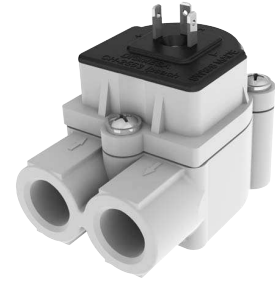


## PBT GENERAL PURPOSE FLOWMETER Serie FHK-1/4-PBT

Part number: 937-15XX/F

The FHK Flowmeter is a general-purpose device; its working range can be individually defined according to its nozzle size. It is employed for measuring, regulating or metering and guarantees most precise measurement of fluid quantities. In addition, a pulse generator integrated into the flowmeter allows an universal use.

**Specific applications:** Inlet and outlet on the same side, compact design, great working range, depending on the nozzle diameter.



### Material:

Housing: PBT 35%GF (Arnite)  
 Bearing pin: Inox 1.4305 (18/8)  
 Nozzel: Ø 1.0, 1.2, 2.0, 2.5mm  
 PPS 40%GF (Ryton)  
 Nozzel: Ø 5.6mm like housing  
 O-ring: MVQ (Silikon)  
 Turbine: PVDF  
 Magnets: Keramik Sr Fe O  
 (in contact with the medium)  
 Screw: PT-screws  
 (Phillips cross recessed)

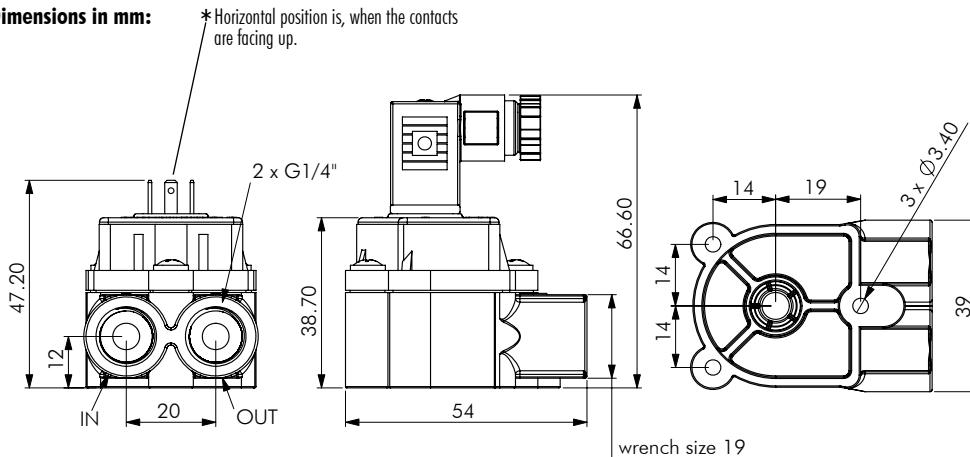
### Technical data:

Flow rate: 0.027 - 8.30 l/min depending on the nozzle diameter  
 Measuring accuracy: +/- 2.0%  
 Repetition: < +/- 0.25%  
 Temperature range: -10°C to +65°C  
 14°F to 149°F  
 Pressure range: 20 bar at 20°C  
 290 psi /68°F  
 Mounting position: Horizontal \*  
 Nozzle size: Ø 1.0, 1.2, 2.0, 2.5, 5.6mm

### Electrical connection ratings:

Power supply: +3.8 to +24 VDC  
 Consumption: < 8 mA  
 Signal connection: Open collector NPN or PNP  
 Signal voltage: 0 VDC GND  
 (saturation < 0.7 V)  
 Signal load: max. 20 mA  
 Leakage current: max. 10 µA  
 Connections: 3-pin AMP 2.8 x 0.8 mm  
 Signal: Square-wave output  
 Duty Cycle: ~ 50%

### Dimensions in mm:



Nozzle size	Pulses/litre	g/pulse	min. flow rate in litres/min at Linear start	max. flow rate in litres/min	Pressure loss
Ø 1.00 mm	2223	0.4499	0.0274	0.5867	1.00
Ø 1.20 mm	1787	0.5595	0.0315	0.7777	1.00
Ø 2.00 mm	1013	0.9869	0.1109	2.3268	1.00
Ø 2.50 mm	754	1.3252	0.0673	2.7421	0.60
Ø 5.60 mm	256	3.9100	0.1802	8.3080	0.90

The values specified must be considered as approximate values.

The number of pulses per litre may differ depending on medium and installation.

We recommend to calibrate the number of pulses per litre in line with the complete installation.

