Signet 2580 FlowtraMag™ Meter

+GF+

(Smart Phone not included)

The Signet 2580 FlowtraMag is a full-bore plastic in-line style magnetic flow meter. The PVC body with titanium electrodes has no moving parts, and is two to three times lighter in weight compared to traditional metal magmeters on the market. It is designed for high accuracy flow measurement in short pipe runs, making it an ideal solution for industrial applications where performance and simplicity are important.

The FlowtraMag design is factory calibrated with certificate at ±1% of reading accuracy. It is offered in corrosion resistant materials to provide long-term reliability with minimal maintenance costs. The LED indicators show at-a-glance system status, including normal operation, zero flow and partially filled pipe detection.

The flow meter provides three different outputs; field selectable frequency or digital (S³L) as well as analog 4 to 20 mA. The FlowtraMag is capable of temperature readings of the media using the Signet 0252 Configuration Tool or GF Config Tool Bluetooth® app. The GF Config Tool Bluetooth® app supports iOS and Android for simple on-the-fly user configuration.

These versatile, easy-to-install meters deliver accurate flow measurement in pipe sizes of DN25 (1 in.), DN50 (2 in.) and DN100 (4 in.), optimized for performance in short pipe runs often associated with final effluent lines, well heads and water treatment skids.

Features

- **No moving parts**

- **Lighter in weight compared to traditional metal magmeters**

- **Reduced straight run requirements, ideal for final effluent lines, wellheads and skids**

- **Factory calibrated with certificate (±1% of reading accuracy)**

- **Partially filled pipe detection status indicator**

- **Visual LED indicators make sensor status clear and easy to read**

- **Reverse flow direction configurable with 0252 Configuration Tool or GF Config Tool Bluetooth® App**

- **Capable of temperature readings of the media using the 0252 Configuration Tool or GF Config Tool Bluetooth® App**

- **One device with three different outputs: field selectable Frequency or Digital (S³L), and analog 4 to 20 mA**

- **On-the-fly configuration with GF Config Tool Bluetooth® App**

- **Bluetooth® 4.2 capable, support iOS and Android for simple user configuration**

Applications

- **Chemical Processing/Production**
- **Cooling Tower**
- **Filtration Systems**
- **Water and Wastewater Treatment**
- **Municipal and Industrial Water Distribution**
- **Pool and Aquatics**
- **Process Control, Water Process Flow**
- **Reverse Osmosis**
- **Scrubber Systems**
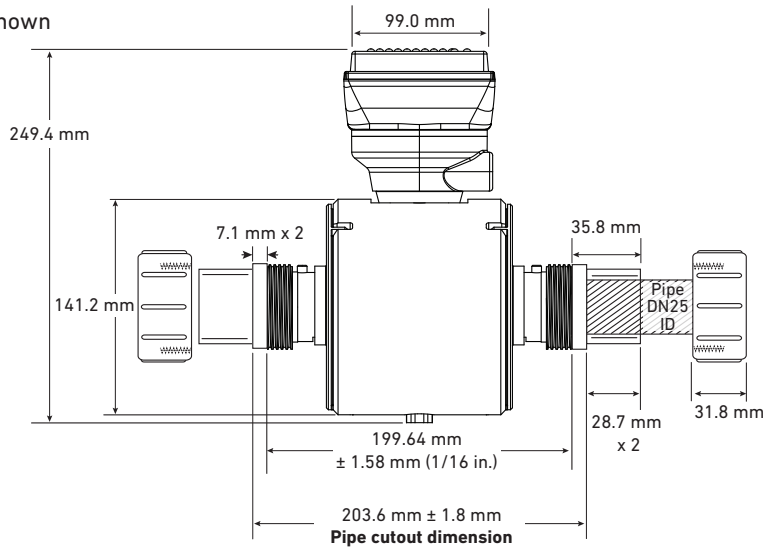- **Metal Recovery and Landfill Leachate**
- **Mining**

