

Hybrid Control System  $\alpha$ STEP

## AZ Series

AC Input

### EtherNet/IP™ Compatible Driver

**AZ** Series AC input drivers now offer EtherNet/IP communications for a battery-free, absolute mechanical sensor motor and driver solution. For use with all Oriental Motor **AZ** Series motors and linear & rotary actuators equipped with the **AZ** Series.



EtherNet/IP®

### Motor Control over the Network

Easily control the **AZ** Series by directly connecting to the EtherNet/IP master device using a single EtherNet/IP communications cable. This allows for quick and simple wiring.

#### AZ Series AC Input Motors and Linear & Rotary Actuators

● The products shown below are representative examples.



**AZ** Series



Electric Linear Slides  
**EAS** Series  
Equipped with **AZ** Series



Hollow Rotary Actuators  
**DGI** Series  
Equipped with **AZ** Series



Electric Cylinders  
**EAC** Series  
Equipped with **AZ** Series



Lack and Pinion Systems  
**L** Series  
Equipped with **AZ** Series



Hybrid Control System  $\alpha$ STEP  
**AZ** Series  
AC Input  
EtherNet/IP Compatible Driver

Host Control Device

EtherNet/IP  
Master Device

EtherNet/IP®

#### Motor Control from the Network

- Set and run operating data
- Set various parameters
- Check alarm details

#### Simple Wiring

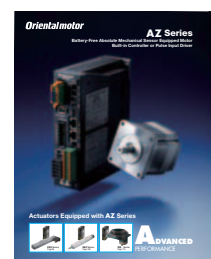
- Wiring to the master device is consolidated into a single EtherNet/IP communication cable
- Reduces wiring errors and labor time

#### ● EDS File

An EDS file has been prepared to allow EtherNet/IP compatible products to be used more easily. The EDS file can be downloaded from the Oriental Motor website.

#### ● AZ Series Catalog

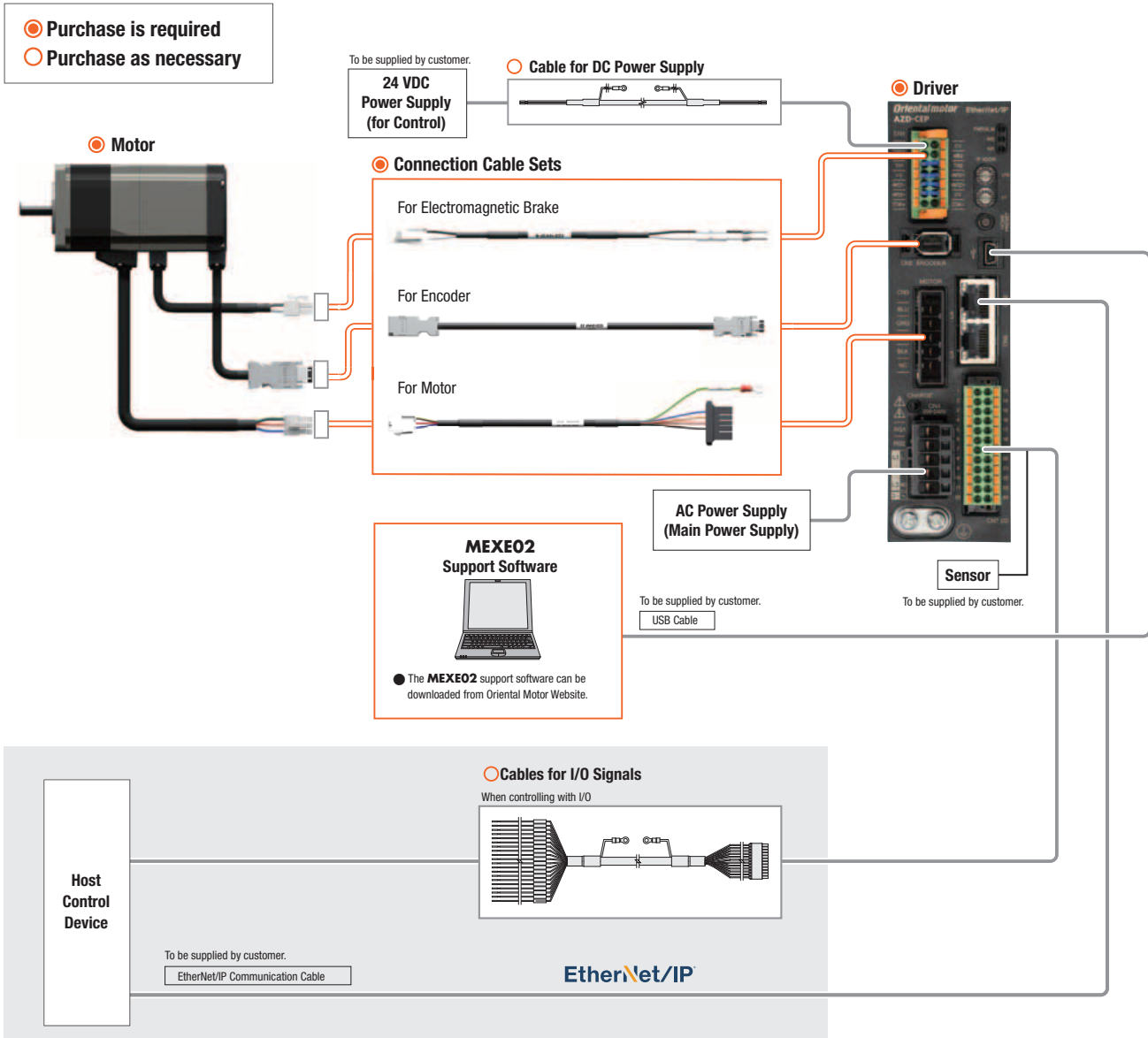
Please see our separate catalog for the **AZ** Series products or visit our website.



