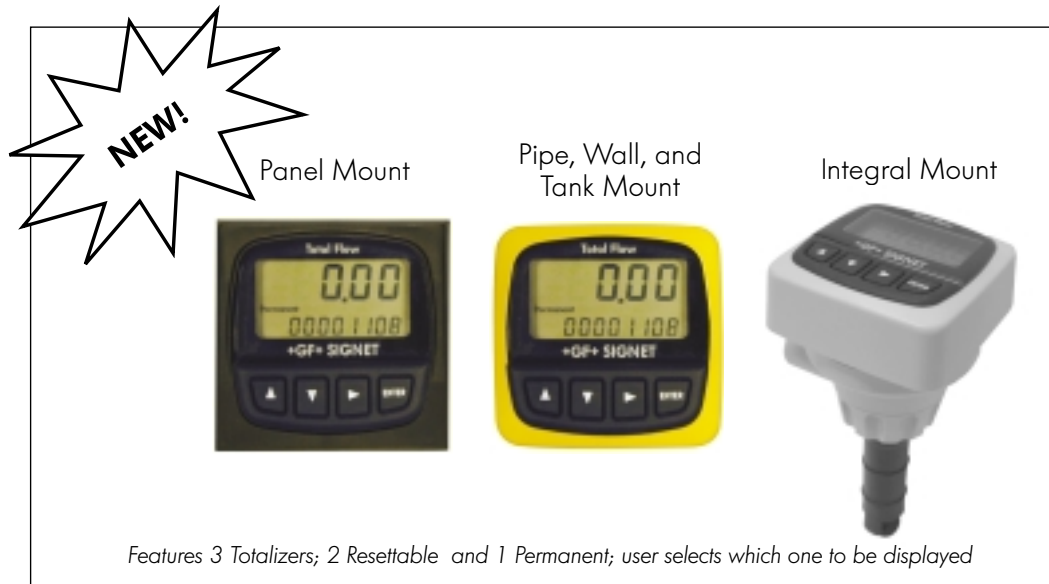


8150 Battery Powered Flow Totalizer



Features

- Three totalizers
- Long-lasting lithium batteries
- Mounting versatility
- No-flow indicator
- Large digital display with averaging
- Simple push-button operation
- User selectable access code prevents unwanted changes
- Auto-calibration

Description

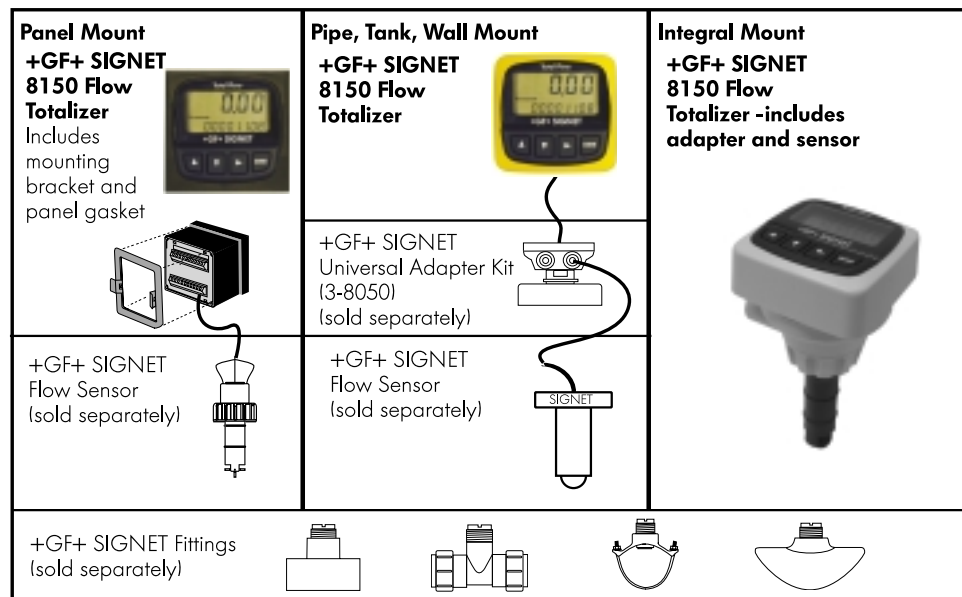
The +GF+ SIGNET 8150 Battery Operated Flow Totalizer is compatible with the +GF+ SIGNET 515, 525 and 2517 flow sensors, and will provide years of dependable operation. The large digital display indicates flow rate and totalized flow volume simultaneously. One of the three totalizers is resettable from the front panel or a remote location, while the second resettable totalizer can only be reset by entering a user-selectable security code. Meanwhile, the third is a permanent non-resettable totalizer. Our intuitive software design and four-button keypad provide for simple operation while setting screen displays and