U.S. and International Patents Pending

Specifications

General

Pipe Size Range	DN25, DN50, DN100	1 in., 2 in., 4 in.
Flow Range	0.02 to 10 m/s	0.07 to 33 ft/s
3-2580-P-T-010	0.53 LPM to 266.35 LPM	0.14 to 70.36 GPM
3-2580-P-T-020	2.23 LPM to 1112.60 LPM	0.59 to 293.92 GPM
3-2580-P-T-040	8.72 LPM to 4357.83 LPM	2.30 to 1151.22 GPM
Minimum Conductivity	20 µS/cm – water based	
Power Cable Wire	7.6 m (25 ft) 2-conductor shielded	
Output Cable Wire	7.6 m (25 ft) 5-conductor shielded	
Cable wires may be extended up to 305 m (1000 ft), special order only		

Wetted Materials

Flow Tube Body	PVC
Electrode	Titanium, grade 2
O-rings	FKM

Performance

Accuracy	± 1% of reading plus ± 0.01 m/s (0.033 ft/s), reference condition 50 µS/cm and water based
Repeatability	± 0.5% of reading @ 25 °C (77 °F)
Low Flow Cutoff	0.02 m/s (0.07 ft/s) (adjustable via 0252 Configuration Tool or GF Config Tool App)

Electrical

DC Power (Functional Rating)	24 VDC, max 24 W (12 to 32 VDC)
Reverse Polarity Protected	Up to 35 VDC
Over-Voltage Maximum Rating	35 VDC

Current Output

Passive (low power)	4 to 20 mA per ANSI-ISA 50.00.01 Class H
Active Output	4 to 20 mA
Passive Loop Voltage	12 to 32 VDC
Loop Accuracy	±32 µA (@ 25 °C @ 24 VDC)
Loop Resolution	5 µA
Loop Span	3.8 mA to 21 mA
Error Condition	None, 3.6 mA or 22 mA
Max. Cable	300 m (1000 ft)
Max. Loop Resistance	600 Ω @ 24 VDC
	Compatible with PLC, PC or similar equipment

Frequency Output

Frequency	5 to 24 VDC, 50 mA max.
Frequency Range	0 to 1500 Hz
Max. Cable	300 m (1000 ft)
Max. Pull-up Voltage	30 VDC, 10k pull-up recommended
	Compatible with Signet 8900, 9900, 9950, and 0486 Profibus Concentrator

Digital (S³L) Output

Digital (S³L)	4.5 to 5.5 VDC
	Serial ASCII, TTL level 9600 bps Compatible with Signet 8900, 9900, 9950 and 0486 Profibus Concentrator
Max. Cable Length	Application dependent

Environmental Requirements

Enclosure	NEMA 4X / IP65		
Relative Humidity	0 to 95% non-condensing		
Storage Temperature	-10 °C to 60 °C (14 °F to 140 °F)		
Operating Temperature			
	Ambient	-10 °C to 60 °C	14 °F to 140 °F
	Media	0 °C to 60 °C	32 °F to 140 °F
UL Environmental Rating	UL 50, Type 6P Storage		
Altitude	4,000 m	13,123 ft	

Pressure/Temperature Ratings

Maximum Operating Pressure	10 bar @ 23 °C (145 psi @ 73 °F)
DN25 (1 in.) and DN50 (2 in.)	3.5 bar @ 60 °C (51 psi @ 140 °F)
DN100 (4 in.)	2.27 bar @ 60 °C (33 psi @ 140 °F)

Shipping Weight

3-2580-P-T-010	3.4 kg	7.5 lbs
3-2580-P-T-020	4.5 kg	9.9 lbs
3-2580-P-T-040	8.3 kg	18.3 lbs

