

Sevenstar CS300C Series

Digital PI Mass Flow Controllers and Meters
Ultra High Purity Semiconductor Grade, Metal sealed
1 sccm – 30 slm

esl 
service is solution



FEATURES

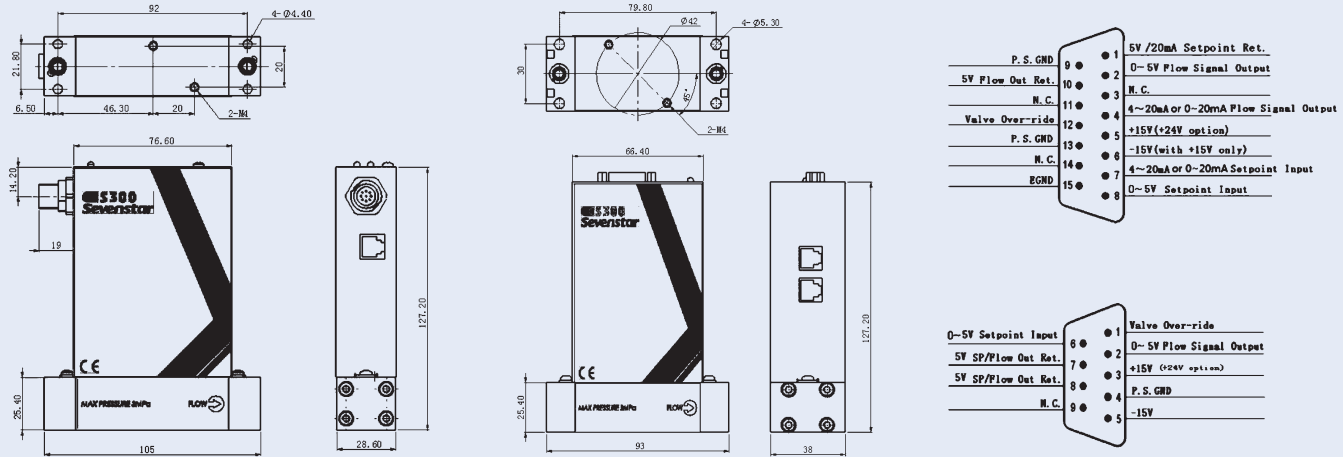
- ▶ **High Accuracy** ($\pm 0.8\%$ SP)
- ▶ **Fast Response** (less than 0.5 sec)
- ▶ **Excellent Sensor Stability**
- ▶ **High Purity** (assembled in a Class 100 Clean Room)
- ▶ **Multiple Communication Interfaces**
(Analogue, RS485, Profibus® and DeviceNet™)
- ▶ **Multi Gas & Multi Range**
- ▶ **Designed in California**



CS300 digital mass flow controllers incorporate the latest thermal technology for high accuracy, fast response time and low zero drift. Multi Gas and Multi Range, Auto Zero, Alarm, soft start and delay functions are available. The CS300 MFC offers reliable performance and long-term application flexibility.

Sevenstar is specialized in developing and manufacturing Mass Flow Controller and related flow delivery products. With over 30 years of experience in the field, used in a wide variety of industries and R&D institutions, the company enjoys a high reputation in the market. Every specifications of these series are totally in accordance with the SEMI standard. Compared with analog products, CS300 MFCs show advantages as convenience, multi-functions, easy communication, good expansion and perfect compatibility. CS300 MFCs hold 11 patent rights and have the CE approval.

- ▶ **High Accuracy**
 $\pm 0.8\%$ SP ($>35\%$ FS), $\pm 0.24\%$ FS ($<35\%$ FS)
- ▶ **Fast Response** less than 0.5 sec
- ▶ **Excellent Sensor Stability** zero drift $< 0.6\%$ FS / Year
- ▶ **Low Temperature Coefficient**
Zero: $< \pm 0.02\%$ FS / °C
Span: $< \pm 0.05\%$ FS / °C
- ▶ **High Purity** assembled in a Class 100 Clean Room, in accordance with SEMI and ISO 9001 standards.
- ▶ **Multiple Communication Interfaces**
0...5VDC, 0...10VDC, 4...20 mA, RS485, Profibus® and DeviceNet™
- ▶ **Multi Gas & Multi Range**
User can change Gas and Full Scale to 30 – 100% FS
- ▶ **Multiple Power Supply**
MFC accepts $\pm 11... 16$ VDC or $+11...28$ VDC
- ▶ **Miscellaneous Functions**
Multi-gas and multi-range, auto-zero, alarm, soft start, delay, data logging and maintenance functions are configurable with the free customer software.
- ▶ **Pressure Compensation**
Effectively compensates foreline pressure changes.
- ▶ **Power Constant Sensor**
Sensor wire and sensor tube work under a linear environment to improve accuracy, response time and reduce the zero drift.
- ▶ **Digital Sensor Balance Technology**
The compensating voltage to the sensor drive minimize the temperature influence on the sensor.
- ▶ **VCP Technology**
To minimize the dead volume and improve the dynamic performance. Fast response and high performance, even at low set points.
- ▶ **1.125" Footprint (CS310C)**



CS300C Series

Ultra High Purity Flow Controller / Meter

Performance (Accuracy)

Standard Accuracy

5...34%	± 0.35% Fullscale
35...100%	± 1.00% Setpoint

High Accuracy (optional)

5...34%	± 0.24% Fullscale
35...100%	± 0.80% Setpoint

Linearity ± 0.50% Fullscale

Repeatability ± 0.20% Fullscale

Response Time
 < 0.8 Seconds
 < 0.5 Seconds (optional)

Valve Configuration NC or NO

Zero Drift
 < 0.60% Fullscale per Year
 (w/o Autozero)

Temperature Coefficient
 ± 0.02% Fullscale per °C (Zero)
 ± 0.05% Fullscale per °C (Span)

Leak Integrity 1x10⁻¹⁰ atm.cc/sec He

Electrical

Connectors SubD15, SubD9 (Analog) per Semi F36
 Devicenet™, RJ45 (RS-485)

I/O Signal 0...5 VDC, 0...10 VDC, 4...20 mA
 Devicenet™, Profibus®, RS485

Power Supply ± 11...16 VDC or +11...28 VDC
 (400mA)

Certifications: CE, ODVA

Diagnostics

Status Lights

MFC Health, Network Status

Alarms

Eeprom Error, Temperature,
 Valve Coil, Sensor Drift

Materials

Wetted Materials

Stainless Steel 316L VV

Surface Finish

5 µinch Ra

Seal Material

Metal

Weight

1.00 kg

Operating Limits

Fullscale Range 1...30.000 sccm

Maximum Pressure 3.50 MPa

Differential Pressure 0.05...0.35 MPa (< 10 slm)
 0.10...0.35 MPa (> 10 slm)

Temperature Range 0...50°C

Overall Length

1/4" VCR Male 124.0 mm

1.125" W-, C-Seal 105.2 mm (CS310C)

1.5" B-, W-, C-Seal 93.0 mm (CS320C)



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