

E series solenoid valve SEF / SEC specification.

Model	SEC-(mass flow controller)	E40/ E40MK3	E50/ E50MK3	E60	E70	E80
	SEF-(mass flow meter)	E40	E50	E60	E70	E80
	Types of gas*1	Non-corrosive gases (the MK3 model can handle N ₂ , O ₂ , air, H ₂ , Ar, and He)		N ₂ , O ₂ , Air, H ₂ , Ar, C ₃ H ₈ , CH ₄ , C ₄ H ₁₀		N ₂ , O ₂ , Air, H ₂
Materials at gas contact area	SUS316L, Viton [®] , PTFE, magnetic stainless steel		SUS316L, Viton [®] , magnetic stainless steel			
Valve type	Close at power-off: C					
Standard flow rate range (N ₂ equivalent F.S.)*1	10/20/30/50/100/ 200/300/500 SCCM 1/2/3/5/10 SLM	20/30 SLM	50/100 SLM	200 SLM	300/500 SLM	
Flow rate control range (for SEC series)	2 to 100% F.S.		5 to 100% F.S.			
Flow rate control range (for SEF series)	0 to 100% F.S.					
Response speed	Less than 1 sec (T98)				Less than 2 seconds (T98)	
Accuracy	± 1% F.S.				± 2% F.S.	
Linearity	± 0.5% F.S.				± 1% F.S.	
Repeatability	± 0.2% F.S.		± 0.5% F.S.		± 1% F.S.	
Operating differential pressure (for SEC series)	10 SCCM to 5 SLM: 50 to 300 kPa (d) 10 to 30 SLM: 100 to 300 kPa (d)		100 to 300kPa (d)	200 to 350kPa (d)		
Usage pressure (for SEF series)	300 kPa (G)		350 kPa (G)			
Pressure Resistance	1 MPa (G)					
Leak Integrity	1 x 10 ⁻¹⁰ Pa·m ³ /s (He)		1 x 10 ⁻¹⁰ Pa·m ³ /s (He)	450 kPa (G) added pressure with loss of pressure less than 1% over 10 minutes		
Operating temperature	5 to 50°C (accuracy guaranteed between 15 and 35°C)		5 to 45°C (accuracy guaranteed between 15 and 35°C)			
Flow rate setting signal	SEC-E40(MK3).E50(MK3) :0.1 to 5VDC (Input impedance : more then 1MΩ)					
	SEC-E60.E70.E80 :0.25 to 5VDC (Input impedance : more then 1MΩ)					
Flow rate output signal	Analog:0 to 5VDC (Minimum load resistance 2kΩ)					
Drive power source	+15 VDC ± 5%, 50 mA	+15 VDC ± 5%, 50 mA				
	-15 VDC ± 5%, 150 mA, 3 VA	-15 VDC ± 5%, 200 mA, 3.9 VA				
Standard Fitting*2	1/4 Swagelok type		3/8 Swagelok type		1/2 Swagelok type	

*1 Please contact HORIBA STEC for information on types of gas other than those listed.

*2 Non-standard joints can also be used. Please contact HORIBA STEC for more information.

* The SEC-E40, SEC-E50, SEC-E40MK3 and SEC-E50MK3 feature an auto-zero function as well.

* Inlet pressure for the SEC-E40/50/60/E40MK3/E50MK3: maximum 300 kPa (G) or under. For the SEC-70/80: maximum

* SCCM and SLM are symbols indicating gas flow rate (mL/min, L/min at 0°C, 101.3 kPa).

* Viton[®] is registered trademark of E. I. DuPont de Nemours.