# Gear Motor TA Series Specifications

## Specifications

<table>
<thead>
<tr>
<th>Motor</th>
<th>Output</th>
<th>Number of poles</th>
<th>Frequency Hz</th>
<th>Voltage V</th>
<th>Rated current A</th>
<th>Rated revolution r/min</th>
<th>AC-side brake current</th>
</tr>
</thead>
<tbody>
<tr>
<td>Three-phase</td>
<td>0.1 kW</td>
<td>4</td>
<td>50/60/60</td>
<td>200/200/220 (400/400/440)</td>
<td>0.63/0.57/0.58 (0.32/0.29/0.29)</td>
<td>1410/1700/1710 (1410/1700/1710)</td>
<td>0.12 A</td>
</tr>
<tr>
<td></td>
<td>0.2 kW</td>
<td>4</td>
<td>50/60/60</td>
<td>200/200/220 (400/400/440)</td>
<td>1.2/1.1/1.1 (0.58/0.55/0.55)</td>
<td>1420/1700/1720 (1410/1690/1690)</td>
<td>0.12 A</td>
</tr>
<tr>
<td></td>
<td>0.4 kW</td>
<td>4</td>
<td>50/60/60</td>
<td>200/200/220 (400/400/440)</td>
<td>2.3/2.2/2.2 (1.2/1.0/1.0)</td>
<td>1380/1665/1685 (1380/1665/1685)</td>
<td>0.16 A</td>
</tr>
<tr>
<td></td>
<td>0.75 kW</td>
<td>4</td>
<td>50/60/60</td>
<td>200/200/220 (400/400/440)</td>
<td>3.8/3.4/3.4 (2.0/1.7/1.7)</td>
<td>1410/1690/1710 (1410/1690/1710)</td>
<td>0.17 A</td>
</tr>
<tr>
<td></td>
<td>1.5 kW</td>
<td>4</td>
<td>50/60/60</td>
<td>200/200/220 (400/400/440)</td>
<td>7.0/6.2/6.0 (3.5/3.1/3.0)</td>
<td>1420/1710/1730 (1420/1710/1730)</td>
<td>0.10 A</td>
</tr>
<tr>
<td></td>
<td>2.2 kW</td>
<td>4</td>
<td>50/60/60</td>
<td>200/200/220 (400/400/440)</td>
<td>9.8/8.9/8.5 (4.9/45/4.3)</td>
<td>1420/1710/1730 (1420/1710/1730)</td>
<td>0.10 A</td>
</tr>
<tr>
<td></td>
<td>3.7 kW</td>
<td>4</td>
<td>50/60/60</td>
<td>200/200/220 (400/400/440)</td>
<td>16.0/14.8/14.0 (8.0/7.4/7.2)</td>
<td>1420/1710/1730 (1420/1710/1730)</td>
<td>0.08 A</td>
</tr>
<tr>
<td></td>
<td>5.5 kW</td>
<td>4</td>
<td>50/60/60</td>
<td>200/200/220 (400/400/440)</td>
<td>23.8/21.2/20.0 (11.9/10.5/10.0)</td>
<td>1430/1730/1740 (1430/1730/1740)</td>
<td>0.10 A</td>
</tr>
<tr>
<td>Single-phase</td>
<td>100W</td>
<td>4</td>
<td>50/60</td>
<td>100</td>
<td>3.2/2.8</td>
<td>1440/1730</td>
<td>0.21 A</td>
</tr>
<tr>
<td></td>
<td>200W</td>
<td>4</td>
<td>50/60</td>
<td>100</td>
<td>5.2/4.6</td>
<td>1430/1710</td>
<td>0.21 A</td>
</tr>
</tbody>
</table>

**Note 1:** The values in parentheses under "Rated current" and "Rated revolution" are for 400/400/440 V.

**Note 2:** For brake-type models, the brake current shown above is added for the phase where the brake lead wire is connected to the motor lead wire. The AC-side brake current is for 200 V AC 60 Hz and 100 V AC 60 Hz.

