

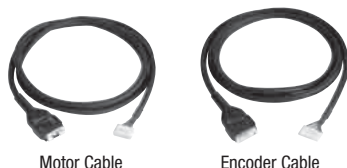
Motorized Cylinder

Accessories (Sold separately)

Cable Set

A set of dedicated cables is used to connect the cylinder with the controller. The cable set consists of a motor cable and an encoder cable or an actuator communication cable. Use flexible cables in applications where the cables will flex repeatedly. The cable length can be selected from 2 m, 5 m and 10 m. Each of the cables can be purchased individually. (For both the electromagnetic brake type and non-electromagnetic brake type.)

●EZC Series



Motor Cable

Encoder Cable

◇Product Line

Cable Set

Length (L)	Model	Individual Cable	
		Motor Cable	Encoder Cable
2 m	CC02EZ1	CC02EZ1-M	CC02EZ1-E
5 m	CC05EZ1	CC05EZ1-M	CC05EZ1-E
10 m	CC10EZ1	CC10EZ1-M	CC10EZ1-E

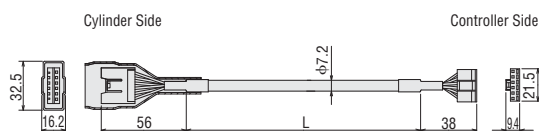
Flexible Cable Set

Length (L)	Model	Individual Cable	
		Flexible Motor Cable	Flexible Encoder Cable
2 m	CC02EZ1R	CC02EZ1R-M	CC02EZ1R-E
5 m	CC05EZ1R	CC05EZ1R-M	CC05EZ1R-E
10 m	CC10EZ1R	CC10EZ1R-M	CC10EZ1R-E

◇Dimensions Unit = mm

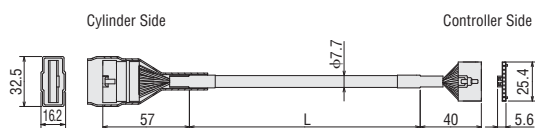
Motor Cable

CC□EZ1-M/CC□EZ1R-M

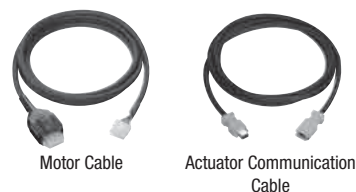


Encoder Cable

CC□EZ1-E/CC□EZ1R-E



●EZHC/EZHP Series



Motor Cable

Actuator Communication Cable

◇Product Line

Cable Set

Length (L)	Model	Individual Cable	
		Motor Cable	Actuator Communication Cable
2 m	CC02EZ2	CC02EZ2-M	CC02EZ1-T
5 m	CC05EZ2	CC05EZ2-M	CC05EZ1-T
10 m	CC10EZ2	CC10EZ2-M	CC10EZ1-T

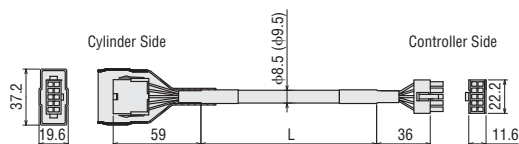
Flexible Cable Set

Length (L)	Model	Individual Cable	
		Flexible Motor Cable	Flexible Actuator Communication Cable
2 m	CC02EZ2R	CC02EZ2R-M	CC02EZ1R-T
5 m	CC05EZ2R	CC05EZ2R-M	CC05EZ1R-T
10 m	CC10EZ2R	CC10EZ2R-M	CC10EZ1R-T

◇Dimensions Unit = mm

Motor Cable

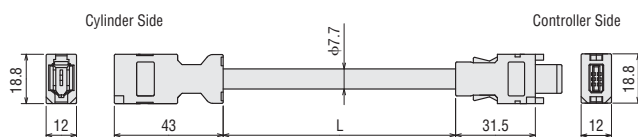
CC□EZ2-M/CC□EZ2R-M



●Figure in the parentheses are for CC□EZ2R-M.