programming the system. Calibration can be easily performed by entering the Auto-Cal feature and entering a value to match an external reference. Screen displays can be modified to suit the user's needs; along with the flow rate, any of the three totalizers can be selected as the displayed totalizer. Customers can quickly scroll through the totalizers simply by pressing any key on the keypad. A display averaging feature is included for applications where the flow in the pipe fluctuates. For applications where flow stops and starts due to production needs, a no-flow indicator will display the hours of non-flow.

Applications

- Wastewater Flow Accumulation
- Water Treatment Systems
- Remote or Mobile Treatment/Distribution Systems
- Irrigation Systems
- Filtration Systems
- Commercial Pools & Spas
- Groundwater Remediation
- RO Concentrate
- Process Flow Monitoring
- UPW Distribution
- Demineralizer Regeneration
- Process Cooling Water
- Neutralization Systems

System Overview



Pending
E171559

Compatible Sensors

The 8150 Battery Powered Flow Totalizer is compatible with the following +GF+ SIGNET Flow Sensors:

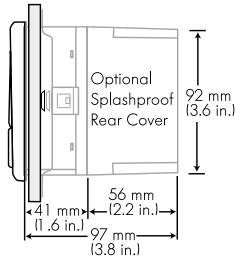
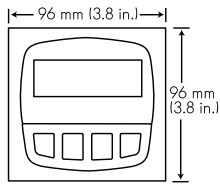
515 525 2517

See individual catalog pages for more information.

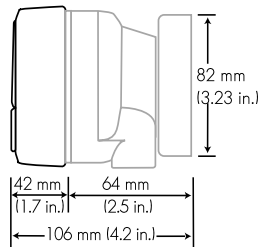
www.gfsignet.com

Dimensions

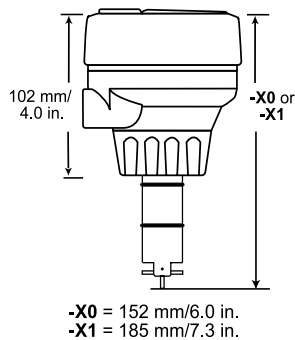
3-8150-1P



3-8150-1 with universal mount



Model 515 Integral Mount Sensors - see pages 12-15 for sensor specifications.



Specifications

General

Compatibility:
 +GF+ SIGNET 515, 525 and 2517 flow sensors
 Input Freq. Range: 0 to 400Hz
 Accuracy: $\pm 0.5\%$ of reading
 Display: LCD type
 4-digit upper line - flow rate
 8-digit lower line - volume totalizer count, either resettable or permanent
 Averaging 0 to 120 secs.
 Contrast: Automatic
 Low battery indication:
 Battery symbol appears on LCD display
 8-digit resettable totalizers:
 Stored until user resets; continues to be stored even after batteries are removed
 8-digit permanent:
 Kept permanently, even when batteries are removed

Materials

Enclosure: PBT resin
 Keypad material: Sealed 4-key silicon rubber
 Panel Case gasket: Neoprene
 Window: Polyurethane coated polycarbonate

Electrical

Battery:
 Two 3.6V Lithium thionyl chloride, AA-size
 Battery life:
 4 years nominal @ 50°C (122°F)

Environmental

Enclosure rating: NEMA 4X/IP65 front
 Operating Temperature:
 -10°C to 65°C (14°F to 149°F)
 Storage Temperature:
 -40°C to 100°C (-40°F to 212°F)
 Relative Humidity
 0 to 95% Non-condensing

Shipping Weight: 0.5 kg (1.1 lbs.)

