

# Model 0152/0154

## Gas and Liquid Mass Flow Secondary Electronics

- Designed for use with Brooks® gas and liquid mass flow/pressure controllers/meters
- Provides power supply, readout and control functions
- Programmable for setpoint selection, blending, valve override and local/remote control
- Totalizer, high/low alarms and I/O range selection
- Provides readout of up to 4 channels scalable to engineering units
- Table top housing, cassette or panel mount
- 24 Vdc or  $\pm 15$  Vdc power supply are available
- 0(1)-5 Vdc or 0(4)-20 mA I/O are available
- Remote I/O feature allows control from external system

### DESCRIPTION

The Brooks microprocessor based readout and control equipment is designed to meet the highest standards with user-friendly operation. Model 0152 provides 2 channels and Model 0154 provides 4 channels.

0152/0154 also provide power supply for Brooks gas/liquid thermal mass flow/pressure controllers/meters and QUANTIM™.

The readout function is a back lit 4 x 20 character display. Features include membrane push buttons for setpoint, blending, valve override and local/remote control. Actual reading or % full scale of flow rate/pressure/density/temperature is programmable for each channel.

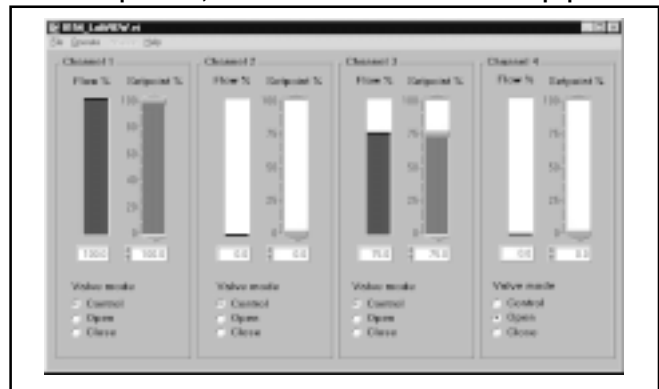
Both models can be operated with independent mass flow control channels, or with one or more channels slaved to the master (blending mode). Each channel can be operated as master or slave or in an independent control mode.

Valve override functions are selectable. In valve override mode, the valve will be open/closed independent of setpoint value.



Model 0152/0154

Table top model, 2/4-channel readout & control equipment



PC based communications  
with Model 0152/0154

An RS-232 port is provided standard to control the 0152/0154 from a PC. This port enables connection of up to 4 analog (or analog configured devices) to a Model 0154. Communications is possible with optional cable and software (Standalone and LabVIEW™ VI with Smart DDE driver). Setpoint, Flow Rate and Valve Override parameters are available.

The local function is useful as backup of the customer's system configuration. In local mode, the Mass Flow devices will be operated directly by the 0152/0154, and in remote mode the customer's peripheral equipment determines the control actions. Stored default values are available after power interruption.

## SPECIFICATIONS

### **⚠ WARNING**

Do not operate this instrument in excess of the specifications below. Failure to heed this warning can result in serious personal injury and/or damage to the equipment.

#### Certification

CE

#### Power input

90-260 Vac, 50/60 Hz 70 W max power.

#### Power output

+15 V/2.9 A, -15V/1.4 A max or 24 Vdc/2.5 A max.

#### Signal input

Signal from flow or pressure transducer and remote setpoint. 0(1)-5 Vdc or 0(4)-20 mA .

#### Signal output

0(1)-5 Vdc or 0(4)-20 mA, Impedance 1 k $\Omega$  (minimum) or Impedance 750 $\Omega$  (maximum)

#### Electrical

Two or four 15-pin D connectors for connecting the mass flow or pressure control equipment.

One 25-pin D connector for combined remote setpoint input and output signal, up to 4 channels.

One 15-pin D connector for connecting remote valve override control function.

#### Display reading

Model 0152: 2x 20 character and Model 0154: 4x 20 character display with back lighting. Percentage full scale or actual reading.

#### Controls

Membrane push buttons for setpoint, blending, valve override, local/remote control, menu selection per channel and power switch.

#### Housing

Anodized aluminium and steel covers: 1/2 size 19" rack cassette or table top with optional handle.

