



ADR-P SERIES

- ▶ Direct drive brushless motor
- ▶ Low cogging torque
- ▶ Low speed and high speed windings

ADR110-P-22

ADR110-P-22				
Performance Parameters	Symbol	Unit	Series	Parallel
Continuous Torque @100°C	T _{cn}	Nm	1.9	1.9
Peak Torque	T _{pk}	Nm	5.8	5.8
Torque Constant ±10%	K _t	Nm/Arms	0.65	0.32
Back EMF Constant ±10%	K _e	Vpeak/rpm	0.055	0.028
Motor Constant @25°C	K _m	Nm/Sqrt(W)	0.30	0.30
Resistance (L-L) @25°C ±10%	R ₂₅	Ω	3.20	0.80
Inductance (L-L) ±20%	L	mH	17.15	4.29
Electrical Time Constant	τ _e	ms	5.36	5.36
Continuous Current @100°C	I _{cn}	Arms	3.0	6.0
Peak Current	I _{pk}	Arms	9.0	18.0
Continuous Power Dissipation @100°C	P _{cn}	W	55.7	55.7
Max. Coil Temperature	t _{max}	°C	100	100
Thermal Dissipation Constant	K _{th}	W/°C	0.742	0.742
Max. Bus Voltage	U _{bus}	Vdc	600.0	600.0
Pole Number	2P	-	16	16

Mechanical Parameters				
Rotor Mass	m	kg	0.25	0.25
Stator Mass	m	kg	0.88	0.88
Rotor Inertia	J _r	kg m ²	1.463E-04	1.463E-04

Other Information		
Insulation Class	Class B (130°C)	
Protection Grade	IP00	
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.
 The contents of datasheet are subjected to change without prior notice.

ADR110-P-45

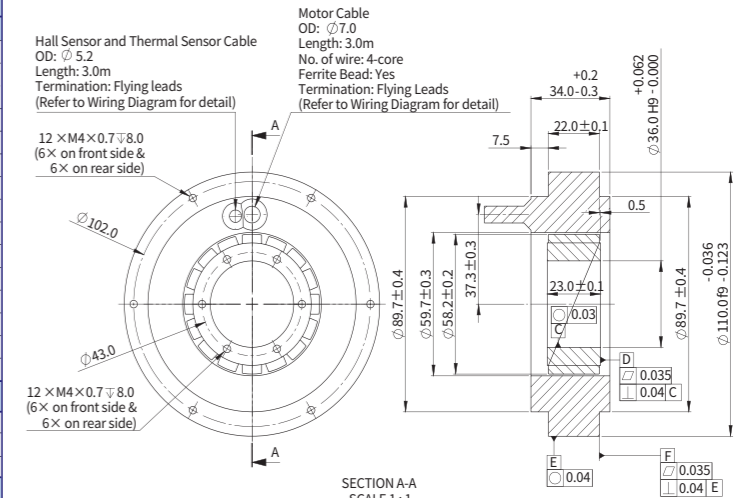
ADR110-P-45				
Performance Parameters	Symbol	Unit	Series	Parallel
Continuous Torque @100°C	T _{cn}	Nm	4.2	4.2
Peak Torque	T _{pk}	Nm	12.6	12.6
Torque Constant ±10%	K _t	Nm/Arms	1.40	0.70
Back EMF Constant ±10%	K _e	Vpeak/rpm	0.119	0.060
Motor Constant @25°C	K _m	Nm/Sqrt(W)	0.51	0.52
Resistance (L-L) @25°C ±10%	R ₂₅	Ω	4.90	1.21
Inductance (L-L) ±20%	L	mH	26.26	6.49
Electrical Time Constant	τ _e	ms	5.36	5.36
Continuous Current @100°C	I _{cn}	Arms	3.0	6.0
Peak Current	I _{pk}	Arms	9.0	18.0
Continuous Power Dissipation @100°C	P _{cn}	W	85.3	84.2
Max. Coil Temperature	t _{max}	°C	100	100
Thermal Dissipation Constant	K _{th}	W/°C	1.137	1.123
Max. Bus Voltage	U _{bus}	Vdc	600.0	600.0
Pole Number	2P	-	16	16

Mechanical Parameters				
Rotor Mass	m	kg	0.40	0.40
Stator Mass	m	kg	1.80	1.80
Rotor Inertia	J _r	kg m ²	2.990E-04	2.990E-04

Other Information		
Insulation Class	Class B (130°C)	
Protection Grade	IP00	
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.	