Standards and Approvals

- CE pending
- CUL, UL pending
- Manufactured under ISO 9001:2000 for Quality and ISO 14001:1996 for Environmental Management

Ordering Information

Instrument Part Number	
3-8150	Battery Operated Flow Totalizer
	Field, Panel, or Integral Sensor mount - choose one
-1	Field mount for pipe, tank, and wall mounting
-1P	Panel mount; includes mounting bracket and panel gasket
-P0*	3-8150-1 integrally mounted on Model 515 Paddlewheel (Part No. 3-8510-P0) for 0.5 to 4 in. pipes, with a polypropylene body, Black PVDF rotor, and Titanium pin
-P1*	3-8150-1 integrally mounted on Model 515 Paddlewheel (Part No. 3-8510-P1) for 5 to 8 in. pipes, with a polypropylene body, Black PVDF rotor, and Titanium pin
-T0*	3-8150-1 integrally mounted on Model 515 Paddlewheel (Part No. 3-8510-T0) for 0.5 to 4 in. pipes, with a natural PVDF body, rotor, and pin
-V0*	3-8150-1 integrally mounted on Model 515 Paddlewheel (Part No. 3-8510-V0) for 0.5 to 4 in. pipes, with a natural PVDF body, rotor, and Hastelloy pin
3-8150	-1 Example Part Number

Model 8150

Ordering Notes:

- 1) For panel version, cutout must be 92 x 92 mm (3.62 x 3.62 in.)
- 2) To mount the panel version on a wall, use the heavy duty wall mount bracket.
- 3) Use the Universal mounting kit with the Field mount instrument to mount to a pipe, tank or wall.
- 4) An optional splash proof rear cover can be ordered separately if needed.

* See individual sensor sheets for more sensor information.

Mfr. Part No.	Code	Mfr. Part No.	Code
3-8150-1	159 000 929	3-8150-P1	159 000 932
3-8150-1P	159 000 930	3-8150-T0	159 001 011
3-8150-P0	159 000 931	3-8150-V0	159 001 012

Accessories and Replacement Parts

Mfr. Part No.	Code	Description
Mounting		
3-8050	159 000 184	Universal mounting kit
3-0000.596	159 000 641	Heavy duty wall mount bracket (for panel mount only)
3-5000.598	198 840 225	Surface mount bracket
3-8050.395	159 000 186	Splashproof rear cover for panel mount totalizer
Liquid Tight Connectors		
3-9000.392	159 000 368	Liquid tight connector kit (includes 3 connectors)
3-9000.392-1	159 000 839	Liquid tight connector, NPT (1 connector)
3-9000.392-2	159 000 841	Liquid tight connector, PG 13.5 (1 connector)
Other		
3-8050.392	159 000 640	Model 200 retrofit adaptor
7400-0011	159 000 022	Lithium battery, 3.6V, Size AA
5523-0222	159 000 392	Cable, two conductor shielded, 22 AWG (per ft.)
Replacement parts for integral mount units - see Model 515 catalog pages for more information		
3-8051	159 000 187	Flow integral mounting kit, NPT (replacement)
3-8510-P0	198 864 504	Sensor for 0.5 to 4 in. pipes, Polypropylene body
3-8510-P1	198 864 505	Sensor for 5 to 8 in. pipes, Polypropylene body
3-8150-T0	159 000 622	Sensor for 0.5 to 4 in. pipes, all natural PVDF
3-8150-V0	198 864 506	Sensor for 0.5 to 4 in. pipes, PVDF body

For More Information:

- For flow wiring information see page 173.
- For flow installation tips and information see page 156.
- To compare this instrument with other +GF+ SIGNET instruments, see Flow Selection Guide on page 4.
- For other instruments that integrally mount on a sensor, see page 68.

