

Stepper Motors α STEP

AZ Series Multi-Axis Drivers

DC Input

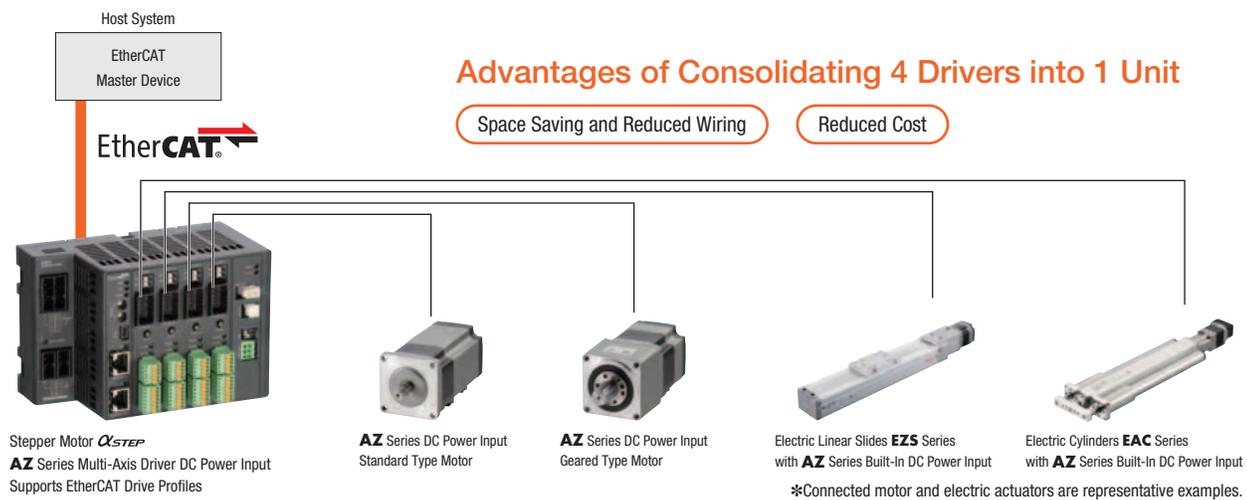
Compatible with EtherCAT Drive Profile

EtherCAT®



A multi-axis driver that supports EtherCAT communication. Compatible with the CiA402 drive profile. It can be connected to the **AZ** Series DC input motors and electric actuators. 2-axes, 3-axes and 4-axes driver connections are available.

Space-Saving and Low-Cost Multi-Axis Driver (Max. 4 Axes)



Product Line and List Price

Product Name	Number of Axis	List Price
AZD2A-KED	Axis 2	\$860.00
AZD3A-KED	Axis 3	\$1,140.00
AZD4A-KED	Axis 4	\$1,370.00

The following items are included with each product.
Driver, Driver Connection Set, Operating Manual

● ESI File

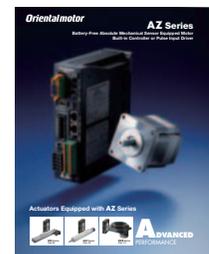
An ESI file is provided so that EtherCAT-compatible products can be used more easily.

The ESI file can be downloaded from the Oriental Motor website. For questions about connections to Omron PLCs, please contact OMRON Corporation.

An EtherCAT connection guide is available.

