

Hollow Rotary Actuators Accessories

Control Module RoHS

This enables you to perform operations such as setting the driver's internal parameters and setting or changing the data. It can also be used for operations such as speed and I/O monitoring, and teaching.

Product Line

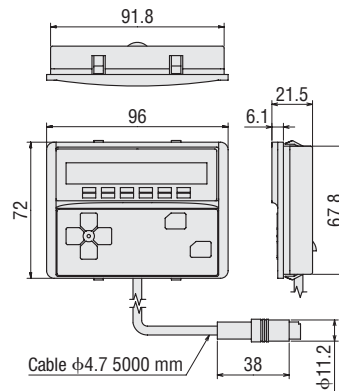
Product Name
OPX-2A



Dimensions (Unit mm)

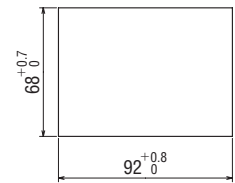
Control Module

Mass: 0.25 kg CAD B453



Panel Cut-Out

(Installation plate thickness 1~3 mm)



Overview,
Product
Series

FLEX
Compatible
Products

Motorized
Linear
Slides

α STEP
EZSII

α STEP
EZSII
Cleanroom

Motorized
Cylinders

α STEP
EZCII

Motorizes
Linear
Slides/
Cylinders

Common
Controllers

Accessories

Compact
Linear
Actuators

DRL

Accessories

Hollow
Rotary
Actuators

DGI

Accessories

Data Setting Software Communication Cable RoHS

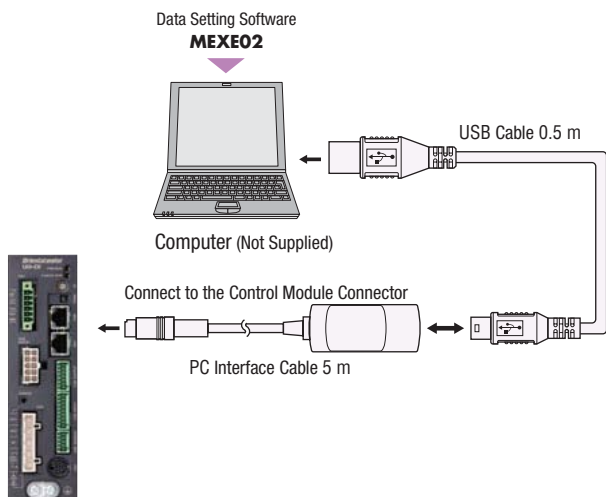
This communication cable is required for connecting to the computer on which the data setting software is installed.

Product Line

Product Name
CC05IF-USB



Computer and Driver Connection



Note

● To connect to a computer, you must install a dedicated driver.

Data Setting Software MEXE02

Data Setting Software can be downloaded from our website. CD-ROMs are also available.

Visit our website, or contact the nearest Oriental Motor sales office.

Operating Environment

Operating System (OS)

- Microsoft Windows 2000 Professional Service Pack 4
Be sure to apply Rollup1 that is provided by Microsoft. Check "Add or remove programs" to see if Rollup1 is installed.

For the following operating systems, the 32 bit (x86) editions and 64 bit (x64) editions are supported.

- Microsoft Windows XP Home Edition Service Pack 3
- Microsoft Windows XP Professional Service Pack 2
- Microsoft Windows XP Professional Service Pack 3*
- Microsoft Windows Vista Home Basic Service Pack 2
- Microsoft Windows Vista Home Premium Service Pack 2
- Microsoft Windows Vista Business Service Pack 2
- Microsoft Windows Vista Ultimate Service Pack 2
- Microsoft Windows Vista Enterprise Service Pack 2
- Microsoft Windows 7 Starter Service Pack 1
- Microsoft Windows 7 Home Premium Service Pack 1
- Microsoft Windows 7 Professional Service Pack 1
- Microsoft Windows 7 Ultimate Service Pack 1
- Microsoft Windows 7 Enterprise Service Pack 1

*32 bit (x86) edition only

PC

Recommended CPU*1	Intel Core processor 2 GHz or faster (compatible with the OS)
Display	Video adapter and monitor with a minimum resolution of XGA (1024×768)
Recommended Memory*1	32 bit (x86) edition: 1 GB or more 64 bit (x64) edition: 2 GB or more
Hard Disk*2	Free disk space of at least 30 MB
USB Port	One USB1.1 port
Disk Device	CD-ROM drive (for installation)

*1 The system requirements for the OS must be met.

*2 MEXE02 requires Microsoft .NET Framework 2.0 Service Pack 2. If it is not installed, it will be installed automatically. An additional 500 MB of free space may be required.

Note

- Depending on your system environment, the required memory and hard disk may vary.
- Windows and Windows Vista are registered trademarks of Microsoft Corporation in the United States and other countries.

Home Sensor Sets RoHS

A home sensor set, which consists of a photomicro sensor, cable type connector, sensor installation bracket, shield plate and installation screws, is provided to facilitate easy return-to-home operation.

Since the sensor set comes with all the parts required for the return-to-home operation, you will spend less time designing, fabricating and procuring parts related to sensor installation. Installation is very easy, so you can start using the sensor right away.