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gear motor specifications

- **Output:** Three-phase: 0.1, 0.2, 0.4, 0.75, 1.5, 2.2, 3.7, 5.5 kW
  - Non-brake type • Brake type
- **Power supply:** 200/200/220V 50/60/60Hz
- **Number of poles:** 4
- **Protection type:** 0.1 kW - Totally-enclosed type (IP44), 0.2-5.5 kW - Totally-enclosed external fan type (IP44)
  - Drip-proof protection type (IP22)
- **Cooling method:** 0.1 kW - Self-cooled type (IC410), 0.2-5.5 kW - Self-managed type (IC411)
  - Draft type (IC01)
- **Starting method:** Split-phase starting type
- **Rating:** Continuous
- **Insulation:** 0.1 kW-3.7 kW - Class E, 5.5 kW - Class B
- **Brake:** Non-excitation type • DC electromagnetic brake
- **Reduction ratio:** 1/5 to 1/1200
- **Lubricating method:** Grease
- **Shaft end key way:** New JIS key (JIS B1301-1976): Output shaft key attached (Ordinary-class key way)
- **Output shaft end:** Tapped
- **Installation place:** Indoor not exposed to dust or water
- **Ambient temperature:** −20°C to 40°C
- **Ambient humidity:** Less than 85% (non condensing)
- **Altitude:** Elevations below 1000 m
- **Atmosphere:** Free from corrosive gases, explosive gases and steam
- **Mounting direction:** No limitations on mounting angles: horizontal, vertical or inclined

**Color:** Munsell 2.5G6/3

Note) The protective construction for the brake-type is IP20.
# Gear Motor TA Series Specifications

## Special motor types (Applied to gear motors and gear motors with brakes)

<table>
<thead>
<tr>
<th>Motor specifications</th>
<th>Three-phase motor type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage</td>
<td>0.1kW</td>
</tr>
<tr>
<td>Double voltage</td>
<td>Brake</td>
</tr>
<tr>
<td>Other voltage</td>
<td>○</td>
</tr>
<tr>
<td>Terminal box type</td>
<td>○</td>
</tr>
<tr>
<td>Standard voltage</td>
<td>○</td>
</tr>
<tr>
<td>Outdoor type</td>
<td>○</td>
</tr>
<tr>
<td>Double voltage</td>
<td>○</td>
</tr>
<tr>
<td>Other voltage</td>
<td>○</td>
</tr>
<tr>
<td>Explosion-proof type</td>
<td>○</td>
</tr>
<tr>
<td>Standard voltage</td>
<td>○</td>
</tr>
<tr>
<td>Other voltage</td>
<td>○</td>
</tr>
</tbody>
</table>

(Note 1) The other voltage 200 V level and 400 V level function at the levels indicated by ‘○’ in the table below.

(Note 2) The explosion-proof type 0.1 kW device is of the same size and dimensions as the 0.2 kW device.

### (1) 0.1kW · 0.2kW · 0.4kW · 0.75kW · 1.5kW · 2.2kW · 3.7kW

<table>
<thead>
<tr>
<th>Three-phase 200 V level</th>
<th>Three-phase 400 V level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency of 50 Hz</td>
<td>Frequency of 60 Hz</td>
</tr>
<tr>
<td>Voltage (V)</td>
<td>Voltage (V)</td>
</tr>
<tr>
<td>210</td>
<td>220</td>
</tr>
<tr>
<td>210</td>
<td>230</td>
</tr>
<tr>
<td>380</td>
<td>415</td>
</tr>
<tr>
<td>420</td>
<td>460</td>
</tr>
<tr>
<td>Non-Brake</td>
<td>△</td>
</tr>
<tr>
<td>Brake-type</td>
<td>△</td>
</tr>
</tbody>
</table>

### (2) 5.5kW

<table>
<thead>
<tr>
<th>Three-phase 200 V level</th>
<th>Three-phase 400 V level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency of 50 Hz</td>
<td>Frequency of 60 Hz</td>
</tr>
<tr>
<td>Voltage (V)</td>
<td>Voltage (V)</td>
</tr>
<tr>
<td>210</td>
<td>220</td>
</tr>
<tr>
<td>210</td>
<td>230</td>
</tr>
<tr>
<td>380</td>
<td>415</td>
</tr>
<tr>
<td>420</td>
<td>460</td>
</tr>
<tr>
<td>Non-Brake</td>
<td>△</td>
</tr>
<tr>
<td>Brake-type</td>
<td>△</td>
</tr>
</tbody>
</table>

