

FLOW RATE TRANSMITTERS

Flow Rate Transmitter is ideal for batching, industrial process control, mobile hydraulic equipment and computer / PLC controlled hydraulic system monitoring application. Available in analog or pulse outputs.

TECHNICAL SPECIFICATIONS



Measuring Accuracy

±2.0% of full scale for oil and water
±2.5% of full scale in center third of measuring range; ±4% in upper & lower thirds for air and gas

Repeatability

±1% of full scale

Flow Measuring Range

0.1-150 GPM (0.5-550 LPM)
2-1300 SCFM (1-600 SLPS)

Standard Calibration Fluids

Oil monitors: DTE 25® @ 110°F (43°C), 0.873 sg

Water monitors: tap water @ 70°F (21°C), 1.0 sg

Air monitors: air @ 70°F (21°C), 1.0 sg and 100 PSIG (6.8 Bar)

Maximum Operating Pressure Liquids

Aluminum and brass monitors:
3500 PSIG (240 Bar)
Stainless steel: 6000 PSIG (410 Bar)

Air/Gas

Aluminum and brass: 600 PSIG (40 Bar)
Stainless steel: 1000 PSIG (69 Bar)

Maximum Operating Temperature

Media: 185°F (85°C)
Ambient: 185°F (85°C)

Filtration Requirements

74 micron filter or 200 mesh screen minimum

Viscosity

Standard viscosities up to 110 cSt. For viscosities between 110 to 430 cSt contact factory.

BENEFITS

Simple to Install

All transmitters are factory calibrated and ship fully assembled. Simply install the transmitter into your system and apply power. No straight plumbing required at inlet or outlet.

Industry Standard Outputs

Transmitters provide proportional analog or pulse outputs that will drive popular data acquisition devices, meters and analog input cards.

Direct Reading

All transmitters provide a visual indication of flow rate that matches the transmitted output.

Weather-Tight Construction

The rugged cast aluminum enclosure is built to NEMA 4X standard and allows installation outdoors and in environments where liquid tight seals are required.

Rugged and Reliable

Without delicate internal components to break, abrade or corrode, the flow transmitter will provide many years of low-maintenance service.

DTE 25 is a registered trademark of Exxon Mobil.

ELECTRONIC TRANSMITTER PERFORMANCE

Power Requirements

12-24 VDC, Regulated

Load Driving capacity

4-20mA: Load resistance is dependent on power supply voltage.

Use the following equation to calculate maximum load resistance:

Max Loop Load (Ω) = 50 (Power supply volts - 12).

0-5 VDC (regulated): Minimum load resistance 1000 Ω .

1-5 VDC* (regulated): Minimum load resistance 25 K Ω

Square Wave Pulse: Minimum load resistance 1000 Ω

Transmission Distance

4-20mA and 1-5 VDC (regulated) are limited only by wire resistance and power supply voltage.
<200 feet recommended for 0-5 VDC (regulated) and square wave pulse.

Over-Current Protection

Self limiting at 35mA

Resolution

10-bit (0.1%)

Response Time

<100 milliseconds

**The 1-5 VDC output requires an external 249 ohm resistor (not included with transmitter) to be wired at the receiving device.*

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ENCLOSURE MATERIALS OF CONSTRUCTION (NON-WETTED COMPONENTS)

Enclosure & Cover	Painted Aluminum	Painted Aluminum	Painted Aluminum
Seals	Buna-N®	Buna-N	Buna-N
Window	Pyrex®	Pyrex	Pyrex
Din Connector	Polyamide	Polyamide	Polyamide

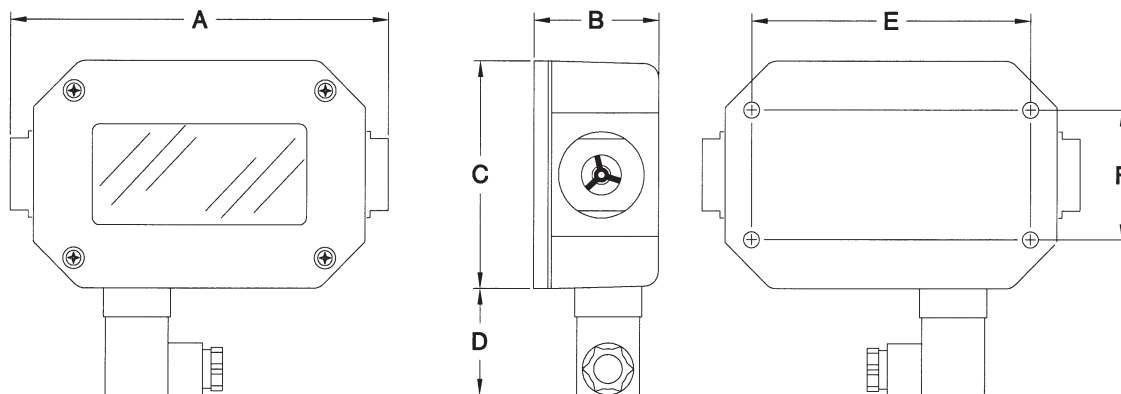
Buna-N is a registered trademark of Chemische Werke Huls. Pyrex® is a registered trademark of Corning Incorporated.