Product Line

Product Name	Sensor Output	Applicable Product
PADG-SA	NPN	DG60
PADG-SAY	PNP	
PADG-SB	NPN	DG85 DG130 DG200
PADG-SBY	PNP	

Specifications

NPN Type

Sensor Product Name	DG60: EE-SX672A (Made by OMRON Corporation) DG85, DG130, DG200: EE-SX673A (Made by OMRON Corporation)
Power Supply Voltage	5~24 VDC±10% Ripple (P-P) 10% or less
Current Consumption	35 mA or less
Control Output	NPN Open-Collector Output 5~24 VDC 100 mA or less Residual Voltage 0.8 V or less (Load current of 100 mA)
Indicator LED	Detection Display (Red)
Sensor Logic	Normally Open/Normally Closed (Selectable, depending on connection)

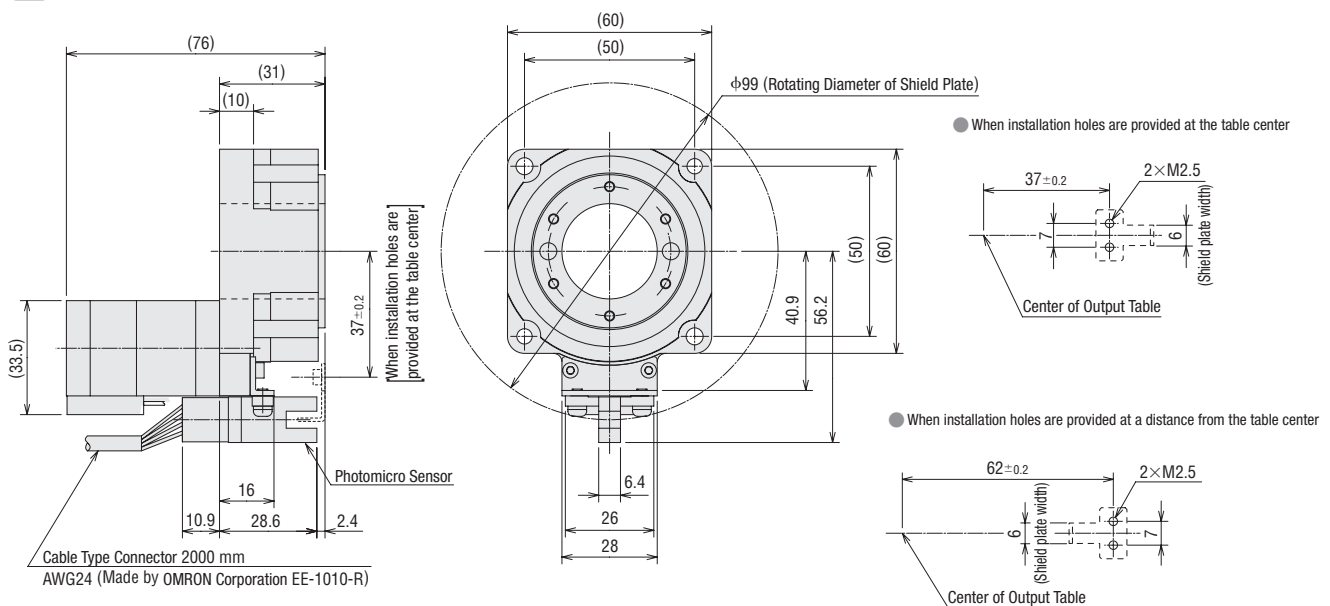
PNP Type

Sensor Product Name	DG60: EE-SX672R (Made by OMRON Corporation) DG85, DG130, DG200: EE-SX673R (Made by OMRON Corporation)
Power Supply Voltage	5~24 VDC±10% Ripple (P-P) 10% or less
Current Consumption	30 mA or less
Control Output	PNP Open-Collector Output 5~24 VDC 50 mA or less Residual Voltage 1.3 V or less (Load current of 50 mA)
Indicator LED	Detection Display (Red)
Sensor Logic	Normally Open/Normally Closed (Selectable, depending on connection)

Sensor Installation Dimensions (Unit mm)

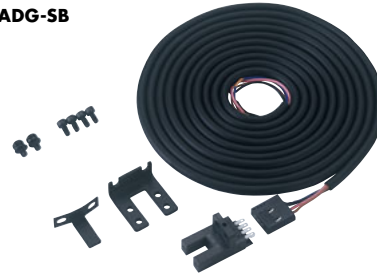
DG60

CAD D2863



[Installation plate cut-out dimensions for shield plate]

PADG-SB



Installing the Home Sensor Set

Be aware of the following points when installing the accessory home sensor set.

- Set the operating conditions so that the operating ambient temperature stays at 40°C or less and the surface temperature of the actuator motor stays at 90°C or less.
- When performing return-to-home operation using the back shaft of the motor, a separate sensor, installation bracket and other necessary parts should be provided.

When Extending the Sensor Line

Use a shielded cable when extending the sensor line by a minimum of 2 m. The shielded cable must be grounded.