525 Metalex Paddlewheel Flow Sensor

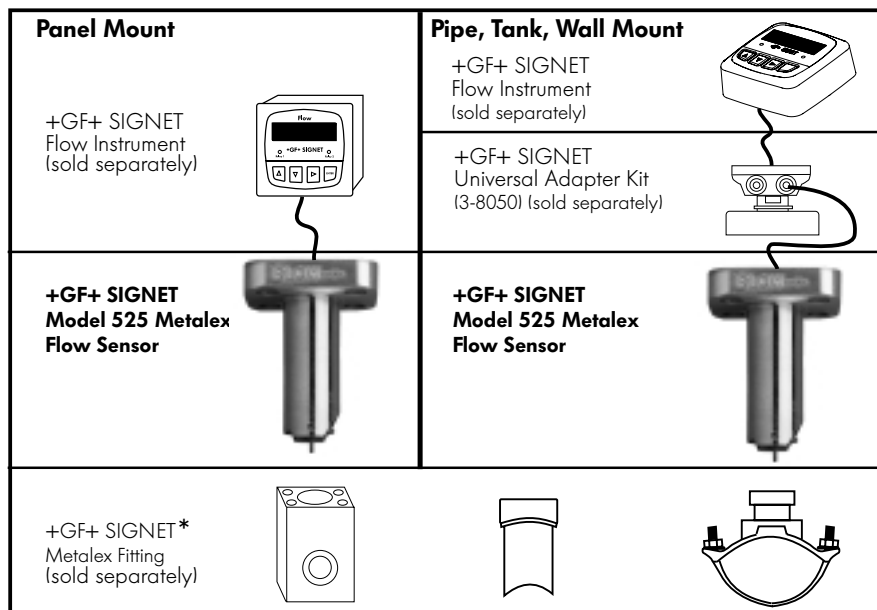


Description

The +GF+ SIGNET 525 Metalex Paddlewheel Flow Sensor combines stainless steel construction with insertion paddlewheel technology. The result is a highly reliable sensor suitable for operation at extreme pressures and temperatures. The Tungsten Carbide shaft and Fluoroloy B®/PTFE bearing provides excellent wear resistance for extended service.

A comprehensive fitting program allows installation in steel lines with the mini-block for small diameters, and either the mini-tap or saddle for pipes up to DN300 (12 in.). The self-generating output signal allows use with any battery operated flow totalizer, including the new 8150.

System Overview



* For information on pipe fittings specially designed for use with the Model 525 Metalex Flow Sensor, see page 188 in the catalog.

Features

- Flow rate range 0.5 to 6m/s (1.6 to 20 ft/s)
- For up to 103 bar (1500 psi) pressure
- For up to 149°C (300°F) temperatures
- DN15 to DN300 (0.5 to 12 in.) pipe range
- Simple Installation
- 316SS body (1.4401)
- Tungsten Carbide shaft
- 7.6m (25 ft.) cable included
- FM & CSA, CE approved

Application

- Boiler Feedwater Monitoring
- HVAC Systems
- Chemical Transport
- Heat Exchangers
- Reverse Osmosis
- Cooling systems
- Not Suitable for Gases



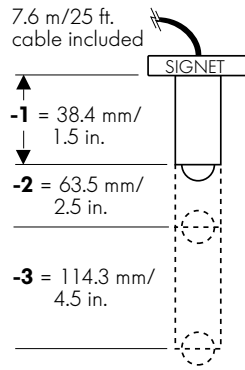
Compatible Instruments

The 525 Metalex Flow Sensor is compatible with the following +GF+ SIGNET instruments:

8150	5100	8900
8550	5500	
5075	5600	

See individual catalog pages for more information

Dimensions



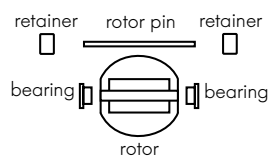
Application Tips:

- Use the Conduit Adapter Kit to protect the cable-to-sensor connection when used in wet environmental areas. See page 198 for more information.
- Use the Socket Weld or Weld-on Mini-Tap fittings for sensor installation in pressures up to 1500 psi (103 bar).
- The 525 can be used in intrinsically safe areas using an approved barrier between the sensor and instrument.

