



Mass Flow Controller MC-3000 series

MC-3000 Series

Features

New generation piezoelectric valve.
Full potential of digital technology and optimized digital PID control.
Compatible to analog MFCs.
LINTEC Co., Ltd. patent pending ambient temperature compensated flow sensor (US and Japan).

Piezoelectric Valve Advantages

The New Generation Piezoelectric Valve MFC's springless metal design offers :

- very fast response time,
- extremely low dead volume,
- great stability (to pressure variation),
- particle prevention.

Metal Design Advantages

Combined with the piezoelectric valve, metal seals and superior surface finishing within the MFC contribute to ultra clean performances.

Digital Advantages

Dynamic control in the gas line.
Optimized digital control.
Analog, RS232 or RS485 communication mode capability with on-board jumper selection.
Software compatible with MC-2000 Series.
Digisoft, free diagnostics software.

Options

Surface polishing (LEP: 0.5 μ m Ra max).
Compatible with liquefied gases.
Small flow range from 1 to 10 sccm (NO valve).
Wide range of control (0.5 to 100% F.S).
Surface mounting (C-Seal, W-Seal, CS-Seal, B-Seal).
Various calibration pressure.



Specifications

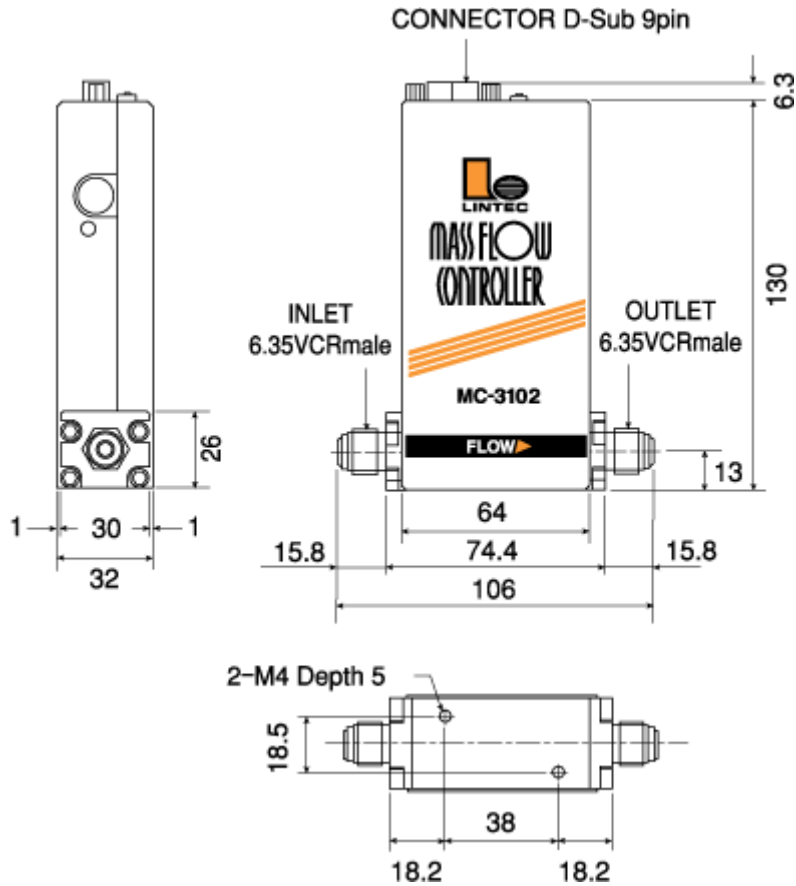
Flow Range (N ₂ equivalent).....	.10 sccm ~ 5 slm
.....	.10 ~ 20 slm
Control Range.....	.2 ~ 100% F.S.
Valve Actuator.....	Piezoelectric
Valve Seat.....	PCTFE
Valve Rest Position.....	Normally Open or Closed
Accuracy.....	± 1% F.S.
Linearity.....	± 0.5% F.S.
Repeatability.....	± 0.2% F.S.
Response Time (SEMI E17-91).....	≤ 1 sec (typical)
Operating Temperature.....	15 ~ 50°C (60 ~ 122°C)
Temperature Coefficient (zero).....	± 0.02% F.S./°C
Temperature Coefficient (span).....	± 0.02% F.S./°C
Calibration Pressure.....	standard 1.5 bar (21 psi)
Operating Pressure.....	< 5 slm : 0.5 ~ 3 bar (7 ~ 43 psi)
.....	< 10 slm : 1 ~ 3 bar (14 ~ 43 psi)
.....	< 20 slm : 1.5 ~ 3 bar (21 ~ 43 psi)
Maximum Inlet Pressure.....	10 ⁶ Pa (10 bar, 145 psi)
Wetted Materials.....	.316L stainless steel, PCTFE, Au
Surface finish.....	optional
Leak Integrity.....	< 1.10 ⁻¹⁰ atm.scc/sec (He)
Standard Seals.....	.Metal (Gold), Pt (option)
Fittings.....	.¼" VCR compatible

Power Requirements

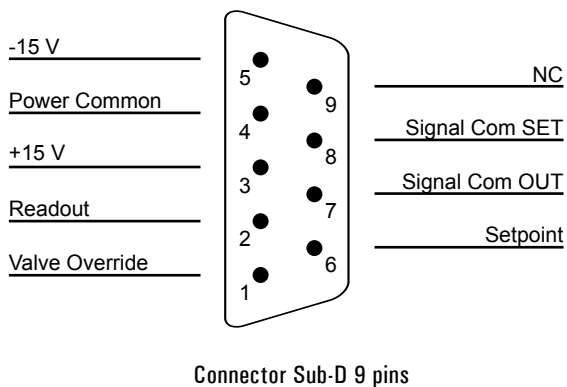
Mass Flow Controller.....	+ 15 VDC, 120 mA / -15 V, 100 mA
Analog Setpoint Signal.....	from 0 to 5 VDC
Analog Flow Output Signal.....	from 0 to 5 VDC
Digital control.....	RS232, RS485
Electrical Connector.....	Sub-D 9 pins male



Dimensions



Pinout configuration



Schematic diagram

