

Brushless Motors/AC Speed Control Motors

# Accessories

Overview,  
Product  
Series

Brushless  
Motors

AC Input  
BMU

AC Input  
BLE

AC Input  
BLF

AC Input  
BXII

DC Input  
BLH

AC Speed  
Control  
Motors

DSC

BHF

Accessories

Accessories

Installation

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Motor/Gearhead Mounting Brackets.....	D-190
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# Cables

A good selection of cables provides convenient connection between a motor, driver and controller.



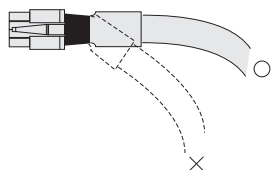
<Application Example>

## Reference Page Overview

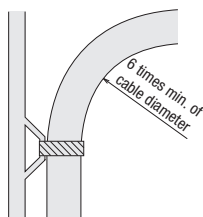
Motor Type	Product Name	Reference Page
Speed Control Motors	<b>BMU</b> Series	Page D-18
	<b>BLE</b> Series	Page D-42
	<b>BXII</b> Series	Page D-86
	<b>BLH</b> Series	Page D-118
	<b>DSC</b> Series	Page D-138

## Notes on Use of Flexible Connection Cables

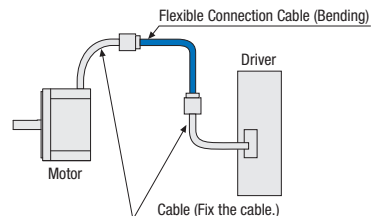
① Do not allow the cable to bend at the cable connector.



② For the bending radius, use at six times or more of the cable diameter.

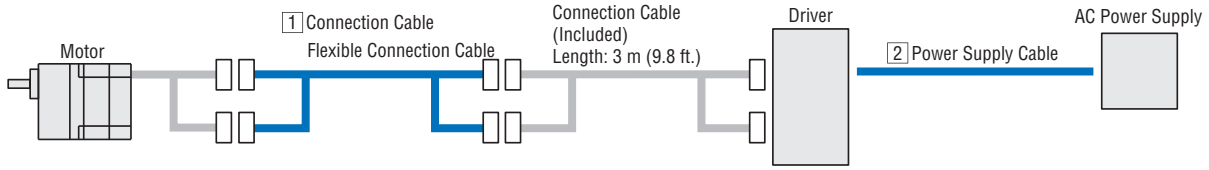


③ Connection cables are not flexible. If regularly bending of the cable is required, use the flexible cable only (sold separately).



## Connection Cables for BMU Series

### Cable System Configuration



### 1 Connection Cables Flexible Connection Cables

These cables are used to connect the motor and the driver. When using after extending the cables included with the product, the overall length of the cables should not exceed 10.5 m (34.4 ft.) (maximum of 2 connected cables). Use the flexible connection cable in applications where the cable is bent and flexed.

#### Product Line

##### ◇ Connection Cables

Product Name	Length L [m (ft.)]	List Price
<b>CC01BL2</b>	1 (3.3)	\$36.00
<b>CC02BL2</b>	2 (6.6)	\$50.00
<b>CC03BL2</b>	3 (9.8)	\$65.00
<b>CC05BL2</b>	5 (16.4)	\$94.00
<b>CC07BL2</b>	7 (23.0)	\$122.00
<b>CC10BL2</b>	10 (32.8)	\$166.00



##### ◇ Flexible Connection Cables

Product Name	Length L [m (ft.)]	List Price
<b>CC01BL2R</b>	1 (3.3)	\$72.00
<b>CC02BL2R</b>	2 (6.6)	\$101.00
<b>CC03BL2R</b>	3 (9.8)	\$130.00
<b>CC05BL2R</b>	5 (16.4)	\$187.00
<b>CC07BL2R</b>	7 (23.0)	\$245.00
<b>CC10BL2R</b>	10 (32.8)	\$331.00



