

PRODUCT SERIES

Thermal Gas Mass Flow Meters & Controller

Differential Pressure Gas Mass Flow Meter & Controller

Electronic Pressure Controller (EPC)

Flow Display and Control Instrument

Modular Pneumatic Products and Customization



Delivering Stability and Efficiency in Fluid Measurement and Control



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Fluid measurement and control products and solutions provider

COMPANY PROFILE

Biosflow was founded in 2015 and specializes in the R&D and production of fluid measurement and control products. Upholding the core values of "Pragmatism, Innovation, Collaboration, and Excellence," we are committed to delivering stable and efficient fluid measurement and control solutions, providing partners with high-quality MFC (Mass Flow Controller) products and industry-specific solutions. After nearly a decade of accumulation and development, Bothflow's products have been widely applied in sectors such as biotechnology and pharmaceuticals, petrochemicals, new energy, semiconductors, scientific instruments, and high-end industrial manufacturing.

10⁺ years
Technology
accumulation

30⁺ countries
Product
exports

3000⁺ units
Corporate
Customers

50⁺ %
Engineering
Team

100⁺ kinds
Application
Scenario

1200⁺ m²
R&D and production
base



Strong Technical Foundation

Localization with independent
controllability

10+ years of product experience

Fully self-developed core
algorithms and components



Strict quality control

Class 1,000 Cleanroom

In-house reliability laboratory

Advanced calibration equipment



Superior Brand Service

Delivery in as Fast as 1 Day

Custom Samples in 2 Weeks

Up to 3 Years Full Machine Warranty

CONTACT US

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Wechat



Whatsapp

High-precision calibration instrument

It provides reference standards traceable to national/international benchmarks, employing automated and highly repeatable precision measurement and calibration processes to systematically eliminate inherent instrument errors (e.g., zero drift, non-linearity, sensitivity deviations), ensuring output values maintain high consistency with true physical quantities.



Leybold high sensitivity helium leak detector



Fluke high precision flow calibration device



Mesalabs High precision flow calibration device

Class 1,000 Cleanroom

Absolute strict environmental control (particulates, temperature, humidity, static electricity) isolates dust contamination, preventing precision components (such as sensors and gas flow channels) from measurement deviations caused by particulate adherence or environmental fluctuations. This ensures consistent measurement accuracy and long-term reliability from the production stage.



Reliability Laboratory

Biosflow has established a Reliability Laboratory equipped with environmental test chambers, ESD simulators, high-voltage test platforms, salt spray test equipment, and other facilities to validate and enhance the environmental adaptability, measurement stability, and long-term reliability of instruments in real-world applications. This ensures accurate operation even under extreme working conditions.



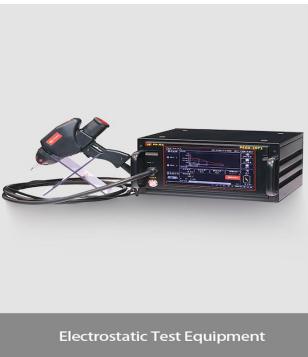
High and Low Temperature Aging
Test Chamber(-70~150°C)



Salt Spray Test Chamber



High Voltage Test Platform



Electrostatic Test Equipment

INTRODUCTION

Product Series

Gas Mass Flow Controller

Employing capillary thermal differential and laminar differential pressure sensor technologies, and integrating world-leading fluid measurement and control technologies, our products deliver exceptional stability, linearity, and dynamic response characteristics. They are commonly used for precise measurement and control of gas mass flow and are widely applied in sectors such as biopharmaceuticals, petrochemicals, new energy, semiconductors, scientific instruments, and high-end industrial applications.

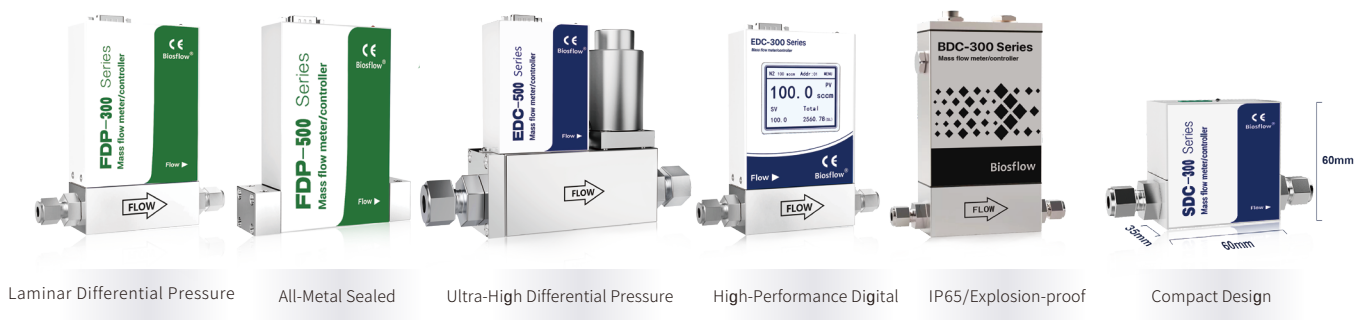
- Pioneering in China**

High ΔP Rated,
Leakage-Class VI Valve
- High ΔP Tolerance**

Max. P/ΔP: 10 MPa
- Long-term corrosion resistance**

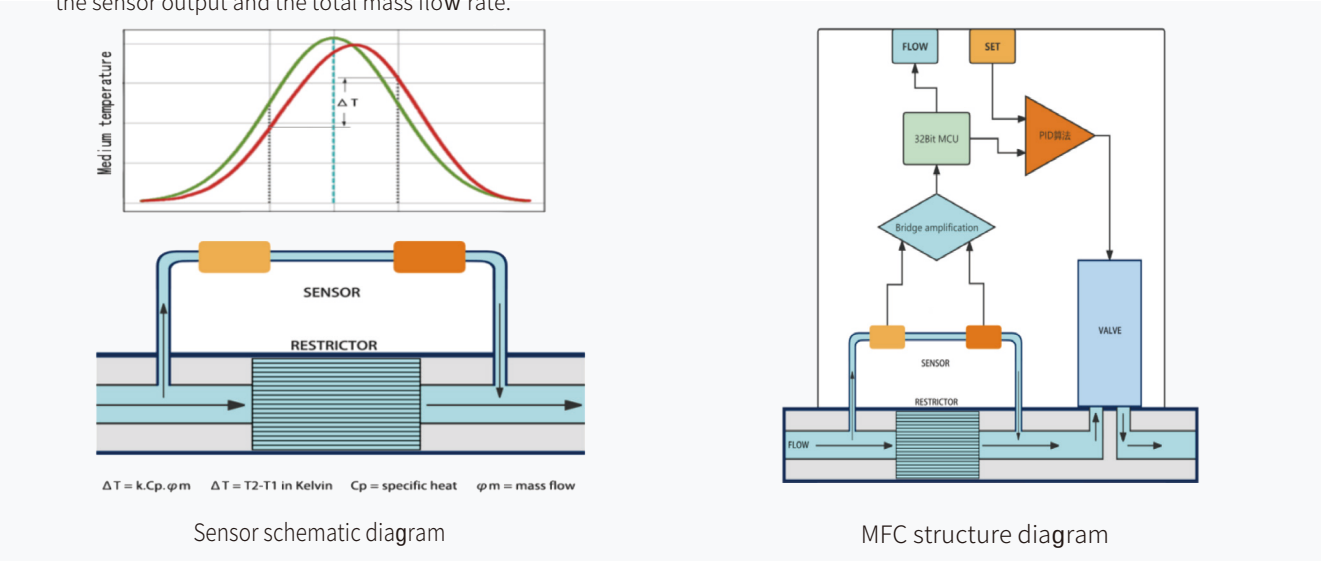
180+Common Gases | 30+Corrosive gas
- Self-reliance and controllability**

Localization
All components are self-developed

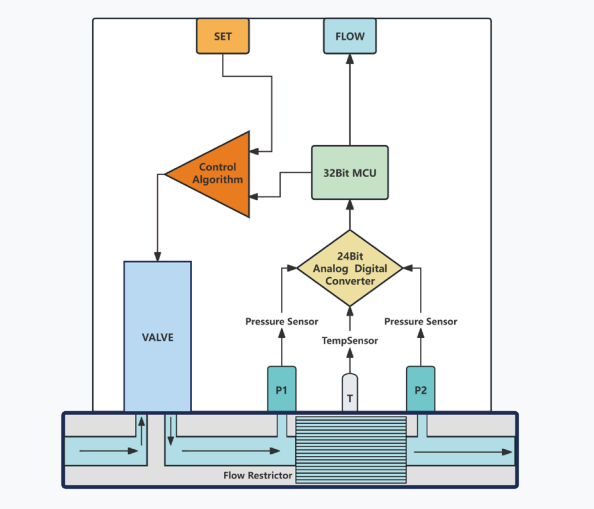


Thermal Mass Flow Meters & Controllers (MFM/MFC)

The sensor, based on the capillary thermal temperature differential principle, consists of a stainless steel capillary tube with a thermistor and a heating element. A portion of the gas flows through the bypass sensor and is heated by the heating element. The asymmetric temperature distribution caused by the gas flow allows for the measurement of a temperature difference across the thermistor, which is proportional to the mass flow rate through the sensor. The main flow path is perfectly divided by the laminar flow element, ensuring a linear relationship between the sensor output and the total mass flow rate.