Actuator Communication Cable

CC□EZ1-T/CC□EZ1R-T



Sensor Set (RoHS)

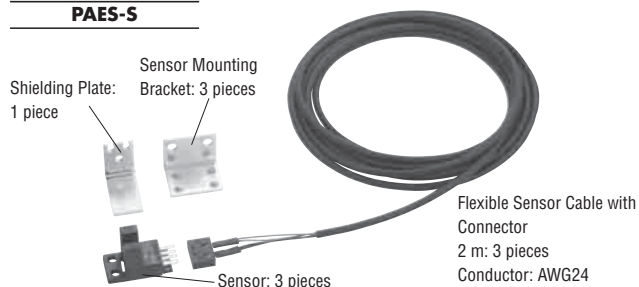
These sensors can be used in controller mode or driver mode. The sensor set consists of sensors and a cable with connector.

Note:

- In driver mode, connect the sensors to the controller you have provided.

Product Line

Model
PAES-S

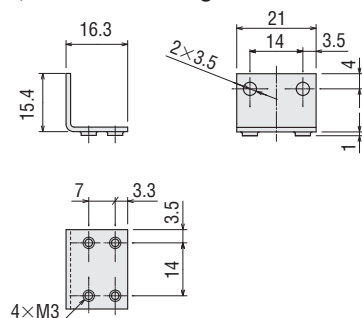


Specifications

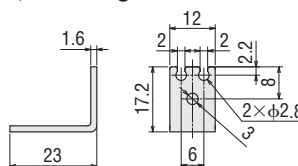
Model	PAES-S (OMRON Model: EE-SX674A)
Power Supply	5~24 VDC $\pm 10\%$, ripple (P-P) 10% or less
Current Consumption	35 mA or less
Control Output	NPN open-collector output, 5~24 VDC, 100 mA or less Residual voltage 0.8 V or less (at load current of 100 mA)
Indicator LED	Detection display (red)
Sensor Logic	Normally open/Normally closed (selectable, depending on connection)

Dimensions Unit = mm

◇ Sensor Mounting Bracket



◇ Shielding Plate



Sensor Extension Cables

Use these cables to connect each sensor used in the controller mode to the linear motion controller.

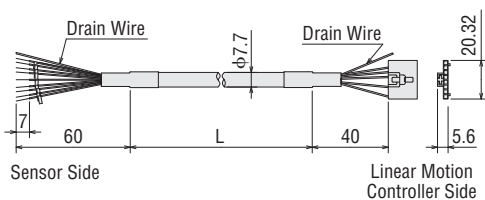
Product Line

Model	Length (L)	Applicable Series
CC02EZ1-S	2 m	EZC Series
(RoHS) CC20D1-1	1 m	EZHC Series
(RoHS) CC20D2-1	2 m	EZHP Series

Dimensions Unit = mm

CC02EZ1-S

Conductor: AWG24

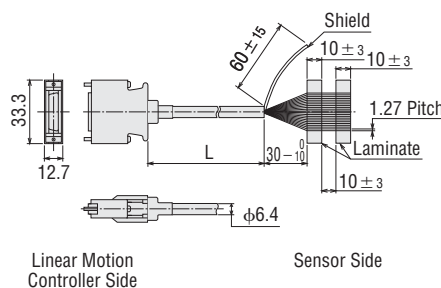


CC02EZ1-S

CC20D1-1

CC20D1-1

Conductor: AWG28



Teaching Pendant This product does not conform to the RoHS Directive.

The teaching pendant allows you to set and operate various data by hand, as well as to monitor the set data, current position and I/O status in real time.

Product Line

Model
EZT1

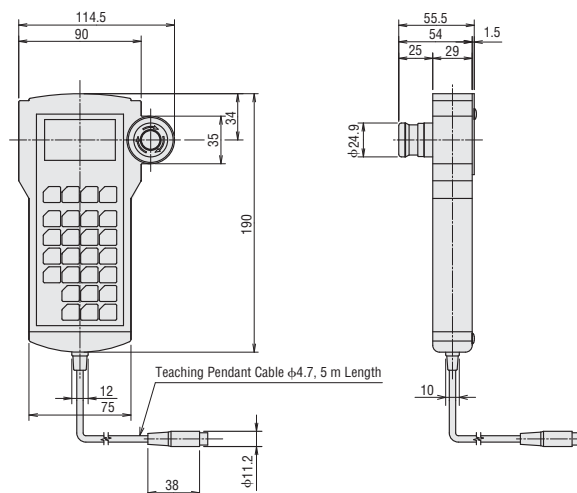


Specifications

Display	LCD with 2-colored back light
Cable Length	5 m
Mass	0.37 kg
Ambient Temperature	0~+40°C (non-freezing)

