Oriental motor

Brushless Motor

Stainless Steel Type

200W

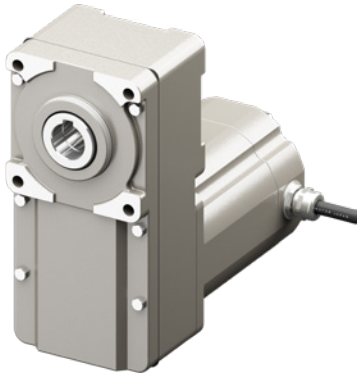
Stainless steel motor has been lineup that using stainless steel material equivalent to **SUS304** in high efficiency (**IE5** equivalent) brushless motors.

Brushless Motor

Stainless Steel 200 W

NEW PRODUCTS

Product Line



Motor/Gearhead

Product Name	Gear Ratio
BL2M6200CCS-□FR	**10**, **15**, **20**, **30**, **50**

- The □ in the product name indicates the gear ratio.
- The cable (2 m) emerging from the motor can be connected directly to the driver.

Product Number

BL2M 6 200 C C S - 10 FR

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

①	Motor Type	**BL2M** : Brushless Motor
②	Frame Size	**6** : 104 mm (Gearhead Frame Size: 110 mm)
③	Output Power	**200** : 200 W
④	Power Supply Voltage	**C** : AC Power Supply
⑤	Motor Connection Method	**C** : Cable Type
⑥	Identification Number	**S** : Stainless Steel
⑦	Gear Ratio	Number : Gear Ratio
⑧	Gearhead Type	**FR** : Hollow Shaft Flat Gearhead

Compatible Drivers

Power Supply Voltage	Product Name
Single-Phase 100-120 V	**BLE2D200-AS**
Single-Phase, Three-Phase 200-240 VAC	**BLE2D200-CS**

Product Number

BLE2D 200 - A S

① ② ③ ④

①	Driver Type	**BLE2D** : **BLE2** Series Driver
②	Output Power	**200** : 200 W
③	Power Supply Voltage	**A** : Single-Phase 100-120 V **C** : Single-Phase, Three-Phase 200-240 VAC
④	**S** : For Stainless Steel Motor	

Specifications

Motor Product Name			BL2M6200CCS-□FR				
Gear Ratio			10	15	20	30	50
Driver Product Name			BLE2D200-AS, BLE2D200-CS				
Rated Output Power (Continuous) [W]			200				
Rated Speed (Motor Shaft) [r/min]			3000				
Speed Control Range (Motor Shaft) [r/min]			80 - 4000				
Output Shaft Speed [r/min]*1		80 r/min	8	5.3	4	2.7	1.6
		3000 r/min	300	200	150	100	60
		4000 r/min	400	267	200	133	80
Permissible Torque [Nm]		80 - 3000 r/min	5.41	8.12	10.8	16.2	27.1
		4000 r/min	4.06	6.09	8.12	12.2	20.3
Max. Instantaneous Torque [Nm]		80 - 2000 r/min	9.74	14.6	19.5	29.2	48.7
Permissible Inertia J [$\times 10^{-4}$kgm^2]			460	1000	1700	3900	9300
	When Instantaneous Stop or Bi-Directional Operation is performed*2		200	450	800	1800	5000
Direction of Rotation			Opposite Direction of Motor				
Permissible Axial Load [N]	10mm from End of Output Shaft	80 - 3000 r/min	1230	1680		2040	
		4000 r/min	1130	1550		1900	
	20mm from End of Output Shaft	80 - 3000 r/min	1070	1470		1780	
		4000 r/min	990	1360		1660	
Permissible Radial Load [N]			800				
Speed Regulation*3	Load		±0.2% (±0.5%) or less: Conditions 0 to rated torque, rated speed, rated voltage, normal ambient temperature				
	Voltage		±0.2% (±0.5%): Conditions Rated voltage −15 to +10%, rated speed, no load, normal ambient temperature				
	Temperature		±0.2% (±0.5%): Conditions Operating ambient temperature 0 to +40°C, rated speed, no load, rated voltage				
Permissible Inertia Motor J [$\times 10^{-4}$kgm^2]			1.143				

*1 The output shaft rotational speed is the motor shaft rotational speed.
*2 This also applies when the deceleration time is set to less than 0.1 seconds in digital settings.
*3 Values in parentheses represent specifications for analogue settings.
●The □ in the product name indicates the gear ratio.