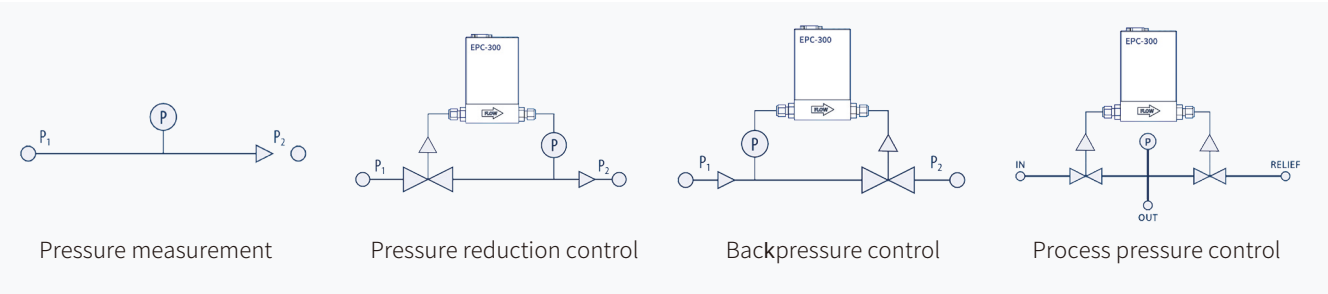
Differential Pressure (DP) Gas Mass Flow Meters & Controllers



First, the medium is converted from turbulent flow to an orderly laminar state using precision laminar flow elements. High-precision pressure or differential pressure sensors are then used to measure the pressure or pressure difference at both ends of the pipe. Based on the Hagen-Poiseuille principle, the pressure difference across the pipe is linearly related to the volume flow rate of the fluid passing through it. After pressure and temperature compensation and correction, the mass flow rate of the medium can be calculated.

Electronic Pressure Controller (EPC)

These digital electronic pressure gauges and controllers utilize a diaphragm-type piezoresistive pressure sensor for accurate and reliable measurement of absolute, gauge, and differential pressures. Their compact, straight-through internal flow path design makes them suitable for precise measurement and control of gas pressures. Constructed from 316L stainless steel, they are compatible with some toxic and corrosive media. The core components, including a pressure sensor, solenoid valve, and microcontroller, enable automated backpressure, pressure reduction, or bidirectional pressure control in gas systems.



- Feature-rich**

Automatic pressure reduction/
back pressure/
pressure process control
- High pressure adaptability**

Maximum working pressure/
pressure difference 10MPa
- Stable and high precision**

Self-developed million-times
high-reliability proportional
valve
- Ultra-fast response**

Digital communication
response time <2s



FAC-300Series



INTRODUCTION

The FAC series utilizes a capillary thermocouple sensor , ensuring measurement accuracy unaffected by temperature and pressure. Its 316L stainless steel body is compatible with toxic and corrosive gases and offers a maximum operating pressure of 450 psi. The analog measurement and control circuitry provides a 0-5V/4-20mA output signal. Surge suppression and overvoltage and overcurrent protection circuitry are incorporated into the electrical interface to ensure stable and reliable system operation. The FAC series is CE and RoHS certified , making it an optimal solution for cost-effective applications.

APPLICATION AREA

Food processing, atmosphere furnace, pharmaceutical manufacturing, bioengineering, surface treatment, vacuum coating equipment and other fields.

CHARACTERISTIC

- ◆ Precise measurement and control
- ◆ Analog communication 0~5V/4~20mA
- ◆ Fast response and high repeatability
- ◆ Compatible with corrosive gases
- ◆ Not affected by temperature and pressure
- ◆ Cost-effective solution

SPECIFICATIONS

Range and Operating Pressure

Model	Maximum full scale (N2 standard) pressure	Minimum full scale (N2 standard)	Maximum working	Max. Pressure Differential
FAC-320/1	30 SLM	10 SCCM	450 Psi/30 Bar	150 Psi/10 Bar

Note: SCCM (standard milliliters per minute) SLM (standard milliliters per minute) standard conditions(20°C、101.3Kpa)

Performance

Flow Accuracy	±%1 F.S;
Repeatability	±0.2% F.S
Control Range	2%~100% F.S
Response Time	<2s
Temperature Coefficient	Zero: <0.05% of F.S/°C. Span: <0.1% of S.P /°C
Pressure Coefficient	0.2% of S.P/ Bar
Operating Temperature	0~50°C
Leak Rate	1x10-9 atm. cc/sec He
Preheat Time	5 min accuracy to ±2% F.S (30 min to achieve the best accuracy)

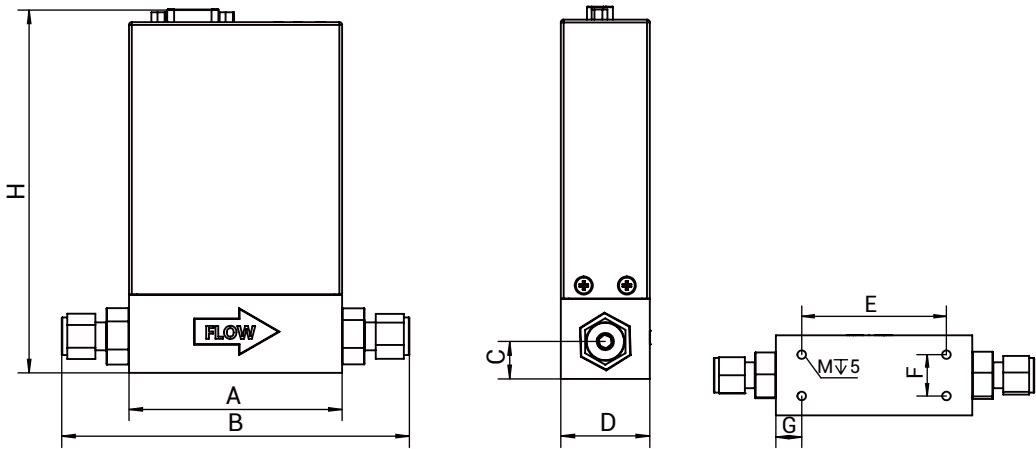
Electrical parameters

Power Supply	+15~24 V dc
Maximum Power Consumption	10W (MFC);3W (MFM)
Analog Communication	0~5 V / 4~20mA
Electrical interface	9-Pin D-connector (Male)

Mechanical parameters

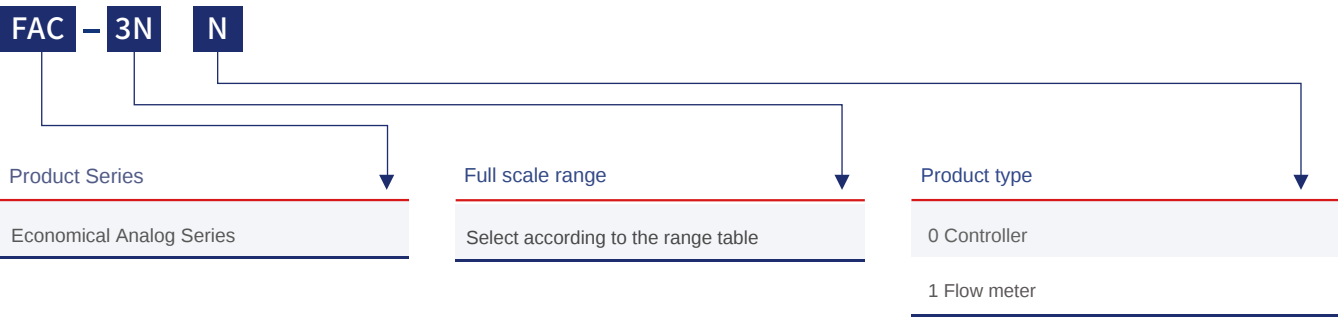
Valve Type	Normally closed (MFM without control valve)
Substrate Material	316L stainless stee
Sealing Material	Rubber seals [FKM, FFKM, EPDM, BUNA]
Fittings	1/8、1/4、3/8、φ3、φ6、φ9 tube fittings or VCR

SIZE(mm)&WEIGHT(kg)



Model	A	B	C	D	H	E	F	G	M	Weight
FAC-320/1	76	124	13	31	125	56	16	10	M4	0.95

Model Selection Guide



FDC-300 Series



INTRODUCTION

The FDC-300 series utilizes a capillary thermocouple sensor, ensuring measurement accuracy unaffected by temperature and pressure. Its 316L stainless steel base is compatible with toxic and corrosive gases, and boasts a maximum operating pressure of 1500 psi. Its digital measurement and control circuitry offers enhanced interference immunity, and its digital communication is compatible with analog signals (0-5V/4-20mA). Surge suppression and overvoltage and overcurrent protection circuitry are incorporated into the electrical interface, ensuring stable and reliable system operation. The FDC series is CE and RoHS certified, making it an ideal solution for cost-effective digital applications.

