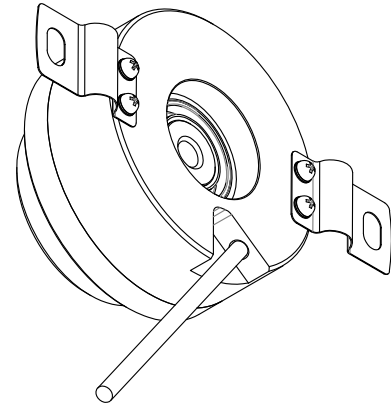


K80

Specifications 1/4

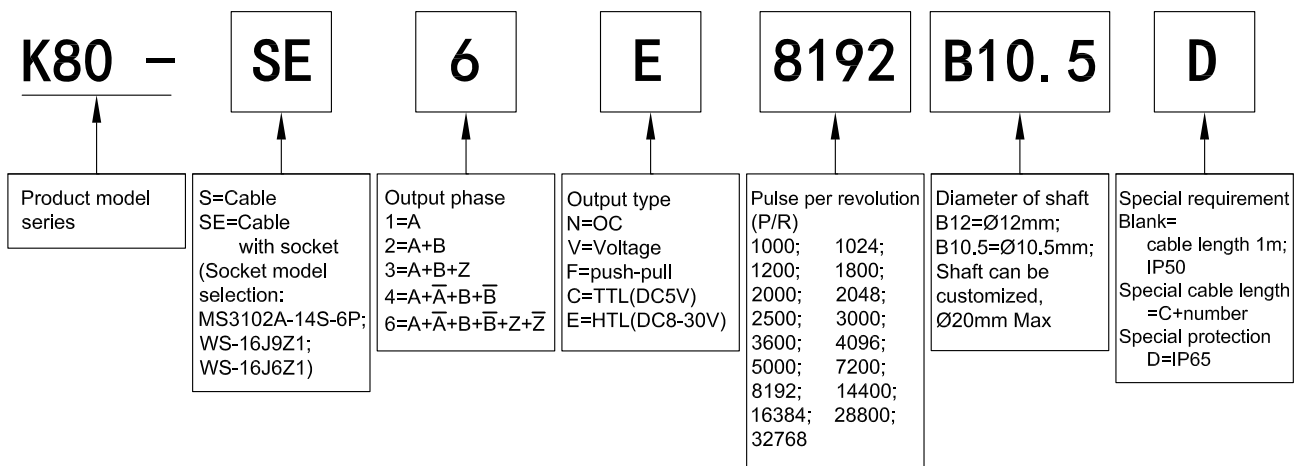
Incremental Type (Hollow shaft, Blind hole)

- Feature: Sturdy and durable, Alternative output mode, long service life, etc
- Application: Automation control like elevator, CNC machines, packing machinery, etc
- External dimensions: external diameter $\varnothing 80\text{mm}$, thickness 50mm, shaft $\varnothing 12\text{mm}; \varnothing 10.5\text{mm}$
- Resolution: up to 32768P/R
- Supply voltage: DC5V; DC8-30V
- Protection: IP50; IP65
- Cable length: 1000mm
- Weight: about 600g



Model Guide

- Model form (filled required parameters in the box as following)
- Must choose supply voltage: DC5V; DC8-30V
- SE cable with socket, need to choose the socket model: MS3102A-14S-6P; WS-16J9Z1; WS-16J6Z1 (pls refer to the specification 4/4)



K80 Specifications 2/4

Output Mode

Output type	Output circuit	Output wave form	Connection
OC		<p> $a.b.c.d = \frac{T}{4} \pm \frac{T}{8}$ Phase A is ahead of B by $\frac{T}{4} \pm \frac{T}{8}$, rotate direction CW (View from shaft end, direction is clockwise rotation) CW direction \rightarrow </p>	0=GND 1=red=DC5V; DC8-30V 2=black=OV 3=white=A 4=green=B 5=yellow=Z
Push-Pull		<p> $a.b.c.d = \frac{T}{4} \pm \frac{T}{8}$ Phase A is ahead of B by $\frac{T}{4} \pm \frac{T}{8}$, rotate direction CW (View from shaft end, direction is clockwise rotation) CW direction \rightarrow </p>	
Voltage		<p> $a.b.c.d = \frac{T}{4} \pm \frac{T}{8}$ Phase A is ahead of B by $\frac{T}{4} \pm \frac{T}{8}$, rotate direction CW (View from shaft end, direction is clockwise rotation) CW direction \rightarrow </p>	
TTL HTL		<p> $a.b.c.d = \frac{T}{4} \pm \frac{T}{8}$ Phase A is ahead of B by $\frac{T}{4} \pm \frac{T}{8}$, rotate direction CW (View from shaft end, direction is clockwise rotation) CW direction \rightarrow </p>	

