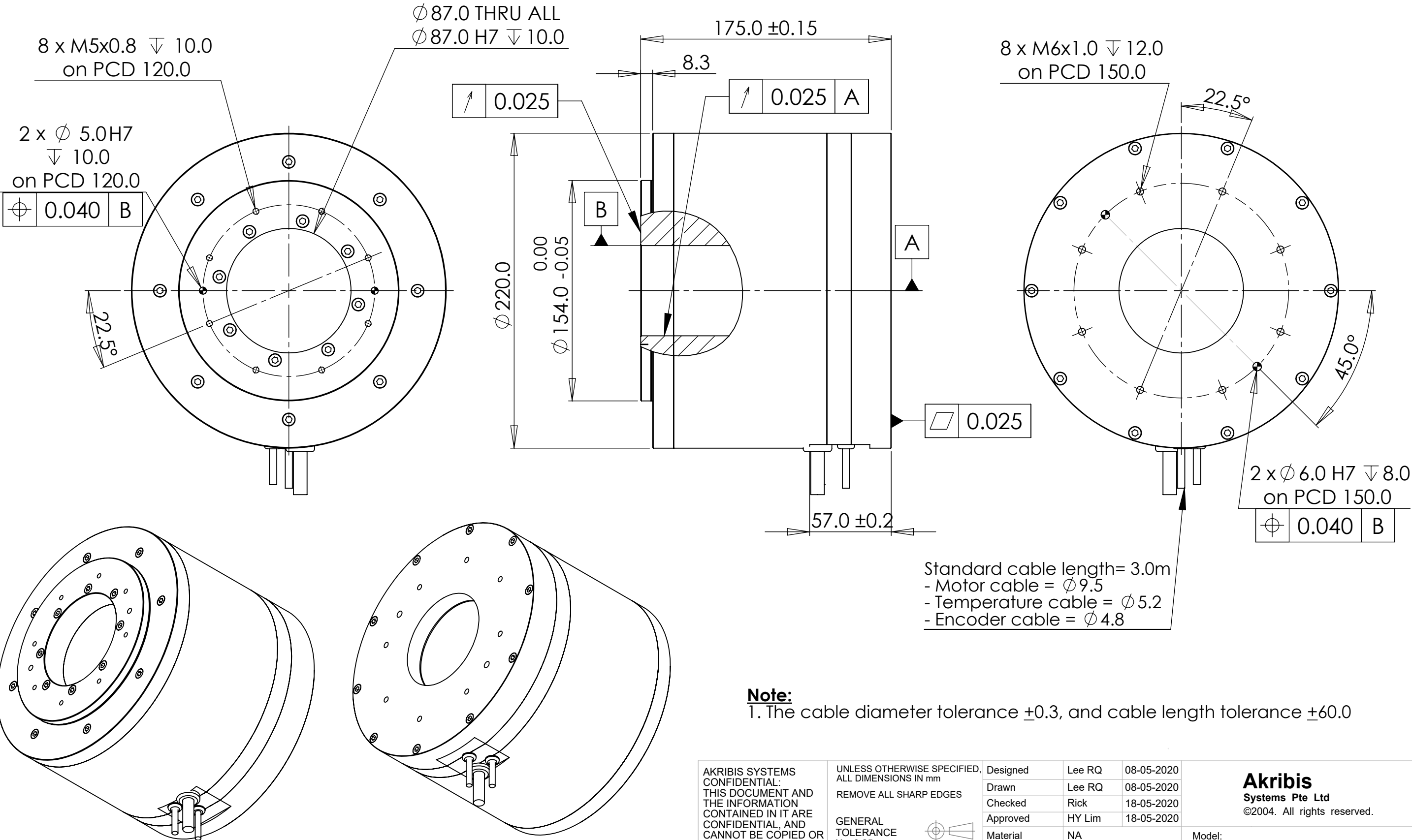


8 7 6 5 4 3 2 1

ADR220-B175-S/P-J/K-3.0-RA-26B-P25-Z75
(Comes with Renishaw Resolute BiSS 26-bit encoder) ⚠

REV	DESCRIPTION	BY	DATE	APPD
00	INITIAL RELEASE	Lee RQ	18-05-2020	HY Lim
⚠	Correct "incremental" to "absolute", BiSS Was BiSS-C	Lee RQ	25-05-2020	Rick




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	GENERAL TOLERANCE			Drawn		Lee RQ	08-05-2020	
	X $\pm 0.25mm$			Checked		Rick	18-05-2020	
	X.X $\pm 0.1mm$			Approved		HY Lim	18-05-2020	
	X.XX $\pm 0.05mm$			Material		NA		
	X.XXX $\pm 0.025mm$			Surface Treatment		NA		
3rd ANGLE PROJECTION			Heat Treatment		NA			Model: Title : ADR220-B175-RA-26B-Z75 Dwg No: ADR220-B175-RA-26B-Z75 Sheet: 1 OF2 Rev: 1
			Quantity		NA			

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ADR220-B175-S/P-J/K-3.0-RA-26B-P25-Z75

(Comes with Renishaw Resolute BiSS 26-bit encoder) ⚠

SPECIFICATION:

