

Turbine Flowmeter

DFFK



OVERVIEW

Operation

The universal Classicline DFF or DFFK is used in practically every imaginable field, such as in the foodstuffs, chemical, industrial and semiconductor sectors. The two versions differ in the position of their connections: In the DFF, they are side by side while in the DFFK, they are opposite each other. This flow sensor is available in many different configurations and can easily be adapted to meet special customer requirements. The newly developed ceramic bearing is also suitable for applications requiring continuous day-and-night operation.

Application

- Chemistry
- Semiconductor industry
- Beverage
- Grease
- Fuels
- Inks, pastes

Features

- Simple Installation
- High performance
- Easy installation
- Long term stability
- Compact design

OPERATING DATA

Working Pressure	20 Bar max.
Temperature Limit	-10°C...+65°C
Accuracy	±2,0%
Repeatability	±0,25%
Continuous Operation	<500 rpm
Mounting position	Horizontal
Nozzle Size	1-10 mm

MEASURING RANGES

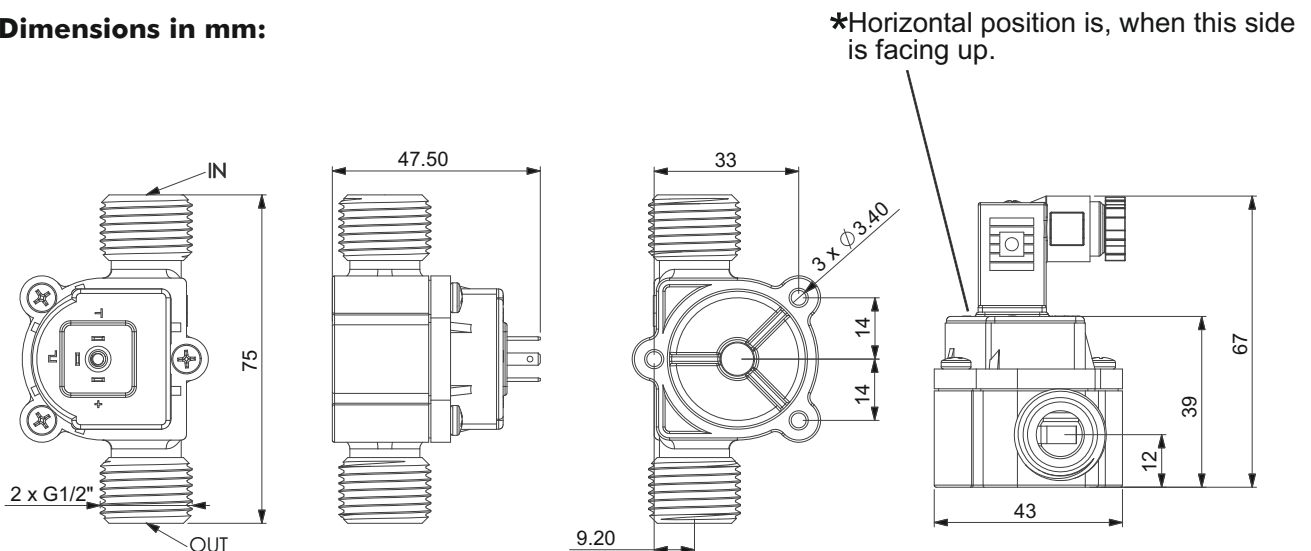
Flow Rate Ranges		
Nozzle	Min.	Max.
1.0 mm	0.041 l/min	0.56 l/min
1.2 mm	0.050 l/min	0.82 l/min
2.0 mm	0.091 l/min	2.40 l/min
2.5 mm	0.150 l/min	3.74 l/min
3.0 mm	0.102 l/min	5.63 l/min
4.0 mm	0.123 l/min	8.38 l/min
5.6 mm	0.308 l/min	9.26 l/min
7.0 mm	1.40 l/min	11.50 l/min
10.0 mm	3.00 l/min	29.23 l/min

MATERIALS

Housing	PBT, PPS, PA (Fiberglass Reinforcement), PVDF
Bearing Pin	Inox 1.4305, Inox 1.4571, PTFE, Ceramic Aluminum oxide on request
Nozzle	1,0...2,5 PPS (DFFK chemistry mat. PTFE), 3,0...4,0 Inox 1.4305 (DFFK chemistry mat. PTFE), 5.6...10.0 PBT
O-ring	FPM (viton), EPDM, Viton, Kalrez
Turbine	PVDF
Screw	PT-screw

