

SHAFT TYPE

NOC-SP Model



Mechanism for The Shaft Load Resistance (IP65)

- Standard Low Cost Versions of 10~2500 P/R and 5000 P/R, and Also The 10000 P/R Version for High Accurate Application.

Model

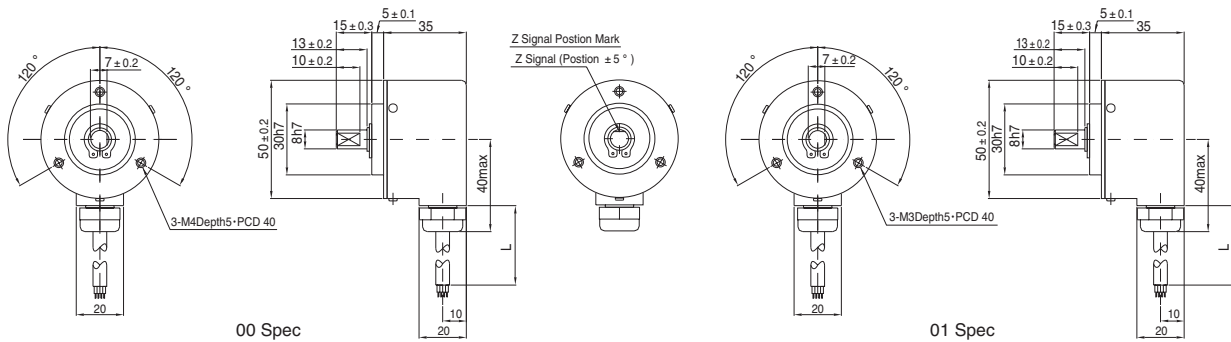
NOC-SP - **2 M** - - -

Style	Resolution		Output Mode	Outer diameter shaft	Cable Length	Signals
	10P/R	600				
10	10P/R	600	8 : 8	050 : 500mm (Standard)	00: PCD40 3-M4 Depth 5	
20	20P/R	1000	9525 : 9.525	100 : 1000mm		
30	30P/R	1024	10 : 10 : Option	300 : 3000mm	01: PCD40 3-M3 Depth 5	
40	40P/R	1250	No Indication : Voltage Output		No Indication : Other than D output	
50	50P/R	1800	C : Open Collector Output		No Indication : D output with LS	
60	60P/R	2000	HC : Open Collector Output / High Voltage		C : D output with C-MOS	
100	100P/R	2048	HCP : PNP Mode Open Collector Output / High Voltage			
200	200P/R	2500	HT : Push-Pull Output / High Voltage			
250	250P/R	3600	D : Line Driver Output Standard C-MOS			
300	300P/R	4096	WT : Push-Pull Output / Wide Voltage			
360	360P/R	5000				
500	500P/R	1000				

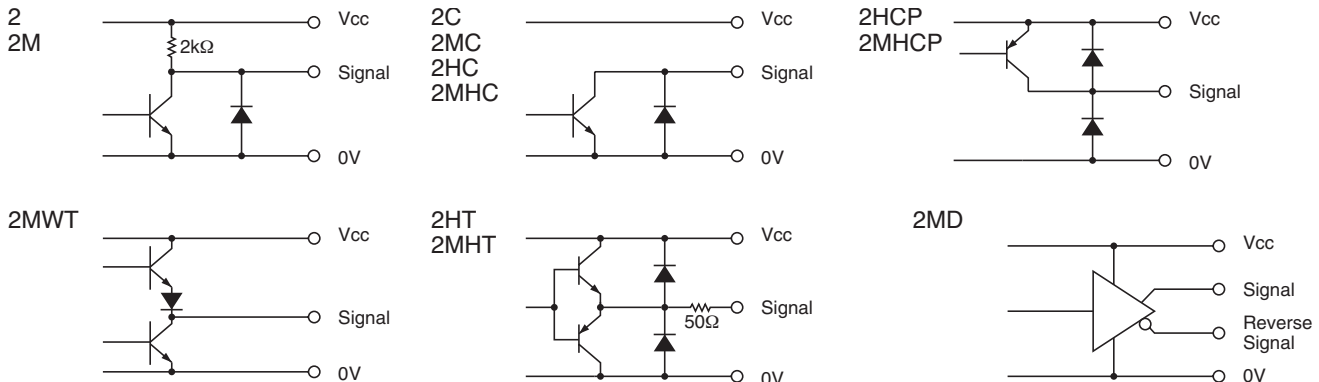
10000 P/R(Line Driver Only)

2M : AB90° Phase Difference + Zero Signal

External Dimension



Circuit of Output Signal



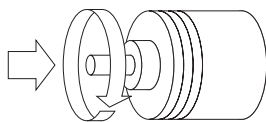
Electrical Spec.

