

τ DISC ND-s HS Series Model and motor type description

○ Motor type

ND

110

-

85

-

F

S

P

-

HS

② ⑤ ⑥ ⑦ ③ ⑬ ④ ⑭

○ Model

NMR

-

S

A

U

I

A2

A

-

551

A

P

① ② ⑤ ⑥ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭

NMR...Direct drive motor Series			
②	Middle product classification (1)	Motor type	ND...ND-s Series/ ND-s HS Series
		Model	S...ND-s Series/ ND-s HS Series
③	Middle product classification (2)		S...ND-s Series/ ND-s HS Series/ DD-s Series/ HD-s Series
④	Middle product classification (3)		HS...ND-s HS Series
⑤	Nominal diameter *1	With flange	Flange less
		A...110 (Actual range 110 to 119 mm)	R...140 (Actual range 140 to 149 mm) S...180 (Actual range 180 to 189 mm)
⑥	Nominal height *1	With flange	Flange less
		U...85 (Actual range 80 to 99 mm)	E...70/95 (Actual range 70 to 95 mm) F...95 (Actual range 96 to 119 mm)
⑦	Motor flange	F...With flange	L...Flange less
⑧	Encoder type	I...Incremental encoder	
⑨	Power supply voltage	A2...200 VAC	
⑩	Order of design	A→B→C...Starting from A	
⑪	Rated output *2	Example) 551 ... 55 1 = 55 × 10 ¹ = 550W <div style="margin-left: 20px;"> └ Exponential part of powers of 10 └ Significant figures </div>	
⑫	Brake (with or without)	A...Without brake	
⑬	Table surface rotation accuracy	Without...Standard specification	P...High accuracy type (option)
⑭	Special model symbol	Without...Standard specification	-R + sequential number...Quasi standard spec -S + sequential number...Special model spec

*1 The motor type is represented by a numerical value. Nominal dimensions may be different from actual dimensions. For details, refer to the dimensions.
 *2 Approximate value.

* Dimensions are subject to change without prior notice to improve the product. Before designing, download the latest dimensions from our website.

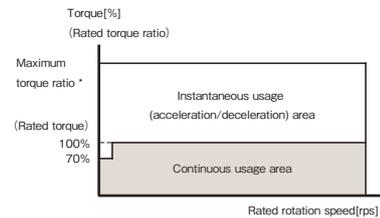
About the encoder type

The encoder type of the ND-s HS Series is the incremental encoder only.

Common specifications

Ambient operating temperature	0 to 40°C
Ambient operating humidity	85%RH or less; no condensation
Installation location	Do not install in a harmful atmosphere containing corrosive gas, grinding oil, metal dust, oil, etc. Install in an indoor place not exposed to direct sunlight.
Installation direction	Horizontal with the rotor facing upward. *When the installation direction is not horizontal with the rotor facing upward, consult with our sales staff.
Cooling method	Natural air cooling
Insulation class	Class F
Withstand voltage	1,500 VAC, 1 minute
Protection class	IP42
Height above sea level	1,000 m or less
Vibration resistance	1G (3 directions, 2 hours each)
Shock resistance	30G (3 directions, 2 times each)

Torque characteristics



* The maximum torque ratio depends on the motor type.
(Maximum torque/Rated torque)

If the locking operation or an equivalent operation (ultra low speed rotation or reciprocation within a very small range of angles) is performed continuously, the electronic thermal value may be reduced for motor protection.
 When you plan to perform the above operation, contact our sales staff.

