

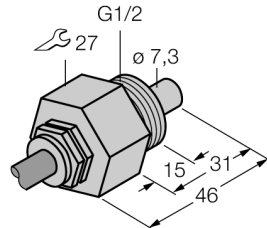
Flow sensor

Immersion sensor without integrated processor

FCS-G1/2A4-NAEX0/D024

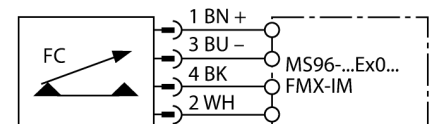
TURCK

Industrial
Automation



- ATEX category II 1/2 G, Ex zone 0
- Intrinsically safe flow sensor for liquid media
- Calorimetric principle
- Adjustment via potentiometer at Ex signal processor
- Status indicated via LED chain on signal processor
- Acceptance test certificate 3.1b (EN 10204)
- Intrinsically safe EEx ia IIC T6, for use in zone 0
- Cable device
- 4-wire connection to an Ex0 processor

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.

Type code	FCS-G1/2A4-NAEX0/D024
Ident no.	6870344
Operating range water	1...100cm/s
Oil operating range	3...200 cm/s
Stand-by time	typ. 8 s (2...15 s)
Switch-on time	typ. 2 s (1...13 s)
Switch-off time	typ. 2 s (1...15 s)
Temperature jump, response time	max. 12 s
Temperature gradient	≤ 250 K/min
Medium temperature	-20...60 °C
Device designation	⊕ II 1/2 G EEx ia IIC T6
Protection type	Ex ia IIC
PowerP _i	≤ 0.69 W
Internal inductances/capacitances	negligibly small
Ex approval acc. to conformity certificate	TÜV 99 ATEX 1517X
Protection class	IP68
Housing material	Stainless steel, V4A (1.4571)
Sensor material	stainless steel, AISI 316Ti
Max. tightening torque housing nut	100 Nm
Connection	PUR cable
Cable length	2 m
Cable cross section	4 x 0.25 mm ²
Pressure resistance	60 bar
Mechanical connection	G 1/2"

Flow sensor Immersion sensor without integrated processor FCS-G1/2A4-NAEX0/D024

Operating manual

Intended use

This device fulfils the directive 94/9/EC and is suited for use in explosion hazardous areas according to EN50014, EN50020 and EN50284.

For use in explosion hazardous areas conform to classification

II 1 G (Group II, Category 1 G, electrical equipment for gaseous atmospheres).

Marking (see device or technical data sheet)

Ⓔ II 1/2 G and EEx ia IIC T6 acc.to EN50020 and EN50284

Installation / Commissioning

These devices may only be installed, connected and operated by trained and qualified staff. Qualified staff must have knowledge of protection classes, directives and regulations concerning electrical equipment designed for use in explosion hazardous areas.

Please verify that the classification and the marking on the device comply with the actual application conditions.

This device is only suited for connection to approved EExi circuits acc. to EN500014 and EN50020. Please observe the maximum admissible electrical values.

After connection to other circuits the sensor may no longer be used in EExi installations. When interconnected to (associated) electrical equipment, it is required to perform the "Proof of intrinsic safety" (EN60079-14).

Installation and mounting instructions

Avoid static charging of cables and plastic devices. Please only clean the device with a damp cloth. Do not install the device in a dust flow and avoid build-up of dust deposits on the device.

If the devices and the cable could be subject to mechanical damage, they must be protected accordingly. They must also be shielded against strong electro-magnetic fields.

In order to avoid contamination of the device, please remove possible blanking plugs of the cable glands or connectors only shortly before inserting the cable or opening the cable socket.

service / maintenance

Repairs are not possible. The approval expires if the device is repaired or modified by a person other than the manufacturer. The most important data from the approval are listed.