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Motorizes
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Common
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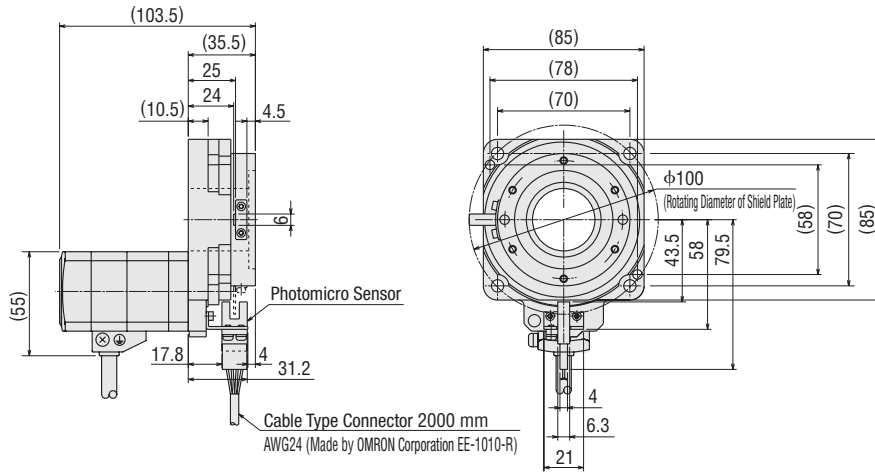
Hollow
Rotary
Actuators

