OMRON provides two types of couplings for different application conditions: Resin and metal. Select the best type for the application.

As a general rule, use metal couplings for high resolution and resin couplings for low resolution. (As a rough guide, a high resolution is one that exceeds 3,600 ppr.) Even for applications requiring relatively low resolution, a metal coupling will provide more reliability in applications involving rapid acceleration/deceleration or for Encoders with high starting torque.

### Characteristics

<table>
<thead>
<tr>
<th>Material</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resin (standard type)</td>
<td>• Low cost. • Easy shaft alignment when mounting. • Lightweight and low moment of inertia, placing a smaller load on the drive system.</td>
<td>• Low torsion rigidity and thus not suitable for high resolution. • Mounting is possible even if the shafts are greatly misaligned, which can cause damage from fatigue over long periods of application.</td>
</tr>
<tr>
<td>Metal (aluminum, helical)</td>
<td>• High torsion rigidity and thus suitable for high resolution. • Transmitted allowable torque is large.</td>
<td>• High cost. • Heavy and thus place a large load on the drive system. • The allowable shaft misalignment is small, so accurate positioning is required when mounting.</td>
</tr>
</tbody>
</table>

### Coupling Suitability Table

<table>
<thead>
<tr>
<th>Couplings</th>
<th>Specification</th>
<th>Resin, standard type</th>
<th>Resin, different end diameter</th>
<th>Metal</th>
</tr>
</thead>
<tbody>
<tr>
<td>E6A2-C</td>
<td>4 dia.</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>E6B2-C</td>
<td>6 dia.</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>E6C2-C</td>
<td>6 dia.</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>E6C3-C</td>
<td>8 dia.</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>E6D-C</td>
<td>6 dia.</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>E6F-C</td>
<td>10 dia.</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>E6H-C</td>
<td>Hollow shaft interior dia.: 8 mm</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>E6J-C</td>
<td>2 dia.</td>
<td>○</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>E6CP-A</td>
<td>6 dia.</td>
<td>○</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>E6C3-A</td>
<td>8 dia.</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>E6F-A</td>
<td>10 dia.</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>E6J-A</td>
<td>4 dia.</td>
<td>○</td>
<td>---</td>
<td>---</td>
</tr>
</tbody>
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<td>6 dia.</td>
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</tr>
<tr>
<td>E6C3-C</td>
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<td>---</td>
<td>---</td>
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<td>6 dia.</td>
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<td>10 dia.</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>E6J-A</td>
<td>4 dia.</td>
<td>○</td>
<td>---</td>
<td>---</td>
</tr>
</tbody>
</table>

* Tolerance conforms to JIS standard: JIS B 0401. ⊳ Refer to page 2.
## Rotary Encoders

### Coupling Dimensions

**E69-C02B**

- Material: Glass-reinforced PBT
- Applicable model: E6J-C

**E69-C04B**

- Material: Glass-reinforced PBT
- Applicable model: E6A2-C, E6J-A

**E69-C06B**

- Material: Glass-reinforced PBT

**E69-C06M**

- Material: Extra-super duralumin

**E69-C10B**

- Material: Glass-reinforced PBT
- Applicable model: E6F-C, E6F-A

**E69-C10M**

- Material: Extra-super duralumin
- Applicable model: E6F-C, E6F-A

**E69-C08B**

- Material: Glass-reinforced PBT
- Applicable model: E6C3-A, E6C3-C

**E69-C08M**

- Material: Glass-reinforced PBT
- Applicable model: E6C3-A, E6C3-C

**E69-C610B**

- Material: Glass-reinforced PBT

**E69-C68B**

- Material: Glass-reinforced PBT

---

### Standard hole dimensions (mm) / Tolerance (µm)

<table>
<thead>
<tr>
<th>Min.</th>
<th>Max.</th>
<th>Height: 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>---</td>
<td>3</td>
<td>+14</td>
</tr>
<tr>
<td>3</td>
<td>6</td>
<td>+18</td>
</tr>
<tr>
<td>6</td>
<td>10</td>
<td>+22</td>
</tr>
</tbody>
</table>
Flanges and Servo Mounting Brackets

