

- Features : Various resolution, 10~6000 P/R(24 Class)  
Wideranging power voltage  
Customized design, Prompt delivery



### Model

INCREMENTAL  
SHAFT TYPE

Outer Diameter: Ø48 8 : Ø8

**KS48 - 8**

#### Resolution(P/R)

- 0010 0030 0048 0050 0100
- 0125 0200 0250 0256 0300
- 0360 0400 0500 0512 0600
- 1000 1024 2000 2048 2500
- 3000 3600 5000 6000

#### Output Signal

- B : A, B
- Z : A, B, Z
- U : A, A, B, B
- V : A, A, B, B, Z, Z

#### Output Form

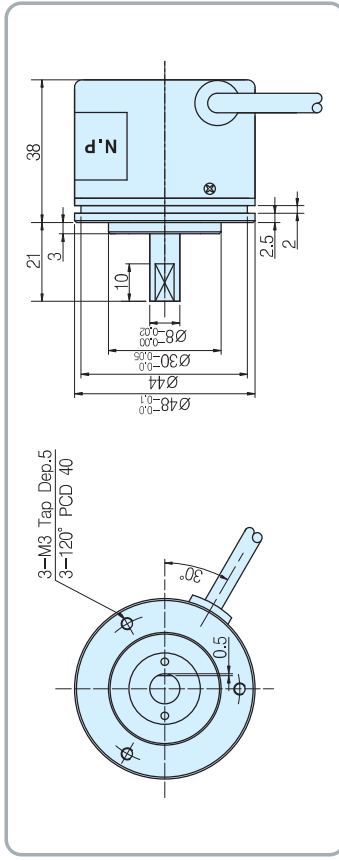
- O : Open Collector
- V : Voltage Output
- C : Complementary
- T : Totem Pole
- L : Line Driver

#### Cable Length

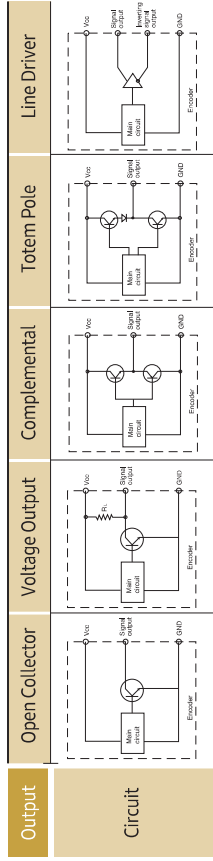
- 1 : 1[M]
- 2 : 2[M]
- 3 : 3[M]
- 5 : 5[M]
- 10 : 10[M]

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

### External Dimension



### Output Circuit



### Electrical Spec.

Output type	Open Collector	Voltage Output	Complemental	Totem Pole	Line Driver
Power Supply	DC +5[V] ~ +24[V] Ripple: p-less than 5%	DC +5[V] ~ +24[V] Ripple: p-less than 5%	DC +15[V] ~ +24[V] Ripple: p-less than 5%	DC +5[V] ~ 24[V] Ripple: p-less than 5%	DC +5[V] , 5 ~ +24[V] Ripple: p-less than 5%
Consuming Current (In case of no load)	70mA Max	70mA Max	150mA Max	150mA Max	150mA Max
Maximum Response Frequency	150 KHz (10 ~ 2048 P/R) / 300 KHz (2500 ~ 6000 P/R)				
Output voltage	Less than V (0.5V) (More than 1/25V) (In case of inputting +5V), (More than 1/10V) (More than 1/8V) (In case of inputting +24V)				
Output current	Less than 20mA	Less than 20mA	Less than 10mA	Less than 10mA	Less than 20mA
Rising, decline time	Less than 3µs	Less than 3µs	Less than 1µs	Less than 1µs	Less than 1µs (Less than 0.5µs: 100)
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	80gf ~ cm Max
Maximum number of revolution	6000 rpm
Bearing lifetime	27,000 [hr] (In case of rotating by 5000 rpm)
Allowable Shaft Load	Radial : 2.5kg Max Axial : 1.3kg Max
Position deflection of allowable shaft	Radial : Less than 0.05 mm Axial : Less than 0.2mm
Connection Table	4PIAW(G2.6) Shield CABLE
weight	20g

### Rigid Spec.

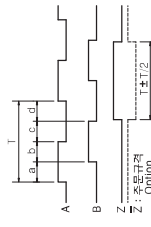
Operating Temp. Range	-10°C ~ +70°C (No freezing)
Preserving temp	-20°C ~ +85°C
Using humidity	35% ~ +85% RH
Preserving Humidity	30% ~ +90% RH
Internal Vibration	5G
Internal Shock	100G
Degree of Protection	IP 50

### Output Phase Shift

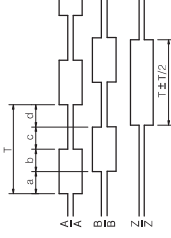
CW → Clockwise viewed from shaft end  
 $a + b, c + d = T/2 \pm T/10$   
 $a, b, c, d = T/4 \pm T/10$



### Open Collector, Voltage Output Complemental, Totem Pole



### Line Driver



### Connection Table

Cable's Color	Output Signal
Open Collector Voltage Output Complemental Totem Pole	Line Driver
Red	Vcc
Black	GND
Green	A Sig
Blue	$\bar{A}$ Sig
White	B Sig
Pink	$\bar{B}$ Sig
Yellow	Z Sig
Orange	Z Sig
Shield	CASE Shield