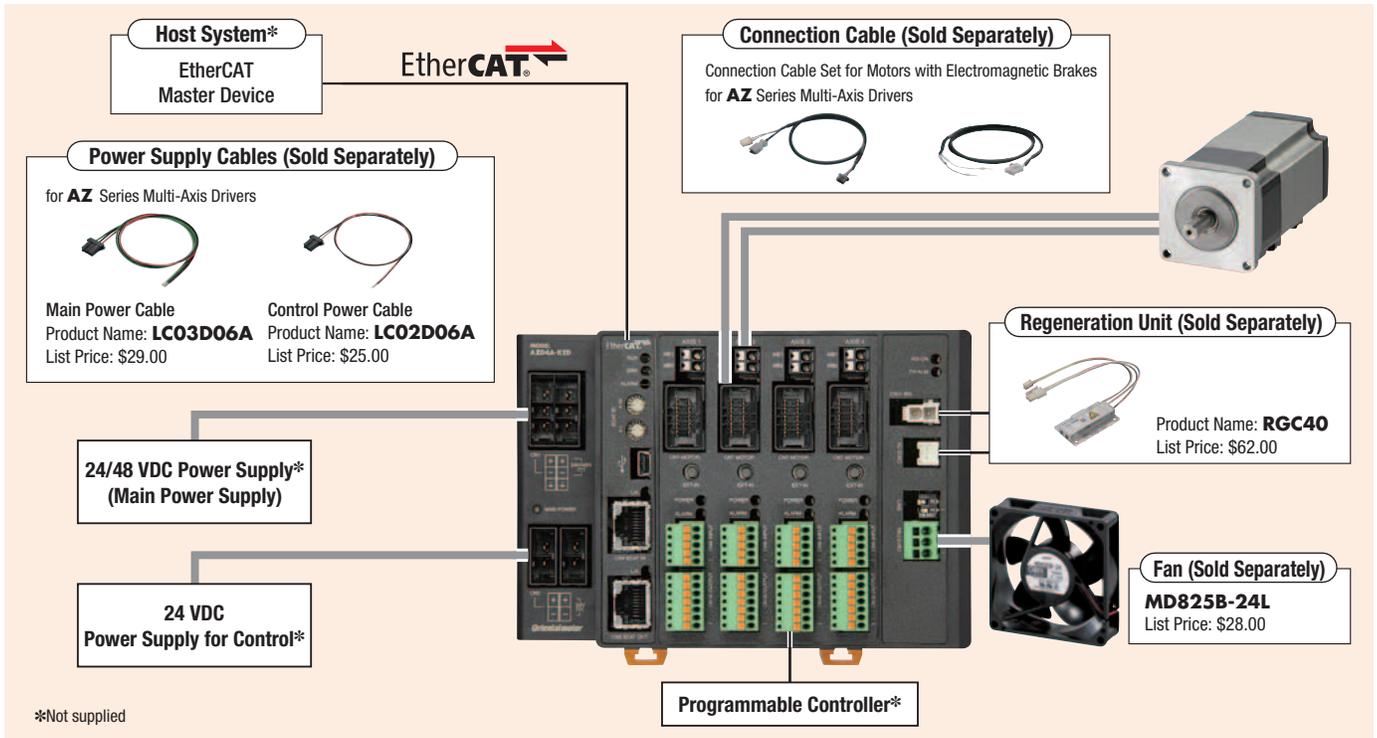
● AZ Series Catalog

- DC Input Motor Specifications
- DC Input Motor Characteristics
- DC Input Motor Dimensions
- Accessories
 - General-Purpose Cables
 - Couplings
 - Motor Mounting Brackets



System Configuration

Example Configuration of a System Using **AZ** Series DC Input Standard Type Motors with Electromagnetic Brakes.



Note

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

Connection Cables, Flexible Connection Cables (Sold Separately)

Connection cables are required to connect the multi-axis driver and motors. These are not included with the multi-axis driver. Connection cables are sold separately. Use a flexible connection cable in applications where the cable is bent and flexed repeatedly. The maximum extension length is 20 m (65.4 ft.).

● Motor Cable for AZ Series Multi-Axis Driver

The multi-axis driver connection cable combines both the motor cable and encoder cable into one cable.