Individual specifications

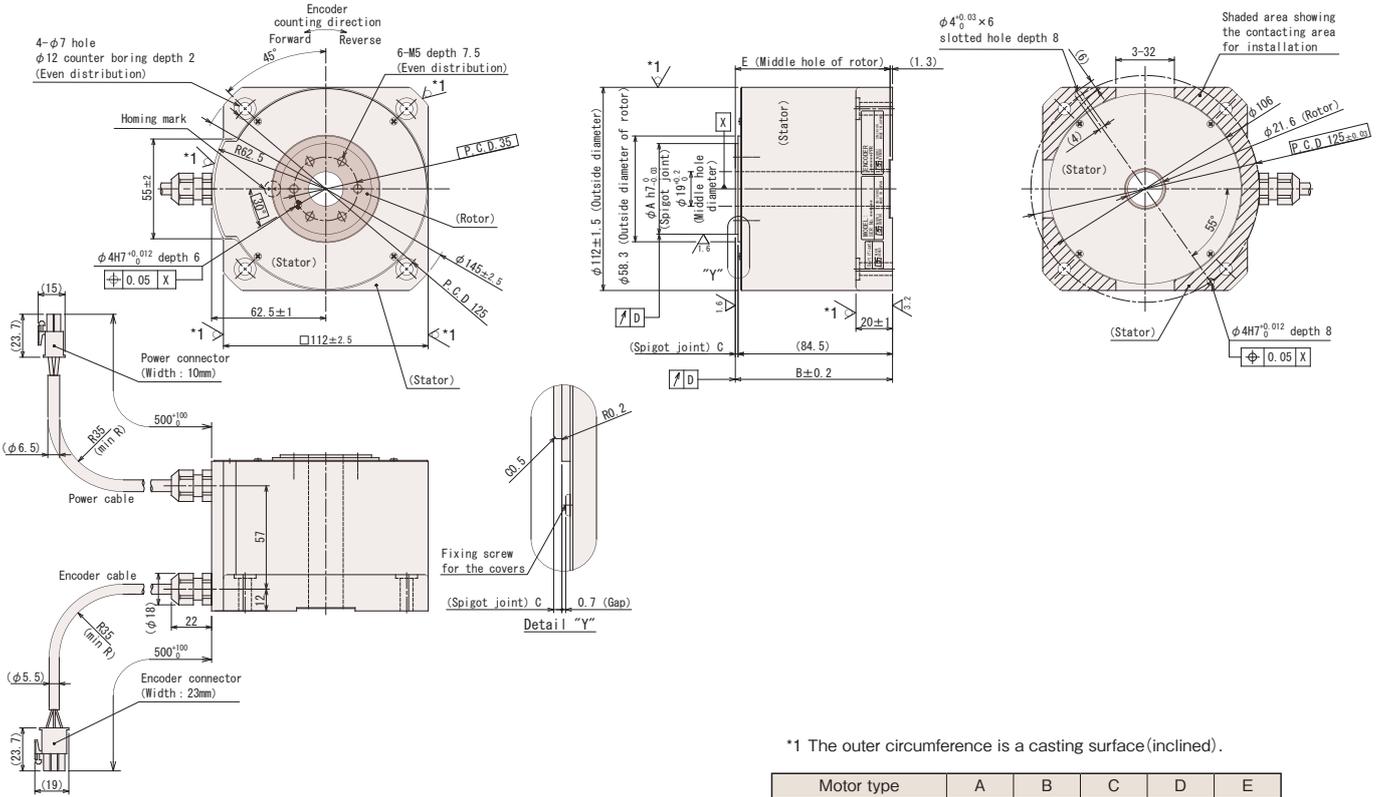
Motor type *1	ND110-85-FS(P)-HS		ND140-70-LS(P)-HS		ND140-95-LS(P)-HS		ND180-95-LS(P)-HS	
Model *1	NMR-	SAUIA2A-551A(P)	SREIA2A-661A(P)	SRFIA2A-102A(P)	SSEIA2A-162A(P)			
Flange type		With flange	Flange less		Flange less		Flange less	
Power supply used	ACV	200	200	200	200			
Outside diameter	mm	112	145	145	180			
Height *2	mm	86 (85.8)		73 (72.8)	98 (97.8)	94 (93.8)		
Rated torque *3	N·m	5.9	8	9.6	15	24		
Max torque *3	N·m	14.1	19.2	22	37	65		
Rated rotation speed *3	rps	15		11	11	11		
Rated output *3	W	556	753	663	1,036	1,658		
Rated current *3	A	3.4	5	5.6	8.1	8.4		
Encoder type		Incremental		Incremental	Incremental	Incremental		
Detection pulse	ppr	1,280,000		1,600,000	1,600,000	1,680,000		
Detection resolution	arcsec	1.02		0.810	0.810	0.772		
Allowable moment load *4	N·m	6.1		17.3	17.3	27.3		
Allowable axial load *4	kN	1.1		2.4	2.4	2.9		
Table surface rotation accuracy *5	Radial run out (no load)	μm		μm		μm		
	Axial run out (no load)	μm		μm		μm		
Absolute Positioning accuracy *6	arcsec			±15 (When the absolute position compensation function option is used)				
Repeated Positioning accuracy (when reciprocating)	arcsec	±2		±1				
Rotor moment of inertia	kg·m ²	0.00061		0.00084	0.00134	0.0053		
Weight	kg	3.1		4.1	5.9	8.8		
Magnetic pole detection method		Selection of magnetic pole sensor detection or automatic magnetic pole detection						
Paired servo driver	VPH Series	NCR-H□	2401A-□□□	2801A-□□□	2801A-A-□□□	2152A-A-□□□	2152A-A-□□□	