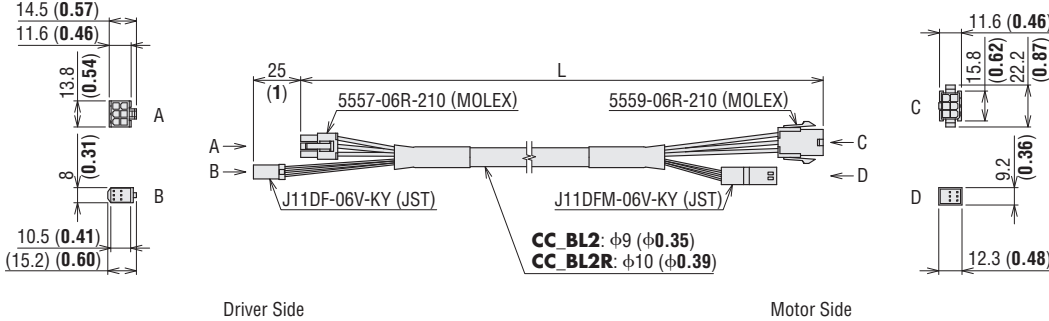
#### Note

- It is possible to connect the included cable and the connection cable for extension. The overall length of the extension cables and the included cables should not exceed 10.5 m (34.4 ft.) (maximum of 2 cables).

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- It is possible to connect the included cable and the connection cable for extension. The overall length of the extension cables and the included cables should not exceed 10.5 m (34.4 ft.) (maximum of 2 cables).
- Note on use of flexible extension cables → Page D-180

### Dimensions Unit = mm (in.)



## 2 Power Supply Cables

These cables are used to connect the driver and the power supply. Cables are available with or without a power supply plug.



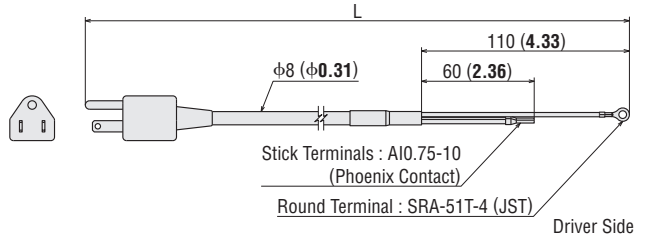
Plug Included

### Product Line

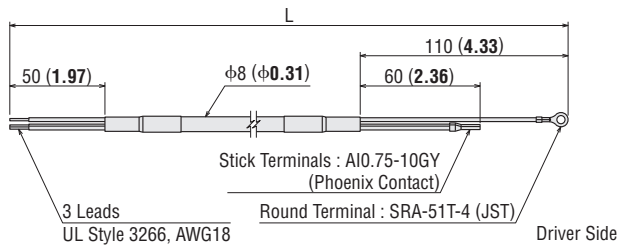
Product Name	Product Line	Power Supply Voltage	Length L [m (ft.)]	List Price
<b>CC01AC03P</b>	Plug included	Single-Phase 100-120 VAC	1 (3.3)	\$18.00
<b>CC02AC03P</b>			2 (6.6)	\$24.00
<b>CC03AC03P</b>			3 (9.8)	\$30.00
<b>CC01AC03N</b>	Plug not included	Single-Phase 100-120 VAC Single-Phase 200-240 VAC	1 (3.3)	\$12.00
<b>CC02AC03N</b>			2 (6.6)	\$18.00
<b>CC03AC03N</b>			3 (9.8)	\$24.00
<b>CC01AC04N</b>	Plug not included	Three-Phase 200-240 VAC	1 (3.3)	\$12.00
<b>CC02AC04N</b>			2 (6.6)	\$18.00
<b>CC03AC04N</b>			3 (9.8)	\$24.00

• Dimensions Unit = mm (in.)

