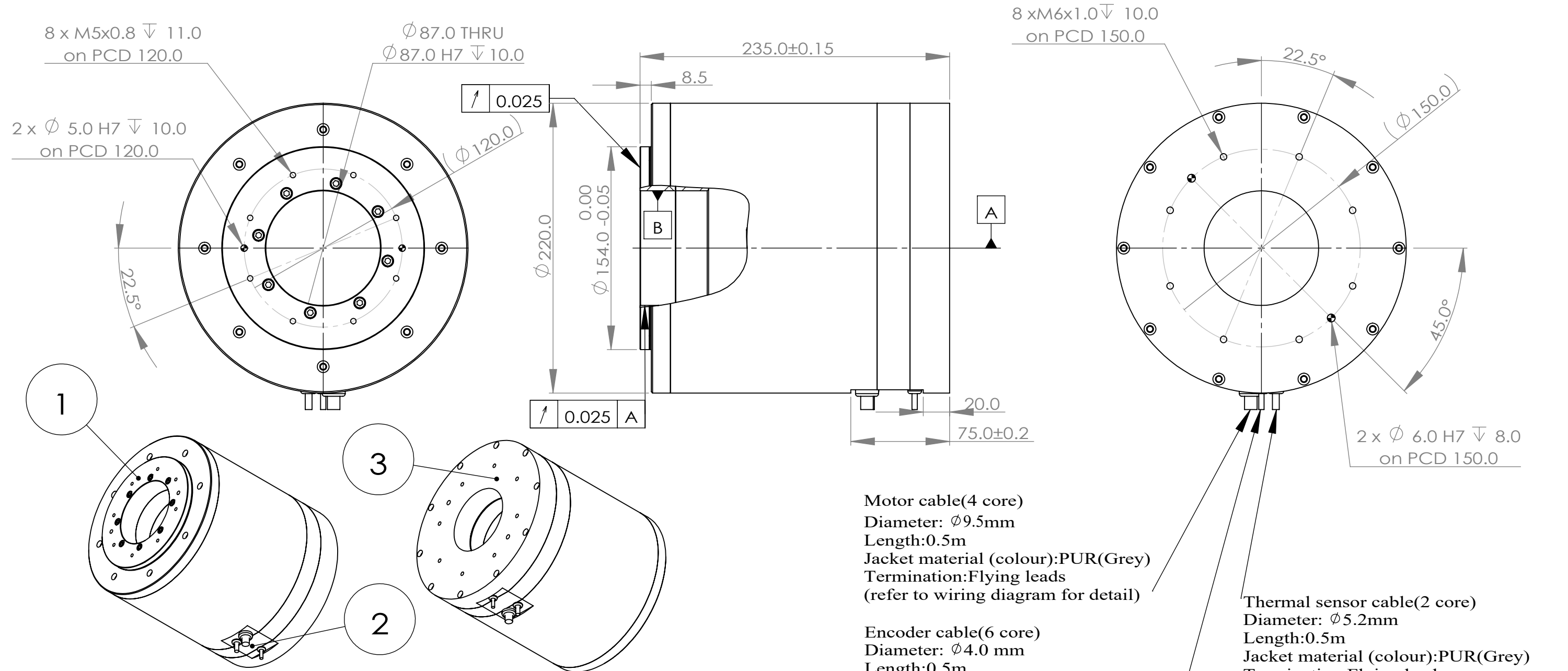


ADR220-B235-P/S-J/K-NH-0.5-FB-S305-P25

Customization description: Biss-c Absolute Encoder 23bit

REV	DESCRIPTION	BY	DATE	APPD
00	INITIAL RELEASE	WYW	21-10-2022	YX



Notes:

- 1.User to ensure flatness of mounting surface within 0.01/300mm;
- 2.Cable diameter within +/-0.3mm tolerance, cable length within +/-60.0mm tolerance;
- 3.Certain specifications in the drawing are subject to change.

RELEASED DATE:
2025/2/5

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	REMOVE ALL SHARP EDGES		Drawn	WYW	20-10-2022			
			Checked	SJ	21-10-2022			
			Approved	YX	21-10-2022			
	<div>GENERAL TOLERANCE X ± 0.25mm X.X ± 0.1mm X.XX ± 0.05mm X.XXX ± 0.025mm</div> <div> 3rd ANGLE PROJECTION</div>		Material	NA		Model:	ADR220-B235	
			Surface Treatment	NA		Title :	ADR220-B235	
			Heat Treatment	NA		Dwg No:	ADR220-B235	
			Quantity	NA		Sheet:	1 OF4	Rev: 0

