ORIENTAL MOTOR U.S.A. Corp.
570 Alaska Avenue
Torrance, CA 90503
1-800-GO-VEXTA (468-3982)

Item # BLM5400HP-AS / BMUD400-S, 400 W (1/2 HP) BMU Series Brushless DC Motor Speed Control System (Three-Phase 200-240 VAC)

The BMU Series features a compact, high-power and high-efficiency brushless DC motor (BLDC motor) and is combined with an easy to use, easy to set speed controller. The entire motor structure features our latest brushless DC motor technology and has been innovated in pursuit of the optimal performance.

- High-efficiency motor
- Wide Speed Control Range
- Easy wiring and set up
- Expanded functions
- IP66 rated motor

*Connection Cable Required.

Web Price

$578.00

Specifications | Driver Functions | Speed-Torque | Dimensions | Product Number | System

Specifications

Lead Time[1]	Estimated Ship: 02/12/2026
Motor Type	Brushless DC Motor
Motor Frame Size	3.54 in.
Output Power	400 W (1/2 HP)
Power Supply	Three-Phase 200-240 VAC
Shaft/Gear Type	Round Shaft (No Gearhead)
Output Shaft Diameter	14 mm
Rated Torque	11.24 lb-in
Electromagnetic Brake	Not Equipped
Variable Speed Range (r/min)	80 ~ 4000

Permissible Load Inertia	82 oz-in²
Permissible Radial Load	0.39 in. from Shaft End = 33 0.79 in. from Shaft End = 38 lb
Permissible Axial Load	Half of motor mass or less
Max. Extension Length (m)	10.5
Components	**BLM5400HP-AS**, 400 W (1/2 HP) Brushless DC Motor **($315.00)** **BMUD400-S**, Brushless DC Motor Driver (Three-Phase 200-240 VAC) **($263.00)**
RoHS Compliant	These products do not contain substances that exceed the regulation values in the RoHS Directive.
Safety Standards	UL CSA CE
CE Marking	Low Voltage Directives EMC Directives
California Proposition 65	⚠ **CA WARNING** Cancer risk from exposure to Nickel. See www.P65Warnings.ca.gov Risk of reproductive harm from exposure to Di-n-hexyl phthalate (DnHP). See www.P65Warnings.ca.gov Risk of cancer and reproductive harm from exposure to Di(2-ethylhexyl phthalate (DEHP). See www.P65Warnings.ca.gov *See "?" or copy/paste www.P65Warnings.ca.gov in your browser.*
Insulation Resistance (Motor)	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.
Insulation Resistance (Driver)	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 I/O signal terminal after continuous operation under normal ambient temperature and humidity.
Dielectric Strength (Motor)	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.
Dielectric Strength (Driver)	No abnormality is judged even with application of 1.5 VAC at 50 Hz between the power supply terminal and the protective earth terminal and with application of 1.5 kVAC at 50 Hz between the power supply terminal and the I/O terminal for 1 minute after continuous operation under normal ambient temperature and humidity.

Temperature Rise (Motor)	The maximum temperature rise of the windings is 90ºF (50ºC) and that of the case is 72ºF (40ºC) when measured by the thermocouple method after rated continuous operation under normal ambient temperature and humidity.
Temperature Rise (Driver)	Temperature rise of the heat sink is 90ºF (50ºC) or less measured by the thermocouple method after rated continuous operation under normal ambient temperature and humidity.
Ambient Temperature Range	32ºF ~ 104ºF (0ºC ~ 40ºC), nonfreezing
Ambient Humidity	85% or less, noncondensing
Altitude	Up to 3300 ft (1000 m) above sea level.
Operating Atmosphere	No corrosive gases or dust. Cannot be used in a radioactive area, magnetic field, vacuum or other special environment.
Thermal Class	CSA standards: 105 (A), EN standards: 120 (E) UL
Degree of Protection	[Motor] IP66 [Driver] IP20