Dimensions Unit = mm

DXF D416



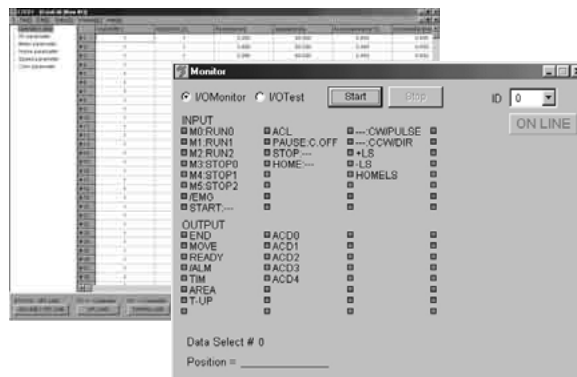
Data Editing Software (Applicable series: EZC Series)

With this software, you can set and edit various data on a PC. It comes with a PC interface cable for connecting the linear motion controller and PC. The software also provides various monitoring functions.

Product Line

Model
EZED1

- The data editing software can be used with either the EZMC36I or EZMC36A controller.



PC Interface Cable

A 5 m cable with a D-sub 9 connector one end for the RS-232C communications between the PC and the linear motion controller.

Specifications (Operating environment)

Item	Model: EZED1
Operating Systems	Microsoft® Windows® 95 Service Pack 1 or later* Microsoft® Windows® 98 Microsoft® Windows® 98SE Microsoft® Windows® Me Microsoft® Windows NT® 4.0 Service Pack 6 or later Microsoft® Windows® 2000 Microsoft® Windows® XP
Computer	A personal computer that can install any of the above Windows® operating systems
Display Resolution	SVGA (800 × 600) or more [XGA (1024 × 768) or more is recommended.]
Hard Disk Capacity	Available disk space of 1.5 MB or more
Disk Drive	CD-ROM drive

* Internet Explorer 4.01 Service Pack 1 or later is also required.

● Service Pack signifies a service pack provided by Microsoft Corporation.

● Microsoft, Windows and Windows NT are registered trademarks of Microsoft Corporation in the United States and other countries.

Teaching Pendant (EZT1)/Data Editing Software (EZED1)

Function Comparison Table

Function	Item	
	Teaching Pendant (Model: EZT1)	Data Editing Software (Model: EZED1)
Cable Length	5 m	5 m*
Display	LCD 17 characters×4 lines	PC screen
Emergency Stop Button	○	×
Operation Data Setting	○	○
Parameter Setting	○	○
Teaching Function (Direct/remote)	○	×
Operation Execution	○	×
Data Copy	×	○
Display Function	○	○
Operation Data Monitoring	○	×

○: Available ×: Not available

* PC interface cable (included) is used.

Controller Link Cables These products do not conform to the RoHS Directive.

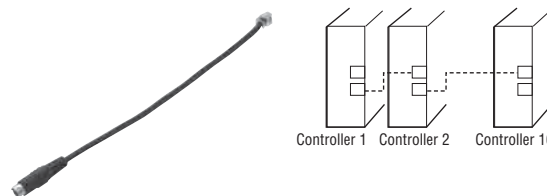
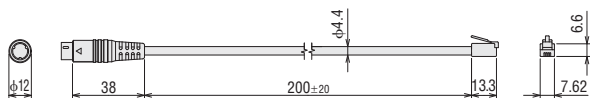
Use these dedicated cables to link the controllers. A maximum of 16 controllers can be connected, with data set separately for each of the controllers.

Product Line

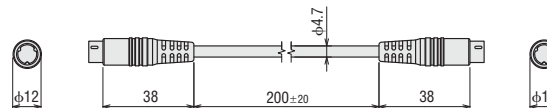
Model	Length	Applicable Series
CC002EZ1-L	0.2 m	EZC Series
CC002EZ2-L	0.2 m	EZHC Series EZHP Series

Dimensions Unit = mm

CC002EZ1-L



CC002EZ2-L



I/O Cables RoHS

These dedicated cables are used for connection between the linear motion controller and the host controller. A half-pitch connector allowing one-touch connection to the controller is attached at one end of the cable.

