

## High-Flow Gas Mass Flow Meters with Digital Display

### Features

- Direct monitoring of mass flow rate eliminates need for ancillary pressure and temperature sensing
- Digital display of mass flow rate on flow body or remote version for panel mounting
- Aluminum flow body accommodates most gases in flow rates up to 175 slpm
- Electronic output of mass flow rate available for control or data-logging
- Large, straight sensor tube reduces contamination and maintenance down-time
- Platinum sensor eliminates zero-drift and ensures long-term repeatability
- Primary standard calibration ensures starting point accuracy and NIST traceability
- CE Approved



For information online...

[www.sierrainstruments.com](http://www.sierrainstruments.com)

# Top-Trak® Model 826/827



### Description

**S**ierra Instruments' Model 826/827 High-Flow Top-Trak® accurately measures the mass flow rate of most clean gases. Available in flow ranges from 0 to 75 slpm up to 0 to 175 slpm. Wetted surfaces are anodized aluminum with Viton® "O" rings, and all are corrosion-resistant.

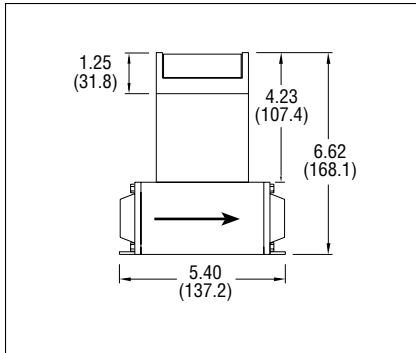
The Model 826/827 measures and displays the mass flow rate directly in sccm or slpm. The instrument is available with or without a digital display, which is tiltable over 180° for easy viewing and can be removed for remote panel mounting. A 0 to 5 VDC or 4 to 20 mA output signal linearly proportional to gas mass flow rate is provided for recording, data-logging or control. A 9-pin "D" connector for the output signal, input power, and remote display drive is standard.

Top-Trak's performance is unsurpassed: accuracy is 1.5% of Full Scale over a wide temperature and pressure range, and time response is two seconds to within 2% of final flow. This device is widely used in a variety of flow validation and calibration applications, by dozens of instrument OEMs, and in a multitude of laboratory, test and analytical operations.

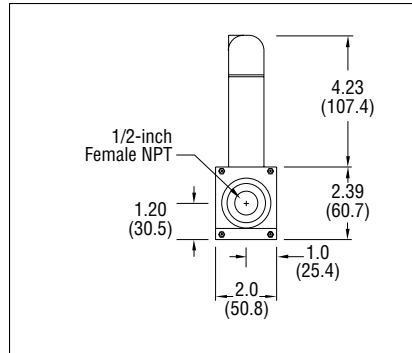
The information contained herein is subject to change without notice.