## One-touch manual release brake-type

<table>
<thead>
<tr>
<th>Three-phase brake motor type</th>
<th>Single-phase brake motor type</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.1kW</td>
<td>△</td>
</tr>
<tr>
<td>0.2kW</td>
<td>△</td>
</tr>
<tr>
<td>0.4kW</td>
<td>△</td>
</tr>
<tr>
<td>0.75kW</td>
<td>△</td>
</tr>
<tr>
<td>1.5kW</td>
<td>△</td>
</tr>
<tr>
<td>2.2kW</td>
<td>△</td>
</tr>
<tr>
<td>3.7kW</td>
<td>△</td>
</tr>
<tr>
<td>5.5kW</td>
<td>△</td>
</tr>
<tr>
<td>100W</td>
<td>△</td>
</tr>
<tr>
<td>200W</td>
<td>△</td>
</tr>
</tbody>
</table>
1. Features

(1) Non-excitation type (spring-close type)
Because this type allows the brake to be actuated with the power OFF, it can cope with a sudden power failure.

(2) SLB brake, VNB brake: Dry multiple-plate DC system  SBH brake: Dry single-plate DC system
The construction is simple and compact. It is possible to brake and release with low noise.

(3) No asbestos
Harmful asbestos is not used in the brake lining.

(4) Ready for various applications
It is possible to use with external wiring and for external operation.
The SLB brake comes with a manual release.
The optional one-touch manual release is also available.

2. Brake specifications

<table>
<thead>
<tr>
<th>Motor output</th>
<th>Three-phase</th>
<th>0.1kW</th>
<th>0.2kW</th>
<th>0.4kW</th>
<th>0.75kW</th>
<th>1.5kW</th>
<th>2.2kW</th>
<th>3.7kW</th>
<th>5.5kW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single-phase</td>
<td>100W</td>
<td>200W</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Brake model number</th>
<th>Three-phase 220V</th>
<th>SLB1</th>
<th>SLB2</th>
<th>SLB4</th>
<th>SLB5</th>
<th>VNB158K</th>
<th>VNB228K</th>
<th>VNB371K</th>
<th>VNB55K</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single-phase</td>
<td>SLB1</td>
<td>SLB2</td>
<td>SLB4</td>
<td>SLB5</td>
<td>VNB158K</td>
<td>VNB228K</td>
<td>VNB371K</td>
<td>VNB55K</td>
<td></td>
</tr>
</tbody>
</table>

| DC module model number | Three-phase 220V | DM200D | HD-12MY1 | | | | |
|------------------------|------------------|--------|-----------|----|----|---|
| Single-phase           | DM100A           | ------ | --------- | |

<table>
<thead>
<tr>
<th>Rated torque</th>
<th>Static friction torque</th>
<th>Dynamic friction torque</th>
<th>Voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(kgf·m)</td>
<td>(kgf·m)</td>
<td>24V</td>
</tr>
<tr>
<td>Static</td>
<td>1.31 x 10^3</td>
<td>1.31 x 10^3</td>
<td>DC24V</td>
</tr>
<tr>
<td>Dynamic</td>
<td>3.66 x 10^3</td>
<td>3.66 x 10^3</td>
<td>DC24V</td>
</tr>
<tr>
<td>Total</td>
<td>1.31 x 10^3</td>
<td>1.31 x 10^3</td>
<td>DC24V</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Allowable starting frequency</th>
<th>10 times/minute</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Braking delay time (reference value)</th>
<th>AC internal wiring</th>
<th>AC external wiring</th>
<th>DC internal wiring</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC internal wiring</td>
<td>0.18 - 0.25</td>
<td>0.18 - 0.20</td>
<td>0.05 - 0.07</td>
</tr>
<tr>
<td>AC external wiring</td>
<td>0.18 - 0.20</td>
<td>0.18 - 0.20</td>
<td>0.05 - 0.07</td>
</tr>
<tr>
<td>DC internal wiring</td>
<td>0.18 - 0.20</td>
<td>0.18 - 0.20</td>
<td>0.05 - 0.07</td>
</tr>
<tr>
<td>DC external wiring</td>
<td>0.18 - 0.20</td>
<td>0.18 - 0.20</td>
<td>0.05 - 0.07</td>
</tr>
</tbody>
</table>

Note 1) If the single-phase motor starting frequency is 5 times/minute, keep the duty ratio below 50% (DC 15 seconds running, 5 seconds stopping). The life of the contacts in the built-in contactor switch (motor starter) is approximately 300,000 cycles.

