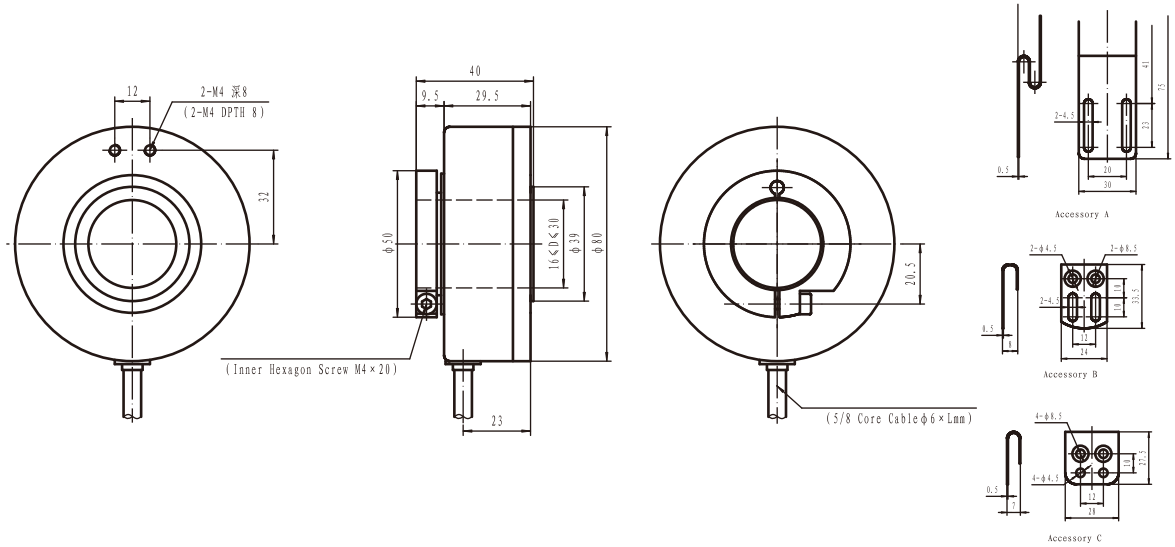
SANSHENG
SENSOR

Product Selection Guide

SA80B
Applications & Features

Ultra-thin design, saving mounting space.
Large hollow shaft from 16mm to 30mm.
Multple mounting brackets are available.
Mainly used in elevators, motors, light industrial machinery for displacement, speed measurement.
Imported optoelectronic components with high reliability and anti-interference.
Long life and wide temperature range.

Mechanical Drawing



Electrical Specifications

Output Type	Supply Voltage DC (V)	Current Consumption (mA)	Output Voltage (V)		Rise Time (ns)	Fall Time (ns)	Frequency Response (kHz)
			V_H	V_L			
E (Voltage)	5±0.25	≤80	>3.5	≤0.7	≤500	≤100	0-300
	8-26	≤120	>VCC-2.5	≤0.7	≤500	≤100	0-300
	10-30						
F (Push-pull)	5±0.25	≤80	>3.5	≤0.7	≤500	≤100	0-300
	8-26	≤120	>VCC-2.5	≤0.7	≤500	≤100	0-300
	10-30						
C (Open Collector)	5±0.25	≤60	>VCC-2.5	≤0.7	≤500	≤100	0-300
	8-26						
	10-30						
L (Line Driver)	5±0.25	≤100	>3.5	≤0.7	≤200	≤200	0-300
A (Wide Voltage Line Driver)	8-26	≤60	>VCC-2.5	≤0.7	≤500	≤100	0-300
	10-30						

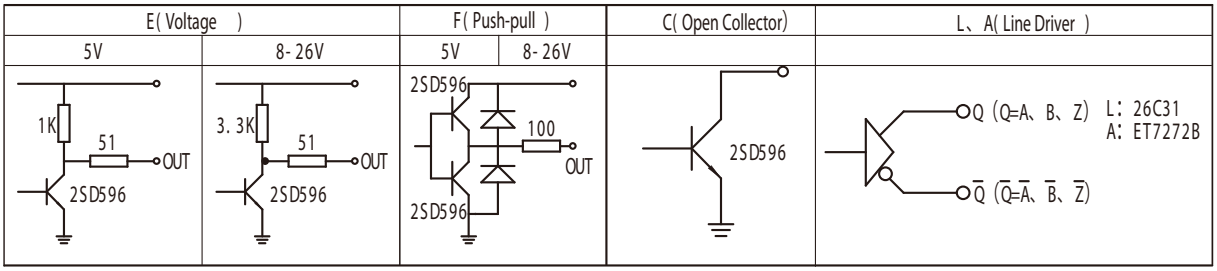
Mechanical Specifications

Max. Speed (r/min)	Start Torque(25 ℃) (N. M)	Max. Load on Shaft (N)		Moment of Inertia (kgm^2)	Weight (kg)
		Radial	Axial		
6000	$1*10^{-3}$	40	20	$4*10^{-6}$	≈0.60

