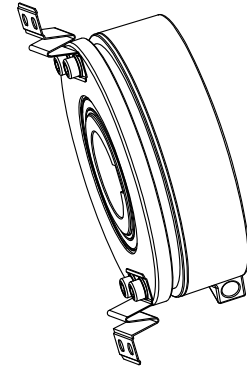


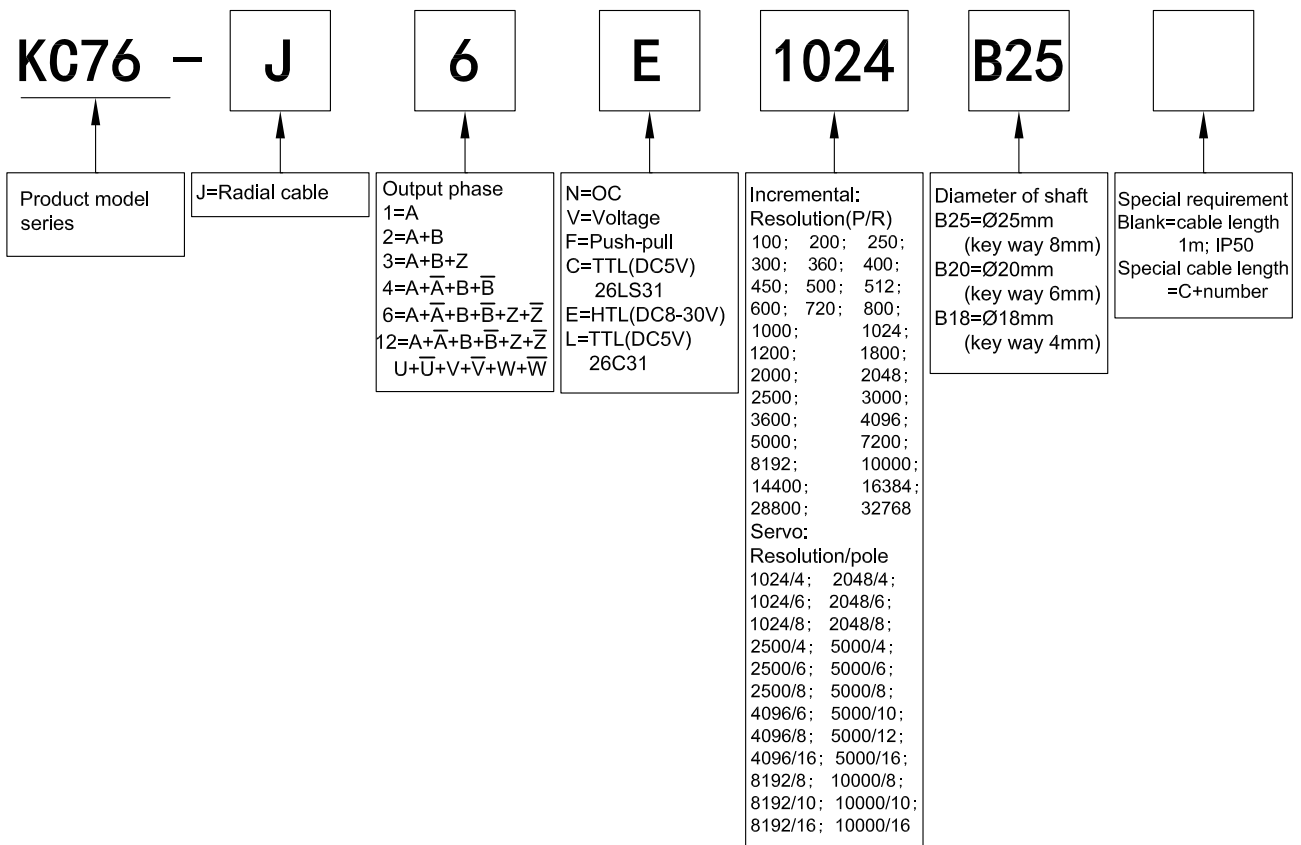
KC76 Specifications 1/4

- Incremental Type (Hollow shaft with key way,through hole)
 - Feature: shaft with key way for assembling, sturdy and durable, optional various output mode, long service life, etc
 - Application: servo motor, elevator field, packing machinery, production line, etc, for automation control
 - External dimensions: external diameter $\phi 76.5\text{mm}$, thickness 28mm, diameter of shaft $\phi 18$; $\phi 20$; $\phi 25\text{mm}$ optionally
 - Resolution: up to 32768P/R
 - Supply voltage: DC5V; DC8-30V
 - Protection: IP50
 - Cable length: 1000mm
 - Weight: about 360g



Model Guide

- Model form (filled required parameters in the box as following)
- Must choose supply voltage: DC5V; DC8-30V



KC76

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		<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=shielding=GND 1=red=DC5V; DC8-30V 2=black=OV 3=white=A 4=green=B 5=yellow=Z 6=white/black= \bar{A} 7=green/black= \bar{B} 8=yellow/black= \bar{Z}
HTL		<p> $\frac{T}{4} \pm \frac{T}{8}$ </p>	

