

FLS F6.30

PADDLEWHEEL FLOW TRANSMITTER



The new FLS F6.30 is a blind transmitter based on paddlewheel. It can be applied for the measurement of every kind of solid-free liquids. The F6.30 can provides different output options using a 4-20 mA and a Solid State Relay. Analog output can be used for long distance transmission and SSR can be set as an alarm or as a volumetric pulse output. F6.30 Paddlewheel Flow Transmitter is provided with an USB interface and a dedicated software (freely downloadable from FLS web site) which allows to easily calibrate instrument and to intuitively set outputs by a PC. The specific design allows an accurate flow measurement over a wide dynamic range in pipe sizes from DN15 (0.5") to DN600 (24").

APPLICATIONS

- Industrial water and wastewater treatment
- Cooling water systems
- Swimming pools
- Flow control and monitoring
- Water treatment
- Water regeneration plant
- Processing and manufacturing industry
- Water distribution

MAIN FEATURES

- High chemical resistance
- Pipe size range: from DN15 (0,5") to DN600 (24")
- Low pressure drop
- Friendly calibration procedure
- 4-20 mA, frequency or volumetric pulse output settable by USB
- SSR settable as alarm by PC



TECHNICAL DATA

General

- Pipe Size Range: DN15 to DN600 (0.5" to 24")
Please 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
- Minimum Reynolds Number Required: 4500
- Enclosure: IP65
- Wetted Materials:
 - sensor Body: CPVC, PVDF, Brass or 316L SS
 - o-rings: EPDM or FPM
 - rotor: ECTFE (Halar®)
 - shaft: Ceramic (Al_2O_3) / 316L SS (only for metal sensors)
 - bearings: Ceramic (Al_2O_3)

Electrical

- Power Supply:
 - 12 to 24 VDC $\pm 10\%$ regulated (reverse polarity and short circuit protected)
 - maximum current: consumption: 150 mA
 - protective earth: $< 10 \Omega$
- 1 X Current output:
 - 4-20 mA, isolated
 - max. loop impedance: $800 \Omega @ 24 VDC - 250 \Omega @ 12 VDC$
- 1 X Solid State Relay output:
 - user selectable as MIN alarm, MAX alarm, Volumetric, Pulse Out, Window alarm, Off
 - optically isolated, 50 mA MAX sink, 24 VDC MAX pull-up voltage
 - max pulse/min: 300
 - hysteresis: User selectable

Environmental

- Storage Temperature: $-30^\circ C$ to $+80^\circ C$ ($-22^\circ F$ to $176^\circ F$)
- Ambient Temperature: $-20^\circ C$ to $+70^\circ C$ ($-4^\circ F$ to $158^\circ F$)
- Relative Humidity: 0 to 95% (non-condensing)

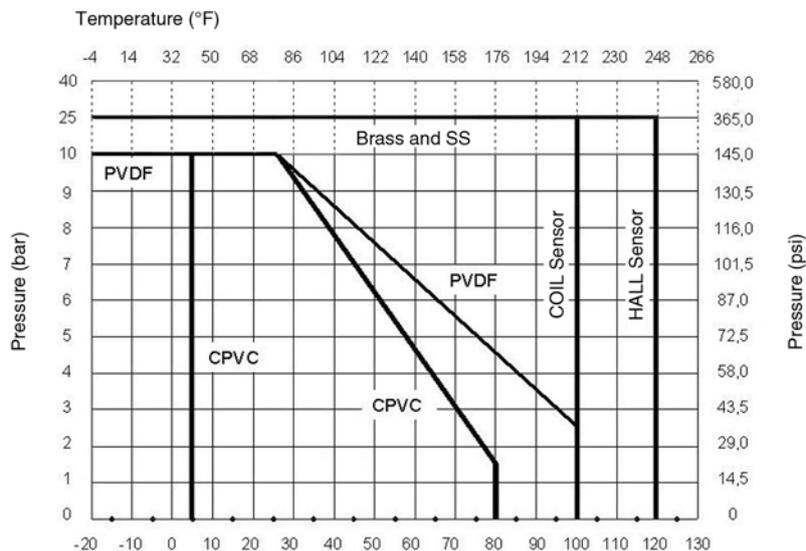
Standards & Approvals

- Manufactured under ISO 9001
- Manufactured under ISO 14001
- CE
- RoHS Compliant
- GOST R

