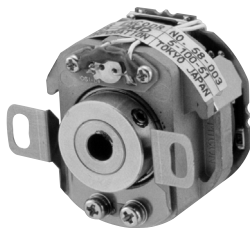


BUILT-IN TYPE**SBY** Model**Standard Built-in Model**

- General Application Build-in Model.
- Suitable for Small Servo-motor.

Model

SBY- **-** **D** **-** **-050-00**

Resolution

10	1000 P/R
20	2000 P/R
25	2500 P/R
30	3000 P/R

Due to unavailable combination of specifications,
Please make sure with sales Reps of the model name.

Signal UVW Number of Poles

- 4 : 4Poles
- 6 : 6Poles
- 8 : 8Poles

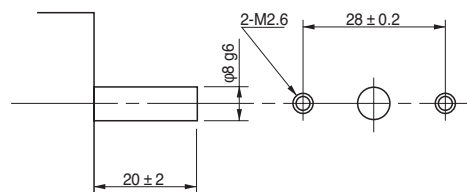
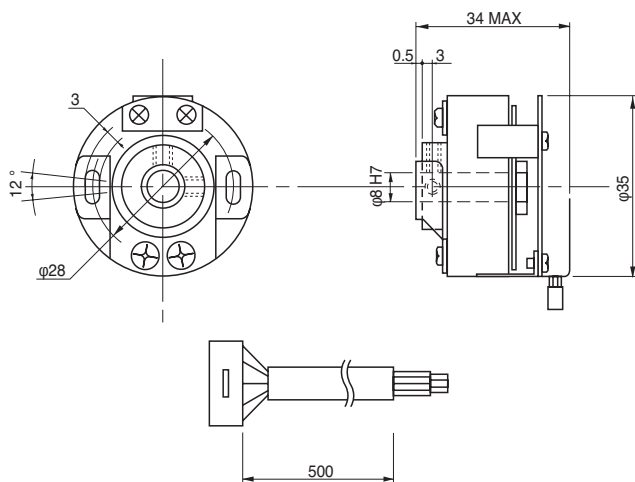
Hollow Shaft Diameter

- 6 : $\phi 6$
- 8 : $\phi 8$

Output Mode — D : Line Driver Output

Signals

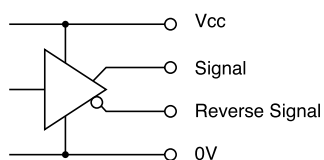
- 2M : AB90° Phase Difference + Zero Signal
- 5M : AB90° Phase Difference + Zero Signal
: + UVW120° Phase Difference

External Dimension

Setting Dimension

Circuit of Output Signal

2 MD
5 MD



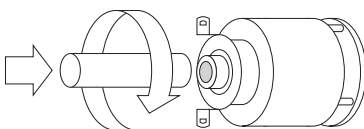
Electrical Spec.

TYPE		2MD	5MD
Supply Voltage		DC4.75 ~ 5.25V	DC4.75 ~ 5.25V
Requirement		160 mA Max	250 mA Max
Output Voltage	"H"	2.5 V or More	2.5 V or More
	"L" ※1	0.5 V Max	
Maximum Output Current		20 mA MAX	
Rise & Fall Time		200 ns Max	200 ns Max
Maximum Frequency Response		200 kHz	
Withstanding Voltage of Output Tr.		—	—

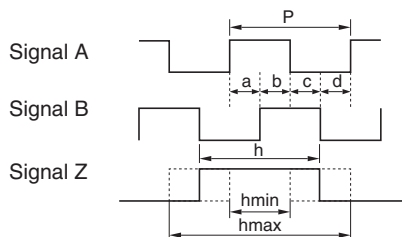
※1) at Maximum Output Current

Wave Form.

CW → Rotating Toward Clockwise
Viewed from an Arrow



2MD
5MD



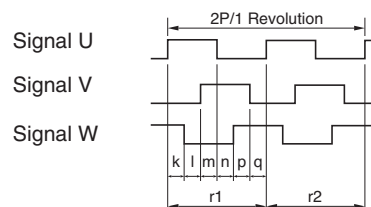
$$P = \frac{1}{1\text{Resolution}}$$

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

Wave Ratio (Duty); 50 ± 25 (%)

Rising point of B-signal is always at one point
while Z-signal is at H-level.

• When UVW phases output are 4 poles at 120°.



Mechanical Angular k ~ q 30° ± 3° Position Relation between U and Z phases
r1, r2 180° ± 1° Mechanical Angular 0° ± 2°

A B Z U V W signal are reverse signal of ABZUVW.

Mechanical Spec.

Starting Torque		29.4×10 ⁻⁴ N · m Max
Angular Acceleration		1×10 ⁵ rad/s ²
Shaft Loading	Thrust axial	9.8N
	Radial	19.6N
Moment of Inertia		1×10 ⁻⁶ kg · m ²
Maximum RPM		6000r/min
Net Weight		150g Max

Environmental Spec.

Operating Temperature	-10°C ~ +85°C
Storage Temperature	-20°C ~ +85°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