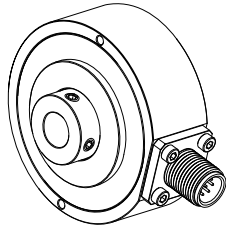


# KN58

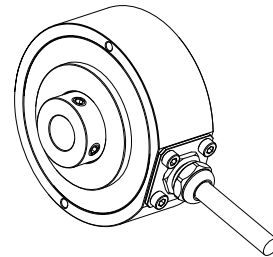
## Specifications 1/5

### ■ Incremental Type (Through shaft)

- Features: This product is a compact photoelectric induction encoder, and the connection is made by both socket and cable, which makes the installation simple and reliable.
- Application scope: Servo motor, industrial automation and other fields.
- External dimensions: external diameter  $\varnothing 58\text{mm}$ , thickness 26mm, diameter of shaft  $\varnothing 14\text{mm}$ (Max)
- Resolution: up to 10000P/R
- Supply voltage: DC5V; DC8-30V
- Socket: C=Radial connector 8P;  
T=Radial cable
- Weight: about 200g



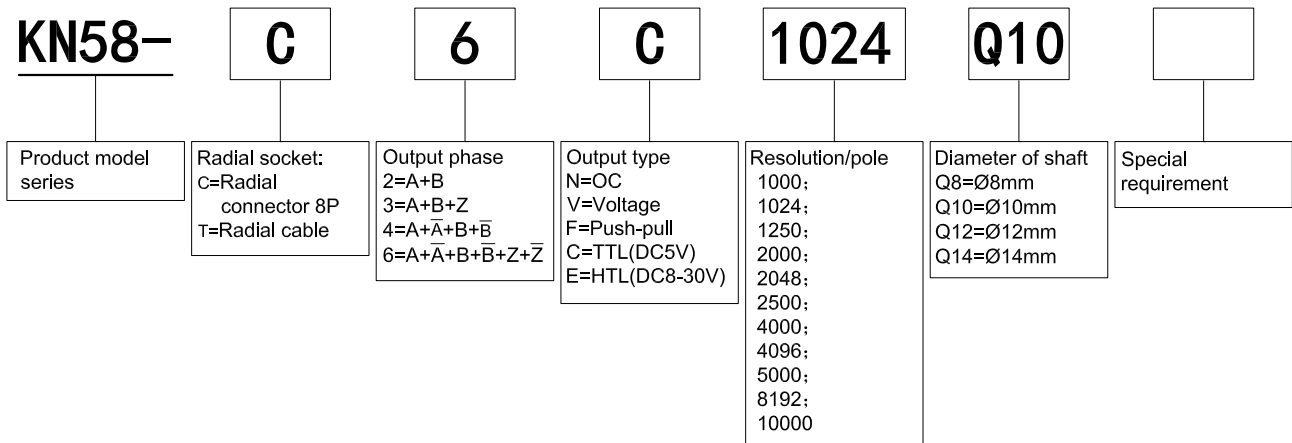
KN58-C



KN58-T

### ■ Model Guide

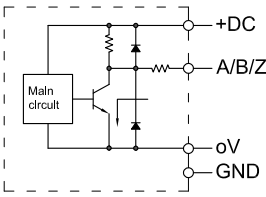
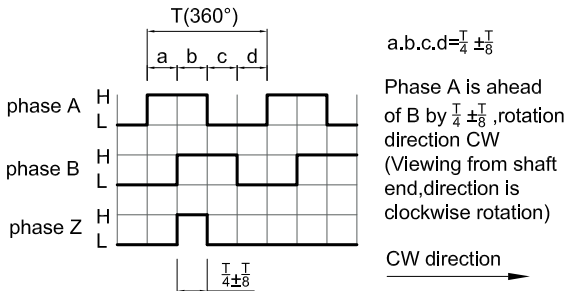
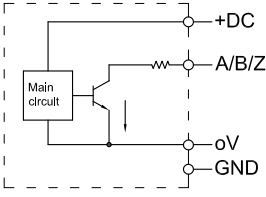
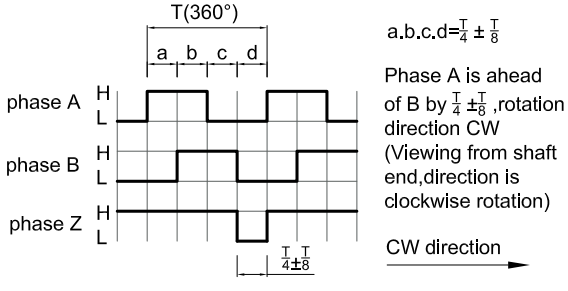
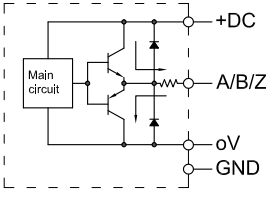
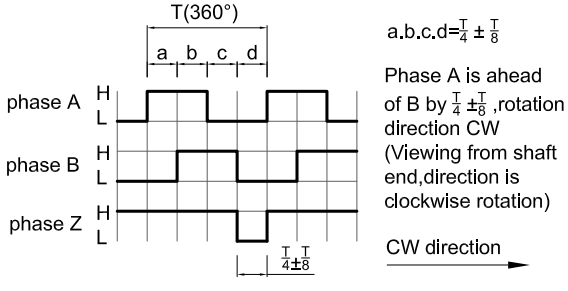
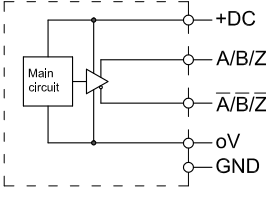
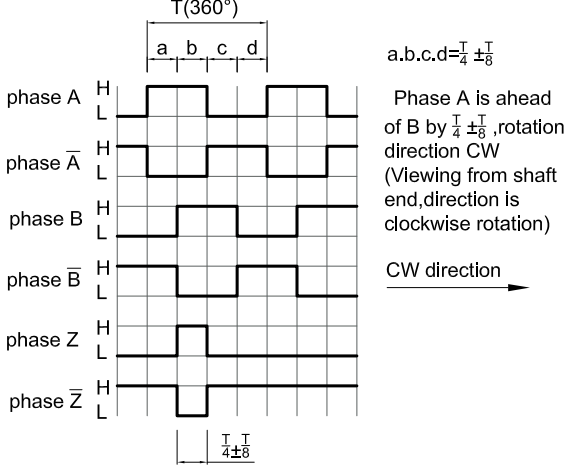
- Model form (filled required parameters in the box as following)



# KN58

## Specifications 2/5

### Output Mode

Output type	Output circuit	Output wave form
Voltage		 <p> <math>a.b.c.d = \frac{T}{4} \pm \frac{T}{8}</math>                      Phase A is ahead of B by <math>\frac{T}{4} \pm \frac{T}{8}</math>, rotation direction CW (Viewing from shaft end, direction is clockwise rotation)                      CW direction <math>\rightarrow</math> </p>
OC (NPN)		 <p> <math>a.b.c.d = \frac{T}{4} \pm \frac{T}{8}</math>                      Phase A is ahead of B by <math>\frac{T}{4} \pm \frac{T}{8}</math>, rotation direction CW (Viewing from shaft end, direction is clockwise rotation)                      CW direction <math>\rightarrow</math> </p>
