

SHAFT TYPE

NOC3-SP Model



Mechanism for The Shaft Load Resistance(IP65)

- Standard Low Cost Versions of 500~5000P/R

Model

NOC3 - SP - **2M** - - **200 - 00E**

Style

Resolution

Signals

Cable Length

200 : 2000 mm

Output Mode

Shaft Diameter — 8 : ϕ 8 mm

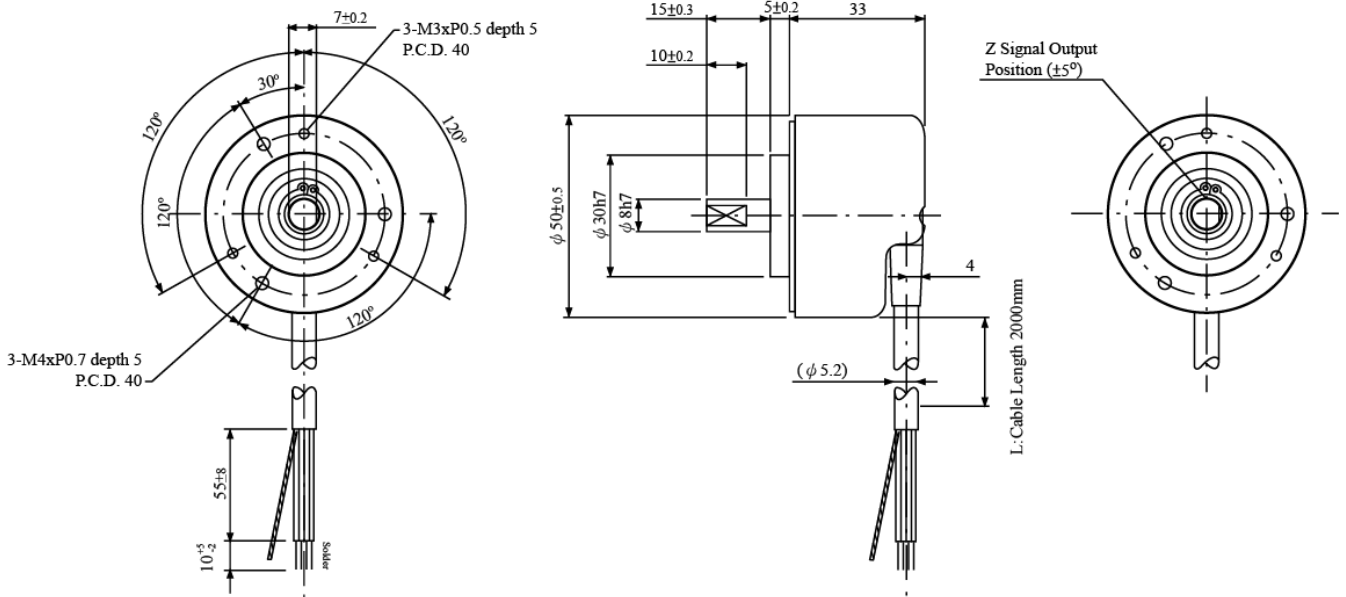
S: Shaft
P: IP65

500	500 P/R
1000	1000 P/R
2000	2000 P/R
5000	5000 P/R

- C : Open Collector
- T : Complementary
- D : Line-Driver

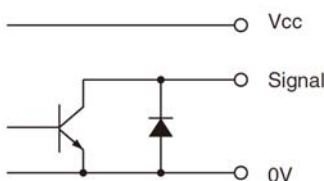
2M : AB90 Phase Difference + Zero Signal

External Dimension

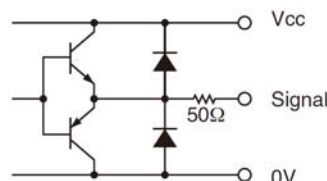


Circuit of Output Signal

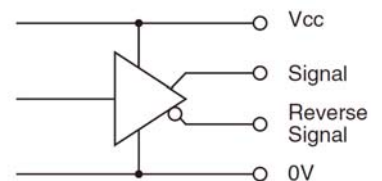
2MC



2MT



2MD

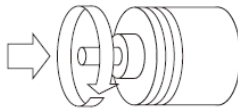


Electrical Spec.

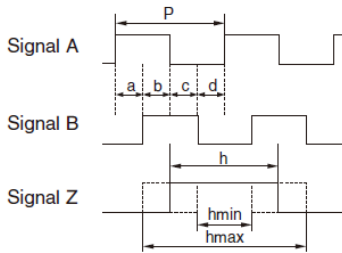
Type		2MC	2MT	2MD
Supply Voltage		DC4.5~30V		DC4.5~5.5V
Current consumption		30mA Max.	60mA Max.	30mA Max.
Output Voltage	H	-	Vcc -0.7 or more	2.5V or more
	L	0.5V or less	0.7V or less	0.5V or less
Output Current		40mA Max.	600mA Max.	20mA Max.
Rise & Fall Time		1us	200ns	100ns
Frequency Response	500P/R	120KHz		
	>1000P/R	240KHz		

Wave Form.

CW → Rotating Toward Clockwise Viewed from an Arrow



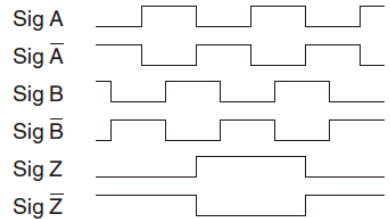
Rising point of A-Signal is always at one point while Z-Signal is at H-Level in CW.



$$P = \frac{1}{1\text{Resolution}}$$

$$a, b, c, d = \frac{P}{4} \pm \frac{P}{8} \quad \frac{P}{4} \leq h \leq \frac{3P}{4}$$

Wave Ratio (Duty); 50 ± 25 (%)



Electrical Connections

2MC 2MT	Color	Description
	Red	Vcc
	Black	0V common
	Blue	Signal A
	White	Signal B
	Yellow	Signal Z
	Shield	NC

2MD	Color	Description	Color	Description
	Red	Vcc	White	Signal B
	Black	0V common	Gray	Signal B-bar
	Green	Signal A	Yellow	Signal Z
	Blue	Signal A-bar	Orange	Signal Z-bar
	Shield	NC		

Mechanical Spec.

Starting Torque	9.8x10 ⁻³ N · m Max.	
Angular Acceleration	1x10 ⁵ rad/s ²	
Shaft Loading	Thrust axial	49 N
	Radial	78.4 N
Moment of Inertia	8x10 ⁻⁷ Kg · m ²	
Maximum RPM	5000 RPM	
Net Weight	250g	

Environmental Spec.

Operating Temperature	-10~85°C
Storage Temperature	-30~+85°C
Humidity	RH 85% or less
Vibration	10~55Hz/1.5mm 2hr
Shock	490 m/s ² 11ms X,Y,Z each 3 times
Degree of Protection	IP65