

Signet 2100 Turbine Sensor Operating Instructions



3-2100.090-1 Rev. J 04/17 English



WARNING!

1. Do not remove from pressurized lines.
2. Never install sensor without O-rings.
3. Confirm chemical compatibility before use.
4. Do not exceed maximum temperature/pressure specifications.
5. Wear safety goggles and faceshield during installation/service.
6. Failure to follow safety instructions could result in severe personal injury.

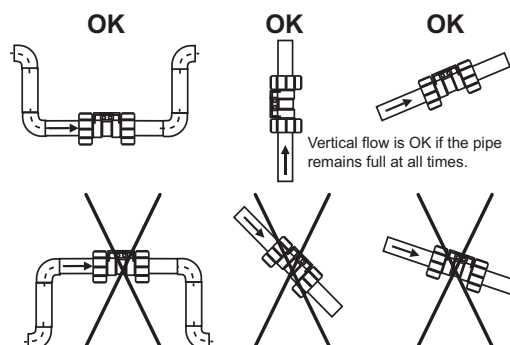
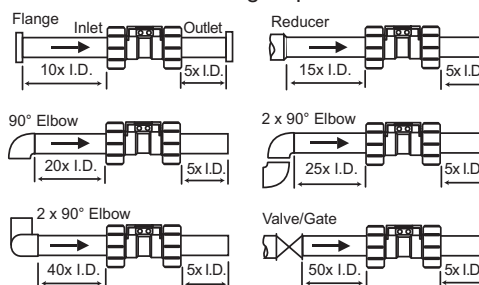
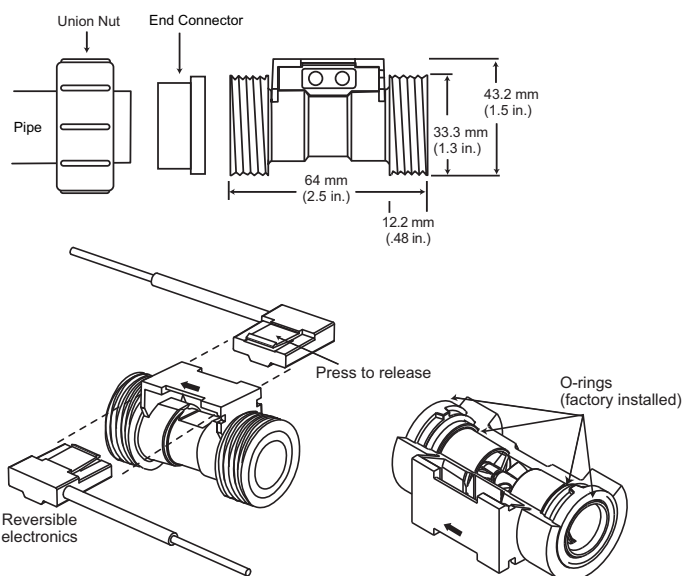
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Installation/Mounting

1. Install sensor with arrow pointing in the direction of flow. All mounting angles acceptable.
2. Slide union nut onto pipe or flexible tubing.
3. Install end connectors.
4. Hand tighten union nut to secure.

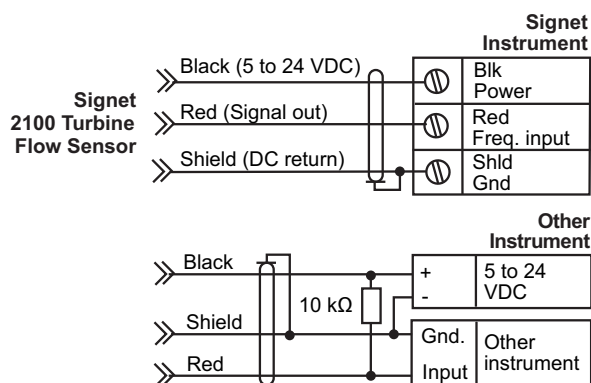
- Suitable for clear or opaque fluids. Suspended solids may cause mechanical failure.
- Upstream/downstream mounting requirements:



Sensor Wiring

Wiring Tips:

- Use 2-conductor twisted-pair shielded cable (Belden #8451 or equivalent) for sensor cable splices up to 300 m (1000 ft) max.
- Maintain cable shield through cable splice.
- Route sensor cable away from AC power lines.