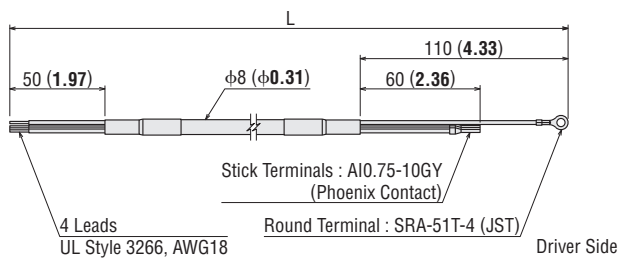
### • CC01AC03P, CC02AC03P, CC03AC03P



### • CC01AC03N, CC02AC03N, CC03AC03N



### • CC01AC04N, CC02AC04N, CC03AC04N



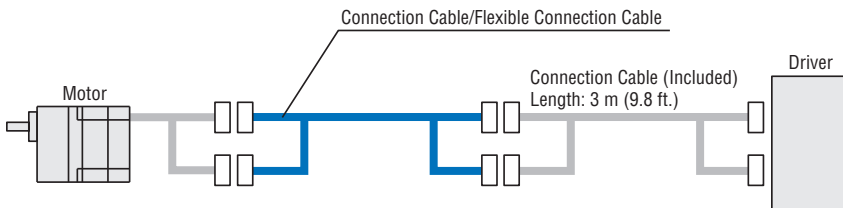
## Connection Cables for BLE Series

The **BLE** series is available with a 3 m (9.8 ft.) connection cable for motor and driver connection.

When the distance between the motor and the driver is extended, the accessory (sold separately) connection cable must be used.

Use the accessory (sold separately) flexible connection cable in applications where the cable is bent and flexed.

### Cable System Configuration



### Standard Type

#### Connection Cables (CC\_BLE)

Product Name	Length L [m (ft.)]	List Price
<b>CC01BLE</b>	1 (3.3)	\$37.00
<b>CC02BLE</b>	2 (6.6)	\$52.00
<b>CC03BLE</b>	3 (9.8)	\$67.00
<b>CC05BLE</b>	5 (16.4)	\$97.00
<b>CC07BLE</b>	7 (23.0)	\$127.00
<b>CC10BLE</b>	10 (32.8)	\$172.00
<b>CC15BLE</b>	15 (49.2)	\$247.00
<b>CC20BLE</b>	20 (65.6)	\$321.00

#### Flexible Connection Cables (CC\_BLER)

Product Name	Length L [m (ft.)]	List Price
<b>CC01BLER</b>	1 (3.3)	\$75.00
<b>CC02BLER</b>	2 (6.6)	\$105.00
<b>CC03BLER</b>	3 (9.8)	\$135.00
<b>CC05BLER</b>	5 (16.4)	\$194.00
<b>CC07BLER</b>	7 (23.0)	\$254.00
<b>CC10BLER</b>	10 (32.8)	\$344.00
<b>CC15BLER</b>	15 (49.2)	\$493.00
<b>CC20BLER</b>	20 (65.6)	\$643.00



Connection Cables



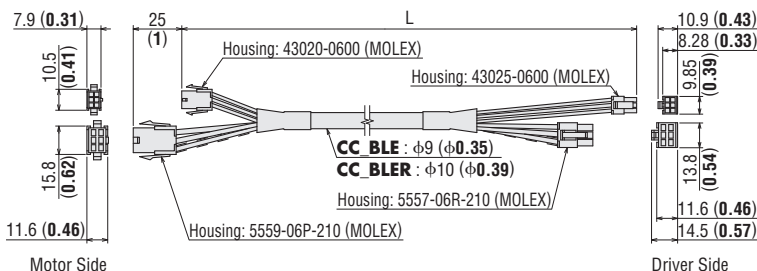
Flexible Connection Cables

● Notes on use of flexible connection cables → Page D-180

### Note

● When connecting the connection cable, keep the overall length of the cable at 20.5 m (67.2 ft.) or less (maximum 3 cables).