DGI

Accessories

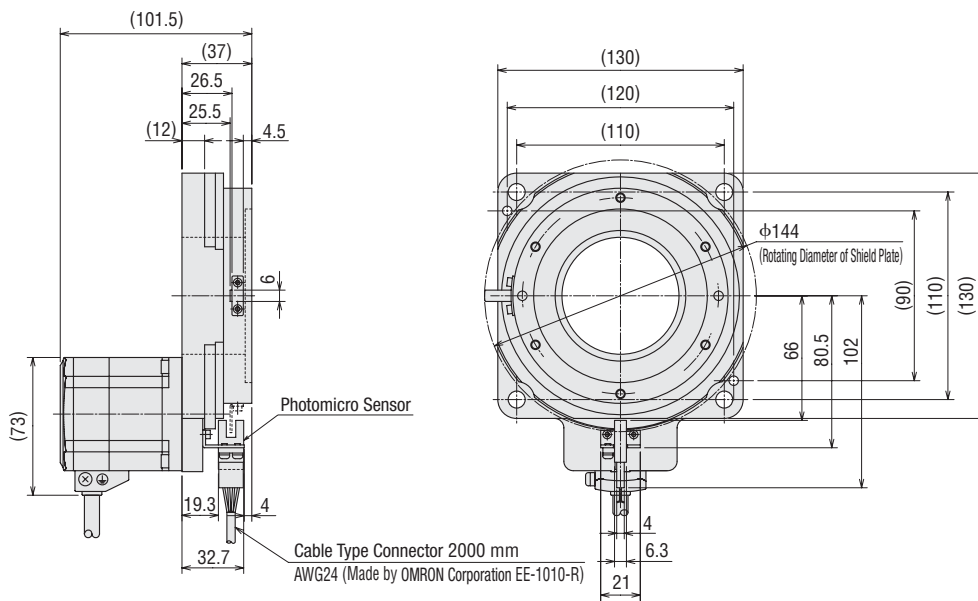
● DG85

CAD D2864



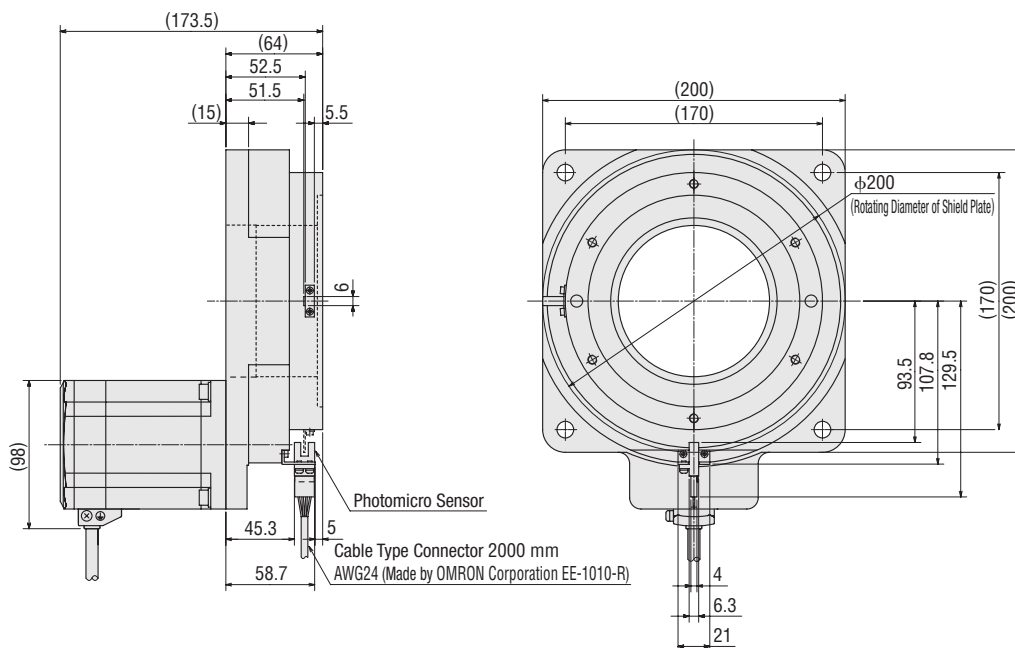
● DG130

Actuator Product Name: DGM130R-ARAC CAD D2865



● DG200

Actuator Product Name: DGM200R-ARAC CAD D2866

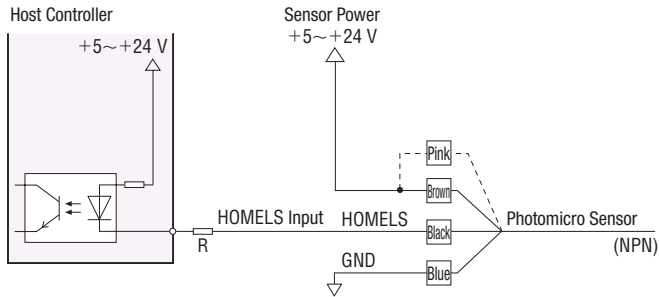


Wiring the Sensor

NPN Type

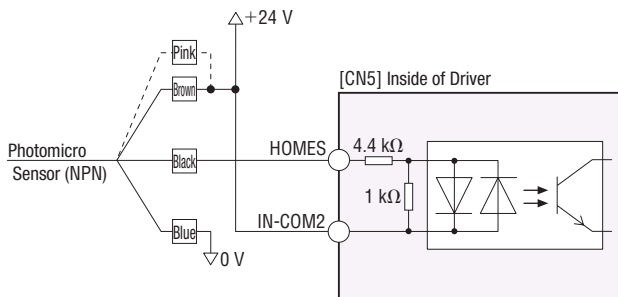
Keep the power supply voltage between 5 VDC and 24 VDC. In addition, Keep the current value at 100 mA or less. When the current exceeds 100 mA, connect the external resistor R. The GND of sensor power and power of external controller should be connected together.

<Pulse Input Type>



--- Connect the pink lead wire to the brown lead wire when the sensor logic is N.C. (normally closed).
The pink lead wire is not connected when the sensor logic is N.O. (normally open).

<Built-In Controller Type>

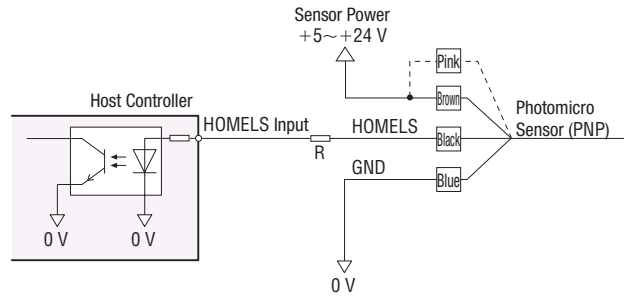


--- Connect the pink lead wire to the brown lead wire when the sensor logic is N.C. (normally closed).
The pink lead wire is not connected when the sensor logic is N.O. (normally open).

PNP Type

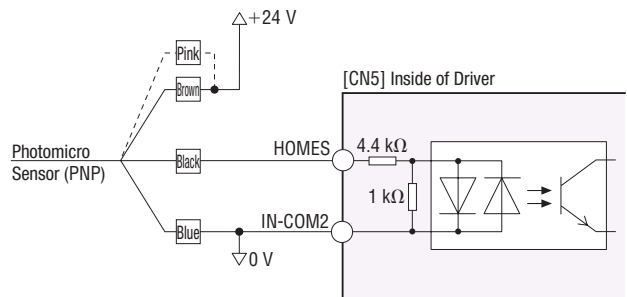
Keep the power supply voltage between 5 VDC and 24 VDC. Keep the current value at 50 mA or less. When the current exceeds 50 mA, connect the external resistor R.

<Pulse Input Type>



--- Connect the pink lead wire to the brown lead wire when the sensor logic is N.C. (normally closed).
The pink lead wire is not connected when the sensor logic is N.O. (normally open).

<Built-In Controller Type>



--- Connect the pink lead wire to the brown lead wire when the sensor logic is N.C. (normally closed).
The pink lead wire is not connected when the sensor logic is N.O. (normally open).

Mounting Pedestals RoHS

This is a useful mounting pedestal that enables the **DGII** Series to be used as a direct drive motor. Applications that require height and installation from the side can also be performed, expanding the range of available operations.

Product Line

Product Name	DGII Series Applicable Products	
	Product Line	Product Name
MDG60A	Single Shaft	DG60-ARA
MDG60B	Single Shaft/Double Shaft	DG60-ARA DG60-ARB
MDG85A	Single Shaft	DG85R-ARA
MDG85B	Single Shaft/Double Shaft	DG85R-ARA DG85R-ARB
MDG130A	Single Shaft	DG130R-ARA
MDG130B	Single Shaft/Double Shaft With Electromagnetic Brake	DG130R-ARA DG130R-ARB DG130R-ARM

● The product names of the applicable products are described with text by which the product name can be identified.