Standards and Approvals

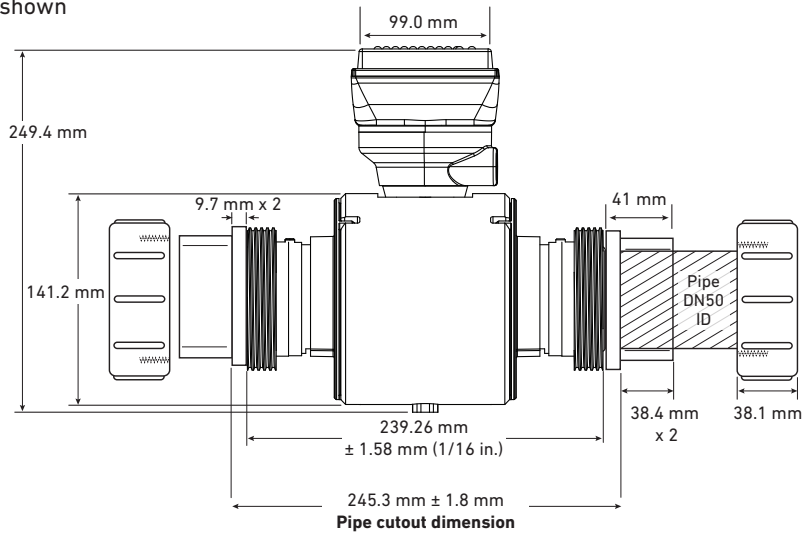|	
	CE, FCC, NSF pending
	UL, CUL Recognized Component
	RoHS compliant, China RoHS
	Manufactured under ISO 9001 for Quality, ISO 14001 for Environmental Management and OHSAS 18001 for Occupational Health and Safety.

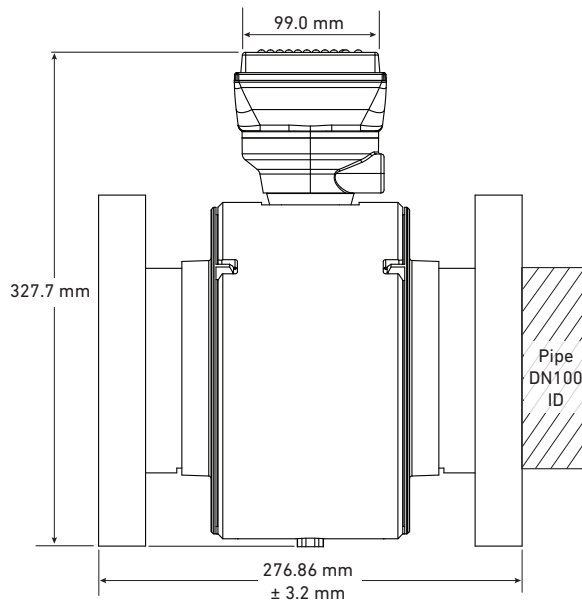# Dimensions

DN25
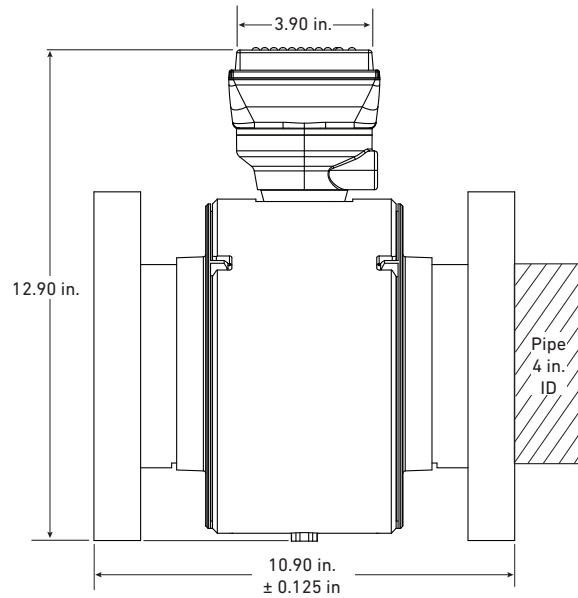Union ends and union nuts shown

99.0 mm

249.4 mm

7.1 mm x 2

35.8 mm

141.2 mm

Pipe DN25 ID

28.7 mm x 2

31.8 mm

199.64 mm
± 1.58 mm (1/16 in.)

203.6 mm ± 1.8 mm
Pipe cutout dimension

DN50
Union ends and union nuts shown

99.0 mm

249.4 mm

9.7 mm x 2

41 mm

141.2 mm

Pipe DN50 ID

38.4 mm x 2

38.1 mm

239.26 mm
± 1.58 mm (1/16 in.)

