

SHAFT TYPE

NOC-SP Model



Heavy Duty Model 50mm Diameter Encoder (IP65)

•Standard Versions of 10~10000P/R for High Accurate Application.



Model NOC-SP -2M - E

Style
S: Shaft
P: Dust-Proof & Water-Proof

Resolution	10	20	30	40	50	60	100	200	250	300	360	500
	10P/R	20P/R	30P/R	40P/R	50P/R	60P/R	100P/R	200P/R	250P/R	300P/R	360P/R	500P/R
	600	1000	1024	1250	1800	2000	2048	2500	3600	4096	5000	10000
	600P/R	1000P/R	1024P/R	1250P/R	1800P/R	2000P/R	2048P/R	2500P/R	3600P/R	4096P/R	5000P/R	10000P/R

*10000 P/R(Line Driver Only)

Outer diameter shaft
8 : φ8
*(9525 : φ9.525)
*(10 : φ10)
* Option

Cable Length
050 : 500mm (Standard)
100 : 1000mm
300 : 3000mm

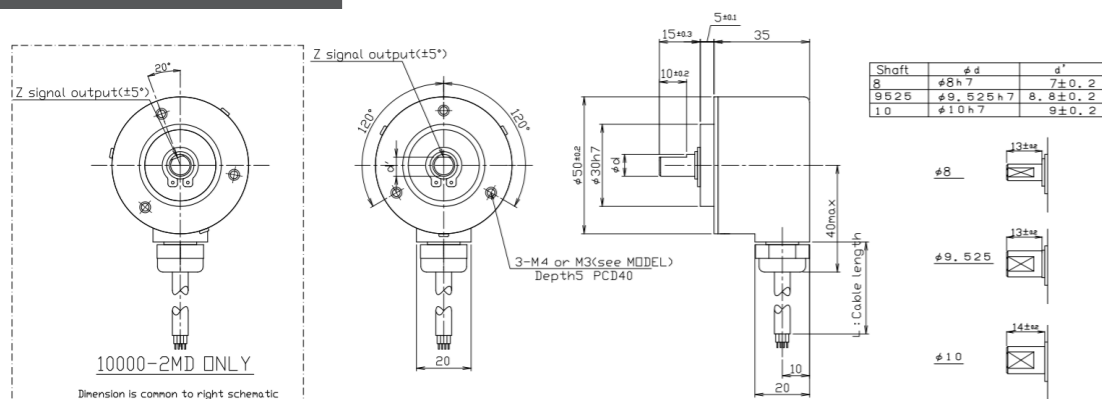
Complying with RoHS
00 : PCD40 3-M4 Depth 5
01 : PCD40 3-M3 Depth 5

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

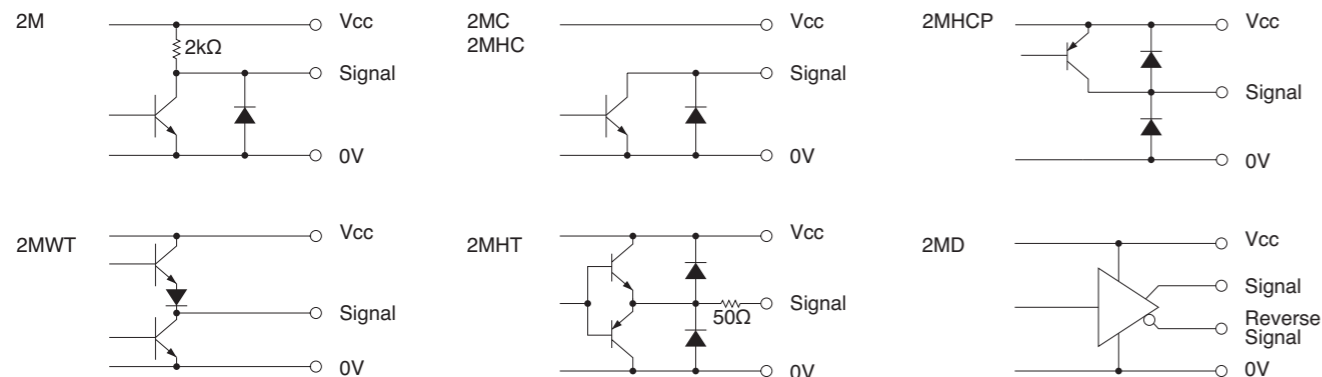
Signals 2M : AB90° Phase Difference + Index Signal
C : D output with LS
C : D output with C-MOS

ROTARY-ENCODER

External Dimension



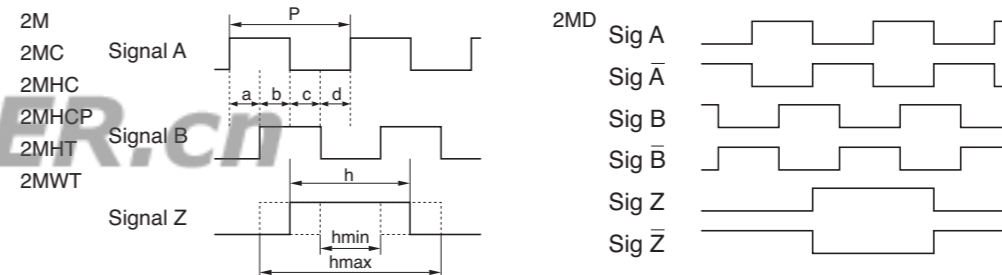
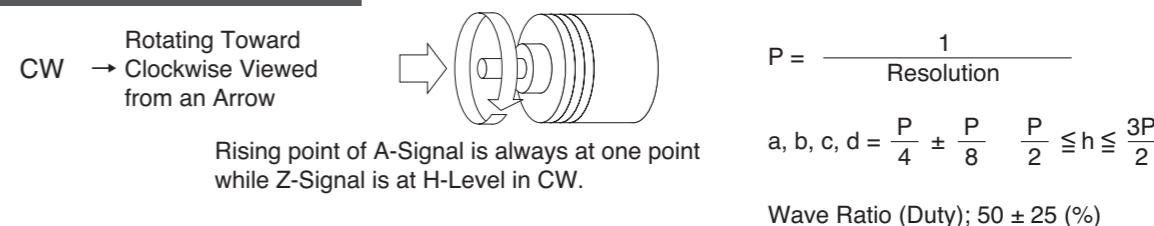
Output Circuit



Electrical Spec

TYPE	*1) at Maximum Sink Current				*2) Maximum Source Current		
	2M	2MC	2MHC	2MHCP	2MHT	2MD	2MWT
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(~5000P/R) 1 MHz (10000P/R)		100 kHz
Withstanding Voltage of Output Tr.	50 V Max						

Wave Form



Electrical Connections

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

2MD	Color	Signal	Color	Signal
	Red	Power Supply(Vcc)	White	Signal B
	Black	0V	Gray	Signal B
	Green	Signal A	Yellow	Signal Z
	Blue	Signal A	Orange	Signal Z
	Shield	NC		

Mechanical Spec

Starting Torque	9.8X10 ⁻³ N · m Max
Angular Acceleration	1X10 ⁵ rad/s ²
Shaft Loading	Thrust 49N
	Radial 78.4N
Moment of Inertia	3X10 ⁻⁶ kg · m ²
Maximum Permissible Speed	Instantaneous: 5000min ⁻¹ Continuous : 3000min ⁻¹
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 X, Y, Z Each 2h
Shock	980m/s ² , 11ms X, Y, Z Each 3 times
Ingress Protection	IP65