

## Flow sensor

# DSM-2420

### Brief description

The DSM2420 is a combined sensor for the simultaneous measurement of flow velocity and fill level in open or accessible closed channels of all types and shapes. The sensor is made of special plastic and is therefore resistant to practically all aggressive media found in water and wastewater. The sensor can be mounted in any type of channel using corresponding adaptable stainless steel mounting shoes. For measuring the fill level, floor installation is required.

### Functionality

The sensor is installed in partially or fully filled pipes and channels and delivers reliable measurement results starting at fill levels of 3 cm.

The detection of the flow velocity is carried out using an ultrasonic measuring principle (Doppler effect) and the fill level is determined hydrostatically.

The measurement signals are evaluated via the compatible data logger or can be integrated into other existing measurement, alarm and control systems.

### TECHNICAL DATA

#### Characteristics

Dimensions	180 x 48 x 36,5 mm ( L x W x H )
Weight	approx. 1,5 kg
Protection class	IP68
Cable length (Standard)	15 m
Bend radius	> 10 x D (Cable diameter 6.25 mm)= > 62,5mm
Temperature range	0°C ... 50°C
Mounting shoe material	V2A 1,5mm

#### Measurement principle

Flow velocity	Ultrasonic- Doppler
Fill level	Hydrostatic differential pressure measurement



Zertifikat #

IBExU 04 ATEX 1256

#### Special features

- ✓ Sensor made of special plastic; resistant to aggressive media
- ✓ Mounting in the channel using adaptable stainless steel mounting shoes
- ✓ Suited for Ex atmospheres with the FDL400 measuring device with integrated Z-barrier

#### Your advantages as a system operator

- ✓ Optimization in the planning or operation of your sewer network
- ✓ Support for efficient system operation
- ✓ Sensor-based control of systems and processes in water management
- ✓ Enhanced environmental protection
- ✓ Ideal for self-monitoring of wastewater plants
- ✓ Easy installation in existing sewer structures without on-site measures

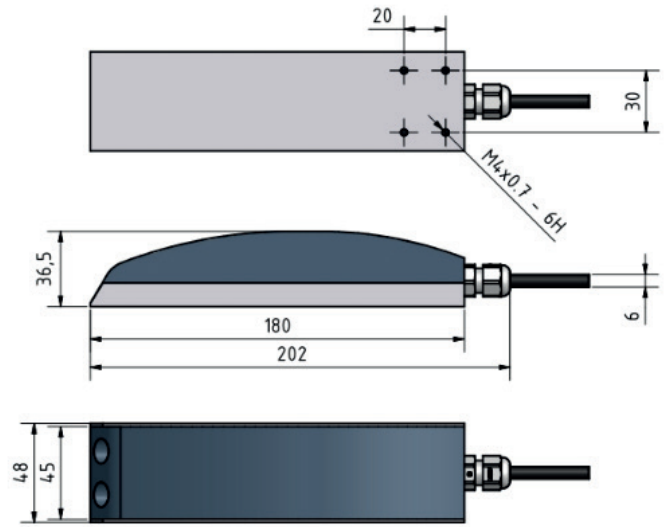
**Flow velocity**

Measurement range	0,01 - 4 m / s
Measurement accuracy	+/- 5 % of the instantaneous value in the channel
Temperature drift	0,1% / °C (Measurement span)
Temperature drift	0,05% / °C (Zero point)
Output signal	4 - 20 mA

**Fill level**

Measurement range	0 – 1 m ; 0 – 2 m ; 0 – 4 m
Measurement accuracy	< 0,2% FS. Sum of non-linearity, hysteresis and repeatability
Temperature drift	0,005%/C° FS measurement range
Temperature drift	0,005%/C° FS measurement zero point
Material	Al2O3 (96%) active surface
Output signal	4 – 20 mA
Zero point	norm 4 mA ( +/- 3 % )

**Dimensional drawing**



**Pin assignment**