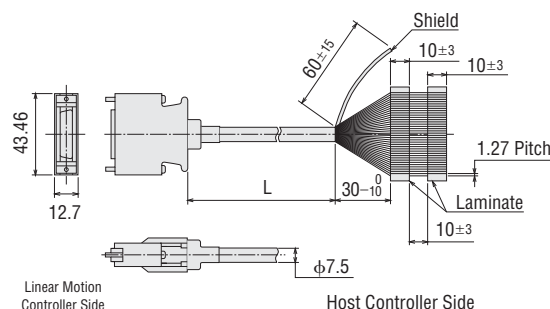
Product Line

Model	Length (L)
CC36D1-1	1 m
CC36D2-1	2 m



Dimensions Unit = mm

Conductor: AWG28



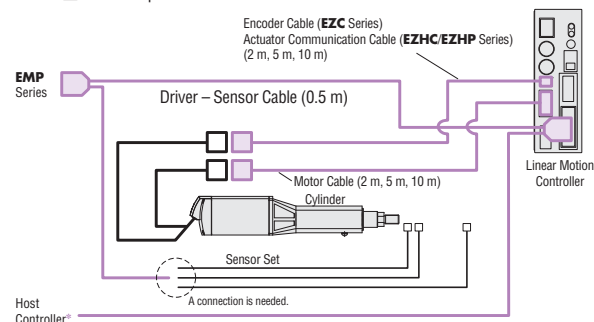
Driver – Sensor Cables These products do not conform to the RoHS Directive.

These cables are used for connecting the linear motion controller and **EMP** Series controller.

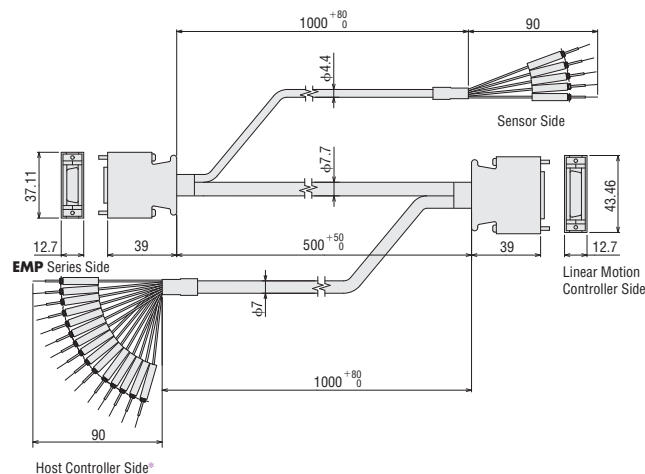
Product Line

Model	Length	Applicable Series	
		Product	EMP Series
CC005EZ4-EMPD	0.5 m	EZC Series	EMP400 Series
CC005EZ6-EMPD		EZHC Series	EMP400 Series
		EZHP Series	

● The current position output function of the linear motion controller is not available for **CC005EZ□-EMPD**. To use the current position output function, use the I/O cable **CC36D□-1** and implement control from the host controller.



Dimensions Unit = mm



※ The following numbers of wires are connected to the host controller:

CC005EZ4-EMPD: 15 Wires

CC005EZ6-EMPD: 12 Wires

※ The following signals are connected to the host controller:

CC005EZ4-EMPD: Alarm code, alarm clear, operation current setting, standstill current setting, all windings off

CC005EZ6-EMPD: Quadrature (ASG/BSG), alarm clear, motor non-excitation/ electromagnetic brake release, preset, all windings off

DIN Rail Mounting Plate **RoHS** (Applicable series: **EZC Series**)

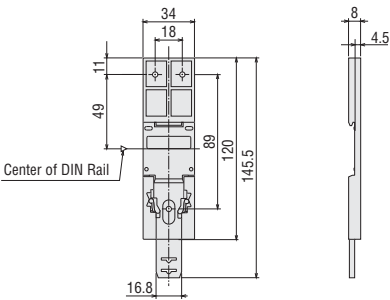
This plate is used to install the linear motion controller to a DIN rail.
The plate comes with the mounting screws.

Product Line

Model
PADP01



Dimensions Unit = mm
Mass: 20 g



● Screws (Included)
M3 P0.5 Length 8 mm...3 pieces

Battery

The following spare batteries are also available for cylinder.

