

FLS F3.80

OVAL GEAR FLOW SENSOR



The FLS Oval Gear Flow sensors F3.80 have been designed following the main industrial application requirements: high mechanical resistance and reliable performances. These sensors are suitable to measure a wide range of viscous solid-free liquids with a very high accuracy and repeatability.

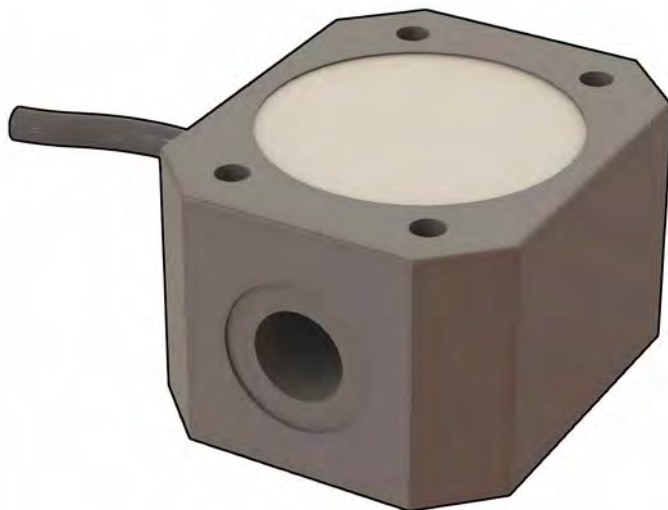
The sensors can be fixed to flexible or rigid pipes via 1/4" GAS threaded process connections. The construction materials, ECTFE (Halar®) or PP or Stainless steel, provide high strength and chemical resistance.

APPLICATIONS

- Chemical industry
- Laboratory plants
- Dosing systems
- Pulsating flows measurement
- High viscosity and not conductive fluid measurement
- Oil measurement

MAIN FEATURES

- Compact dimensions
- Easy installation
- High chemical resistance
- High viscosity fluids measurement
- Low pressure loss



TECHNICAL DATA

General

- Flow Rate Range:
 - F3.81.H: 10 to 100 l/h (0.044 up to 0.44 gpm)
 - F3.82.H: 25 to 150 l/h (0.11 up to 0.66 gpm)
- Linearity: 1 % of full scale
- Repeatability: < 0,3% of full scale
- Working Temperature: -10°C to 60°C (14°F to 140°F)
- Max. Fluid Viscosity : 1000 cP (mPas)
- Working Pressure:
 - PP body:
 - 6 bar (87 psi) @ 25°C (77°F)
 - 3 bar (44 psi) @ 60°C (140°F)
 - ECTFE body:
 - 8 bar (116 psi) @ 25°C (77°F)
 - 5 bar (73 psi) @ 60°C (140°F)
 - SS body:
 - 8 bar (116 psi) @ 60°C (140°F)
- Enclosure: IP65
- Wetted Materials:
 - PP version:
 - sensor body: PP
 - o-ring: FPM
 - gear: ECTFE (Halar)
 - shaft: zircon
 - ECTFE version:
 - sensor body: ECTFE (Halar)
 - o-ring: FPM
 - gear: ECTFE (Halar)
 - shaft: zircon
 - Stainless Steel:
 - sensor body: SS AISI 316L
 - o-ring: FPM
 - gear: ECTFE (Halar)

- shaft: Stainless Steel
- Connections: 1/4" GAS female
- Cable length: 2 m (6.5 ft) standard

Specific for F3.81.H

- Supply voltage: 5 to 24 VDC $\pm 10\%$, regulated
- Supply current: < 15 mA @ 24 VDC
- Output signal: square wave Cmos (NPN / PNP)
- Signal type: Push-Pull (for connection to NPN and PNP inputs)
- K-factor = 5950 Pulses/Liter (22521 Pulses/U.S. Gallon)

