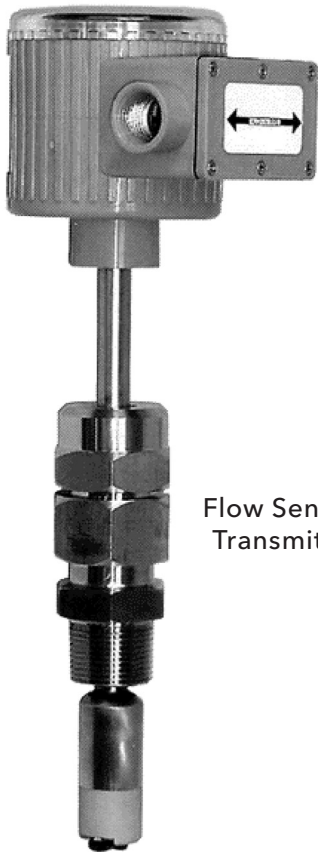


SENSOR/TRANSMITTER

FLOW SENSOR/TRANSMITTER FOR PUMPS WITH TECHNOLOGIC® DRIVES



Flow Sensor/
Transmitter

Sensor/Transmitters are the nerves of the system.

The rugged Bell & Gossett Flow Sensor/Transmitter precisely measures system flow and transmits a proportional 4 to 20 mA DC signal to the Technologic Controller for display or program calculations.

These non-magnetically sensed, non-fouling devices are factory calibrated to the pipe size for the job from 1-1/2" to 36" (38 mm to 914 mm).

STANDARD FEATURES

- Factory-calibrated
- Optional software and cable available for field programming
- Suitable for mounting in vertical pipe
- Suitable for mounting in horizontal pipe within 45° of top dead center
- 0.33 to 20 ft. (0.1 m to 6.1 m) per second velocity range
- Output signal linear in proportion to flow
- Non-magnetically sensed, non-fouling paddle wheel
- Powered by the Technologic Controller
- Accuracy of $\pm 1\%$ of rate
- NEMA 4X Transmitter Enclosure
- Maximum Pressure Ratings:
1000 psi @ 100°F, 900 psi @ 200°F,
750 psi @ 300°F (6895 kPa @ 38°C, 6205 kPa @ 93°C,
5171 kPa @ 149°C)
- Maximum Temperature Ratings:
Fluid - 300°F (149°C) continuous service
Electronics - 150°F (66°C)
- 9.9 lbs (4.5 kg) approximate weight

INSTALLATION CONSIDERATIONS

- Standard 18 AWG (1.194 mm dia.) gauge 3 wire shielded cable located in conduit separate from high voltage wiring
- 24 vdc power supplied from Technologic Controller
- Takes accurate readings and relays them to the Technologic Controller up to 2,000 ft. (610 m) away, when 10 pipe diameters upstream and 5 pipe diameters downstream of straight uninterrupted flow is present.
- See drawing 1FC011 (page 2) for installation considerations

TECHNOLOGIC ANALOG SENSOR WIRING

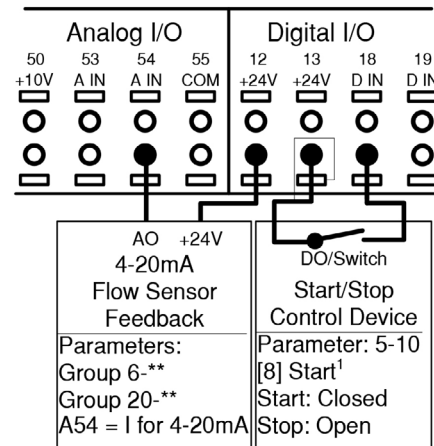
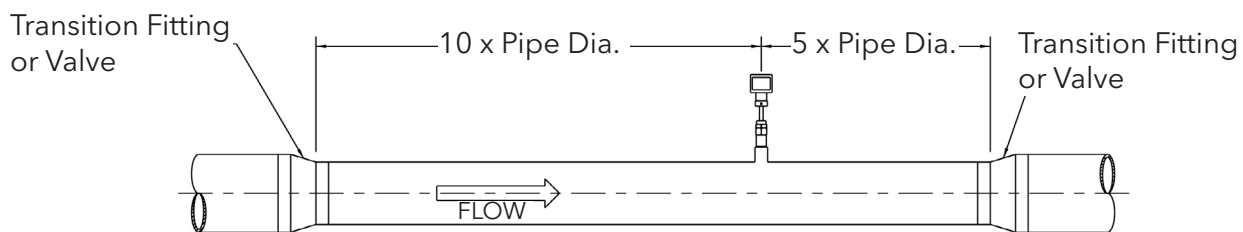