KC76

Specifications 3/4

● Output Mode

Output type	Output circuit	Output wave form	Connection
TTL		<p> $a, b, c, d = \frac{T}{4} \pm \frac{T}{8}$ $e = T \pm \frac{T}{2}$ f: center of phase Z to rise point of phase U, that is $\pm 0.3^\circ$ </p> <p>CCW direction \rightarrow (Viewed from shaft end when installing)</p> <p> A, B, Z, U, V, W $\bar{A}, \bar{B}, \bar{Z}, \bar{U}, \bar{V}, \bar{W}$ </p>	0=shielding=GND 1=red=DC5V 2=black=OV 3=white=A 4=green=B 5=yellow=Z 6=white/black= \bar{A} 7=green/black= \bar{B} 8=yellow/black= \bar{Z} 9=blue=U 10=gray=V 11=pink=W 12=blue/black= \bar{U} 13=gray/black= \bar{V} 14=pink/black= \bar{W}

■ Electrical Characteristics

Parameter Item	Output type		OC	Voltage	Push-pull	TTL(26LS31)	TTL(26C31)	HTL(HD7)
	Input	Output						
Supply voltage			DC+5V \pm 5%; DC8V-30V \pm 5%			DC+5V \pm 5%		DC8-30V \pm 5%
Consumption current			100mA Max			120mA Max		
Allowable ripple			$\leq 3\%$ rms					
Top response frequency			100KHz			200KHz		300KHz
Output volume	Output current	Input	≤ 30 mA	Load resistance 2.2K	≤ 30 mA	$\leq \pm 20$ mA		$\leq \pm 50$ mA
		Output	—		≤ 10 mA			
	Output voltage	"H"	—	—	$\geq [(\text{Supply voltage}) - 2.5V]$	$\geq 2.5V$		$\geq V_{CC} - 3 V_{DC}$
		"L"	$\leq 0.4V$	$\leq 0.7V$ (less than 20mA)	$\leq 0.4V$ (30mA)	$\leq 0.5V$		$\leq 1V V_{DC}$
Load voltage			$\leq DC30V$	—	—			
Rise & Fall time			Less than 2us(cable length: 2m)			Less than 1us(Cable length: 2m)		≤ 100 ns
Insulation strength			AC500V 60s					
Insulation resistance			10M Ω					
Mark to space ratio			45% to 55%					
Phase shift between A & B			90 $^\circ \pm 10^\circ$ (low speed, frequency ≤ 1000 Hz)					
			90 $^\circ \pm 20^\circ$ (high speed, frequency > 1000 Hz)					
Origin motion	Low level available	High level available	Low level available	—				
GND			not connect to encoder					

KC76 Specifications 4/4

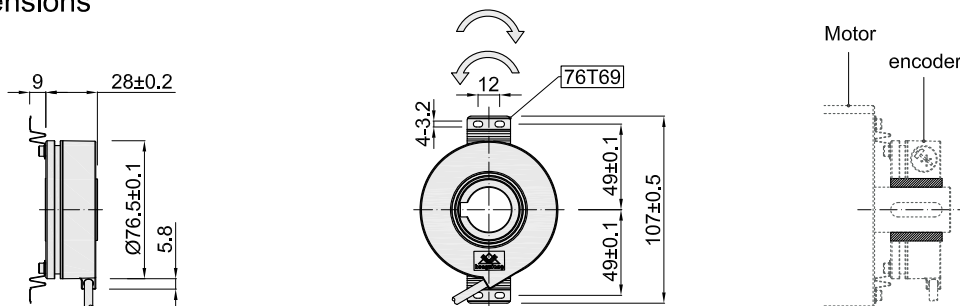
Mechanical Characteristics

Shaft	Ø18mm; Ø20mm; Ø25mm(stainless steel)
Starting torque	Less than 80×10^{-3} N·m
Inertia moment	Less than 100×10^{-6} kg·m ²
Shaft load	Radial 70N; Axial 50N
Slew speed	≤3000 rpm
Shell	Die cast aluminum
Weight	about 360g

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 0.75mm,5~55Hz,2h for X,Y,Z direction individually
Shock(endure)	1960m/s ² ,11ms three times for X,Y,Z direction individually
Protection	IP50

Basic Dimensions



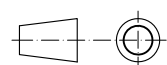
Assembling requirement

Inner hexagon screw M3*8 with flat gasket and spring ring is recommended to use

B	Ø25 ^{H7}	Ø20 ^{H7}	Ø18 ^{H7}
b	8 ^{+0.098} _{+0.040}	6 ^{+0.078} _{+0.030}	4 ^{+0.078} _{+0.030}
h	15.8 ^{+0.2} _{+0.0}	12.8 ^{+0.1} _{+0.0}	10.8 ^{+0.1} _{+0.0}
B*	Ø25 _{g6}	Ø20 _{g6}	Ø18 _{g6}
b*	8 ^{H9}	6 ^{H9}	4 ^{H9}
h*	8.5 ^{-0.2} _{-0.0}	6.5 ^{-0.1} _{-0.0}	6.5 ^{-0.1} _{-0.0}

B* Motor shaft diameter tolerance

Unit: mm



76T69 = Leaf Spring

= Rotate direction of servo signal output shaft

= Rotate direction of incremental signal output shaft

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 .