

ŚMARTFLOW

TRACER[®] ELECTRONIC FLOWMETERS



General Description

Tracer Electronic Flowmeter with Liquid Crystal Display (LCD) measures water flow rate, temperature, calculates BTU's per minute and incorporates a Flow Characteristic Indicator (FCI). The highly-visible display is configured via the sealed push buttons and user-friendly menus.

FCI helps optimize systemic water usage. "TFLOW" on the digital display signifies the presence of Turbulent Flow, or optimum cooling water efficiency. 10, 20 or 30% glycol mix is supported in Turbulent Flow calculations.

Bi-directional flow reading makes installation simple and convenient.

English or Metric units for flow and temperature can be selected at any time.

Corrosion-resistant wetted parts assure long-lasting durability.

Polysulfone viewing window provides visual flow indication (3/8" models only)

Automatic display shut-off prolongs battery life.

RoHS compliant

As a diagnostic tool, engineers and maintenance personnel can quickly spot-check temperature and flow in water lines using the LCD Tracer flowmeter. This portable LCD unit is unmatched as a troubleshooting tool.

As a process control tool, the Tracer can be left in place to closely monitor more critical applications. Annual calibration is recommended for best results. 3/8" Tracer flowmeters are not recommended for use in liquids containing ferrous particles. Larger units equipped with inductive sensors are not sensitive to metal particles in process liquid.

Model DD Digital Display

- Battery Powered
- ♦ LCD Display

(R)

- FCI (Flow Characteristic Indicator)
- Flow
- Temperature
- · BTU's per minute

See page 3 for model numbers and dimensions.

Specifications

Flow Accuracy	±5%*
Flow Repeatability	±3%*

Wetted Parts

s
m
K)
е
n
el
m

Power

Battery	
(incl	uded, shipped uninstalled)
Battery Life	500 hrs actual use

Process Temperature

Range	32°F to 180°F (0°C to 82°C)
Accuracy	±2% of display value
Repeatability	±1% of display value

Environmental

Pressure	
3/8" Body	150 psi max. (10.3 bar max.)
2" Body	100 psi max.(6.9 bar max.)

*Accuracy and Repeatability figures are based on the full scale of the range.

Design and specifications are subject to change without notice.

Form #190 (3.17)



RTFLOW) Switching Tracer[®] Electronic Flowmeters



General Description

Tracer Electronic Switching Flowmeter measures liquid flow rate and temperature while providing a selectable analog voltage and programmable switch. Tracer Switching Flowmeter calculates BTU's per minute and incorporates FCI (Flow Characteristic Indicator) in support of Scientific CoolingSM principles.

8 to 28VDC power source is required to supply the flowmeter. Sealed push-buttons configure the flowmeter and switching operations through user-friendly menus.

Separate analog outputs facilitate data collection of temperature and flow rates. The voltage outputs are user-selectable using onscreen menus: 0 to 5 Volts or 0 to 10 Volts.

FCI helps optimize systemic water usage. "TFLOW" on the digital display signifies the presence of Turbulent Flow, or optimum cooling water efficiency. 10, 20 or 30% glycol mix is supported in Turbulent Flow calculations.

SPDT switch is programmable for one to five set points: low flow, high flow, low temperature, high temperature and/or turbulent flow condition. Set points may be turned on or off in any combination.

Bi-directional flow reading makes installation simple and convenient.

English or Metric units for flow and temperature can be selected at any time.

Applications

Tracer flowmeter is suitable for use in injection molding machine cooling water loops, lube oil systems, blending systems, filter condition indicators, and varied applications requiring flow measurement of clean, non-viscous, chemically compatible process liquids.

Annual calibration is recommended for best results. 3/8" Tracer flowmeters are not recommended for use in liquids containing ferrous particles. Larger units equipped with inductive sensors are not sensitive to metal particles in process liquid.

Model DDS Digital Display Switching

- Remotely Powered 8 to 28VDC
- 0-5 or 0-10 Volts Analog Outputs
- Programmable SPDT Switch
- LCD Display
 - FCI (Flow Characteristic Indicator)
 - Flow
 - Temperature
 - BTU's per minute

See page 3 for model numbers and dimensions.