TABLE 1 - DIRECT INSERT SENSORS FOR SCH 40 PIPE				
CALIBRATED PART	PIPE SIZE	GPM	C (IN) SCH40	H (IN)
137411	3"	250	2-3/8 + B	15.75
137412	4"	400	2-23/32 + B	15.75
137413	6"	850	2-31/32 + B	15.75
137414	8"	1750	3-19/32 + B	15.75
137415	10"	3150	4-1/4 + B	15.75
137416	12"	5000	4-7/8 + B	19.00
137417	14"	6400	3-9/32 + B	19.00
137418	16"	9100	3-5/8 + B	19.00
137419	18"	12400	3-31/32 + B	19.00
137420	20"	16500	4-9/32 + B	19.00

TABLE 2 - HOT TAP SENSORS FOR SCH 40 PIPE				
CALIBRATED PART	PIPE SIZE	GPM	C (IN) SCH40	H (IN)
137411-HT	3"	250	2-3/8 + B	19.00
137412-HT	4"	400	2-23/32 + B	19.00
137413-HT	6"	850	2-31/32 + B	19.00
137414-HT	8"	1750	3-19/32 + B	19.00
137415-HT	10"	3150	4-1/4 + B	19.00
137416-HT	12"	5000	4-7/8 + B	21.5
137417-HT	14"	6400	3-9/32 + B	21.5
137418-HT	16"	9100	3-5/8 + B	21.5
137419-HT	18"	12400	3-31/32 + B	21.5
137420-HT	20"	16500	4-9/32 + B	21.5



1FC011 Drawing

SENSOR/TRANSMITTER SPECIFICATION

Flow Sensor/Transmitter

Furnish () field mounted, flow transmitter(s) as indicated on plans. The flow sensor shall be an insertion or hot tap type using a non-magnetic, spinning impeller (paddle wheel) as the only moving part. The sensor stem will be brass with the sensor tip being glass-filled polyphenylene sulfide (PPS). The impeller shall be Stainless Steel with a Torlon® sleeve bearing. The shaft material shall be Tungsten Carbide. All O-rings shall be Viton®. The sensor shall be supplied with a 1" NPT adapter for installation into any commercially available weld-on fitting or pipe saddle.

The sensor shall operate in liquid temperatures up to 300°F (149°C) continuous service in

line pressures up to 1000 psi @ 100°F, 900 psi @ 200°F, 750 psi @ 300°F. The sensor shall operate in flows of 0.33 to 20 ft/sec. with initial flow detection below 0.25 ft/sec (0.08 m/sec). The flow sensor shall have a pressure drop of 0.5 psi (3.4 kPa) or less at 10 ft/sec (3 m/sec) for all pipe sizes 1-1/2" (38 mm) in diameter and up. The flow sensor shall have repeatability of ±0.5%. The sensor shall operate with a minimum straight pipe requirement of 10 pipe diameters upstream and 5 pipe diameters downstream. The sensor shall be a two-wire device with 4-20 mA analog outputs. The sensor shall be an Insertion Flow Sensor without display and may be field programmed using a Bell & Gossett S13699 connection cable and a Windows based software program.

xylem
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We value your feedback. Please take our 3 question survey at **bellgossett.com/survey** to let us know how we are doing.