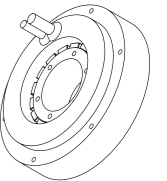
① Measurement is taken at ambient temperature 25°C. Value depends on the thermal environment.
 ② Resistance is measured by DC current with standard 3 m cable.
 ③ Inductance is measured by current frequency of 1 kHz.
 The contents of datasheet are subjected to change without prior notice.

Dimension

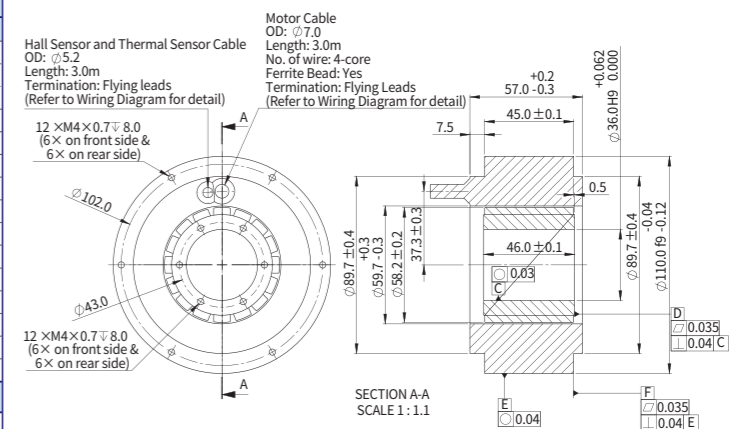


Note:

- ① User to ensure the concentricity of stator and rotor to be within 0.15mm when mounted;
- ② User to ensure flatness of mounting surface within 0.015/300mm;
- ③ User to ensure perpendicularity of rotor inner bore relative to datum E within 0.1mm when mounted;
- ④ The cable diameter tolerance +0.3, and cable length tolerance +60.0

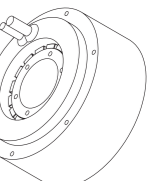


Dimension



Note:

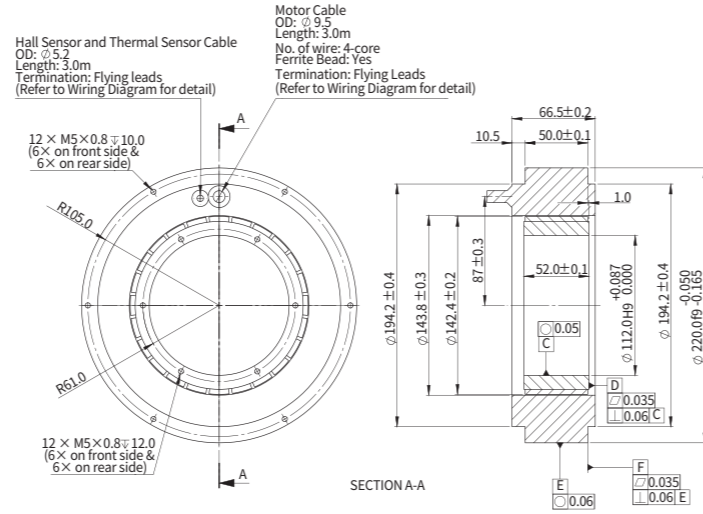
- ① User to ensure the concentricity of stator and rotor to be within 0.15mm when mounted;
- ② User to ensure flatness of mounting surface within 0.015/300mm;
- ③ User to ensure perpendicularity of rotor inner bore relative to datum E within 0.1mm when mounted;
- ④ The cable diameter tolerance +0.3, and cable length tolerance +60.0



ADR220-P-50

Table with Performance Parameters and Mechanical Parameters for ADR220-P-50. Columns include Symbol, Unit, Series, and Parallel values for various metrics like torque, resistance, and current.

