

FLOWSTAT TURBINE FLOW SENSOR

Perfect monitoring solution for chillers/cooling circuits, HVAC, medical equipment, batching and industrial process control applications.



TECHNICAL SPECIFICATIONS

Measuring Accuracy
±2% of full scale

Repeatability
±0.5% of full scale

Flow Measuring Range
1/2" porting: 0.5-15 GPM
(2-60 LPM)
3/4" - 1" porting: 1.5-50 GPM
(60-200 LPM)

Turn Down Ratio
10:1

Fluid Temperature Range
20-225°F (-7° to 107°)

Maximum Operating Pressure
to 200 PSIG (14 bar)

With Optional Stainless Steel Cover:
to 500 PSIG (34 bar)

Filtration Requirements
150 Micron filter recommended

Calibration Fluid
Water only

BENEFITS

Choice of Three Port Sizes

Select from 1/2", 3/4" or 1" NPT porting to meet system requirements.

Encapsulated Circuitry

Withstands the harshest environments.

Several Outputs Available

The standard interface is a 2-wire, 4-20mA current loop. Sensor signal may be transmitted on a low cost wire without degradation. Pulse, relay and 0-5 VDC are also available.*Fluid temp output also available.

Connects Directly to your Flow Monitoring Instruments

Can be connected directly to analog acquisition cards, chart recorders or other monitoring instruments, without external signal conditioning.

Simply Plumb and Apply Power

Comes factory calibrated to your flow range specifications.

MATERIALS OF CONSTRUCTION

Wetted Components

Component	Materials
Casing	Stainless Steel 316
Cover	Stainless Steel 316 (optional clear polycarbonate)
Seal	Buna-N® (other options available)
Turbine	Acetal Copolymer
Bearing	PEEK (Polyetheretherketone)
Shaft	316 Stainless Steel

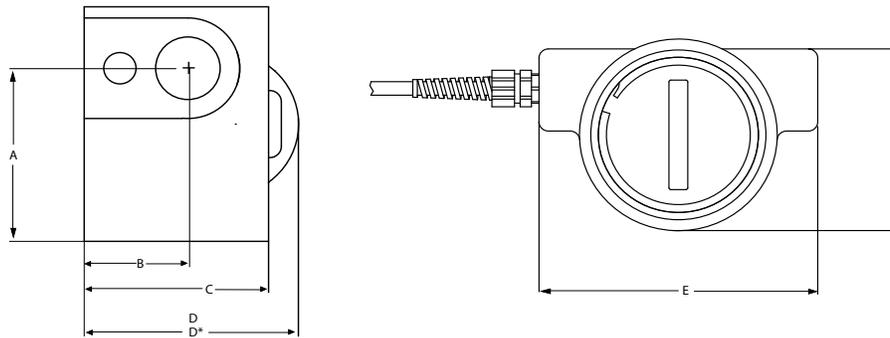
Non-Wetted Components

Component	Materials
Encapsulant	Epoxy
Strain Relief	Nylon
Lock Ring	Stainless Steel
Wire Insulation	High-Temperature PVC

Buna-N is a registered trademark of Chemische Werke Huls.

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MECHANICAL DIMENSIONS

DIM	1/2" NPTF	3/4" NPTF - 1" NPTF
A	1.94" (49mm)	3.06" (78mm)
B	1.13" (29mm)	1.33" (34mm)
C	2.00" (51mm)	2.46" (62mm)
D	2.45" (62mm)	2.78" (71mm)
D*	2.45" (62mm)	2.88" (73mm)
E	3.70" (94mm)	5.25" (133mm)
F	2.63" (67mm)	3.80" (97mm)

*Dimensions with clear polycarbonate cover installed.

ELECTRONIC SPECIFICATIONS

4-20 mA version		0-5 VDC version	
Power Requirements	12-35 VDC, loop powered	Power Requirements	12-35 VDC
Load driving capacity	Use the following equation to calculate maximum load resistance: Max Loop Load (Ω) = 50 (Power supply volts - 12).	Maximum Current	25 mA DC
Maximum Transmission Distance	Limited only by wire resistance & supply voltage	Minimum Load resistance	1000 Ohms
Response time	2 seconds to 90% (step change)	Maximum Transmission Distance	200 feet recommended
Resolution	Infinite	Resolution	Infinite
Over-current limit	Self limiting at 35 mA	Response time	< 5 seconds to 90% (step change)
Other protection	Reverse polarity		
Relay Output		Pulse Output Version	
Power Requirements	12-35 VDC	Power Requirements	12-24 VDC
Maximum Transmission Distance	200 feet recommended	Response Time	<100 mS
Switch Contact	Form C, 5A max 120 or 240 VAC	Maximum Current	25 mA DC
Hysteresis	5% of set point maximum	Maximum Transmission Distance	200 feet recommended
Set Point Repeatability	1% of full scale	Minimum Load Resistance	1000 Ohms
		Protection	Short circuit & reverse polarity
		K-Factor	1/2" port \approx 200 pulses/gallons 3/4" & 1" ports \approx 60 pulses/gallons

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PART NUMBER GUIDE

OUTPUT*

- Current = C
- Pulse = P
- Relay = R
- Voltage = V
- Voltage & Temp = T

*Switch option & temperature output available on a custom basis.

ROTOR COVER

- 316 Stainless Steel to 500 psi = S
- Clear Polycarbonate to 200 psi = C

PORT SIZE RANGE

- 1/2" NPT = B
- 3/4" NPT = C
- 1" NPT = D

MAX. FLOW RATE: GPM

1/2" NPT:

- 5 GPM up to 15 GPM Max. =
- flow rates available

3/4" & 1" NPT:

- 15 GPM up to 50 GPM Max. =
- flow rates available

Important: Choose a maximum flow rate. For 1/2" NPT: 5-15 maximum GPM. For 3/4" and 1" NPT: 15-50 maximum GPM. Minimum flow rate will be 10% of maximum flow rate. Example: If your maximum flow rate is 8 GPM, the minimum flow rate would be .8 (8 x .1 = .8) Thus, the correct flow range would be .8-8.0 GPM.

OPTIONS

- Control Cover = C
- Electronic Disconnect = D
- Low Flow Option** = L F

** The low flow option will accommodate full-scale flow rates from 2.5 - 4.5 GPM for 1/2" only.

COVER SEAL

- Buna-N (Standard) = B
- EPR (Optional) = E
- FKM (Optional) = V

TYPICAL PRESSURE DIFFERENTIALS