The following items are included with the product.
Hexagon socket head screws for actuator assembly, positioning pins, bands (for cable clamping), band bases, set screws for band bases

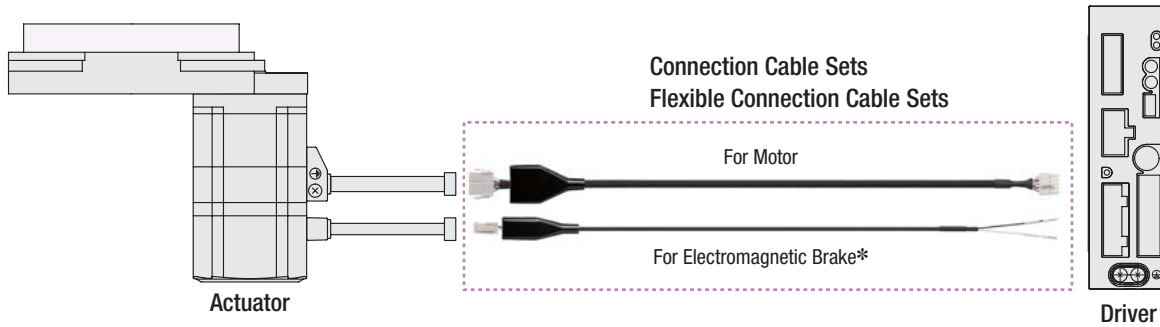
Connection Cable Sets (RoHS), Flexible Connection Cable Sets (RoHS) Extension Cable Sets (RoHS), Flexible Extension Cable Sets (RoHS)

The **DGII** Series comes with a cable of 1 m, 2 m or 3 m for the connection between the actuator and driver.
 When the distance between the actuator and driver is extended to 3 m or longer, a connection cable set or extension cable set must be used.
 Use a flexible connection cable set or flexible extension cable set if the cable will be bent repeatedly.

System Configuration

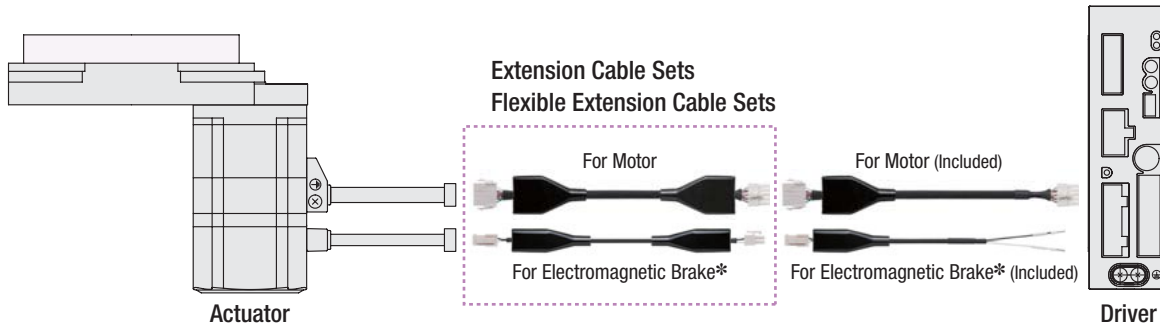
When Connecting the Actuator and Driver without Using an Included Cable

- Use a connection cable set.
- Use a flexible connection cable set if the cable will be bent.



When Extending the Distance between the Actuator and the Driver Using an Included Cable

- Use an extension cable set and connect it to the included cable.
- Use a flexible extension cable set if the cable will be bent.



*Cables for electromagnetic brake to be used with the electromagnetic brake type.

Note

- Keep the overall cable length at 30 m or less when using an extension cable set or a flexible extension cable set to connect with a cable included with the **DGII** Series.

Connection Cable Sets RoHS, Flexible Connection Cable Sets RoHS

Product Line

Connection Cable Sets

◇ For Single Shaft, Double Shaft



Cables for DC Power Supply Input Motor

Product Name	Length L (m)
CC050VA2F2	5
CC070VA2F2	7
CC100VA2F2	10
CC150VA2F2	15
CC200VA2F2	20
CC300VA2F2	30



Cables for AC Power Supply Input Motor

Product Name	Length L (m)
CC050VAF	5
CC070VAF	7
CC100VAF	10
CC150VAF	15
CC200VAF	20
CC300VAF	30

◇ For With Electromagnetic Brake



Cables for Motor



Cable for Electromagnetic Brake

Product Name	Length L (m)
CC050VAFB	5
CC070VAFB	7
CC100VAFB	10
CC150VAFB	15
CC200VAFB	20
CC300VAFB	30

Flexible Connection Cable Sets

◇ For Single Shaft, Double Shaft



Cables for DC Power Supply Input Motor

Product Name	Length L (m)
CC010VA2R2	1
CC020VA2R2	2
CC030VA2R2	3
CC050VA2R2	5
CC070VA2R2	7
CC100VA2R2	10
CC150VA2R2	15
CC200VA2R2	20
CC300VA2R2	30



