

Model DD Digital Display

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

See page 23 for model numbers and dimensions

General Description

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

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.

Features and Benefits

- ◆ **Bi-directional flow reading** makes installation simple and convenient.
- ◆ **English or Metric units** for flow and temperature are user-selectable.
- ◆ **Corrosion-resistant wetted parts** assure long-lasting durability.
- ◆ **Polysulfone viewing window** provides visual flow indication (DD-3B & DD-3E models only).
- ◆ **Automatic display shut-off** prolongs battery life.
- ◆ **RoHS compliant**

FCI (Flow Characteristic Indicator)

Turbulent Flow is the point at which cooling efficiency is optimized. Flow rates higher than the point of Turbulent Flow do not improve cooling. 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.

Specifications

Flow Accuracy±5%*

Flow Repeatability±3%*

Wetted Parts

3/8" BodyNickel-Plated Brass
 3/4" - 2" BodyClear-Anodized Aluminum
 or 303 Stainless Steel (-SS model suffix)
 Sight Window (3/8" only)Polysulfone
 ImpellerNylon 6/12
 Impeller Shaft18-8 Stainless Steel
 MagnetNeodymium

Power

Battery3.6V 1.0A Lithium
 Tadiran 5902 (part no. EFB-36)
 Battery Life500 hrs actual use

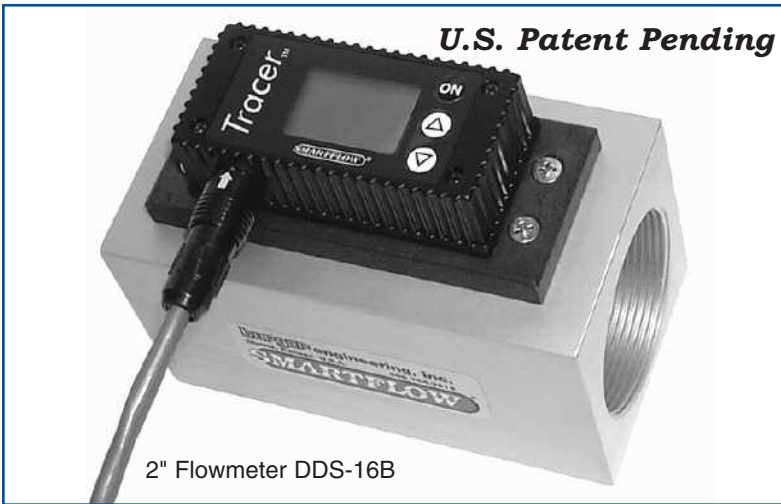
Process Temperature

Range32°F to 180°F
 (0°C to 82°C)
 Accuracy±2% of display value
 Repeatability±1% of display value

Environmental

Pressure
 3/8" Body150 psi max.
 (10.3 bar max.)
 3/4" - 2" Body100 psi max.
 (6.9 bar max.)

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



Model DDS

Digital Display Switching

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

See page 23 for model numbers and dimensions

General Description

Tracer Electronic Switching Flowmeter measures liquid flow rate and temperature while providing a selectable analog signal and programmable switch for low or high flow and temperature.

8 to 28VDC power source operates the flowmeter. Sealed push-buttons configure the flowmeter and switching operations through user-friendly menus. FCI (see page 19) and BTU's per minute calculation are standard.

Analog signal transmits 0 to 5 or 0 to 10 Volts; signal is scaleable for flow and temperature. The SPDT switch in the Tracer flowmeter can be wired directly to a process control system or other peripheral equipment. The NPT(F) threaded openings provide versatile, leak-free connections to match existing plumbing.

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. Not recommended for use with liquids containing metallic particles.

Specifications

Flow Accuracy.....±5%*

Flow Repeatability±3%*

Wetted Parts

3/8" BodyNickel-Plated Brass

3/4" - 2" BodyClear-Anodized Aluminum
or 303 Stainless Steel (-SS model suffix)

ImpellerNylon 6/12

Impeller Shaft.....18-8 Stainless Steel

MagnetNeodymium

Power8 to 28VDC

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

3/8" Body150 psi max.
(10.3 bar max.)

3/4" - 2" Body.....100 psi max.
(6.9 bar max.)

*These figures based on the full scale of the range.

Features and Benefits

- ◆ **Programmable SPDT switch** tied to high or low flow, or high or low temperature conditions to help protect equipment and processes.
- ◆ **0 to 5 or 0-10 Volts selectable analog output** for connection to process control system.
- ◆ **Flow Characteristic Indicator** helps optimize systemic water usage. "TFLOW" on digital display signifies Turbulent Flow.
- ◆ **Bi-directional flow reading** makes installation simple and convenient.
- ◆ **Metric or English units** for flow and temperature are user-selectable.
- ◆ **3/8" through 2" NPT(F) inlet/outlet** installs easily into existing plumbing.

Model Numbers and Dimensions

Display Tracer	Switching Tracer	Connection Size	Flow Range	Max Dimensions (mm/in)			
				L	H	W	C
DD-3B	DDS-3B	3/8" NPT(F)	0 - 8 gpm 0 - 30 lpm	87/3.42	58/2.27	42/1.67	21/0.83
DD-3B-B	DDS-3B-B	3/8" BSPP(F)					
DD-3E		3/8" quick connect					
DD-6B	DDS-6B	3/4" NPT(F)	2 - 20 gpm 8 - 76 lpm	121/4.75	94/3.70	57/2.25	29/1.13
DD-6B-B	DDS-6B-B	3/4" BSPP(F)					
DD-8B	DDS-8B	1" NPT(F)					
DD-8B-B	DDS-8B-B	1" BSPP(F)	3 - 30 gpm 11 - 114 lpm				
DD-12B	DDS-12B	1-1/2" NPT(F)	6.5 - 60 gpm 25 - 228 lpm	140/5.50	118/4.65	76/3.00	38/1.50
DD-12B-B	DDS-12B-B	1-1/2" BSPP(F)					
DD-16B	DDS-16B	2" NPT(F)	10 - 110 gpm 38 - 418 lpm				
DD-16B-B	DDS-16B-B	2" BSPP(F)					

Add "-SS" suffix to above model numbers for 303 Stainless Steel bodies with NPT threads only.

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.