Note 2) The load torque values shown above are static and dynamic friction torque values after idling.

Note 3) The braking delay time is a reference value, which may vary depending on the brake condition, use conditions, individual differences, etc. If you want to shorten the braking delay time (for elevators, etc.), we recommend that you employ DC external wiring.

Note 4) The values in parentheses in the box of the braking delay time of the 3.7kV device are for 400V. If you want to shorten this braking delay time, employ DC external wiring.

Note 5) The 0.5kW device is a made-to-order product. Please contact us for details.

3. Rectifier (DC module)
The built-in DC module is connected with the motor lead wire. If you intend to employ a DC external wiring circuit, please inform us at the time of order placement or make the connections according to the wiring diagram on page 105.
If you want us to deliver the DC module separately for use in the control panel, etc., please instruct us to do so at the time of placement of the order.
Gear Motor TA Series Specifications

Outline dimensions (HD-12MYH)

Outline dimensions (DM100A)

4. Brake structure

- **GMTA010 (SLB01)**
- **HMTA010 (SLB01)**

- **GMTA020 (SLB02)**
- **GMTA040 (SLB04)**
- **GMTA075 (SLB07)**

- **HMTA020 (SLB02)**
- **HMTA040 (SLB04)**
- **HMTA075 (SLB07)**

- **GMTA150 (VNB158K)**
- **GMTA220 (VNB228K)**
- **GMTA370 (VNB371K)**
- **GMTA550 (VNB555K)**

- **HMTA150 (VNB158K)**
- **HMTA220 (VNB228K)**
- **HMTA370 (VNB371K)**
- **HMTA550 (VNB555K)**

- **GMTA100 (SBH01)**
- **GMTA200 (SBH01)**
- **HMTA100 (SBH01)**
- **HMTA200 (SBH02)**

- **GMTA010 (SLB01)**
- **HMTA010 (SLB01)**

**Specifications**

1. Anti-load bracket with yoke
2. Coil
3. Armature
4. Presser bar spring
5. Brake plate
6. U nut
7. Collar
8. Guide bolt
9. Lining
10. Fan cover
11. Square hub
12. Snap ring
13. Key
14. Spring pin
15. Brake spring
16. Fan cover fastening screw
17. DC module
18. Closed end connection binder
19. Closed end connection binder

1. Yoke
2. coil
3. Brake spring
4. Armature
5. Lining
6. Anti-load bracket
7. Stud bolt
8. Liner
9. Distance collar
10. Protective liner
11. Hexagon nut
12. Brake plate
13. Sheet packing
14. Center hub
15. Fan
16. Fan cover
17. Snap ring
18. Key
19. DC module
20. Closed end connection binder
21. Gap
22. Adjustable nut
23. Lining
24. Brake spring
25. Mounting bolt
26. Brake plate
27. Hexagon socket head bolt
28. Fan cover
29. DC module

---

1. Yoke
2. Coil
3. Armature
4. Brake spring
5. Lining
6. Adjusting nut
7. Lining
8. Mounting bolt
9. Hexagon socket head bolt
10. Fan cover
11. DC module

---

[Diagram of GMTA010 (SLB01)]

[Diagram of HMTA010 (SLB01)]

[Diagram of GMTA020 (SLB02)]

[Diagram of GMTA040 (SLB04)]

[Diagram of GMTA075 (SLB07)]

[Diagram of HMTA020 (SLB02)]

[Diagram of HMTA040 (SLB04)]

[Diagram of HMTA075 (SLB07)]

[Diagram of GMTA150 (VNB158K)]

[Diagram of GMTA220 (VNB228K)]

[Diagram of GMTA370 (VNB371K)]

[Diagram of GMTA550 (VNB555K)]

[Diagram of HMTA150 (VNB158K)]

[Diagram of HMTA220 (VNB228K)]

[Diagram of HMTA370 (VNB371K)]

[Diagram of HMTA550 (VNB555K)]

[Diagram of GMTA100 (SBH01)]

[Diagram of GMTA200 (SBH01)]

[Diagram of HMTA100 (SBH01)]

[Diagram of HMTA200 (SBH02)]
5. Manual release

(1) For 0.1 kW-0.75 kW: SLB brake

※The manual release is included as standard equipment.

