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.

Specifications

Model DD
Digital Display

- Battery Powered
- LCD Display
  - FCI (Flow Characteristic Indicator)
  - Flow
  - Temperature
  - BTU's per minute

See page 3 for model numbers and dimensions.

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

Wetted Parts
3/8” Body ...................... Nickel-Plated Brass
2” Body ...................... Clear-Anodized Aluminum or 303 Stainless Steel (-SS model suffix)
Sight Window (3/8” only).............. Polysulfone Impeller ..............................................Nylon Impeller Shaft....................................Stainless Steel Magnet (3/8” only)......................Neodymium

Power
Battery........................................... 3.6V 1.0A Lithium
(included, 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.
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 Cooling™ 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 on-screen 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.

See page 3 for model numbers and dimensions.

Specifications

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

Wetted Parts

2” Body ................... Clear-Anodized Aluminum or 303 Stainless Steel (-SS model suffix)
Impeller .................................................. Nylon
Impeller Shaft ....................... Stainless Steel

Power .................................................. 8 to 28VDC
Cable .................................................. 16ft (4.8M)

Switching ............... SPDT, 1A, 30VAC, 42VDC

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

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.

U.S. Patent No. 7,729,869
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.
Delta-Q Flow Regulator can be used with 3/8" Tracer electronic flowmeters.

**DD-36V Battery-Powered**
- Flow Rate Display
- Temperature Display
- BTU's/Minute Display
- Turbulent Flow Condition (with optional glycol % input)

**Model Number**

<table>
<thead>
<tr>
<th>Thread Size</th>
<th>Delta-Q End Cap Material</th>
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<tbody>
<tr>
<td>3/8&quot;NPT(F)</td>
<td>Q Brass</td>
</tr>
<tr>
<td>3/8&quot;BSPP(F)</td>
<td>QP Nylon</td>
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</tbody>
</table>

**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.)
- Power: 3.6VDC Battery (included)