FLS F3.10
PADDLEWHEEL MINI FLOW SENSOR

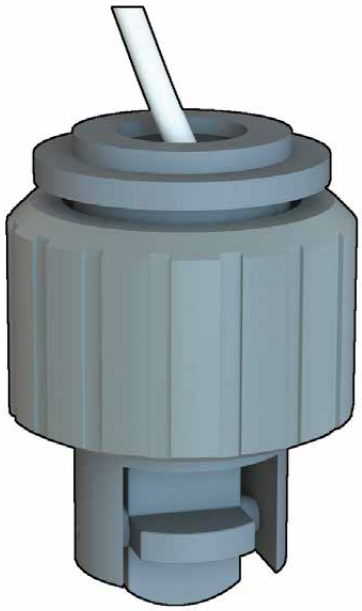
The simple and reliable paddlewheel technology has been moved into this MINIFLOW sensor type FLS F3.10, designed for use with every kind of solid-free liquids. The sensor can measure flow from 0.25 m/s (0.8 ft/s) producing a frequency output signal highly repeatable. A rugged construction and a proven technology guarantee exceptional performances with little or no maintenance required. The very small dimension and a special design make it suitable for installation on FIP standard Tee-fittings from DN15 to DN40 (0.5 to 1.5 in.).

APPLICATIONS

- Water treatment
- Filtration systems
- Pure water production
- Water monitoring
- Fertigation

MAIN FEATURES

- IP68 enclosure
- ABS body with EPDM or FPM seal
- ABS 4-blade paddlewheel (no bearings)
- Mono-directional design
- Installation on standard FIP tees
- PVDF body version on request



TECHNICAL DATA

General

• Pipe Size Range: DN15 to DN40 (0.5 to 1 1/2”) Please refer to Installation Fittings section for more details
• Flow Rate Range: 0.25 to 4 m/s (0.8 to 12,5 ft./s)
• Linearity: ± 1 % of full scale
• Repeatability: ± 0.5 % of full scale. Minimum Reynolds Number Required: 4500
• Enclosure: IP68
• Operating Pressure:
- max 10 bar (145 psi) @ 20 °C (68°F)
- max 2 bar (30 psi) @ 70 °C (158°F)
• Operating Temperature: -20°C to 70°C (-4°F to 158°F).
• Wetted Materials:
- sensor Body: ABS (PVDF for special version)
- o-rings: EPDM or FPM
- rotor: ABS (PVDF for special version)
- shaft: 316L SS
- magnets: $SmCo_5$

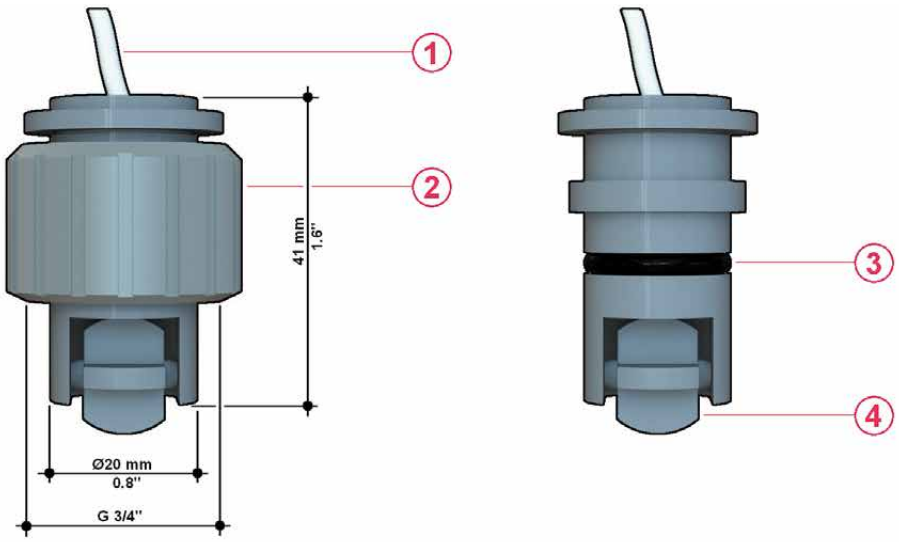
Electrical

• Supply current: < 30 mA @ 24 VDC
• Output signal:
- square wave
- output frequency: 15 Hz per m/s nominal (4,6 Hz per ft/s nominal)
- output type: transistor NPN open collector
- output current: 10 mA max
• Cable length: 2 m (6,5 ft) standard, 300 m (990 ft) maximum