- Perform release with no load applied to the output shaft.
- Remove the fan cover and install the screws.
- After the completion of work, be sure to remove the screws and install the cover before starting operation.

The one-touch manual release is optional. Can be supplied made-to-order with short lead times.

(2) For 1.5 kW-5.5 kW: VNB brake

The one-touch manual release type is optional. Can be supplied made-to-order with short lead times.

※For the 5.5 kW device, the release position and operation position are reversed.
(3) For 100 W-200 W: SBH brake
The one-touch manual release type is optional. We can supply with short lead times.

6. Formula for brake life span and braking distance

**SI units**

1. **Braking workload**

   \[ E_f = \frac{(I_m + T_0) \times n^2}{182.5} \times \frac{T_0}{(T_0 \pm T_e)} \]

   - \( E_f \): Braking workload per operation \( \text{J} \)
   - \( I_m \): Moment of inertia of hypoid motor (gear motor) \( \text{kg} \cdot \text{m}^2 \) (Table 2 on page 233)
   - \( n \): Motor shaft revolution \( \text{r/min} \)
   - \( T_0 \): Dynamic friction torque of brake \( \text{N} \cdot \text{m} \)
   - \( T_e \): Motor-shaft-equivalent load torque \( \text{N} \cdot \text{m} \)

2. **Brake life span**

   \[ Z = \frac{E_t}{E_f} \]

   - \( Z \): Total number of working cycles
   - \( E_t \): Total braking workload \( \text{J} \)

3. **Braking time**

   \[ t = t_0 + t_d \]

   \[ t_0 = \frac{(I_m + T_0) \times n}{9.55 \times (T_0 \pm T_e)} \]

   - \( t \): Braking delay time \( \text{s} \)

4. **Braking distance**

   \[ S = \left( t_0 + \frac{1}{2} t_d \right) \times V \]

   - \( S \): Braking distance \( \text{mm} \)
   - \( V \): Speed of linear motion \( \text{mm/s} \)

**Gravitational units**

1. **Braking workload**

   \[ E_f = \frac{(GD_i + GD_s) \times n^2}{7180} \times \frac{T_0}{(T_0 \pm T_e)} \]

   - \( E_f \): Braking workload per operation \( \text{kgf} \cdot \text{m} \)
   - \( GD_i \): GD of hypoid motor (gear motor) \( \text{kgf} \cdot \text{m}^2 \) (Table 2 on page 233)
   - \( GD_s \): GD of motor-shaft-equivalent load \( \text{kgf} \cdot \text{m}^2 \)
   - \( n \): Motor shaft revolution \( \text{r/min} \)
   - \( T_0 \): Dynamic friction torque of brake \( \text{kgf} \cdot \text{m} \)

2. **Brake life span**

   \[ Z = \frac{E_t}{E_f} \]

3. **Braking time**

   \[ t = t_0 + t_d \]

   \[ t_0 = \frac{(GD_i + GD_s) \times n}{9.55 \times (T_0 \pm T_e)} \]

4. **Braking distance**

   \[ S = \left( t_0 + \frac{1}{2} t_d \right) \times V \]
Gear Motor TA Series Specifications

About terminal boxes (common to gear motors and hypoid motors) 0.1 kW-0.75 kW

1. Standard terminal boxes

(1) A resin terminal box is included as standard equipment.

Note: If you need a hard terminal box type (made of die-cast aluminum), order it using the option code.

(2) Position and dimensions of terminal box

![Diagram of terminal box positions]

<table>
<thead>
<tr>
<th>Motor output</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>P</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.1 kW</td>
<td>64.5</td>
<td>67</td>
<td>67</td>
<td>81</td>
<td>125</td>
</tr>
<tr>
<td>0.2 kW</td>
<td>102.5</td>
<td>67</td>
<td>67</td>
<td>81</td>
<td>125</td>
</tr>
<tr>
<td>0.4 kW</td>
<td>102.5</td>
<td>67</td>
<td>67</td>
<td>81</td>
<td>125</td>
</tr>
<tr>
<td>0.75 kW</td>
<td>98.5</td>
<td>67</td>
<td>67</td>
<td>90</td>
<td>125</td>
</tr>
</tbody>
</table>

(3) Change of the position of the terminal box

If you want to change the position of the terminal box because, for example, it is positioned inconveniently for you, please instruct us to do so. The position of the terminal box can be changed by changing the tightening position of the through bolt for fastening the motor.