Push-Pull		 <p> <math>a.b.c.d = \frac{T}{4} \pm \frac{T}{8}</math>                      Phase A is ahead of B by <math>\frac{T}{4} \pm \frac{T}{8}</math>, rotation direction CW (Viewing from shaft end, direction is clockwise rotation)                      CW direction <math>\rightarrow</math> </p>
TTL HTL		 <p> <math>a.b.c.d = \frac{T}{4} \pm \frac{T}{8}</math>                      Phase A is ahead of B by <math>\frac{T}{4} \pm \frac{T}{8}</math>, rotation direction CW (Viewing from shaft end, direction is clockwise rotation)                      CW direction <math>\rightarrow</math> </p>

### ■ Electrical Characteristics

Parameter		Output type	OC	Voltage	Push-pull	TTL	HTL
Item							
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		300KHz	500KHz	800KHz
Output capacity	Output current	Input	≤30mA	Load resistance 2.2K	≤30mA	≤±20mA	≤±50mA
		Output	—		≤10mA		
	Output voltage	"H"	—	—	≥[(Supply voltage)-2.5V]	≥2.5V	≥V <sub>CC</sub> -3 V <sub>DC</sub>
		"L"	≤0.4V	≤0.7V(less than 20mA)	≤0.4V(30mA)	≤0.5V	≤1V V <sub>DC</sub>
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° ( frequency in low speed )				
			90°±20° ( frequency in high speed )				
Origin motion			Low level available	High level available	Low level available	—	
GND			not connect to encoder				

### ■ Mechanical Characteristics

Shaft	Ø8mm; Ø10mm; Ø12mm; Ø14mm(stainless steel)
Starting torque	Less than $9.8 \times 10^{-3}$ N·m
Inertia moment	Less than $6.5 \times 10^{-6}$ kg·m <sup>2</sup>
Shaft load	Radial 40N; Axial 20N
Slew speed	≤5000 rpm
Bearing Life	$1.5 \times 10^9$ revs at rated load(100000hrs at 2500RPM)
Shell	Aluminium alloy
Weight	About 200g

