

Precision Just Got More Precise...

Introducing the CONCOA Mass Flow Meters and Controller Displays



CONCOA®

PRECISION GAS CONTROLS

1.800.225.0473 • www.CONCOA.com



Mass Flow Meter/ Thermal Mass Flow Controller

Series MFM Thermal Mass Flowmeters and MFC Thermal Mass Flow Controllers are versatile and designed to be easy to use even for beginners to this type of flow monitoring or control technology. The units have a standard maximum working pressure of 500 psig and are supplied standard with correction factors for Air, Helium Hydrogen and Carbon Dioxide, with other factors available on request.

Made from 316L stainless steel bar stock, units are available in a broad range of flows from 0-10 sccm to 0-20 lpm. Their accuracy is very high at + 1% of full scale, and each unit is supplied with a NIST Traceable Calibration Certificate. Circuitry is designed to withstand High RF interference and has a fast response that is proven reliable for performance and accuracy.

MFM 200

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|--------------------------------------|--|
| Accuracy ¹ and Linearity | ±1% F.S. |
| Repeatability | ±0.05% F.S. |
| Standard Pressure Rating | 500 psig |
| Pressure Coefficient | -0.0067%/psi (0-1000 psig N ₂) typical |
| Leak Integrity | <1x10 ⁻⁹ sccs |
| Temperature Coefficient ¹ | Zero ±0.035% FS/°C (0-60°C) Span ±0.05% RDG/°C (0-60°C) |
| STP | 0°C and 760 Torr |
| Power | ±15 VDC @ ±25 mA |
| Flow Signal | (Inherently linear) 0-5.00 VDC |
| Wetted Material | 316 SS, Viton®, 82/18 Au/Ni Braze, Trace Silver Solder |
| Connector | 15-pin subminiature D |
| Fittings | 1/4" and 1/8" Tube |
| Weight | 1.8 lb (0.82 kg) |

MFC 202

| | |
|--------------------------------------|---|
| Accuracy ¹ and Linearity | ±1% F.S. |
| Repeatability | ±0.05% F.S. |
| Standard Pressure Rating | 500 psig |
| Pressure Coefficient | -0.0067%/psi (0-1000 psig N ₂) typical |
| Control Valve DP* | 15-65 psig |
| Leak Integrity | <1x10 ⁻⁹ sccs |
| Temperature Coefficient ¹ | Zero ±0.035% FS/°C (0-60°C) Span ±0.05% RDG/°C (0-60°C) |
| STP | 0°C and 760 Torr |
| Power | ±15 VDC @ ±60 mA/-185 mA |
| Flow Signal | (Inherently linear) 0-5.00 VDC |
| Command Signal | 0-500 VDC or 4-20 mA |
| Wetted Material | 316 SS, 302 SS, Nickel, Viton®, 82/18 Au/Ni Braze, Trace Silver Solder, Kalrez® |
| Connector | 15-pin subminiature D |
| Fittings | 1/4" and 1/8" Tube |
| Weight | 1.8 lb (0.82 kg) |

Features

- ±1% of Full-Scale Accuracy
- Proven Reliability
- Range—20,000 sccm (N₂ Equivalent)
- NIST Traceable Calibration

Applications

- Leak Testing
- Medical Research
- Vapor Deposition
- R&D and Process Flows
- Semiconductor Processes
- Pollution Monitoring
- Gas Blending
- Chromatography

CCD100 Controller Display

CONCOA's CCD100 Controller Display features a graphical VFD display which displays the relevant units and generates ease of use menu structures. The Controller Display contains digital comms, alarm outputs, configurable units and multiple transducer supplies as well. The unit's firmware can also be customized for specific applications.

The CCD100 not only contains internal setpoint functions, but also features external inputs which can be used to generate slaved setpoint from another processor/transducer. The unit can also be programmed for tamper-resistant functionality by hardwiring the interface connector. The user can lock out the menu command and/or zero out the command button.

| Feature | Specification |
|-----------------------------|--|
| Full Scale Input | 0-5 volt or 0-10 volt |
| Input Impedance | >100Kohm |
| Measurement Resolution | 16 bit |
| Command Output | 0-5 volt operator selectable |
| Error | 0.02% of reading plus 1 digit |
| Display Type | VFD graphical display |
| Display Range | -9.999 to +99.999 |
| Transducer Power Supply | +/- 15 volts at 250mA, 24 volts DC at 300mA |
| Operating Temperature Range | +5 to +50°C (41 to 122°F) |
| Storage Temperature Range | -20 to +70°C (-4 to 158°F) |
| Maximum Relative Humidity | 95% at 50°C (122°F) |
| Warm Up Time | 20 mins |
| Decimal Point Selection | Operator selectable from front panel |
| Power Supply | 110/115/230 VAC 50/60 Hz or 24VDC |
| Dimensions | 92mm x 45mm x 141mm (3.62in x 1.77in x 5.67in) |
| Weight | 350g (.77lbs) |
| Panel Cut Out | Standard 1/8 DIN |
| Main Connector | IEC 320 on in-line PSU |
| Alarm Output | 2 mechanical changeover relays (max 50VDC) |
| Digital Comms | |
| Serial | RS232 or RS485 |
| Baud | 19200-57600, 8 data bits, no parity, 1 stop bit |
| Addressing | A to H |
| Ethernet (TCP/IP) | Configurable IP address and subnet mask. Single host stack. (Factory fit Option) |