FAA-04-1.4571

100001989

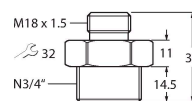
Screw-in adapter for immersion sensors from the series FS.., FP..; material: Stainless steel 1.4571 (316Ti); process connection: G1/4"



FAA-34-1.4571

100001990

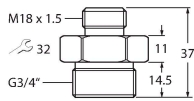
Screw-in adapter for immersion sensors from the series FS.., FP..; material: Stainless steel 1.4571 (316Ti); process connection: N3/4"



FAA-81-1.4571

100001991

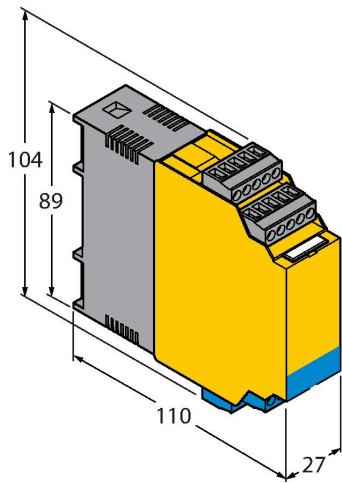
Screw-in adapter for immersion sensors from the series FS.. , FP..; material: Stainless steel 1.4571 (316Ti); process connection: G3/4"



## Accessories

Dimension drawing	Type	ID	
	FMX-IM-3UR38FX	100000821	Ex signal processor for Ex flow sensors from the FP...-...-NAEX-... product series; operating voltage 20...250 VAC; LED bar for displaying flow speed and medium temperature; IO-Link device with relay outputs for flow, temperature and errors
	FMX-IM-3UP63FX	100000822	Ex signal processor for Ex flow sensors from the FP...-...-NAEX-... product series; operating voltage 20...30 VDC; LED bar for displaying flow speed and medium temperature; IO-Link device with transistor outputs for flow, temperature and errors

Dimension drawing



Type

FMX-IM-2UPLI63FX

ID

100000823

Ex signal processor for Ex flow sensors from the FP...-...-NAEX-... product series; operating voltage 20...30 VDC; LED bar for displaying flow speed and medium temperature; HART device with analog output for flow and transistor outputs for temperature and errors