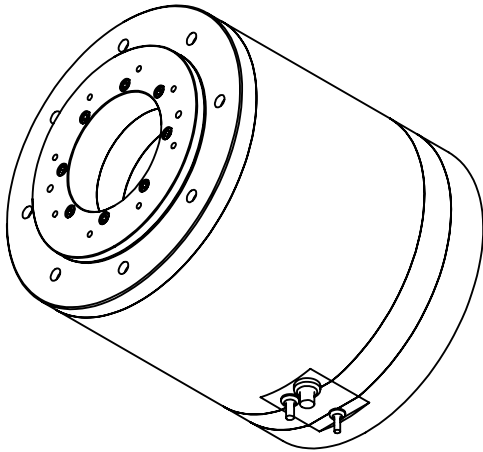
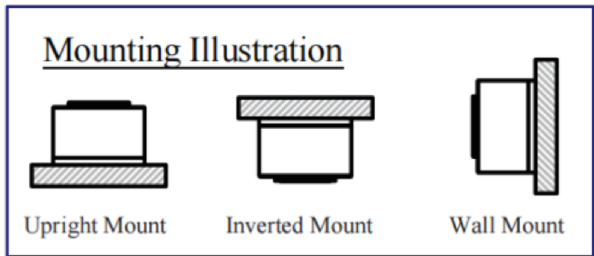
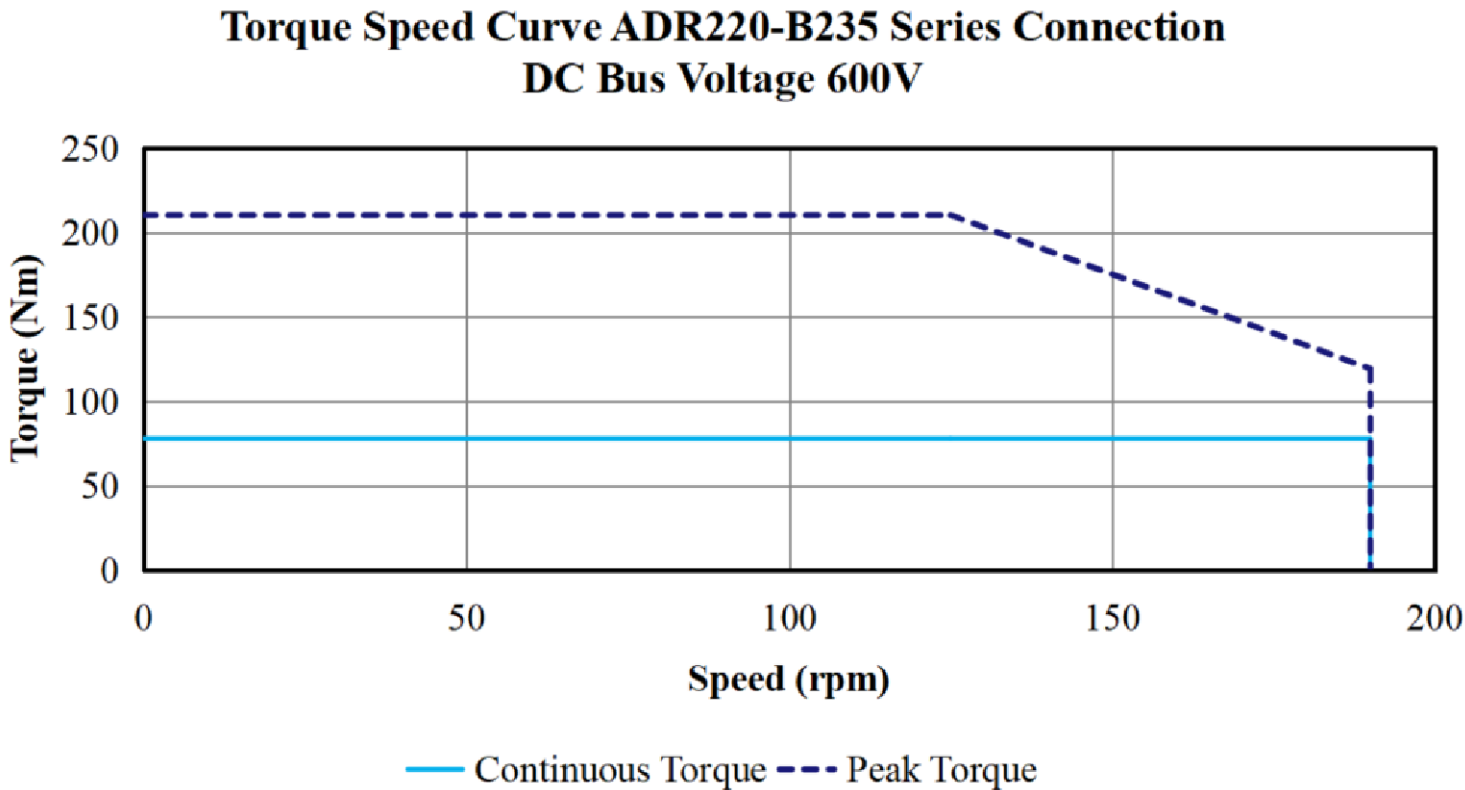
ADR220-B235-S-K-H9D-0.5-FB-S305-P25