### Flange and Servo Mounting Bracket Suitability Table

<table>
<thead>
<tr>
<th>Flange</th>
<th>Servo Mounting Bracket</th>
</tr>
</thead>
<tbody>
<tr>
<td>E69-FBA</td>
<td>E69-FCA</td>
</tr>
<tr>
<td>E69-FCA02</td>
<td>E69-FCA03</td>
</tr>
<tr>
<td>E69-1</td>
<td>E69-2 Servo Mounting Bracket provided.</td>
</tr>
</tbody>
</table>

- ☑️ Suitable and provided with product, Δ Suitable and sold separately, ---: Not suitable.

#### Flange Dimensions

<table>
<thead>
<tr>
<th>Model</th>
<th>Type</th>
<th>Flange</th>
<th>Servo Mounting Bracket</th>
</tr>
</thead>
<tbody>
<tr>
<td>E6A2-C</td>
<td></td>
<td>☑️</td>
<td>E6A2-CWZ.</td>
</tr>
<tr>
<td>E6B2-C</td>
<td></td>
<td>Δ</td>
<td>---</td>
</tr>
<tr>
<td>E6C2-C</td>
<td></td>
<td>Δ</td>
<td>---</td>
</tr>
<tr>
<td>E6C3-C</td>
<td></td>
<td>Δ</td>
<td>---</td>
</tr>
<tr>
<td>E6D-C</td>
<td></td>
<td>Δ</td>
<td>---</td>
</tr>
<tr>
<td>E6F-C</td>
<td></td>
<td>Δ</td>
<td>---</td>
</tr>
<tr>
<td>E6H-C</td>
<td></td>
<td></td>
<td>Hollow-shaft Model; Flange not required.</td>
</tr>
<tr>
<td>E6C3-A</td>
<td></td>
<td>Δ</td>
<td>---</td>
</tr>
<tr>
<td>E6F-A</td>
<td></td>
<td>Δ</td>
<td>---</td>
</tr>
</tbody>
</table>

#### E69-FBA

- Four, R3
- Four, 3.3-dia. holes, 30dia.
- Three, 3.5-dia. holes, 6.5 countersinking
- Material: SPCC Thickness: 3.2
- Applicable model: E6B2-C
- Note: Three phillips screws M3 × 6 provided

#### E69-FCA

- Four, R3
- Five, 4.5-dia. holes, 52dia.
- Three, 4.5-dia. holes, 8.5 countersinking
- Material: SPCC Thickness: 3.2
- Applicable model: E6C2-C
- Note: Three phillips screws M4 × 8 provided

#### E69-FBA02

- Three, 3.5-dia. holes, 6.5 countersinking
- Material: SPCC Thickness: 3.2
- Applicable model: E6B2-C
- Note: Three phillips screws M3 × 10 provided, E69-2 Servo Mounting Bracket provided

- Mounting Diagram For the E6B2-C

- E69-1
- E69-2
- Panel
- Three, M5
- E69-2 (provided)

Tolerance class IT16 applies to dimensions in this datasheet unless otherwise specified.
**Rotary Encoders**

---

**E69-FCA02**

![Mounting Diagram For the E6C2-C]

Material: SPCC  
Thickness: 3.2  

**Applicable model: E6C2-C**  
Note: Three phillips screws M4 x 10 provided, E69-2 Servo Mounting Bracket provided

---

**E69-FCA04**

![Mounting Diagram For the E6C3-A]

Material: SPCC  
Thickness: 3.2  

**Applicable model: E6C3-C, E6C3-A**  
Note: Three phillips screws M4 x 8 provided, E69-2 Servo Mounting Bracket provided

---

**Servo Mounting Bracket Dimensions**  
(Unit: mm)

Tolerance class IT16 applies to dimensions in this datasheet unless otherwise specified.

**E69-1 (Three brackets in a set.)**

![E69-1 Mounting Bracket Dimensions]

Applicable model: E6A2-C  
Material: SPCC

**E69-2 (Three brackets in a set.)**

![E69-2 Mounting Bracket Dimensions]

Material: SPCC

---
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