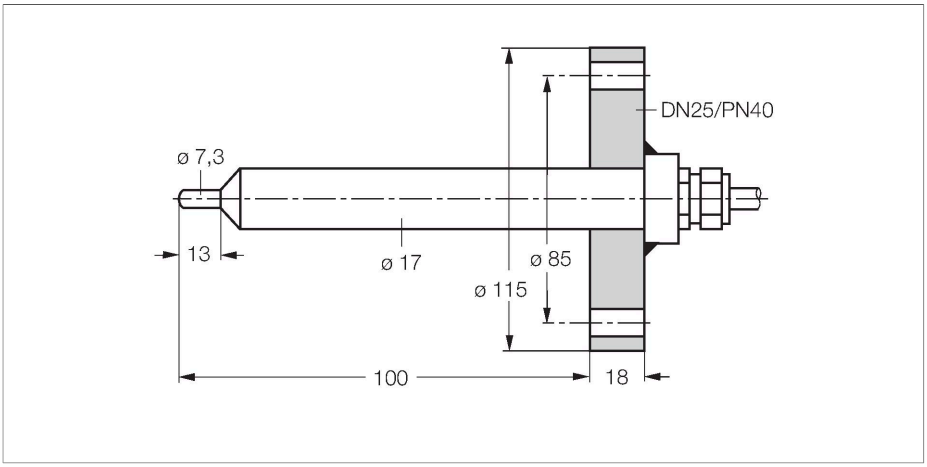
FCS-DN25A4-NAEX0/L100
Flow Monitoring – Immersion Sensor without Integrated Processor



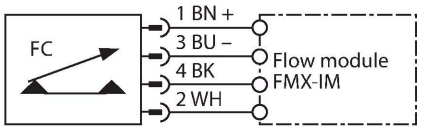
Technical data

ID	6872035
Type	FCS-DN25A4-NAEX0/L100
Mounting conditions	Immersion sensor
Water Operating Range	1…100 cm/s
Oil Operating Range	3…200 cm/s
Minimum immersion depth	≥ 15 mm
Stand-by time	typ. 8 s (2…18 s)
Switch-on time	typ. 2 s (1…13 s)
Switch-off time	typ. 2 s (1…13 s)
Temperature jump, response time	max. 12 s
Temperature gradient	≤ 250 K/min
Medium temperature	-20…+60 °C
Electrical data	
Important note	For Ex applications, the values specified in the corresponding Ex certificates (ATEX, IECEx, UL, etc.) apply.
Device marking	EX II 1 G Ex ia IIC T6…T3 Ga EX II 1/2 G Ex ia IIC T6…T3 Ga/Gb EX II 1 D Ex ia IIIC T125 °C Da
Ignition protection category	Gas Ex ia IIC; dust Ex ia IIIC
Power	≤ 0.69 W
Internal capacitance (C_i)/inductance (L_i)	0.27 nF/1.3 µH
Ex approval acc. to conformity certificate	TÜV 99 ATEX 1517X
Protection class	IP67
Mechanical data	
Design	Immersion
Housing material	Stainless steel, 1.4571 (AISI 316Ti)

Features

- Ex sensor for liquid media
- Calorimetric functionality
- Adjustment via Ex signal processor
- Status indicated via LED chain on signal processor
- Sensor length 100 mm
- Cable device
- 4-wire connection to an Ex0 processor
- ATEX category II 1/2 G, Ex-zone 0
- ATEX category II 1 D, Ex zone 20

Wiring diagram



Functional principle

Our insertion - flow sensors operate on the principle of thermodynamics. The measuring probe is heated by several °C as against the flow medium. When fluid moves along the probe, the heat generated in the probe is dissipated. The resulting temperature is measured and compared to the medium temperature. The flow status of every medium can be derived from the evaluated temperature difference. Thus TURCK's wear-free flow sensors reliably monitor the flow of gaseous and liquid media.

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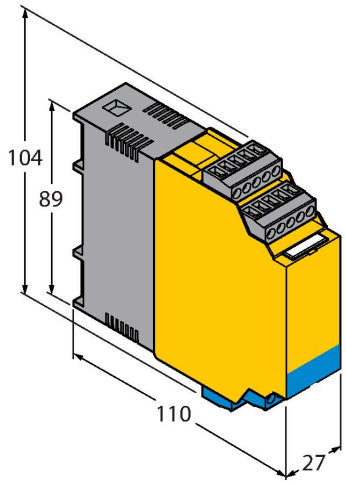
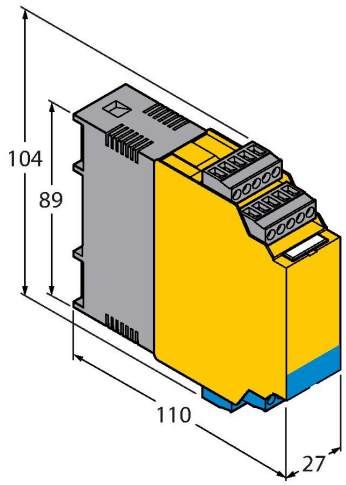
Technical data

Sensor material	Stainless steel, 1.4571 (AISI 316Ti)
Electrical connection	Cable
Cable length	2 m
Cable quality	Blue
Cable Jacket Material	PUR
Core cross-section	4 x 0.25 mm^2
Permissible ambient pressure for the device in explosive atmospheres	0.8…1.1 bar absolute
Pressure resistance	60 bar
Process connection	Receptacle
Tests/approvals	
Approvals	ATEX CE UKCA GOST

Accessories

Dimension drawing	Type	ID	
	FMX-IM-3UP63X	7525101	Ex signal processor for Ex flow sensors from the FC…-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
	FMX-IM-3UR38X	7525103	Ex signal processor for Ex flow sensors from the FC….-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

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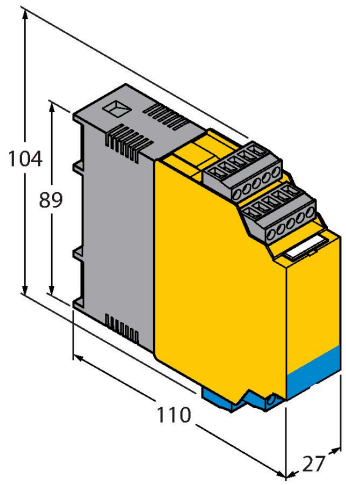
Dimension drawing	Type	ID	
	FMX-IM-2UPLI63X	7525105	Ex signal processor for Ex flow sensors from the FC…-NAEX… product series; operating voltage 20…30 VDC; LED bar for displaying flow speed and medium temperature; HART device with analog output for flow and transistor outputs for temperature and errors

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