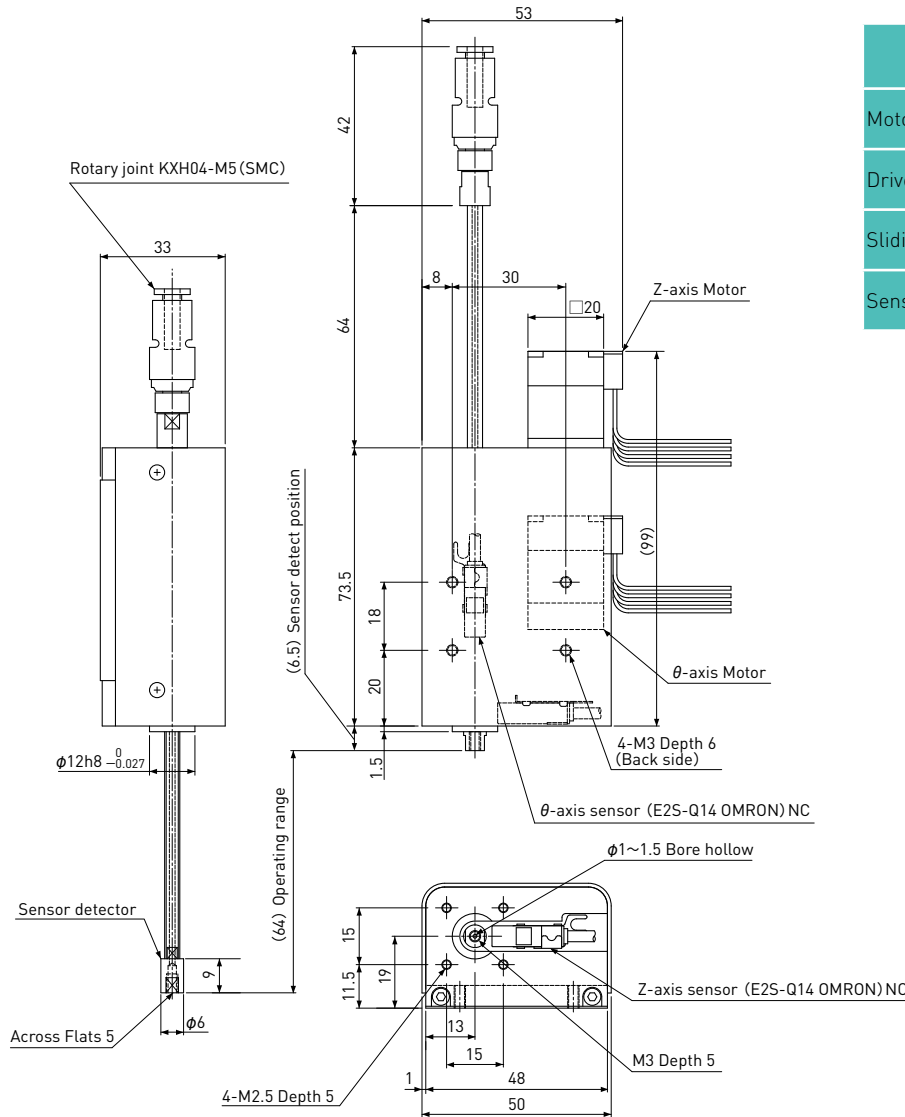


BD VZ 04-G 04 050 N 01

□20 2-phase Stepping Motor  
Lead 4mm Travel 50mm



Parts List	
Motor	□20 Stepping Motor 0.5A/phase
Drive Screw	Ball Screw φ4 (Lead 4mm)
Sliding Guide	Ball Spline φ4mm
Sensor	Proximity Sensor E2S-Q14 (OMRON)

Motor(Z, θ -axis)

A	Black
Ā	Green
B	Red
B̄	Blue

UL3265,AWG26 (300mm)

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	50mm	± 360°
Repeatability	±0.020mm	±0.03°
Resolution	10 μm (Full Step)	0.9° (Full Step)
Maximum Speed	80mm / sec	1080° / sec
Acceleration & Deceleration time	Min.0.2sec	Min. 0.04sec
Reference Thrust Force	5N	—
Maximun Permissible Moment	—	0.9 × 10 <sup>-5</sup> kg·m <sup>2</sup> (※)
Reduction ratio	1/2	1/2
Mass	300g	
Operating Temperature	0~40°C (No Condensation)	

Reference of Moment of Inertia		
Dia.	Height	
	Aluminum	Steel
φ 20mm	205mm (180g)	73mm (180g)
φ 30mm	40mm (80g)	14mm (80g)
φ 40mm	13mm (45g)	4.5mm (45g)

