Specifications of SEC-Z500X Series

▶ DeviceNet™ communication models

Mass flow controller model *1	SEC-Z514KX	SEC-Z514MGX	SEC-Z524MGXN	SEC-Z524MGX	SEC-Z534MGX	SEC-Z544MGX	SEC-Z554MGX	SEC-Z564MGX	Mass flow controller model *1
Mass flow meter model *1	SEF-Z514KX	SEF-Z514MGX	SEF-Z524MGXN	SEF-Z524MGX	SEF-Z534MGXN	SEF-Z544MGXN	SEF-Z554MGX	SEF-Z564MGX	Mass flow meter model *1
Full-scale flow rate (N_2 conversion flow rate)	1/2 SCCM	MR/MG number #R1.5: 17.5 SCCM #1.5: 55 SCCM #2.5: 175 SCCM #3.5: 550 SCCM #4.5: 1.75 SLM #5.5: 5.5 SLM #R01: 10 SCCM #01: 30 SCCM #02: 100 SCCM #03: 300 SCCM #04: 1 SLM #05: 3 SLM #06: 10 SLM	MR/MG number #6.5: 22 SLM #07: 30 SLM #08: 50 SLM		MR/MG number #09: 100 SLM	MR/MG number #10: 200 SLM	MR/MG number #11: 300 SLM	MR/MG number #12: 500 SLM	Full-scale flow rate (N_2 conversion flow rate)
Valve Type	O: Normally open C: Normally close				O: Normally open C: Normally close		C: Normally close		Valve Type
Flow rate at fully closed control valve	≤ 2% F.S.				≤ 2% F.S.				Flow rate at fully closed control valve
Flow rate control range	2-100% of F.S.				2-100% of F.S.				Flow rate control range
Flow rate measuring range (SEF)	0-100% of F.S.				0-100% of F.S.				Flow rate measuring range (SEF)
Accuracy *2	±1.0% F.S.	±1.0% S.P. (Flow rate > 25% F.S.) ±0.25% F.S. (Flow rate ≤ 25% F.S.)			±1.0% S.P. (Flow rate > 35% F.S.) ±0.35% F.S. (Flow rate ≤ 35% F.S.)		±2% S.P. (flow rate > 50% F.S.) ±1% F.S. (flow rate ≤ 50% F.S.)		Accuracy *2
Operating temperature	5 to 50°C (recommended temperature range: 15 to 45°C)				5 to 50°C (recommended temperature range: 15 to 45°C)				Operating temperature
Response	≤ 1 second: over full flow rate range				≤ 1 second: over full flow rate range		≤ 2 second: over full flow rate range		Response
Linearity	≤ ±0.5% F.S.				≤ ±0.5% F.S.		±1% F.S.		Linearity
Repeatability	≤ ±0.2% F.S.				≤ ±0.2% F.S.		±0.5% F.S.		Repeatability
Operating differential pressure	50 to 300 kPa (d)	50 to 300 kPa (d) #5.5, #06: 100 to 300 kPa (d)	200 to 300 kPa (d)		100 to 300 kPa (d)	200 to 300 kPa (d)	150 to 350 kPa (d)	250 to 350 kPa (d)	Operating differential pressure
Operating differential pressure (SEF)	≤ 300 kPa (d)				≤ 300 kPa (d)		≤ 300 kPa (d)		Operating differential pressure (SEF)
MAX. Operating pressure	450 kPa(g)				450 kPa(g)				MAX. Operating pressure
Pressure resistance	1000 kPa(g)				1000 kPa(g)				Pressure resistance
Leak Integrity	≤ 5 x 10^{-12} Pa·m^3/s (He)				≤ 5 x 10^{-12} Pa·m^3/s (He)				Leak Integrity
Digital interface	DeviceNet™ Protocol				DeviceNet™ Protocol				Digital interface
Wetted materials	316L Stainless Steel (polished surface)				316L Stainless Steel (polished surface)				Wetted materials
Power supply	Conforming to ODVA standards, DC 24 V, 4.0 VA				Conforming to ODVA standards, DC 24 V, 4.0 VA		Conforming to ODVA standards,DC 24 V, 4.0 VA		Power supply
Standard Fitting *3	1/4 inch VCR equivalent Option: 1.125 inch IGS, 1.5 inch IGS		1/4 inch VCR equivalent Option: 1.125 inch IGS	1.5 inch IGS	1/2 inch VCR equivalent Option: 1. 5 inch IGS		1/2 inch VCR equivalent		Standard Fitting *3
Mounting orientation	Free				Free				Mounting orientation

*1 The gas type and full scale settings for the SEC(SEF)-Z514MGX, Z524MGX, Z524MGXN, Z534MGX, Z544MGX, Z554MGX and Z564MGX can be changed by the operator, using special software.
*2 The precision is that associated with the full-scale MR and MG number values. The flow rate precision guaranteed temperatures conform to SEMI standards. For details, please contact HORIBA STEC.
*3 IGS: Integrated Gas System
• SCCM and SLM are notations indicating the gas flow rate (mL/min, L/min, at 0°C and 101.3 kPa).