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 maintanance 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: ± 0.75% of full scale
• Repeatability: ± 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

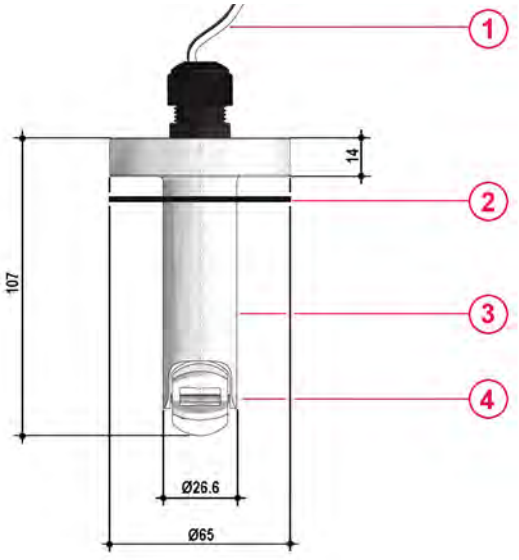
Specific for F3.20.P

• 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

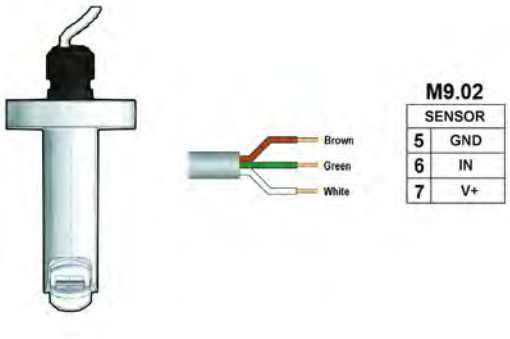
DIMENSIONS



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



M9.02

SENSOR	
5	GND
6	IN
7	V+

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