### Dimensions Unit = mm (in.)



### With Electromagnetic Brake Type

#### Connection Cables (CC\_BLEM)

Product Name	Length L [m (ft.)]	List Price
<b>CC01BLEM</b>	1 (3.3)	\$50.00
<b>CC02BLEM</b>	2 (6.6)	\$65.00
<b>CC03BLEM</b>	3 (9.8)	\$80.00
<b>CC05BLEM</b>	5 (16.4)	\$110.00
<b>CC07BLEM</b>	7 (23.0)	\$140.00
<b>CC10BLEM</b>	10 (32.8)	\$184.00
<b>CC15BLEM</b>	15 (49.2)	\$259.00
<b>CC20BLEM</b>	20 (65.6)	\$334.00

#### Flexible Connection Cables (CC\_BLEMR)

Product Name	Length L [m (ft.)]	List Price
<b>CC01BLEMR</b>	1 (3.3)	\$100.00
<b>CC02BLEMR</b>	2 (6.6)	\$130.00
<b>CC03BLEMR</b>	3 (9.8)	\$160.00
<b>CC05BLEMR</b>	5 (16.4)	\$220.00
<b>CC07BLEMR</b>	7 (23.0)	\$280.00
<b>CC10BLEMR</b>	10 (32.8)	\$370.00
<b>CC15BLEMR</b>	15 (49.2)	\$520.00
<b>CC20BLEMR</b>	20 (65.6)	\$670.00



Connection Cables



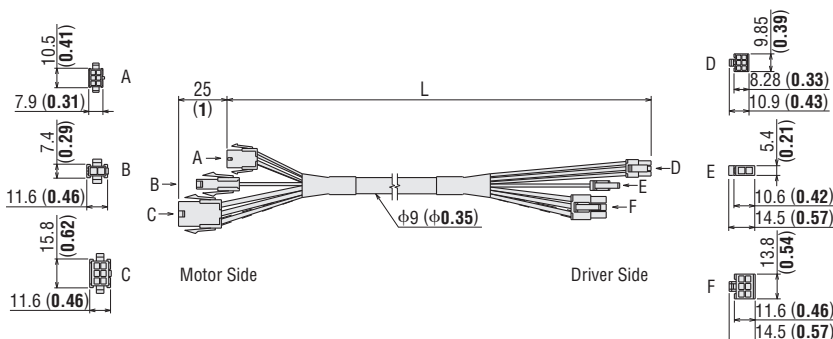
Flexible Connection Cables

● Notes on use of flexible connection cables → Page D-180

### Note

● When connecting the connection cable, keep the overall length of the cable at 20.5 m (67.2 ft.) or less (maximum 3 cables).

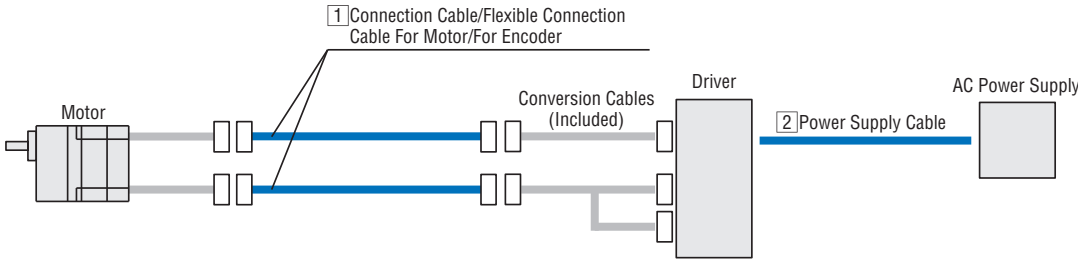
### Dimensions Unit = mm (in.)



Code	Housing	Manufacturer
A	43020-0600	MOLEX
B	5559-02P-210	MOLEX
C	5559-06P-210	MOLEX
D	43025-0600	MOLEX
E	5557-02R-210	MOLEX
F	5557-06R-210	MOLEX

## Connection Cables for BXII Series

### Cable System Configuration

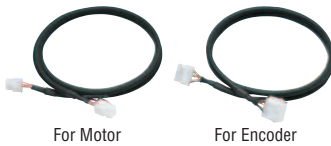


### 1 Connection Cables, Flexible Connection Cables

These cables are used to extend the wiring distance between the motor and driver. The maximum extension length is 30.4 m (99.7 ft.). Use the flexible connection cable in applications where the cable is bent and flexed. All connection cables and flexible connection cables come as a set of motor and encoder cables.