Cables for AC Power Supply Input Motor

Product Name	Length L (m)
CC010VAR	1
CC020VAR	2
CC030VAR	3
CC050VAR	5
CC070VAR	7
CC100VAR	10
CC150VAR	15
CC200VAR	20
CC300VAR	30

◇ For With Electromagnetic Brake



Cables for Motor



Cable for Electromagnetic Brake

Product Name	Length L (m)
CC010VARB	1
CC020VARB	2
CC030VARB	3
CC050VARB	5
CC070VARB	7
CC100VARB	10
CC150VARB	15
CC200VARB	20
CC300VARB	30

Extension Cable Sets RoHS, Flexible Extension Cable Sets RoHS

Product Line

Extension Cable Sets

◇ For Single Shaft, Double Shaft



Cables for DC Power Supply Input Motor

Product Name	Length L (m)
CC010VA2F2	1
CC020VA2F2	2
CC030VA2F2	3
CC050VA2F2	5
CC070VA2F2	7
CC100VA2F2	10
CC150VA2F2	15
CC200VA2F2	20



Cables for AC Power Supply Input Motor

Product Name	Length L (m)
CC010VAFT	1
CC020VAFT	2
CC030VAFT	3
CC050VAFT	5
CC070VAFT	7
CC100VAFT	10
CC150VAFT	15
CC200VAFT	20

◇ For With Electromagnetic Brake



Cables for Motor



Cable for Electromagnetic Brake

Product Name	Length L (m)
CC010VAFBT	1
CC020VAFBT	2
CC030VAFBT	3
CC050VAFBT	5
CC070VAFBT	7
CC100VAFBT	10
CC150VAFBT	15
CC200VAFBT	20

Flexible Extension Cable Sets

◇ For Single Shaft, Double Shaft



Cables for DC Power Supply Input Motor

Product Name	Length L (m)
CC010VA2R2	1
CC020VA2R2	2
CC030VA2R2	3
CC050VA2R2	5
CC070VA2R2	7
CC100VA2R2	10
CC150VA2R2	15
CC200VA2R2	20



Cables for AC Power Supply Input Motor

Product Name	Length L (m)
CC010VART	1
CC020VART	2
CC030VART	3
CC050VART	5
CC070VART	7
CC100VART	10
CC150VART	15
CC200VART	20

◇ For With Electromagnetic Brake



Cables for Motor



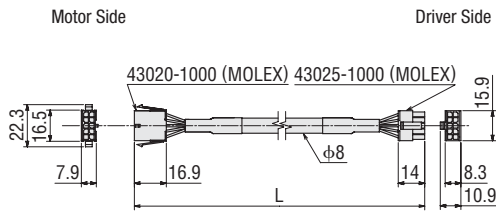
Cable for Electromagnetic Brake

Product Name	Length L (m)
CC010VARBT	1
CC020VARBT	2
CC030VARBT	3
CC050VARBT	5
CC070VARBT	7
CC100VARBT	10
CC150VARBT	15
CC200VARBT	20

Dimensions (Unit mm)

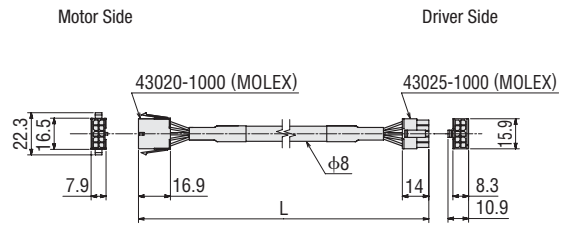
Connection Cable

◇ Cables for DC Power Supply Input Motor

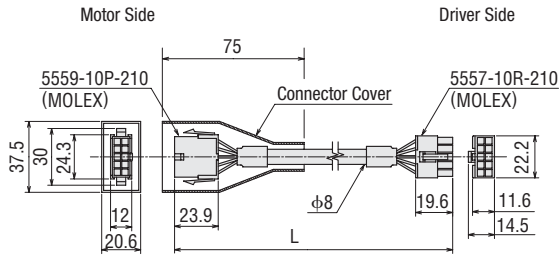


Extension Cable

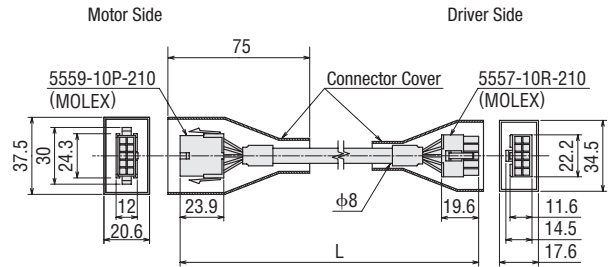
◇ Cables for DC Power Supply Input Motor



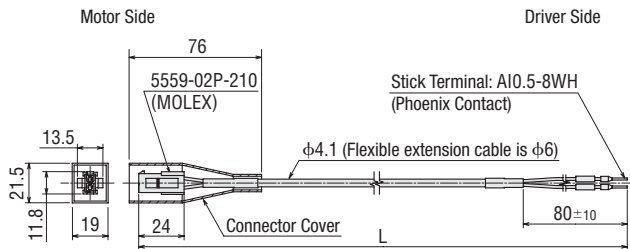
◇ Cables for AC Power Supply Input Motor



