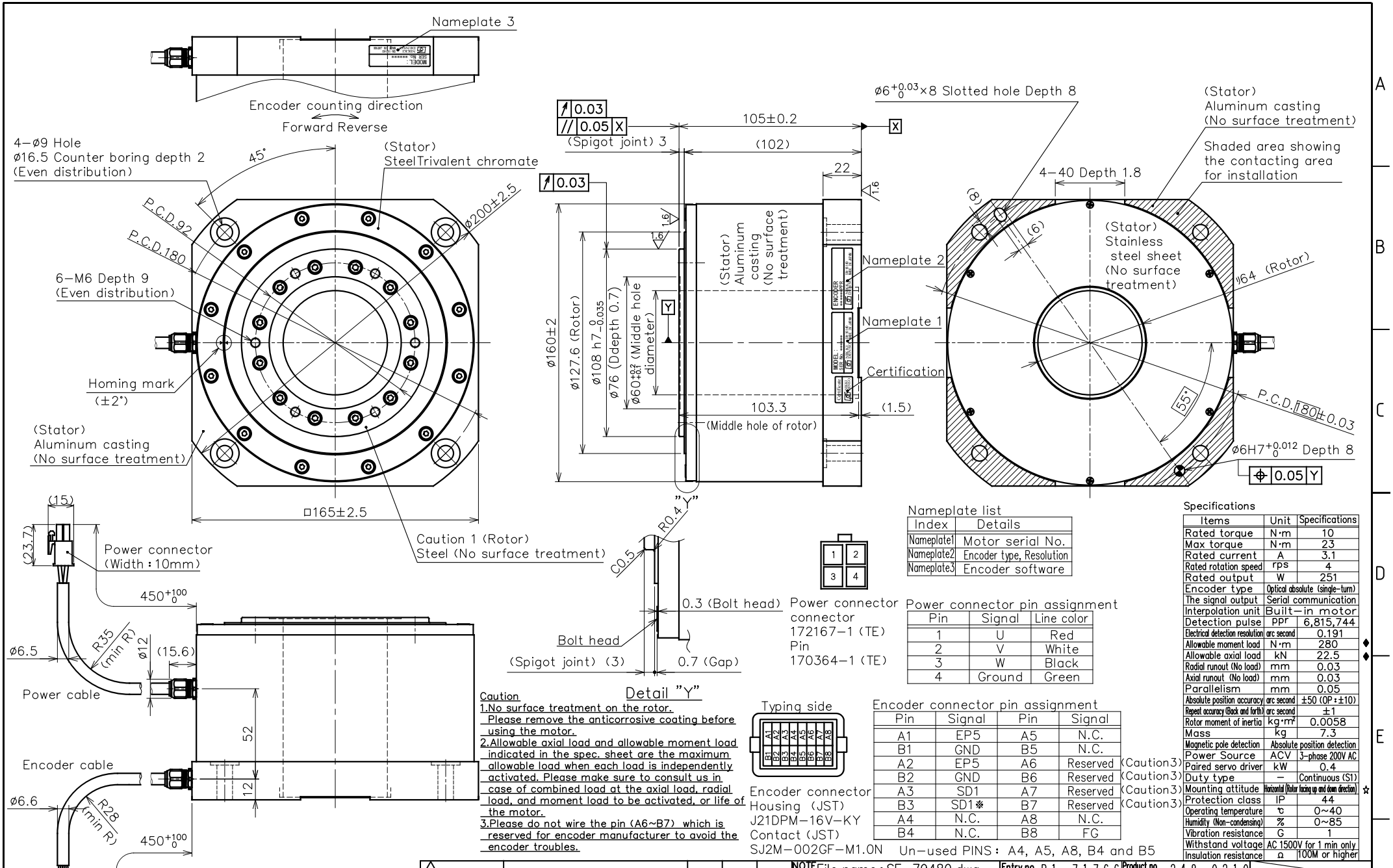

Nameplate list

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

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. Please do not wire the pin (A6~B7) which is reserved for encoder manufacturer to avoid the encoder troubles.

Encoder connector pin assignment

Pin	Signal	Pin	Signal	
A1	EP5	A5	N.C.	
B1	GND	B5	N.C.	
A2	EP5	A6	Reserved	(Caution3)
B2	GND	B6	Reserved	(Caution3)
A3	SD1	A7	Reserved	(Caution3)
B3	SD1※	B7	Reserved	(Caution3)
A4	N.C.	A8	N.C.	
B4	N.C.	B8	FG	

Un−used PINS : A4, A5, A8, B4 and B5

Specifications

Items	Unit	Specifications	
Rated torque	N·m	10	
Max torque	N·m	23	
Rated current	A	3.1	
Rated rotation speed	rps	4	
Rated output	W	251	
Encoder type	Optical absolute (single−turn)		
The signal output	Serial communication		
Interpolation unit	Built−in motor		
Detection pulse	ppr	6,815,744	
Electrical detection resolution	arc second	0.191	
Allowable moment load	N·m	280	◆
Allowable axial load	kN	22.5	◆
Radial runout (No load)	mm	0.03	
Axial runout (No load)	mm	0.03	
Parallelism	mm	0.05	
Absolute position accuracy	arc second	±50 (OP : ±10)	
Repeat accuracy (Back and forth)	arc second	±1	
Rotor moment of inertia	kg·m²	0.0058	
Mass	kg	7.3	
Magnetic pole detection	Absolute position detection		
Power Source	ACV	3−phase 200V AC	
Paired servo driver	kW	0.4	
Duty type	−	Continuous (S1)	
Mounting attitude	Horizontal (Rotor facing up and down direction)		☆
Protection class	IP	44	
Operating temperature	℃	0~40	
Humidity (Non−condensing)	%	0~85	
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.

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

NOTE File name : SE−79480.dwg

Approved	Checked	Designed

NIKKI DENSO CKD NIKKI DENSO CO., LTD

Entry no. R,1−7,1,7,6,6
Surface treatment: Refer drawing
Material: Refer drawing
Scale: 1 / 2
Third angle projection

Product no. 2,4,8−0,2,1,0
Model: τDISC motor DD160−105−FS (ABS) DD16−251F04CNN
Title: Dimensions (ABS)
Drawing No. SE−79480
REV.