Length L [m (ft.)]	For Frame Size 20 mm (0.72 in.), 28 mm (1.10 in.)				For Frame Size 42 mm (1.65 in.), 60 mm (2.36 in.)			
	Connection Cables	List Price	Flexible Connection Cables	List Price	Connection Cables	List Price	Flexible Connection Cables	List Price
0.5 (1.64)	CC005VZ2FA	\$79.00	CC005VZ2RA	\$93.00	CC005VZFA	\$79.00	CC005VZRA	\$93.00
1 (3.3)	CC010VZ2FA	\$79.00	CC010VZ2RA	\$93.00	CC010VZFA	\$79.00	CC010VZRA	\$93.00
1.5 (4.9)	CC015VZ2FA	\$84.00	CC015VZ2RA	\$102.00	CC015VZFA	\$84.00	CC015VZRA	\$102.00
2 (6.6)	CC020VZ2FA	\$89.00	CC020VZ2RA	\$110.00	CC020VZFA	\$89.00	CC020VZRA	\$110.00
2.5 (8.2)	CC025VZ2FA	\$95.00	CC025VZ2RA	\$117.00	CC025VZFA	\$95.00	CC025VZRA	\$117.00
3 (9.8)	CC030VZ2FA	\$101.00	CC030VZ2RA	\$123.00	CC030VZFA	\$101.00	CC030VZRA	\$123.00
4 (13.1)	CC040VZ2FA	\$108.00	CC040VZ2RA	\$139.00	CC040VZFA	\$108.00	CC040VZRA	\$139.00
5 (16.4)	CC050VZ2FA	\$122.00	CC050VZ2RA	\$156.00	CC050VZFA	\$122.00	CC050VZRA	\$156.00
7 (23.0)	CC070VZ2FA	\$150.00	CC070VZ2RA	\$199.00	CC070VZFA	\$150.00	CC070VZRA	\$199.00
10 (32.8)	CC100VZ2FA	\$194.00	CC100VZ2RA	\$260.00	CC100VZFA	\$194.00	CC100VZRA	\$260.00
15 (49.2)	CC150VZ2FA	\$269.00	CC150VZ2RA	\$366.00	CC150VZFA	\$269.00	CC150VZRA	\$366.00
20 (65.6)	CC200VZ2FA	\$342.00	CC200VZ2RA	\$470.00	CC200VZFA	\$342.00	CC200VZRA	\$470.00

● Connection Cable Set for Motor with Electromagnetic Brake for AZ Series Multi-Axis Driver

This 2-cable set includes the motor cable for the **AZ** Series multi-axis driver and the motor cable for the **AZ** Series electromagnetic brake type motor.

Length L [m (ft.)]	For Frame Size 42 mm (1.65 in.), 60 mm (2.36 in.)			
	Connection Cable Sets	List Price	Flexible Connection Cable Sets	List Price
0.5 (1.64)	CC005VZFBA	\$95.00	CC005VZRBA	\$126.00
1 (3.3)	CC010VZFBA	\$95.00	CC010VZRBA	\$126.00
1.5 (4.9)	CC015VZFBA	\$102.00	CC015VZRBA	\$137.00
2 (6.6)	CC020VZFBA	\$108.00	CC020VZRBA	\$148.00
2.5 (8.2)	CC025VZFBA	\$116.00	CC025VZRBA	\$158.00
3 (9.8)	CC030VZFBA	\$123.00	CC030VZRBA	\$167.00
4 (13.1)	CC040VZFBA	\$134.00	CC040VZRBA	\$189.00
5 (16.4)	CC050VZFBA	\$149.00	CC050VZRBA	\$211.00
7 (23.0)	CC070VZFBA	\$183.00	CC070VZRBA	\$265.00
10 (32.8)	CC100VZFBA	\$236.00	CC100VZRBA	\$343.00
15 (49.2)	CC150VZFBA	\$324.00	CC150VZRBA	\$476.00
20 (65.6)	CC200VZFBA	\$410.00	CC200VZRBA	\$607.00



Specifications

● Power Supply Input

Main Power Supply: 24/48 VDC±10% 7.0 A When using a motor, make sure that the average is 4.0 A max.

Control Power Supply: 24 VDC±10% 1.5 A When using an electromagnetic brake, use a 24 VDC±5% power supply for the electromagnetic brake. When using an electromagnetic brake with a 20 m (65.6 ft.) connection cable, use a 24 VDC±4% power supply.

● EtherCAT Specifications

Item	Description
Baud Rate	100Mbps
Communication Period	0.5ms/1ms/2ms/3ms/4ms/5ms/6ms/7ms/8ms
Node Address	0~255 (00h~FFh, initial value: 00h)
Communication Protocols	·EtherCAT-dedicated protocol (CoE) ·CiA402 drive profile

