



SANSHENG
SENSOR



Product Selection Guide

SA50S Applications & Features

Widely used in various industrial machinery control, especially in the printing and packaging industry.

Resolution up to 6000 pulses.

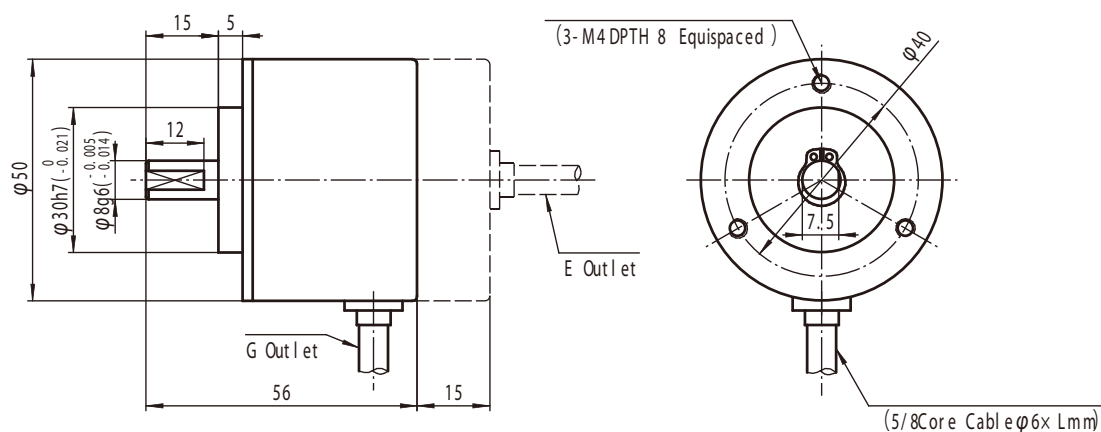
Small size, light weight and high precision.

Longer shaft length optional, suitable for various application environment.

High cost-effective performance products.



Mechanical Drawing



Electrical Specifications

[illegible]

Mechanical Specifications

Max. Speed (r/min)	Start Torque(25 ℃) (N. M)	Max. Load on Shaft (N)		Moment of Inertia (kgm ²)	Weight (kg)
		Radial	Axial		
6000	$1 * 10^{-3}$	25	20	$4 * 10^{-6}$	≈0.3

Enviromental Specifications

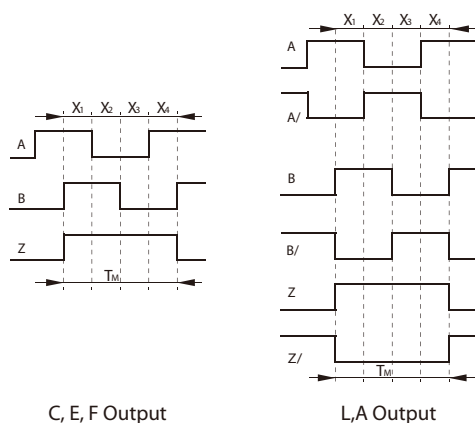
Operating Temp. (℃)	-20 ~ +85	Impact Resistance (m/s ²)	50 (3 times on x,y,z direction, each time last for 6ms)
Storage Temp. (℃)	-30 ~ +95	Anti-vibration (m/s ²)	20 (10 ~ 200Hz 2 hours on X,Y,Z direction)
Relative Humidity	35% ~ 85%RH No Condensation	Protection Class	Common IP54

Output Circuits

E(Voltage)		F(Push-pull)		C(Open Collector)	L、A(Line Driver)
5V	8- 26V	5V	8- 26V		

Note: C,F output is shorted to ground protection diode

Output Waveform



Wave Ratio : $X1 + X2 = 0.5T \pm 0.1T$ $X2 + X3 = 0.5T \pm 0.1T$

Phase Different : $Xn \geq 0.125T$ ($n=1,2,3,4$)

Absolute Angle Error : $\leq 0.2T$

Cycle Error : $\leq 0.05T$

$T = 360^\circ / N$ (N = lines count per revolution)

Width of Z signal

1、 $Tm = 1T \pm 0.5T$ $Tm = nT \pm 0.1T$ ($n \geq 2$)

The phase relation of Z signal and A,B signal is not stipulated.

