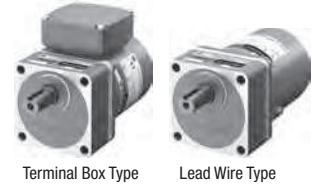


## Induction Motors

# 100 W

□ 90 mm

## Combination Type, Round Shaft Type



Terminal Box Type

Lead Wire Type

### Specifications - Continuous Rating



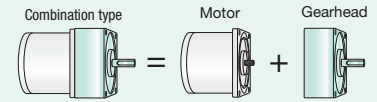
| Product Name<br>Upper Level: Combination Type<br>Lower Level: Round Shaft Type |  | Output Power | Voltage         | Frequency | Current | Starting Torque | Rated Torque | Rated Speed |
|--|--|--------------|-----------------|-----------|---------|-----------------|--------------|-------------|
| Terminal Box Type  | Lead Wire Type                           | W            | VAC             | Hz        | A       | mN·m            | mN·m         | r/min       |
| <b>5IK100VEST2-□</b><br><b>5IK100VA-EST2</b>                                   | <b>5IK100VES-□</b><br><b>5IK100VA-ES</b> | 100          | Three-Phase 220 | 50        | 0.55    | 850             | 690          | 1400        |
|  |  |              |                 | 60        | 0.48    | 700             | 570          | 1680        |
|  |  | 100          | Three-Phase 230 | 50        | 0.57    | 850             | 690          | 1400        |
|  |  |              |                 | 60        | 0.48    | 700             | 570          | 1680        |

- The specifications apply to the motor only.
- There is no built-in overheat protection device (thermal protector).  
To prevent the motor from burning out when an excess load is applied or the output shaft is locked, use the electrical thermal function of the electromagnetic switch or the inverter.
- To combine this model with an inverter, set the frequency of the inverter to 120 Hz or lower.

### Product Line

#### Combination Type

The combination type comes with a motor and a gearhead pre-assembled.  
The combination of the motor and the gearhead can be changed.  
They are also available separately.  
You can also remove the gearhead to change the installation position by 90°.



#### Combination Type

| Type              | Product Name         | Gear Ratio                        |
|-------------------|----------------------|-----------------------------------|
| Terminal Box Type | <b>5IK100VEST2-□</b> | <b>5, 6, 7.5, 9, 12.5, 15, 18</b> |
|                   |                      | <b>25, 30, 36, 50, 60</b>         |
|                   |                      | <b>75, 90, 100, 120, 150, 180</b> |
| Lead Wire Type    | <b>5IK100VES-□</b>   | <b>5, 6, 7.5, 9, 12.5, 15, 18</b> |
|                   |                      | <b>25, 30, 36, 50, 60</b>         |
|                   |                      | <b>75, 90, 100, 120, 150, 180</b> |

The following items are included in each product.  
Motor, Gearhead, Installation Screws, Parallel Key, Operating Manual

#### Round Shaft Type

| Type              | Product Name         |
|-------------------|----------------------|
| Terminal Box Type | <b>5IK100VA-EST2</b> |
| Lead Wire Type    | <b>5IK100VA-ES</b>   |

The following items are included in each product.  
Motor, Operating Manual

### Permissible Torque on Combination Types

#### 50 Hz

Unit : N·m

| Product Name                      | Speed r/min | 300      | 250      | 200        | 166      | 120         | 100       | 83        | 60        | 50        | 41        | 30        | 25        | 20        | 16.6      | 15         | 12.5       | 10         | 8.3        |
|-----------------------------------|-------------|----------|----------|------------|----------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|------------|
|                                   | Gear Ratio  | <b>5</b> | <b>6</b> | <b>7.5</b> | <b>9</b> | <b>12.5</b> | <b>15</b> | <b>18</b> | <b>25</b> | <b>30</b> | <b>36</b> | <b>50</b> | <b>60</b> | <b>75</b> | <b>90</b> | <b>100</b> | <b>120</b> | <b>150</b> | <b>180</b> |
| <b>5IK100VEST2-□, 5IK100VES-□</b> |             | 3.1      | 3.7      | 4.7        | 5.6      | 7.8         | 9.3       | 10.7      | 14.8      | 17.8      | 21.4      | 29.7      | 35.6      | 40        | 40        | 40         | 40         | 40         | 40         |