## System Configuration

### AZ Series Standard Type Motor with EtherNet/IP Compatible Driver

System configuration example using EtherNet/IP communications or I/O control, with EtherNet/IP compatible **AZ** Series driver. Motor, driver, and a set of connection cables (required). Standard or flexible connection cables in many lengths are available.



#### Note

● The motor cable and electromagnetic brake cable from the motor cannot be connected directly to the driver. When connecting to the driver, use a connection cable.

## Product Number

# AZD - C EP

①

②

③

①	Driver Type	<b>AZD: AZ Series Driver</b>
②	Power Supply Input	<b>A:</b> Single-Phase 100-120 VAC <b>C:</b> Single-Phase/Three-Phase 200-240 VAC
③	Network Type	<b>EP:</b> EtherNet/IP

## Product Line

Power Supply Input	Product Name	List Price
Single-Phase 100-120 VAC	<b>AZD-AEP</b>	\$656.00
Single-Phase/Three-Phase 200-240 VAC	<b>AZD-CEP</b>	\$656.00

## Included

Connector	Operating Manual
<ul style="list-style-type: none"> <li>• CN4 Connector (1 pc.)</li> <li>• CN1 Connector (1 pc.)</li> <li>• CN7 Connector (1 pc.)</li> <li>• Connector Wiring Lever (1 pc.)</li> </ul>	1 Copy

# Specifications

## Communications Specifications

Communications Standards	EtherNet/IP Communication (Conforms with CT16)	
Vendor ID	187: Oriental Motor Company	
Device Type	43: Generic Device	
Transmission Rate	10/100 Mbps (Autonegotiation)	
Communication Mode	Full duplex/Half duplex (Autonegotiation)	
Cable Specifications	Shielded twisted-pair (STP) cable Straight-through/Crossover cable, Category 5e or higher	
Number of Occupied Bytes	Output (Scanner → Driver)	40 bytes
	Input (Driver → Scanner)	56 bytes
Implicit Communication	Number of Connections	2
	Connection Type	Exclusive Owner, Input Only
	Communication Cycle (RPI)	1 to 3200 ms
	Connection Type (Scanner → Driver)	Point-to-Point
	Connection Type (Driver → Scanner)	Point-to-Point, Multicast
Explicit Communication	Data Trigger	Cyclic
	Number of Connections	6
IP Address Setting Method	Connection Type	UCMM, Connection
	IP address setting switch, Parameter, DHCP	
Network Topologies	Star, Linear bus, Ring (Device Level Ring)	



## Driver Specifications

Driver Product Name		AZD-AEP	AZD-CEP
Main Power Supply	Input Voltage	Single-Phase 100-120 VAC -15 to +6% 50/60 Hz	· Single-Phase 200-240 VAC -15 to +6% 50/60 Hz · Three-Phase 200-240 VAC -15 to +6% 50/60 Hz
	Input Current*1	Single-Phase	<b>AZM46</b> : 2.7 A, <b>AZM48</b> : 2.7 A, <b>AZM66</b> : 3.8 A <b>AZM69</b> : 5.4 A, <b>AZM98</b> : 5.5 A, <b>AZM911</b> : 6.4 A <b>DGM85</b> : 2.7 A, <b>DGM130</b> : 3.8 A, <b>DGM200</b> : 6.4 A <b>LM2</b> : 3.8 A, <b>LM4</b> : 3.8 A
		Three-Phase	—
Control Power Supply	Input Voltage	24 VDC ±5%*2	
	Input Current	0.25 A (0.5 A)*3	
Interface	Pulse Input	· 2 points, Photocoupler · Maximum input pulse frequency Scanner provides line driver output: 1 MHz (50% duty) Scanner provides open collector output: 250 kHz (50% duty)	
	Control Input	6 points, Photocoupler	
	Pulse Output	2 points, Line driver	
	Control Output	6 points, Photocoupler/Open collector	
	Power Shut Down Signal Input	2 points, Photocoupler	
	Power Shut Down Monitor Output	1 point, Photocoupler/Open collector	
	Filed Network	EtherNet/IP	

\*1 Varies according to the motor it is combined with.