## Dimensional Specifications

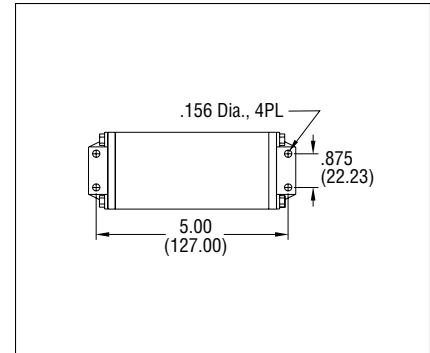
**Model 826—Side View**



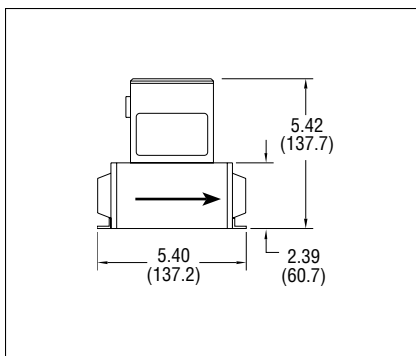
**Model 826—Outlet View**



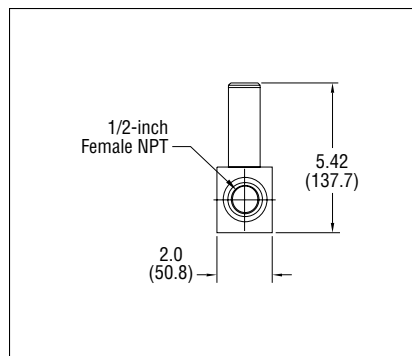
**Model 826—Bottom View**



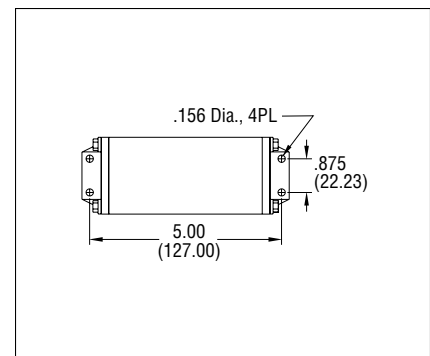
**Model 827—Side View**



**Model 827—Outlet View**



**Model 827—Bottom View**



All dimensions are inches and in parentheses are millimeters. Certified drawings are available on request.

## Performance Specifications

### Accuracy

+/- 1.5% of Full Scale including linearity over 15° to 25°C and 5 to 60 psia (0.3 to 4 bara)

### Repeatability

+/- 0.5% of Full Scale

### Temperature Coefficient

0.08% of Full Scale per °F (0.15% of Full Scale per °C), or better

### Pressure Coefficient

0.01% of Full Scale per psi (0.15% of Full Scale per bar), or better

### Response Time

800 ms time constant; six seconds (typical) to within +/- 2% of final value over 25 to 100% of Full Scale

## Operating Specifications

### Gases

Most gases; check compatibility with wetted materials; specify when ordering

### Mass Flow Rates

0 to 75 up to 0 to 175 slpm; flow range is for an equivalent flow of nitrogen at 760 mm Hg and 21°C (70°F); other ranges in other units are available (e.g., scfh or nm<sup>3</sup>/h)

### Gas Pressure

150 psig (10 barg) maximum;  
20 psig (1.4 barg) optimum

### Pressure Drop

15.0 mbar at 75 slpm  
67.8 mbar at 175 slpm

### Gas & Ambient Temperature

32 to 122°F (0 to 50°C)

### Leak Integrity

1 X 10<sup>-4</sup> atm cc/sec of helium maximum

### Power Requirements

12 to 18 VDC, 15 VDC nominal, 100 mA maximum  
24 VDC optional

### Output Signal

Linear 0 to 5 VDC, 1000 ohms minimum load resistance  
Linear 4 to 20 mA, 500 ohms maximum loop resistance

### Display

3.5 digit LCD (0.6 in H); removable for remote mounting

## Physical Specifications

### Wetted Material

Anodized aluminum, 316 stainless steel, nickel plating, Viton® "O"-rings standard; Neoprene and 4079 Kalrez® "O"-rings optional

### STRAIGHT PIPE LENGTH REQUIREMENTS (In Number of Internal Diameters, D)

1/2 inch Female NPT, minimum, upstream	10 D
1/2 inch Female NPT, minimum, downstream	5 D

## Ordering the Model 822, 824, 826 or 827

### PARENT NUMBER

- 822** Top-Trak® Mass Flow Meter with Display
- 824** Top-Trak® Mass Flow Meter
- 826** Top-Trak® High-Flow Meter with Display
- 827** Top-Trak® High-Flow Meter

### INLET/OUTLET FITTINGS

- 1** 1/8-inch Compression, Max flow 5 slpm
- 2** 1/4-inch Compression, Max flow 50 slpm
- 3** 3/8-inch Compression
- 5** 1/4-inch VCO, Max flow 50 slpm
- 8** 1/4-inch VCR, Max flow 50 slpm
- 10** 6 mm Compression, Max flow 50 slpm
- 11** 10 mm Compression
- 13** 1/4-inch NPT, female
- NX** 1/2-inch NTP, female ( 826, 827 )

### ELASTOMERS

- OV1** Viton®

### INPUT POWER

- PV1** 12 to 15 VDC
- PV2** 24 VDC

### OUTPUT SIGNAL

- V1** 0 to 5 VDC, Linear
- V4** 4 to 20 mA, Linear

### OPTIONS

- RD(ft)** Remote Display (Cable Length in Feet)
- MP** Medium Pressure Calibration
- LF** Low Flow Calibration (0 to 20 sccm or below)

### GAS, FLOW RATE

**ACCESSORIES (Consult Factory)**  
**CONNECTORS AND CABLES (Consult Factory)**