*1 Shown in parentheses are the motor type and model of the high accuracy type (option).
 *2 Shown in parentheses is the value of the high accuracy type (option).
 *3 The specification values are those obtained when the τ DISC is mounted on a heat sink (aluminum plate) of one of the following sizes and operated at the ambient operating temperature.
 · ND110-HS type 300 mm × 300 mm × 22 mm / · ND140-HS type 640 mm × 450 mm × 50 mm
 · ND180-HS type 640 mm × 450 mm × 50 mm
 *4 The life of the bearing and the run out accuracy differ depending on the load. For the points to note with regard to the allowable loads, refer to "About the allowable loads of τ DISC" on p.44.
 *5 For details, refer to "High accuracy type option for τ DISC table surface rotation accuracy" on p.43.
 *6 For details, refer to "τ DISC Absolute position compensation function option" on p.42.

τ DISC ND-s HS Series Dimensions

ND110-85-FS(P)-HS

NMR-SAU1A2A-551A(P)

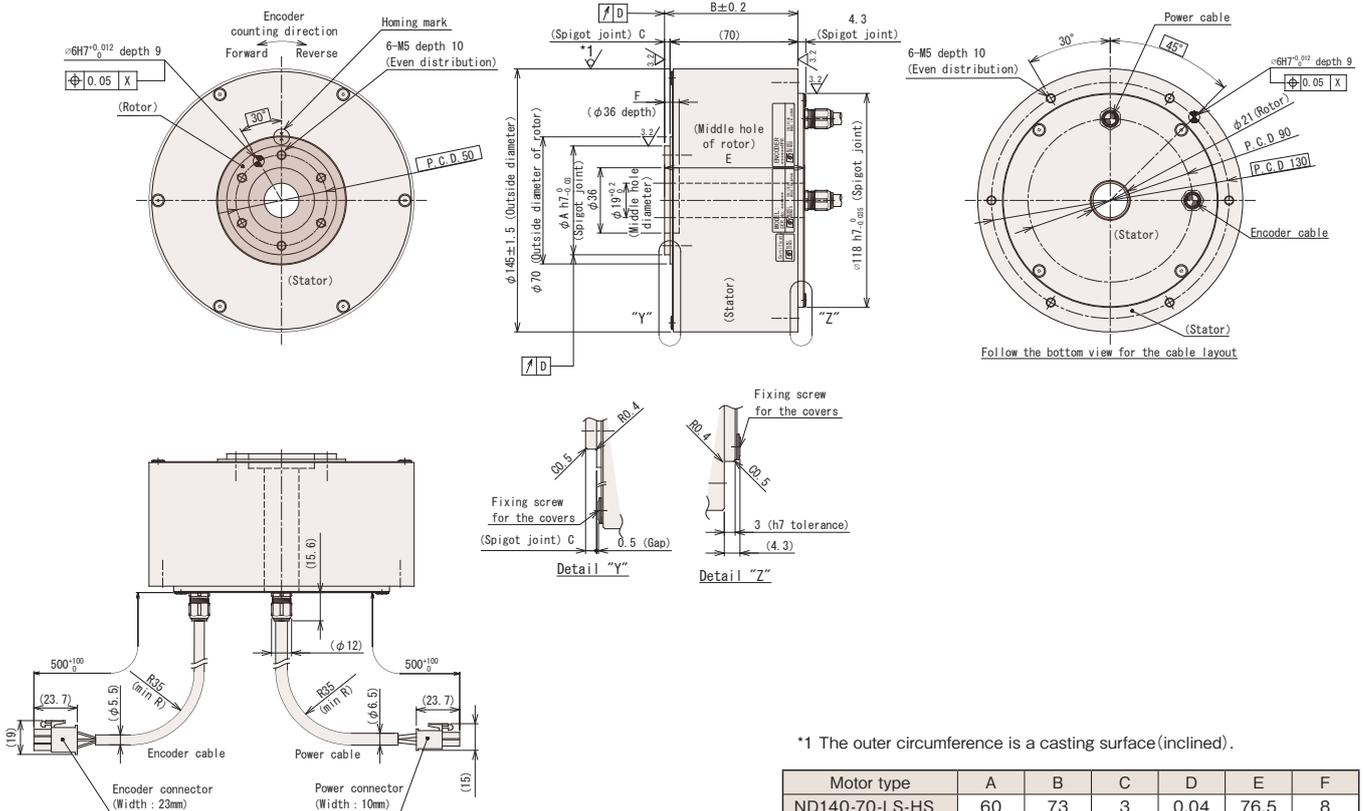


*1 The outer circumference is a casting surface (inclined).