Enviromental Specifications

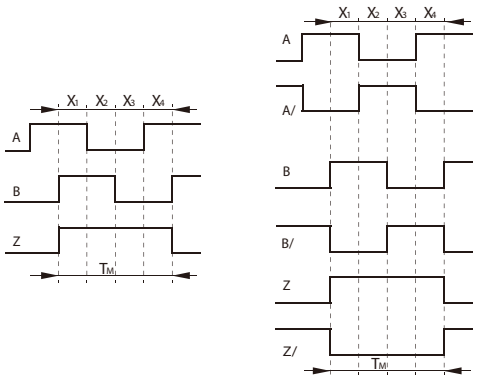
Operating Temp. (℃)	-20～+85	Impact Resistance (m/s^2)	50 (3 times on x,y,z direction, each time last for 6ms)
Storage Temp. (℃)	-30～+95	Anti-vibration (m/s^2)	20 (10～200Hz 2 hours on X,Y,Z direction)
Relative Humidity	35%～85%RH No Condensition	Protection Class	Common IP54

Output Circuits



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

Output Waveform



C, E, F Output　　L,A Output

Wave Ratio ： X1＋X2＝0.5T±0.1T　　X2+X3＝0.5T±0.1T

Phase Different ： Xn≥0.125T（n＝1,2,3,4）

Absolute Angle Error ： ≤0.2T

Cycle Error ： ≤0.05 T

T＝360° / N（N= lines count per revolution）

Width of Z signal

1、Tm＝1T±0. 5T　Tm＝nT± 0.1 T（n≥ 2）

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

2、Tm=0.5T±0.25T　Tm=0.25T± 0.125T

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

Electrical Connections

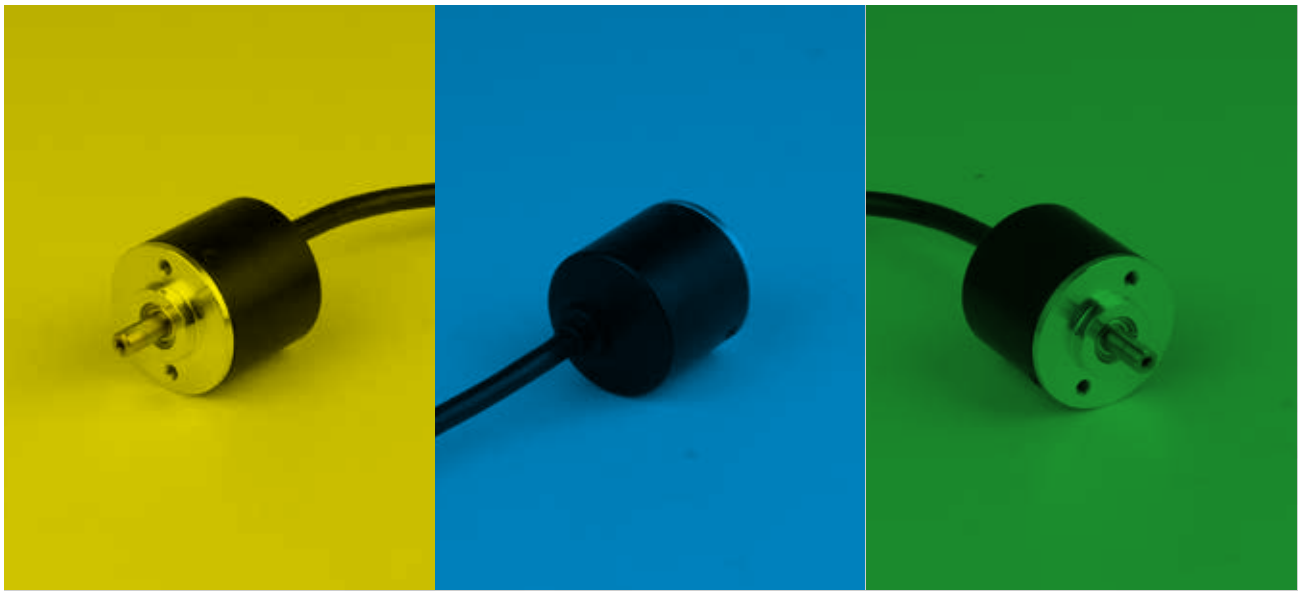
Cable Color	Red	Black	Green	Brown	White	Gray	Yellow	Orange	Shield
E（Voltage） F（Push-pull） C（Open Collector）	Vcc	0 V	A		B		Z		G
L、A（Line Driver）	Vcc	0 V	A	A/	B	B/	Z	Z/	G

Order Information

S Product Class	A Product Type	80 Outer Diameter	B Shaft Type	30 Shaft Diameter	A Accessory	G Termination
S:Common	Incremental	Φ80mm	B:Clamping Hollow Shaft	Φ16-30mm	A,B,C type	G:Dustproof Radial Cable J:Waterproof Radial Cable 15N:15 pin computer connector

1M Cable Length	2 Supply Voltage	C Output Type	500 Resolution (can be customized)	B Output Signal	M Index Signal
Standard 1M 0.3M-10M	1:DC5V 2:DC8-26V 3:DC10-30V	E:Voltage F:Push-Pull C:Open Collector L:Line Driver A:Wide Voltage Line Driver	120\200\360\500\512\600\720 1000\1024\1200\2048\2500\4096 5400	A: A phase signal B: 90° phase different A、B signals output	M:Z signal

E.g：SA80B30A-G1M1L-500BM



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