APPLICATION AREA

Bioengineering, vacuum coating, material preparation, petrochemical industry, surface treatment and other fields.

CHARACTERISTIC

- ◆ Precise measurement and control

◆ Fast response and high repeatability

◆ Compatible with corrosive gases
- ◆ Digital communication, compatible with analog communication

◆ Maximum working pressure up to 1500 Psi

◆ Economic Digital Application

SPECIFICATIONS

Range and Operating Pressure

Model	Maximum full scale (N2 standard)	Minimum full scale (N2 standard)	Maximum working	Max. Pressure Differential
FDC-32x	30 SLM	10 SCCM	1500 Psi/100 Bar	150 Psi/10 Bar
FDC-33x	100 SLM	30 SLM	1500 Psi/100 Bar	150 Psi/10 Bar
FDC-34x	200 SLM	100 SLM	450 Psi/30 Bar	150 Psi/10 Bar
FDC-35x	400 SLM	200 SLM	450 Psi/30 Bar	150 Psi/10 Bar
FDC-36x	1000 SLM	400 SLM	450 Psi/30 Bar	150 Psi/10 Bar

Note: SCCM (standard milliliters per minute) SLM (standard milliliters per minute) standard conditions(20°C、101.3Kpa)

Performance

Flow Accuracy	±1% F.S
Repeatability	±0.2% F.S
Control Range	2%~100% F.S
Response Time	<1.5s
Temperature Coefficient	Zero: <0.05% of F.S/°C. Span: <0.1% of S.P /°C
Pressure Coefficient	0.2% of S.P/ Bar
Operating Temperature	0~50°C
Leak Rate	1x10-9 atm. cc/sec He
Preheat Time	5 min accuracy to ±2% F.S (30 min to achieve the best accuracy)

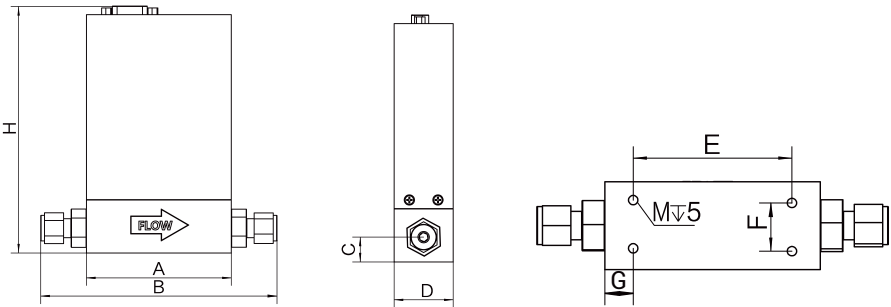
Electrical parameters

Power Supply	+15~24 V dc
Maximum Power Consumption	10W (MFC);3W (MFM)
Digital Communication	RS-485 (modbus Rtu protocol)
Analog Communication	0~5 V / 4~20mA
Electrical interface	9-Pin D-connector(Male)

Mechanical parameters

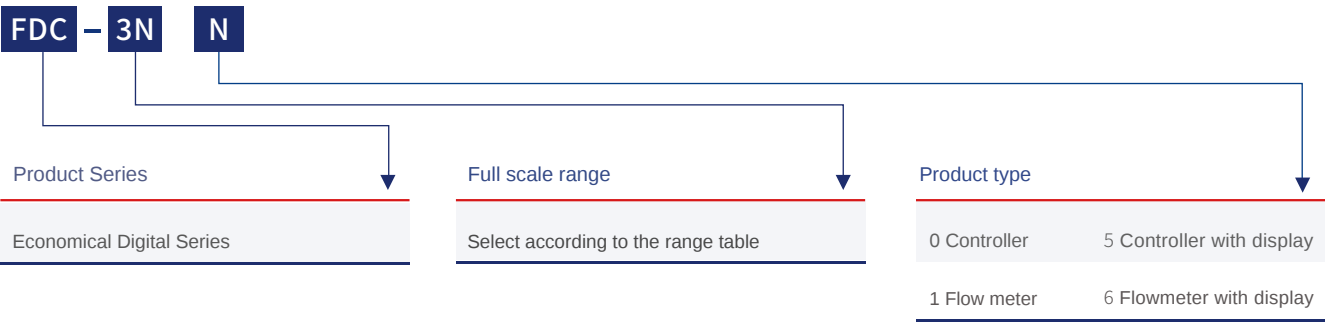
Valve Type	Normally closed (MFM without control valve)
Substrate Material	316L stainless steel
Sealing Material	Rubber seals [FKM, FFKM, EPDM, BUNA]
Fittings	1/8、1/4、3/8、φ3、φ6、φ9 tube fittings or VCR

SIZE(mm)&WEIGHT(kg)



Model	A	B	C	D	H	E	F	G	M	Weight
FDC-32x	76	124	13	31	125	56	16	10	M4	0.95
FDC-33x	98.5	147	17	45	135	68	22	15.2	M4	1.8
FDC-34x	143	218	22	50	150	107	30	18	M4	3.3
FDC-35x	143	218	22	50	150	107	30	18	M4	3.3
FDC-36x	200	276	37	74	165	180	30	10	M6	5.5

Model Selection Guide



EDC-300Series



INTRODUCTION

The EDC-300 series is a newly designed, next-generation MFC/MFM, utilizing cutting-edge fluid measurement and control technology. Based on a capillary thermocouple, it incorporates advanced "temperature differential automatic balancing technology" to ensure exceptional stability, linearity, and dynamic response. The 316L stainless steel base is compatible with toxic and corrosive gases, offering a maximum operating pressure of 1500 psi and a maximum flow rate of 1500 SLM. It features a newly designed digital measurement and control circuitry, over 10 digital communication protocols, analog communication compatibility, and an optional LCD display for convenient on-site operation. The EDC series' outstanding performance is an ideal companion for high-quality applications.

APPLICATION AREA

Bioengineering, vacuum coating, material preparation, petrochemical industry, surface treatment and other fields.

CHARACTERISTIC

- ◆ Precise measurement and control

◆ Fast response and high repeatability

◆ Unaffected by temperature and pressure

◆ High Pressure Difference Adaptability
- ◆ Maximum working pressure up to 1500 Psi

◆ Digital communication, compatible with analog communication

◆ Optional LCD with Real-Time Display

◆ Compatible with corrosive gases

SPECIFICATIONS

Range and Operating Pressure

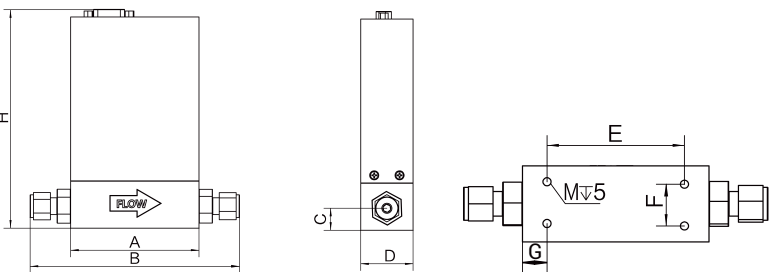
Model	Maximum full scale (N2 standard)	Minimum full scale (N2 standard)	Maximum working	Max. Pressure Differential
EDC-31x	10 SCCM	3 SCCM	1500 Psi/100 Bar	150 Psi/10 Bar
EDC-32x	30 SLM	10 SCCM	1500 Psi/100 Bar	150 Psi/10 Bar
EDC-33x	100 SLM	30 SLM	1500 Psi/100 Bar	150 Psi/10 Bar
EDC-34x	200 SLM	100 SLM	450 Psi/30 Bar	150 Psi/10 Bar
EDC-35x	400 SLM	200 SLM	450 Psi/30 Bar	150 Psi/10 Bar
EDC-36x	1000 SLM	400 SLM	450 Psi/30 Bar	150 Psi/10 Bar
EDC-37x	1500 SLM	1000 SLM	450 Psi/30 Bar	150 Psi/10 Bar

Note: SCCM (standard milliliters per minute) SLM (standard milliliters per minute) standard conditions(20°C, 101.3Kpa)

