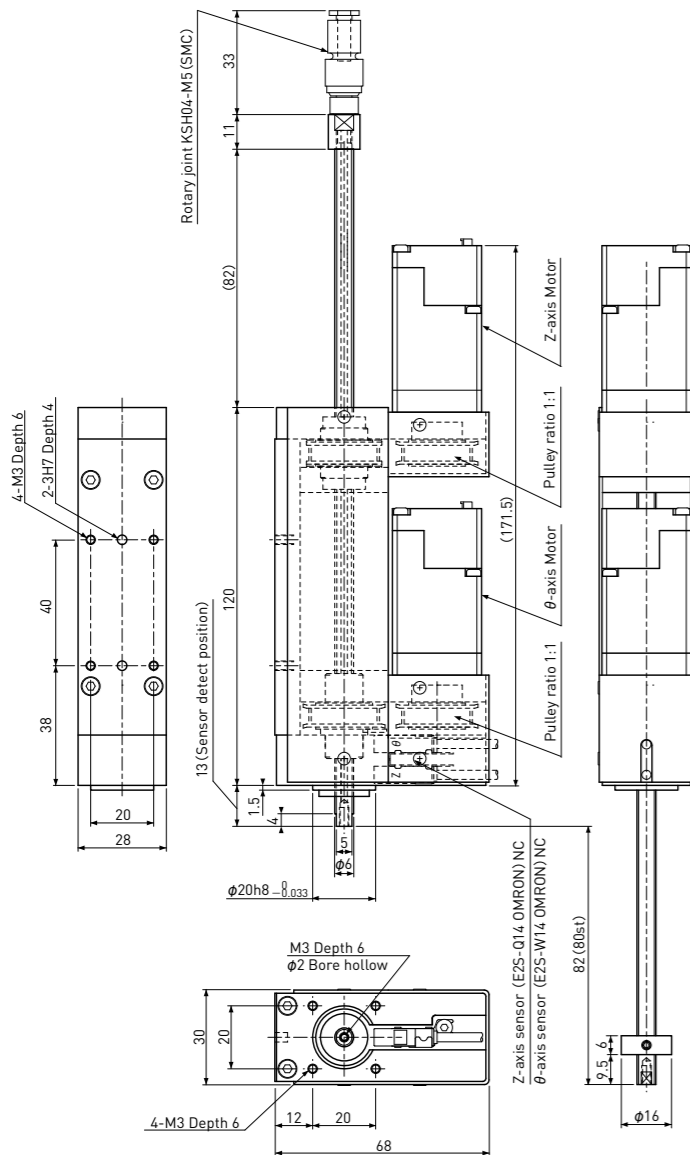


BD28-G100 080 NEK2N-V

□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	

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.

Specifications

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

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

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.

※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".