#### 60 Hz

Unit : N·m

| Product Name                      | Speed r/min | 360      | 300      | 240        | 200      | 144         | 120       | 100       | 72        | 60        | 50        | 36        | 30        | 24        | 20        | 18         | 15         | 12         | 10         |
|-----------------------------------|-------------|----------|----------|------------|----------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|------------|
|                                   | Gear Ratio  | <b>5</b> | <b>6</b> | <b>7.5</b> | <b>9</b> | <b>12.5</b> | <b>15</b> | <b>18</b> | <b>25</b> | <b>30</b> | <b>36</b> | <b>50</b> | <b>60</b> | <b>75</b> | <b>90</b> | <b>100</b> | <b>120</b> | <b>150</b> | <b>180</b> |
| <b>5IK100VEST2-□, 5IK100VES-□</b> |             | 2.6      | 3.1      | 3.8        | 4.6      | 6.4         | 7.7       | 8.8       | 12.3      | 14.7      | 17.6      | 24.5      | 29.4      | 34.6      | 40        | 40         | 40         | 40         | 40         |

- The speed is calculated by dividing the motor's synchronous speed (50 Hz: 1500 r/min, 60 Hz: 1800 r/min) by the gear ratio.  
The actual speed is 2 to 10% less, depending on the load.

● A number indicating the gear ratio is entered where the box □ is located within the product name.

## Permissible Radial Load/Permissible Axial Load

→ page 56

## Permissible Inertia J of Combination Types

→ page 55

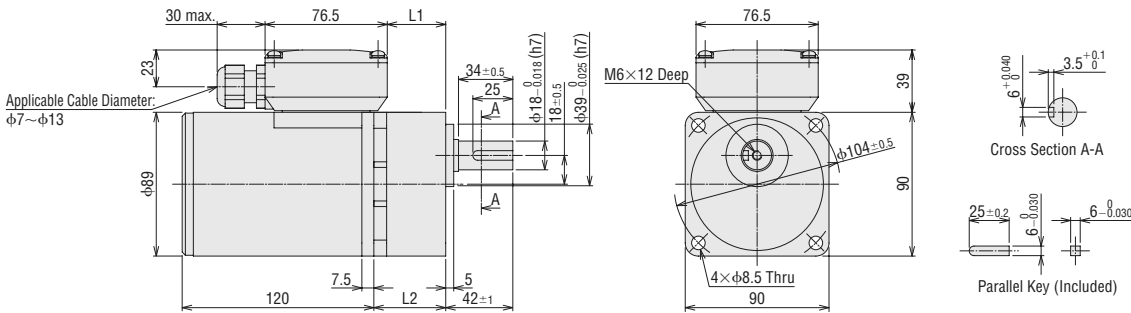
### Dimensions (Unit = mm)

- "Installation screws" are included with the combination type. Dimensions of installation screws → page 55
- The cable outlet of the terminal box can be changed and fixed to four different directions.
- A number indicating the gear ratio is entered where the box □ is located within the product name.