Performance

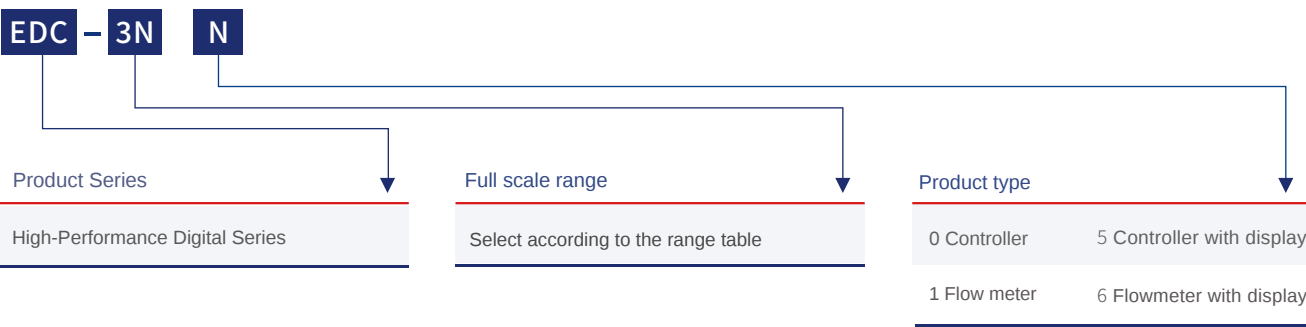
Flow Accuracy	±0.8% F.S (<100 SLM);±1% F.S (>100 SLM)
Repeatability	±0.2% F.S
Control Range	1~100% F.S
Response Time	<0.8s
Temperature Coefficient	Zero: <0.05% of F.S/°C. Span: <0.1% of S.P /°C
Pressure Coefficient	0.2% of S.P/ Bar
Operating Temperature	0~50°C
Leak Rate	1x10 ⁻⁹ atm. cc/sec He
Preheat Time	5 min accuracy to ±2% F.S (30 min to achieve the best accuracy)

SIZE(mm)&WEIGHT(kg)



Model	A	B	C	D	H	E	F	G	M	Weight
EDC-310/1	76	124	13	31	125	56	16	10	M4	0.95
EDC-315/6	76	124	13	36	125	56	16	10	M4	0.95
EDC-320/1	76	124	13	31	125	56	16	10	M4	0.95
EDC-325/6	76	124	13	36	125	56	16	10	M4	0.95
EDC-33x	98.5	147	17	45	135	68	22	15.2	M4	1.8
EDC-34x	143	218	22	50	150	107	30	18	M4	3.3
EDC-35x	143	218	22	50	150	107	30	18	M4	3.3
EDC-36x	200	276	37	74	165	180	30	10	M6	5.5

Model Selection Guide



EDC-500Series



INTRODUCTION

The EDC-500 series utilizes a new generation of sensors featuring "temperature differential automatic balancing technology" and features upgraded and optimized solenoid valve structures and control algorithms. This allows the MFC to operate not only under high pressure but also under high differential pressures, with a maximum operating differential pressure of 10 MPa. The solenoid valve seal utilizes PTFE, significantly enhancing its resistance to corrosive and organic gases.

APPLICATION AREA

Micro-reactors, hydrogenation units, petrochemicals, coal chemical industry and other high-pressure reaction fields.

CHARACTERISTIC

- ◆ Precise measurement and control

◆ Fast response and high repeatability

◆ Unaffected by temperature and pressure

◆ Maximum working pressure difference 10MPa
- ◆ Maximum working pressure 10MPa

◆ Digital communication, compatible with analog communication

◆ Optional LCD with Real-Time Display

◆ Compatible with corrosive gases

SPECIFICATIONS

Range and Operating Pressure

Model	Maximum full scale (N2 standard)	Minimum full scale (N2 standard)	Maximum working	Max. Pressure Differential
EDC-51x	10 SCCM	3 SCCM	1500 Psi/100 Bar	1500 Psi/100 Bar
EDC-52x	30 SLM	10 SCCM	1500 Psi/100 Bar	1500 Psi/100 Bar
EDC-53x	100 SLM	30 SLM	1500 Psi/100 Bar	1500 Psi/100 Bar

Note: SCCM (standard milliliters per minute) SLM (standard milliliters per minute) standard conditions(20℃、101.3Kpa)

Performance

Flow Accuracy	±0.8%
Repeatability	±0.2% F.S
Control Range	1~100% F.S
Response Time	<0.8s
Temperature Coefficient	Zero: <0.05% of F.S/℃. Span: <0.1% of S.P /℃
Pressure Coefficient	0.2% of S.P/ Bar
Operating Temperature	0~50℃
Leak Rate	1x10-9 atm. cc/sec He
Preheat Time	5 min accuracy to ±2% F.S (30 min to achieve the best accuracy)

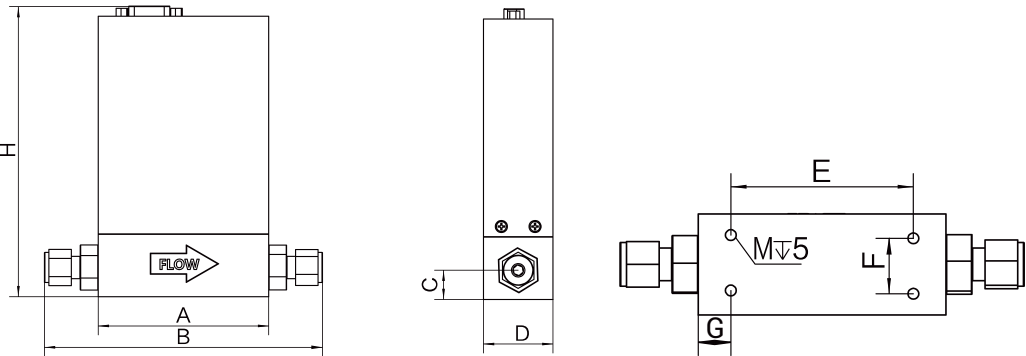
Electrical parameters

Power Supply	+15~24 V dc
Maximum Power Consumption	10W (MFC);3W (MFM)
Digital Communication	RS-485 (modbus Rtu protocol)
Analog Communication	0~5 V / 4~20mA
Electrical interface	9-Pin D-connector (Male)

Mechanical parameters

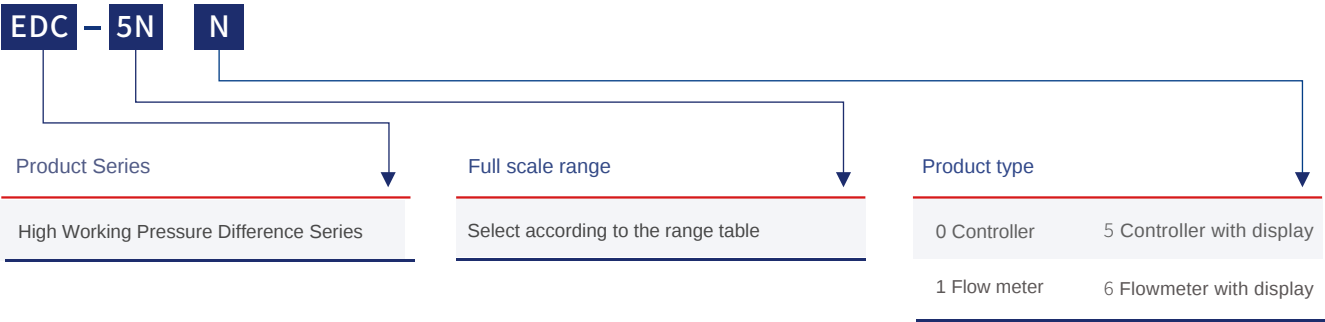
Valve Type	Normally closed (MFM without control valve)
Substrate Material	316L stainless steel
Sealing Material	Rubber seals [FKM, FFKM, EPDM, BUNA]
Fittings	1/8、1/4、3/8、1/2、3/4、φ3、φ6、φ9、φ12 tube fittings or VCR

SIZE(mm)&WEIGHT(kg)



Model	A	B	C	D	H	E	F	G	M	Weight
EDC-510/1	76	124	13	31	125	56	16	10	M4	0.95
EDC-515/6	76	124	13	36	125	56	16	10	M4	0.95
EDC-520/1	76	124	13	31	125	56	16	10	M4	0.95
EDC-525/6	76	124	13	36	125	56	16	10	M4	0.95
EDC-53x	98.5	147	17	45	135	68	22	15.2	M4	1.8

Model Selection Guide



EDC-600 Series



INTRODUCTION

The EDC-600 series is a newly upgraded, next-generation, ultra-high-precision MFC. Its sensors utilize a higher-standard manufacturing process and undergo high- and low-temperature aging screening to ensure exceptional long-term stability. All electronic components utilize high-precision, low-drift components. Each product undergoes 72 hours of high- and low-temperature aging and temperature compensation before shipment, and undergoes repeated flow accuracy testing to ensure stable and reliable product accuracy.