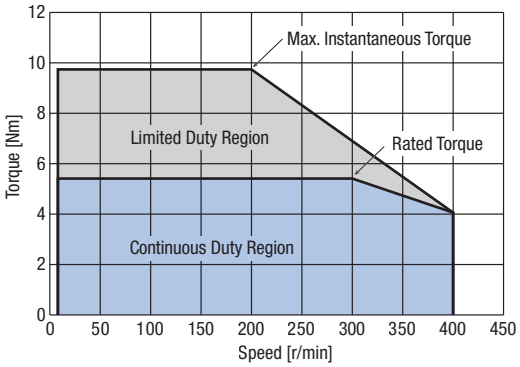
Driver Power Supply Input Specifications

Driver product name	BLE2D200-AS	BLE2D200-CS
Rated Voltage V	Single-Phase 100-120	Single-Phase 200-240 / Three-Phase 200-240
Permissible Voltage Range	−15 to +10%	
Frequency Hz	50 / 60	
Permissible Frequency Range	±5%	
Rated Input Current A	4.4	Single-Phase: 2.4 / Three-Phase: 1.4
Maximum Input Current A	9.3	Single-Phase: 5.3 / Three-Phase: 3.5

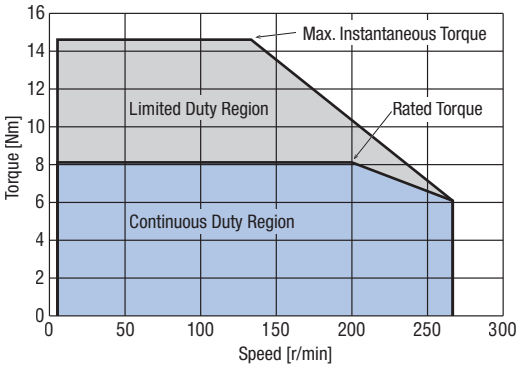
Speed – Torque Characteristics

Continuous Duty Region: Continuous operation is possible in this region.
Limited Duty Region: This region is used primarily when accelerating.

