Fast-Flo™ Model 620S

Fast Response, High-Performance, Immersible Thermal Gas Mass Flow Meter

Features

- Fast response flow meter ideal for gas mass flow measurement applications
- 200 millisecond response to changes in flow rate
- Smart electronics permit field adjustment of critical flow meter settings
- Field validation of flow meter calibration
- Outstanding rangeability
- Optional 2 x 12 backlit LCD display
- Minimal flow blockage and low pressure drop
- CE approved
- Optional Modbus RTU

Description

Sierra Instruments' Fast-Flo™ Model 620S Immersible Thermal Mass Flow Meter provides an economical solution for gas flow measurement applications. The meter's sensor offers long-term reliability and 200 millisecond response to changes in flow rate.

The versatile microprocessor-based transmitter integrates the functions of flow-range adjustment, meter validation and diagnostics in a probe-mounted NEMA 4X (IP65) housing. Mass flow rate and totalized flow, as well as other configuration variables, can be displayed on the meter's optional 2 x 12 backlit LCD panel.

The meter also provides an optical/galvanic isolated 4-20 mA output and two alarm outputs. The programmable transmitter is easily configured via RS-232 and Sierra's Smart Interface™ Windows™ based software or three push buttons in the device. Modbus RTU is also supported. The Model 620S is suitable for pipes or ducts from 2-inches to 48-inches (DN50 to DN1200).

ISO REGISTERED 9001

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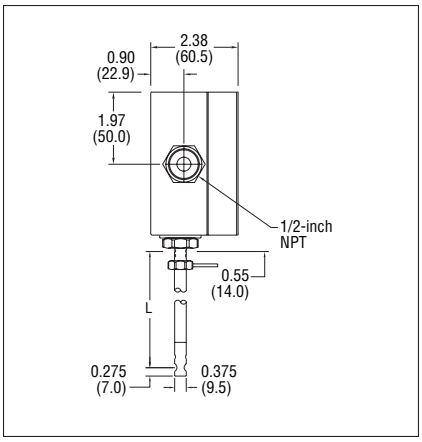
For information online...

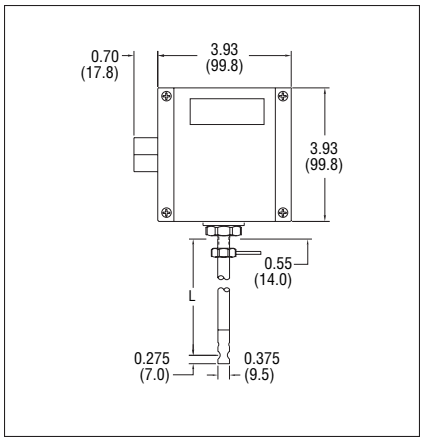
www.sierrainstruments.com

Dimensional Specifications

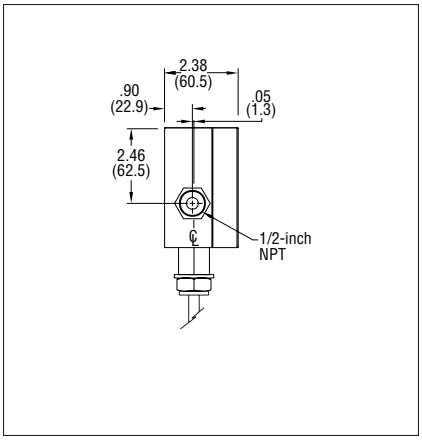
NEMA 4X–Side View (EN2)



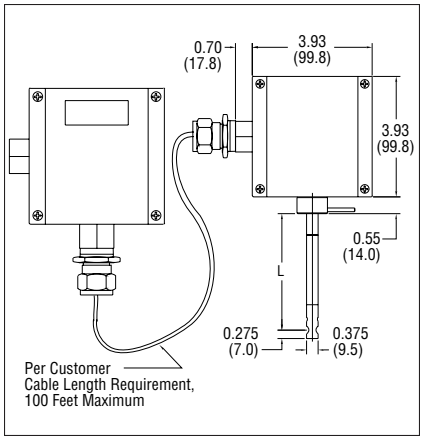
NEMA 4X–Front View (EN2)



NEMA 4X with Junction Box–Side View (EN4)



NEMA 4X with Junction Box–Front View (EN4)