APPLICATION AREA

High-precision measurement and control fields such as scientific research institutes, university laboratories, metrology institutes, and air monitoring stations.

CHARACTERISTIC

- ◆ Precise measurement and control

◆ Fast response and high repeatability

◆ Unaffected by temperature and pressure
- ◆ Digital communication, compatible with analog communication

◆ Measurement accuracy is within $\pm 4\%$ of Full Scale (F.S.)

◆ High-quality digital applications for corrosive gases

SPECIFICATIONS

Range and Operating Pressure

Model	Maximum full scale (N2 standard)	Minimum full scale (N2 standard)	Maximum working	Max. Pressure Differential
EDC-61x	10 SCCM	3 SCCM	750 Psi/50 Bar	150 Psi/10 Bar
EDC-62x	30 SLM	10 SCCM	750 Psi/50 Bar	150 Psi/10 Bar
EDC-63x	100 SLM	30 SLM	750 Psi/50 Bar	150 Psi/10 Bar

Note: SCCM (standard milliliters per minute) SLM (standard milliliters per minute) standard conditions(20°C、101.3Kpa)

Performance

Flow Accuracy	±0.4%
Repeatability	±0.2% F.S
Control Range	1~100% F.S
Response Time	<0.8s
Temperature Coefficient	Zero: <0.05% of F.S/°C. Span: <0.1% of S.P /°C
Pressure Coefficient	0.2% of S.P/ Bar
Operating Temperature	0~50°C
Leak Rate	1x10 ⁻⁹ atm. cc/sec He
Preheat Time	5 min accuracy to ±2% F.S (30 min to achieve the best accuracy)

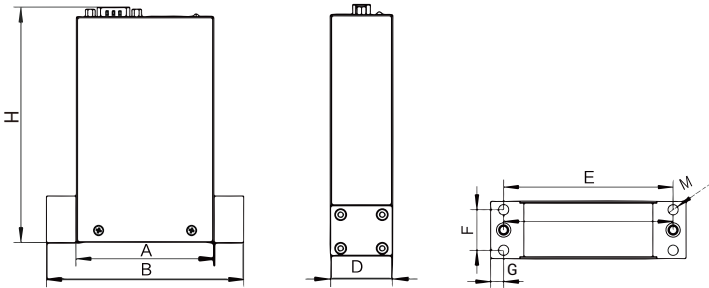
Electrical parameters

Power Supply	+15~24 V dc
Maximum Power Consumption	10W (MFC);3W (MFM)
Digital Communication	RS-485 (modbus Rtu protocol)
Analog Communication	0~5 V / 4~20mA
Electrical interface	9-Pin D-Connector (Male) / Aircraft connector

Mechanical parameters

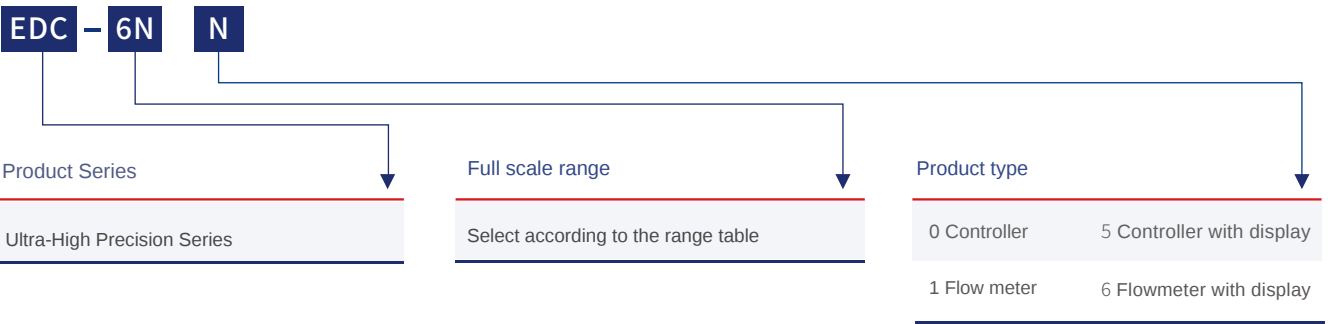
Valve Type	Normally closed (MFM without control valve)
Substrate Material	316L stainless stee
Sealing Material	Rubber seal / Metal seal
Fittings	1/4" VCR、IGS-C Seal、IGS-W Seal

SIZE(mm)&WEIGHT(kg)



Model	A	B	C	D	H	E	F	G	M	Weight
EDC-610/1	76	124	13	31	125	56	16	10	M4	0.95
EDC-615/6	76	124	13	36	125	56	16	10	M4	0.95
EDC-620/1	76	124	13	31	125	56	16	10	M4	0.95

Model Selection Guide



ESC-300 Series



INTRODUCTION

The ESC-300 series is a newly designed, next-generation MFC/MFM, utilizing cutting-edge fluid measurement and control technology. Based on a capillary thermocouple, it incorporates advanced "temperature differential automatic balancing technology" to ensure exceptional sensor stability, linearity, and dynamic response. It utilizes a 316L all-metal seal, is compatible with toxic and corrosive gases, and offers a maximum flow rate of 30 SLM. Featuring a newly designed digital measurement and control circuit and over 10 optional communication protocols, the ESC-300 series is the perfect companion for high-quality applications.

APPLICATION AREA

Semiconductor manufacturing process, thin film deposition system, epitaxial process system, precision surface coating system, high vacuum equipment, analysis system and other fields.

CHARACTERISTIC

- ◆ Precise measurement and control

◆ Fast response and high repeatability

◆ Compatible with corrosive gases
- ◆ All-Metal Seal

◆ Compliant with semiconductor SEM standards

◆ Digital communication, compatible with analog communication

SPECIFICATIONS

Range and Operating Pressure

Model	Maximum full scale (N2 standard)	Minimum full scale (N2 standard)	Maximum working	Max. Pressure Differential
ESC-310	10 SCCM	3 SCCM	1500 Psi/100 Bar	1500 Psi/100 Bar
ESC-320	30 SLM	10 SCCM	1500 Psi/100 Bar	1500 Psi/100 Bar
ESC-330	100 SLM	30 SCCM	1500 Psi/100 Bar	1500 Psi/100 Bar

Note: SCCM (standard milliliters per minute) SLM (standard milliliters per minute) standard conditions(20°C、101.3Kpa)

Performance

Flow Accuracy	±0.8%
Repeatability	±0.2% F.S
Control Range	1~100% F.S
Response Time	<0.8s
Temperature Coefficient	Zero: <0.05% of F.S/°C. Span: <0.1% of S.P /°C
Pressure Coefficient	0.2% of S.P/ Bar
Operating Temperature	0~50°C
Leak Rate	1x10-9 atm. cc/sec He
Preheat Time	5 min accuracy to ±2% F.S (30 min to achieve the best accuracy)

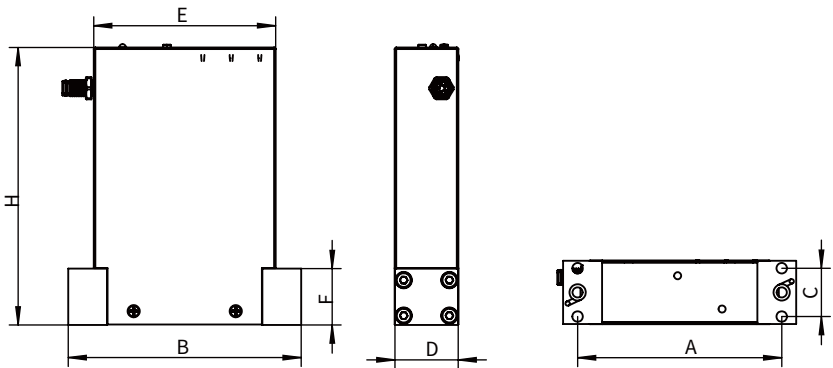
Electrical parameters

Power Supply	+15~24 V dc
Maximum Power Consumption	10W (MFC);3W (MFM)
Digital Communication	RS-485 (modbus Rtu protocol)
Analog Communication	0~5 V / 4~20mA
Electrical interface	9-Pin D-Connector (Male) / Aircraft connector

Mechanical parameters

Valve Type	Normally closed (MFM without control valve)
Substrate Material	316L stainless steel
Sealing Material	All-Metal Seal
Fittings	1/4" VCR、IGS-C Seal、IGS-W Seal

SIZE(mm)&WEIGHT(kg)



Model	A	B	C	D	H	E	F	Weight
ESC-310/1	92	105	22	28	126	82	25	0.95
ESC-320/1	92	105	22	28	126	82	25	0.95
ESC-330/1	92	105	22	28	126	82	25	0.95

Model Selection Guide



SDC-300 Series



INTRODUCTION

The SDC-300 series is an ultra-compact MFC/MFM utilizing the thermal MEMS principle, offering high accuracy, fast response, and excellent repeatability. Its 316L stainless steel base is compatible with some toxic and corrosive gases, with a maximum operating pressure of 150 Psi/10 Bar and a maximum flow rate of 100 SLM. Its newly designed digital measurement and control circuitry makes it suitable for a variety of industrial gas measurement and control scenarios.