Change of position: For a 180° swing for a gear motor or a hypoid motor, or a 90° or 270° swing for a face mount or hollow shaft type, use an option code to instruct us to change the position.

(4) Change of the lead outlet direction of the terminal box

The lead outlet direction can be changed to the left (anti-load side) or 180° (upper side) by changing the top cover mounting direction. For the hard terminal box, the lead outlet direction can be changed 90°.

(5) Construction of the terminal box

- Resin terminal box (standard)

- The hard terminal box (optional) is of the same specifications as the outdoor type. Refer to this type. The cable port is φ18.

2. Terminal box of brake-types

(1) A resin terminal box is included as standard equipment.

(2) Position and dimensions of the terminal box

![Diagram of terminal box positions]

<table>
<thead>
<tr>
<th>Motor output</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>P</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.1 kW</td>
<td>102.5</td>
<td>83</td>
<td>70</td>
<td>104.5</td>
<td>31</td>
</tr>
<tr>
<td>0.2 kW</td>
<td>119.5</td>
<td>83</td>
<td>70</td>
<td>104.5</td>
<td>31</td>
</tr>
<tr>
<td>0.4 kW</td>
<td>119.5</td>
<td>83</td>
<td>70</td>
<td>104.5</td>
<td>31</td>
</tr>
<tr>
<td>0.75 kW</td>
<td>125.5</td>
<td>83</td>
<td>70</td>
<td>113.5</td>
<td>31</td>
</tr>
</tbody>
</table>

(3) Change of the lead outlet direction of the terminal box

The lead outlet direction can be changed by 180° upper side by changing the top cover mounting direction.

(4) Construction of terminal box

- Resin terminal box (standard)
Gear Motor TA Series Specifications

Terminal boxes (common to gear motors and hypoid motors) for 1.5 kW-5.5 kW

1. Standard terminal boxes

(1) A steel plate terminal box is included as standard equipment.

(2) Position and dimensions of the terminal box

<table>
<thead>
<tr>
<th>Motor output</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>P</th>
<th>Q</th>
<th>KD</th>
<th>0°</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5kW</td>
<td>117</td>
<td>83</td>
<td>97</td>
<td>143</td>
<td>37</td>
<td>27</td>
<td>0</td>
</tr>
<tr>
<td>2.2kW</td>
<td>117</td>
<td>83</td>
<td>97</td>
<td>143</td>
<td>37</td>
<td>27</td>
<td>0</td>
</tr>
<tr>
<td>3.7kW</td>
<td>137.5</td>
<td>83</td>
<td>97</td>
<td>151</td>
<td>37</td>
<td>27</td>
<td>0</td>
</tr>
</tbody>
</table>

Note) For the 5.5 kW device, the position of the terminal box is turned 15 degrees clockwise (upward) from the horizontal.

(3) Change of the position of the terminal box

If you want to change the position of the terminal box because, for example, it is positioned inconveniently for you, please instruct us to do so. The position of the terminal box can be changed by changing the tightening position of the through bolt for fastening the motor.

Change of position: 90° swing is possible for both the gear motor and hypoid motor. Use the option code to instruct us to change the position.

(4) Change of lead outlet direction of the terminal box

The lead outlet direction can be changed by 90°.

(5) Construction of terminal boxes

- Steel plate terminal boxes (standard)

2. Terminal boxes of brake-types

(1) A resin terminal box is included as standard equipment.

(2) Position and dimensions of the terminal box

<table>
<thead>
<tr>
<th>Motor output</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>P</th>
<th>Q</th>
<th>KD</th>
<th>0°</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5kW</td>
<td>196</td>
<td>135</td>
<td>96</td>
<td>141</td>
<td>35.5</td>
<td>27</td>
<td></td>
</tr>
<tr>
<td>2.2kW</td>
<td>196</td>
<td>135</td>
<td>96</td>
<td>141</td>
<td>35.5</td>
<td>27</td>
<td></td>
</tr>
<tr>
<td>3.7kW</td>
<td>2115</td>
<td>176.5</td>
<td>97</td>
<td>154</td>
<td>35.5</td>
<td>27</td>
<td></td>
</tr>
</tbody>
</table>

(3) Change of the position of the terminal box

If you want to change the position of the terminal box because, for example, it is positioned inconveniently for you, please instruct us to do so. The position of the terminal box can be changed by changing the tightening position of the through bolt for fastening the motor.

