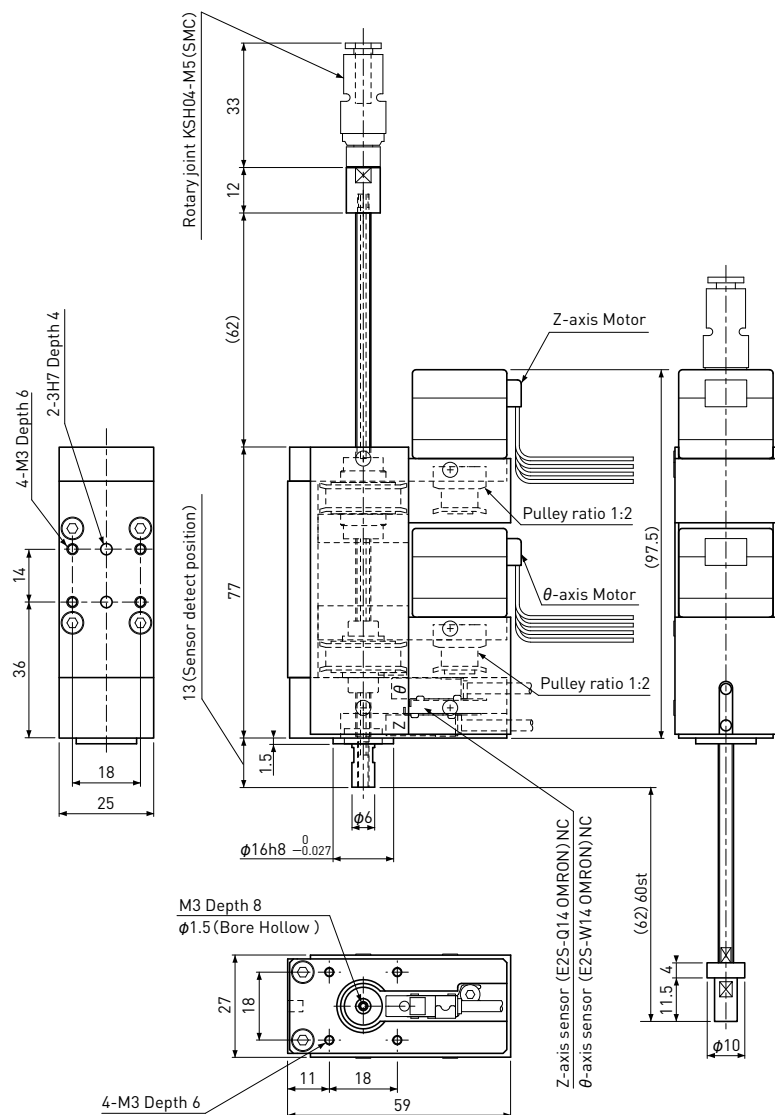


BDVZ04 - G04 - 060 N 01

☐ 25/NEMA 10 2-phase Stepping Motor
Lead 4mm Travel 60mm



Parts List

Motor	NEMA 10 Stepping Motor 0.7A/phase
Drive Screw	Ball Screw $\phi 4$ (Lead 4mm)
Sliding Guide	Ball Spline $\phi 4$ mm
Sensor	Z axis : Proximity Sensor E2S-Q14-1M (OMRON) NC
	θ axis : Proximity Sensor E2S-W14-1M (OMRON) NC

Motor(Z, θ -axis)

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

UL1061.AWG26(300mm)

Sensor(Z, θ -axis)

+12~24V	Brown
LS	Black
GND	Blue

1000mm

● Specifications

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

Items	Z Axis	θ Axis
Movable Range	60mm	$\pm 360^\circ$
Repeatability	$\pm 0.020\text{mm}$	$\pm 0.03^\circ$
Resolution	$10\mu\text{m}$ (Full Step)	0.9° (Full Step)
Maximum Speed	80mm / sec	3 rev / sec
Maximum acceleration	0.4 m/sec^2	$150\pi\text{ rad/sec}^2$
Reference Thrust Force	5N	—
Maximun Permissible Moment	—	$0.8 \times 10^{-5}\text{kg}\cdot\text{m}^2$ (※1)
Reduction ratio	1/2	1/2
Mass	370g	
Operating Temperature	$0\sim 40^\circ\text{C}$ (No Condensation)	

Reference of Moment of Inertia

Dia.	Height	
	Aluminum	Steel
φ 20mm	180mm (160g)	64mm (160g)
φ 30mm	36mm (70g)	12.5mm (70g)
φ 40mm	11mm (40g)	4mm (40g)

