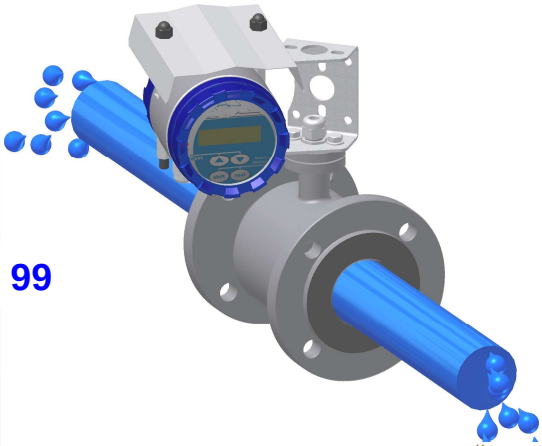
leveltec

Magnetic – inductive flowmeter

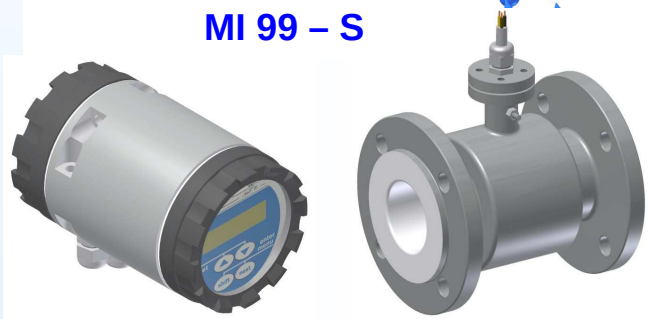
type MI99



MI 99

MI 99 – SMART

MI 99 – S



Flexible and clever assembling system
Robust and resistant cover of sensor and transmitter
Innovative and high-power transmitter for every aplication
Easy and fast-moving change from compact to remote version

Applications

Agriculture
Water treatment
Power, civil engineering
Chemical, food, pharmaceutical industry

Function description

continuous measurement of current flow, positive and negative flow from DN 10 - 1000 mm flanged
DN 10 - 100 mm wafer type.
bi-directional total flow measurement, flow direction indication
flexible possibilities comparing functions with relay output, manual set up of outputs,high-speed signal processing
data-logger: measurement data archiving (set up 5 min to 4 months), PC data output
universal power supply, small power consumption
easy change of control unit without necessity of reprogramming
additional modules according to customers requirements
diagnostics: field current displaying, empty or full pipe detection + next functions

Advantages

Compact and remote, multi-universal, efficient magnetic-inductive flowmeter, **easy and economic** assembly **for every application via special bracket**.

Technical data – details:

The customer assume personal responsibility for reasonable using of sensor and control unit.

Magnetic-inductive sensor:

Nominal sizes	DN 10 ÷ 1000
Connecting cable	compact version MI 99 – C: standard 0,5 m/2x2x0,25 mm remote version MI 99 – S, MI – SMART: standard 8 m/max. 50 m
Control principle	Pulse DC
Excitation coils supply	From the transmitter
Excitation of coils isolation	Class E
Connection	Flanged DIN (ANSI, BS) / hygienic - food DIN 11 851
Maximum Pressure	Standard 1,6 MPa (0,6 / 1,0 / 2,5 / 4,0 MPa)
Protection	Standard IP 67 / NEMA 5 (IP 68 / NEMA 6)
Liner material	Hard + soft rubber DN 10 ÷ DN 1000 / Teflon PTFE DN 10 ÷ DN 500
Liner temperature	Hard + soft rubber -5°C ÷ +90°C / Teflon PTFE -25°C ÷ +130°C
Electrodes	Stainless steel 316Ti, L (Hastelloy / Tantalum / Titanium / Platinum)
Outer casing and flanges	Carbon steel standard (Stainless Steel 304, 321)
Flow tube	Stainless steel 321
External coating	Acrymetal multi component lacguer
Ambient temperature	-20°C ÷ +60°C
Accessories options	Stainless Steel Earthing rings for plastic pipe(DN10÷DN40). The flowmeters from **DN 50÷DN 1000** are equipped of grounding electrode. Function of grounding electrode is same as grounding ring.
Special Options	Stainless Steel, food industry, wafer version

Control unit MI 99 – SMART, MI 99 - C,S:

Medium conductivity	≥ 5 µS/cm, for demi water ≥ 20 µS/cm
Measurement accuracy	0,2 % of reading, while flow is within 10 ÷ 100% of range; (for reference conditions only)
Flow filter	Multi-mode adjustment
Low flow rejection	Adjustable in steps of 0,1%
Flow direction	Bi-directional measurement distinguished by sing, current flow is summarized by total volume counters (S+ for possitive flow and S- for negative flow)
Zero flow	Automatic zero point setting
Empty pipe detection	With adjustable detection period
Data logger	4 months capacity; average 5-minute current flowrates, total volume and operating time by hour/day/month time slices
Real time	Clock and calendar including leap years until 2099; with battery backup
Display	LCD, alphanumeric, 2 x 16 characters, with backlight
Keyboard	4 keys
Analog output	**Active** galvanically separated, 0(4)÷20 mA / 500 Ω, 0÷5 mA / 2 kΩ or generally selected to maximum 30 mA / 300 Ω, *overvoltage protection of III. level*
Frequency output	0÷1 kHz / 0÷100 % from flow rate range, galvanically separated, **passive** - free optocoupler, external load 8,2 – 10 kΩ, voltage supply for external load max. 24VDC+10%
Binary outputs	1÷4 x relays, non-voltage contact, non-inductive load, 30V AC/DC/3A, **modes:** pulse (according to total flow in possitive and negative flow), comparing (4 submodes), status (air intake)
Communication output (must be specificated)	RS 485 (galvanically separated) or RS 232 C, Modbus RTU, ELA protocol for current and stored data transmission to PC, PLC; on request: software for data acquisition Smart MI
Cable outlets	3x PG 11, power supply cable 3 x 1 – 1,5 mm^2 Cu
Power supply	85 ~ 260 VAC/50~60 Hz/10 VA ∧ 9 ~ 36 VDC/10 W ∧ 24 VDC/10 W (± 1V)
Electric protection	MI 99 – C,S: IP 67 (NEMA 5), MI 99 – SMART: IP 65 (NEMA 4)
Ambient temperature	-20º C ÷ +50ºC
Dimensions	MI 99 – C,S: 180 x Ø 115 mm / MI 99 – SMART: 300 x 210 x 100 mm
Weight	MI 99 – C,S: 2,6 kg / MI 99 – SMART: 1,5 kg
Housing material	MI 99 – C,S: aluminium housing // MI 99 – SMART: plastic box
Surface finish	Powered coated (komaxit, anodizing) / -