			ADR220-B175-Z75	
Performance Parameters	Symbol	Unit	Series	Paraellel
Continuous Torque @100°C ¹	T _{cn}	Nm	46.0	46.0
Peak Torque	T _{pk}	Nm	137.9	137.9
Torque Constant ±10%	K _t	Nm/Arms	8.51	2.84
Back EMF constant ±10%	K _e	Vpeak/rpm	0.727	0.242
Motor Constant @25°C	K _m	Nm/Sqrt(W)	2.87	2.69
Resistance (L-L)@25°C ±10% ²	R ₂₅	Ω	5.87	0.74
Inductance (L-L) ±20% ³	L	mH	53.60	6.30
Electrical time constant	τ _e	ms	9.13	8.51
Continuous Current @100°C ¹	I _{cn}	Arms	5.40	16.20
Peak Current	I _{pk}	Arms	16.2	48.6
Continuous Power Dissipation @100°C ^[1]	P _{cn}	W	331.0	375.5
Max. Coil Temperature	T _{max}	°C	100.0	100.0
Thermal Dissipation Constant ¹	K _{thn}	W/°C	4.4	5.0
Max. Bus Voltage	U _{bus}	Vdc	600.0	600.0
Pole Number	p	-	24	
Rec. Max Speed @230V AC ⁴	Ω _{max}	rpm	150	540
Mechanical Parameters				
Overall Mass	m	kg	15.6	15.6
Rotor Inertia	J _r	kg.m ²	1.786E-02	1.786E-02
Axial Runout ⁵	-	μm	25	
Radial Runout ⁵	-	μm	25	
Max Axial Load (Upright Mounting) ⁶	-	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				
RA Optical Absolute Encoder Resolution 	-	bit	26	26
	-	count/rev	67,108,864	67,108,864
Accuracy with Error Mapping ⁷	-	arc sec	+/-4	+/-4
Repeatability ⁷	-	arc sec	+/-2	+/-2
Other Information				
Insulation Class		Class B (130°C)		
Protection Grade		IP40		
Compliance with Global Standards		RoHS, CE		
Ambient Temperature	Operation	0°C to 40°C (non-freezing)		
	Storage	-15°C to 70°C (non-freezing)		
Ambient Humidity	Operation	10%RH to 80%RH (non-condensing)		
	Storage	10%RH to 90%RH (non-condensing)		
Recommended Ambience		Indoor (no direct sunlight); No corrosive gas, inflammable gas, oil mist or dust.		

[1] Measurement is taken at ambient temperature 25°C. Value depends on the thermal environment.
[2] Resistance is measured by DC current with standard 3 m cable.
[3] Inductance is measured by current frequency of 1 kHz.
[4] The value is based on Renishaw Resolute absolute optical encoder (26-bit resolution) under maximum bus voltage.
[5] The runout value in parenthesis is optional.
[6] Please refer to the illustration for different mountings.
[7] Based on Renishaw Resolute absolute optical encoder (26-bit resolution) with standard runout.
The contents of datasheet are subjected to change.

REV	DESCRIPTION	BY	DATE	APPD
00	INITIAL RELEASE	Lee RQ	18-05-2020	HY Lim
⚠	Correct "incremental" to "absolute", BiSS Was BiSS-C	Lee RQ	25-05-2020	Rick

WIRING DIAGRAM AND CABLE INFORMATION:

Table 1:
Motor Power Cable Information

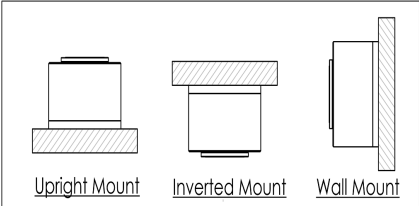
Specification	Unit		Remarks
Cable Diameter	mm	9.5	+/-0.3
Cable Length	m	3.0	+/-60.0
Number of Cores	-	4.0	
Cable Colour	-	Black	
Termination Type	-	Flying Leads	
Ferrite Bead	-	Yes	
CE Compliance	-	Yes	

Table 2:
Hall Sensor Cable Information

Specification	Unit		Remarks
Cable Diameter	mm	5.2	+/-0.3
Cable Length	m	3.0	+/-60.0
Number of Cores	-	2	
Cable Colour	-	Grey	
Temperature Option	-	Provided	J-Type (thermostat) K-Type (PT100)
CE Compliance	-	Yes	

Table 3:
Encoder Cable Information

Specification	Unit		Remarks
Cable Diameter	mm	4.8	+/-0.3
Cable Length	m	3.0	+/-60.0
Number of Cores	-	9	
Cable Colour	-	Black	



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	REMOVE ALL SHARP EDGES		Drawn	Lee RQ	08-05-2020			
			Checked	Rick	18-05-2020			
			Approved	HY Lim	18-05-2020			
	<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:			
			Surface Treatment	NA	Title :	ADR220-B175-RA-26B-Z75		
			Heat Treatment	NA	Dwg No:	ADR220-B175-RA-26B-Z75		
			Quantity	NA	Sheet:	2 OF2	Rev: 1	