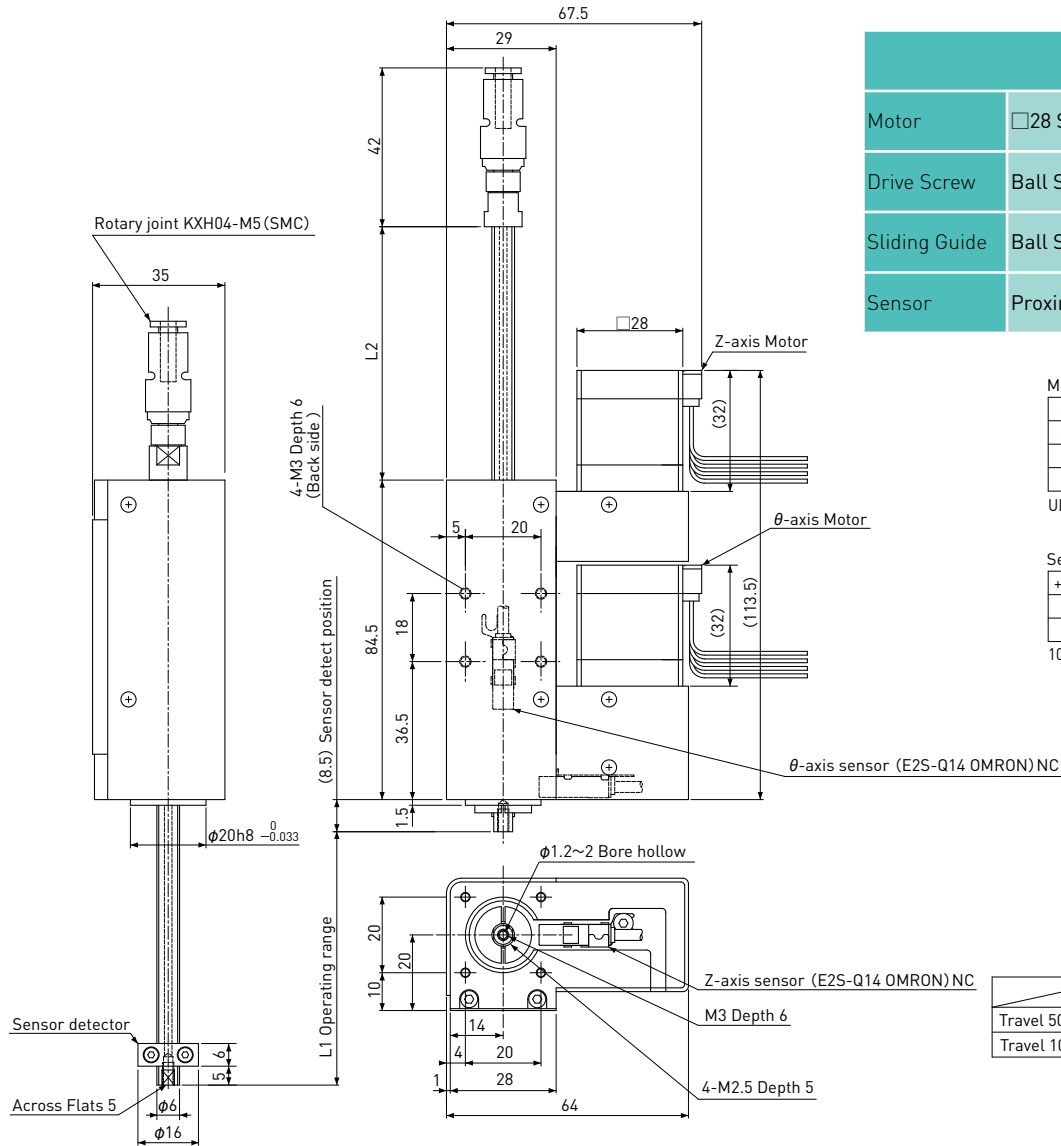
Precautions

- 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.

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

BD VZ 06-G 10 050/100 N 02

□28 2-phase Stepping Motor  
Lead 10mm Travel 50/100mm



Parts List	
Motor	□28 Stepping Motor 1.5A/phase
Drive Screw	Ball Screw $\phi 6$ (Lead 10mm)
Sliding Guide	Ball Spline $\phi 6$ mm
Sensor	Proximity Sensor E2S-Q14 (OMRON)

Motor(Z,  $\theta$  -axis)

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

UL3265,AWG24 (600mm)

Sensor(Z,  $\theta$  -axis)

+12~24V	Brown
LS	Black
GND	Blue

1000mm

	L1	L2
Travel 50mm	67	67
Travel 100mm	117	117

● Specifications

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

Items	Z Axis	$\theta$ Axis
Movable Range	50mm / 100mm	$\pm 360^\circ$
Repeatability	$\pm 0.020$ mm	$\pm 0.03^\circ$
Resolution	25 $\mu$ m (Full Step)	0.9° (Full Step)
Maximum Speed	200mm / sec	1080° / sec
Acceleration & Deceleration time	Min. 0.2sec	Min. 0.04sec
Reference Thrust Force	10N	—
Maximum Permissible Moment	—	0.5 $\times 10^{-4}$ kg·m <sup>2</sup> (※)
Reduction ratio	1/2	1/2
Mass	480g (50 travel) , 490g (100 travel)	
Operating Temperature	0~40°C (No Condensation)	