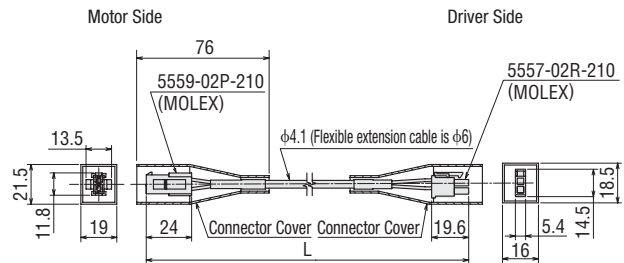
◇ Cables for AC Power Supply Input Motor



◇ Cable for Electromagnetic Brake

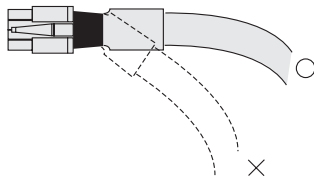


◇ Cable for Electromagnetic Brake

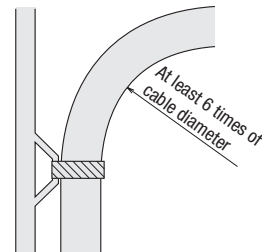


Notes on Use of Flexible Cable

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

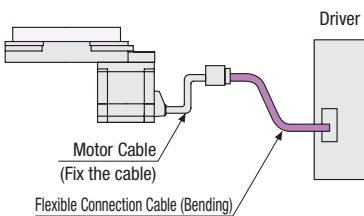


② For the bending radius, use at least 6 times of the cable diameter.

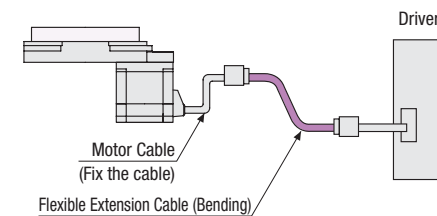


③ The cable from the actuator and the included cable are not for bending. If the motor cable is to be bent, bend it at the flexible cable.

• Flexible Connection Cable

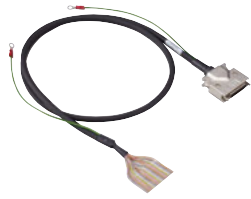


• Flexible Extension Cable



Driver Cable

General-Purpose Cables RoHS



This shielded cable has a half-pitch connector at one end of the cable for easy connecting to the driver.

Note

- Note that as the length of the pulse line between the driver and controller increases, the maximum transmission frequency decreases.
- Install a connector that matches the controller you are using to the other end of the cable.

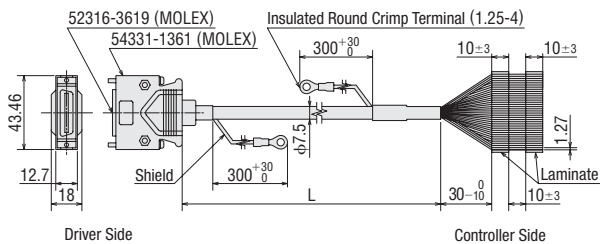
Product Line

Product Line	Product Name	Applicable	Length L (m)
Straight	CC36D1E	Pulse Input Type For CN5 (36 pins)	1
	CC36D2E		2

Dimensions (Unit mm)

CC36D1E, CC36D2E

Conductor: AWG28 (0.08 mm²)



Connector – Terminal Block Conversion Unit RoHS



CC36T10E

A conversion unit that connects a driver to a programmable controller using a terminal block.

- Includes a signal name plate for easy, one-glance identification of driver signal names
- DIN-rail Installable
- Cable length: 1 m

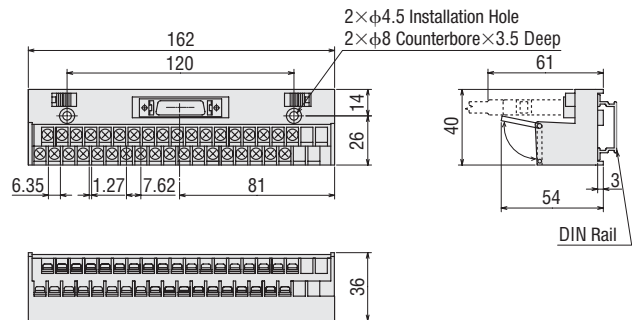
Product Line

Product Name	Applicable	Length (m)
CC36T10E	Pulse Input Type For CN5 (36 pins)	1

Dimensions (Unit mm)

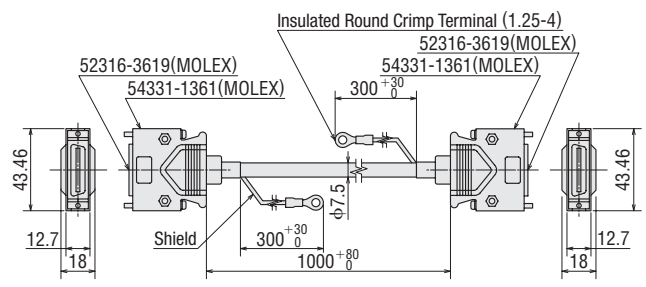
CC36T10E

CAD B991



Terminal Block Pin No.

