

## EZHC Series

# EZHC4



### Specifications

| Model                           | Incremental Type                                   |                       | EZHC4A-□I             |                |                 |                 | EZHC4A-□MI              |   |      |     |     |  |
|---------------------------------|--|-----------------------|-----------------------|----------------|-----------------|-----------------|-------------------------|---|------|-----|-----|--|
|                                 | Absolute Type                                      |                       | EZHC4A-□A             |                |                 |                 | EZHC4A-□MA              |   |      |     |     |  |
| Motor Type                      | Stepping Motor with Built-in Rotor-Position Sensor |                       |                       |                |                 |                 |                         |   |      |     |     |  |
| Drive Method                    | Ball Screw   |                       |                       |                |                 |                 |                         |   |      |     |     |  |
| Electromagnetic Brake           | Not equipped                                       |                       |                       |                |                 | Equipped        |                         |   |      |     |     |  |
| Speed Range                     | mm/s   |                       | ~400                  |                | ~600            |                 | ~400                    |   | ~600 |     |     |  |
| Max. Transportable Mass         | kg   | Horizontal Direction* | —                     |                | —               |                 | —                       |   | —    |     |     |  |
|                                 |  | Vertical Direction    | —                     |                | —               |                 | 6.5                     |   | 4.5  |     |     |  |
| Max. Acceleration               | m/s <sup>2</sup>                                   | Horizontal Direction  | —                     |                | —               |                 | —                       |   | —    |     |     |  |
|                                 |  | Vertical Direction    | —                     |                | —               |                 | 2.5                     |   | —    |     |     |  |
| Max. Thrust Force               | N  | kgf                   | 65                    | 6.5            | 55              | 5.5             | 65                      | 6.5   | 55   | 5.5 |     |  |
| Push Force                      | N  | kgf                   | 65                    |                | 6.5             |                 | (Speed: 6 mm/s or less) |   |      |     |     |  |
| Max. Holding Brake Force        | N  | kgf                   | Power ON              |                | 65              |                 | 6.5                     |   | 65   |     | 6.5 |  |
|                                 |  |                       | Power OFF             |                | —               |                 | —                       |   | —    |     | —   |  |
|                                 |  |                       | Electromagnetic Brake |                | —               |                 | —                       |   | 65   |     | 6.5 |  |
| Repetitive Positioning Accuracy | mm   |                       | ±0.02                 |                |                 |                 | —                       |   |      |     |     |  |
| Resolution                      | mm   |                       | 0.01                  |                |                 |                 | —                       |   |      |     |     |  |
| Lead                            | mm   |                       | 12                    |                |                 |                 | —                       |   |      |     |     |  |
| Stroke                          | mm   |                       | 50, 100, 200, 300     |                |                 |                 | —                       |   |      |     |     |  |
| Cylinder Mass                   | kg   |                       | Stroke                | 50 : 1.7 (1.9) | 100 : 2.0 (2.2) | 200 : 2.5 (2.7) | 300 : 3.0 (3.2)         | Figure in the parentheses shows the mass of the model with electromagnetic brake. |      |     |     |  |
| Ambient Temperature             | °C   |                       | 0 ~ +40 (Nonfreezing) |                |                 |                 | —                       |   |      |     |     |  |

\*In a horizontal direction, the value cannot be shown because it varies by frictional resistance of the sliding surface.

●See page 54 for the specification and dimensions of the controller.

### General Specifications

| Item                  | Specification   |
|-----------------------|---|
| Insulation Resistance | 100 MΩ minimum when measured by a DC 500 V megger between the following places.<br>• Windings — Case<br>• Case — Windings of electromagnetic brake<br>(Only for electromagnetic brake equipped model)       |
| Dielectric Strength   | Sufficient to withstand the following for one minute.<br>• Windings — Case AC 1.0 kV 50 Hz<br>• Case — Windings of electromagnetic brake AC 1.0 kV 50 Hz<br>(Only for electromagnetic brake equipped model) |

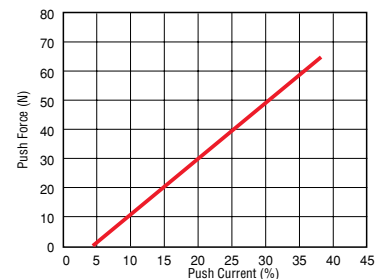
### Cylinder/Controller Combinations

| Type             | Electromagnetic Brake | Model      | Cylinder Model | Controller Model |
|------------------|-----------------------|------------|----------------|------------------|
| Incremental Type | Not equipped          | EZHC4A-□I  | EZHC4A-□       | EZMC13I-A        |
|                  | Equipped              | EZHC4A-□MI | EZHC4A-□M      |                  |
| Absolute Type    | Not equipped          | EZHC4A-□A  | EZHC4A-□       | EZMC13A-A        |
|                  | Equipped              | EZHC4A-□MA | EZHC4A-□M      |                  |

\*The box (□) in the model name and cylinder model name represents the code for stroke length.

