

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 flat gasket in graphite. 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 needed 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: AISI316L

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

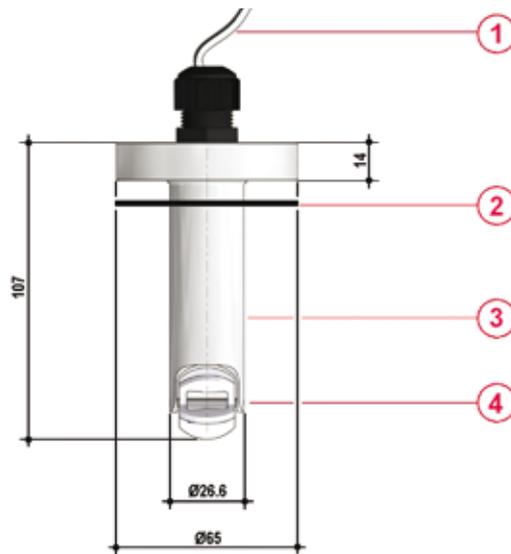
Specific for F3.20.P

- 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
- GOST R

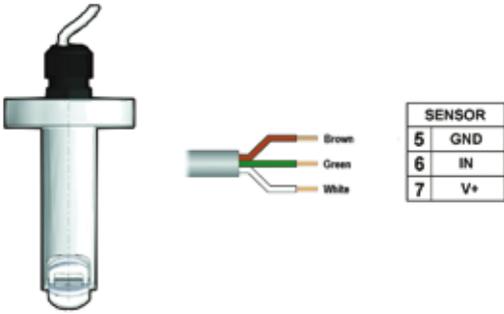
DIMENSIONS



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

WIRING CONNECTIONS

F3.20 IP68 Sensor wiring connection



ORDERING DATA

F3.20.X.01 High Pressure Paddlewheel Flow Sensors							
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