Reference of Moment of Inertia		
Dia.	Height	
	Aluminum	Steel
$\phi 30$ mm	225mm (445g)	80mm (445g)
$\phi 40$ mm	71mm (250g)	25mm (250g)
$\phi 50$ mm	29mm (160g)	10mm (160g)

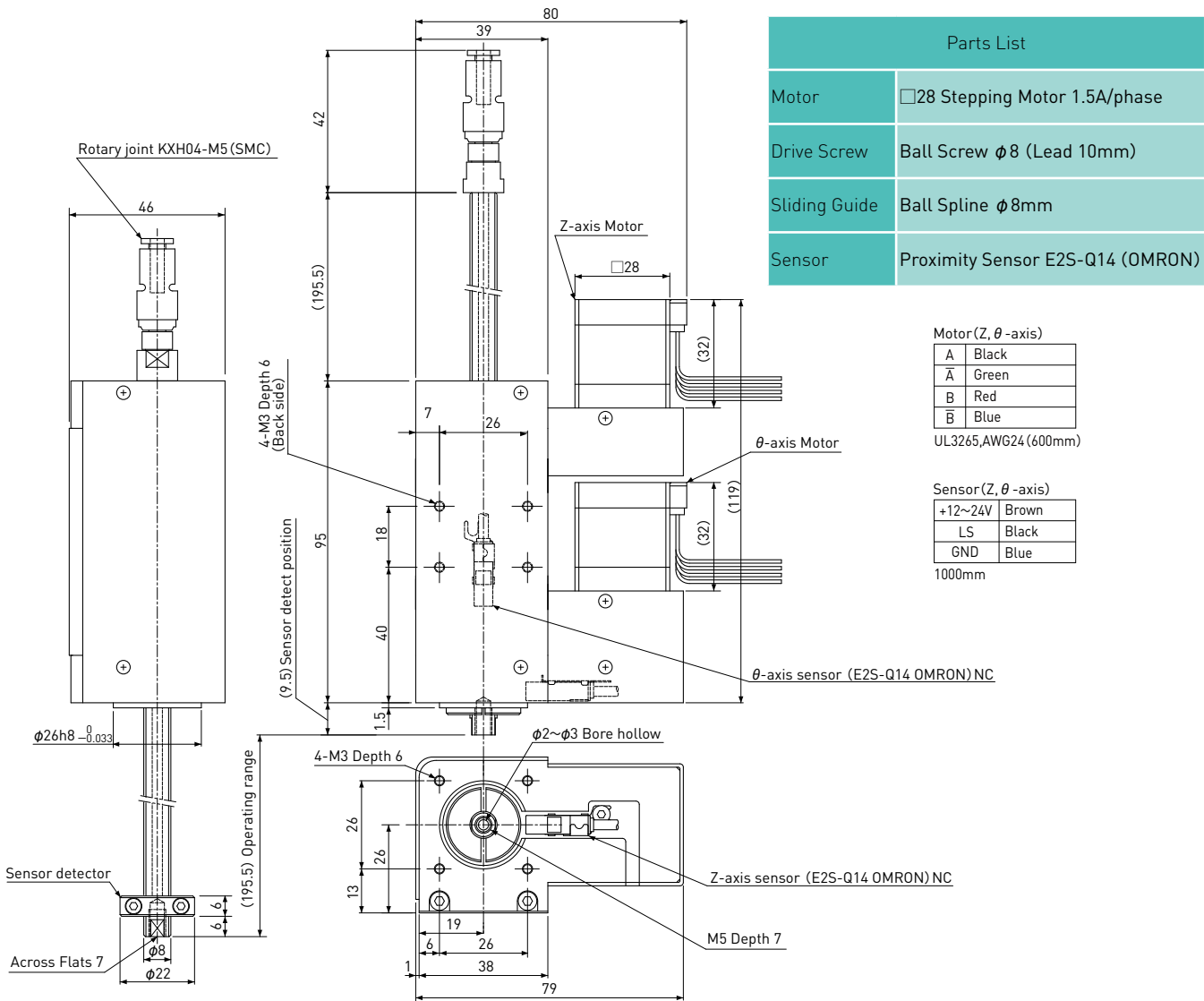
Precautions

- 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.

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

BD VZ 08-G 10 150 N 02

□28 2-phase Stepping Motor  
Lead 10mm Trave 150mm



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

Items	Z Axis	θ Axis
Movable Range	150mm	± 360°
Repeatability	±0.020mm	±0.03°
Resolution	25 μm (Full Step)	0.9° (Full Step)
Maximum Speed	200mm / sec	1080° / sec
Acceleration & Deceleration time	Min. 0.2sec	Min. 0.04sec
Reference Thrust Force	10N	—
Maximun Permissible Moment	—	0.5 × 10 <sup>-4</sup> kg·m <sup>2</sup> (※)
Reduction ratio	1/2	1/2
Mass	730g	
Operating Temperature	0~40°C (No Condensation)	

Reference of Moment of Inertia		
Dia.	Height	
	Aluminum	Steel
φ30mm	225mm(445g)	80mm(445g)
φ40mm	71mm(250g)	25mm(250g)
φ50mm	29mm(160g)	10mm(160g)

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.

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