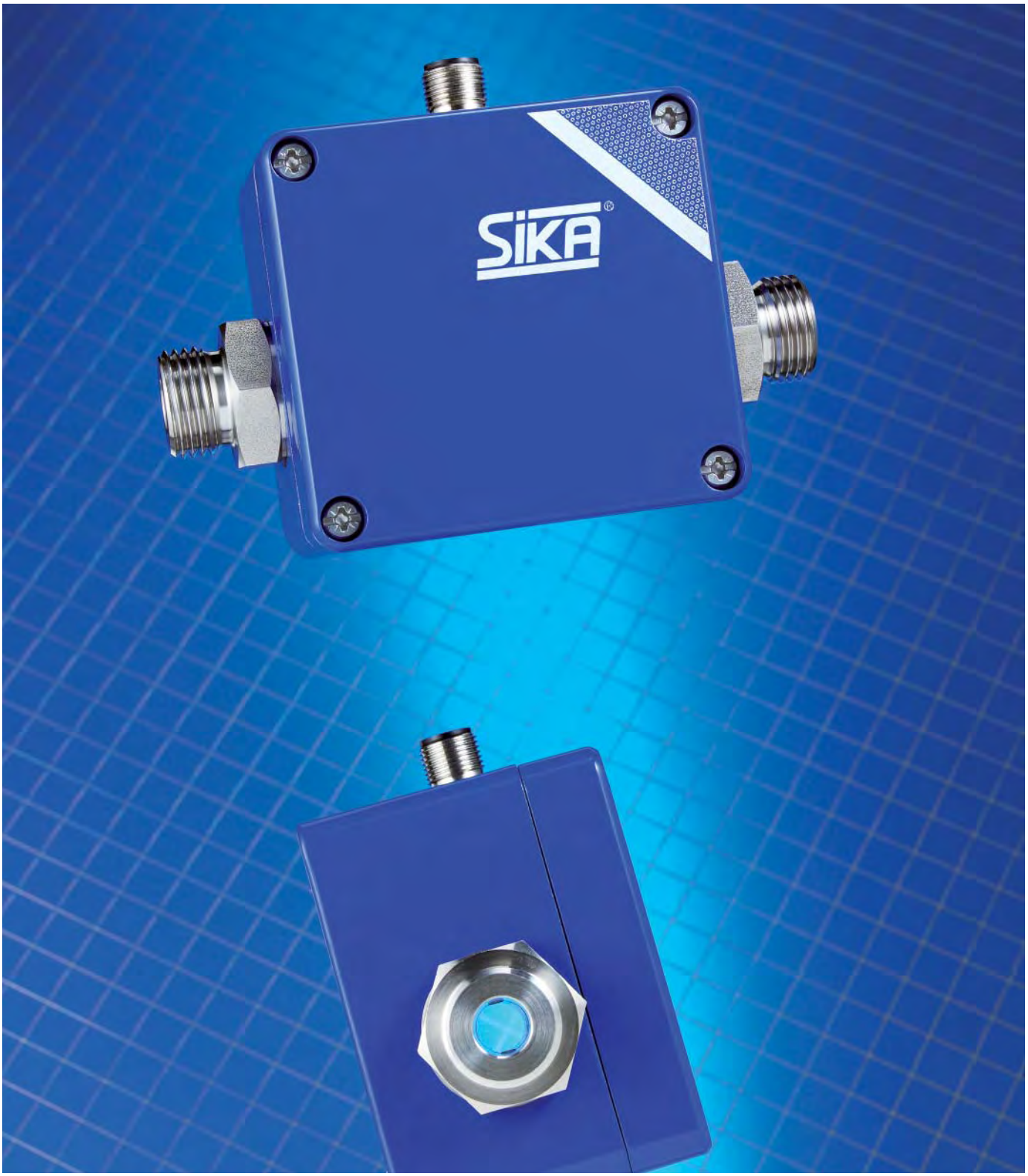
Magnetic Inductive Flow Sensors

Series VMI



SIKA Dr.Siebert & Kühn GmbH & Co. KG • Struthweg 7–9 • 34260 Kaufungen • Germany • ☎ +49 5605 803-0 • 🖷 +49 5605 803-54 • ✉ info@sika.net • www.SIKA.net

Magnetic Inductive Flow Sensors, Series VMI

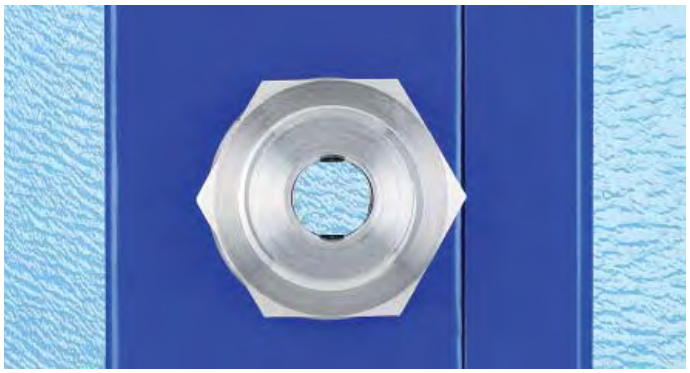
Free Flow!

Compact - cost-effective - robust!

The cost-effectiveness of the extremely compact magnetic inductive flow sensor VMI from SIKA means that this field-proven process technology method can now also be applied for mechanical engineering measuring procedures.

The advantages of the sensor are mighty impressive:

- No moving parts
- No wear
- Free pipe cross section
- No additional pressure drop
- Resistant to soiled liquids
- Maintenance free
- Can be used in both flow directions
- Quick response (< 500 ms)
- Less inlet section requirements



Thanks to the measuring principle, changes to the temperature, density, viscosity, concentration or electrical conductivity of the medium do not affect the output signal.

Typical application areas

The VMI can be used in areas where flow sensors with moving parts, e. g. paddle wheel meters, cannot be applied due to soiled media.

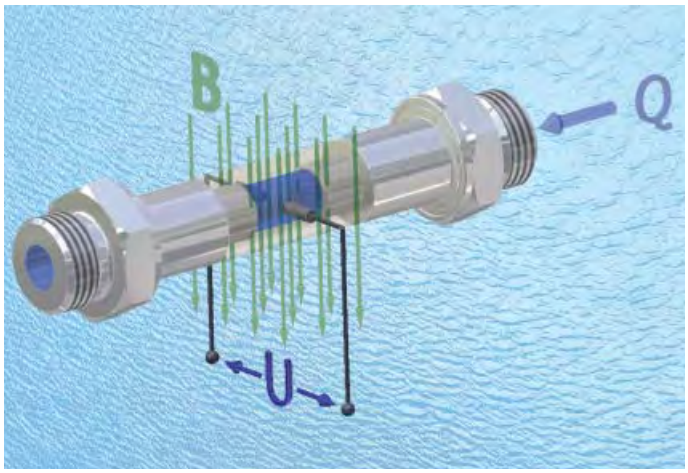
The sensor is intended for continuously measuring flow rates or for dosing electrically conductive liquids with a minimum conductivity of 50 µS/cm. The VMI is the ideal flow sensor for interference free operation combined with long service life.

Operational principle

The magnetic inductive flow sensor works on an induction principle:

The measuring pipe is in a magnetic field (B). If an electrically conductive medium with the determined flow (Q) pass through the pipe and thus right-angled to the magnetic field, a voltage (U) which is proportional to the average flow velocity, is induced into the medium and picked up by the two electrodes.

The output signal is a flow proportional frequency signal.



Materials

Electrodes	Stainless steel 1.4571
Process connections	Stainless steel 1.4571
Pipe	PEEK-GF30
Gasket	EPDM
Housing	Aluminium pressure diecasted

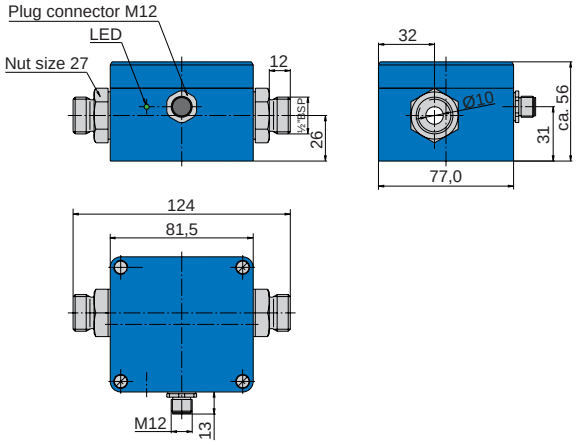
Technical data

Measurement range	2...40 l/min
Accuracy	±1 % of reading
Signal output starting from	1 l/min
Repeatability	1 %
Media / min. conductance of medium	Water and other conductive fluids / 50 µS/cm
Max. medium temperature	75 °C
Ambient temperature	5...70 °C
Nominal pressure	PN16
Diameter	DN 10
Process connection	½“ BSP male thread
Flow indication	LED green
Frequency output signal - Pulse rate - Resolution - Signal shape - Signal current - Max. pull up voltage	 Standard: 855 pulses/l, optional: 1...1000 pulses/l factory setting Standard: 1.2 ml/pulse, optional: 1000...1 ml/pulse factory setting Square wave signal NPN open collector, pulse duty ratio 50:50 Max. 20 mA, current limited 30 VDC
Response time	< 500 ms
Electrical connection	Plug connector M12x1
Power supply / current consumption	24 VDC ±10 % / max. 80 mA
Electrical protection measures	Short-circuit proof (up to 30V) and polarity protection (up to -30V)
Protection class	IP 54

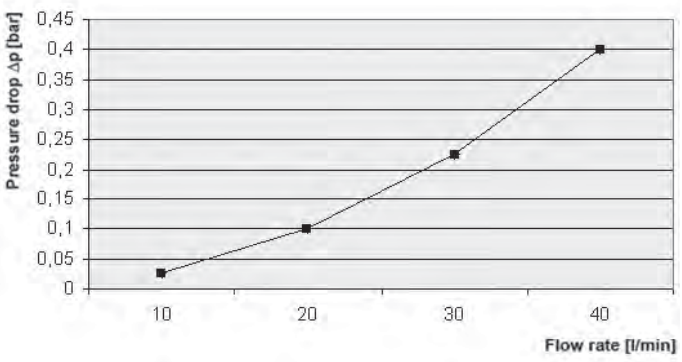
Accessory part	Length	Order code	
Connection cable with 4 pin cable socket M12x1, angle type molded lead, sheathing material PUR, screened, (Tmax = 80 °C)	3 m 5 m 10 m	XVT 2053 XVT 2009 XVT 2070	

Order code
VMI1040K7NPS0A3

Dimension



Pressure drop



SIKA Dr.Siebert & Kühn GmbH & Co. KG • Struthweg 7–9 • 34260 Kaufungen • Germany • ☎ +49 5605 803-0 • 🖷 +49 5605 803-54 • ✉ info@sika.net • www.SIKA.net

Our Production and Sales Range

Flow Measurement Equipment

Axial Turbine Flow Sensor

Flow Switches

Pressure Gauges and Pressure Sensors

Industrial Thermometers

Electronic Digital Thermometer, Dial Thermometer

Measuring Instruments

Temperature Sensors

Calibrators, DKD-Laboratory

Your able partner for measurement and control

SIKA® founded 1901
Dr. Siebert & Kühn GmbH & Co. KG

…measurement…control…calibration

Phone: 0700 CALL SIKA
Phone: +49 5605 803-0
Fax: +49 5605 803-54/60
E-Mail: info@sika.net
Internet: http://www.sika.net
Struthweg 7-9, 34260 Kaufungen
P. O. Box 11 13, 34254 Kaufungen
Germany

Subject to technical modification