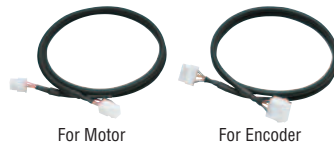
#### Product Line

##### ◇ Connection Cables (CC\_SBF)



Product Name	Length L [m (ft.)]	List Price
CC01SBF	1 (3.3)	\$67.00
CC02SBF	2 (6.6)	\$84.00
CC03SBF	3 (9.8)	\$100.00
CC05SBF	5 (16.4)	\$134.00
CC07SBF	7 (23.0)	\$167.00
CC10SBF	10 (32.8)	\$217.00
CC15SBF	15 (49.2)	\$301.00
CC20SBF	20 (65.6)	\$385.00
CC30SBF	30 (98.4)	\$520.00

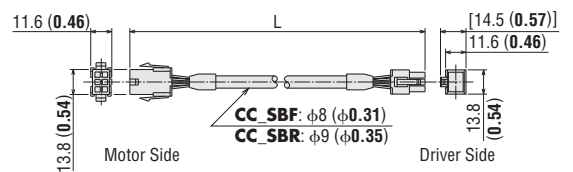
##### ◇ Flexible Connection Cables (CC\_SBR)



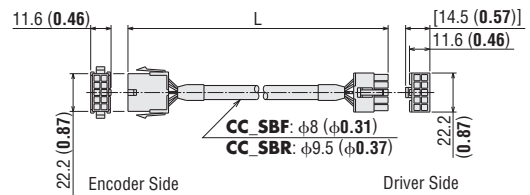
Product Name	Length L [m (ft.)]	List Price
CC01SBR	1 (3.3)	\$146.00
CC02SBR	2 (6.6)	\$221.00
CC03SBR	3 (9.8)	\$296.00
CC05SBR	5 (16.4)	\$447.00
CC07SBR	7 (23.0)	\$597.00
CC10SBR	10 (32.8)	\$823.00
CC15SBR	15 (49.2)	\$1,199.00
CC20SBR	20 (65.6)	\$1,575.00
CC30SBR	30 (98.4)	\$1,750.00

#### Dimensions Unit = mm (in.)

##### ◇ For Motor



##### ◇ For Encoder



#### Note

- It is possible to connect the included cable and the connection cable for extension. The overall length of the extension cables and the included cables should be 30.4 m (99.7 ft.) or less.
- Note on use of flexible extension cables → Page D-180

### 2 Power Supply Cables

These cables are used to connect the driver and the AC power supply. Cables are available with or without a power supply plug.



Plug Included

#### Product Line

Product Name	Product Line	Power Supply Voltage	Length L [m (ft.)]	List Price
CC01AC03P	Plug included	Single-Phase 100-120 VAC	1 (3.3)	\$18.00
CC02AC03P			2 (6.6)	\$24.00
CC03AC03P			3 (9.8)	\$30.00
CC01AC03N	Plug not included	Single-Phase 100-120 VAC Single-Phase 200-240 VAC	1 (3.3)	\$12.00
CC02AC03N			2 (6.6)	\$18.00
CC03AC03N			3 (9.8)	\$24.00

● Dimensions → Page D-182

## Connection Cables for BLH Series

These cables are used to extend the wiring distance between the motor and driver. The maximum extension length is 2 m (6.6 ft.). Use the flexible connection cable in applications where the cable is bent and flexed.