Dimension



- Note: 1 User to ensure the concentricity of stator and rotor to be within 0.15mm when mounted; 2 User to ensure flatness of mounting surface within 0.015/300mm; 3 User to ensure perpendicularity of rotor inner bore relative to datum E within 0.1mm when mounted; 4 The cable diameter tolerance +0.3, and cable length tolerance +60.0

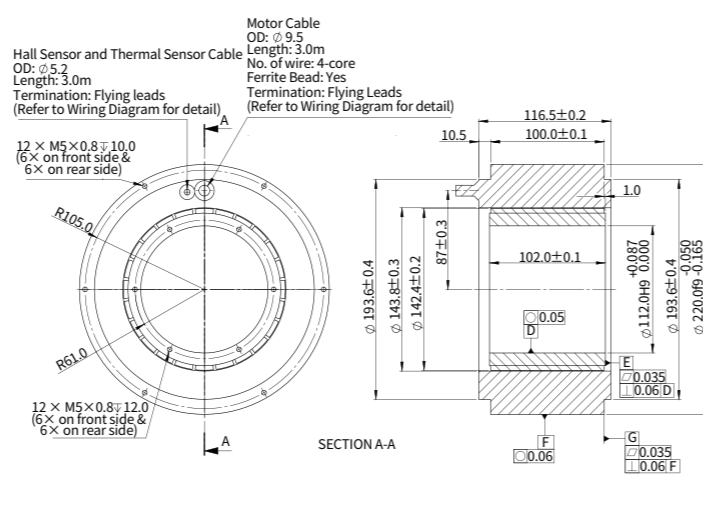
Table with Other Information for ADR220-P-50, including Insulation Class (Class B), Protection Grade (IP00), and Ambient Temperature/ Humidity specifications.

Measurement is taken at ambient temperature 25°C. Value depends on the thermal environment. Resistance is measured by DC current with standard 3 m cable. Inductance is measured by current frequency of 1 kHz.

ADR220-P-100

Table with Performance Parameters and Mechanical Parameters for ADR220-P-100. Columns include Symbol, Unit, Series, and Parallel values for various metrics like torque, resistance, and current.

Dimension



- Note: 1 User to ensure the concentricity of stator and rotor to be within 0.15mm when mounted; 2 User to ensure flatness of mounting surface within 0.015/300mm; 3 User to ensure perpendicularity of rotor inner bore relative to datum E within 0.1mm when mounted; 4 The cable diameter tolerance +0.3, and cable length tolerance +60.0

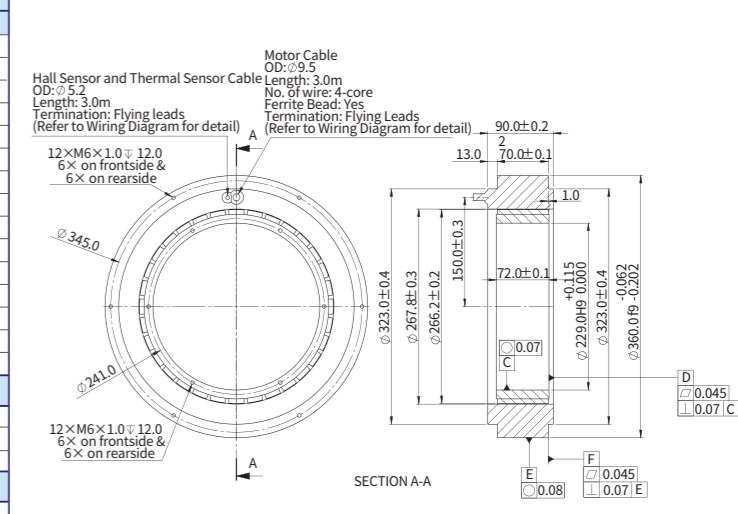
Table with Other Information for ADR220-P-100, including Insulation Class (Class B), Protection Grade (IP00), and Ambient Temperature/ Humidity specifications.

Measurement is taken at ambient temperature 25°C. Value depends on the thermal environment. Resistance is measured by DC current with standard 3 m cable. Inductance is measured by current frequency of 1 kHz.

ADR360-P-70

Table with Performance Parameters and Mechanical Parameters for ADR360-P-70. Columns include Symbol, Unit, Series, and Parallel values for various metrics like torque, resistance, and current.

Dimension



- Note: 1 User to ensure the concentricity of stator and rotor to be within 0.15mm when mounted; 2 User to ensure flatness of mounting surface within 0.015/300mm; 3 User to ensure perpendicularity of rotor inner bore relative to datum E within 0.1mm when mounted; 4 The cable diameter tolerance +0.3, and cable length tolerance +60.0