APPLICATION AREA

Portable gas analyzers, biological fermentation, gas chromatography and other fields.

CHARACTERISTIC

- ◆ High-precision measurement and control
- ◆ 60*35*60mm ultra-small size
- ◆ Response time<0.7S
- ◆ High-quality digital applications for corrosive gases

SPECIFICATIONS

Range and Operating Pressure

Model	Maximum full scale (N2 standard)	Minimum full scale (N2 standard)	Maximum working	Max. Pressure Differential
SDC-31x	10 SCCM	3 SCCM	150 Psi/10 Bar	150 Psi/10 Bar
SDC-32x	30 SLM	10 SCCM	150 Psi/10 Bar	150 Psi/10 Bar
SDC-33x	100 SLM	30 SCCM	150 Psi/10 Bar	150 Psi/10 Bar

Note: SCCM (standard milliliters per minute) SLM (standard milliliters per minute) standard conditions(20°C、101.3Kpa)

Performance

Flow Accuracy	±1%
Repeatability	±0.2% F.S
Control Range	2~100% F.S
Response Time	<0.7s
Temperature Coefficient	Zero: <0.05% of F.S/°C. Span: <0.1% of S.P /°C
Pressure Coefficient	0.2% of S.P/ Bar
Operating Temperature	0~50°C
Leak Rate	1x10-11 atm. cc/sec He
Preheat Time	5 min accuracy to ±2% F.S (30 min to achieve the best accuracy)

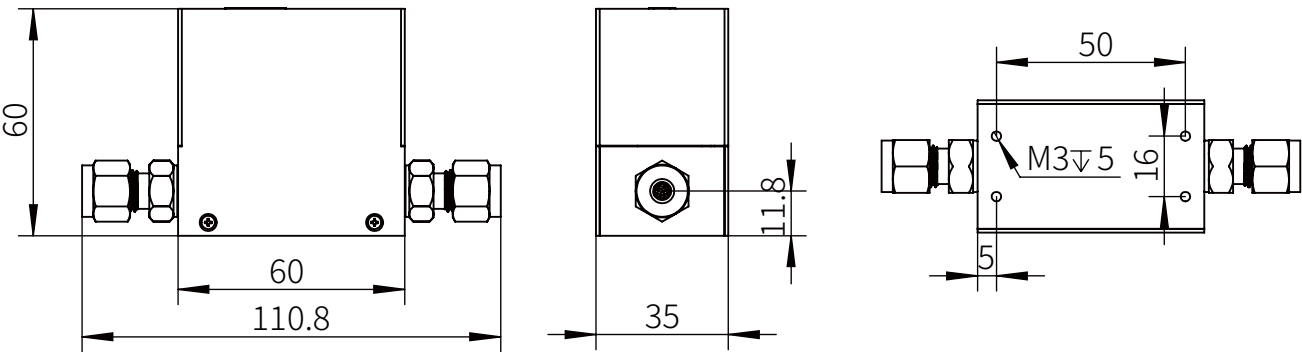
Electrical parameters

Power Supply	+15~24 V dc
Maximum Power Consumption	5W (MFC);1W (MFM)
Digital Communication	RS-485 (modbus Rtu protocol)
Sealing Material	0~5 V / 4~20mA
Electrical interface	4-pin industrial Phoenix terminal

Mechanical parameters

Valve Type	Normally closed (MFM without control valve)
Substrate Material	316L stainless steel
Sealing Material	Rubber Seal
Fittings	1/4" VCR、IGS-C Seal、IGS-W Seal

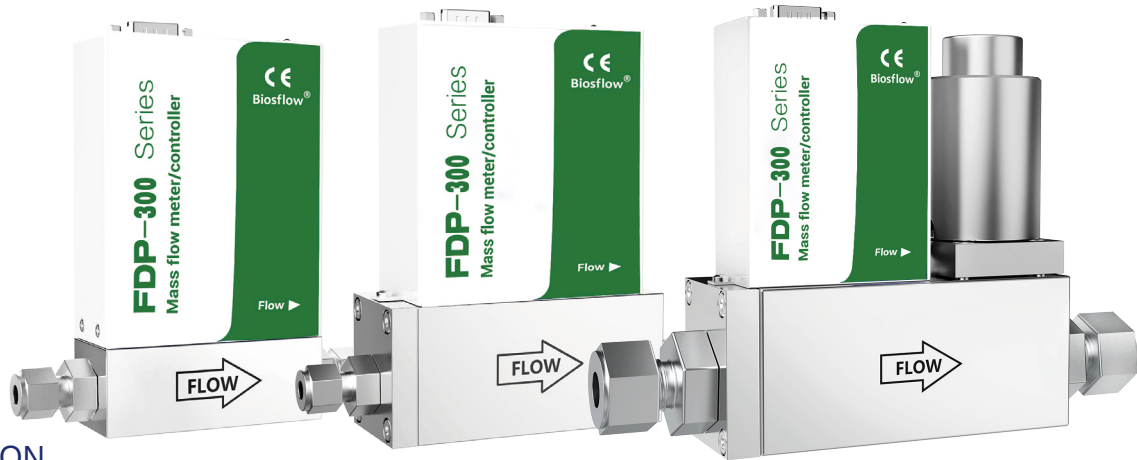
SIZE(mm)&WEIGHT(kg)



Model Selection Guide



FDP-300Series



INTRODUCTION

The FDP-300 series adopts the laminar flow differential pressure measurement and control principle. Based on high-precision temperature and pressure sensors, it integrates self-developed software algorithms, giving the product high response, high accuracy, high repeatability, and low drift. The base is made of 316L stainless steel, suitable for toxic and corrosive media. The maximum working pressure can reach 150 Psi/10 Bar, and the maximum flow rate can reach 1000 SLM. It features a newly designed digital measurement and control circuit with more than 10 digital communication protocols available, and is compatible with analog communication. An optional LCD screen is available for convenient on-site operation display.

APPLICATION AREA

Semiconductor manufacturing, photovoltaic equipment, vacuum equipment, materials preparation, petrochemicals, bio-fermentation and other fields.

CHARACTERISTIC

- ◆ High-precision measurement and control

◆ Fast response and high repeatability

◆ Optional touch display

◆ Built-in multiple gas switching
- ◆ Fast response and good repeatability

◆ Low pressure drop and clog-resistant

◆ Resistant to corrosive gases

◆ Digital Compatible Analog Communication

SPECIFICATIONS

Range and Operating Pressure

Model	Maximum full scale (N2 standard)	Minimum full scale (N2 standard)	Maximum working	Max. Pressure Differential)
FDP-32x	30 SLM	10 SCCM	150 Psi/10 Bar	150 Psi/10 Bar
FDP-33x	100 SLM	30 SLM	150 Psi/10 Bar	150 Psi/10 Bar
FDP-34x	200 SLM	100 SLM	150 Psi/10 Bar	150 Psi/10 Bar
FDP-35x	400 SLM	200 SLM	150 Psi/10 Bar	150 Psi/10 Bar
FDP-36x	1000 SLM	400 SLM	150 Psi/10 Bar	150 Psi/10 Bar

Note: SCCM (standard milliliters per minute) SLM (standard milliliters per minute) standard conditions(20°C、101.3Kpa)

Performance

Flow Accuracy	±0.6% F.S
Repeatability	±0.2% F.S
Control Range	1~100% F.S
Response Time	<0.5s
Temperature Coefficient	Zero: <0.05% of F.S/°C. Span: <0.1% of S.P /°C
Pressure Coefficient	0.2% of S.P/ Bar
Operating Temperature	0~50°C
Leak Rate	1x10-9 atm. cc/sec He
Preheat Time	1s

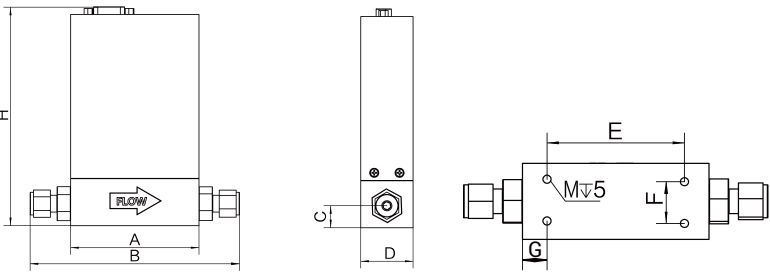
Electrical parameters

Power Supply	+14~27 V
Maximum Power Consumption	10W (MFC);3W (MFM)
Digital Communication	RS-485 (modbus Rtu protocol)
Analog Communication	0~5 V / 4~20mA
Electrical interface	9-Pin D-Connector (Male)