### ■ Environmental Specifications

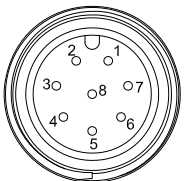
Environmental temperature	Operating: -20~+90°C(repeatable winding cable: -10°C); Storage: -25~+100°C
Environmental humidity	Operating and storage: 35~85%RH(noncondensing)
Vibration(endure)	Amplitude 0.75mm,5~55Hz,2h for X,Y,Z direction individually
Shock(endure)	490m/s <sup>2</sup> 11ms three times for X,Y,Z direction individually
Protection	IP65

# KN58

## Specifications 4/5

### ■ Connection

#### ● 8-Pin Radial Socket Table 1

Pin Assignments	Socket Pin No.	Function
	Pin 1	OV
	Pin 2	DC
	Pin 3	A
	Pin 4	B
	Pin 5	Z
	Pin 6	$\bar{A}$
	Pin 7	$\bar{B}$
	Pin 8	$\bar{Z}$

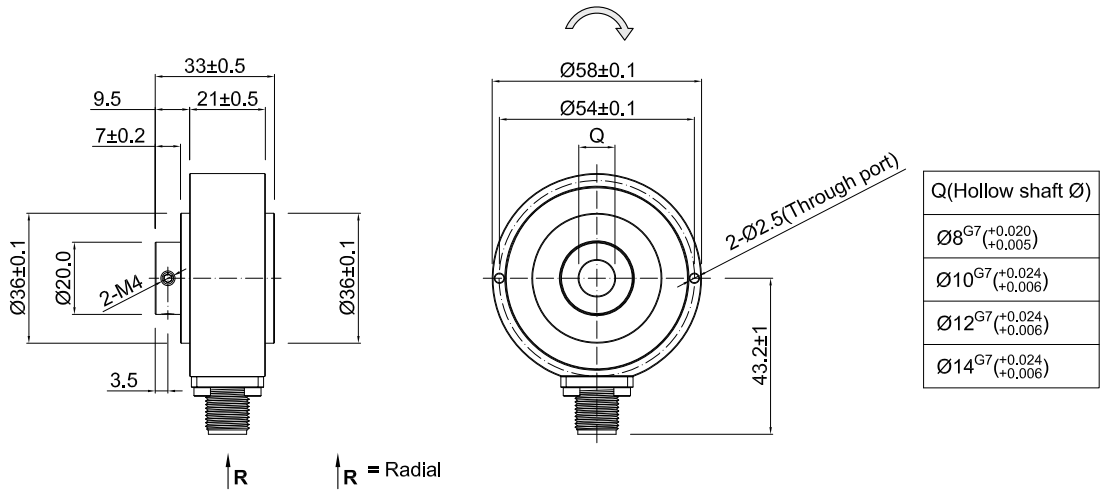
#### ● Radial cable Table 2

Color	Black	Red	White	Green	Yellow	White/Black	Green/Black	Yellow/Black
Function	OV	+DC	A	B	Z	$\bar{A}$	$\bar{B}$	$\bar{Z}$

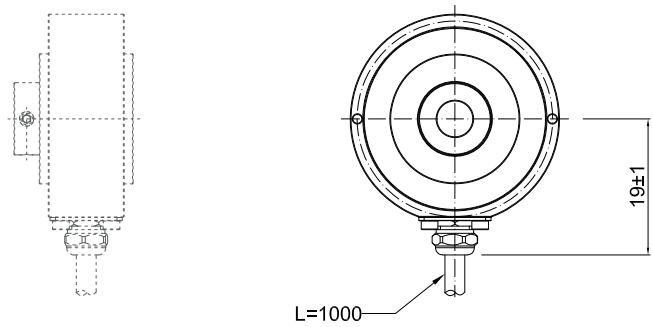
# KN58 Specifications 5/5

## Basic Dimensions

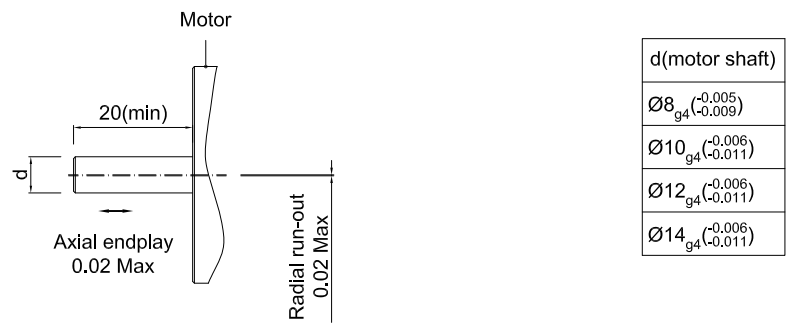
- KN58-C



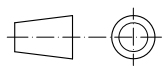
- KN58-T



## Install requirements



Unit: mm



= Rotate direction of signal output shaft