

The 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.

MAIN FEATURES

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



Flow ranges 10 - 100 lt/h / 25 - 150 lt/h

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 ±10%, regulated
- Supply current: < 15 mA @ 24 VDC
- Output signal: square wave Cmos (NPN / PNP)
- K-factor = 5950 Pulses/Liter (22521 Pulses/U.S. Gallon)

Specific for F3.82.H

- Supply voltage: 5 to 24 VDC ±10%, regulated
- Supply current: < 15 mA @ 24 VDC
- Output signal: square wave Cmos (NPN / PNP)
- K-factor = 3400 Pulses/Liter (12869 Pulses/U.S. Gallon)

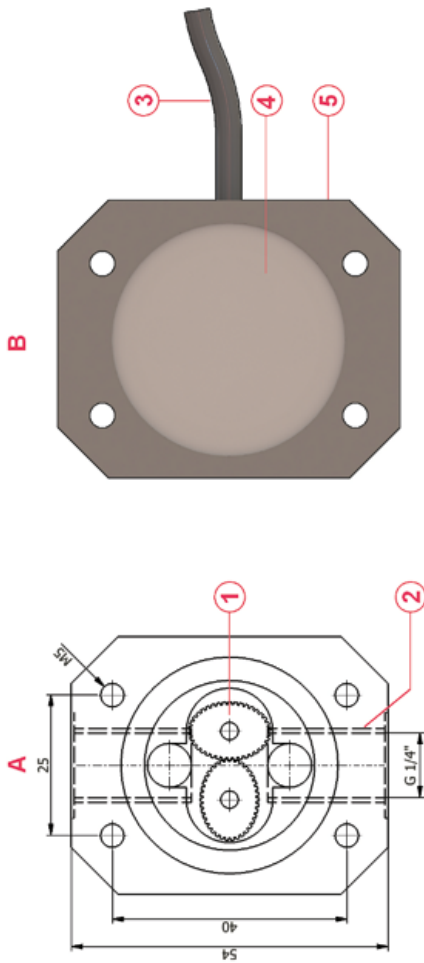
Standards & Approvals

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

APPLICATIONS

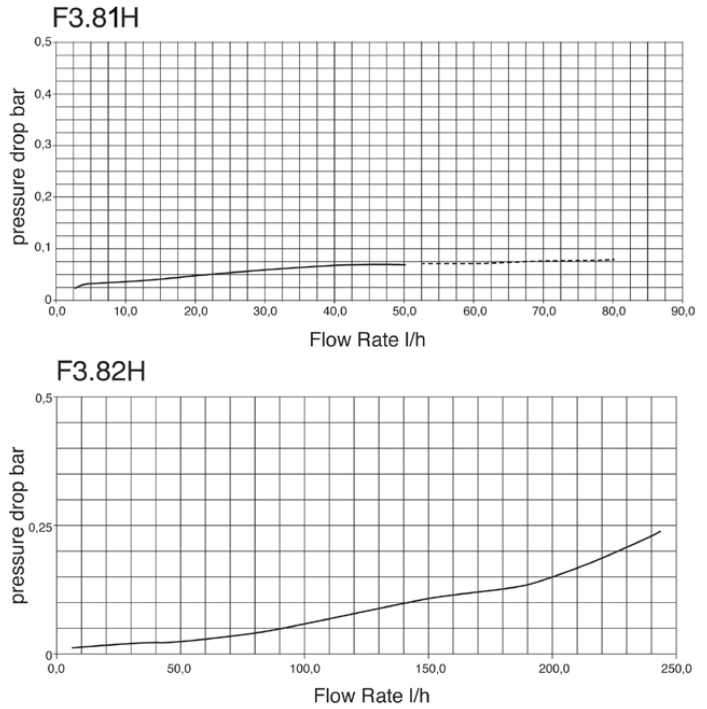
- Chemical industry
- Laboratory plants
- Dosing systems
- Pulsating flows measurement
- High viscosity and not conductive fluid measurement
- Oil measurement

DIMENSIONS



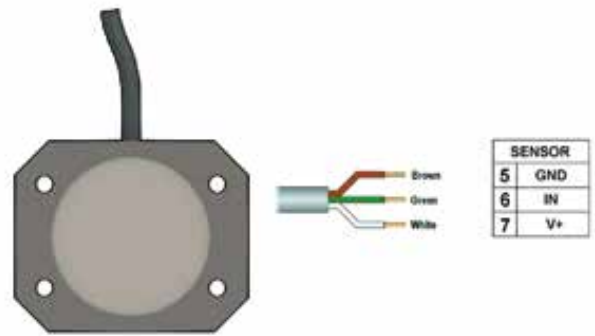
- 1 ECTFE Halar® oval gears
- 2 1/4" GAS threaded pipe connection
- 3 Electrical cable: 2m. (6.5 ft) standard
- 4 Completely encapsulated electronics
- 5 PP or ECTFE Halar® (registered trademark of Ausimont-Solvay) or SS sensor body

Pressure Drop



WIRING CONNECTIONS

F3.8X.H Sensor Connection



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