Driver Functions

Speed Control Method (Select one of the following)	Digital Setting using the dial
Number of Speed Settings	4
Acceleration/Deceleration Time	Analog Setting: 0.1 ~ 15.0 s (Time setting from stopped state until reaching rated speed) Common setting for acceleration/deceleration time with the use of acceleration/deceleration time potentiometer*. Digital setting: 0.0 ~ 15.0 s (Time setting from current speed to setting speed) Individual settings for acceleration time/deceleration time for each operating data*. *Acceleration time/deceleration time varies with the load condition of the motor.
Input Signals	Photocoupler Input method Input Resistance: 6.6 kΩ Operation by internal power supply: 5 VDC Connectable External DC Power Supply: 24 VDC -15~+20% Current 100 mA or more Sink input/Source input Supplied through external wiring. Arbitrary signal assignment to IN0~IN4 input (5 points) is possible [ ]: Initial Setting [FWD], [REV], [MO], [M1], [ALARM-RESET], EXT-ERROR, H-FREE.
	Photocoupler and Open-Collector Output External Power Supply: 4.5 ~ 30 VDC Current 100 mA or less

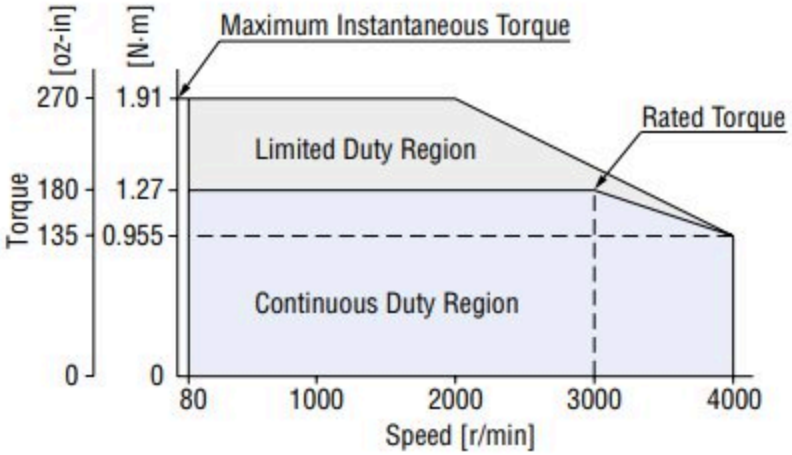
Output Signals	Sink output/Source output Supplied through external wiring. Arbitrary signal assignment to OUT0, OUT1 (2 points) is possible [ ]:Initial Setting [ALARM-OUT1], [SPEED-OUT], ALARM-OUT2, MOVE, VA, WNG
Protective Function	When the following protective functions are activated, ALARM-OUT1 output turns OFF and the motor will undergo a coasting stop. At the same time, the alarm code will be displayed. (Instantaneous stop for external stop only) Overcurrent, Main circuit overheating, Overvoltage, Undervoltage, Sensor error, Overload, Overspeed, EEPROM error, Initial sensor error, Initial operation inhibition, External stop
Time Rating	Continuous

Speed-Torque

Speed – Torque Characteristics

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

● 400 W (1/2 HP)



● The values correspond to each specification and characteristic of the stand-alone motor. The speed – torque characteristics show the values when rated vo
● A number indicating the gear ratio is specified where the box □ is located in the product name.

Dimensions

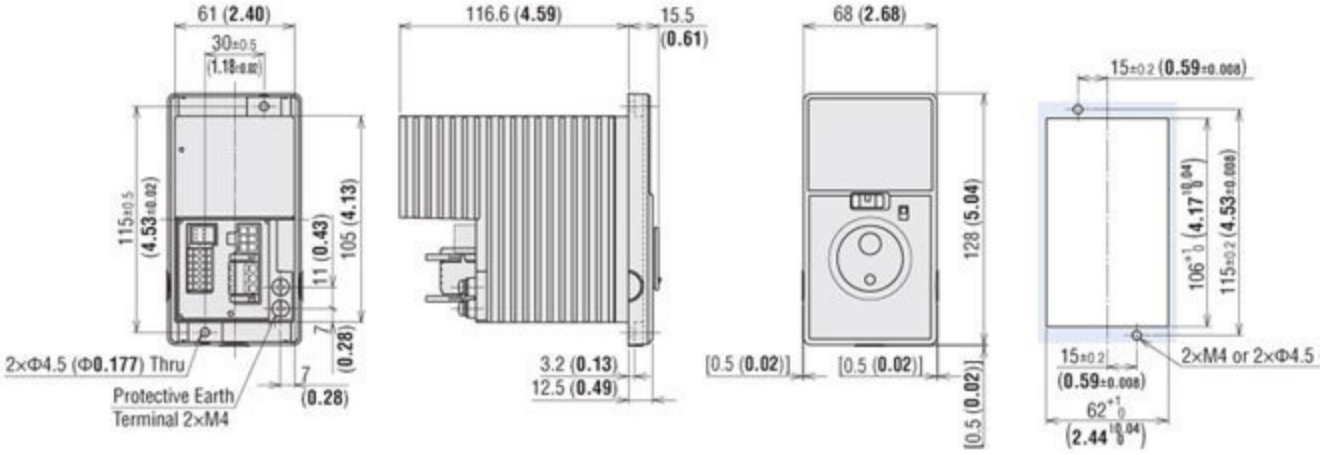
Dimensions Unit = mm (in.)