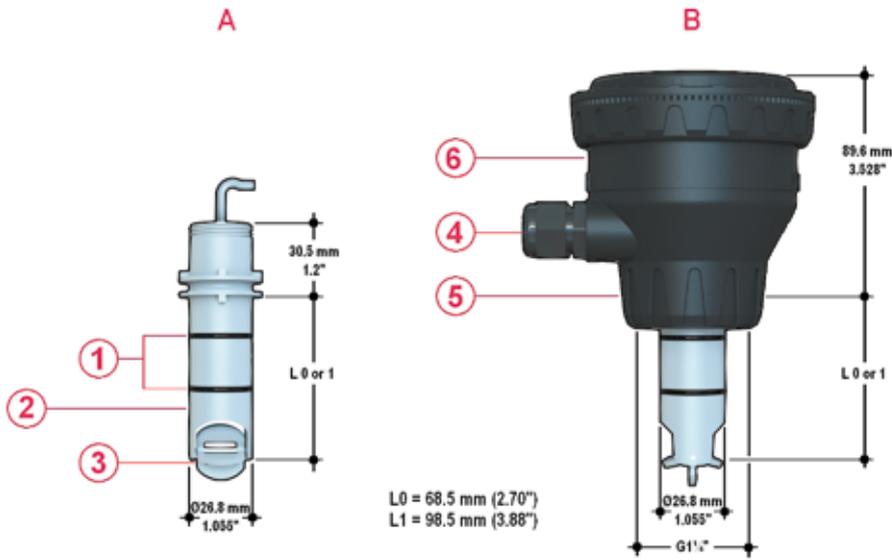
Maximum Operating Pressure / Temperature (25 years lifetime)

F6.30 Transmitter

- CPVC body:
 - 10 bar (145 psi) @ $25^\circ C$ ($77^\circ F$)
 - 1,5 bar (22 psi) @ $80^\circ C$ ($176^\circ F$)
- PVDF body:
 - 10 bar (145 psi) @ $25^\circ C$ ($77^\circ F$)
 - 2,5 bar (36 psi) @ $100^\circ C$ ($212^\circ F$)
- Brass or SS body:
 - 25 bar (363 psi) @ $100^\circ C$ ($212^\circ F$)



DIMENSIONS



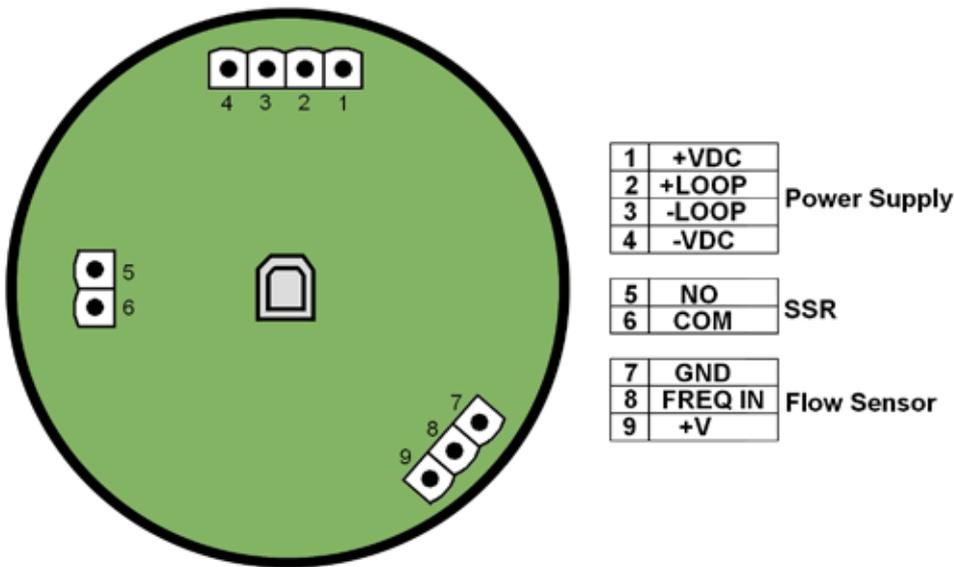
A Sensor body
B F6.30 Paddlewheel Flow transmitter

