

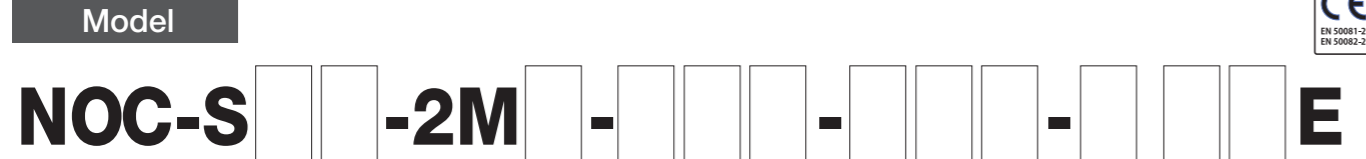
SHAFT TYPE

NOC-S Model



Standard Model of 50mm Diameter Encoder

- Standard Low Cost Versions of 10~5000 P/R.
- NOC2-S: Dedicated 2 signal(500 P/R and 1000 P/R).



Resolution

10	10P/R	600	600P/R
20	20P/R	1000	1000P/R
30	30P/R	1024	1024P/R
40	40P/R	1250	1250P/R
50	50P/R	1800	1800P/R
60	60P/R	2000	2000P/R
100	100P/R	2048	2048P/R
200	200P/R	2500	2500P/R
250	250P/R	3600	3600P/R
300	300P/R	4096	4096P/R
360	360P/R	5000	5000P/R
500	500P/R		

Output Mode

- No Indication : Voltage Output
- C : Open Collector Output
- HC : Open Collector Output / High Voltage
- HCP : PNP Mode Open Collector Output / High Voltage
- HT : Push-Pull Output / High Voltage
- D : Line Driver Output Standard C-MOS
- WT : Push-Pull Output / Wide Voltage

Complying with RoHS

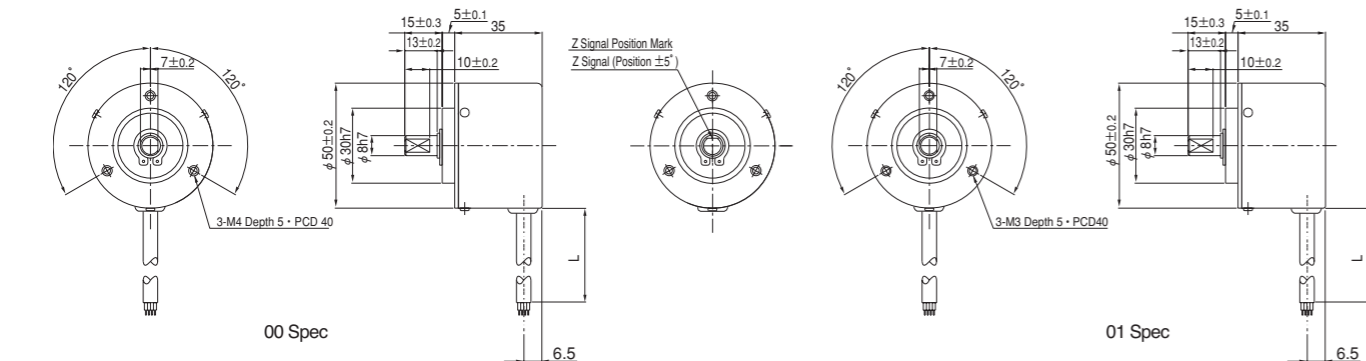
- 00 : M4 3-M4 Depth5
- 01 : M3 3-M3 Depth5