● Driver

◇ 200 W (1/4 HP), 300 W (2/5 HP), 400 W (1/2 HP)

BMUD200-A, BMUD200-C, BMUD300-C, BMUD400-C, BMUD400-S
Mass: 0.8 kg (1.76 lb.)

2D CAD A1434 3D CAD



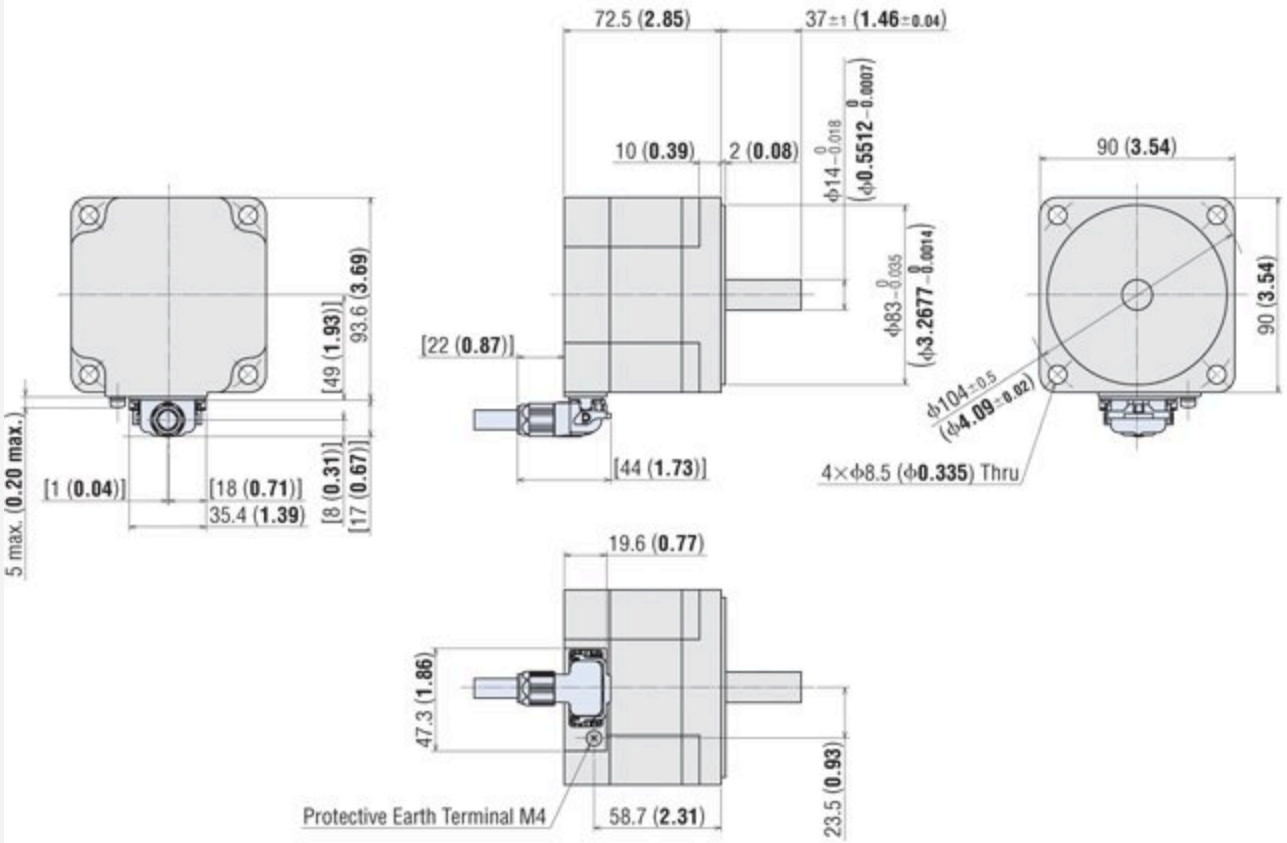
Dimensions Unit = mm (in.)