Customization description:Biss-c Absolute Encoder 23bit

REV	DESCRIPTION	BY	DATE	APPD
00	INITIAL RELEASE	WYW	21-10-2022	YX

ADR220-B235-S

Rev0	SJ	2022/6/24	
Approved	Manager	2022/6/25	
Performance Parameters			
	Symbol	Unit	Value
Continuous Torque (NC)@100°C ^[1]	T _{cn}	Nm	77.9
Peak Torque	T _{pk}	Nm	210.3
Torque Constant ±10%	K _t	Nm/Arms	23.60
Back EMF Constant ±10%	K _e	Vpeak/rpm	2.02
Motor Constant @25°C	K _m	Nm/Sqrt(W)	6.0
Resistance (L-L) @25°C ±10% ^[2]	R _{2s}	Ω	10.32
Inductance (L-L) ±20% ^[3]	L	mH	106.7
Electrical Time Constant	t _e	ms	10.34
Continuous Current (NC)@100°C ^[1]	I _{cn}	Arms	3.3
Peak Current	I _{pk}	Arms	9.9
Continuous Power Dissipation (NC)@100°C ^[1]	P _{cn}	W	217.3
Max. Coil Temperature	t _{max}	°C	100
Thermal Dissipation Constant (NC) ^[1]	K _{thn}	W/°C	2.9
Max. Bus Voltage	U _{bus}	Vdc	600
Pole Number	2p	-	24
Rec. Max Speed @Peak Torque (415V AC) ^[4]	O _{max}	rpm	125
Rec. Max Speed @Continuous Torque (415V AC) ^[4]	O _{max}	rpm	190
Mechanical Parameters			
Overall Mass (NC)	m _n	kg	TBD
Rotor Inertia	J _r	kg·m ²	TBD
Axial Runout	-	μm	25
Radial Runout	-	μm	25
Max. Axial Load (Upright Mounting) ^[5]	-	N	1669
Max Axial Load (Inverted / Wall mounting)	-	N	105
Max Moment Load (Upright Mounting)	-	Nm	85
Max Moment Load (Inverted / Wall Mounting)	-	Nm	9.4
Encoder Parameters			
Absolute Encoder	-	bit	23
Accuracy after Error Mapping ^[6]	-	arc sec	±3
Accuracy without error mapping ^[6]	-	arc sec	±15
Repeatability ^[6]	-	arc sec	±1.5



[1] Measurement is taken at ambient temperature 25°C. Value depends on the thermal environment.

Abbreviations: NC-Natural Cooling

[2] Resistance is measured by DC current with standard 0.5 m cable.

[3] Inductance is measured by current frequency of 1 kHz.

[4] The value is based on absolute encoder under max. bus voltage.

[5] Please refer to the illustration for different mountings.

[6] Based on absolute encoder with standard runout.

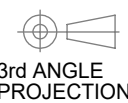
The contents of datasheet are subject to change without prior notice.

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UNLESS OTHERWISE SPECIFIED,
ALL DIMENSIONS IN mm
REMOVE ALL SHARP EDGES

GENERAL
TOLERANCE
X ± 0.25mm
X.X ± 0.1mm
X.XX ± 0.05mm
X.XXX ± 0.025mm



Designed	WYW	20-10-2022
Drawn	WYW	20-10-2022
Checked	SJ	21-10-2022
Approved	YX	21-10-2022
Material	NA	
Surface Treatment	NA	
Heat Treatment	NA	
Quantity	NA	



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Model: ADR220-B235
Title : ADR220-B235
Dwg No: ADR220-B235
Sheet: 3 OF4

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ADR220-B235-P/S-J/K-NH-0.5-FB-S305-P25

Customization description:Biss-c Absolute Encoder 23bit

WIRING DIAGRAM AND CABLE INFORMATION:

Table 1: Motor Power Cable Information

Specification	Unit		Remarks
Cable Diameter	mm	9.5	See Note 1
Cable Length	m	0.5	See Note 1
Number of Cores	-	4×2.5mm^2	
Cable Colour	-	Grey	
Minimum Bending Radius	mm	Moving:Cable ∅ x 12 Fixed: Cable ∅x6	
Rated Voltage	-	3-phase 415Vac	
Termination Type	-	Flying Leads	
Ferrite Bead	-	Yes	
CE Compliance	-	Yes	

