

Product information

OMNIPLUS-HR1MV

Flow transmitter OMNIPLUS-HR1MV



- Robust industrial-grade flowmeter
- To be used with water or oil (viscosity-stabilized)
- No inlet and outlet sections required
- One analog output (10V or 20 mA switchable)
- Two switching outputs
- IO-Link interface

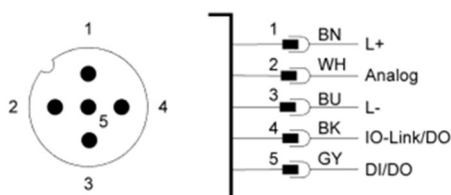
Product description

The flow transmitters of the OMNIPLUS-HR1MV series work according to the principle of the spring-supported piston. A magnetically equipped piston is deflected by the flowing medium against the force of a spring. Deflection is a measure of flow rate. The position of the floating body is recorded outside the flow chamber with the help of magnetic field sensors.

The integrated electronics have an LCD display as well as an analog output and two switching outputs and can be easily configured by the user. In addition, it has an IO-Link interface that allows digital communication with the sensor.

Connection diagram

Connector M12 x 1 pin assignment



Specifications

Measuring principle	Spring-supported piston	
Nominal size	DN 32 / DN 40 / DN 50	
Mechanical connection	Female thread G 1¼ ... G 2 (other connections on request)	
Measurement ranges	2 ... 200 l/min (see table „Ranges“)	
Measurement uncertainty	±3 % F.S. plus viscosity variation	
Media	Water, oils or other viscous media (30 ... 200 mm²/s)	
Compressive strength	PN 200	
Media temperature	-20 ... +85 °C optional -20 ... +150 °C (with spacers)	
Storage temperature	-20 ... +80 °C	
Materials (wetted)	Brass version	Stainl. steel version
	CW614N nickelled	1.4571
	CW614N	1.4404
	1.4310	1.4310
	Hard ferrite	Hart ferrite (PTFE coated)
	NBR (DN 32/40)	FKM (DN 32/40)
Supply voltage	18 ... 30 V DC	
Current consumption	< 130 mA (SIO mode, unloaded outputs)	
IO-Link specification	IO-Link revision	V1.1
	Bit rate	COM2 (38400 bit/s)
	Minimum cycle time	20 ms
	SIO mode	yes
	Port class	A compatible
	Block parameterization	yes
	Data storage	yes
Analog output	Current:	4 ... 20 mA 0 ... 20 mA
	Voltage:	0 ... 10 V 2 ... 10 V 0 ... 5 V 1 ... 5 V 0.5 ... 4.5 V
Switching outputs	2 transistor outputs push-pull, parameterizable as NPN o.C. Short-circuit and reverse polarity resistant I _{out} = 100 mA max per output Configurable on the device as • Limit switch • Frequency output • Pulse output • Signal output for preset counter	
Display	1.2" graphic LCD (transflective) 128 x 64 pixels backlight white, red on alarm message	
Electr. connection	M12x1 circular connector, 5-pin	
Protection class	IP65 / IP67	
Conformity	CE	

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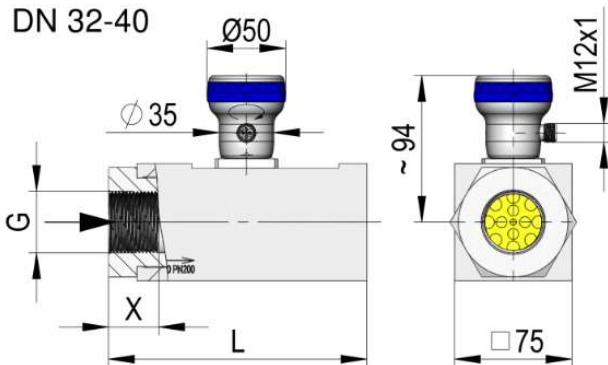
Ranges

Range l/min (oil 30 ... 200 mm ² /s)	Q _{max} l/min
2 ... 12	50
5 ... 25	60
10 ... 40	100
20 ... 60	150
30 ... 100	200
50 ... 150	230
100 ... 200	250

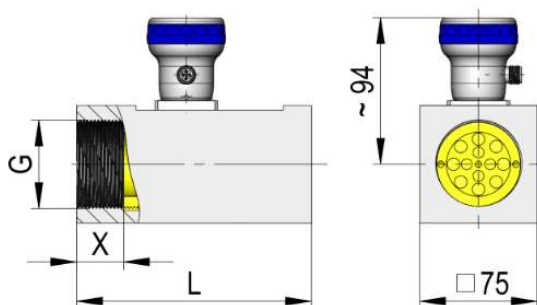
Dimensions and weights

Type OMNIPLUS-	G	X mm	L mm	AF mm	Weight appr. kg
HR1MV-032	G 1 1/4	29	165	70	5.8
HR1MV-040	G 1 1/2	29	165	70	5.5
HR1MV-050	G 2	26	150	-	5.0

DN 32-40



DN 50



Order code

1. 2. 3. 4. 5. 6.
OMNIPLUS-HR1MV - ☐ ☒ ☐ ☐ ☐ ☐

● = standard ○ = option

1. Nominal size	
032	● DN 32
040	● DN 40
050	● DN 50
2. Mechanical connection	
G	● Female thread
3. Housing material	
M	● Brass
K	● Stainless steel
4. Measurement range	
012	● 2 ... 12 l/min
025	● 5 ... 25 l/min
040	● 10 ... 40 l/min
060	● 20 ... 60 l/min
100	● 30 ... 100 l/min
150	● 50 ... 150 l/min
200	● 100 ... 200 l/min
5. Option 1	
H	○ Extended temperature range 150 °C (with spacers)
6. Option 2	
T	○ Electronics fully potted, for increased climatic stress (high humidity and/or strongly changing temperatures)

Accessories

Cable with circular connector M12x1 / 5pole (not included)