#### Dimensions

1/2 size 19" rack cassette, [5.1" (130 mm) height, 8.7" (220 mm) width, 9.1" (230 mm) depth]. Table top (Refer to Figure 1).

#### Ambient Temperature

0 - 50°C (32-122°F)

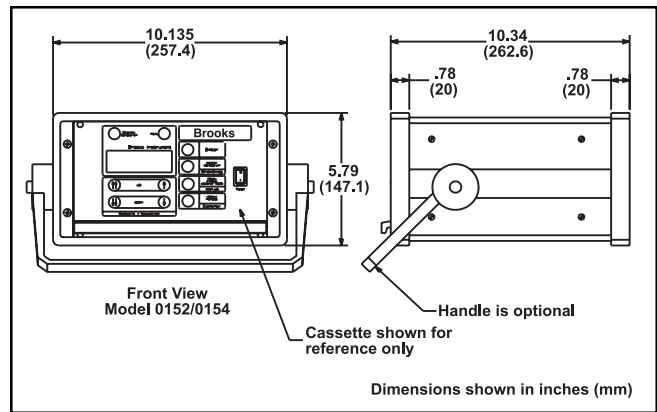


Figure 1 Dimensions Table Top Models 0152/0154

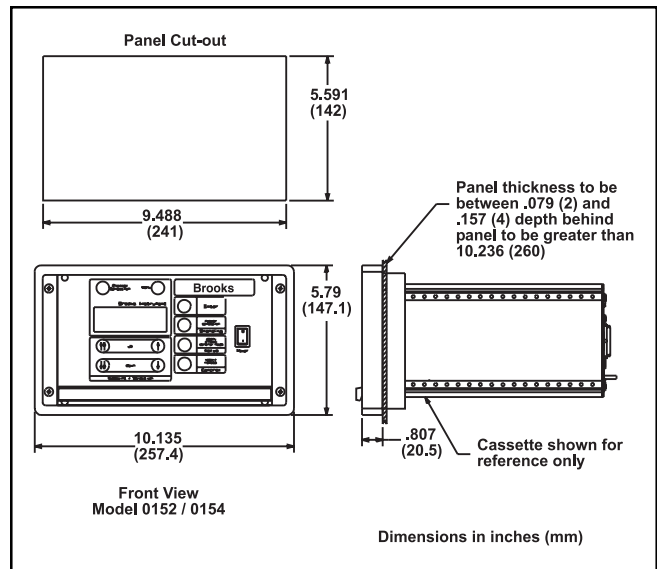
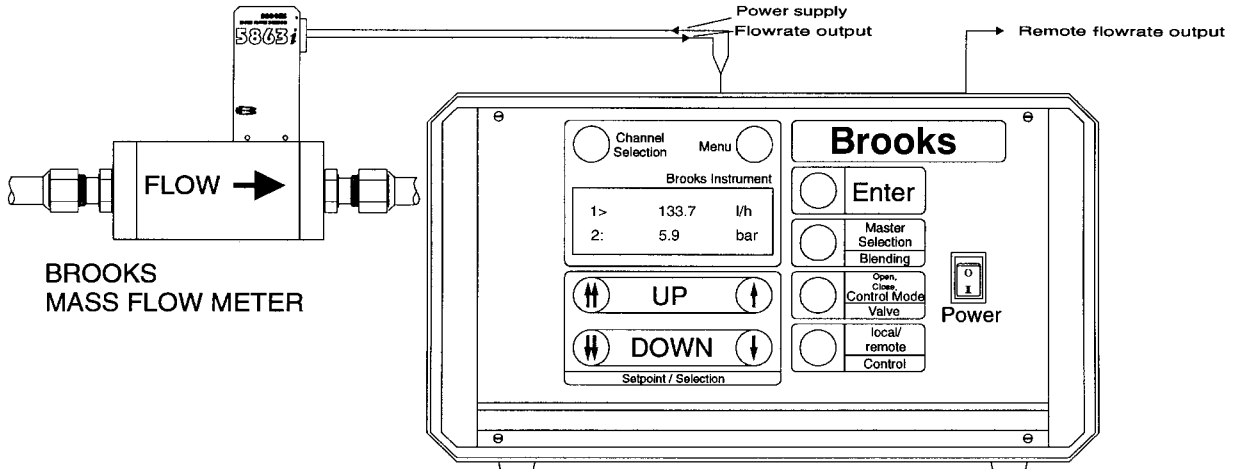