Tables

Length Chart

Code	L
L04	4.0 (101.6)
L06	6.0 (152.4)
L09	9.0 (228.6)
L13	13.0 (330.2)
L18	18.0 (457.2)
L24	24.0 (609.6)

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

Performance Specifications

Accuracy of Point Velocity
+/- 1% of full scale

Repeatability
+/- 0.2% of full scale

Temperature Coefficient
+/- 0.02% of reading per °F within +/- 50°F of customer specified conditions
+/- 0.03% of reading per °F within +/- 50°F to 100°F of customer specified conditions
+/- 0.04% of reading per °C within +/- 25°C of customer specified conditions
+/- 0.06% of reading per °C within +/- 25°C to 50°C of customer specified conditions

Pressure Coefficient
.02% per psi for air, consult factory for other gases

Response Time
200 milliseconds to 63% of final velocity value

Operating Specifications

Gases
Most non-corrosive gases

Gas Pressure
120 psig (8 barg) maximum design pressure

Pressure Drop
Negligible

Gas & Ambient Temperature
Gas . . . . . -40° to 176°F (-40° to 80°C)
Ambient . . . . . -40° to 120°F (-40° to 50°C)

Power Requirements
18 to 30 VDC (regulated), 625 mA maximum

Output Signal
Linear 0–5 VDC or 0-10 VDC, 1000 ohms minimum load resistance or
Linear 4–20 mA proportional to mass flow rate,
700 ohms maximum resistance power supply dependent
User-selectable. Active non-galvanically separated or
passive galvanically separated (loop power required)

Digital Communication

Modbus RTU

Operating Specifications (continued)

Alarms
Hard contact user-adjustable high and low
Dead band adjustable with Smart Interface™ software
Relay ratings . . . . . Maximum 42 VAC or 42 VDC, 140 mA

Displays
Alphanumeric 2 x 12 digit backlit LCD
Adjustable variables via on-board switches (password protected)
or with Smart Interface™ software
Adjustable variables. . Full scale (50 to 100 %)
Time Response (1 to 7 seconds)
Correction factor setting (0.5 to 5)
Zero and span

Totalizer
Eight digits (9,999,999) in engineering units
Resettable by software, on-board switches or external magnet

Software
Smart Interface™ Windows™-based software
Minimum 8 MB of RAM, preferred 16 MB of RAM
RS-232 communication
Additional features. . . Alarm dead band adjustment
Low flow cut-off adjustment
Linearization adjustment
Save / Load configurations
Flow meter validation

Physical Specifications

Wetted Material
Probe. 316SS
Sensor . . . . . 304SS, glass coating epoxy

Enclosure
NEMA 4X (IP65) powder-coated cast aluminum

Electrical Connections
One 1/2-inch female NPT

Mounting (optional)
3/8-inch tube compression fitting with 1/2-inch male NPT
Weldolet
Flat Duct Bracket
Curved Duct Bracket

Certifications
CE approved

Ordering the Model 620S

PARENT MODEL NUMBER

620S	Fast-Flo™ Immersible Thermal Flow Meter

PROBE LENGTH

L04	4-inches (10 cm)
L06	6-inches (15 cm)
L09	9-inches (23 cm)
L13	13-inches (33 cm)
L18	18-inches (46 cm)
L24	24-inches (61 cm)
L(in)	Special Length, Maximum 36-inches (Length in Inches)

MOUNTING ACCESSORIES

620S-M0	None
620S-M1	Compression Fitting (3/8-inch tube x 1/2-inch Male NPT)
620S-M2( )	Weldolet (3/8-inch Female NPT) Specify pipe O.D. in parentheses
620S-M3	Flat Duct Bracket (3/8-inch tube compression fitting)
620S-M4( )	Curved Duct Bracket (3/8-inch tube compression fitting) Specifiy duct O.D. in parentheses

ENCLOSURES

EN2	NEMA 4X (IP65)
EN4(ft)	Remote NEMA 4X (IP65) with Junction Box Specify Cable Length in Parentheses Vinyl Cable, Maximum 100 feet (30 m), (Length in Feet)

OUTPUT SIGNAL

V1	0–5 VDC, Linear
V3	0–10 VDC, Linear
V4	4–20 mA, Linear

DISPLAY

NR	No Readout
DD	Digital Display

GAS CODE

0	Air
1	Argon
2	CO_2
6	Helium
10	N_2
99	Other

OPTION 1 (DIGITAL COMMUNICATIONS)

PULSE	Pulse
MB	Modbus

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