2、 $Tm = 0.5T \pm 0.25T$ $Tm = 0.25T \pm 0.125T$

The rising edge of the Z-channel signal is aligned with the rising edge of the B-channel signal

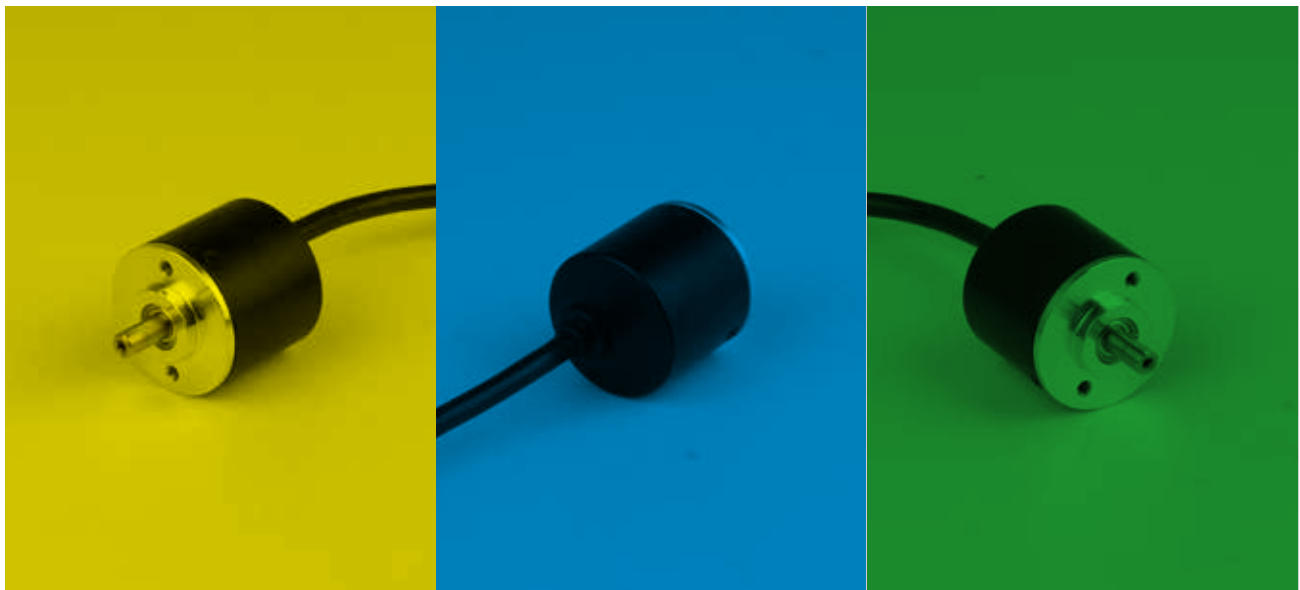
Electrical Connections

Cable Color	Red	Black	Green	Brown	White	Gray	Yellow	Orange	Shield
E (Voltage)	Vcc	0 V	A		B		Z		G
F (Push-pull)	Vcc	0 V	A		B		Z		G
C (Open Collector)	Vcc	0 V	A		B		Z		G
L、A (Line Driver)	Vcc	0 V	A	A/	B	B/	Z	Z/	G

Order Information

S Product Class	A Product Type	50 Outer Diameter	S Shaft Type	8 Shaft Diameter	G Termination
S:Common	Incremental	Φ50mm	S:Solid Shaft	Φ8mm	G:Dustproof Radial Cable J:Waterproof Radial Cable
1M Cable Length	1 Supply Voltage	C Output Type	100 Resolution (can be customized)	B Output Signal	M Index Signal
Standard 1M	1:DC5V 2:DC8-26V 3:DC10-30V	E:Voltage F:Push-Pull C:Open Collector L:Line Driver A:Wide Voltage Line Driver	30\60\100\120\127\128\150\200 250\256\300\360\400\500\512\600 640\720\800\900\960\1000\1200 1250\1440\1500\1600\1800\2000 2048\2500\2540\2560\3000\3600 4000\5000\6000	A:A phase signal B:90°phase different A、 B signal	M:Z signal

E.g: SA50S8-G1M1C-100BM



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