



VO-02

Miniature Oval Gear Flowmeter



Features

- / Aluminium or st. steel
- / Small build
- / For ranges from 0,001 l/min
- / Up to 80 bar
- / From 0,5 mPas

Description:

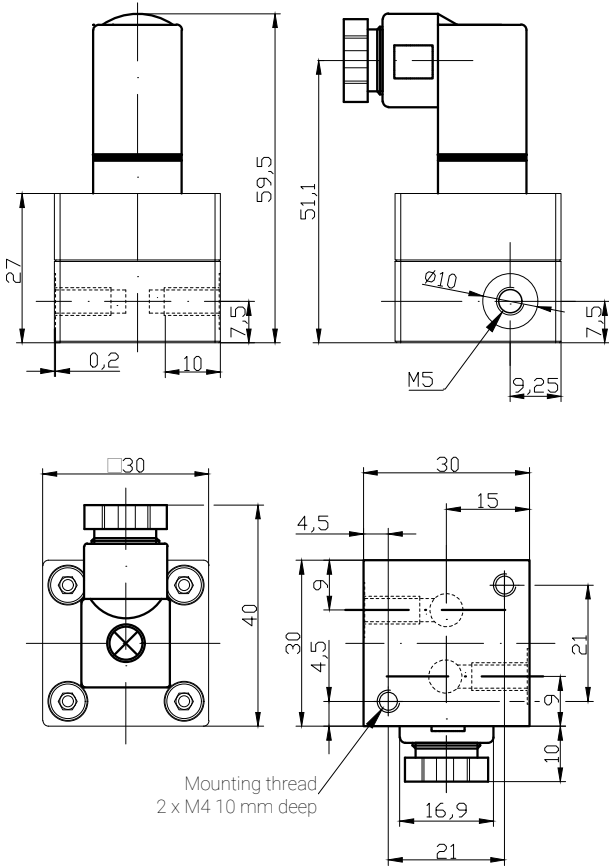
In addition to our proven oval gear flowmeters series VO-01, the new series VO-02 has been designed for tiny ranges (from 0,001 l/min). These meters are very precise and can measure the smallest amounts of fluid. These instruments are using the volume-measuring principle, where the media running through the housing sets gears into motion. Within those gears are magnets, which trigger a Hall-sensor. The sensor then sends out squarewaves, whose frequency is proportional to the flowing media. Whether the meter is used for low or highly viscose media, the volume of the tooth space remains the same, so the meters can be used either way. The VO-02 has a standard PNP impulse output, while the housing is available in either aluminium or stainless steel.

Application:

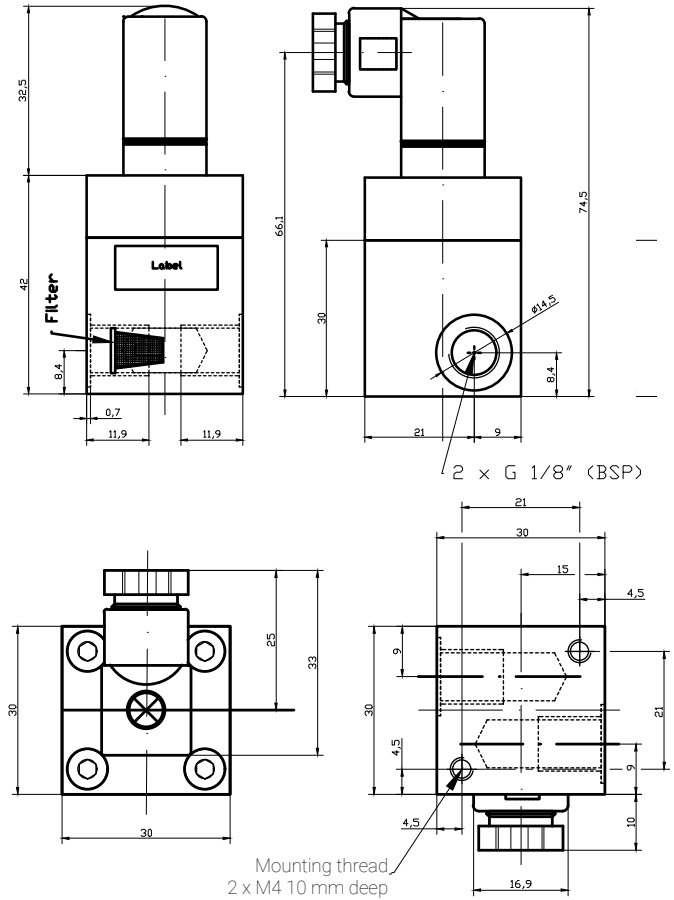
The VO-02 are perfectly designed for measuring the flow of oils. For example mineral- and plant-oils, plant based fuels, diesel and a variety of lubricants.