### Product Line

#### Connection Cables



BLH015/BLH230/BLH450		BLH5100
Applicable Products	Product Name	List Price
BLH015 BLH230 BLH450	CC02BLH	\$55.00
BLH5100	CC02AXH2	\$52.00

### Product Line

#### Flexible Connection Cables

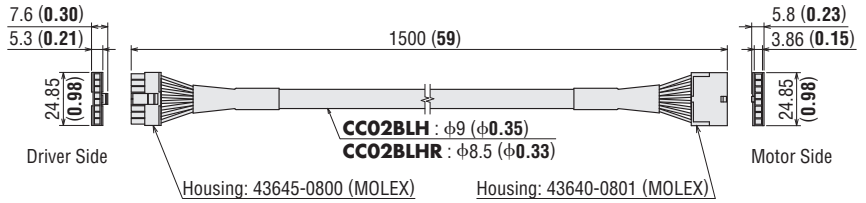


BLH015/BLH230/BLH450		BLH5100
Applicable Products	Product Name	List Price
BLH015 BLH230 BLH450	CC02BLHR	\$98.00
BLH5100	CC02BLH2R	\$103.00

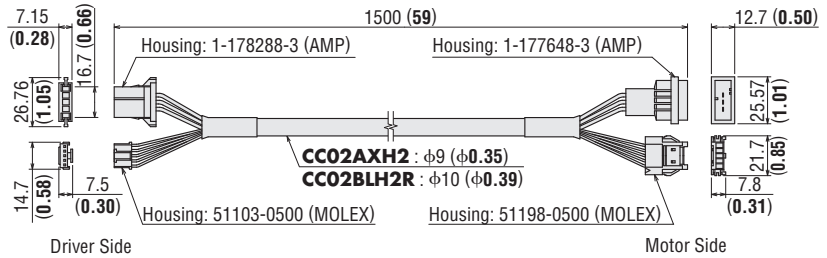
● Notes on use of flexible connection cables → Page D-180

### Dimensions Unit = mm (in.)

#### BLH015/BLH230/BLH450



#### BLH5100



Overview,  
Product  
Series

Brushless  
Motors

AC Input  
BMU

AC Input  
BLE

AC Input  
BLF

AC Input  
BXII

DC Input  
BLH

AC Speed  
Control  
Motors

DSC

BHF

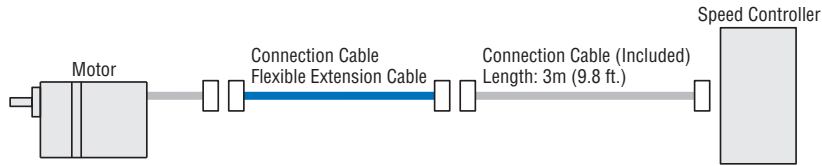
Accessories

Installation

## Connection Cables for DSC Series

These cables are used to connect the motor and the speed controller. When using extension cables included with the product, the overall length of the cables should not exceed 10.5 m (34.4 ft.) (maximum of 3 cables). Use the flexible connection cable in applications where the cable is bent or flexed.

### Cable System Configuration



### Product Line

#### Connection Cable for Standard Type (CC\_SC)

Product Name	Length L [m (ft.)]	List Price
CC01SC	1 (3.3)	\$35.00
CC02SC	2 (6.6)	\$39.00
CC03SC	3 (9.8)	\$49.00
CC05SC	5 (16.4)	\$68.00
CC10SC	10 (32.8)	\$116.00



#### Connection Cable for Electromagnetic Type (CC\_SCM)

Product Name	Length L [m (ft.)]	List Price
CC01SCM	1 (3.3)	\$47.00
CC02SCM	2 (6.6)	\$51.00
CC03SCM	3 (9.8)	\$61.00
CC05SCM	5 (16.4)	\$80.00
CC10SCM	10 (32.8)	\$128.00



#### Flexible Connection Cable for Standard Type (CC\_SCR)

Product Name	Length L [m (ft.)]	List Price
CC01SCR	1 (3.3)	\$68.00
CC02SCR	2 (6.6)	\$78.00
CC03SCR	3 (9.8)	\$97.00
CC05SCR	5 (16.4)	\$135.00
CC10SCR	10 (32.8)	\$231.00



#### Flexible Connection Cable for Electromagnetic Type (CC\_SCMR)

Product Name	Length L [m (ft.)]	List Price
CC01SCMR	1 (3.3)	\$92.00
CC02SCMR	2 (6.6)	\$102.00
CC03SCMR	3 (9.8)	\$121.00
CC05SCMR	5 (16.4)	\$159.00
CC10SCMR	10 (32.8)	\$255.00