#### Combination Type

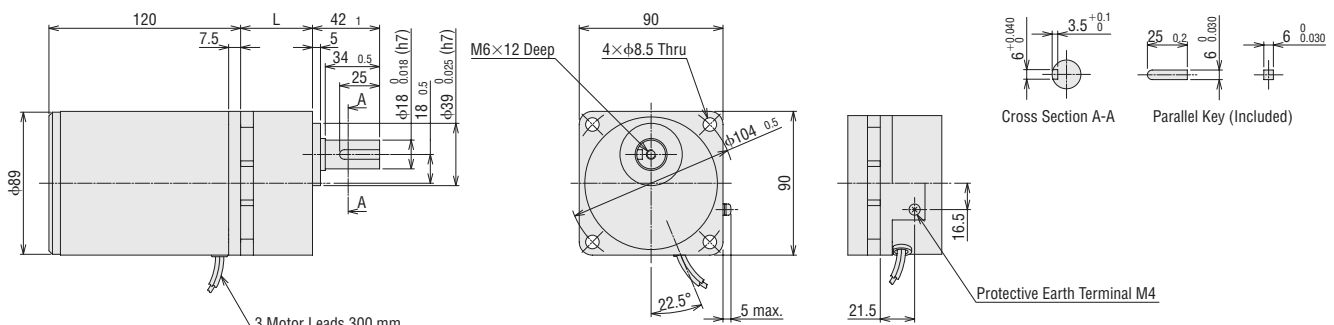
##### Terminal Box Type

| Product Name         | Motor Product Name | Gearhead Product Name | Gear Ratio    | L1   | L2 | Mass kg |
|----------------------|--------------------|-----------------------|---------------|------|----|---------|
| <b>5IK100VEST2-□</b> | 5IK100VGVR-EST2    | 5GVR□B                | <b>5~15</b>   | 36.6 | 45 | 4.7     |
|                      |                    |                       | <b>18~36</b>  | 49.6 | 58 |         |
|                      |                    |                       | <b>50~180</b> | 61.6 | 70 |         |



##### Lead Wire Type

| Product Name       | Motor Product Name | Gearhead Product Name | Gear Ratio    | L  | Mass kg |
|--------------------|--------------------|-----------------------|---------------|----|---------|
| <b>5IK100VES-□</b> | 5IK100VGVR-ES      | 5GVR□B                | <b>5~15</b>   | 45 | 4.4     |
|                    |                    |                       | <b>18~36</b>  | 58 |         |
|                    |                    |                       | <b>50~180</b> | 70 |         |



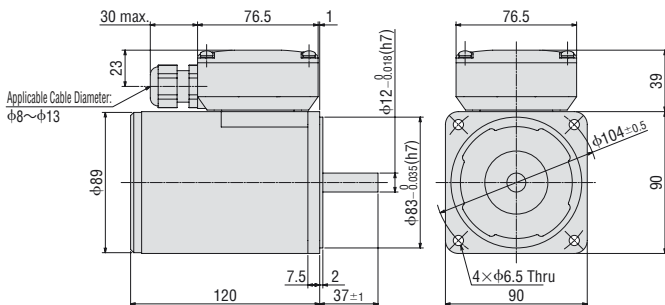
Detail Drawing of Protective Earth Terminal

#### Round Shaft Type

##### Terminal Box Type

**5IK100VA-EST2**

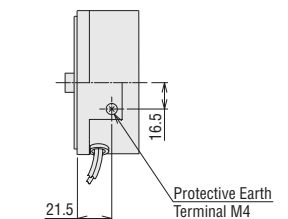
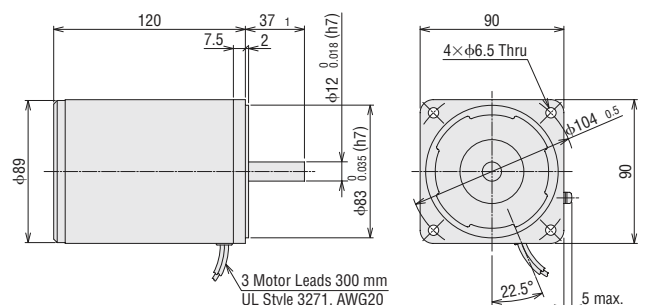
Mass: 3.2 kg



##### Lead Wire Type

**5IK100VA-ES**

Mass: 2.9 kg



Detail Drawing of Protective Earth Terminal

K1S Series

6 W  
110~230 VAC

15 W  
110~230 VAC

25 W  
110~230 VAC

40 W  
110~230 VAC

60 W  
110~230 VAC

90 W  
110~230 VAC

K1S Series

60 W  
220, 230 VAC

100 W  
220, 230 VAC

100 W  
220, 230 VAC  
Hollow/Solid Shaft

200 W  
220~400 VAC

K1S Series

60 W  
220, 230 VAC

100 W  
220, 230 VAC

With Electromagnetic Brake