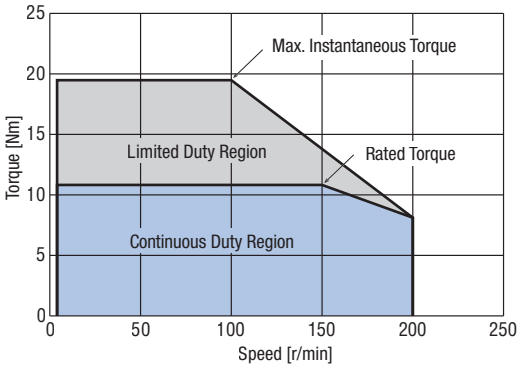
BL2M6200CCS-10FR



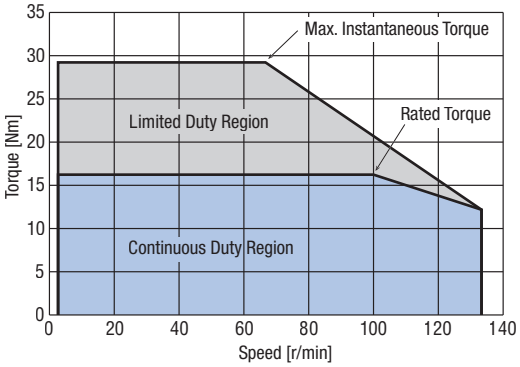
BL2M6200CCS-15FR



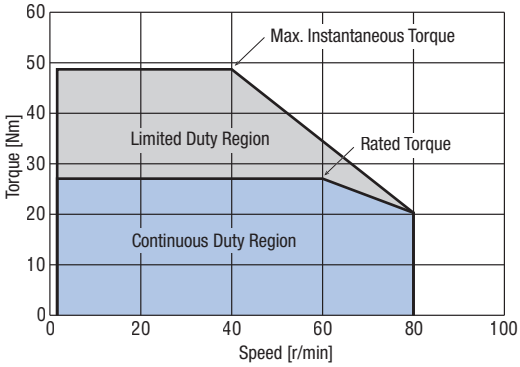
BL2M6200CCS-20FR



BL2M6200CCS-30FR



BL2M6200CCS-50FR



General Specifications

Item		Motor	Driver
Insultation Resistance		100 MΩ or more when 500 VDC megger is applied between the windings and the case after continuous operation under normal ambient temperature and humidity.	The measured value is 100 MΩ or more when a 500 VDC megger is applied between the power supply terminal and the protective earth terminal and between the power supply terminal and the signal I/O terminal after continuous operation under normal ambient temperature and humidity.
Dielectric Voltage		Sufficient to withstand 1.5 kVAC at 50 Hz applied between the windings and the case for 1 minute after continuous operation under normal ambient temperature and humidity.	Sufficient to withstand the application of 1.5 kVAC at 5 Hz between the power supply terminal and the protective earth terminal for 1 minute, and with application of 1.5 kVAC at 50 Hz between the power supply terminal and the signal I/O terminal for 1 minute after continuous operation under normal ambient temperature and humidity.
Temperature Rise		Following rated continuous operation at ambient temperature and humidity, the measured temperature rise on the case surface using the thermocouple method is 65°C or below.	The temperature rise of the heat sink is 50°C max., measured by the thermocouple method after rated continuous operation under normal ambient temperature and humidity.
Operating Environment *1	Ambient Temperature	0 to +40°C (Non-freezing)	0 to +40°C (Non-freezing)
	Ambient Humidity	85% max. (Non-condensing)	
	Altitude	Max. of 1000 m above sea level	
	Atmosphere	No corrosive gases or dust. No oil splashing. Cannot be used in a radioactive area, magnetic field, vacuum, or other special environments.	No corrosive gases or dust. No oil splashing. Cannot be used in a radioactive area, magnetic field, vacuum, or other special environments.
	Vibration	Not subject to continuous vibration or excessive shock. Conforms to IEC 60068-2-6, “Sine-wave vibration test method” Frequency Range: 10 - 55 Hz, Half Amplitude: 0.15 mm: Sweep Direction: 3 directions (X, Y, Z) Number of Sweeps: 20 times	
Storage Conditions*2	Ambient Temperature	−20 to +70°C (Non-freezing)	−25 to +70°C (Non-freezing)
	Ambient Humidity	85% max. (Non-condensing)	
	Altitude	3000 m or less above sea level	
	Atmosphere	No corrosive gases or dust. No oil splashing. Cannot be used in a radioactive area, magnetic field, vacuum, or other special environments.	
Heat-Resistant Class		EN Standards: 120 (E)	–
Degree of Protection		IP67*3 (excluding driver connection connectors) IP69K*4 (excluding mounting surface, cables, and driver connection connectors)	IP20

∗1 Install the driver in a location with heat dissipation capacity equivalent to an aluminium metal plate.
Single installation: 200×200 mm, thickness 2 mm.
∗2 Storage environment values are for short periods, including during transport.
∗3 The IP rating indicating dust and water resistance is specified in IEC 60529 and IEC 60034-5.
∗4 IP6X is specified in IEC 60034-5. IPX9K is specified in DIN 40050-9.

Note

● Do not perform insulation resistance measurements or withstand voltage tests whilst the motor and driver are connected.