- The motor dimensions are the dimensions are illustrated with the separately-sold connection cable (par
  The described masses do not include the mass of the connection cable. Dimensions and mass of the connecti
- Installation screws are included.

Motor

◇Round Shaft Type 400 W (1/2 HP)

BLM5400HP-AS



Product Number −

Product Code

Motor

BLM 4 60 S H P - GFV □

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

BLM 5 200 □ H P K

① ② ③ ④ ⑤ ⑥ ⑦

①	Motor Type	**BLM**: Brushles
②	Frame Size	**2**: 60 mm **4**: 8 **6**: 104 mm **7**:
③	Output Power (W)	(Example) **120**
④	Identification Number	**S**
⑤	Motor Connection Method	Blank: Cable Ty **H**: Connector T
⑥	Motor Degree of Protection	None: IP40 Rati **P**: IP66 Rating* **W**: IP67 Rating
⑦	Shaft Type	**GFV**, **GFV2** **A**, **A2**: Round **AC**, **AC2**: Rou (wi **K**: Round Shaft
⑧	Output Shaft Material	Blank: Iron **S**:

*IP65 when combined with **FR** gearhead, IP44 gearhead.

Gearhead

GFV 2 G 50 S □ F

① ② ④ ⑤ ⑥ ⑦

5 C B 50 B

② ③ ⑥ ④ ⑤

①	Shaft Type	**GFV**: **GFV** Pi **GFS**: **GFS** Pin
②	Combinable Motors Frame Size	**2**: 60 mm **4**: 8 **6**: 104 mm **7**:
③	Gearhead Size	Code (Example)
④	Gear Ratio	Number: Gearh
⑤	Output Shaft Material	Blank, **B**: Iron **S**: Stainless Ste
⑥	Gearhead Type	Blank: Parallel **FR**: Hollow Sha **H**: **JH** Gearhea **B**: **JB** Gearhea **V**: **JV** Gearhea
⑦	**F**: H1 Food-Grade Lubricant Compatible **W**: Watertight, Dust-Resistant Specification	

Driver

BMUD 60-A 2

① ② ③ ④

①	Driver Type	**BMUD**: BM
②	Output	**30**: 30 W **60** **200**: 200 W
③	Power Supply Voltage	**A**: Single-Pha **C**: Single-Pha **S**: Three-Phas
④	Reference Number	

Connection Cables/Flexible Connection Cables (Connector Type)

CC 010 KH BL R F

①	Cable Type	**CC**: Connectio

②	Length	**005**: 0.5 m **020**: 2 m **040**: 4 m **100**: 10 m
③	Motor Connection Method	**KH**: Metal Co
④	Applicable Model	**BL**: Brushless
⑤	Blank: Connection Cable	**R**: Flexible Co
⑥	Cable Output Direction	**F**: Cable Outlet **B**: Cable Outle of the Output S **V**: Cable Outle

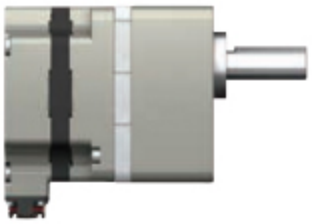
System

System Configuration Connector Type

Motors, gearheads, and connection cables must be ordered individually.

BMU Series Connector Type

Motor/Gearhead



Connection Cable/Flexible Connection Cable

Maximum Extension Distance: 10 m

Cable Outlet in Output Shaft Direction

Cable Outlet Opposite to Output Shaft Direction

Cable Outlet in Vertical Direction

Driver

Progra
Control

AC Pow
(Main Po

Cables and Accessories

Flexible Couplings

Mounting Bracket for Motor and Gearhead

I/O Signal Cables

Power Supply Cable

Mounting Brackets Circuit Products*2

Flange Drive Adapter
For use with parallel shaft gearhead motors with an output power of 120 W.

Torque Arms

Dust and Water Resistant Type Front Cover*2

*1 Not supplied.

*2 Mounting bracket for circuit product and dust and water resistant type front cover cannot be used together.

●Example of System Configuration

BMU Series Connector Type					Peripheral Equipment		
Motor	Parallel Shaft Gearhead	Driver	Connection Cable (3 m)	+	Mounting Brackets	Flexible Couplings	Mounting Circui
BLM230HP-GFV	GFV2G10S	BMUD30-A2	CC030KHBLV		SOL2M4F	MCL301010	MA

●The system configuration shown above is an example. Other combinations are also available.

[1] Quoted Ship Date for orders placed before 12:00 pm PST. Quantities may affect Shipping Date.