

FLS F3.20

HIGH PRESSURE PADDLEWHEEL FLOW SENSOR



FLS F3.20 is a paddlewheel flow sensor suitable for system at high pressure and at critical temperature. F3.20 is designed for use with every kind of solid-free liquids in compliance with chemical compatibilities of wetted materials. First quality materials used, as SS for body/shaft and Halar® for rotor, grant high mechanical performances and an appreciated reliability. Sensor needs a very limited maintenance and, in those cases, it's easy to perform due to a 4 screws system and to a graphite flat gasket. F3.20 sensor is available for connection to FLS monitors and for PLC connection directly. SS weld on adapter is available for sensor installation on pipe range from 1 ½" to 8" (DN40 to DN200).

APPLICATIONS

- Heat Exchangers
- Reverse osmosis
- Cooling systems
- HVAC systems (heating, ventilation and air conditioning)
- Boiler feedwater

MAIN FEATURES

- Working range up to 110 bar (1600 PSI) and up to 248°F (120 °C)
- Wide operating range (from 0,15 to 8 m/s)
- Just one sensor and one fitting for a wide range of pipe dimensions (from 1 ½" to 8")
- High linearity and repeatability
- Limited maintenance need and easy execution
- Available special version for direct connection to PLC



TECHNICAL DATA

General

- Pipe Size Range: DN40 to DN200 (0.5 to 8 in). Refer to Installation Fittings section for more details
- Flow Rate Range: 0.15 to 8 m/s (0.5 to 25 ft./s)
- Linearity: $\pm 0.75\%$ of full scale
- Repeatability: $\pm 0.5\%$ of full scale
- Pressure: 110 bar (1600 psi)
- Temperature: 120 °C (248 °F)
- Minimum Reynolds Number Required: 4500
- Enclosure: IP68
- Wetted Materials:
 - sensor Body: 316L SS
 - sealing system: graphite flat gasket
 - rotor: ECTFE (Halar®)
 - shaft: 316L SS

Specific for F3.20.H

- Supply voltage: 5 to 24 VDC regulated
- Supply current: < 30 mA @ 24 VDC
- Output signal:
 - square wave
 - frequency: 45 Hz per m/s nominal (13.7 Hz per ft/s nominal)
 - output type: transistor NPN open collector
 - output current: 10 mA max
- Cable length: 8 m (26.4 ft) standard, 300 m (990 ft) maximum

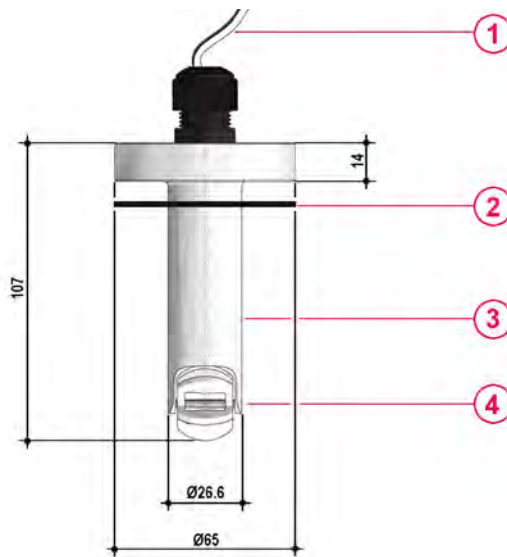
Specific for F3.20.P

- Supply voltage: 12 to 24 VDC regulated
- Supply current: < 30 mA @ 24 VCC
- Output signal:
 - square wave
 - output frequency: 45 Hz per m/s nominal (13.7 Hz per ft/s nominal)
 - output type: Push - Pull (digital input NPN or PNP)
 - output current: IOut max < 20 mA
- Cable length: 8 m (26.4 ft) standard, 300 m (990 ft) maximum

Standards & Approvals

- Manufactured under ISO 9001
- Manufactured under ISO 14001
- CE
- RoHS Compliant
- EAC

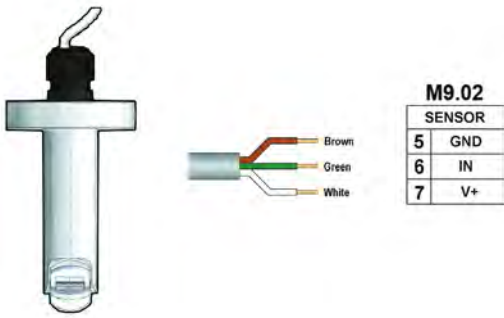
DIMENSIONS



- 1 Electrical cable: 8 m. (26.4 ft) standard
- 2 Graphite flat gasket
- 3 316L SS sensor body
- 4 ECTFE Halar® Open-cell rotor and 316L SS Shaft

WIRING CONNECTIONS

F3.20.H IP68 Sensor wiring connection



Wiring connections to the other monitors

	M9.00	M9.50	M9.03		M9.07	M9.08	M9.10
GND	7	30	30	16	16	16	37
IN	8	28	28	14	14	14	36
V+	9	27	27	13	13	13	35

ORDERING DATA

F3.20.X.01 High Pressure Paddlewheel Flow Sensor							
Part No.	Version	Power supply	Length	Main Wetted Materials	Enclosure	Flow Rate Range	Weight (gr.)
F3.20.H.01	Hall	5- 24 VDC	107 mm	316L SS	IP 68	0.15 to 8 m/s (0.5 to 25 ft./s)	600
F3.20.P.01	Push-Pull	12- 24 VDC	107 mm	316L SS	IP 68	0.15 to 8 m/s (0.5 to 25 ft./s)	600