

Digital Control/Readout Electronics and Power Supply For Mass Flow Controllers

Features

Model 951

- 5 digit LED display
- Front-panel pushbutton set point, calibration and alarms
- Integral power supply (+/- 15 Vdc)
- Compact size—1/8 DIN
- CE Approved

Model 954

- 4 line, 20 character LCD display
- Valve Close, Valve Open (Purge) pushbutton override
- Front-panel menu adjustable:
 - Flow units
 - Set Point
 - Totalizer
 - Gas K-factors
 - Alarms
 - Master/Slave Ratio Control
 - Calibration
- Analog Outputs: 0-5, 0-10 VDC and 4-20 mA
- Digital Output: RS-232 and RS-485
- CE Approved

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950 Series Digital Flo-Box



Description

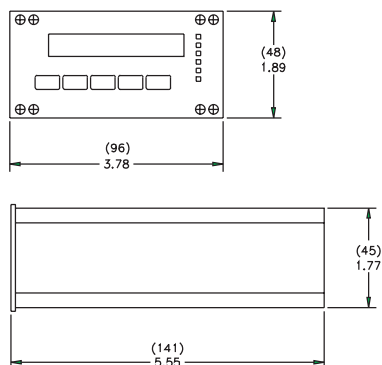
Sierra Instruments' 950 Series Digital Flo-Box products include a compact, single channel device for operation of one mass flow meter or controller and a deluxe, multi-channel device for operation of up to four devices. Designed specifically for use with the Sierra Model 830L, 830M, 840L and 840M instruments, both of these powerful digital systems supply power (+/- 15 Vdc), display the flow rate, and offer set point control for MFC's.

The Model 951 is an ultra-compact digital device that is designed to operate a single unit. In addition to power, readout and set point, it offers multiple alarm points and can be easily calibrated in the field to operate both new and existing devices. It is designed for easy panel mounting (1/8 DIN). An optional stand facilitates benchtop usage.

The Model 954 is a state-of-the-art digital system that can operate up to four units. In addition to power, readout and set point, it offers front-panel override for valve shut and purge functions for MFC's, user programmable K-factors for different gases, engineering units, alarms, independent totalizer for all four channels, master slave ratio control and multiple alarms. It also offers both RS-232 and RS-485 communication via rear-mounted serial ports. The Model 954 is designed for easy panel mounting (1/2 rack) and includes a convenient stand for benchtop usage.

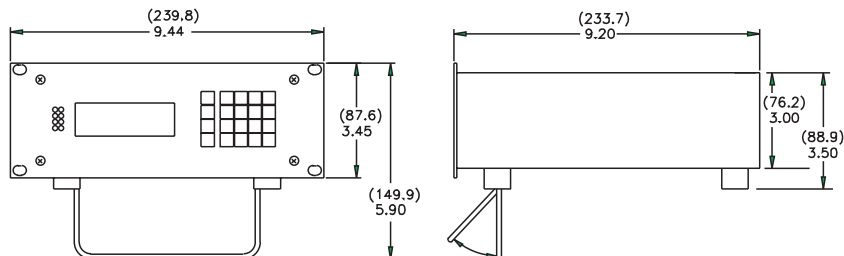
Dimensional Specifications

Model 951 Dimensions



All dimensions are inches. Millimeters are in parentheses.

Model 954 Dimensions



Operating Specifications

Ambient Temperature

32° to 120°F (0° to 50°C)

Storage Temperature

-5° to 160°F (-20° to 70°C)

Relative Humidity

0 to 50% non-condensing

Power Requirements

Model 951 100, 110 or 240 VAC (specify when ordering), 50/60 Hz

Model 954 100, 110 or 240 (+/- 10%) VAC, switch selectable, 50/60 Hz

Power Output*

Model 951 +/- 15 VDC, 250-500 mA

Model 954 +/- 15 VDC, 250-400 mA per channel

*Suitable for Sierra Model 840L, 840M, 830L, 840M flow instruments, among many others

Signal Input

Model 951 0-5 VDC only, >1 Megohm input impedance

Model 954 User selectable: 0-5 & 0-10 VDC, 4-20 mA

Input impedance: voltage >10 Megohm, current 120 ohms

Signal Output-Analog

Model 951 Set point 0-5 VDC only (10K ohm resistance), 2 alarms

Model 954 Set point and flow output user selectable: 0-5 & 0-10 VDC, 4-20 mA (250 ohm max load resistance)
2 alarms per channel

Serial Communications

Model 951 N/A standard, optional RS-232 (contact factory)

Model 954 RS-232, RS-485

Baud Rate 9600, 19200 (user selectable)

Programmable Functions

Model 951 Set point, Alarm #1 (high and low values), Alarm #2 (high and low values), Alarm hysteresis (deadband) for #1 and #2, Calibrate Full Scale, Calibrate Zero, decimal point location

Model 954 Four Independent Channels:

Valve override: Run, Close, Purge

Display Flow or Totalizer, Engineering Units, Gas name/symbol, A/D filter rate, Input Signal type, Alarm high and low values, Ratio Control, Calibrate Full Scale, Calibrate Zero, Gas Correction Factor

Display

Model 951 0.4" red LED's, 5 digits, over-range display

LED indicators for Calibration, Zero, Alarms

Model 954 Four Independent Channels, 4 X 20 LCD, backlit

LED indicators for Valve Open (Purge), Valve Closed, Valve Run (set point)

Set point adjust, Totalizer Active, Master, Slave, Flow Value, Engineering Units or 0-100%, Gas Identification

Ordering the Model 951/954

