



PVDF body version



AISI316 body version

**DESCRIPTION**

The 1000 series turbine flowmeter is designed to give high performance and competitive pricing with 7 flow ranges from 0.05 to 30 l/min. Its choice of body materials makes this the ideal choice for the metering of aggressive chemicals, including ultra-pure water. The standard inlet is a 1/2" BSPF although for OEM use alternatives are available. The bearings are made of sapphire for long life and reliability, the body is either PVDF or AISI316 stainless steel.

At the heart of the meter is a precision turbine that rotates freely on robust sapphire bearings and contains over-moulded magnets that are detected through the chamber wall by a Hall effect detector. The output is a stream of NPN pulses that readily interfaces with most electronic display or recording devices, such as Pulsite® Solo. The combination of materials and technology ensures a long life product with reliable operation throughout. There are two temperature options 125°C or 60°C. The 60°C unit is fitted with two LEDs to monitor the power and pulse output. Both NPN and PNP transistor outputs are available on each flow meter.

**GENERAL SPECIFICATIONS**

Range	min.0,05 max 30 l/min
Linearity	±1% to 2% F.S.
Repeatability	±0,1%
Connections	1/2"BSP female
Body materials	PVDF or AISI316
Rotor materials	PVDF with over-moulded protected magnets
Bearings materials	Sapphire
O.ring materials	Viton®; EPDM; NBR; Silicone
Pressure	10 bar; option 40 bar (only AISI316 body version)
Temperature	-25°C... 125°C; (max 60°C for PNP+NPN 2 leds version)
Output	NPN pulses; option PNP with 2 leds
Connector type	M12, option 2 m cable for 40 bar version
Power supply	4,5...24Vdc
Protection grade	IP65
Weight	PVDF 0,085 Kg; AISI316 0,245 Kg

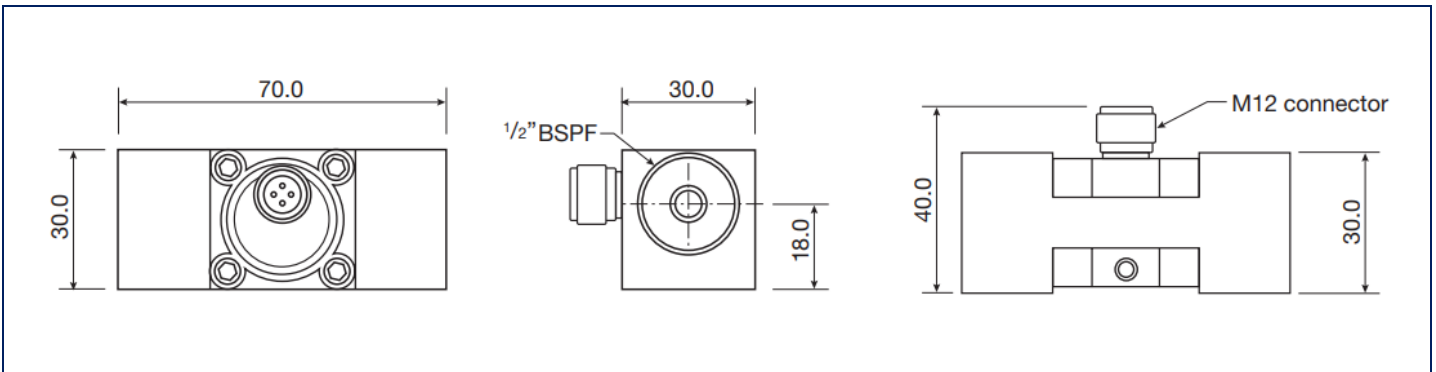
**IDEAL FOR**

- Liquid batching
- Chemical dosing
- Engine test
- Laboratory tests
- Cooling equipment
- Active flow alarms
- Semiconductor plant