Mechanical parameters

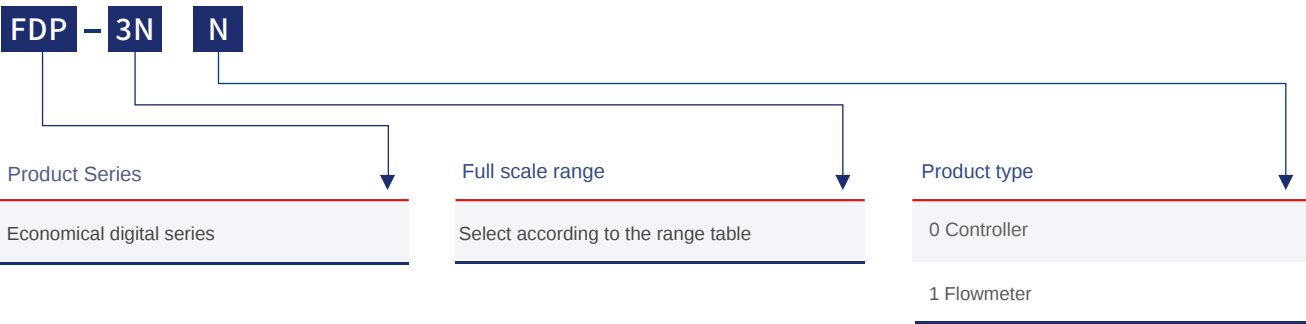
Valve Type	Normally closed (MFM without control valve)
Substrate Material	316L stainless steel
Sealing Material	Fluororubber; EPDM rubber; perfluororubber
Fittings	Metric and Imperial Ferrule / VCR Fittings

SIZE(mm)&WEIGHT(kg)



Model	A	B	C	D	H	E	F	G	M	Weight
FDP-32x	76	124	13	31	125	56	16	10	M4	0.95
FDP-33x	98.5	147	17	45	135	68	22	15.2	M4	1.8
FDP-34x	143	218	22	50	150	107	30	18	M4	3.3
FDP-35x	143	218	22	50	150	107	30	18	M4	3.3
FDP-36x	200	276	37	74	165	180	30	10	M6	5.5

Model Selection Guide



FDP-500Series



INTRODUCTION

The FDP-500 series employs laminar flow differential pressure measurement and control principles. Based on high-precision temperature and pressure sensors, it integrates self-developed software algorithms, resulting in products with high response, high accuracy, high repeatability, and low drift. The base is made of 316L stainless steel, suitable for toxic and corrosive media, with a maximum operating pressure of 150 Psi/10 Bar and a maximum flow rate of 100 SLM. The FDP-500 series features an all-metal seal and complies with SEMI standards.

APPLICATION AREA

Applications include semiconductor manufacturing processes, thin film deposition systems, epitaxial process systems, precision surface coating systems, high vacuum equipment, and analytical systems.

CHARACTERISTIC

- ◆ High-precision measurement and control
- ◆ Fast response and high repeatability
- ◆ Digital Compatible Analog Communication
- ◆ Optional touch display
- ◆ Low pressure drop and clog-resistant
- ◆ Resistant to corrosive gases

SPECIFICATIONS

Range and Operating Pressure

Model	Maximum full scale (N2 standard)	Minimum full scale (N2 standard)	Maximum working	Max. Pressure Differential
FDP-510/1	10 SCCM	3 SCCM	150 Psi/10 Bar	150 Psi/10 Bar
FDP-520/1	30 SLM	10 SCCM	150 Psi/10 Bar	150 Psi/10 Bar
FDP-530/1	100 SLM	30 SCCM	150 Psi/10 Bar	150 Psi/10 Bar

Note: SCCM (standard milliliters per minute) SLM (standard milliliters per minute) standard conditions(20°C、101.3Kpa)

Performance

Flow Accuracy	±0.6% F.S
Repeatability	±0.2% F.S
Control Range	1~100% F.S
Response Time	<0.5s
Temperature Coefficient	Zero: <0.05% of F.S/°C. Span: <0.1% of S.P /°C
Pressure Coefficient	0.2% of S.P/ Bar
Operating Temperature	0~50°C
Leak Rate	1x10-9 atm. cc/sec He
Preheat Time	1 s

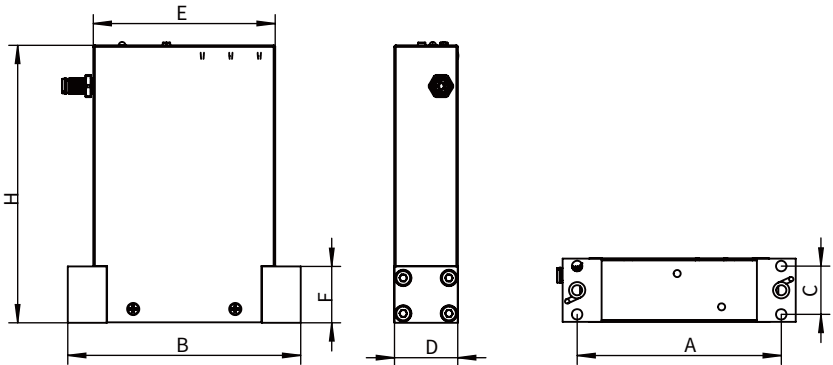
Electrical parameters

Power Supply	+14~27 V dc
Maximum Power Consumption	10W (MFC);3W (MFM)
Digital Communication	RS-485 (modbus Rtu protocol)
Analog Communication	0~5 V / 4~20mA
Electrical interface	9-Pin D-connector (Male)

Mechanical parameters

Valve Type	Normally closed (MFM without control valve))
Substrate Material	316L stainless steel
Sealing Material	316L stainless steel
Fittings	Metric and Imperial Ferrule / VCR Fittings

SIZE(mm)&WEIGHT(kg)



Model	A	B	C	D	H	E	F	Weight
FDP-510/1	92	105	22	28	126	82	25	0.95
FDP-520/1	92	105	22	28	126	82	25	0.95
FDP-530/1	92	105	22	28	126	82	25	0.95

Model Selection Guide



EPC-300Series



INTRODUCTION

The EPC-300 series digital electronic pressure gauges and controllers utilize diaphragm-type piezoresistive pressure sensors, enabling accurate and reliable measurement of absolute pressure, gauge pressure, and differential pressure. Their compact, straight-through internal flow path design is suitable for precise measurement and control of gas pressure. The product body is made of 316L stainless steel, suitable for handling some toxic and corrosive media. The newly designed digital measurement and control circuit offers over 10 selectable digital communication protocols, is compatible with analog communication, and can be equipped with an optional LCD touchscreen for convenient on-site operation. The EPC-300 series can achieve pressure reduction, back pressure, and process pressure control, with a maximum operating pressure of 10 MPa and a maximum operating differential pressure of 10 MPa.

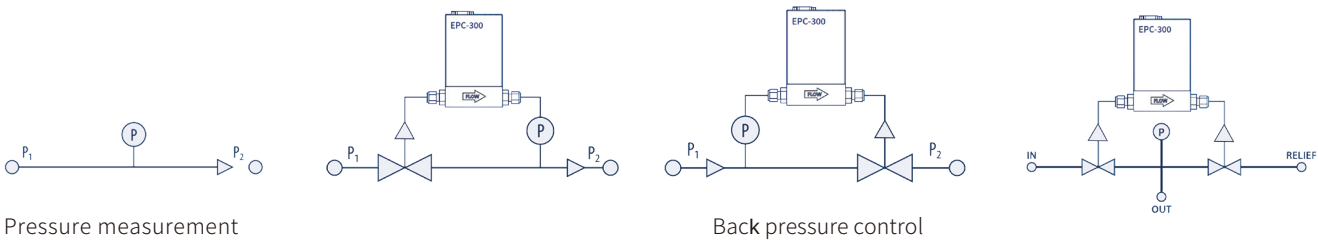
APPLICATION AREA

Analytical instruments, bio-fermentation, vacuum equipment, materials preparation, semiconductors and other fields.

