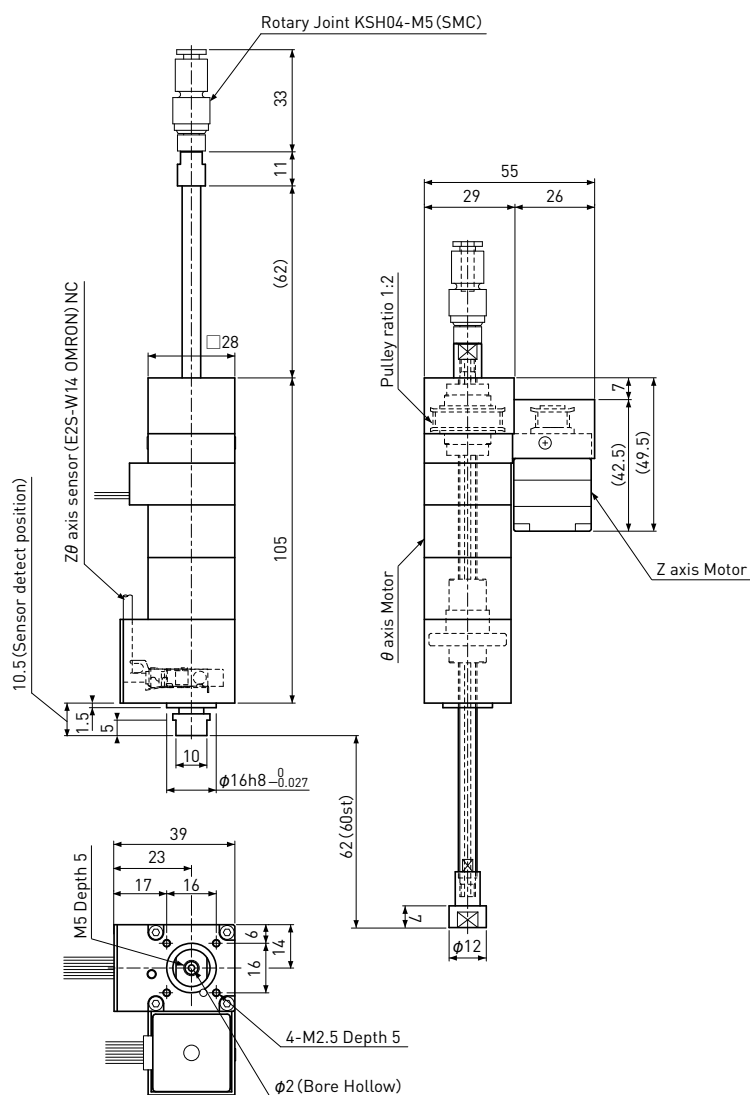


## HDVZ28 - G10 - 060 N

□25/28 (NEMA10/11) 2-phase Stepping Motor  
Lead 10mm Travel 60mm



Parts List

|                         |                                     |                                           |
|-------------------------|-------------------------------------|-------------------------------------------|
| Motor                   | Z                                   | NEMA 10 Stepping Motor 0.7A/phase         |
|                         | $\theta$                            | NEMA 11 Hollow Stepping Motor 0.67A/phase |
| Drive Screw             | Ball Screw $\phi 6$ (Lead 10mm)     |                                           |
| Sliding Guide           | Ball Spline $\phi 6$ mm             |                                           |
| Sensor (Linear, Rotary) | Proximity Sensor E2S-W14-1M (OMRON) |                                           |

Z-axis Motor

|           |        |
|-----------|--------|
| A         | Red    |
| $\bar{A}$ | Yellow |
| B         | Blue   |
| $\bar{B}$ | Orange |

UL1061,AWG26 (300mm)

 $\theta$  -axis Motor

|           |       |
|-----------|-------|
| A         | Black |
| $\bar{A}$ | Green |
| B         | Red   |
| $\bar{B}$ | Blue  |

UL1061,AWG24 (300mm)

Sensor (Z,  $\theta$  -axis)

|         |       |
|---------|-------|
| +12~24V | Brown |
| LS      | Black |
| GND     | Blue  |

1000mm

## Specifications

※The numbers in table below are reference. Detail dimensions will be provided by drawing.

| Items                      | Z Axis                    | $\theta$ Axis                                |
|----------------------------|---------------------------|----------------------------------------------|
| Movable Range              | 60mm                      | $\pm 360^\circ$                              |
| Repeatability              | $\pm 0.020$ mm            | $\pm 0.03^\circ$                             |
| Resolution                 | 25 $\mu$ m<br>(Full Step) | 1.8°<br>(Full Step)                          |
| Maximum Speed              | 200mm / sec               | 3 rev / sec                                  |
| Maximum acceleration       | 1 m/sec <sup>2</sup>      | 150 $\pi$ rad/sec <sup>2</sup>               |
| Reference Thrust Force     | 5N                        | —                                            |
| Maximum Permissible Moment | —                         | 0.15 $\times 10^{-4}$ kg·m <sup>2</sup> (※1) |
| Reduction ratio            | 1/2                       | —                                            |
| Mass                       | 440g                      |                                              |
| Operating Temperature      | 0~40°C (No Condensation)  |                                              |

※1 For the Maximum Permissible Moment, see "Reference of Moment of Inertia" table above.

※2 For the technical information, see "Actuator Technical Description".

Reference of Moment of Inertia

| Dia.         | Height       |              |
|--------------|--------------|--------------|
|              | Aluminum     | Steel        |
| $\phi 20$ mm | 340mm (300g) | 120mm (300g) |
| $\phi 30$ mm | 65mm (130g)  | 25mm (130g)  |
| $\phi 40$ mm | 20mm (75g)   | 7.5mm (75g)  |

## Precautions

- 1) The Z-axis does not have brake device. Please be careful when the power supply is switched off in case of Z-axis may free-fall.
- 2) Reference of Moment of Inertia table shows the theoretical values. KSS recommends that you should apply actual moment to the machine and confirm the safety operation before use.