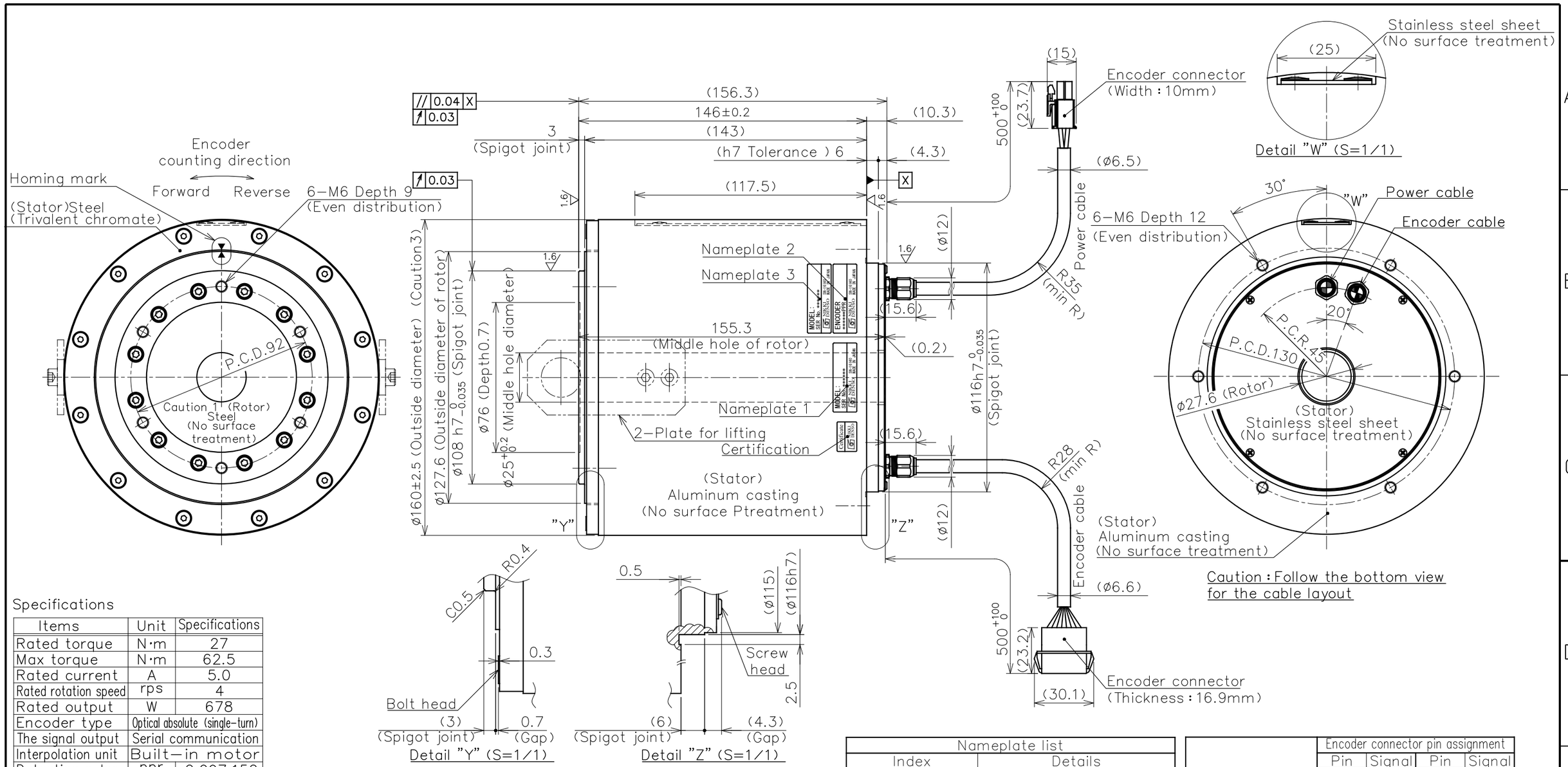


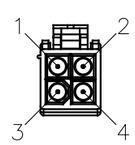
Specifications

Items	Unit	Specifications
Rated torque	N·m	27
Max torque	N·m	62.5
Rated current	A	5.0
Rated rotation speed	rps	4
Rated output	W	678
Encoder type	Optical absolute (single-turn)	
The signal output	Serial communication	
Interpolation unit	Built−in motor	
Detection pulse	ppr	2,097,152
Electrical detection resolution	arc second	0.618
Allowable moment load	N·m	280 ◆
Allowable axial load	N	22,500 ◆
Radial runout (No load)	mm	0.03
Axial runout (No load)	mm	0.03
Parallelism	mm	0.04
Absolute position accuracy	arc second	±50 (OP : ±10)
Repeat accuracy (Back and forth)	arc second	±1
Rotor moment of inertia	kg·m²	0.0074
Mass	kg	13.5
Magnetic pole detection	Absolute position detection	
Power Source	ACV	3-phase 200V AC
Paired servo driver	kW	0.8
Duty type	−	Continuous (S1)
Mounting attitude	Horizontal (Rotor facing up and down direction)	☆
Protection class	IP	44
Operating temperature	℃	0~40
Humidity (Non-condensing)	%	85 or lower
Vibration resistance	G	1
Withstand voltage	AC 1500V for 1 min only	
Insulation resistance	Ω	100M or higher

◆ The life of bearing and runout accuracy are different by load condition.
☆ Please make sure to consult with us if the mounting is other than horizontal attitude.

Caution
1.No surface treatment on the rotor.
Please remove the anticorrosive coating before using the motor.
2.Allowable axial load and allowable moment load indicated in the spec. sheet are the maximum allowable load when each load is independently activated. Please make sure to consult us in case of combined load at the axial load, radial load, and moment load to be activated, or life of the motor.
3.Motor outer periphery is the casting surface, and certain irregularity may be found.
4.Please do not wire the pin (A6~B7) which is reserved for encoder manufacturer to avoid the encoder troubles.

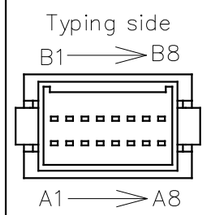
Nameplate list	
Index	Details
Nameplate1	Motor serial No.
Nameplate2	Encoder type, Resolution
Nameplate3	Encoder software



Power connector pin assignment

Pin	Signal	Line color
1	U	Red
2	V	White
3	W	Black
4	Ground	Green

Housing : 172167−1 (TE)
Contact : 170364−1 (TE)



Encoder connector pin assignment

Pin	Signal	Pin	Signal	
A1	EP5	A5	N.C.	
B1	GND	B5	N.C.	
A2	EP5	A6	Reserved	Caution4
B2	GND	B6	Reserved	Caution4
A3	SD1	A7	Reserved	Caution4
B3	SD1*	B7	Reserved	Caution4
A4	N.C.	A8	N.C.	
B4	N.C.	B8	FG	

JST
Housing : J21DPM−16V−KY
Contact : SJ2M−002GF−M1.0N

Rev. mark Entry no.	Rev. note	APPROVED DATE	CHECKED DATE	DESIGNED DATE
△				
△				
△				

NOTE File name : SE−79460.dwg

Approved	Checked	Designed

NIKKI DENSO CKD NIKKI DENSO CO., LTD

Entry no. R1−7176 6
Surface treatment: Refer drawing
Material: Refer drawing
Scale 1 / 2
Third angle projection

Product no. 248−0160
Model: DISC motor DD160−146−LS (ABS) DD16−681L04CNN
Title: Dimensions (ABS)
Drawing No. SE−79460
REV.