Motor type	A	B	C	D	E
ND110-85-FS-HS	50	86	1.5	0.03	84.7
ND110-85-FSP-HS	49.8	85.8	1.3	0.01	84.5

ND140-70-LS(P)-HS

NMR-SREIA2A-661A(P)



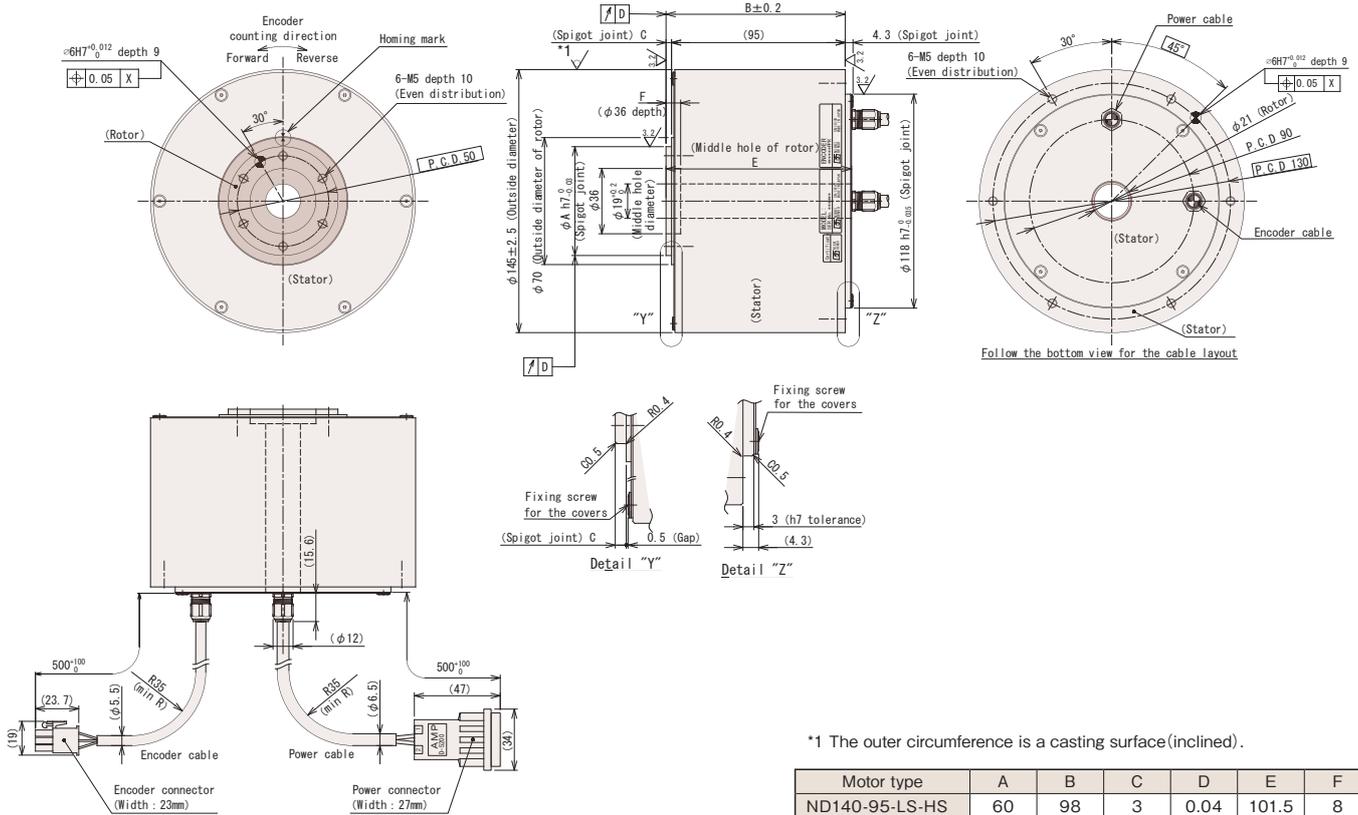
*1 The outer circumference is a casting surface (inclined).

Motor type	A	B	C	D	E	F
ND140-70-LS-HS	60	73	3	0.04	76.5	8
ND140-70-LSP-HS	59.8	72.8	2.8	0.01	76.3	7.8

τ DISC ND-s HS Series Dimensions

ND140-95-LS(P)-HS

NMR-SRFIA2A-102A(P)



ND180-95-LS(P)-HS

NMR-SSEIA2A-162A(P)