For More Information:

- For flow wiring information see page 173.
- For flow installation tips and information see page 156.
- To compare this Sensor with other +GF+ SIGNET Flow Sensors, See Flow Selection Guide on page 4.
- For flow sensor mounting position information see page 156.
- For rotor pin and rotor replacement information see page 197.

Rotor Kit



Specifications

General

Flow Rate Range: 0.5 to 6 m/s
(1.6 to 20 ft/s)

Pipe size range: DN15 to DN300
(0.5 to 12 in.)

Linearity: ±1% of full range

Repeatability: ±0.5% of full range

Minimum Reynolds number required: 4500

Wetted Materials

Sensor body: 316SS 1.4401 (ACI type CF-8M 1.4408 per ASTM A351), DIN 17440

Rotor material: SS (CD4MCu 1.4517 cast steel Alloy)

Rotor pin: Tungsten Carbide GRP 1 or stainless steel

Retainers (2): 316 stainless steel (1.4401)

Rotor bearings (2): Fluoroloy B®/PTFE

Gasket: KLINGER®sil C-4401

Electrical

Frequency: 12 Hz per ft/s nominal,
5 to 8 mV p-p per Hz

Source Impedance: 11.6 KW

Cable length: 7.6 m (25 ft), can be extended to 60m
(200 ft) with no significant degradation of signal strength

Electrical (continued)

Cable type: 22 AWG, 2-conductor w/shield, 150°C maximum

Shipping Weight:

P525-1	0.723 kg	1.6 lbs.
P525-2	0.774 kg	1.7 lbs.
P525-3	0.923 kg	2.0 lbs.

Max. Pressure/Temperature Rating

- Socket Weld or Weld-On Mini-Tap fittings: 103 bar (1500 psi) @ 149°C (300°F)
- Strap-on Saddle fitting: 21 bar (300 psi) @ 66°C (150°F)

See page 226 for Temperature and Pressure graphs

Standards and Approvals

- Manufactured under ISO 9001:2000 for Quality and ISO 14001:1996 for Environmental Management
- CE, CSA
- FM Class I, II, III, Division 1 (Groups A-G)

Ordering Information

Sensor Part Number	
P525	Metalex Flow sensor for high pressures and temperatures
Sensor style	
-1	used with 0.5 to 1 inch socket-weld mini-tap fittings*
-2	used with 1.25 to 12 inch weld-on mini-tap fittings*
-3	used with 2 to 12 inch strap-on saddle fittings*
Rotor Pin Material	
-	Tungsten Carbide
S	316 Stainless Steel (1.4401)
P525 -1	Example Part Number

*see page 188 for compatible fittings

Mfr. Part No.	Code
P525-1	198 801 494
P525-2	198 801 495
P525-3	198 801 496
P525-1S	159 000 963
P525-2S	159 000 964
P525-3S	159 000 965

Model 525 Ordering Notes:

- 1) Each sensor option is used with a different fitting.
- 2) Fittings must be ordered separately.
- 3) See flow sensor accessories on page 197 for fitting information.

Accessories and Replacements Parts

Mfr. Part No.	Code	Description
P52509	159 000 479	Rotor kit (rotors, stainless steel pin, bearings, retainers)
P52509-2	159 000 480	Rotor kit (rotors, tungsten carbide pin, bearings, retainers)
P52504-1	198 801 500	Rotor Pin, Stainless steel (1.4401)
P52504-2	198 820 023	Rotor Pin, Tungsten Carbide
P52618	159 000 493	Gasket
P52503	198 820 013	Bearing, Fluoroloy B®/PTFE
P52527	159 000 481	Retainers, Stainless steel
P52628	159 000 504	Fitting cap kit (cap and gasket)
P51589	159 000 476	Conduit Adapter Kit
5523-3222	159 000 393	Cable (per foot) 2 cond. w/shield, 22 AWG