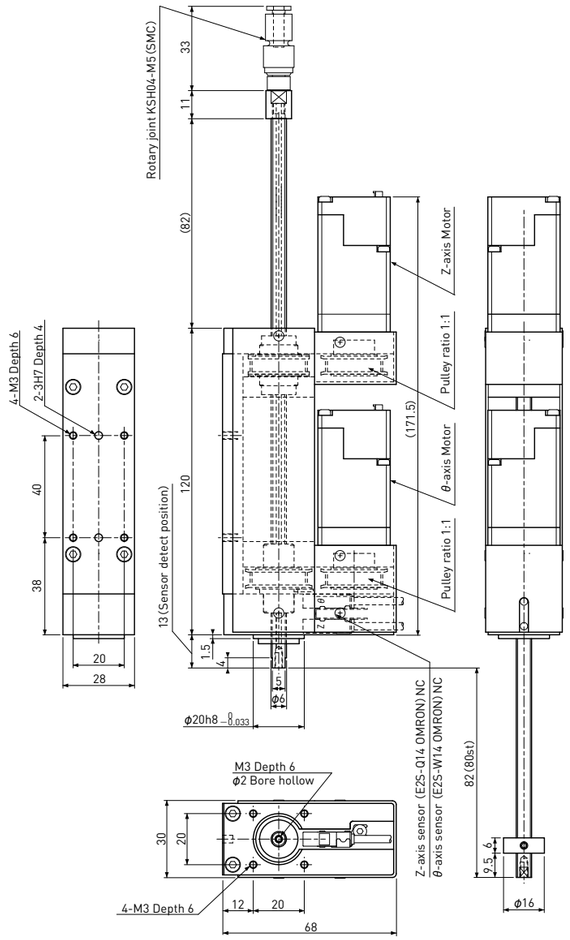
Standard style of VZθ BD series — Belt Drive High Speed type

BD28-G100 080 NEK2N-V

□28 / NEMA 11 2-phase Stepping-Servo Motor type
Lead 10mm Travel 80mm



Parts List	
Motor	NEMA 11 Stepping-Servo Motor TSM11Q-2RM
Drive Screw	Ball Screw φ6 (Lead 10mm)
Sliding Guide	Ball Spline φ6mm
Sensor	Z axis : Proximity Sensor E2S-Q14-1M (OMRON) NC θ axis : Proximity Sensor E2S-W14-1M (OMRON) NC

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	80mm (※1)	± 360°
Repeatability	±0.020mm	±0.03°
Resolution	0.5μm (※2)	0.018° (※2)
Maximum Speed	500mm / sec	25 rev/sec
Maximum acceleration	10 m/sec²	1000π rad/sec²
Reference Thrust Force	3N	—
Maximun Permissible Moment	—	0.15×10⁻⁴kg·m² (※3)
Reduction ratio	1/1	
Mass	740g	
Operating Temperature	0~40℃ (No Condensation)	

※1) Travel length (Movable Range) can be changed according to your request.
※2) Default setting : 20,000 steps / rev
※3) For the Maximum Permissible Moment, see "Reference of Moment of Inertia" table above.
※4) For the technical information, see " Actuator Technical Description".

Reference of Moment of Inertia		
Dia.	Height	
	Aluminum	Steel
φ30mm	65mm (128g)	23mm (128g)
φ40mm	21mm (74g)	7.5mm (74g)
φ50mm	8.5mm (46g)	3mm (46g)

Precautions
1) The Z-axis does not have brake device. Please be careful when the power supply is switched off in case 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.

●Connector Pin diagram

Pin No.	Name	Color	Description
1	Y2	Purple	Open drain outputs with freewheeling diode (30 VDC, 100 mA in max.)
2	Y1	Orange	
3	X4	White	Digital inputs (input high voltage 5~24 VDC, input low voltage below 1 VDC, signal frequency 1 MHz in max.)
4	X3	Brown	
5	X2	Yellow	Digital inputs (input high voltage 5~24 VDC, input low voltage below 2 VDC, signal frequency 1 MHz in max.)
6	X1	Gray	
7	RX-	Green and White	RS-422/485 interface differential signals
8	RX+	Green	
9	TX-	Blue and White	
10	TX+	Blue	
11	+	Red	V+ power supply(typ. 24 VDC)
12	—	Black	V- power ground(GND)

Note 1) All digital inputs & outputs are referenced to the power ground-(V-).
Note 2) Please use Mating Cable.