

# SHAFT TYPE

# OPN<sub>Model</sub>



## Heavy Duty Model

- Heavy-Duty Type.
- Easy Mounting with Flange Attached.

### Model

**OPN - [ ] [ ] - 2M [ ] - [ ] - 0 0 0 - 0 0**

Resolution

002	20P/R	10	1000P/R
004	40P/R	1024	1024P/R
005	50P/R	1250	1250P/R
006	60P/R	18	1800P/R
01	100P/R	20	2000P/R
02	200P/R	2048	2048P/R
03	300P/R	25	2500P/R
036	360P/R	36	3600P/R
05	500P/R	4096	4096P/R
06	600P/R	5000	5000P/R

Output Mode

Flange Style  
 No Indication : No Flange  
 F : With Flange

No Indication : Voltage Output

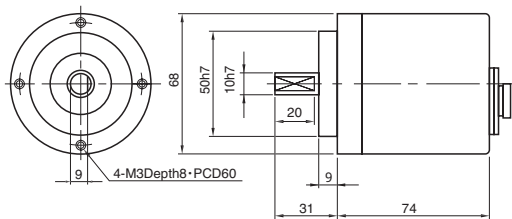
C : Open Collector Output

HC : Open Collector Output / High Voltage

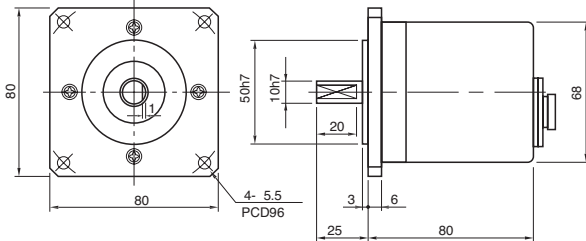
Signals — AB90° Phase Difference + Zero Signal

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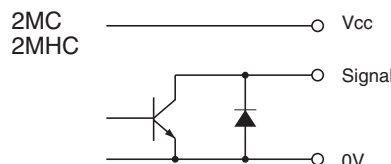
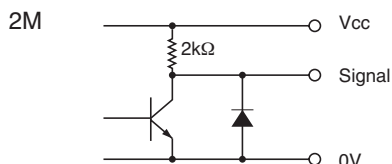
### External Dimension



F : With Flange



### Circuit of Output Signal



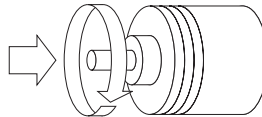
### Electrical Spec.

TYPE		2M	2MC	2MHC
Supply Voltage		DC4.5 ~ 13.2V		DC 10.8 ~ 26.4V
Requirement		90 mA Max	70 mA Max	
Output Voltage	“H”	Within -1 Power Volt	—	
	“L” ※1	0.5 V Max		
Maximum Output Current		30 mA MAX		
Rise & Fall Time		1 μsMax		
Maximum Frequency Response		200 kHz		
Withstanding Voltage of Output Tr.		50 V MAX.		

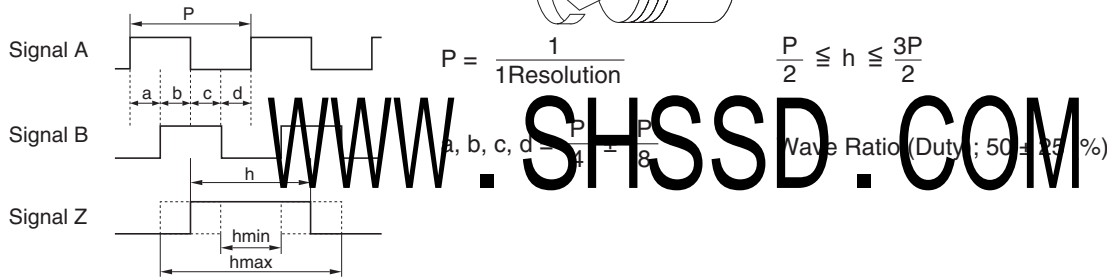
※1)  
at Maximum Output Current

### 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.



### Electrical Connections

Pin#	Description	Pin#	Description
1	Power Source	6	0V Common
2	F, G	7	0V Common
3	Signal Z		
4	Signal B		
5	Signal A		

Receptacle Sanwa Connector Ltd. SCK-2007

### Mechanical Spec.

( ) Option

Starting Torque		19.6×10 <sup>-3</sup> N · m Max
Angular Acceleration		1×10 <sup>5</sup> rad/s <sup>2</sup>
Shaft Loading	Thrust axial	39.2N
	Radial	78.4N
Moment of Inertia		6×10 <sup>-6</sup> kg · m <sup>2</sup>
Maximum RPM		5000r/min ( 7000r/min )
Net Weight		700g Max

### Environmental Spec.

Operating Temperature	-10°C ~ +70°C
Storage Temperature	- 30°C ~ +80°C
Humidity	RH 85% Max No Condensation
Vibration	10~55 Hz / 1.5mm 2 h
Shock	490m/s <sup>2</sup> , 11ms X, Y, Z Each 3 times
Degree of Protection	IP54