245.3 mm ± 1.8 mm
Pipe cutout dimension

DN100
Flange bolt kits and gaskets not shown (sold separately)

99.0 mm

327.7 mm

Pipe DN100 ID

276.86 mm
± 3.2 mm

Dimensions

1 in.
Union ends and union nuts shown
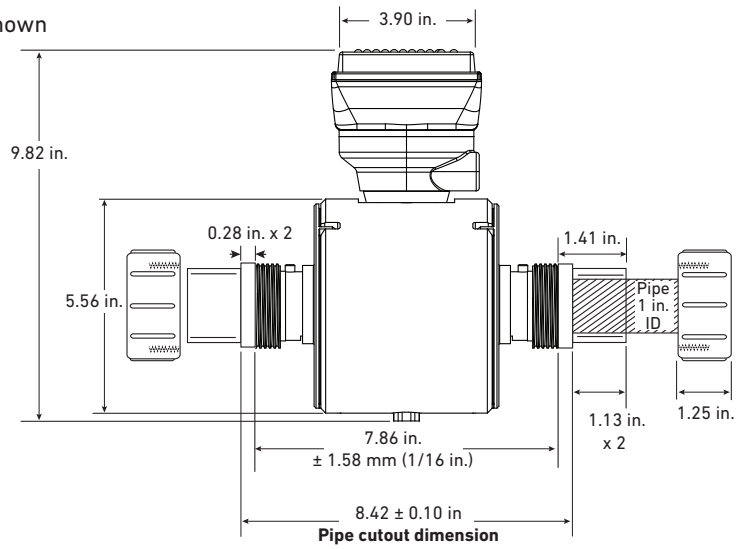
3.90 in.

9.82 in.

0.28 in. x 2

5.56 in.

1.41 in.

Pipe
1 in.
ID

7.86 in.
± 1.58 mm (1/16 in.)

1.13 in.
x 2

1.25 in.

8.42 ± 0.10 in
Pipe cutout dimension

2 in.
Union ends and union nuts shown

3.90 in.

9.82 in.

0.38 in. x 2

5.56 in.

1.65 in.

Pipe
2 in.
ID

9.42 in.
± 1.58 mm (1/16 in.)

1.51 in.
x 2

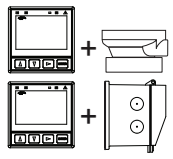1.50 in.

10.18 ± 0.10 in
Pipe cutout dimension

4 in.
Flange bolt kits and gaskets not shown (Sold separately)

3.90 in.

12.90 in.

Pipe
4 in.
ID

10.90 in.
± 0.125 in
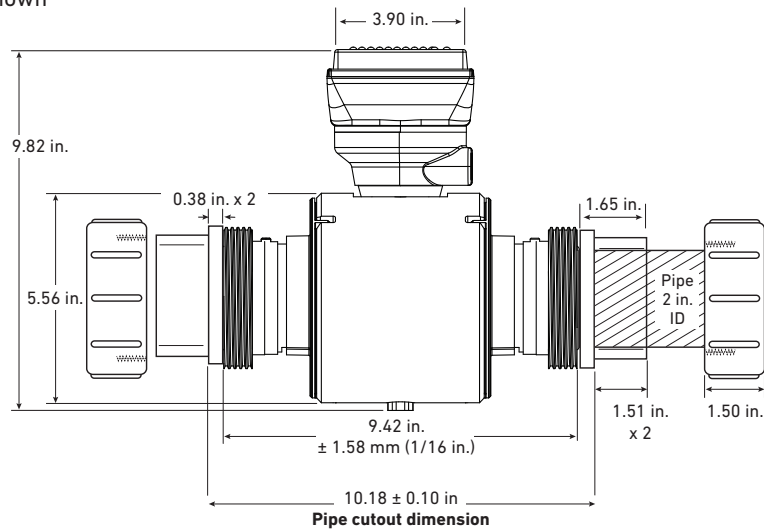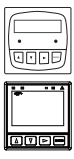
System Overview