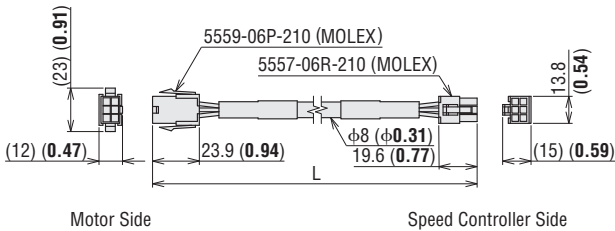


#### Note

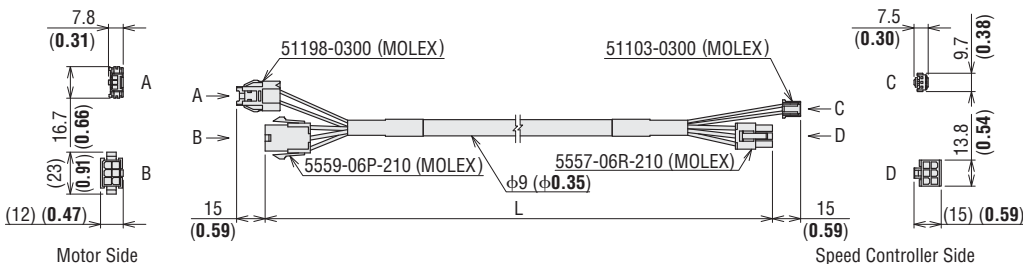
- It is possible to connect the included cable and the connection cable for extension. The overall length of the extension cables and the included cables should not exceed 10.5 m (34.4 ft.) (maximum of 3 cables).
- Note on use of flexible extension cables → Page D-180

### Dimensions Unit = mm (in.)

#### For Standard Type



#### For Electromagnetic Brake Type





# External Speed Potentiometer

This is a potentiometer used for setting the speed control motor.

## PAVR-20KZ

### Product Line

(20 kΩ 1/4 W, with a linear resistance vs. angle curve)

Product Name	List Price	Applicable Products
<b>PAVR-20KZ</b>	\$15.00	<b>BLE</b> Series*1 <b>BXII</b> Series*2 <b>BLH</b> Series*2 <b>DSC</b> Series*1

### Note

\*1 One external speed potentiometer set is included.

Use when setting the speed in multiple stages.

\*2 The external speed potentiometer is not included.

Use when setting the speed with the external speed potentiometer.



## DIN Rail Mounting Plate for External Speed Potentiometer

This is a DIN rail mounting bracket for the external speed potentiometer.

### Features

- Because it is made of metal, solid installation is possible.
- It will not slip horizontally, even without an end plate.
- Anti-spin mechanism holes are already machined in.

### Product Line

Material: SPCC Surface treatment: Trivalent chromate

Product Name	List Price	Applicable External Speed Potentiometer
<b>MADP04</b>	\$19.00	<b>PAVR-20KZ</b>



**MADP04**



<Application Example>

Overview,  
Product  
Series

Brushless  
Motors

AC Input  
BMU

AC Input  
BLE

AC Input  
BLF

AC Input  
BXII

DC Input  
BLH

AC Speed  
Control  
Motors

**DSC**

**BHF**

Accessories

Installation



For details (specifications, characteristics, dimensions and others) on these products please refer to either to our website, contact technical support or your nearest Oriental Motor sales office.

[www.orientalmotor.com/catalog](http://www.orientalmotor.com/catalog)

# Regeneration Units

During vertical drive (gravitational operation) and when starting and stopping large inertia loads rapidly, external forces cause the motor to rotate and function as a power generator. When that occurs, if the regenerative power exceeds the capacity of the driver to absorb, failure may result. In such cases, the regeneration unit is connected to the driver and the regenerative power is released as heat energy.

## Product Line

Product Name	List Price	Applicable Products
<b>EPRC-400P</b>	\$58.00	<b>BLE Series</b> <b>BXS230, BXS460, BXS5120</b>
<b>RGB100</b>	\$59.00	<b>BXS6200, BXS6400</b>



# Motor Speed Indicator

## SDM496

This is the speed indicator for speed control motor products.