Standards & Approvals

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

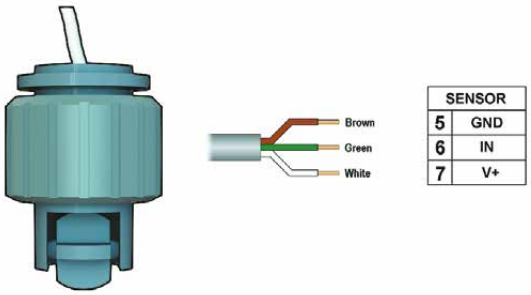
DIMENSIONS



1 Electrical cable: 8 m. (26.4 ft) standard
2 UPVC cap for installation into fittings
3 O-Ring seals available in EPDM or FPM
4 ABS 4-blade rotor and SS shaft

WIRING CONNECTIONS

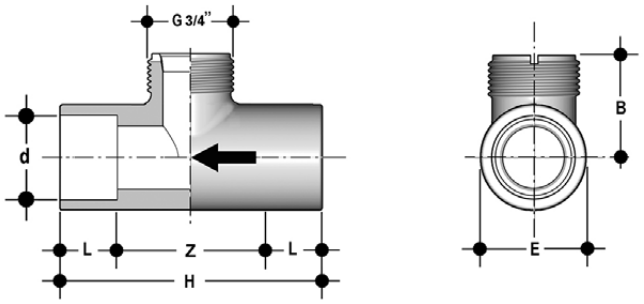
F3.10 IP68 Sensor wiring connection



ORDERING DATA

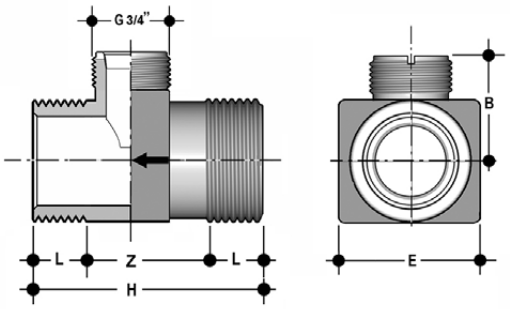
F3.10.H.XX Paddlewheel Miniflow Sensors							
Part No.	Version	Power supply	Length	Main wetted materials	Enclosure	Flow Rate Range	Weight (gr.)
F3.10.H.01	Hall	5 - 24 VDC	41 mm	ABS/EPDM	IP68	0.25 to 4 m/s (0.8 to 12,5 ft./s)	100
F3.10.H.02	Hall	5 - 24 VDC	41 mm	ABS/FPM	IP68	0.25 to 4 m/s (0.8 to 12,5 ft./s)	100

INSTALLATION FITTINGS FOR FLS F3.10



ISO Metric PVC Tee Fittings (female ends for solvent welding)

Part No.	DN/ Size	d/R	O-ring	Body	H	Z	L	B	E	Flow Sensor Lenght	Suitable for (*)
TMIV20MF	15	20	-	UPVC	43	11	16	27	27	-	F
TMIV25MF	20	25	-	UPVC	52	14	19	30	33	-	F
TMIV32MF	25	32	-	UPVC	61,5	17,5	22	33,5	41	-	F
TMIV40MF	32	40	-	UPVC	74	22	26	38	50	-	F
TMIV50MF	40	50	-	UPVC	89	27	31	43	61	-	F



ISO Metric BRASS Tee Fitting (1 1/4" male threaded ends)

Part No.	DN/ Size	d/R	O-ring	Body	H	Z	L	B	E	Flow Sensor Lenght	Suitable for (*)
TMFODN23	23	1 1/4"	-	BRASS	74,2	46,2	14	28	50	-	F

(*) Suitable for: F= Flow sensors; A= Analytical electrodes