

Laminar Flow Tester

FC0782



- Intuitive touch-screen interface
- Customised graphical Screen image prompts for operators
- Flow measurement from 0.001 ml/min to 5000 litres/min
- 300 Product settings with up to 16 sequence steps and a variety of test types such as flow, back pressure and input/output
- Automatic pressure regulator
- Communications via RS232, RS485, USB, Ethernet, PROFINET, EtherNet/IP
- Barcode scanner support
- Built-in Data Logger with USB memory stick connection
- Programmable electrical and pneumatic I/O

The FCO782 is an advanced air/gas flow meter suitable for production line testing of gas industry appliances and valves, calibration of fuel injectors and many other flow measuring applications. The FCO782 can be easily interfaced to PLCs or PCs where integration is required, or in many cases the built-in programmable I/O functions can remove the need for a PLC. The communications facility may be used for configuration, control and data logging.

Flow Measurement

Flow ranges (all available with x10 range)	0 to 20 ml/min 0 to 200 ml/min 0 to 2 litres/min	0 to 6 litres/min 0 to 10 litres/min 0 to 20 litres/min	0 to 30 litres/min 0 to 100 litres/min 0 to 200 litres/min	0 to 2000 litres/min 0 to 5000 litres/min
Accuracy @ 20°C	10% to 100% range: $< \pm (1\% \text{ reading} + 1 \text{ digit})$ 0 to 10% range: $< \pm (0.1\% \text{ range} + 1 \text{ digit})$ For dual range instruments, "range" refers to the selected range.			
Resolution	4 digit display			
Temperature Coefficients	Zero: Automatic Zero facility, Span: $< 0.1\%$ per °C			
Long Term Drift (span)	$< 1\%$ per year			

Pressure Measurement

Pressure Ranges	± 2 mbar ± 20 mbar ± 50 mbar	± 200 mbar ± 400 mbar ± 999 mbar	-1 bar to +4 bar -1 bar to +6 bar -1 bar to +8 bar	-1 bar to +9.999 bar -1 bar to +14 bar
Accuracy @ 20°C	10% to 100% range: $< \pm (1\% \text{ reading} + 1 \text{ digit})$ 0 to 10% range: $< \pm (0.1\% \text{ range} + 1 \text{ digit})$			
Resolution	4 digit display			
Temperature Coefficients	Zero: $< 0.05\%$ per °C Span: $< 0.1\%$ per °C			
Long Term Drift (span)	$< 1\%$ per year			

Electrical

Supply Voltage	24 VDC $\pm 10\%$ < 1 A
Electrical connections	Power: 2 way detachable screw terminal Outputs: 20 way detachable screw terminal Inputs: 16 way detachable screw terminal RS232: 9 pin D plug RS485: 5 pin detachable screw terminal LAN: RJ45 connector, 10base-T/100base-TX Ethernet USB: 1 x USB Type A connector, 1 x USB Type B connector
Control Inputs	Up to 12 Opto-isolated, active high or active low. 5 VDC to 24 VDC into 10 K Ω
Control Outputs	Up to 16 Active High transistor output (PNP). 12 VDC to 45 VDC, 120 mA (per channel)

Pneumatic

Media Compatibility	Clean dry air or non-corrosive gas										
Gas Temperature at LFE	0 – 50°C										
Relative Humidity of Gas	0 – 95% Non-condensing										
Air Supply Pressure	Maximum 10 bar gauge, Minimum 5 bar gauge										
Regulator Supply Pressure	Maximum 16 bar gauge										
Pneumatic Connections	Air supply – 6 mm push-in tube connector Regulator supply and output – 8 mm push-in tube connector Up to 5 programmable pneumatic outputs – 4 mm push-in tube connectors Pressure sense port – 4 mm push-on tube connectors Laminar Flow Element ports – Size dependent on range: <table> <tr> <td>20, 200 ml/min</td><td>6/4mm Push-on tube fitting</td></tr> <tr> <td>2, 6, 10, 20, 30 litres/min</td><td>12mm Plain Spigot</td></tr> <tr> <td>100 litres/min</td><td>22mm Plain Spigot</td></tr> <tr> <td>200 litres/min</td><td>28mm Plain Spigot</td></tr> <tr> <td>2000, 5000 litres/min</td><td>76mm i/d 184mm o/d flange.</td></tr> </table>	20, 200 ml/min	6/4mm Push-on tube fitting	2, 6, 10, 20, 30 litres/min	12mm Plain Spigot	100 litres/min	22mm Plain Spigot	200 litres/min	28mm Plain Spigot	2000, 5000 litres/min	76mm i/d 184mm o/d flange.
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LFE Operating pressure	Maximum static pressure 4 bar.										

Construction

Enclosure	Steel construction enclosure with paint finish. Suitable for 19" 3U rack mounting.
Dimensions – Rack Case	267 x 133 x 296 mm (W x H x D) (excluding LFE)
Dimensions – Bench Case	232 x 154 x 296 mm (W x H x D) (excluding LFE)
Weight	5kg, ± 0.5 kg (excluding LFE)

All information is subject to change without notice.

Furness Controls has a UKAS accredited laboratory which offers pressure calibration from 0 to 40 kPa and flow calibration from 0.1 ml/min to 2000 litres/min