FLOW METER MATERIALS OF CONSTRUCTION (WETTED COMPONENTS)

Casing & End Ports	Anodized Aluminum	Brass	Stainless Steel 303
Seals	Buna-N (STD), EPR, FKM or Kalrez®	Buna-N (STD), EPR, FKM or Kalrez	FKM with PTFE backup (STD), Buna-N, EPR or Kalrez
Transfer Magnet	PTFE coated Alnico	PTFE coated Alnico	PTFE coated Alnico
All other internal parts	Stainless Steel	Stainless Steel	Stainless Steel

Kalrez is a registered trademark of DuPont Incorporated.

MECHANICAL - SIZE CODE



DIM	Series 3	Series 4	Series 5	Series 5 (2" port only)
A	6-9/16" (167mm)	7-5/32" (182mm)	10-1/8" (258mm)	12-5/8" (322mm)
B	2-3/16" (56mm)	2-15/16" (75mm)	3-13/16" (97mm)	3-13/16" (97mm)
C	4" (101mm)	4-1/2" (114mm)	5-5/16" (135mm)	5-5/16" (135mm)
D	1-7/8" (47mm)	1-7/8" (47mm)	1-7/8" (47mm)	1-7/8" (47mm)
E	4-7/8" (128mm)	5" (127mm)	6-3/4" (172mm)	6-3/4" (172mm)
F	2-1/4" (57mm)	2-7/8" (73mm)	3-3/4" (95mm)	3-3/4" (95mm)

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PART NUMBER GUIDE

R [] [] - [] [] [] - [] [] [] [] - [] [] [] []

TRANSMITTER

R

PORTING/THREAD TYPE

(all female)

1/4" NPTF, dry seal	3 only	=	S
3/8" NPTF, dry seal	3 only	=	A
1/2" NPTF, dry seal	3 only	=	B
3/4" NPTF, dry seal	4 only	=	C
1" NPTF, dry seal	4 only	=	D
#6 SAE, O-ring seal	3 only	=	E
#8 SAE, O-ring seal	3 only	=	F
#10 SAE, O-ring seal	3 only	=	G
#12 SAE, O-ring seal	4 only	=	H
#16 SAE, O-ring seal	4 only	=	J
1-1/4" NPTF, dry seal	5 only	=	K
1-1/2" NPTF, dry seal	5 only	=	L
2" NPTF, dry seal	5 only	=	M
#20 SAE, O-ring seal	5 only	=	N
#24 SAE, O-ring seal	5 only	=	P
#32 SAE, O-ring seal	5 only	=	Q
1/4" BSPP	3 only	=	8
3/8" BSPP	3 only	=	R
1/2" BSPP	3 only	=	T
3/4" BSPP	4 only	=	U
1" BSPP	4 only	=	V
1-1/4" BSPP	5 only	=	W
1-1/2" BSPP	5 only	=	Y
2" BSPP	5 only	=	X
Cartridge			Z

SPECIAL SCALE/CUSTOM PRODUCT

PORT SIZE RANGE

1/4" - 1/2" =

3/4" - 1" =

1-1/4" - 2" =

OPTIONAL FLOW DIRECTIONS

Standard Flow, Uni-Directional =

Reverse Flow =

FLOW RANGES

Liquid	Air	Size		
0.1-1.0 GPM	2-12 SCFM	3 only	=	<input type="text" value="0"/> <input type="text" value="1"/>
0.2-2.0 GPM	4-23 SCFM	3 & 4	=	<input type="text" value="0"/> <input type="text" value="2"/>
0.5-5.0 GPM	5-50 SCFM	3 & 4	=	<input type="text" value="0"/> <input type="text" value="5"/>
1-10 GPM	10-100 SCFM	3 & 4	=	<input type="text" value="1"/> <input type="text" value="0"/>
1-15 GPM	25-150 SCFM	3 & 4	=	<input type="text" value="1"/> <input type="text" value="5"/>
2-20 GPM	20-215 SCFM	4 only	=	<input type="text" value="2"/> <input type="text" value="0"/>
2-25 GPM	20-250 SCFM	4 & 5	=	<input type="text" value="2"/> <input type="text" value="5"/>
3-30 GPM	30-330 SCFM	4 only	=	<input type="text" value="3"/> <input type="text" value="0"/>
4-40 GPM	30-400 SCFM	4 only	=	<input type="text" value="4"/> <input type="text" value="0"/>
5-50 GPM	40-500 SCFM	4 only	=	<input type="text" value="5"/> <input type="text" value="0"/>
5-50 GPM	30-470 SCFM	5 only	=	<input type="text" value="5"/> <input type="text" value="0"/>
8-75 GPM	30-750 SCFM	5 only	=	<input type="text" value="7"/> <input type="text" value="5"/>
10-100 GPM	150-900 SCFM	5 only	=	<input type="text" value="8"/> <input type="text" value="8"/>
20-150 GPM	150-1300 SCFM	5 only	=	<input type="text" value="9"/> <input type="text" value="9"/>

MATERIAL

Aluminum =

Brass =

Stainless Steel =

MAX. PRESSURE RATING

600 psig (air & gas, aluminum & brass) =

1000 psig (air & gas, stainless steel) =

3500 psig (liquids, aluminum & brass) =

6000 psig (liquids, stainless steel) =

FLUID MEDIA

Air & Gases =

Oil @ 0.873 specific gravity =

Water @ 1.0 specific gravity =

Note: For special scales consult the factory.

Note: SAE porting not available in Brass. Consult factory for SAE brass monitor requirements.

Products may be subject to change without notice - Contact factory for the most up-to-date product information.