

Flowmeters by.....

## Thermal Instrument Company, Inc

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### MODEL 62-9/62T-9/9500 INTEGRAL THERMAL MASS PROBE FLOWMETER

The Thermal Instrument Model 62-9 Mass Probe Flowmeter With Integral 9500 Microprocessor Electronics brings an element of versatility to Mass Flow Measurement of Liquids and Gases.

A uniquely designed microprocessor controlled electronics provides integral local control and display in an explosion proof housing. Optional Remote Mounting of the electronics to a distance of 4000 ft provides additional versatility depending on the application.

Flow signal linearity and temperature effects, determined at calibration, are corrected by the microprocessor using operating parameter data stored in EEPROM memory.

#### DESIGN FEATURES

- > **Unobstructed Flow Tube with Non-wetted Sensors** mounted on the Inner Surface of the flow tube of the Insertion Probe Design permits measurement of Gases, Liquids and Slurries.
- > **Wide Selection of Probe Materials:** 316 SS is standard. Corrosion resistant materials such as Hastelloy C, Monel, Inconel, Carpenter 20 as well as carbide and fluorocarbon coatings are available.
- > **Hi Temperature designs to 1000 F.**
- > **Wide Flow Range on Gases** is greater than 100:1
- > **Vent Flow Measurement** at near atmospheric conditions and low flow.
- > **Rate and Totalizer** Ultra-bright LED display
- > **NIST Traceable Calibration** on user gases and liquids. Calibration in user piping configurations.

## SPECIFICATION MODEL 62-9/9500



- > **Isolated Fluid Temperature Signal** , 4-20MA from an RTD Sensor on the Flow Tube.
- > **Multi sensor Design for large ducts and stacks**
- > **Electronics suitable for Remote Mount** to 4000 ft.
- > **Totalizer Data** is stored in the EEPROM memory on power loss and restored on startup. No batteries required.

#### ENGINEERING SPECIFICATIONS

##### Accuracy:

+/- .50% of Full Scale, [or 2.0% of reading whichever is better. Full Scale over the calibrated range.]  
[Process fluid temperature span +/- 50 F]

**Repeatability:** +/- .20 % of Rate

##### Response Time:

Gases: 1 to 2 sec. Typical  
Liquids: Less than 500ms.

**Pressure Rating:**

0 - 1200 psig (Std)

0 - 10000 psig Dependent on meter size

**Mass Flowrates:****Gas:** 40 to 50,000 SFCM**Liquid:** .02 to 20 FPS

Note: maximum determined by pipe capacity.

**Flow Range:** 100:1 Std. Multiple ranges available.**Calibrated Temperature Range:****Gas:** -40 F to 350 F (-40 to 177 C) STD.

[-20 F to 1000 F] (-28 C to 538 C) Optional).

**Liquid:** -40 F to 350 F (-40 to 177 C) STD.

[-40 F to 500 F](-40 to 260 C) Optional

**Calibration Temperature Capability:**

-200 TO 800 F (-129 to 427 C)

**Wetted Materials:** 316SS (STD). Consult the factory for other material requirements.**Mounting:** Flange, Packing Gland, Triclover, Hot Tap**MICROPROCESSOR SPECIFICATIONS:****EEPROM Memory:** 64K**Displays:** 8 digit Flowrate and Totalizer (Optional)**Communicator:****Interface:** RS-232 via Ribbon Connector**Baud Rate:** 9600**Adjustable Variables with RS-232 Communicator:****Zero Cutoff; Zero Offset**

Filter Factor

Flow Full Scale

Flow Rate Decimal Point

Flow Totalizer Decimal Point

Flow Totalizer/Flowrate Ratio

**Power:** 120/240 vac, 50/60 Hz.

24VDC, 1 Amp (Factory Set)

**Electrical Connections:** 3/4" FNPT Power & Signal**Enclosure:** Cast Aluminum, Epoxy Painted**Environmental Ratings:**

Housing: Explosion Proof, Class 1, Div. 1,

Groups, B, C D Weatherproof: Nema 4

Ambient Temperature: -25 to 60 C (-13 to 140 F)

Storage Temperature: -40 to 70 C (-40 to 158F)

**Mounting:**

Integral to the Flow Transducer.

Remote to 4000 ft., Wall or Frame mount.

**Signal Cable for Remote Design:** 18 gauge, 2 pair with cable shield. Maximum distance, 4000 ft.**MODEL NUMBERING SYSTEM:****Base Model:** = 62-9/9500**Electronics MOUNTING:****I** = Integral Mount**R** = Remote Mount**Fluid:****G** = Gas**L** = Liquid**Probe Size:** 1/2 to 2" (See Sizing Tables for Gas and Liquid).**Material:****316SS** = STD.**Other** = Consult Factory**Process Connection:****PG** = Packing Gland (Std.)**FLG-150** = 150# RF Flange (Std. Van stone)**TC** = Triclover**FLG-Other** = Consult Factory**Other** = Consult Factory**Power:****24** = 22-26 VDC, 1AMP. 4 WIRE**120** = 120VAC, 50/60 HZ (STD.)**240** = 240VAC, 50/60 HZ**Output Signals: (Select One\*\*)****0/5** = 0-5 VDC\*\***0/10** = 0-10 VDC\*\***4/20** = 4-20MADC\*\*into 750 ohms, Isolated**4/20T** = **Optional** Process Fluid Temp. **4-20MA.**  
**Self Powered****Display: (Optional)****D** = Flowrate Display, 5 1/2 Digit**8T** = Totalizer**D/8T** = Flowrate and Total Display, 8 digit**Signal Cable for Remote Design:****SC** = 25 FT Supplied with remote configuration**Thermal Instrument Company, Inc****(215) 355-8400 FAX (215) 355-1789****Website:www.thermalinstrument.com****e-Mail:office@thermalinstrument.com**