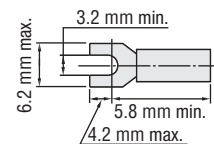
1	9	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	



- Applicable Crimp Terminals
 - Terminal Screw Size: M3
 - Tightening Torque: 1.2 N·m
 - Applicable minimum lead wire: AWG22 (0.3 mm²)

Note

- Round terminals cannot be used.



Battery Set RoHS

Connect when using as an absolute backup system.

Product Line

Product Name	Applicable
BAT01B	Built-In Controller Type



Specifications

Item	Description
Battery Type	Sealed Nickel-Hydrogen Battery
Nominal Voltage	2.4 V
Rated Capacity	1900 mAh
Expected Life	Approx. 4 years*1
Charge Time	32 hours*1
Data Retention Period	Approx. 360 hours (Approx. 15 days)*1*2
Operating Ambient Temperature	0~+40°C (non-freezing)
Operating Ambient Humidity	45~85% (Non-condensing)

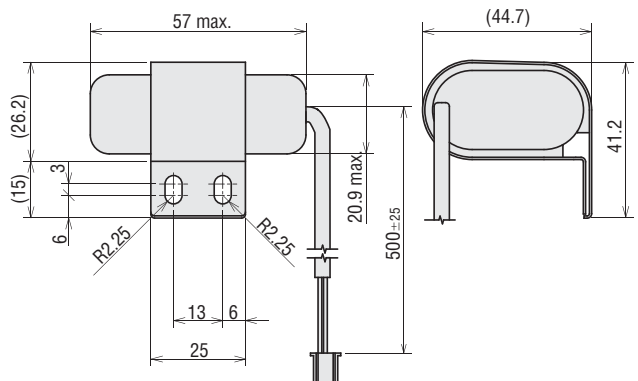
*1 At an ambient temperature of 20°C

*2 After the power supply is cut OFF with the battery fully charged

Dimensions (Unit mm)

Mass: 0.1kg

CAD B560



RS-485 Communication Cables RoHS

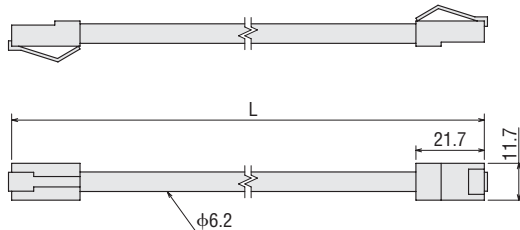
This cable is used to link drivers in multi-axis operations.
It also connects the network converter to the driver.

Product Line

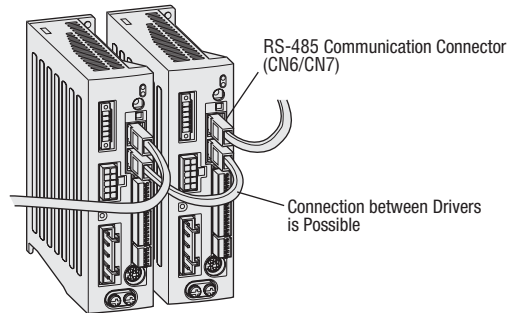
Applicable	Product Name	Length L (m)
Built-In Controller Type AC Power Supply Input	CC002-RS4	0.25
Built-In Controller Type DC Power Supply Input	CC001-RS4	0.1
	CC002-RS4	0.25



Dimensions (Unit mm)



● Connection Example (The illustration below is for an AC power supply input.)



FLEX Communication Cables RoHS

This cable is convenient for connecting to other equipment when controlling FLEX-compatible products by Modbus through RS-485.

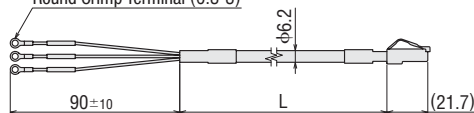
Product Line

Product Line	Product Name	Length L (m)
General-Purpose Type	CC02FLT	2
	CC05FLT	5

Dimensions (Unit mm)

CC02FLT, CC05FLT

Round Crimp Terminal (0.3-3)



Network Converters RoHS

The network converter converts host communication protocol to Oriental Motor's original RS-485 communication protocol. You can use a network converter to control Oriental Motor's RS-485-compatible products within the host communication environment.

Product Line

Network Type	Product Name
CC-Link- Compatible	NETC01-CC
MECHATROLINK- II Compatible	NETC01-M2
MECHATROLINK- III Compatible	NETC01-M3



NETC01-CC



NETC01-M2



NETC01-M3

Overview,
Product
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FLEX
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Motorized
Linear
Slides

**αSTEP
EZSII**

**αSTEP
EZSII**
Cleanroom

Motorized
Cylinders

**αSTEP
EZCI**

Motorizes
Linear
Slides/
Cylinders

Common
Controllers

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