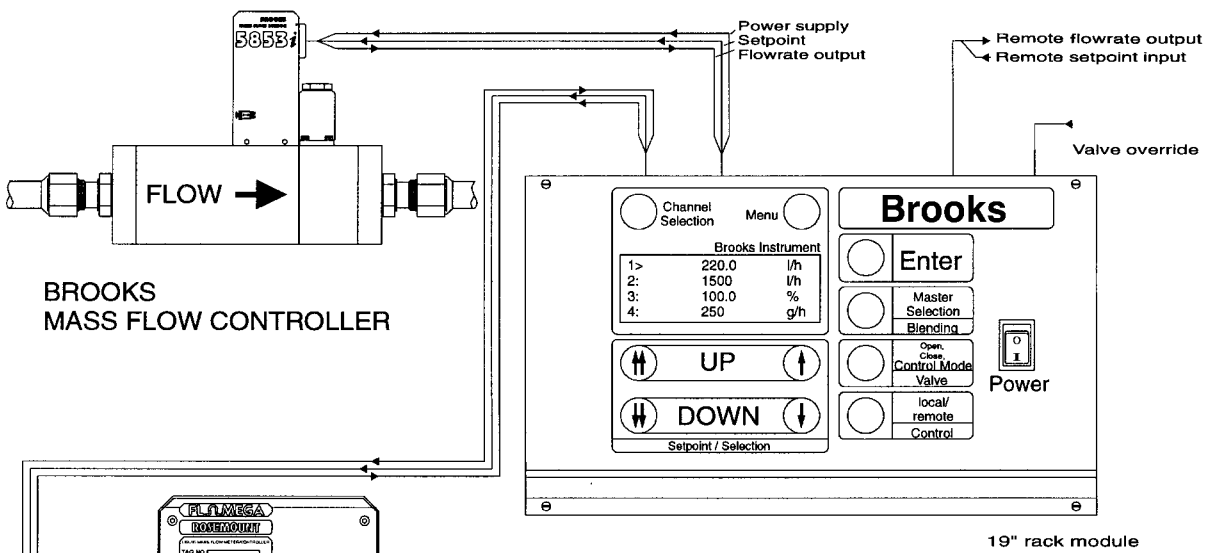
Figure 2 Panel Mount Models 0152/0154

#### To order specify:

1. Model number
  - a. Model 0152, 2-channel
  - b. Model 0154, 4-channel
2. Housing Style
  - a. Panel mount
  - b. 19" Rack mount
  - c. Table Top Model
  - d. Table Top Model with handle
3. Input Power
  - a. 90-260V w/ open ended cable for 240V 50/60 Hz
  - b. 90-260V w/ U.S. plug cable for 120V 50/60 Hz
4. Output Power and Input/output
  - a.  $\pm 15$  Vdc, 70W and 0-5 Vdc
  - b. 24 Vdc, 70W and 4-20 mA



**MODEL 0152  
DUAL CHANNEL POWER SUPPLY &  
READ-OUT EQUIPMENT  
TABLE TOP MODEL**



**MODEL 0154  
4-CHANNEL POWER SUPPLY &  
READOUT & CONTROL ELECTRONICS**

**MODEL 5882  
FLΩMEGA™(LIQUID)  
MASS FLOW CONTROLLER**

TRADEMARKS

Brooks ..... Brooks Instrument Division, Emerson Electric Co.  
Flomega ..... Brooks Instrument Division, Emerson Electric Co.  
LabVIEW ..... National Instruments  
QUANTIM ..... Brooks Instrument Division, Emerson Electric Co.

<p><b>ISO 9001</b> <b>QUALITY SYSTEM</b> <b>Certificate of Conformity</b> The Quality System at Brooks Instrument conforms to the quality standards set forth in ISO 9001.</p>
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Specifications are Subject to Change without Notice.

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