

SHAFT TYPE**OPN** Model**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	50	5000P/R

Output Mode

Flange Style

No Indication : No Flange

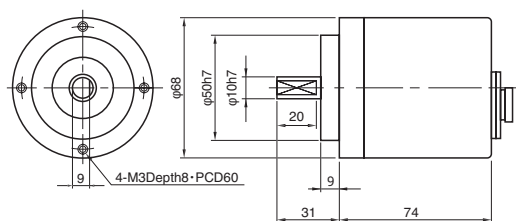
F : With Flange

No Indication : Voltage Output

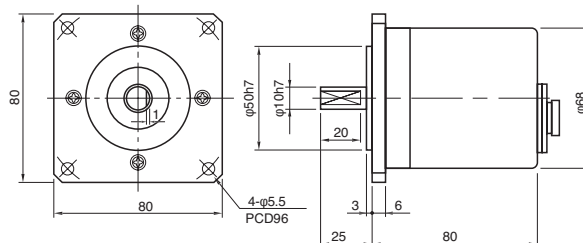
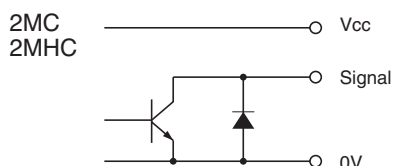
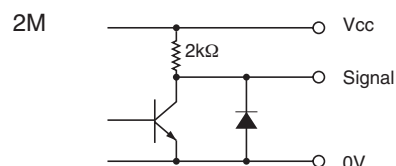
C : Open Collector Output

HC : Open Collector Output / High Voltage

Signals — AB90° Phase Difference + Zero Signal

External Dimension

F : With Flange

**Circuit of Output Signal**

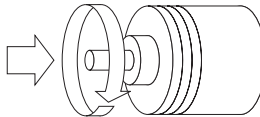
Electrical Spec.

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.		

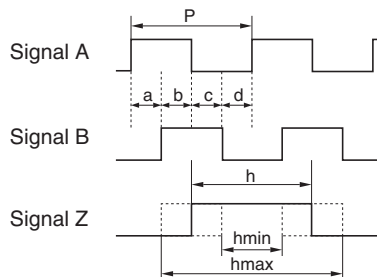
※1)
at Maximum Output Current

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.



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

$$\frac{P}{2} \leq h \leq \frac{3P}{2}$$

$$a, b, c, d = \frac{P}{4} \pm \frac{P}{8}$$

Wave Ratio (Duty); 50 $\pm$ 25 (%)

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 $\times 10^{-3}$ N · m Max
Angular Acceleration		1 $\times 10^5$ rad/s ²
Shaft Loading	Thrust axial	39.2N
	Radial	78.4N
Moment of Inertia		6 $\times 10^{-6}$ kg · m ²
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 ² , 11ms X, Y, Z Each 3 times
Degree of Protection	IP54