

# CS200 / CS200H

## CS200 Digital Mass Flow Controller CS200H Digital Mass Flow Controller - High Temperature



### FEATURES

- **High accuracy** accurate to  $\pm 1.0\%$  S.P ( $\geq 35\%$  F.S.),  $\pm 0.35\%$  F.S. ( $< 35\%$  F.S.)
- **Fast Response** less than  $\leq 1$  sec
- **Excellent sensor stability** zero drift is less than  $0.6\%$  F.S./year
- **Low Temperature Coefficient**  
Zero:  $\leq \pm 0.02\%$  F.S./ $^{\circ}\text{C}$   
Span:  $\leq \pm 0.05\%$  F.S./ $^{\circ}\text{C}$
- **High Purity** assembled in a Class 100 ultra clean room, in accordance with SEMI and ISO 9001 standards
- **Multiple communication interfaces** RS485, Profibus<sup>®</sup> and DeviceNet<sup>™</sup> communication
- **Multi gas and Multi range** User can change gas convert factor, full scale of digital interface, and can rerange from 30% to 100% F.S.
- **High Temperature Tolerance (CS200H)** rated for temperatures up to  $120^{\circ}\text{C}$

CS200 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 CS200 MFC offers reliable performance and long-term application flexibility.

Ideal for high temperature environments, CS200H digital mass flow controllers offer the accuracy and reliability of the CS200, and are rated for temperatures up to  $120^{\circ}\text{C}$ .

CS200 and CS200H mass flow controllers are engineered, sold, serviced and supported in the U.S.

by Helios Technologies, Inc., and manufactured

by Sevenstar.



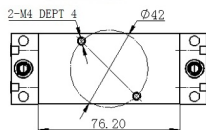
**HELIOS TECHNOLOGIES, INC.**

15032 Red Hill Ave, Suite C  
Tustin, CA 92780 (714) 258-1777  
heliostechinc.com • sales@heliostechinc.com

# CS200 Digital Mass Flow Controller

## CS200H Digital Mass Flow Controller - High Temperature

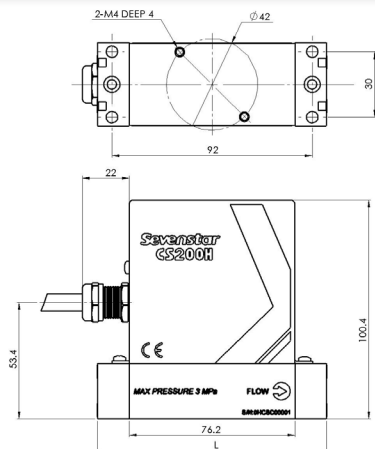
Model				
CS200				
Type	A	C	D	H
Full scale range (N <sub>2</sub> )	1 sccm - 50 slm	1 sccm - 30 slm		
Accuracy		±1.0% S.P (≥35% F.S.)	±0.35% F.S. (<35% F.S.)	
Linearity		±0.5% F.S.		
Repeatability		± 0.2% F.S.		
Response Time		≤1 sec.		
Valve Rest Position		Normally Closed or Normally Open		
Differential Pressure		(0.05~0.35) MPa 7.5 slm (0.1~ 0.275) MPa(<30 slm)	(0.07-0.35) MPa (≤ 15 slm (0.17~0.275) MPa (<50 slm)	
Temperature Coefficient	Zero: ≤ ±0.05% F.S./°C Span: ≤ ±0.1% F.S./°C (≤30 slm) Span: ≤ ±0.2% F.S./°C (>30 slm)	Zero: ≤ ±0.02% F.S./°C Span: ≤ ±0.05% F.S./°C		
Maximum Pressure		3MPa (435 psig)		
Zero Drift		<0.6% F.S. per year without autozero		
Leak Integrity	1x10 <sup>-9</sup> atm-cc/ sec He 1·10 <sup>-10</sup> Pa·m3 / sec He	1x10 <sup>-10</sup> atm-cc/ sec He 1·10 <sup>-11</sup> Pa·m3 / sec He		
Seal Materials	Viton®/Neoprene	Metal		
Surface Chemisty (EP only)	—	CrO thickness >20 Angstroms	—	Cr/Fe ratio > 2.0; CrO thickness >20 Angstroms
Surface Finish (Ra)	25Ra	10Ra	25Ra	10Ra
Operation Temperature		(0~50)°C		MFC/MFM: (90-120)° C; electronic box: (0-50)° C
Input Signal		Digital: RS485(default) / DeviceNet™    Analog: (0~5)VDC(default) / (4-20)mA		
Output Signal		Digital: RS485/DeviceNet™    Analog: (0 ~ 5)VDC or (4 ~ 20) mA		
Power Supply		±11 ~ ±16 VDC or +11 ~ +28 VDC (400mA)		
Electronic Connector		D sub 9 pins male, D sub 15 pins male, DeviceNet™ male		
Fittings	VCR® 1/4" male, Swagelok® 3mm, Swagelok 6mm, Swagelok 10mm, Swagelok 1/8", Swagelok 1/4"	VCR 1/4" male, Swagelok 6mm, Swagelok 1/4", W-Seal; C-Seal		
Weight	1 kg	0.8 kg	1.2 kg with valve, 1 kg without valve	



The length of the product with different fittings

Fitting Type	Length
1.5" C Fitting	105.2
1.5" W Fitting	105.2

Fitting	L
Swagelok Ø3	112.8
Swagelok Ø6	112.8
Swagelok Ø10	112.8
Swagelok 1/8"	112.8
Swagelok 1/4"	112.8
Swagelok 1/2"	112.8
VCR 1/4" W	104
1.5" W-seal	106.2
1.5" C-seal	106.2



Viton® is a registered trademark of DuPont™. DeviceNet™ is a trademark of ODVA.  
Profibus® is a registered trademark of Profibus International. VCR® and Swagelok® are registered trademarks of Swagelok® Company.



**HELIOS TECHNOLOGIES, INC.**

15032 Red Hill Ave, Suite C  
Tustin, CA 92780 (714) 258-1777  
heliostechinc.com • sales@heliostechinc.com