CHARACTERISTIC

- ◆ Insensitive to volume changes
- ◆ High accuracy and excellent repeatability
- ◆ Digital Compatible Analog Communication
- ◆ Straight-through flow path design
- ◆ Low pressure drop and clog-resistant
- ◆ Fast response and low leak rate

CORE FUNCTIONALITY



SPECIFICATIONS

Range and Operating Pressure

Model	Maximum full scale (N2 standard)	Minimum full scale (N2 standard)	Maximum flow
EPC-31x	10 Bar	100 mBar	10 SLM
EPC-32x	50 Bar	10 Bar	10 SLM
EPC-33x	100 Bar	50 Bar	10 SLM

Note: SCCM (standard milliliters per minute) SLM (standard milliliters per minute) standard conditions(20°C, 101.3Kpa)

Performance

Flow Accuracy	±1%F.S
Repeatability	±0.2% F.S
Control Range	Max 5~100% F.S
Response Time	<2ms
Temperature Coefficient	<0.1% F.S./°C
Control stability	≤±0.1% F.S
Operating Temperature	-10~70°C
Leak Rate	1x10-9 atm. cc/sec He

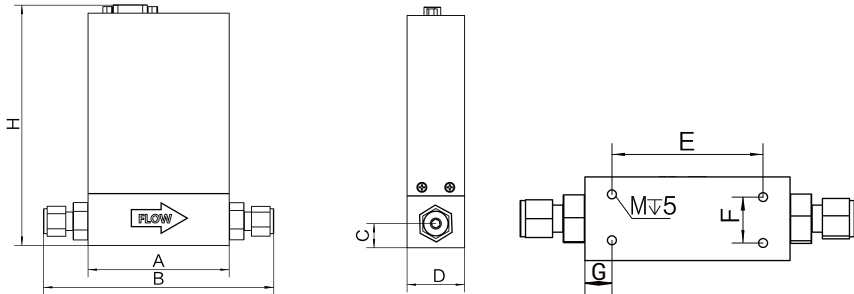
Electrical parameters

Power Supply	+14~27 V dc
Maximum Power Consumption	10W (MFC);3W (MFM)
Digital Communication	RS-485 (modbus Rtu protocol)
Analog Communication	0~5 V / 4~20mA
Electrical interface	9-Pin D-Connector (Male)

Mechanical parameters

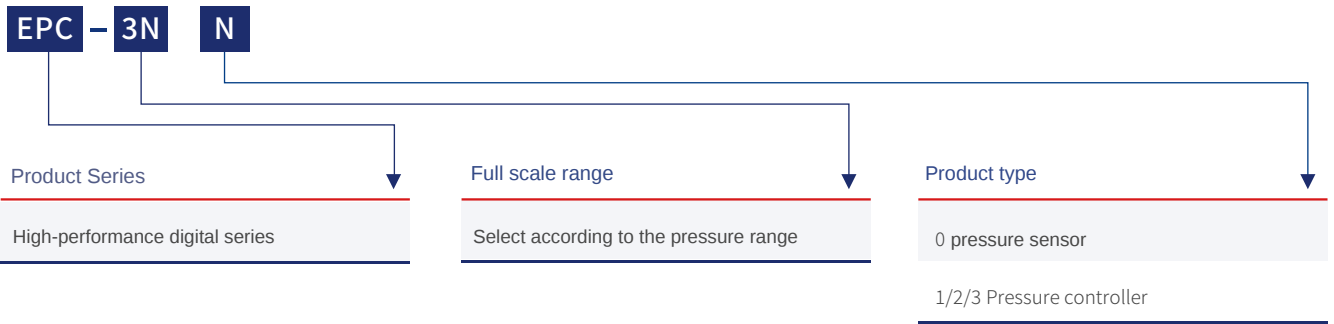
Valve Type	Normally closed
Substrate Material	316L stainless steel
Sealing Material	Fluororubber; EPDM rubber; perfluororubber
Fittings	Metric and Imperial Ferrule / VCR Fittings

SIZE(mm)&WEIGHT(kg)



Model	A	B	C	D	H	E	F	G	M	Weight
EPC-31x	76	124	13	31	125	56	16	10	M4	0.95
EPC-32x	76	124	13	31	125	56	16	10	M4	0.95
EPC-33x	76	124	13	31	125	56	16	10	M4	0.95

Model Selection Guide



EPC-500Series



INTRODUCTION

The EPC-300 series digital electronic pressure gauges and controllers utilize diaphragm-type piezoresistive pressure sensors, enabling accurate and reliable measurement of absolute pressure, gauge pressure, and differential pressure. Their compact, straight-through internal flow path design is suitable for precise measurement and control of gas pressure. The product body is made of 316L stainless steel, making it suitable for some toxic and corrosive media. The newly designed digital measurement and control circuit offers multiple digital communication protocols, is compatible with analog communication, and can be equipped with an optional LCD touchscreen for convenient on-site operation. The EPC-300 series can achieve pressure reduction, back pressure, and process pressure control, with a maximum operating pressure of 10 MPa and a maximum operating differential pressure of 10 MPa.

APPLICATION AREA

Analytical instruments, bio-fermentation, vacuum equipment, materials preparation, semiconductors and other fields.

CHARACTERISTIC

- ◆ Insensitive to volume changes

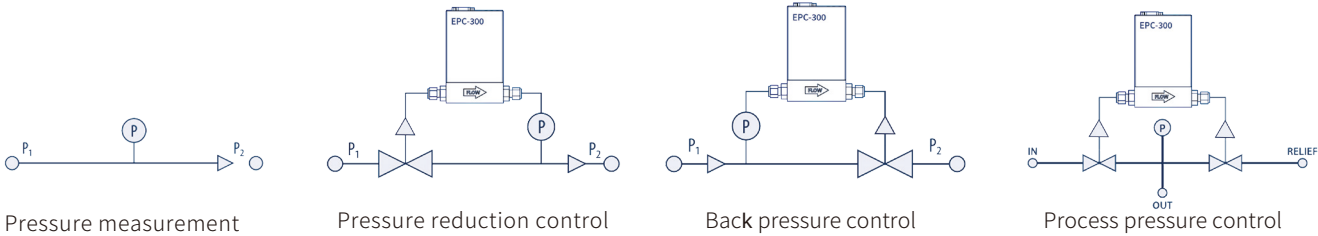
◆ High accuracy and excellent repeatability

◆ Digital Compatible Analog Communication
- ◆ Straight-through flow path design

◆ Low pressure drop and clog-resistant

◆ Fast response and low leak rate

CORE FUNCTIONALITY



SPECIFICATIONS

Model	Maximum full scale (N2 standard)	Minimum full scale (N2 standard)	Maximum flow
EPC-51x	10 Bar	100 mBar	10 SLM
EPC-52x	50 Bar	10 Bar	10 SLM
EPC-53x	100 Bar	50 Bar	10 SLM

Note: SCCM (standard milliliters per minute) SLM (standard milliliters per minute) standard conditions(20°C、101.3Kpa)

Performance

Flow Accuracy	±1%F.S
Repeatability	±0.2% F.S
Control Range	Max 5~100% F.S
Response Time	<2ms
Temperature Coefficient	<0.1% F.S./°C
Control stability	≤±0.1% F.S
Operating Temperature	-10~70°C
Leak Rate	1x10-9 atm. cc/sec He

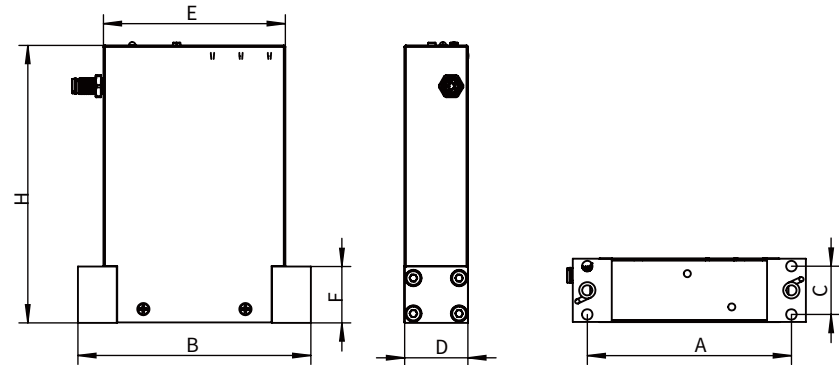
Electrical parameters

Power Supply	+14~27 V dc
Maximum Power Consumption	10W (MFC)3W (MFM)
Digital Communication	RS-485 (modbus Rtu protocol)
Analog Communication	0~5 V / 4~20mA
Electrical interface	9-Pin D-Connector (Male)

Mechanical parameters

Valve Type	Normally closed
Substrate Material	316L stainless steel
Sealing Material	316L stainless steel
Fittings	Metric and Imperial Ferrule / VCR Fittings

SIZE(mm)&WEIGHT(kg)



Model	A	B	C	D	H	E	F	Weight
EPC-51x	92	105	22	28	126	82	25	0.95
EPC-52x	92	105	22	28	126	82	25	0.95
EPC-53x	92	105	22	28	126	82	25	0.95

Model Selection Guide