Stand-Alone	Panel Mount	Pipe, Tank, Wall	4 to 20 mA Output	Automation System
Signet 2580 FlowtraMag	Signet Instruments - 8900 - 9900-1P - 9900-1BC - 9950	Signet Instruments - 9900-1 with 3-8050-1 Universal Mount Kit - 9900-1BC with Rear Enclosure	- Customer Supplied Chart Recorder, Programmable Logic Controller or - Programmable Automation Controller	- 0486 Profibus Concentrator and Customer Supplied Programmable Logic Controller or - Programmable Automation Controller

Signet 2580 FlowtraMag

- 3-2580-P-T-010
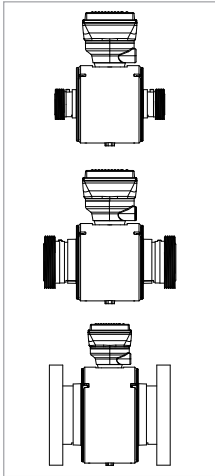- 3-2580-P-T-020
- 3-2580-P-T-040

Temperature/Pressure Graph

Note:
The pressure/temperature graphs are specifically for the Signet sensor. During system design the specifications of all components must be considered. In the case of a metal piping system, a plastic sensor will reduce the system specification.

FBM DN25 (1 in.), DN50 (2 in.)

FBM DN100 (4 in.)

@ 3.5 bar (51 psi)

@ 2.27 bar (33 psi)
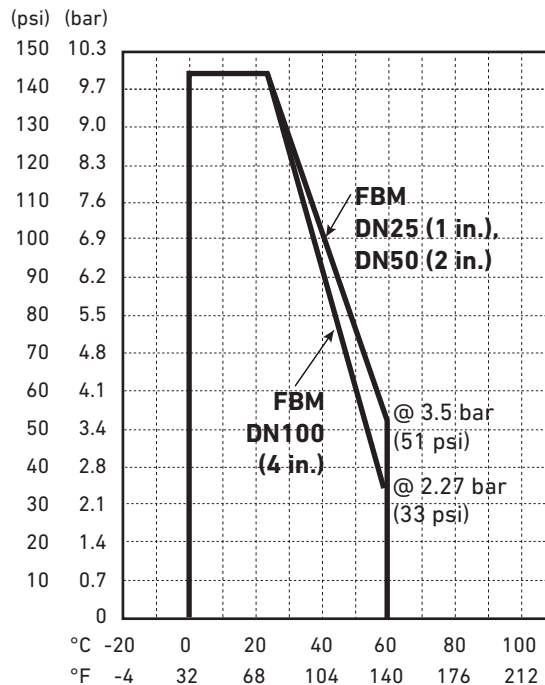
Ordering Information

Mfr. Part No.	Code	Description
3-2580-P-T-010	**159 001 874**	FlowtraMag, PVC Union, FKM, Titanium, DN25 (1 in.)
3-2580-P-T-020	**159 001 875**	FlowtraMag, PVC Union, FKM, Titanium, DN50 (2 in.)
3-2580-P-T-040	**159 001 876**	FlowtraMag, PVC Flange, FKM, Titanium, DN100 (4 in.)

Accessories and Replacement Parts

Mfr. Part No.	Code	Description
3-0252	159 001 808	0252 Configuration Tool
854-040	-	4 inch SCH 80 Van Stone Flange
37X002118	-	4 inch FKM Full Face Flange Gasket - 150# ANSI bolt pattern
37Z000069	-	4 inch Van Stone Flange bolt kit 316 SS - 150# (UNC bolts, SAE washers and nuts)
-	721 790 114	DN100 Flange Adapter, PVC-U Metric
-	721 700 014	DN100 Backing Flange, PVC-U Metric
-	161 375 904C	d32/DN25 Union End, metric
-	161 375 907C	d63/DN50 Union End, metric
-	161 375 430C	1" Union End, PVC
-	161 375 433C	2" Union End, PVC
3VGHR0A32C	-	ASTM / Union Nut, metric DN25 & 1", PVC
3VGHR0A63C	-	ASTM / Union Nut, metric DN50 & 2", PVC
9152-219	-	ASTM / O-Ring, metric DN25 & 1"
9152-332	-	ASTM / O-Ring, metric DN50 & 2"
-	749 440 714	DN100 Flange Profile Gasket