Flow range up to 0,3 l/min:



Flow range up to 1,75 l/min:

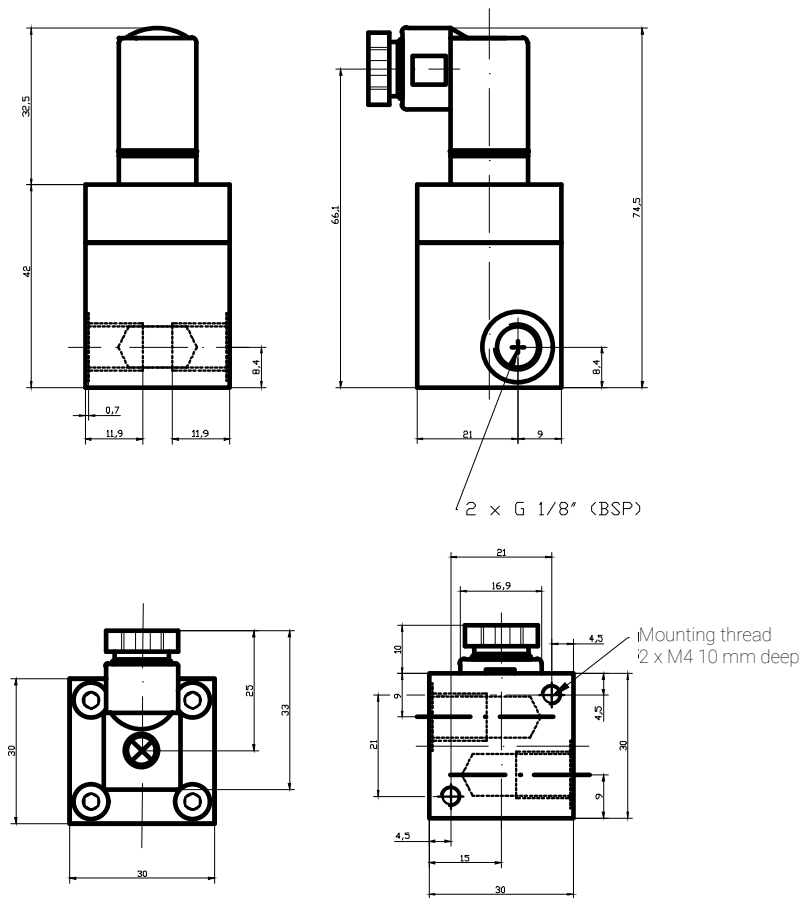


	VO-02.1.1	VO-02.2.1
Material	aluminium	stainless steel
Flow range	0.001...0.3 l/min for v > 3 mPas	0.001...0.3 l/min for v > 5 mPas
Output signal	PNP	PNP
Impulses / litre	14.000 imp/l (v > 3 mPas)	7.000 imp/l (v > 5 mPas)
Pressure range	-0.8...30 bar (20°C)	-0.8...30 bar (20°C)
Burst pressure	50 bar	50 bar
Connection	2 x M5 female	2 x M5 female
Material/rotor/O-ring	Alu-elox. / PPS / FPM 75.5	SS 316L / PPS / FPM 75.5
Pivot/bearing	SS 316 L / 1.4435	SS 316 L / 1.4435
Weight	70 g	165 g
Viscosity	from 0.7 mPas	from 0.7 mPas
max. Mediatemp.	-20...+100°C	-20...+110°C
Accuracy	± 1% at v > 3 mPas	± 1% at v > 5 mPas
Repeatability	± 0.5% (for constant service conditions)	± 0.5% (for constant service conditions)
Mounting position	any	any
Supply	5...24 VDC	5...24 VDC
max. Current	25 mA	15 mA