Change of position: 90° swing is possible for both the gear motors and hypoid motors. Use the option code to instruct us to change the position.

(4) Change of the lead outlet direction of the terminal box

The lead outlet direction can be changed by 90°.

(5) Construction of the terminal box

- Steel plate terminal box (standard)

Note) For the 3.7 kW device, the DC module is positioned outside the terminal box.
Gear Motor TA Series Specifications

**Outdoor type (common to gear motors and hypoid motors) 0.1 kW-0.75 kW** (Protective construction IP55)

(1) Position and dimensions of the terminal box  
(Note) If the motor is not to be installed horizontally, please contact us.

(2) Change of the position of the terminal box  
If you want to change the position of the terminal box because, for example, it is positioned inconveniently for you, please instruct us to do so. The position of the terminal box can be changed by changing the tightening position of the through bolt for fastening the motor. 
Change of position: For a 180° swing for a gear motor or hypoid motor, or a 90° or 270° swing for a face mount type or a hollow shaft type, use the option code to instruct us to change the position.

(3) Change of the lead outlet direction of the terminal box  
The lead outlet direction can be changed by 90°.

(4) Construction of the terminal box

<table>
<thead>
<tr>
<th>Motor output</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>P</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.1 kW</td>
<td>25</td>
<td>95</td>
<td>84</td>
<td>118</td>
<td>215</td>
</tr>
<tr>
<td>0.2 kW</td>
<td>40.5</td>
<td>95</td>
<td>84</td>
<td>118</td>
<td>215</td>
</tr>
<tr>
<td>0.4 kW</td>
<td>40.5</td>
<td>95</td>
<td>84</td>
<td>118</td>
<td>215</td>
</tr>
<tr>
<td>0.75 kW</td>
<td>36.5</td>
<td>95</td>
<td>84</td>
<td>127</td>
<td>215</td>
</tr>
</tbody>
</table>

(2) Change of the position of the terminal box  
If you want to change the position of the terminal box because, for example, it is positioned inconveniently for you, please instruct us to do so. The position of the terminal box can be changed by changing the tightening position of the through bolt for fastening the motor. 
Change of position: 90° swing is possible for both gear motors and hypoid motors. Use the option code to instruct us to change the position.

(3) Change of the lead outlet direction of the terminal box  
The lead outlet direction can be changed by 90°.

(4) Construction of the terminal box

**Outdoor type (common to gear motors and hypoid motors) 1.5 kW-5.5 kW** (Protective construction IP55)

(1) Position and dimensions of the terminal box  
(Note) If the motor is not to be installed horizontally, please contact us.

(2) Change of the position of the terminal box  
If you want to change the position of the terminal box because, for example, it is positioned inconveniently for you, please instruct us to do so. The position of the terminal box can be changed by changing the tightening position of the through bolt for fastening the motor. 
Change of position: 90° swing is possible for both gear motors and hypoid motors. Use the option code to instruct us to change the position.

(3) Change of the lead outlet direction of the terminal box  
The lead outlet direction can be changed by 90°.

(4) Construction of the terminal box

<table>
<thead>
<tr>
<th>Motor output</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>P</th>
<th>Q</th>
<th>KD</th>
<th>θ°</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5 kW</td>
<td>117</td>
<td>96</td>
<td>116</td>
<td>153</td>
<td>47</td>
<td>PF3/4</td>
<td>0</td>
</tr>
<tr>
<td>2.2 kW</td>
<td>117</td>
<td>96</td>
<td>116</td>
<td>153</td>
<td>47</td>
<td>PF3/4</td>
<td>0</td>
</tr>
<tr>
<td>3.7 kW</td>
<td>157.5</td>
<td>96</td>
<td>116</td>
<td>182</td>
<td>47</td>
<td>PF3/4</td>
<td>0</td>
</tr>
<tr>
<td>5.5 kW</td>
<td>151.5</td>
<td>158</td>
<td>186</td>
<td>254</td>
<td>54</td>
<td>PF1</td>
<td>15</td>
</tr>
</tbody>
</table>

Note) The entire length is the same as that of the indoor-type standard product.

(Note) For the 5.5 kW device, the position of the terminal box is turned 15 degrees clockwise (upward) from the horizontal.