

SS400120

FLOW SENSORS • SENSORS FOR WATER

The function of the flow sensor is based on the calorimetric principle. The probe is heated up from the inside a few degrees Celsius in relation to the flow medium, in which it protrudes. When the medium flows, the heat generated in the probe is dissipated through the medium. The temperature within the sensor is measured and compared with the likewise measured medium temperature. From the obtained temperature difference the flow state of each medium can be derived. These sensors are applied in areas such as monitoring of cooling systems, ventilation systems, pump dry running by checking the presence of liquid or gas flows.



MECHANICAL DATA

Degree of protection (IP) of evaluation electronics	IP67
Degree of protection (IP) of measuring head	IP67
Depth	73 mm
Housing design	Cylinder plain
Housing material	Stainless steel 1.4571
Medium temperature (MAX)	80 °C
Pressure resistance	100 bar
Sensing element material	Stainless steel 1.4571
Sensor diameter	40 mm
Type of process connection	G1/4 inch

ELECTRICAL DATA

Adjustable responding value for flow for liquids (MAX)	3 m/s
Adjustable responding value for flow for liquids (MIN)	0.01 m/s
Flow range for oil	3 m/s
Flow range for oil	0.03 m/s
Flow range for water	1.5 m/s
Flow range for water	0.01 m/s
Max. output current	400 mA
Measuring principle of flow	Calorimetric
No-load current	70 mA
Number of pins	4
Operating voltage (MAX)	24 V
Operating voltage (MIN)	24 V
Pressure resistance of measuring head	100 bar
Readiness delay	15 ms
Residual ripple	20 %
Reverse polarity protection	Yes
Setting procedure	Manual adjustment
Short-circuit-proof	Yes
Type of electrical connection	Plug-in connection M12

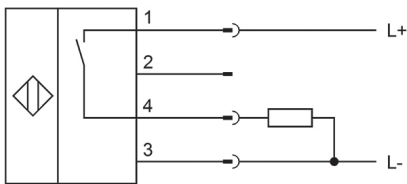
ELECTRICAL DATA

Type of switching function	Normally open contact (NO)
Type of switching output	PNP
Voltage drop	2 V
Voltage type	DC
With LED display	Yes

OTHER DATA

Cooling water circuits	Yes
For hydraulic applications	Yes
Suitable for gases	No
Suitable for liquids	Yes

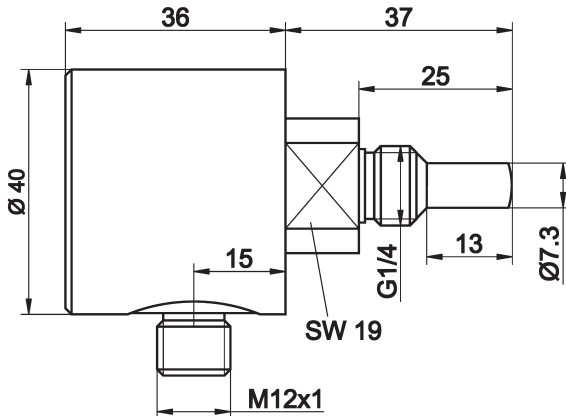
CONNECTION



Colors: 1 = BN (brown), 2 = WH (white), 3 = BU (blue), 4 = BK (black)

Functions: 1 = L+, 2 = n. c., 3 = L-, 4 = PNP NO

DIMENSIONAL DRAWING



INSTALLATION



Mounting / Installation may only be carried out by a qualified electrician!

DISPOSAL



SAFETY WARNINGS

Before initial operation, please make sure to follow all safety instructions that may be provided in the product information!

Never use these devices in applications where the safety of a person depends on their functionality.