### MEASUREMENT TIPS

- Ensure that there is no fast-pulsatory movement of the media
- Ensure that there are no reverse pressure surges
- Ensure that there is no air in the system
- Note the mounting position of the flowmeter
- Min/max flow should be in the linear range of the selected flowmeter
- Clean the system at appropriate intervals
- Avoid electrical current peaks
- Incorrect cabling of power supply +, signal and ground will destroy the flowmeter
- Do not mechanically load electrical contacts
- Avoid moisture on the electrical contacts
- Avoid stray pick-up via the cable (Do not lay cables in parallel with high current loads)



## PVDF CHEMIE FLOWMETER Serie FHK-1/2-PVDF

Part number 937-13XX/C01X

The FHK Flowmeter is a chemical purpose device; its working range can be individually defined according to its nozzle size. It is employed for measuring, regulating or metering and guarantees most precise measurement of fluid quantities. In addition, a pulse generator integrated into the flowmeter allows an universal use.

**Specific applications:** Able to withstand high temperatures, good resistance to chemicals. Compact design, great working range, depending on the nozzle diameter. **Employed in the semiconductor (wafer polishing) sector due to the high purity of materials used.**



### Material:

Housing:	PVDF
Bearing pin:	PCTFE
Nozzle:	PTFE
O-ring:	FPM (Viton) EPDM / Kalrez on request
Turbine:	PVDF 4 Magnets 2 Magnets on request
Magnets:	Keramik Sr Fe O (not in contact with the medium)
Screw:	Inox A2 PT-screws (Phillips cross recessed)

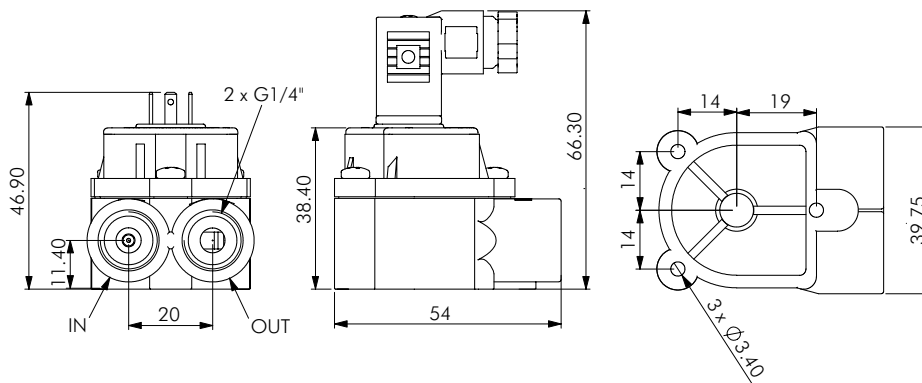
### Technical data:

Flow rate:	0.048 - 5 l/min depending on the nozzle diameter
Measuring accuracy:	+/- 2.0%
Repetition:	< +/- 0.25%
Temperature range:	-10°C to +100°C 14°F to 212°F
Pressure range:	20 bar at 20°C 290 psi /68°F
Mounting position:	Horizontal recommended
Nozzle size:	Ø 1.0, 1.2, 1.5, 2.0, 2.5, 3.3 mm

### Electrical connection ratings:

Power supply:	4.5–24 VDC
Consumption:	5 mA to max.13 mA
Signal connection:	Open collector NPN
Signal voltage:	0 V GND
Signal load:	max. 20 mA
Leakage current:	max. 10 µA
Connections:	3-pin AMP 2.8 x 0.8 mm
Signal:	Square-wave output
Duty Cycle:	50% / ± 5%

### Dimensions in mm:



### MEASUREMENT TIPS

- Ensure that there is no fast-pulsatory movement of the media
- Ensure that there are no reverse pressure surges
- Ensure that there is no air in the system
- Note the mounting position of the flowmeter
- Min/max flow should be in the linear range of the selected flowmeter
- Clean the system at appropriate intervals
- Avoid electrical current peaks
- Incorrect cabling of power supply +, signal and ground will destroy the flowmeter
- Do not mechanically load electrical contacts
- Avoid moisture on the electrical contacts
- Avoid stray pick-up via the cable (Do not lay cables in parallel with high current loads)

Nozzle size	Pulses/litre	g/pulse	min. flow rate in litres/min at Linear start	max. flow rate in litres/min	Pressure loss
Ø 1.00 mm	4962	0.2015	0.0551	0.4789	1.00
Ø 1.20 mm	3752	0.2665	0.0480	0.8273	1.00
Ø 1.50 mm	3020	0.3311	0.0784	1.1325	1.00
Ø 2.00 mm	2078	0.4813	0.1087	2.2155	1.00
Ø 2.50 mm	1443	0.6931	0.0741	2.7640	0.66
Ø 3.30 mm	1033	0.9674	0.2571	5.0044	1.00

The values specified must be considered as approximate values.

The number of pulses per litre may differ depending on medium and installation.

We recommend to calibrate the number of pulses per litre in line with the complete installation.