

Flowmeter with Transmitter



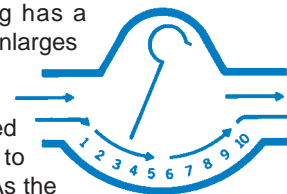
Armor-Flo™ meters with integral transmitters provide an ideal combination - a local mechanical flow rate indicator independent of electrical supply with a 4-20 mA two wire loop powered signal output. The output signal is linear within the middle 80% of the range. A response curve is furnished with each flowmeter. Simple design, rugged construction and good value make this the ideal utility fluid flowmeter.

Features

- Instantaneous local flow rate measurement.
- Local flow rate indication requires no power.
- Flow proportional signal output.
- Broad range of materials available.
- Use in horizontal or vertical piping systems.
- Individually calibrated for fluid and operating conditions.
- User selectable 10:1 turndown flow ranges. ("See Meter Rangeability Sizing Tables")
- User selectable units of measure-including dual units of measure.
- No floats to get stuck, tubes to break or dynamic seals to leak.
- Low pressure loss.
- Simple design with few parts for long service life.

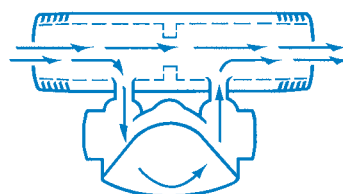
Principle of Operation

The Armor-Flo™ body housing has a variable internal volume which enlarges from the inlet to the outlet.



The primary sensor is a tempered alloy vane with one end affixed to the apex of the meter housing. As the flow rate changes, the vane is flexed in direct proportion. A Teflon® encapsulated magnet links the vane position with the pointer in the indicator housing and the signal output/switch circuit. All adjustments and electrical connections are accessible from the front of the meter housing.

The ½", ¾" and 1" connections typically have female threaded ends. Sizes 1½" through 12" utilize an integral bypass housing



permitting larger connection sizes in the format of a spool with a consistent 12" end to end dimension. In addition, it permits a wide variety of connection types which include threaded, flanged, grooved-ends and tri-clamp.

Applications

- Air
- Chilled Water
- Coolant monitoring
- Gas flow to burners
- Other process utility fluids

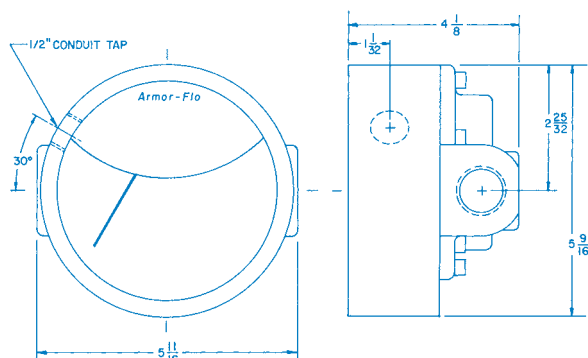
Specifications

Accuracy:	±2% full scale
Repeatability:	±1% full scale
Scales:	Direct reading
Resolution:	Maximum-30 division/Minimum-15 divisions
Rangeability:	10 to 1 turndown
Transmitter:	Accuracy: ± 2% full scale Repeatability: ± 0.5% full scale Permissible load: Rmax= 750 Ω Temperature limits: 0-85°C (32-185°F) Environmental: NEMA 4/NEMA 4x
Materials of Construction:	
Housing:	Aluminum, brass, 316 stainless steel
Shunt:	As housing or carbon steel
Window:	Tempered glass or polycarbonate
Vane:	Cobalt/chromium/nickel alloy with Teflon® encapsulated magnet

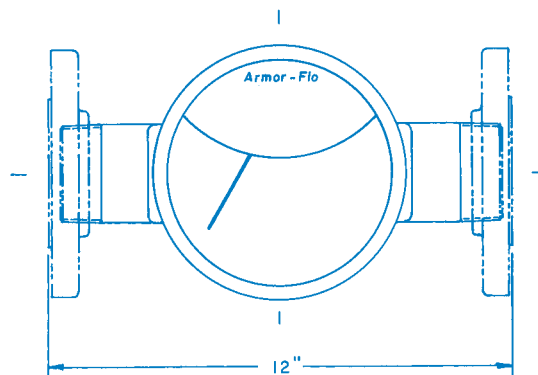
ERDCO

Flowmeter with Transmitter

3600 Series ½", ¾", & 1" connections



3600 Series 1¼" to 6" connections



"O" rings: Buna-n, ethylene propylene, Viton® or perfluoroelastomer

Piping Connections:

½" to 1" NPT Female
1¼" to 4" NPT male
1½" to 3" Tri-clamp
1¼" to 6" Grooved
1¼" to 6" Beveled
½" to 8" 150# /300# RF/FF ANSI Flanges (carbon stl)
½" to 8" 150# RF ANSI Flanges (stainless stl)
½" to 6" 150# RF ANSI Flanges (aluminum)
½" to 6" 150# FF ANSI Flanges (brass)
15 to 25 mm DIN 2999/BS21/ISO R7 Female threaded
15 to 150 mm DIN PN 10 Flanges (316 stainless stl & carbon stl)

Pressure Limits: 1 Housing (aluminum)
0, 1 or 5 Shunt-200 psig (13.8 bar)
2 Housing (brass)
0 Shunt-400 psig (27.6 bar)
2 or 5 Shunt-200 psig (13.8 bar)
6 Housing (316 stainless stl)
0 Shunt-400 psig (27.6 bar)
5 or 6 Shunt-200 psig (13.8 bar)
7 or 8 Shunt-400 psig (27.6 bar)
8 Housing (high pressure 316 stainless stl)
0 Shunt-1000 psig (69 bar)

Temperature Limits:
0 to 85°C (32 to 185°F)

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Model Number System

The example **3661-12F5-114** describes a 3600 Armor-Flo™ meter with a stainless steel body/carbon steel shunt for left to right flow. Connections are 3" 150# raised carbon steel flanges.

<u>36</u>	<u>6</u>	<u>1</u>	-	<u>12</u>	<u>F</u>	<u>5</u>	-	<u>1</u>	<u>1</u>	<u>4</u>
Series	Housing Material	Flow Direction		Size	Type	Shunt Material		Window	O-Ring	Signal
36 -3600	1-Aluminum 2-Brass 6-Stainless Stl 8-Stainless Stl 1000 psig	1 -L to R 2 -R to L 3 -Up 4 -Down		02 -½" (15mm) 03 -¾" (20mm) 04 -1" (25mm) 05 -1¼" (32mm) 06 -1½" (40mm) 08 -2" (50mm) 10 -2½" (65mm) 12 -3" (80mm) 16 -4" (100mm) 20 -5" (125mm) 24 -6" (150mm) 32 -8"	T -NPT End F -Flange 150#RF G -Grooved H -Flange 150#FF J -Flange 300#RF K -Flange 300#FF L -Flange DIN PN 10/15 M -BSP Thread End N -BSP Thread Back P -Flange 600#RF R -NPT Back S -Tri-clamp W -Socket End ½"-1" X -Beveled	0 -None 1 -Aluminum 2 -Brass 5 -Carbon Steel 6 -Stainless Steel 7 -Carbon Steel 400 psig 8 -Stainless Steel 400 psig		1 Glass 2 Polycarbonate	1 EPM 2 Viton 3 Buna-N 4 Perfluoroelastomer	4 4-20 mA Output

*gas applications only

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