Precautions

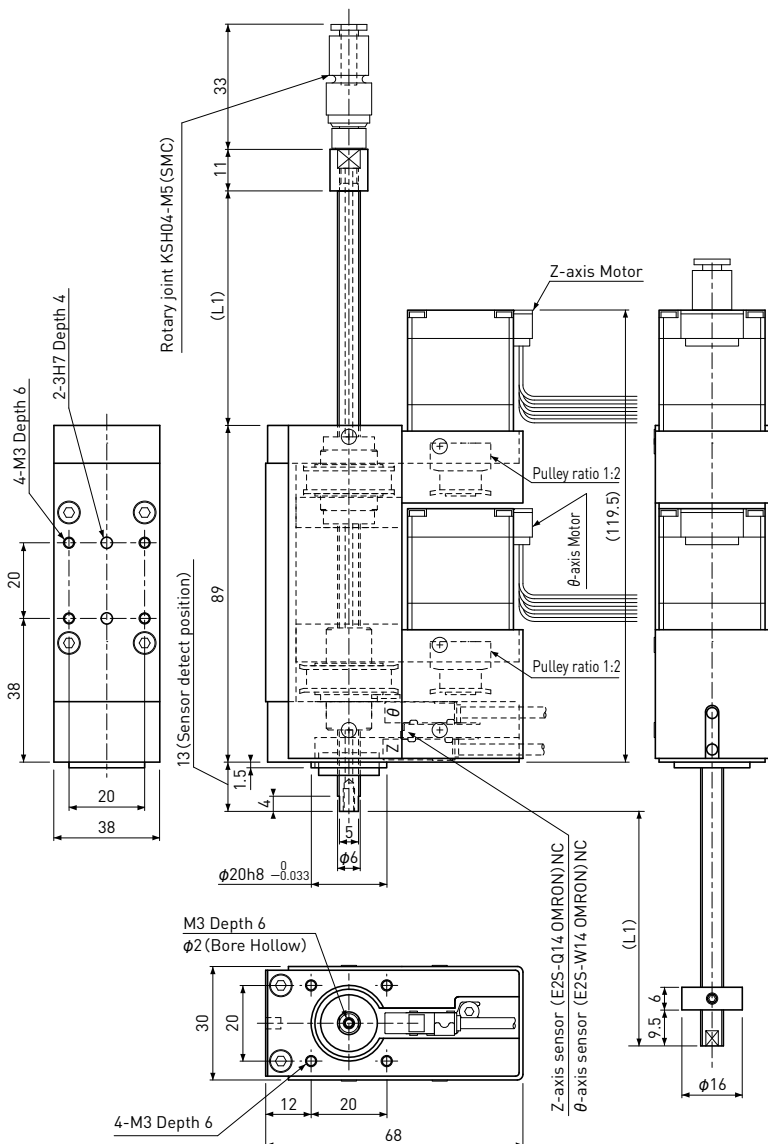
- 1) The Z-axis does not have brake device.
Please be careful when the power supply is switched off in case of Z-axis may free-fall.
- 2) Reference of Moment of Inertia table shows the theoretical values.
KSS recommends that you should apply actual moment to the machine and confirm the safety operation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

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

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

BDVZ06 - G10 - 060/120 N 02

□ 28/NEMA 11 2-phase Stepping Motor
Lead 10mm Travel 60/120mm



Parts List	
Motor	NEMA 11 Stepping Motor 1.5A/phase
Drive Screw	Ball Screw $\phi 6$ (Lead 10mm)
Sliding Guide	Ball Spline $\phi 6$ mm
Sensor	Z axis : Proximity Sensor E2S-Q14-1M (OMRON) NC θ axis : Proximity Sensor E2S-W14-1M (OMRON) NC

Motor (Z, θ -axis)

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

UL3265, AWG24 (600mm)

Sensor (Z, θ -axis)

+12~24V	Brown
LS	Black
GND	Blue

1000mm

	L1
Travel 60mm	62
Travel 120mm	122

Specifications

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

Items	Z Axis	θ Axis
Movable Range	60mm / 120mm	$\pm 360^\circ$
Repeatability	± 0.020 mm	$\pm 0.03^\circ$
Resolution	25 μ m (Full Step)	0.9° (Full Step)
Maximum Speed	200mm / sec	3 rev / sec
Maximum acceleration	1 m/sec ²	150 π rad/sec ²
Reference Thrust Force	10N	—
Maximun Permissible Moment	—	0.4 $\times 10^{-4}$ kg·m ² (※1)
Reduction ratio	1/2	1/2
Mass	590g (60 travel) , 600g (120 travel)	
Operating Temperature	0~40°C (No Condensation)	

