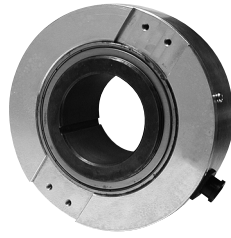


**BUILT-IN TYPE**

**SBU** Model

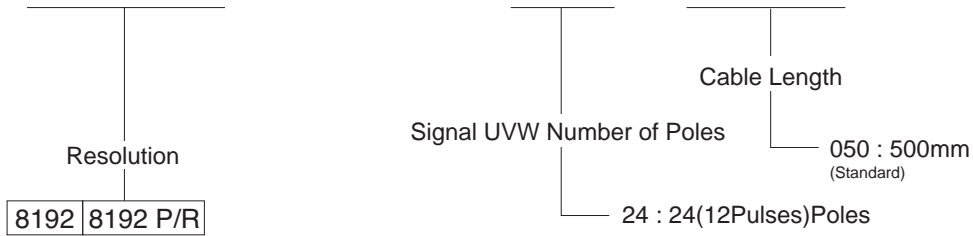


**Large Size Model**

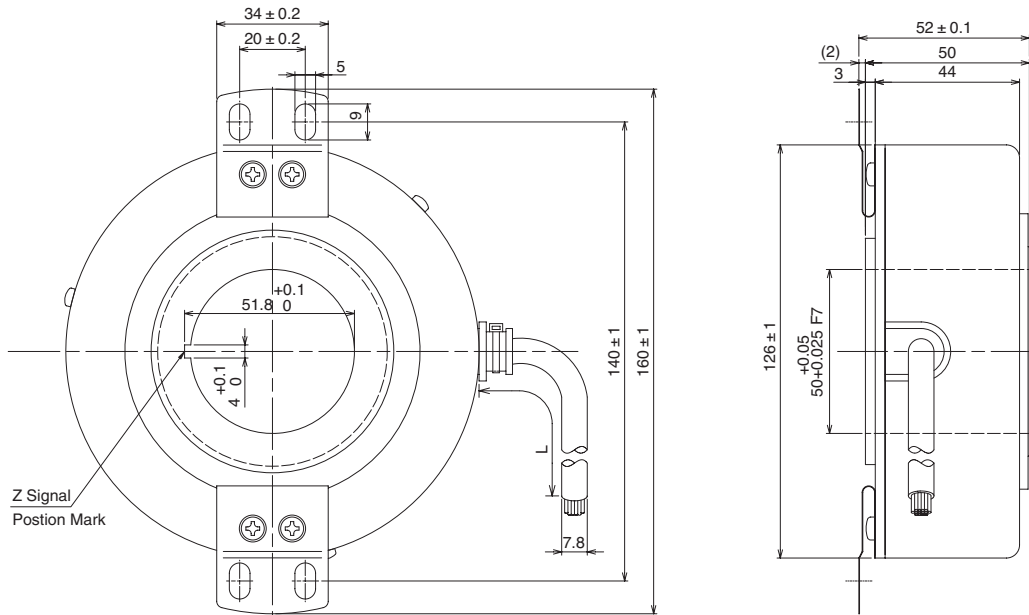
- Low Profile Hollow Through Shaft With Max. Caliber 50mm.

**Model**

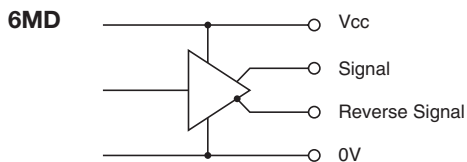
**SBU - 8192 - 6MD 24 - 500 - 00**



**External Dimension**



**Circuit of Output Signal**



### Electrical Spec.

| TYPE                       |        | 6MD             |
|----------------------------|--------|-----------------|
| Supply Voltage             |        | DC 11.4 ~ 12.6V |
| Requirement                |        | 210 mA Max      |
| Output Voltage             | “H”    | 2.5 V or More   |
|                            | “L” ※1 | 0.5 V Max       |
| Maximum Output Current     |        | 20 mA MAX       |
| Rise & Fall Time           |        | 200 ns Max      |
| Maximum Frequency Response |        | 68.3 kHz        |

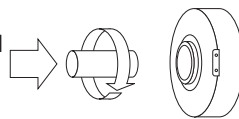
※1)  
at Maximum Output Current

### Electrical Connections

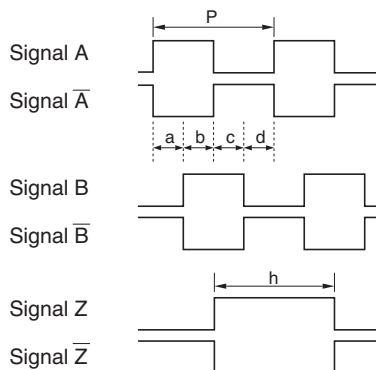
| Pin # | A         | B        |
|-------|-----------|----------|
| 1     | -         | -        |
| 2     | 0V Common | +12V     |
| 3     | -         | -        |
| 4     | F0        | F0       |
| 5     | F2        | F2       |
| 6     | F3        | F3       |
| 7     | F1        | F1       |
| 8     | Signal Z  | Signal Z |
| 9     | Signal B  | Signal B |
| 10    | Signal A  | Signal A |

### 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.

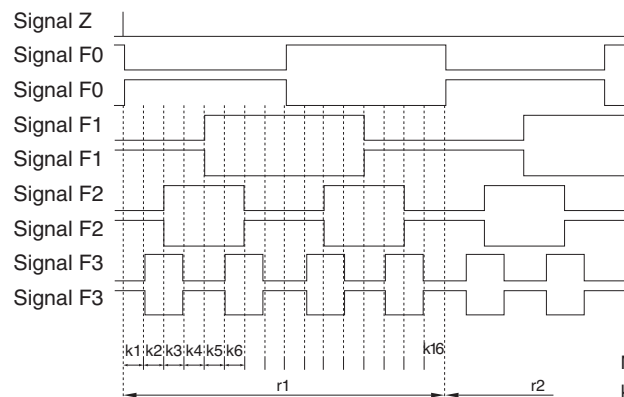


$$P = \frac{1}{1\text{Resolution}}$$

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

Wave Ratio (Duty); 50 ± 25 (%)

When UVW phases output are 4 poles at 120°.



Mechanical Angular  
k1 ~ k16 1.875° ± 0.5°  
r1, r12 30 ± 2°

Position Relation between F0 and Z phases  
Mechanical Angular 0° ± 0.9°

### Mechanical Spec.

|                        |              |  |
|------------------------|--------------|--|
| Starting Torque        |              | 49X10 <sup>-2</sup> N · m Max            |
| Shaft Loading          | Thrust axial | 29.4N                                    |
|                        | Radial       | 49N                                      |
| Moment of Inertia      |              | 1.5X10 <sup>-3</sup> kg · m <sup>2</sup> |
| Maximum RPM            |              | 500r/min                                 |
| Net Weight (W/O Cable) |              | 2kg Max                                  |

### Environmental Spec.

|                       |   |
|-----------------------|---|
| Operating Temperature | -10°C ~ +70°C                                   |
| Storage Temperature   | -20°C ~ +85°C                                   |
| Humidity              | RH 85% Max No Condensation                      |
| Vibration             | 50 Hz / 1.5mm 2 h                               |
| Shock                 | 196m/s <sup>2</sup> , 15ms X, Y, Z Each 3 times |
| Degree of Protection  | IP50  |