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.

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.

TECHNICAL SPECIFICATIONS

Measuring Accuracy
±2.0% of full scale

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.

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.*

AW-LAKE
PROCESS FLOW MEASUREMENT

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ENCLOSURE MATERIALS OF CONSTRUCTION (NON-WETTED COMPONENTS)

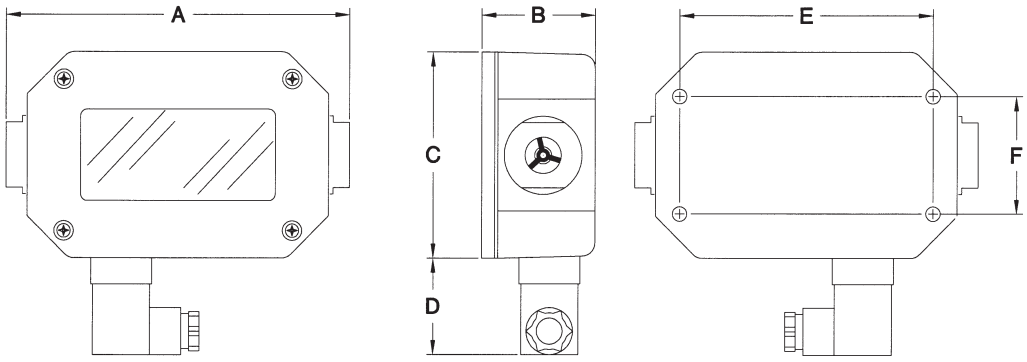
Enclosure & Cover	Painted Aluminum	Painted Aluminum	Painted Aluminum
Seals	Buna-N®	Buna-N®	Buna-N®
Window	Pyrex®	Pyrex®	Pyrex®
Din Connector	Polyamide	Polyamide	Polyamide

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” (135 mm)	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

PORT SIZE RANGE

1/4" – 1/2"	=	3
3/4" – 1"	=	4
1-1/4 – 2"	=	5

MATERIAL

Aluminum	=	A
Brass	=	B
Stainless Steel	=	S

MAX. PRESSURE RATING

600 psig (air & gas, aluminum & brass)	=	4
1000 psig (air & gas, stainless steel)	=	5
3500 psig (liquids, aluminum & brass)	=	6
6000 psig (liquids, stainless steel)	=	7

FLUID MEDIA

Air & Gases	=	A
Oil @ 0.873 specific gravity	=	H
Water @ 1.0 specific gravity	=	W

Note: For special scales consult the factory.

PORTING/THREAD TYPE

(all female)	Size		
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	=	&
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

OPTIONAL FLOW DIRECTIONS

Standard Flow, Uni-Directional	=	☐ ☐
Reverse Flow	=	R F

FLOW RANGES

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

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.

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