Flow transmitter

DF170TM

Materials

The DF170TM is made of the following materials:

- Flow transmitter body: PVC
- Rotor: E-CTFE (HALAR) as standard
- Rotor shaft and bearings: ceramic (AL2O3)
- Seal (O-ring): NBR, EPDM or FPM (Viton)

The DF170TM flow transmitter is suitable for use in combination with a tapping saddle and with pipes with an internal diameter of between d50 and d315.

Description

The DF170TM flow transmitter is used to measure fluid flows in pipe systems. It works based on the rotor principle. The rotor consists of five blades in which magnetic plates have been cast.

The flowing fluid causes the rotor to move, which generates current impulses in the magnetic field sensor, which is fitted in the flow transmitter's body.

The integrated signal amplifier converts these current impulses into an analogue 4-20 mA (standard) signal which is proportional to the flow rate.

Partly due to the lack of magnetic interaction between the rotor and the magnetic field sensor, the flow transmitter's minimum flow rate is 0.15 m/s. The maximum flow rate is 10 m/s. The output signal can bridge a distance of 100 metres without additional amplification.

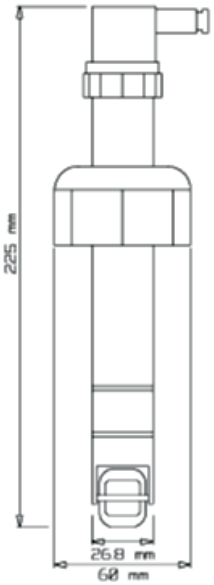
Thanks to the open rotor construction, the blades have almost no effect on the fluid's flow pattern and the pressure loss is kept to a minimum.

The DF170TM can measure the flow in any direction. The concentration of solid particles in the fluid must not exceed 2-5% of the volume. The fluid's viscosity must be 0.5-20 cSt.

If the correct materials are selected, the DF170TM can be used in temperatures up to 60 °C and at a pressure of up to 10 bar.

Technical specifications

Technical specifications DF170TM	
Supply voltage:	12-24 V(DC)
Maximum current consumption:	45 mA
Electrical connection:	Plug according to DIN 43650
Ingress protection:	IP65 according to IEC529 and DIN 40050
Weight:	Approx. 215 g
Maximum cable length:	100m
Measurement range:	0.15-10 m/s
Output signal:	(0)4 - 20 mA (configurable) 0 - (5)10 V (configurable)
Load resistance:	< 330 Ω
Measurement accuracy:	+/- 1% of the measurement range end value
Linearity:	+/- 1% across the entire measurement range
Reproducibility:	+/- 0.5% across the entire measurement range
Medium viscosity:	0.5-20 cSt.



Electrical connection: