

DM01

Compact Magnetic Inductive Flowmeter

- independent of viscosity, density, pressure and temperature
- maintenance free
- practically no pressure loss
- high measuring accuracy
- measuring range span up to 1:50
- smallest dimensions
- frequency and analogue output
- measuring ranges 0,05...2 l/min to 5...250 l/min
- max. pressure: 10 bar, max. temperature: 60 °C



Description:

The electromagnetic compact flow meter DM01 works without moving parts thanks to the electromagnetic measuring principle. It is specially designed for low flow rates and tight installation conditions. Measuring ranges from 0,05 l/min to 250 l/min are available, as are process connections from 3/8" to 1 1/4". A push-pull frequency output is available as an output signal. An analogue 4...20 mA or 0,5...10 V signal is also available as an option.

Advantages:

- no moving parts, therefore the DM01 is maintenance and wear free.
- no components protrude into the measuring tube, thus the pressure loss is kept very small and is not larger than with a pipeline of the same length.
- the measuring is independent of temperature, viscosity, concentration and pressure under normal operating conditions.
- the very wide measuring span of 1:50 makes the DM01 universally applicable.
- foreign bodies carried along in the flow and viscous media interspersed with solids are also unproblematic.
- due to the compact design and the favourable price the DM01 is suitable for serial applications.



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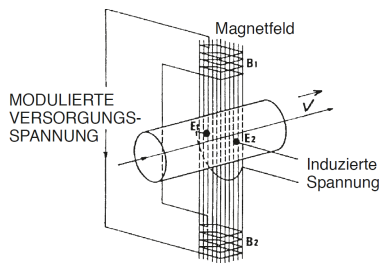
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Operating principle:

Magnetic-inductive flow measurement is based on Faraday's law of induction. The liquid to be measured (electrically conductive) flows perpendicular to a magnetic field. This induces an electrical voltage in the liquid. This voltage is picked up by two electrodes inserted in the measuring tube and further processed by the downstream electronics. The level of the voltage is proportional to the flow velocity.

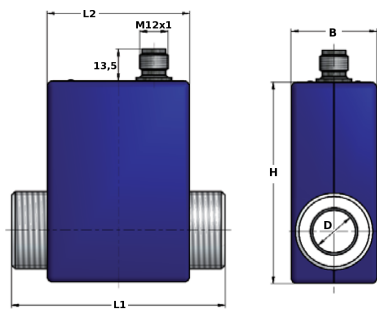


Measuring Ranges and Dimensions:

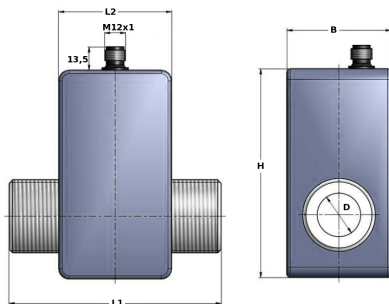
Code	Meas.-range [l/min]	± 0,7 % of m.V, ± 0,3 % of FS* from [l/min]	Max. flow [l/min]	Dimension L1, L2, H, B [mm]	D [mm]
0M	0,05...2	0,1	2,5	85, 59, 89, 36	3
01	0,1...2	0,25	6	85, 59, 89, 36	6
02	0,25...20	1	25	85, 59, 89, 36	8
03	1...50	2,5	60	90, 59, 89, 36	14
05	4...200	5	240	90, 59, 89, 36	18
06	5...250	12,5	300	122, 65, 120, 60	25

Meas.-range [l/min]	Connection G or NPT	Inner-Ø [mm]	Nominal size	K-Factor pulses/l	K-Factor pulses/gallon
0,05...2	3/8" male	3	DN 3	10000	30000
0,1...2	1/2" male	6	DN 6	4000	15000
0,25...20	1/2" male	8	DN 8	1000	3000
1...50	3/4" male	14	DN 15	400	1500
4...200	1" male	18	DN 20	200	750
5...250	1 1/4" male	25	DN 25	80	300

Design measuring range 0M...05 (G 3/8 ... G 1):



Design measuring range 06 (G 1 1/4):



Order Code:

Order number: **DM01. 3. P. 01G. F. 0**

Compact magnetic inductive flow meter

Power supply:

3 = 12...24 VDC (± 10 %)
16...24 VDC (at output 0,5...10 V)

Material meas. tube / electrodes / O-ring:

P = PVDF / stainless steel / EPDM
PH = PVDF / Hastelloy / FKM
(for measuring range 0MG, 01G, 02G only)

Measuring range, connection size:

0MG = 0,05...2 l/min, G 3/8" male (from 0,1 l/min in tol.*)
01G = 0,1...5 l/min, G 1/2" male (from 0,25 l/min in tol.*)
02G = 0,25...20 l/min, G 1/2" male (from 1 l/min in tol.*)
03G = 1...50 l/min, G 3/4" male (from 2,5 l/min in tolerance*)
05G = 4...200 l/min, G 1" male (from 5 l/min in tolerance*)
06G = 5...250 l/min, G 1 1/4" male (from 12,5 l/min in tol.*)
NPT thread on request

Output signal:

F = frequency signal (Push-Pull)
A = frequency signal (Push-Pull) and analogue signal 4...20 mA
V = frequency signal (Push-Pull) and analogue signal 0,5...10 V

Options:

0 = without
9 = please specify in plain text

Accessories:

SM12.: M12-plug connector with PVC cable

length: 2 m, 5 m, 10 m
design: straight/angled
(see accessories, type: SM12)



Technical Data:

Max. pressure: 10 bar (20 °C)
8 bar (40 °C)
6 bar (60 °C)

Media temperature: -10...+60 °C (not freezing)

Ambient temperature: 5...+60 °C

Housing material: ABS

Wetted materials: st. steel 1.4404, PVDF, Hastelloy, EPDM, FKM

***Meas. accuracy: (tolerance)** ± 0,7 % of measured value and ± 0,3 % of full scale

Repeatability: ± 1 %

Reaction time: < 100 ms

Min. conductivity: 20 µS/cm

Flow display: LED green
flashes flow proportional

Power supply: 12...24 VDC (± 10 %)
16...24 VDC (at output 0,5...10 V)

Power consumption: max. 3,6 W

Output signals: frequency signal (Push-Pull)
analogue signal 4...20 mA
analogue signal 0,5...10 V

Electrical Connection: 4-pin round plug M12x1

Protection class IP65 (with screwed on mating connector)