TECHNICAL DRAWINGS AND DIMENSIONS

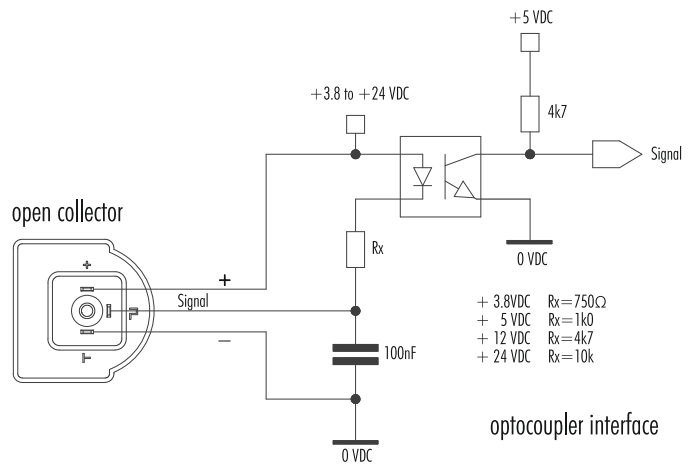
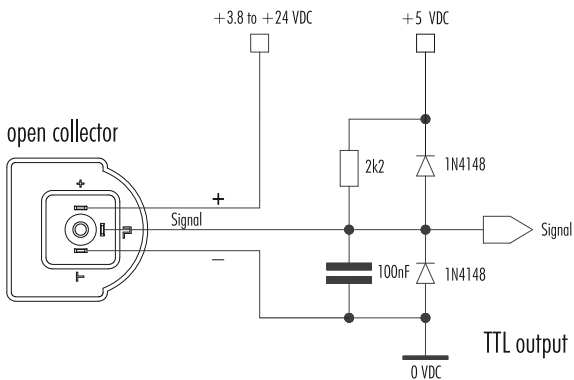
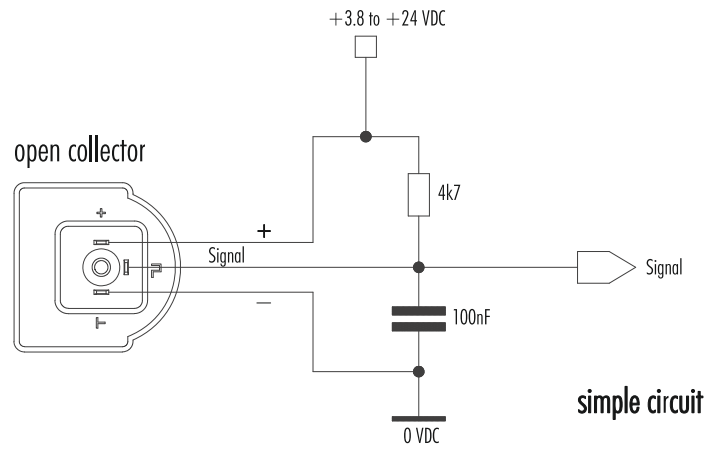
Dimensions in mm:



ELECTRICAL DATA

Power Supply	+3,8 to +24 VDC
Consumption	<8 mA
Signal Connection	Open collector NPN
Signal Voltage	0 VDC GND (saturation <0.7 V)
Signal Load	Max. 20 mA
Leakage Current	Max. 10 μ A
Connections	3 Pin-AMP, REsistor 1.2k, cable, thermo
Signal	Square-wave output
Duty Cycle	~50%

WIRING



ORDERING

DFFK					
Type	C				
	S				
	F				
	Ch				
	H				
Housing Material	BT				
	PS				
	PA				
	PV				
Process Connection	1				
	2				
	3				
	4				
	5				
O-ring	S				
	E				
	V				
	K				
Turbine	1				
	2				
	3				
Bearing Pin	1				
	2				
	3				
	4				
Nozzle					XXX
Electrical Connection					

Turbine Flowmeter
Compact
Standard
Flat
Chemistry
HighFlow
PBT (fiberglass reinforcement)
PPS (fiberglass reinforcement)
PA (fiberglass reinforcement)
PVDF (fiberglass reinforcement)
G 1/4" (max nozzle size Ø 5.6 mm)
John Guest 3/8" f/f (max nozzle size Ø 5.6 mm)
Hose Nipple Ø 12.0 mm / 11. mm m/m(fixed nozzle size Ø 7.0 mm)
G 1/2" (fixed nozzle size Ø 10.0 mm)
Cola BSF 1/2" (max nozzle size Ø 5.6 mm)
Silicone
EPDM
Viton
Kalrez (Only for chemistry)
PVDF FT 36 2M (wetted magnets)
PVDF Chem. 2M (sealed magnets)
PVDF Chem. 4M (sealed magnets)
Inox 1.4305
Inox 1.4571
PTFE
Ceramic
Please specify, example : 1.0 mm = 010 (look at the flow rate table)
1 Pancon Mas-Con
2 3 pin amp
3 Resistor 1.2k
4 3 pin amp LED
5 3 pin amp PNP
6 3 pin amp PNP/LED
7 Cable
8 Empty detection
9 Thermo