Table 2: Hall Sensor Cable Information

Specification	Unit		Remarks
Cable Diameter	mm	5.2	See Note 1
Cable Length	m	0.5	See Note 1
Number of Cores	-	2×0.14mm^2	
Cable Colour	-	Grey	
Minimum Bending Radius	mm	Moving:Cable ∅ x 12 Fixed: Cable ∅x6	
Temperature Option	-	Provided	J-Type(thermostat) K-Type(PT100)
CE Compliance	-	Yes	

Table 3: Encoder Cable Information

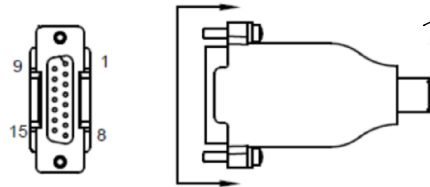
Specification	Unit		Remarks
Cable Diameter	mm	4.0	See Note 1
Cable Length	m	0.5	See Note 1
Number of Cores	-	6	
Cable Colour	-	Black	
Minimum Bending Radius	mm	Moving:Cable ∅ x 12 Fixed: Cable ∅x6	

- Notes:
- Cable diameter within +/-0.3mm tolerance, cable length within +/-60.0mm tolerance;
 - Certain specifications in the drawing are subject to change.

Encoder Cable

PIN	DESCRIPTION	COLOUR
2	GND	WHITE
4	5V	RED
5	DATA+	YELLOW
8	CLK+	BROWN
10	GND(Short with Pin2)	-
12	5V(Short with Pin4)	-
13	DATA-	GREY
15	CLK-	BLACK
Case	Shield	-

DSUB 15 PINS (MALE)



Motor Cable

PIN	DESCRIPTION	COLOUR
-	M1	BLACK 1
-	M2	BLACK 2
-	M3	BLACK 3
-	PE	YELLOW / GREEN

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REMOVE ALL SHARP EDGES

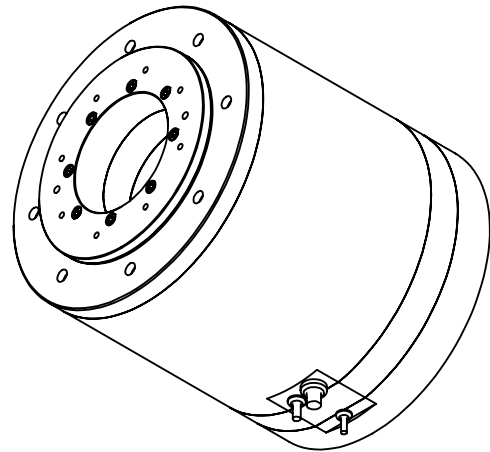
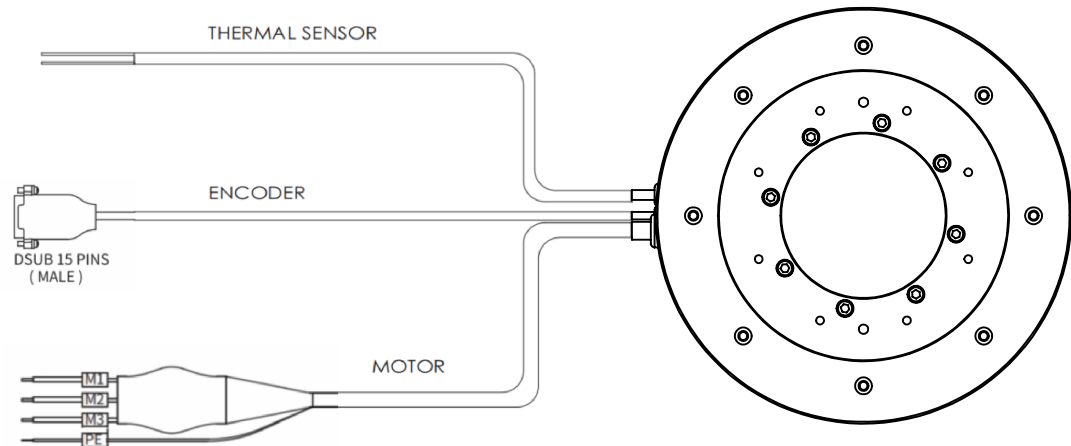
GENERAL
TOLERANCE
X ± 0.25mm
X.X ± 0.1mm
X.XX ± 0.05mm
X.XXX ± 0.025mm



Thermal Sensor Cable

PIN	DESCRIPTION	COLOUR
-	T1	PINK
-	T2	BLUE

THERMAL SENSOR WIRE
(K TYPE - PT100)
(J TYPE - THERMOSTAT)



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Material	NA	
Surface Treatment	NA	
Heat Treatment	NA	
Quantity	NA	



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Model:	ADR220-B235
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