



● Standard Model Nos.

HSM12(Bushingmount type)
HSM18E·EL(Bushingmount and flange-mount)

● General Specifications

Model number	HSM12	HSM18E · EL
Current Consumption	Approx. 7mA	Single output : Approx.7mA Dual output : Approx.14mA
Independent Linearity Tolerance	$\pm 1.5\%FS(FS=90^\circ)$	Output A: $\pm 1.5\%FS(FS=90^\circ)$ Output B: $\pm 3.0\%FS(FS=90^\circ)$
Mechanical Rotating Angle	360° (Endless)	
Effective Electrical Angle	$\pm 45^\circ (90^\circ)$	
Applied Voltage	5V $\pm 10\%$ D.C.	
Load resistance	10K Ω min.	
Effective Output	Approx. 10%~Approx. 90%Vin · FS(FS=100°)	
Output Temperature Characteristics	Within $\pm 2.5\%V_{out}/FS$	
Drift at center position	Within $\pm 0.5\%V_{out}/FS$	
Operating Temperature Range	-40°C ~ +105°C	
Storage Temperature Range	-50°C ~ +105°C	
Mass	Approx. 15g	
Rotating Torque	Within 2mN·m (Within 20gf·cm)	

● Environmental Specifications

Model number	HSM12	HSM18E · EL
Thermal Shock	5 cycles -50°C ~ +105°C	
Exposure at Low Temperature	24 hours at -50°C	
Exposure at High Temperature	1,000 hours at +105°C	
Vibration	10 to 2,000Hz 196m/s ²	
Shock	980m/s ² 6ms	
Life Expectancy(shaft revolutions)	Approx. 50,000,000 shaft revolutions	
EMS Durability	50V/m(80MHz~1GHz 1KHz 80% Amplitude Modulation)	100V/m(same as on the left)
ESD Durability	$\pm 4kV$ contact discharge/ $\pm 4kV$ aerial discharge	$\pm 8kV$ contact discharge/ $\pm 15kV$ aerial discharge

(Note) Rotational Life Expectancy may differ from the specifications depending on status of use.

● Special Specifications Available.

Special effective electrical angle(Possible to meet with from $\pm 10^\circ$ to $\pm 45^\circ$ by 5° step, as requested), Special machining on the shaft, Special output(HSM18E & EL are only available - Cross, Parallel)

● Standard Dimensions