	VO-02.1.2	VO-02.2.2
Material	aluminium	stainless steel
Flow range	0.005...1.75 l/min for v > 5 mPas	0.005...1.75 l/min for v > 5 mPas
Output signal	PNP	PNP
Impulses / litre	3.600 imp/l (20°C)	3.600 imp/l (v > 3 mPas)
Pressure range	-0.8...30 bar (20°C)	-0.8...30 bar (20°C)
Burst pressure	50 bar	50 bar
Connection	2 x G 1/8" female	2 x G 1/8" female
Material/rotor/O-ring	Alu-elox. / PPS / FPM 75.5	1.4404 / PPS / FPM 75.5
Pivot/bearing	SS 316 L / PTFE	1.4404 / PPS / PTFE
Weight	80 g	80 g
Viscosity	from 0.5 mPas	from 0.5 mPas
max. Mediatemp.	-20...+100°C	-20...+110°C
Accuracy	± 1% at v > 3 mPas	± 1% from 5 mPas
Repeatability	± 0.5% (for constant service conditions)	± 0.5% (for constant service conditions)
Mounting position	any	any
Supply	5...24 VDC	5...24 VDC
max. Current	15 mA	25 mA



Flow range up to 5,0 l/min:



	VO-02.1.3	VO-02.2.3
Material	aluminium	stainless steel
Flow range	0.07..5.0 l/min for $v = 5$ mPas	0.07..5.0 l/min for $v = 3$ mPas
Output signal	PNP	PNP
Impulses / litre	1.800 imp/l ($v > 3$ mPas)	900 imp/l
Pressure range	-0.8...30 bar (20°C)	-0.8...60 bar (20°C)
Burst pressure	50 bar	80 bar
Connection	2 x G 1/8" female	2 x G 1/8" female
Material/rotor/O-ring	Alu. elox. / PPS / FKM	1.4435 / PPS / FKM
Pivot/bearing	SS 316 L / PPS, PTFE	1.4435
Weight	110 g	110 g
Viscosity	from 0.5 mPas	from 0.7 mPas
max. Mediatemp.	-40...+90°C	-20...+110°C
Accuracy	$\pm 1\%$ at $v \geq 5$ mPas	$\pm 1\%$ at $v \geq 5$ mPas
Repeatability	$\pm 0.5\%$ (for constant service conditions)	$\pm 0.5\%$ (for constant service conditions)
Mounting position	any	any
Supply	5...24 VDC	5...24 VDC
max. Current	15 mA	15 mA

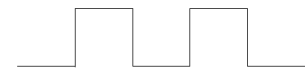
Electrical Connection:

Pin arrangement /

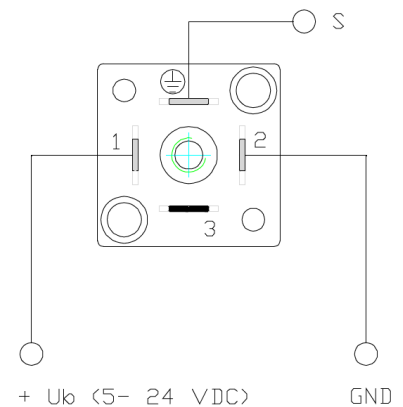
Pin 1: 4.5...24VDC

Pin 2: GND (0V)

Mass-Pin: Signal



Signal out PNP



Ordering Codes:

Order number

VO-02. 1. 2

VO-02 Miniature Oval Gear Flowmeter

Material /

1 = aluminium

2 = stainless steel

Measuring range /

1 = 0.001...0.3 l/min and 7000 imp/l

2 = 0.005...1.75 l/min and 3600 imp/l

3 = 0.07...5 l/min and 1800 imp/l

For use with clean liquids only.

It is essential to ensure that the medium is filtered (approx. 5 μ m). Metal/magnetic filtering is also ideal.

Never drive the device with compressed air !

Check the resistance of the used materials !