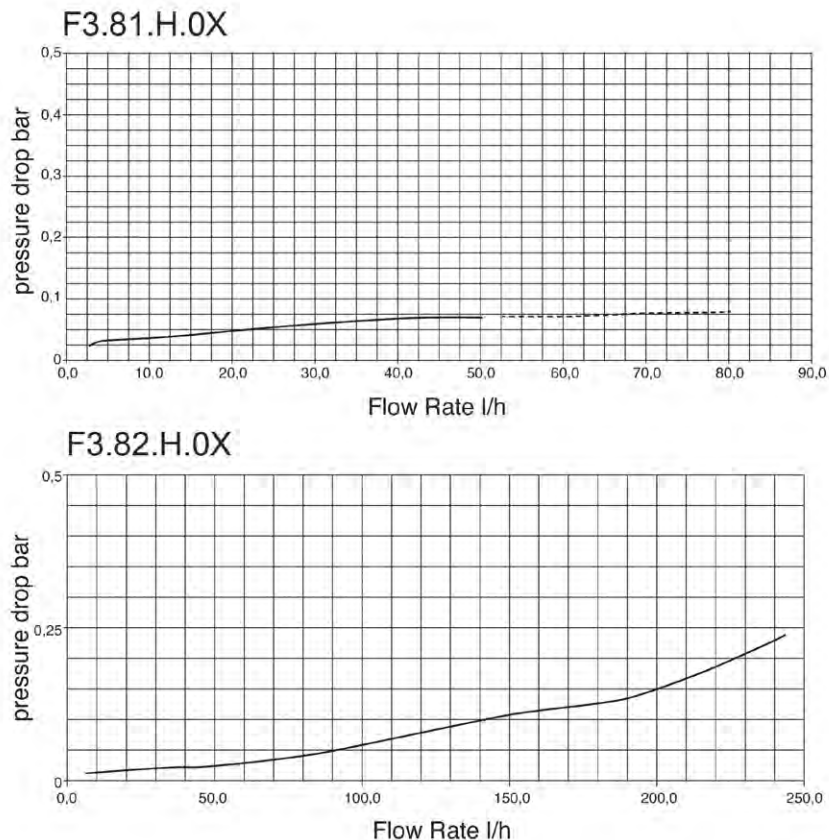
Specific for F3.82.H

- Supply voltage: 5 to 24 VDC $\pm 10\%$, regulated
- Supply current: < 15 mA @ 24 VDC
- Output signal: square wave Cmos (NPN / PNP)
- Signal type: Push-Pull (for connection to NPN and PNP inputs)
- K-factor = 3400 Pulses/Liter (12869 Pulses/U.S. Gallon)

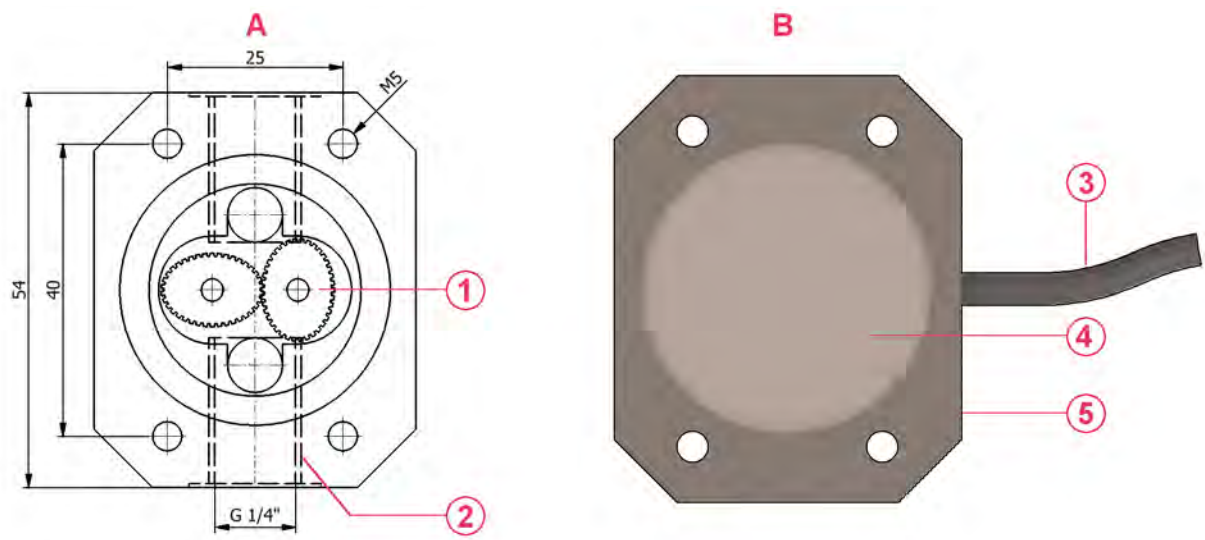
Standards & Approvals

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

Pressure Drop



DIMENSIONS



- 1 ECTFE Halar® oval gears

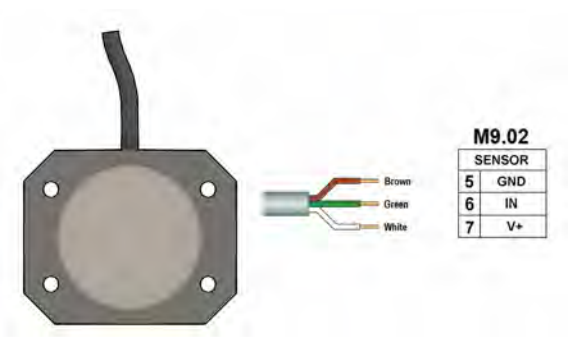
2 1/4" GAS threaded pipe connection

3 Electrical cable: 2m. (6.5 ft) standard

4 Completely encapsuled electronics
- 5 PP or ECTFE Halar® (registered trademark of Ausimont-Solvay) or SS sensor body

WIRING CONNECTIONS

F3.8X.H Sensor Connection



Wiring connections to the other monitors

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

ORDERING DATA

F3.8X.H.XX Oval Gear Flow Sensors							
Part No.	Version	Power supply	Length	Main wetted materials	Enclosure	Flow Rate Range	Weight (gr.)
F3.81.H.01	Hall	5 - 24 VDC	54 mm	PP/ ECTFE/ FPM	IP65	10 to 100 l/h (0.044 to 0.44 gpm)	200
F3.81.H.02	Hall	5 - 24 VDC	54 mm	ECTFE/ ECTFE/ FPM	IP65	10 to 100 l/h (0.044 to 0.44 gpm)	300
F3.81.H.03	Hall	5 - 24 VDC	54 mm	316L SS/ ECTFE/ FPM	IP65	10 to 100 l/h (0.044 to 0.44 gpm)	800
F3.82.H.01	Hall	5 - 24 VDC	54 mm	PP/ ECTFE/ FPM	IP65	25 to 150 l/h (0.11 to 0.66 gpm)	200
F3.82.H.02	Hall	5 - 24 VDC	54 mm	ECTFE/ ECTFE/ FPM	IP65	25 to 150 l/h (0.11 to 0.66 gpm)	300
F3.82.H.03	Hall	5 - 24 VDC	54 mm	316L SS/ ECTFE/ FPM	IP65	25 to 150 l/h (0.11 to 0.66 gpm)	800

IN LINE FLOW SENSORS