Product Line

Model	Applicable Series
PAEZ-BT	EZC Series
RoHS PAEZ-BT2	EZHC Series EZHP Series

● The spare battery does not come with a battery holder.

PAEZ-BT



PAEZ-BT2



The **EZ limo** used as an absolute system, uses Ni-Cd rechargeable batteries. Disposal of the used batteries is subject to each country's regulations on environmental control. Please contact Oriental Motor if you have any questions regarding disposal of the batteries.

Motorized Cylinders Installation

Installation of Motorized Cylinders

Installation Method

Install the cylinder to a metal plate with mounting screws, using mounting holes of the cylinder.

Tightening Torque: 5 N·m

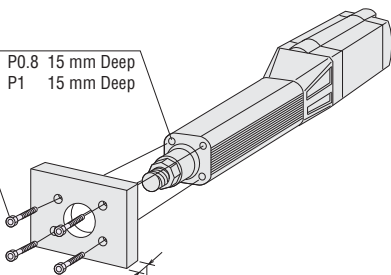
Mounting Holes

EZC4/EZHC4/EZHP4: M5 P0.8 15 mm Deep
EZC6/EZHC6/EZHP6: M6 P1 15 mm Deep

Mounting Screws
(Not supplied)

Plate Thickness

EZC4/EZHC4/EZHP4: 5 mm or more (iron), 10 mm or more (aluminum)
EZC6/EZHC6/EZHP6: 6 mm or more (iron), 12 mm or more (aluminum)



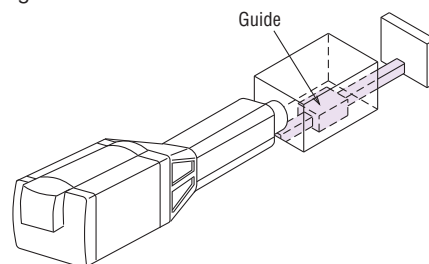
Installation Conditions

Install the cylinder in a location that meets the following conditions, or the product may be damaged.

- Indoors (This product is designed and manufactured to be installed within another device.)
- Ambient temperature: 0~+40°C (non-freezing)
- Ambient humidity: 85% or less (non-condensing)
- Not exposed to explosive, flammable or corrosive gases
- A well-ventilated place
- Not exposed to direct sunlight
- Not exposed to dust
- Not exposed to water, oil or other liquids
- A place where heat can escape easily
- Not exposed to continuous vibration or excessive impact

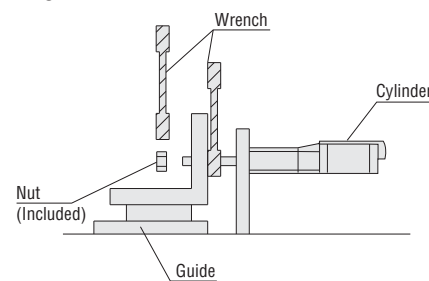
Anti-Spin Mechanism

Avoid using the cylinder in such a way that the rod receives an overhung load or angular load moment. Provide a guide or other appropriate mechanism (anti-spin mechanism) to prevent the rod from receiving a load other than in the axial direction.

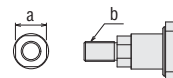


Locking the Rod

When mounting the work, tighten the screws with the rod locked by a wrench or other appropriate tool so that the rod will not be subjected to angular load moment.



Wrench dimension on rod (Unit = mm)



Model	a	b
EZC4/EZHC4/EZHP4	22	M14 P1.5
EZC6/EZHC6/EZHP4	32	M18 P1.5

■ Precautions in Handling

- Do not loosen the cylinder's mounting screws or attempt to disassemble the unit.
- The accuracy and other data are measured at a constant temperature and load.
- When transporting the equipment with a load attached on the rod, the rod may receive external forces exceeding the allowable limit due to vibration and shock during transportation and could become damaged as a result. Therefore, firmly affix the load so that it will not move during transportation.
- Use the electromagnetic brake type in applications where the load must be held when the motor is at standstill. The electromagnetic brake cannot be used to apply braking force.

■ Precautions for Operation

- If sufficient motor cooling is not ensured, use a cooling fan (ORIX FAN, etc.) to provide direct (forced) cooling.
- Do not apply impact on the rod. In particular, avoid stopping the rod by causing it to hit a stopper, as it may result in lower accuracy, noise or malfunction.

