Design
The flow sensor is built into the pipework using adapters.

Function
The transparent fluid admitted in the direction of the arrow is guided into a circular motion via the swirl plate in the measuring chamber and directed onto the lightweight triple vane rotor. The speed of the rotor is proportional to the flow rate and is detected without feedback via the built-in optoelectronic infrared system (diode and phototransistor).

The integrated amplifier supplies a steady square wave signal, whereby the signal level is dependent on the applied supply voltage (5 to 12 V DC).

Due to the particular design of the rotor, any gas bubbles (air bubbles) which may occur in the fluid, are not dissolved, but carried along with the fluid.

Any assembly position is possible. The direction of flow is indicated by an arrow on the sensor housing. Stabilizing zones up or downstream of the measuring device are not necessary.

Flow rate fluctuations or pulsations do not have a negative influence on the resulting measurement.

A protective filter is fitted on the inlet side.

All parts of the measurement housing in contact with media are made of polyvinylidene fluoride (PVDF).

Note
During operation, please observe the polarity of the applied voltage. The terminals are colour coded.

Operating voltage	
Positive terminal	white
Negative terminal	green
Output signal	
Square-wave signal	brown

Technical data

Permissible operating voltage	5 to 12 V DC
Current consumption	6 to 33 mA
Output signal	Square-wave signal, 5 ... 12 V
Frequency range	13 to 1200 Hz
Signal acquisition	Infrared (optoelectronic)
K-Factor (pulse / dm^3)	3200
Measuring range	0.5 to 15.0 l/min
Measurement reliability	± 1% of meas. value, at 20 °C
Linearity	± 1% at 20 °C
Operating pressure	max. 6 bar at 80 °C
Standard temperature range	0 °C to + 65 °C
Measuring span	30/20:1 (up to 5cSt)
Viscosities	Applicable up to 15 cSt.
Reverse polarity protection	Yes
Materials: All media-contacting parts Seals	 PVDF Viton
Dimensions Length Connecting thread External diameter – female hose connector Nominal size – sensor	 43.5 mm M20x2 9 mm 9 mm
Electrical connection	Cable, 750 mm long
Subject to change	