- 1 O-Ring (EPDM or FPM)
- 2 Sensor body PVCC, PVDF, Brass, 316L SS
- 3 Halar Rotor, Ceramic shaft & bearings
- 4 Cable Gland

- 5 ABS cap for installation into fittings
- 6 Electronic box

WIRING CONNECTIONS

Rear Terminal View



ORDERING DATA

| FLS F6.30.XX Paddlewheel Flow Transmitters | | | | | | | |
|--|---------|--------------|--------|-----------------------|-----------|----------------------------------|--------------|
| Part No. | Version | Power supply | Length | Main wetted materials | Enclosure | Flow Rate Range | Weight (gr.) |
| F6.30.01 | Hall | 12 - 24 VDC | L0 | CPVC/EPDM | IP65 | 0.15 to 8 m/s (0.5 to 25 ft./s.) | 750 |
| F6.30.02 | Hall | 12 - 24 VDC | L0 | CPVC/FPM | IP65 | 0.15 to 8 m/s (0.5 to 25 ft./s.) | 750 |
| F6.30.03 | Hall | 12 - 24 VDC | L1 | CPVC/EPDM | IP65 | 0.15 to 8 m/s (0.5 to 25 ft./s.) | 800 |
| F6.30.04 | Hall | 12 - 24 VDC | L1 | CPVC/FPM | IP65 | 0.15 to 8 m/s (0.5 to 25 ft./s.) | 800 |
| F6.30.05 | Hall | 12 - 24 VDC | L0 | PVDF/EPDM | IP65 | 0.15 to 8 m/s (0.5 to 25 ft./s.) | 750 |
| F6.30.06 | Hall | 12 - 24 VDC | L0 | PVDF/FPM | IP65 | 0.15 to 8 m/s (0.5 to 25 ft./s.) | 750 |
| F6.30.07 | Hall | 12 - 24 VDC | L1 | PVDF/EPDM | IP65 | 0.15 to 8 m/s (0.5 to 25 ft./s.) | 800 |
| F6.30.08 | Hall | 12 - 24 VDC | L1 | PVDF/FPM | IP65 | 0.15 to 8 m/s (0.5 to 25 ft./s.) | 800 |
| F6.30.09 | Hall | 12 - 24 VDC | L0 | 316SS/EPDM | IP65 | 0.15 to 8 m/s (0.5 to 25 ft./s.) | 950 |
| F6.30.10 | Hall | 12 - 24 VDC | L0 | 316SS/FPM | IP65 | 0.15 to 8 m/s (0.5 to 25 ft./s.) | 950 |
| F6.30.11 | Hall | 12 - 24 VDC | L1 | 316SS/EPDM | IP65 | 0.15 to 8 m/s (0.5 to 25 ft./s.) | 1000 |
| F6.30.12 | Hall | 12 - 24 VDC | L1 | 316SS/FPM | IP65 | 0.15 to 8 m/s (0.5 to 25 ft./s.) | 1000 |
| F6.30.13 | Hall | 12 - 24 VDC | L0 | BRASS/EPDM | IP65 | 0.15 to 8 m/s (0.5 to 25 ft./s.) | 950 |
| F6.30.14 | Hall | 12 - 24 VDC | L0 | BRASS/FPM | IP65 | 0.15 to 8 m/s (0.5 to 25 ft./s.) | 950 |
| F6.30.15 | Hall | 12 - 24 VDC | L1 | BRASS/EPDM | IP65 | 0.15 to 8 m/s (0.5 to 25 ft./s.) | 1000 |
| F6.30.16 | Hall | 12 - 24 VDC | L1 | BRASS/FPM | IP65 | 0.15 to 8 m/s (0.5 to 25 ft./s.) | 1000 |

INSERTION FLOW SENSORS