

Sine-Cosine & Other Functions

- 5 Million Turns Life
- ±1% Conformity Tolerances (SCB50)
- 20 db log, x², 1/x...etc. (FP50)
- 500 ohms to 20k ohms Resistance Values



SCB 50



FP 50

Model SCB50 features a standard sine-cosine function with ±1% conformity tolerance. Model FP50 is available with the function samples shown below or a customer defined function curve. High precision machining and quality components provide high positioning accuracy and long life.

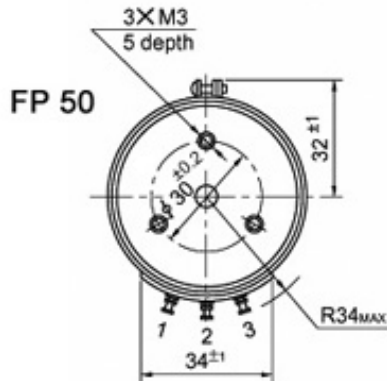
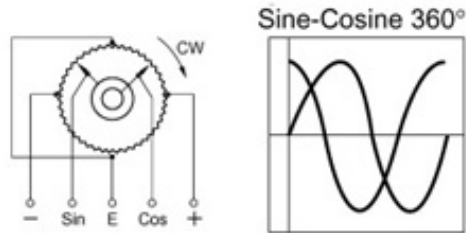
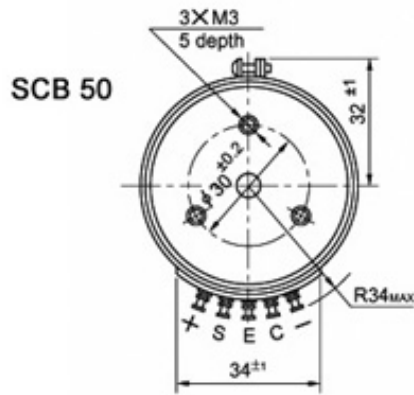
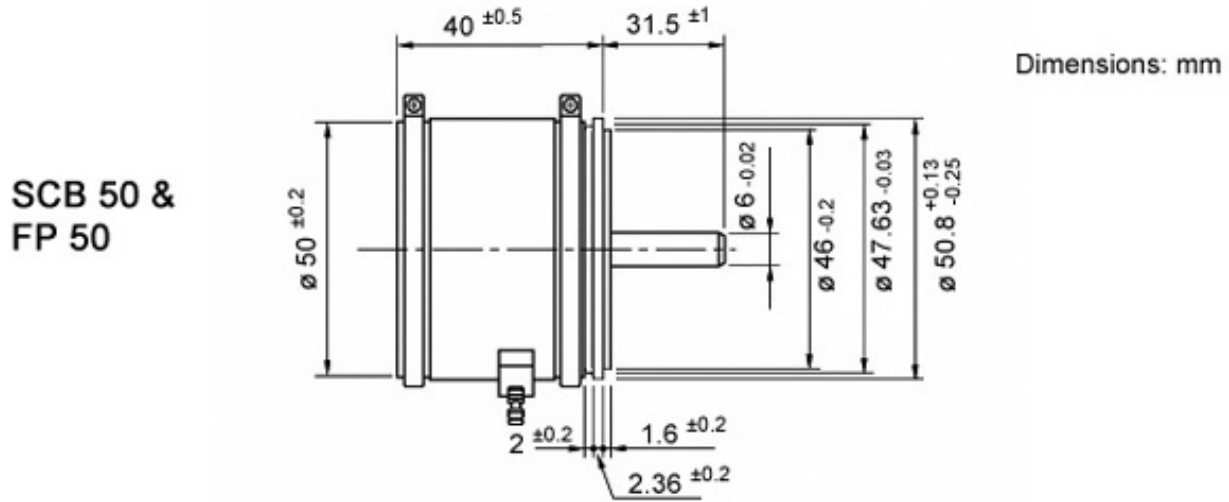
Electrical Specifications	SCB 50	FP 50
Resistance Values (ohms)	500 ~ 20K	
Resistance Tolerance (standard)	± 5%	
Resistance Tolerance (best)	± 3%	
Conformity Tolerance (standard)	± 1%	± 5%
Conformity Tolerance (best)	± 0.5%	± 1%
Electrical Angle +5°, -0°	360°	up to 300°
End Resistance	0.05%	
Insulation Resistance	1000 Mohms at 1000 VDC	
Dielectric Strength	1000 VAC, 1 minute	
Noise	<100 ohms E.N.R.	
Power @ +40°C (W)	2	
Mechanical Specifications		
Mechanical Angle	360° (continuous)	as required
Torque (Ncm)	Starting: 0.8 Operating: 0.6	
Stopper Strength (Ncm)	-	90
Max. Axial Play of Shaft (mm)	0.2	
Max. Radial Play of Shaft (mm)	0.05	
Typical Life (# of turns)	5 million	
Bearing	2 x precision ball bearings	ball bearing and rear sleeve bearing
Environmental Specifications		
Operating Temperature	-55°C to +105°C	
Vibration	15 g / 10Hz to 2,000 Hz	
Shock	50 g / 11ms	
IP Protection Grade	IP40 (IP54 optional)	
Standards	MIL-R-12934	
Materials		
Housing	Aluminum	
Servo flange	Aluminum (fixing clamps included, style SFN 1)	
Shaft	Stainless steel	
Terminals	Gold plated	

Resolution Chart

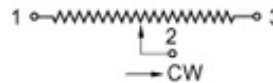
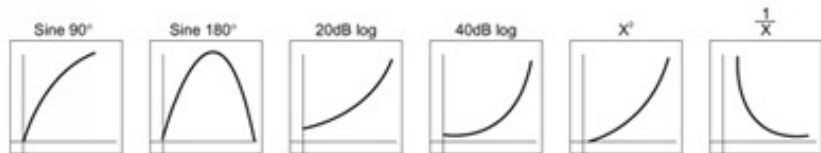
Resistance (ohms)	SCB 50			**Temp. Coefficient
	Resolution (%)	V max across element (V)	I max through element (mA)*	
500	0.100	31	63	80
1k	0.071	44	44	
2k	0.053	63	31	
5k	0.067	100	20	20
10k	0.050	141	14	
20k	0.040	200	10	

* Maximum wiper current is 30mA. ** (\pm ...ppm/K)

Dimensions (mm)



Examples of non-linear function curves



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