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

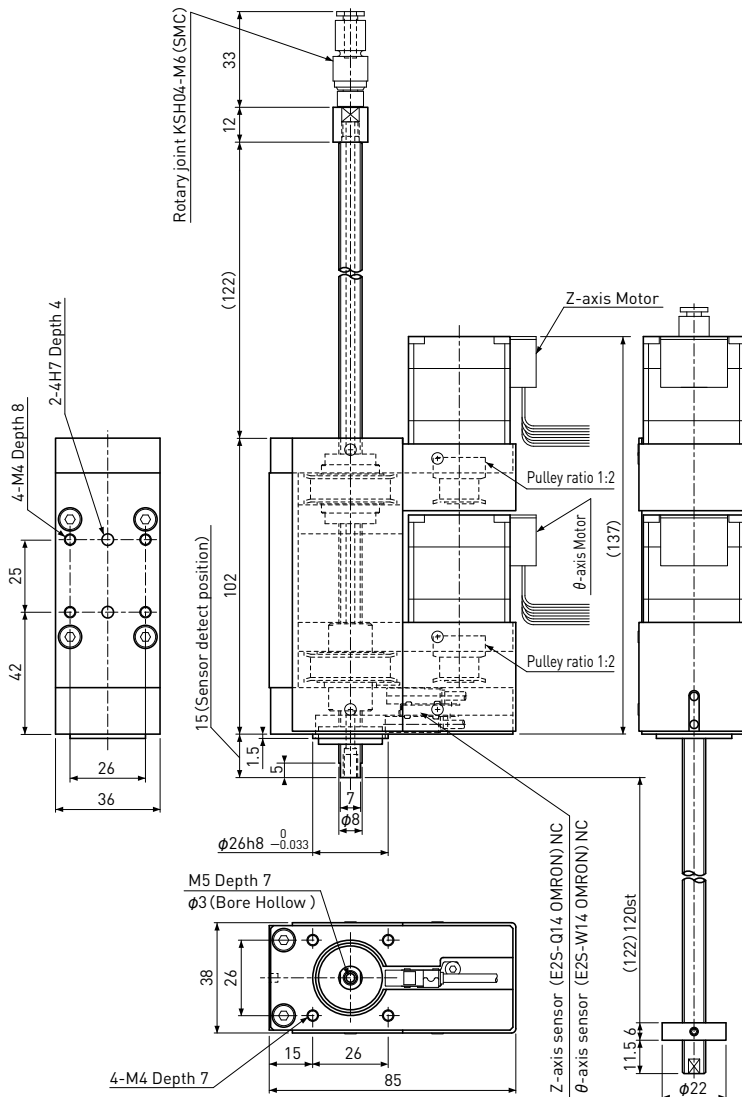
※2 For the technical information, see "Actuator Technical Description".

Reference of Moment of Inertia		
Dia.	Height	
	Aluminum	Steel
$\phi 30$ mm	180mm(360g)	65mm(360g)
$\phi 40$ mm	57mm(200g)	20mm(200g)
$\phi 50$ mm	23mm(130g)	8.5mm(130g)

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.

BDVZ08 - G10 - 120 N 03

☐ 35 / NEMA 14 2-phase Stepping Motor
Lead 10mm Travel 120mm


Parts List

Motor	NEMA 14 Stepping Motor 1.5A/phase
Drive Screw	Ball Screw $\phi 8$ (Lead 10mm)
Sliding Guide	Ball Spline $\phi 8$ mm
Sensor	Z axis : Proximity Sensor E2S-Q14-1M (OMRON) NC θ axis : Proximity Sensor E2S-W14-1M (OMRON) NC

Motor(Z, θ -axis)

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

UL3265,AWG24 (600mm)

Sensor(Z, θ -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	θ Axis
Movable Range	120mm	$\pm 360^\circ$
Repeatability	± 0.020 mm	$\pm 0.03^\circ$
Resolution	25 μ m (Full Step)	0.9° (Full Step)
Maximum Speed	200mm / sec	3 rev / sec
Maximum acceleration	1 m/sec ²	150 π rad/sec ²
Reference Thrust Force	15N	—
Maximum Permissible Moment	—	0.1 $\times 10^{-3}$ kg·m ² (※1)
Reduction ratio	1/2	1/2
Mass	1000g	
Operating Temperature	0~40°C (No Condensation)	

Reference of Moment of Inertia

Dia.	Height	
	Aluminum	Steel
$\phi 40$ mm	142mm(500g)	50mm(500g)
$\phi 50$ mm	58mm(320g)	20.5mm(320g)
$\phi 60$ mm	28mm(220g)	10mm(220g)

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.

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

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