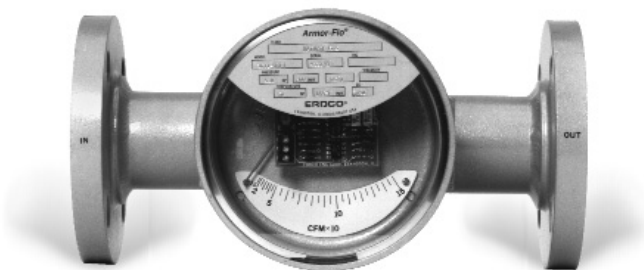


Flowmeter with Transmitter



Armor-Flo™ meters with integral transmitters provide an ideal combination - a local mechanical flow rate indicator independent of electrical supply with a flow proportional signal output. The output signal is linear within the middle 80% of the range. A response curve is furnished with each flowmeter.

Several signal output options are available:

- 4-20 mA two wire loop powered. FM-15425
- 4-20 mA (requires 0.2A, 24V dc supply) with concurrent 0-1000 Hz frequency output (requires 24V dc or 12V dc supply). FM-14792
- 4-20 mA with two adjustable setpoints. Relay contacts rated 1A @ 120V ac/2A @ 28V dc (requires 0.2A, 24V dc supply). FM-14352

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.

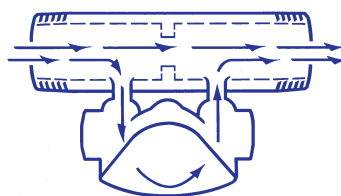
Principle of Operation

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 1/2", 3/4" and 1" connections typically have female threaded ends. Sizes 1 1/4" through 6" utilize a shunt design. This integral



by-pass housing enables larger connection sizes in the format of a spool with a constant 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:	

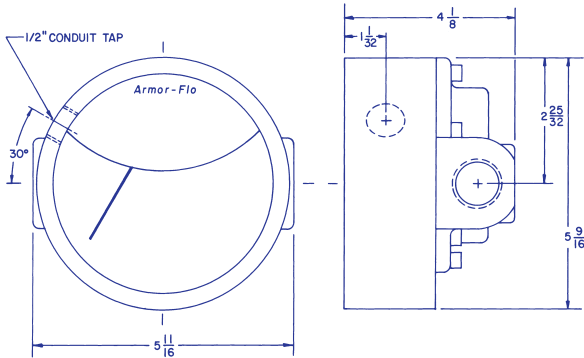
Accuracy: ± 2% full scale
 Repeatability: ± 0.5% full scale
 Permissible load: Rmax= 750 Ω
 Temperature limits: 0-85°C (32-185°F)
 Environmental: NEMA 4/NEMA 4x

Materials of Construction:

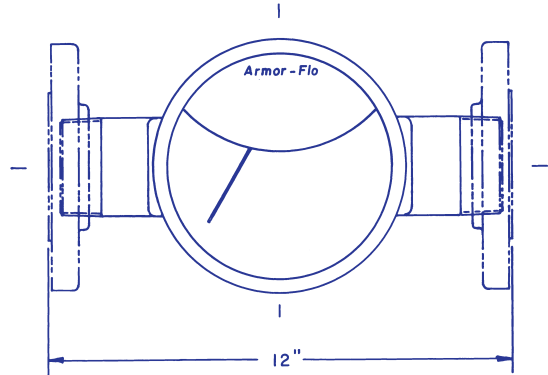
Housing:	Aluminum, brass, 316 stainless steel, Hastelloy® C-22
Shunt:	As housing or carbon steel
Window:	Tempered glass or polycarbonate
Vane:	Cobalt/chromium/nickel alloy or Hastelloy® C-22 with Teflon® encapsulated magnet

Flowmeter with Transmitter

3600 Series 1/2", 3/4", & 1" connections



3600 Series 1 1/4" to 6" connections



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

Piping Connections:

- 1/2" to 1" NPT Female
- 1 1/4" to 4" NPT male
- 1 1/2" to 3" Tri-clamp
- 1 1/4" to 6" Grooved
- 1 1/4" to 6" Beveled
- 1/2" to 6" 150# /300# RF/FF ANSI Flanges (carbon stl)
- 1/2" to 6" 150# RF ANSI Flanges (stainless stl)
- 1/2" to 6" 150# RF ANSI Flanges (aluminum)
- 1/2" 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)
- 9 Housing (Hastelloy® C-22)
 - 0 Shunt-400 psig (27.6 bar)

Temperature Limits:

0 to 85°C (32 to 185°F)

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Model Number System

The example **3661-12F5** 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.

36 Series	6 Housing Material	1 Flow Direction	-	12 Size	F Type	5 Shunt Material
36-3600	1-Aluminum	1-L to R		02-1/2" (15mm)	T-NPT End	0-None
	2-Brass	2-R to L		03-3/4" (20mm)	F-Flange 150#RF	1-Aluminum
	6-Stainless Stl	3-Up		04-1" (25mm)	G-Grooved	2-Brass
	8-Stainless Stl	4-Down		05-1 1/4" (32mm)	H-Flange 150#FF	5-Carbon Steel
	1000 psig			06-1 1/2" (40mm)	J-Flange 300#RF	6-Stainless Steel
	9-Hastelloy®			08-2" (50mm)	K-Flange 300#FF	7-Carbon Steel
	C-22			10-2 1/2" (65mm)	L-Flange DIN PN 10/15	400 psig
				12-3" (80mm)	M-Metric Thread End	8-Stainless Steel
				16-4" (100mm)	N-Metric Thread Back	400 psig
				20-5" (125mm)	P-Flange 600#RF	
				24-6" (150mm)	R-NPT Back	
					S-Tri-clamp	
					W-Socket End 1/2"-1"	
				X-Beveled		