\*2 If an electromagnetic brake motor is used, value is 24 VDC ±4% when the distance between the motor and driver is extended 20 m (65.6 ft.) using an Oriental Motor cable.

\*3 The value inside the ( ) represents the value for an electromagnetic brake motor. 0.33 A for **AZM46**.

## General Specifications

Degree of Protection	IP10
Operating Environment	Ambient Temperature: 0 to +55°C (+32 to +131°F) (non-freezing)*
	Humidity: 85% or less (non-condensing)
	Altitude: Up to 1000 m (3300 ft.) above sea level Atmosphere: No corrosive gas or dust. The product should not be exposed directly to water, oil or other liquids.
Storage Conditions Shipping Conditions	Ambient Temperature: -25 to +70°C (-13 to +158°F) (non-freezing)
	Humidity: 85% or less (non-condensing) Altitude: Up to 3000 m (10000 ft.) above sea level Atmosphere: No corrosive gas or dust. The product should not be exposed directly to water, oil or other liquids.
Insulation Resistance	When a 500 VDC megger is applied to the following locations, resistance is 100 MΩ or higher. · Between the protective earth terminal and the main power supply terminal · Between the encoder connector and the main power supply terminal · Between the input signal terminal and the main power supply terminal
Dielectric Strength	No abnormalities are observed when the specified voltages are applied for 1 minute to the following locations. · Between the protective earth terminal and the main power supply terminal 1.5k VAC 50/60 Hz · Between the encoder connector and the main power supply terminal 1.8k VAC 50/60 Hz · Between the input signal terminal and the main power supply terminal 1.8k VAC 50/60 Hz

\*When a heat sink is installed that is equivalent to an aluminum plate with a size of at least 200×200 mm (7.87×7.87 in.) and 2 mm (0.08 in.) of thickness

### Note

● When measuring insulation resistance or testing dielectric strength, please disconnect the motor and driver.

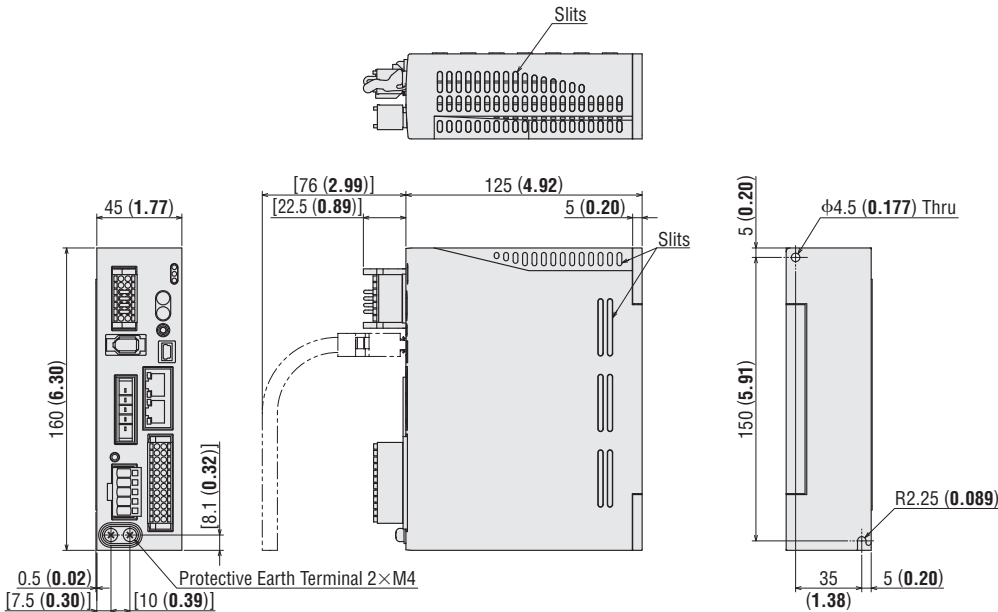
Also, do not perform these tests on the absolute sensor component of the motor.

**Dimensions** Unit: mm (in.)

● **Driver**

**2D & 3D CAD**

Product Name	Mass kg (lb.)	2D CAD
<b>AZD-AEP, AZD-CEP</b>	0.68 (1.50)	B1504



● **Included**

- Main Power Supply/Connector for Regeneration Unit (CN4)  
Connector: 05JFAT-SAXGDK-H5.0 (J.S.T.)  
Connector Wiring Lever

- 24 VDC Power Supply Input/Electromagnetic Brake Connection/Regeneration Unit Thermal Input/Connector for Power Interruption Signal Input/Output (CN1)  
Connector: DFMC1,5/7-ST-3,5-LR (Phoenix Contact)

- I/O Signal Connector (CN7)  
Connector: DFMC1,5/12-ST-3,5 (Phoenix Contact)

EtherNet/IP™ is a trademark of ODVA, Inc.

Specifications are subject to change without notice. This catalog was published in August, 2019.

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