Specifications

Flow Accuracy ±5%*	
Flow Repeatability±3%*	•
Vetted Parts	
2" Body Clear-Anodized Aluminum	1
or 303 Stainless Steel (-SS model suffix))
ImpellerNylon	I.
Impeller Shaft Stainless Stee	
Power	
Cable 16ft (4.8M))
Switching SPDT, 1A, 30VAC, 42VDC	
Process Temperature	

	10 100	(0 0 10 02 0)
Accuracy	±2%	of display value
Repeatability	±1%	of display value

Environmental

Pressure 2" Body 100 psi max.(6.9 bar max.)

*Accuracy and Repeatability figures are based on the full scale of the range.

FCI (Flow Characteristic Indicator)

Turbulent Flow is the point at which cooling efficiency is optimized. Increasing flow rates above the point of Turbulent Flow provides diminishing cooling rate improvement. Using FCI, systemic cooling water flow can be optimized, conserving water and maximizing cooling plant-wide without plumbing changes. "TFLOW" displays when Turbulent Flow is present within the Tracer flowmeter.

2



MARTFLOW) Tracer® Electronic Flowmeters

Model Number

	DD	- 3	В	- B	
Electronics Function					Body Material & Thread Options
Digital Display Battery-Powered	DD			-B	Leave Blank for NPT Threaded Connection Parallel British Threaded Connection
Switching Tracer Analog Output plus Programmable Switch (2" oplu)	DDS			-SS -B-SS	Stainless Steel Body with NPT Threaded Connection (2" only) Stainless Steel Body with Parallel British Threaded Connection (2" only)
Flow Range and Connection	n Size			Pressur	e Gauges & Quick-Disconnect Options
0.5 - 8 gpm (2-30 lpm)	3/8'	3	в	Standard	t the second sec
All 3/8" Tracer flow bodies are Nickel-Plated Brass			-	(without and any	pressure gauge, applies to all 3/8" 2" aluminum flow bodies)
10 - 110 gpm (38 - 418 lpm)	2'	16	-	For upo	cr-disconnect littings (3/8 only)
Standard 2" Tracer flow bodies are Anodized Aluminum (Stainless Steel is optional)			C1 C2 C3	30 psi Pi 60 psi Pi 100 psi I	ressure Gauge Pressure Gauge
			• •		

Stainless Steel Application Note:

Stainless Steel flowmeter bodies are strongly recommended when copper is present in water lines This includes water treatments such as organic biocides containing copper. Aluminum is susceptible to galvanic action in the presence of copper. Contact your factory representative for more information.

Dimensions (mm/inches)				
Body Size	L	Н	W	С
3/8"	87/3.42	58/2.27	42/1.67	21/0.83
2"	140/5.50	118/4.65	76/3.00	38/1.50





[®] Precision Flow Regulator with 3/8" Tracer[®] Electronic Flowmeters

Model Number

LTA-



Delta-Q Flow Regulator can be used with 3/8" Tracer electronic flowmeters.

DD- 3.6V Battery-Powered

- · Flow Rate Display
- Temperature Display
- BTU's/Minute Display
- Turbulent Flow Condition (with optional glycol % input)



Wetted Parts and Materials

Flowmeter Body	Nickel-Plated Brass
Impeller	Nylon
Impeller Shaft	Stainless Steel
Magnet	Neodymium
Back Cover	Polysulfone
Flow Regulator Body	Glass-Filled Nylon
Stem & Valve Seat	Stainless Steel
O-Ring	EPDM
End Cap Brass	or Glass-Filled Nylon

Specifications

Flow Accuracy	±5% of full scale
Flow Repeatability	±3% of full scale
Temperature Accuracy	±2% of display
Temperature Repeatability	±1% of display
Operating Temperature	180°F max.
	(82°C max.)
Operating Pressure	150 psi max.
	(10.3 bar max.)
Power3.6VDC	Battery (included)