■ Installation of Linear Motion Controller

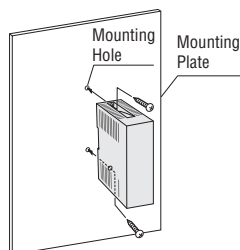
● Installation Direction and Method

◇ Installing Using Screws

When installing the controller with screws, use the two mounting holes provide on the top and bottom, as shown below.

Applicable Product:

EZC Series

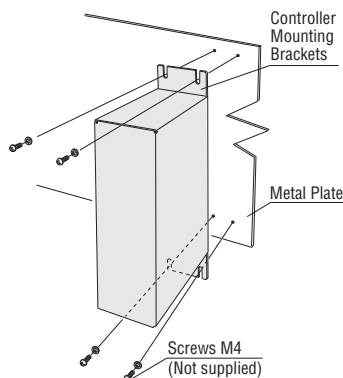


◇ Installing Using the Controller Mounting Brackets

1. Install the controller mounting brackets over the mounting holes at the back of the controller, using the supplied screws.
2. Using the mounting holes in the controller mounting brackets, install the controller by making sure no gaps remain along the metal plate.

Applicable Products:

EZHC/EZHP Series



Notes:

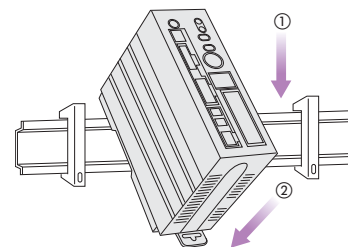
- Install the controller vertically on a flat metal plate in the enclosure installed indoors.
- Do not use the mounting bracket holes provided at the back of the controller for any other purpose.

◇ Installing to a DIN Rail

Hook the controller on the DIN rail (①) and rotate it downward into place (②).

Applicable Product:

EZC Series

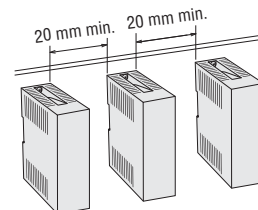


Notes:

- Use a DIN rail with a rail width of 35 mm. Also, use an end plate for affixing the controller.
- The DIN rail and end plate are not supplied with the controller. Those items must be provided by the customer.

◇ Installation Clearances

When two or more controllers are installed, the ambient temperature will increase due to rise in the temperature of each controller. Provide a minimum clearance of 20 mm between the two adjacent controllers and a minimum clearance of 20 mm between each controller and other equipment or structure in all directions. If the ambient temperature is expected to exceed 40°C, provide forced cooling via a fan.



● Installation Conditions

Install the controller in a location that meets the following conditions, or the product may be damaged.

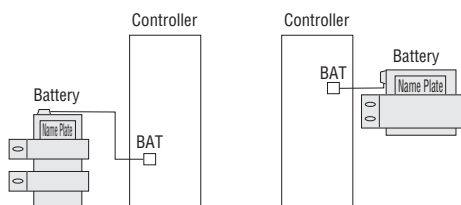
- Indoors (This product is designed and manufactured to be installed within another device.)
- Ambient temperature: 0~+40°C (non-freezing)
- Ambient humidity: 85% or less (non-condensing)
- Not exposed to explosive, flammable or corrosive gases
- Not exposed to direct sunlight
- Not exposed to dust
- Not exposed to water, oil or other liquids
- A place where heat can escape easily
- Not exposed to continuous vibration or excessive impact

Notes:

- When installing the controller in an enclosed space such as a control box, or somewhere close to a heat-radiating object, vent holes should be used to prevent the controller from overheating.
- Do not install the controller in a location where a source of vibration will cause the controller to vibrate.
- In situations where the controller are located close to a large noise source such as high frequency welding machines or large electromagnetic switches, take steps to prevent noise interference, either by inserting noise filters or connecting the controller to a separate circuit.
- Take care that pieces of conductive material (filings, pins, pieces of wire, etc.) do not enter the controller.

● Installation of Battery

Install the battery using the supplied battery holder in such a way that the recycling mark on the battery nameplate remains visible (with the **EZC** Series, orient the battery so the projection on its side wall will remain free from contact). The battery may be installed in any orientation, as long as a minimum clearance of 25 mm is provided between the controller and the battery and the battery lead wires can reach the controller.



● Battery of the **EZC** Series