Output Mode

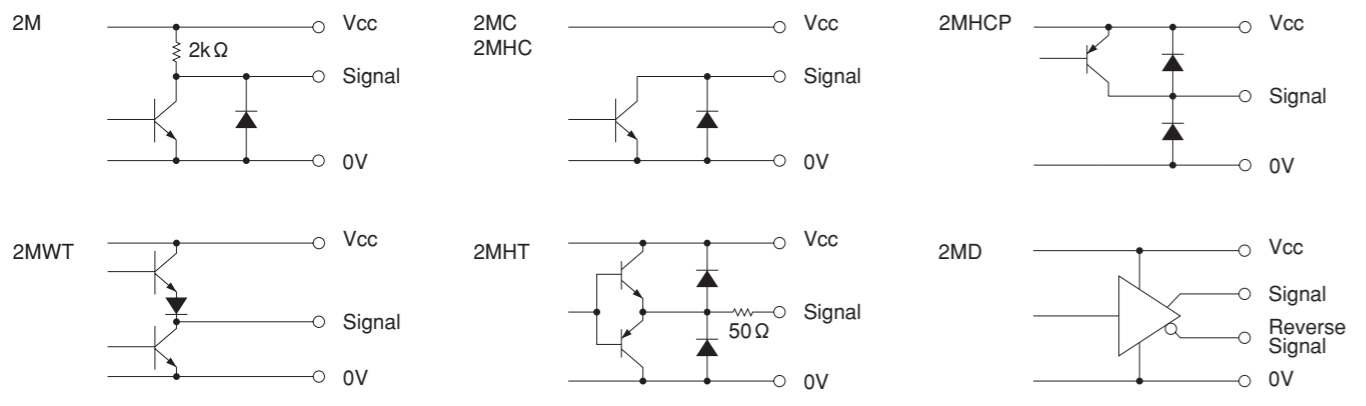
- No Indication: Other than D output
- No Indication: D output with LS
- C : D output with C-MOS

Signals 2M : AB90° Phase Difference + Index Signal

External Dimension



Output Circuit



Electrical Spec

TYPE	2M		2MC		2MHC		2MHCP		2MHT		2MD		2MWT	
	DC4.5~13.2 V				DC10.8 ~ 26.4 V				DC4.5~5.5V (C-MOS)		DC 4.75~30V			
Power Supply(Vcc)	DC4.5~13.2 V				DC10.8 ~ 26.4 V				DC4.5~5.5V (C-MOS)		DC 4.75~30V			
Current Consumption	90 mA Max		70 mA Max		100 mA Max		90 mA Max		70 mA Max (C-MOS)		60 mA Max			
Output Voltage	"H"		Vcc-1V Min		Vcc-1V Min		Vcc-3V Min		2.5 V Min		Vcc-2.5V Min			
	"L" ※1		0.5 V Max		3 V Max		0.5 V Max		0.4 V Max					
Maximum Sink Current	20 mA				40 mA		20 mA		30 mA					
Rise & Fall Time	1 μs Max								200 ns Max		3 μs Max			
Maximum Frequency Response	200 kHz				50 kHz		200 kHz		100 kHz					
Withstanding Voltage of Output Tr.	50 V Max													

Wave Form

CW → Rotating Toward Clockwise Viewed from an Arrow

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

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

Wave Ratio (Duty); 50 ± 25 (%)

Electrical Connections

Model	Color	Signal	Color	Signal
2M	Red	Power Supply(Vcc)	White	Signal B
2MC	Black	0V	Gray	Signal B
2MHC	Green or Blue	Signal A	Yellow	Signal Z
2MHCP	White	Signal B	Orange	Signal Z
2MHT	Yellow	Signal Z		
2MWT	Shield	NC		

Mechanical Spec

Starting Torque	9.8×10 ⁻⁴ N · m Max
Angular Acceleration	1×10 ⁵ rad/s ²
Shaft Loading	Thrust: 49N
	Radial: 78.4N
Moment of Inertia	3×10 ⁻⁶ kg · m ²
Maximum Permissible Speed	5000min ⁻¹
Net Weight	200g 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 X,Y,Z Each 2h
Shock	980m/s ² , 11ms X, Y, Z Each 3 times
Ingress Protection	IP50