### Push Force

Push force can be set through "Push current setting" in the program mode.



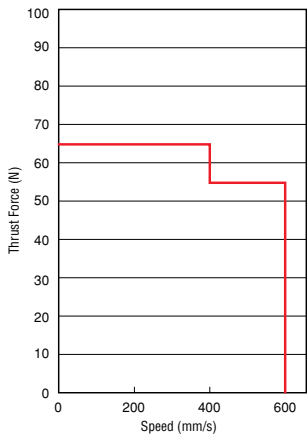
Notes:

• The above value is a reference, not guaranteed.

• When the cylinder is used in a vertical direction, an external force calculated by multiplying the weight of the carried object by the rate of gravitational acceleration is applied. Therefore, the cylinder push force must be set so as to accommodate this external force. Measure the push force using an actual load, and set an appropriate push current.

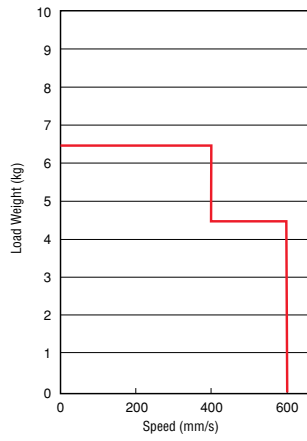
**Correlation Diagram of Speed and Thrust Force**

● Horizontal Direction/  
Vertical Direction



**Correlation Diagram of Speed and Load Weight**

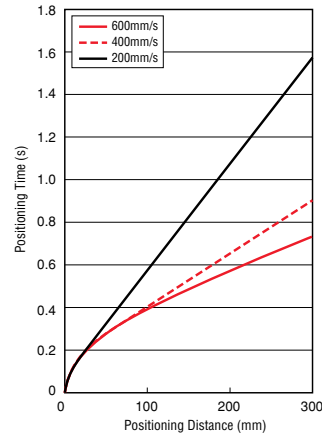
● Vertical Direction



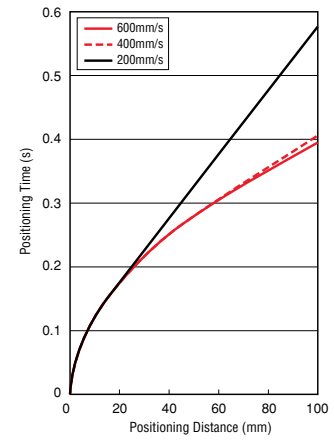
**Minimum Positioning Time**

Acceleration: 2.5 m/s<sup>2</sup> Starting Speed: 6 mm/s

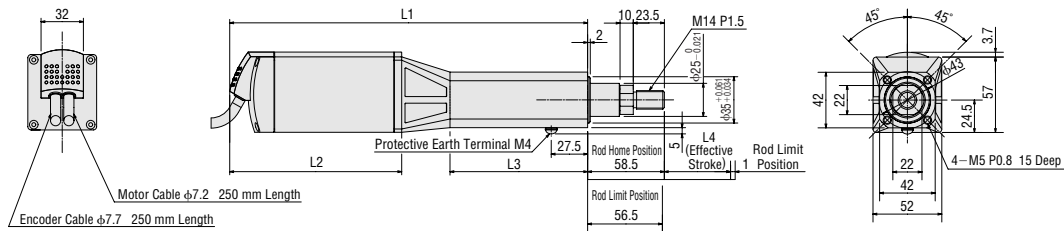
● Horizontal Direction/ Vertical Direction



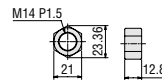
Enlargement of Positioning Distance under 100 mm



**Dimensions unit: mm**



● Nut (included) 1 piece



| Cylinder Model | L1    | L2  | L3  | L4  |
|----------------|-------|-----|-----|-----|
| EZHC4A-05      | 270.5 | 130 | 104 | 50  |
| EZHC4A-05M     | 300.5 | 160 |     |     |
| EZHC4A-10      | 320.5 | 130 | 154 | 100 |
| EZHC4A-10M     | 350.5 | 160 |     |     |
| EZHC4A-20      | 420.5 | 130 | 254 | 200 |
| EZHC4A-20M     | 450.5 | 160 |     |     |
| EZHC4A-30      | 520.5 | 130 | 354 | 300 |
| EZHC4A-30M     | 550.5 | 160 |     |     |