K80

Specifications 3/4

■ Electrical Characteristics

Parameter Item	Output type	OC		Voltage		Push-pull		TTL		HTL			
Supply voltage		DC+5V±5%; DC8V-30V±5%						DC+5V±5%		DC8-30V±5%			
Consumption current		100mA Max											
Allowable ripple		≤3%rms											
Top response frequency		100KHz				200KHz				300KHz			
Output volume	Output current	Input	≤30mA		Load resistance 2.2K	≤30mA		≤±20mA		≤±50mA			
		Output	—			≤10mA							
	Output voltage	"H"	—		—		≥[(Supply voltage)-2.5V]		≥2.5V		≥V _{CC} -3 V _{DC}		
		"L"	≤0.4V		≤0.7V(less than 20mA)		≤0.4V(30mA)		≤0.5V		≤1V V _{DC}		
	Load voltage	≤DC30V		—				—					
Rise & Fall time		Less than 2us(cable length: 2m)				Less than 1us (Cable length: 2m)				≤100ns			
Insulation strength		AC500V 60s											
Insulation resistance		10MΩ											
Mark to space ratio		45% to 55%											
Phase shift between A & B		90°±10° (low speed,frequency ≤1000Hz)											
		90°±20° (high speed,frequency >1000Hz)											
Origin motion		Low level available		High level available		Low level available		—					
GND		not connect to encoder											

■ Mechanical Characteristics

Shaft	∅10.5mm;∅12mmShaft can be customized, ∅20mm Max
Starting torque	Less than 20mN·m
Inertia moment	Less than 25×10 ⁻⁶ kg·m ²
Shaft load	Radial 50N; Axial 30N
Slew speed	≤2000 rpm; IP65≤1500 rpm
Bearing Life	1.5X10 ⁹ revs at rated load(100000hrs at 2500RPM)
Shell	Die cast aluminum
Weight	about 600g