※1) at Maximum Output Current ※2) Maximum Source Current

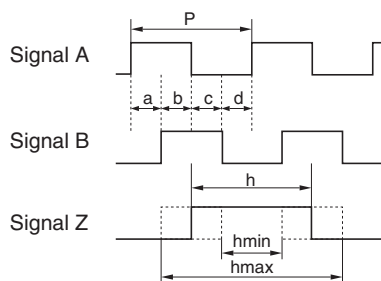
TYPE		2 • 2M	2C•2MC	2HC•2MHC	2HCP•2MHCP	2HT•2MHT	2MD	2MWT
Supply Voltage		DC4.5 ~ 13.2 V			DC10.8 ~ 26.4 V		DC4.5~5.5V (C-MOS)	DC 4.75~30V
Requirement		90 mA Max	70 mA Max		100 mA Max	90 mA Max	70 mA Max (C-MOS)	60 mA Max
Output Voltage	“H”	Within -1 Power Volt	—————		Within -1 ² Power Volt	Within -3 Power Volt	2.5 V or More	Within -2.5 Power Volt
	“L” ※1	0.5 V Max			—————	3 V Max	0.5 V Max	0.4 V Max
Maximum Output Current		20 mA MAX				40 mA MAX	20 mA MAX	30 mA MAX
Rise & Fall Time		1 μs Max					200 ns Max	3 μs Max
Maximum Frequency Response		200 kHz			50 kHz	200 kHz(~5000P/R) 1 MHz (10000P/R)		100 kHz
Withstanding Voltage of Output Tr.		—————	50 V MAX.			—————		

Wave Form.

CW → Rotating Toward Clockwise Viewed from an Arrow



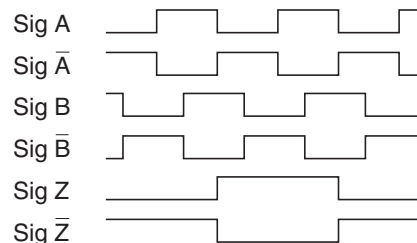
Rising point of A-Signal is always at one point while Z-Signal is at H-Level in CW.



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

$$a, b, c, d = \frac{P}{4} \pm \frac{P}{8} \quad \frac{P}{2} \leq h \leq \frac{3P}{2}$$

Wave Ratio (Duty); 50 ± 25 (%)



Electrical Connections

		Color of Lead Wire	Description
2	2MHC	Red	Power Source
2M	2HCP	Black	0V Common
2C	2MHCP	Green or Blue	Signal A
2MC	2HT	White	Signal B
2HC	2MHT	Yellow	Signal Z
		Shielding Braid	NC

2MD	Color of Lead Wire	Description	Color of Lead Wire	Description
	Red	Power Source	White	Signal B
	Black	0V Common	Gray	Signal B
	Green	Signal A	Yellow	Signal Z
	Blue	Signal A	Orange	Signal Z
	Shielding Braid	NC		

Mechanical Spec.

Starting Torque		9.8×10 ⁻³ N • m Max
Angular Acceleration		1×10 ⁵ rad/s ²
Shaft Loading	Thrust axial	49N
	Radial	78.4N
Moment of Inertia		3×10 ⁻⁶ kg • m ²
Maximum RPM		Maximum : 5000r/min Continuous : 3000r/min
Net Weight		250g Max

Environmental Spec.

Operating Temperature	-10°C ~ +70°C
Storage Temperature	-30°C ~ +85°C
Humidity	RH 85% Max No Condensation
Vibration	10~55 Hz / 1.5mm 2 h
Shock	980m/s ² , 11ms X, Y, Z Each 3 times
Degree of Protection	IP65