INCREMENTAL
HOLLOW SHAFT TYPE

KH88 Series

■Features : Elevator, Parking system, Industrial motor
Easy to be attached, Customized design,
Prompt delivery

ROTARY ENCODER

Model

INCREMENTAL
HOLLOW SHAFT TYPE
Outer Diameter Ø88

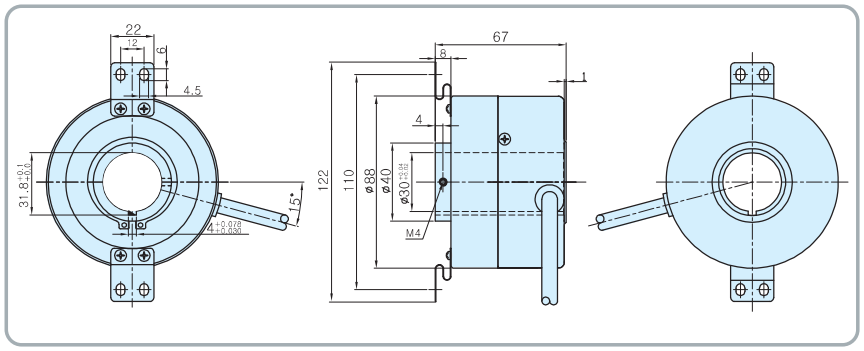
Shaft Size
30 : Ø30

KH88 - 30C - □□□□ - □□ - □

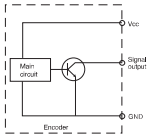
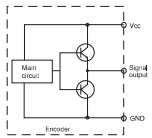
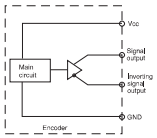
Resolution(P/R)	Output Signal	Output Form	Cable Length
0512 1024	B : A, B Z : A, B, Z V : A, $\overline{A}$, B, $\overline{B}$, Z, $\overline{Z}$	O : Open Collector C : Complemental L : Line Driver	1 : 1[M] 2 : 2[M] 3 : 3[M] 5 : 5[M] 10 : 10[M]

Note) The sepc of power may be different depending on the type of output and be sure to check the electric spec.

External Dimension



Output Circuit

Output	Open Collector	Complemental	Line Driver
Circuit			

Electrical Spec.

Output type	Open Collector	Complemental	Line Driver
Power Supply	DC +15[V] Ripplep-p:less than 5%	DC +15[V] Ripplep-p:less than 5%	DC +5[V], 5~24[V] Ripplep-p:less than 5%
Consuming Current (In case of no load)	70mA Max	150mA Max	150mA Max
Maximum Response Frequency	150 KHz		
Output voltage	Less than V_L 0.5[V]/More than V_H 2.5[V](In case of inputting +5[V]), /More than V_H 10[V](In case of inputting +15[V])		
Output current	Less than 20mA	Less than 10mA	Less than 20mA
Rising, decline time	Less than 3μs	Less than 1μs	Less than 0.1μs(5[V]), Less than 1μs(5~24[V])
Common conditions	In case that the cable length of output side is 1[M] and load resistance is less than 1[kΩ]		

Mechanical Spec.

Starting Torque	800gf - cm Max
Maximum number of revolution	3000 rpm
Bearing lifetime	20,000[hr(In case of rotating by 3000rpm)
Allowable Shaft Load	Radial : 5.0kgMax Axial : 2.5kgMax
Position deflection of allowable shaft	Radial : Less than 0.05 mm Axial : Less than 0.2mm
Connection Table	4P(AWG26) Shield CABLE
weight	600g

Rigid Spec.

Operating Temp. Range	-10°C~ +70°C (No freezing)
Preserving temp	-20°C~ +85°C
Using humidity	35% ~ +85% RH
Preserving Humidity	30% ~ +90% RH
Internal Vibratio	5G
Internal Shock	50G
Degree of Protection	IP 50

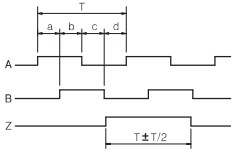
Output Phase Shift

CW ➡ Clockwise viewed from shaft end

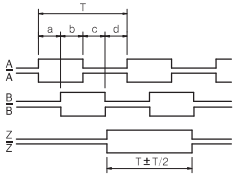
a + b, c + d = T/2 ± T/10

a, b, c, d = T/4 ± T/10

Open Collector, Complemental



Line Driver



Connection Table

Cable's Color / Output Form	Output Signal: Open Collector Complemental	Output Signal: Line Driver
Red	Vcc	Vcc
Black	GND	GND
Green	A Sig	A Sig
Blue	A Sig GND	$\overline{Z}$ Sig
White	B Sig	Z Sig
Pink	B Sig GND	B Sig
Yellow	-	$\overline{A}$ Sig
Orenge	-	$\overline{B}$ Sig
Shield	CASE Shield	CASE Shield