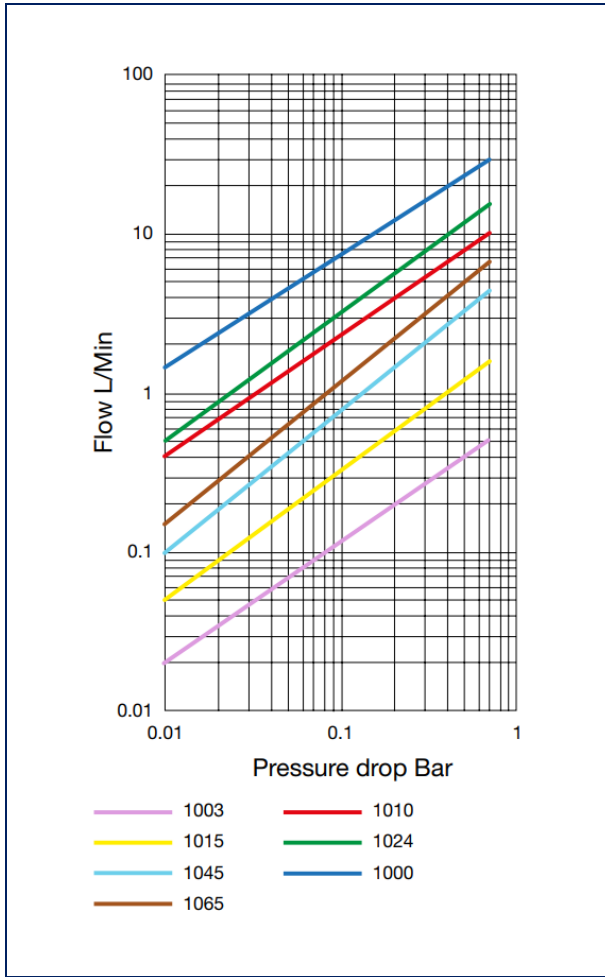
**THECNICAL SPECIFICATIONS**

Model	Orifice	Range l/min	Range l/h	Linearity	Frequency	K factor
1003	1 mm	0,05...0,5 l/min	3...30 l/h	± 2% F.S.	142 Hz	17000
1015	2 mm	0,12...1,5 l/min	7,2...90 l/h	± 2% F.S.	175 Hz	7000
1045	3 mm	0,20...4,5 l/min	12...270 l/h	± 1,5% F.S.	260 Hz	3500
1065	4 mm	0,25...6,5 l/min	15...390 l/h	± 1,5% F.S.	230 Hz	2100
1010	5,5 mm	0,30...10 l/min	18...600 l/h	± 1% F.S.	235 Hz	1420
1024	6 mm	0,50...15 l/min	30...900 l/h	± 1% F.S.	245 Hz	980
1000	7 mm	2...30 l/min	120...1800 l/h	± 1% F.S.	360 Hz	720

**DRAWINGS AND DIMENSIONS**



**PRESSURE DROP CHART**



**ORDER CODES**

<b>1003</b>	0,05...0,5 l/min (3...30 l/h)
<b>1015</b>	0,12...1,5 l/min (7,2...90 l/h)
<b>1045</b>	0,20...4,5 l/min (12...270 l/h)
<b>1065</b>	0,25...6,5 l/min (15...390 l/h)
<b>1010</b>	0,30...10 l/min (18...600 l/h)
<b>1024</b>	0,50...15 l/min (30...900 l/h)
<b>1000</b>	2...30 l/min (120...1800 l/h)
<b>O.RING</b>	
<b>V</b>	Viton® (standard)
<b>E</b>	EPDM
<b>N</b>	Nitrile
<b>S</b>	Silicone
<b>K</b>	Kalrex®
<b>OUTPUT</b>	
<b>0</b>	NPN (Temp. max 125°C) / M12 connector
<b>2</b>	NPN + PNP (Temp. max 60°C) with 2 leds / M12 connector
<b>MATERIAL</b>	
<b>P</b>	PVDF
<b>S</b>	AISI316 Stainless Steel
<b>CALIBRATION</b>	
<b>U</b>	Uncalibrated (standard)
<b>O</b>	With calibration report
<b>OPTIONS</b>	
<b>40 bar</b>	40 bar max only with AISI316 version and only with 2 m cable output
<b>FL</b>	2 m cable output (instead of M12 connector)

**1015-VOP-U** = 0,12-1,5 l/min, o.ring Viton, out NPN, M12 connector, PVDF body, no calibration

**ELECTRICAL CONNECTIONS**

**Standard version with M12 version**

	<b>1</b>	+Vdc
	<b>2</b>	PNP
	<b>3</b>	-Vdc
	<b>4</b>	NPN

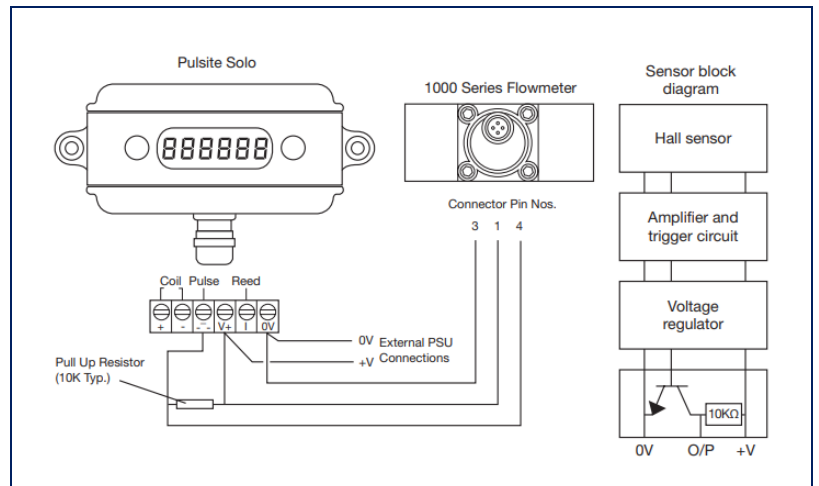
**standard version with 1,8 cable and 3 lead wires**

	<b>Red</b>	+Vdc
	<b>Blue</b>	NPN
	<b>Screen</b>	-Vdc

It is recommended that all signal cables are screened and run separately to power lines and switched inductive loads and are located well away from inverters and other noisy apparatus. Always use sound wiring practice. Hall effect sensors (NPN or PNP) require an external pull-up resistor connected between the output and a suitable power supply to attain a pulse.

Do not use compressed air to test the sensor.

**WIRING EXAMPLE**



Wiring example with a digital flow-totalizer indicator "Pulsite Solo" (to order separately)