Calibration

Sensor Model	Connection Option	K-Factors: Pulses/U.S. Gallon	Pulses/Liter
High Flow Sensors 3-2100-1H, 2H	1/2" Pipe	1725	456
	1/2" Hose	1700	449
Low Flow Sensors 3-2100-1L, 2L	1/2" Pipe	12250	3236
	1/4" Hose	12800	3382
	3/8" Hose	13000	3435
	1/2" Hose	12500	3303

Specifications

General

Operating Range: -L = 0.38 to 3.8 l/m (0.10 to 1 U.S. gpm)
 -H = 3 to 38 l/m (0.8 to 10 U.S. gpm)
 Pipe Size: DN15 (1/2 in.)
 Hose Size: DN8 (1/4 in.), DN10 (3/8 in.), DN15 (1/2 in.)
 Linearity: $\pm 3\%$ of reading
 Repeatability: $\pm 0.5\%$ of reading
 Weight: 151 g (0.33 lbs)

Wetted Materials

Sensor body/rotor: PVDF
 Shaft/bearings: Ceramic
 O-rings: -1 = FKM, -2 = EPR (EPDM)
 Electronics: PBT (polybutylene terephthalate)
 EVA (ethylene vinyl acetate)

Electrical

Power: 5 to 24 VDC $\pm 10\%$, regulated, 1.5 mA max.
 Reverse polarity protected
 Output: Open collector, sinking, max 30 mA

Cable Length: 4.6 m (15 ft) can be extended up to 300 m (1000 ft)
 Cable Type: PVC jacketed, 2 conductor twisted pair with shield (22 AWG)

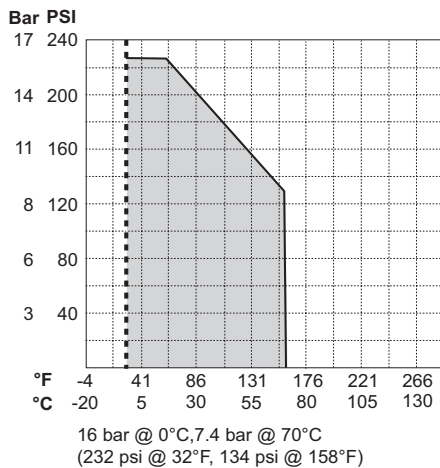
Standards and Approvals

CE
 Manufactured under ISO 9001 and 14001
 China RoHS (Go to www.gfsignet.com for details)

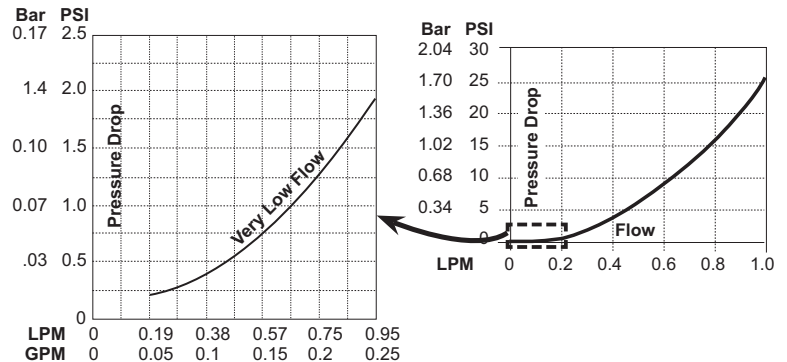
Environmental

Relative Humidity: 0 to 100%
 Storage Temperature: -15 °C to 80 °C (5 °F to 176 °F)

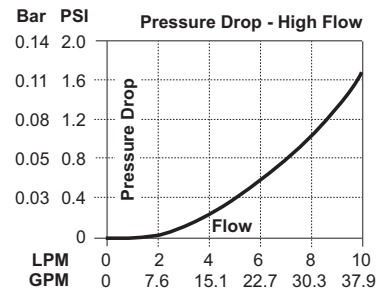
Maximum Pressure/Temperature



Pressure Drop - Low Flow



Pressure Drop - High Flow Flow



Parts and Accessories

Part No.	Code No.	Description
1220-0018	159 000 019	O-rings (2) FKM
1224-0018	159 000 020	O-rings (2) EPR (EPDM)
3-2100-31	159 000 005	Hose Barb connector kit, PVDF, 1/2 in.
3-2100-32	159 000 006	Hose Barb connector kit, PVDF, 3/8 in.
3-2100-33	159 000 007	Hose Barb connector kit, PVDF, 1/4 in.
3-2100-34	159 000 008	Fusion Socket connector, PVDF, DN15
3-2100-35	159 000 009	Butt Fusion/IR connector kit, PVDF, DN15
3-2100-36	159 000 010	Metric Socket connector kit, PVC, DN15
3-2100-37	159 000 011	SCH 80 Socket connector kit, PVC, 1/2 in.
3-2100-38	159 000 012	NPT Thread Socket connector kit, PVC, 1/2 in.
3-8050-1	159 000 753	Universal junction box



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