### Features

- The gear ratio is set with the digital switch of the body, and the output shaft speed of the motor and gearhead can be indicated digitally.
- If the surface installation socket (**EP11PF**, sold separately) is used, attachment to the DIN Rail is possible.
- This is not a standard certified product.

### Product Line

Product Name	List Price	Applicable Products
<b>SDM496</b>	\$192.00	<b>BLE Series</b> <b>BLH Series</b>

The following items are included with each product.  
 Motor Speed Indicator, Adapter for Recessed Mounting,  
 Round Shape Socket, Unit Seal, Operating Manual

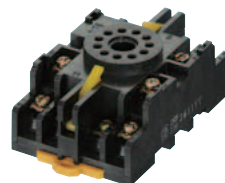


## Flush Mounting Socket for Mounting DIN Rail

Use when installing the motor speed indicator on a DIN Rail.

### Product Line

Product Name	List Price	Applicable Products
<b>EP11PF</b>	\$12.00	Motor Speed Indicator <b>SDM496</b>



<Application Example>

For details (specifications, characteristics, dimensions and others) on these products please refer to either to our website, contact technical support or your nearest Oriental Motor sales office.

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# Driver Mounting Brackets For Wall Mount Installation

## MAFP04

This is a driver mounting bracket for panel-installation type.

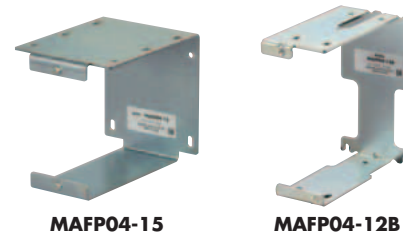
### Features

- It can be installed suspended, placed on the floor or mounted on the back face.

### Product Line

Material: SPCC Surface treatment: Trivalent chromate

Product Name	List Price	Applicable Products
<b>MAFP04-15</b>	\$35.00	<b>BMU</b> Series 30 W (1/25 HP), 60 W (1/12 HP), 120 W (1/6 HP)
<b>MAFP04-12B</b>	\$28.00	<b>BMU</b> Series 200 W (1/8 HP)



**MAFP04-15**

**MAFP04-12B**



<Application Example>

# DIN Rail Mounting Plate

## PADP03

This is a DIN Rail Mounting plate for the driver.

### Features

- Made of plastic, it is lightweight.
- DIN Rail attachment and removal are easy.

### Product Line

Materials: Resin

Product Name	List Price	Applicable Product
<b>PADP03</b>	\$7.00	<b>BLE</b> Series



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DC Input  
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AC Speed  
Control  
Motors

DSC

BHF

Accessories

Installation

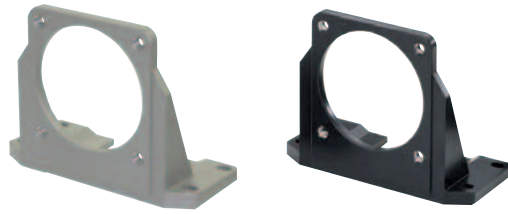


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[www.orientalmotor.com/catalog](http://www.orientalmotor.com/catalog)

## Motor/Gearhead Mounting Brackets

Dedicated mounting brackets for attaching and securing a motor and gearhead. They are a high-strength type, which can be used with high powered motors and gearheads. These brackets come with tapped holes. To mount the motor and gearhead, simply fasten with the screws provided to the gearhead. To mount the motor alone, installation screws must be purchased separately.



### ■ Product Line

→ Page C-196

### ■ Dimensions

→ Page C-198

## Flexible Couplings

These products are clamp type couplings to connect a motor or gearhead shaft to the shaft of the equipment. Once the motor or gearhead is determined, the proper coupling can be selected.



### ■ Applicable Products

→ Page C-202

### ■ Specifications

→ Page C-203

### ■ Dimensions

→ Page C-204