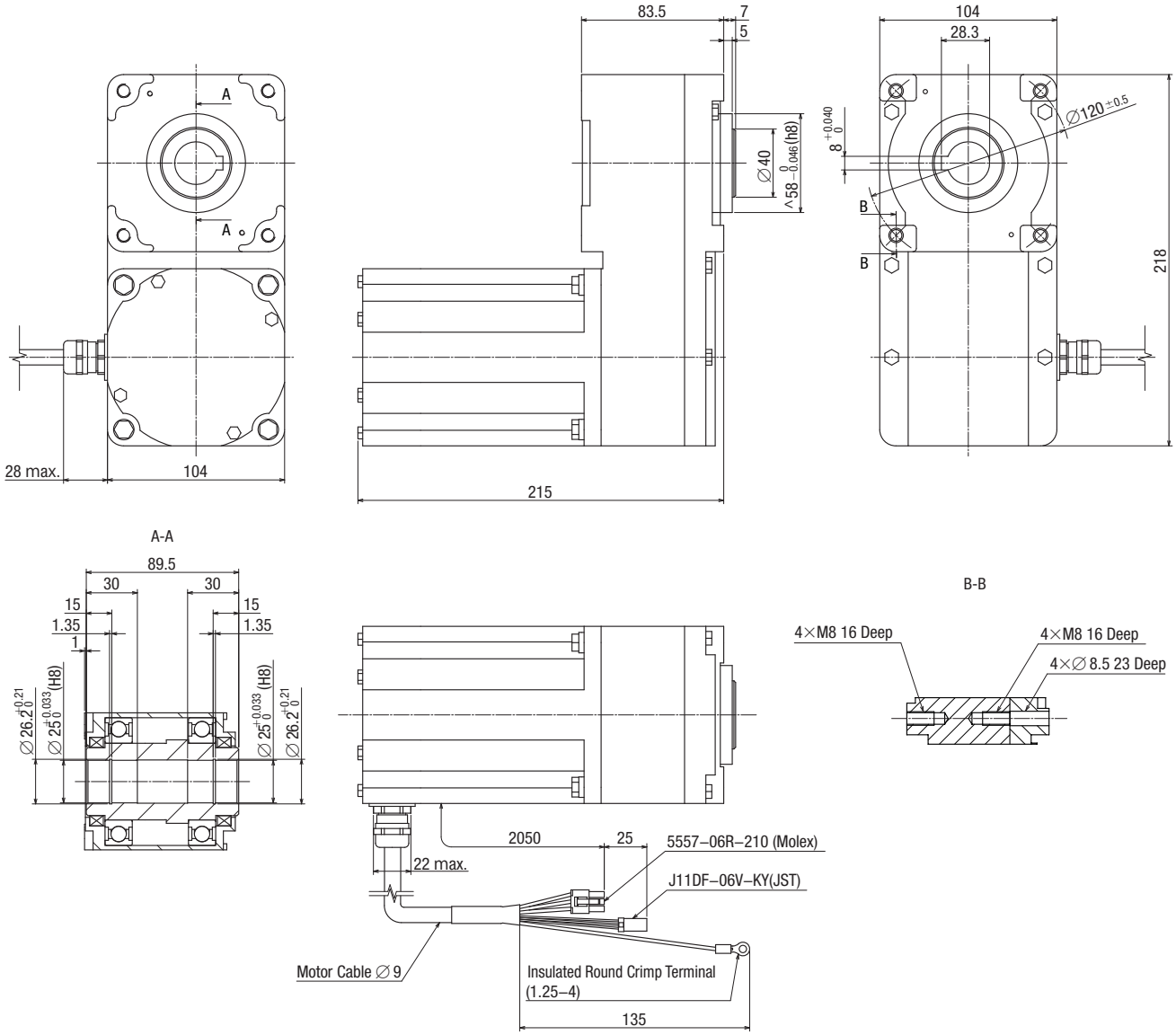
Dimensions

Motor

BL2M6200CCS-□FR

Mass: 13.5 kg

Unit: mm

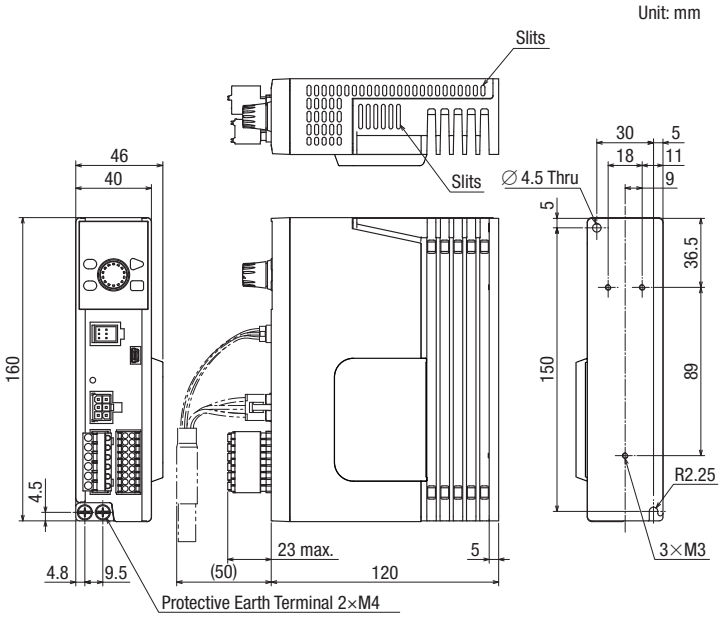


Driver

BLE2D200-AS

Mass: 0.8 kg

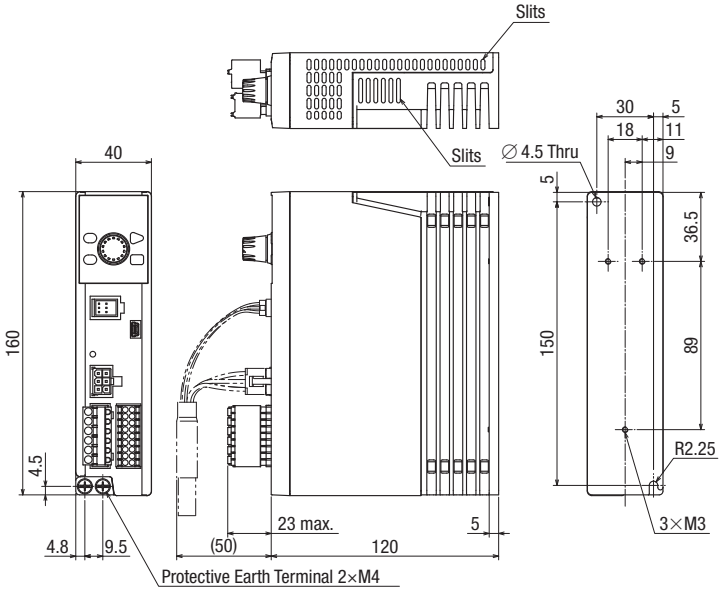
Unit: mm



BLE2D200-CS

Mass: 0.8 kg

Unit: mm



Oriental motor

These products are manufactured at plants certified with the international standards **ISO 9001** (for quality assurance) and **ISO 14001** for systems of environmental management).

Specifications are subject to change without notice. This catalogue was published in November 2025.

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UK/112025/VERS01

Printed in Germany.