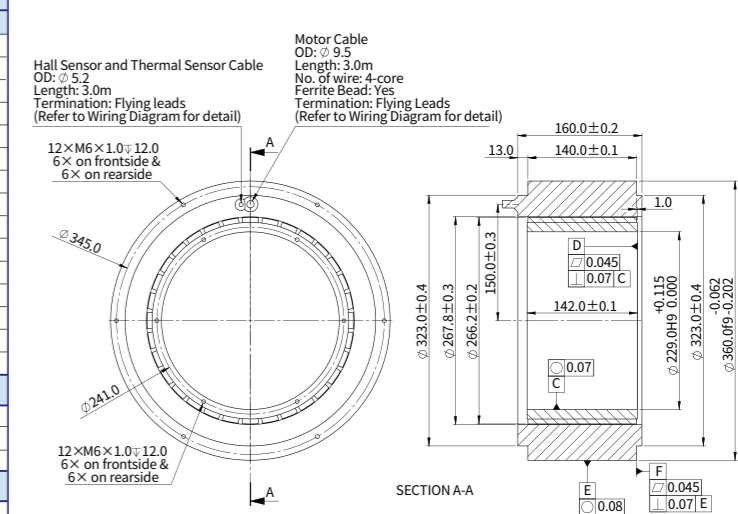
Table with Other Information for ADR360-P-70, including Insulation Class (Class B), Protection Grade (IP00), and Ambient Temperature/ Humidity specifications.

Measurement is taken at ambient temperature 25°C. Value depends on the thermal environment. Resistance is measured by DC current with standard 3 m cable. Inductance is measured by current frequency of 1 kHz.

ADR360-P-140

Table with Performance Parameters and Mechanical Parameters for ADR360-P-140. Columns include Symbol, Unit, Series, and Parallel values for various metrics like torque, resistance, and current.

Dimension

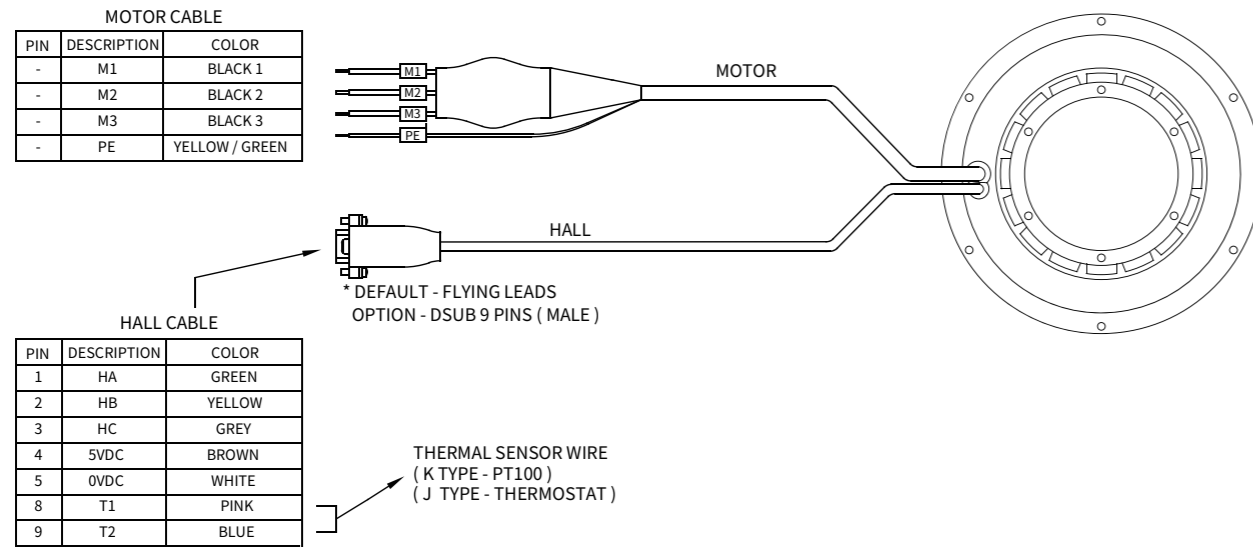


- Note: 1 User to ensure the concentricity of stator and rotor to be within 0.15mm when mounted; 2 User to ensure flatness of mounting surface within 0.015/300mm; 3 User to ensure perpendicularity of rotor inner bore relative to datum E within 0.1mm when mounted; 4 The cable diameter tolerance +0.3, and cable length tolerance +60.0

Table with Other Information for ADR360-P-140, including Insulation Class (Class B), Protection Grade (IP00), and Ambient Temperature/ Humidity specifications.

Measurement is taken at ambient temperature 25°C. Value depends on the thermal environment. Resistance is measured by DC current with standard 3 m cable. Inductance is measured by current frequency of 1 kHz.

Motor Cable Connection



Part Numbering