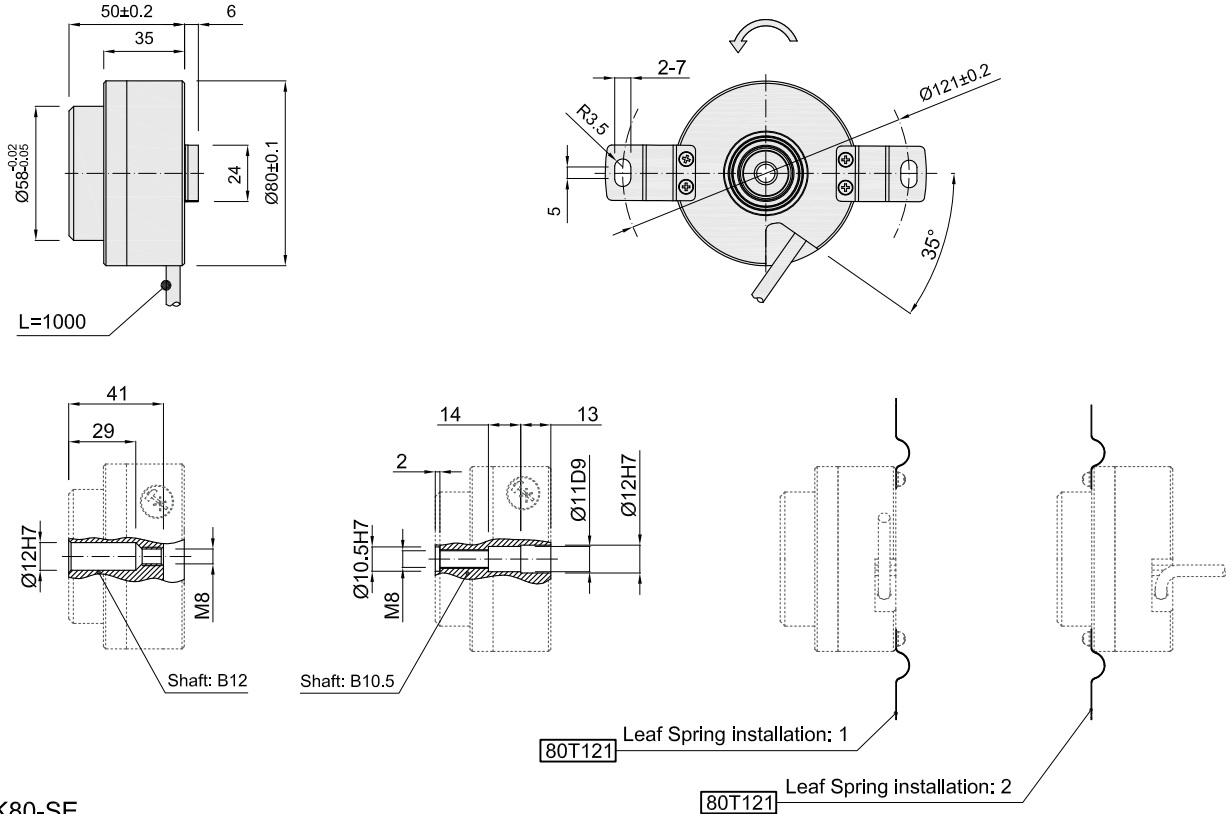
■ Environmental Specifications

Environmental temperature	Operating: -20~+85°C(repeatable winding cable: -10°C); Storage: -25~+90°C
Environmental humidity	Operating and storage: 35~85%RH(noncondensing)
Vibration(endure)	Amplitude 1.52mm,5~55Hz,2h for X,Y,Z direction individually
Shock(endure)	1000m/s ² 11ms three times for X,Y,Z direction individually
Protection	IP50; IP65

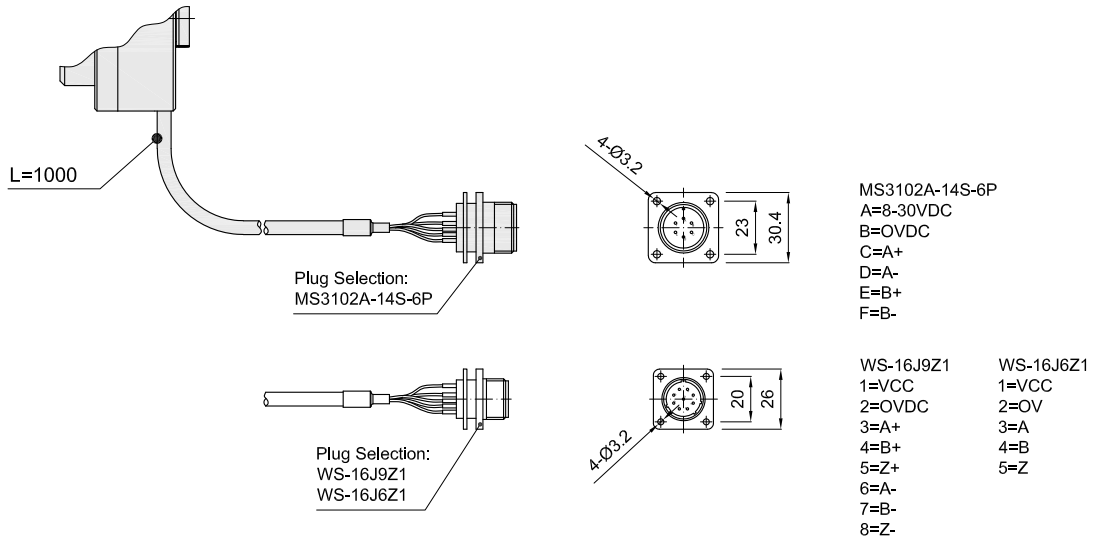
K80 Specifications 4/4

■ Basic Dimensions

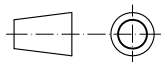
● K80-S



● K80-SE



Unit: mm



= Rotate direction of signal output shaft

= Leaf Spring

About vibration

Vibration act on encoder always cause wrong pulse ,so we should pay attention to working place. More pulse per revolution , narrower groovy spacing of grating ,more effect to encoder by vibration,when rev is low or stop , vibration act on shaft or main body would cause grating vibrating ,so encoder might make wrong pulse.