● General Specifications

Degree of Protection	IP10
Operating Environment	Ambient Temperature: 0 to 50°C (32~+122°F) (non-freezing) Humidity: 85% or less (Non-condensing) Altitude: 1000 m (3280 ft.) max. above sea level Atmosphere: Use in an area without corrosive gases and dust. The product should not be exposed to water or oil.
Storage Condition Transportation Environment	Ambient Temperature: -25 to 70°C (-13~+158°F) (non-freezing) Humidity: 85% or less (Non-condensing) Altitude: 3000 m (9842 ft.) max. above sea level Atmosphere: Use in an area without corrosive gases and dust. The product should not be exposed to water or oil.
Insulation Resistance	The measured value is 100 MΩ or more when a 500 VDC megger is applied between the following places: ·Between FG terminal and Power Supply Terminal
Dielectric Strength	Sufficient to withstand the following for 1 minute: ·Between FG terminal and Power Supply Terminal 1k VAC 50/60 Hz Leakage current 10 mA max.

Note

- Please disconnect the motor and driver when measuring insulation resistance or performing dielectric strength test. Also, do not perform these tests on the motor's Mechanical Absolute Sensor components.

Dimensions Unit = mm (in.)

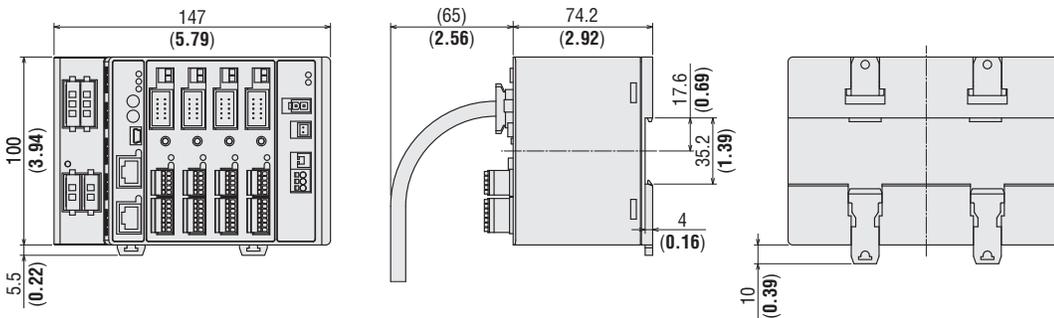
● Multi-Axis Driver

2D & 3D CAD

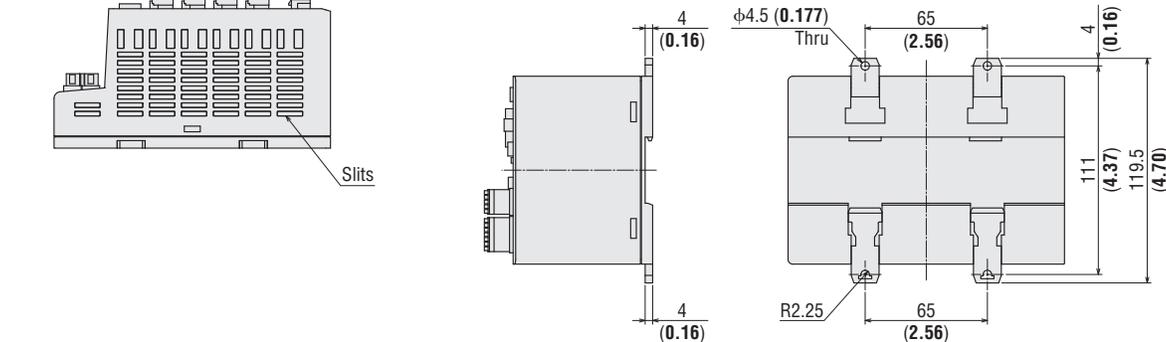
Product Name	Mass kg (lb.)	2D CAD
AZD2A-KED	0.39 (0.86)	B1206
AZD3A-KED	0.42 (0.93)	B1207
AZD4A-KED	0.45 (0.99)	B1208

- Frame size is identical for 2-axes, 3-axes and 4-axes units.

DIN Installation



Screw Installation



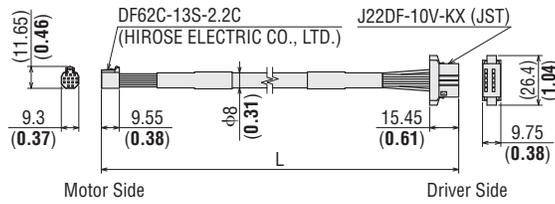
● Included Items

- Main Power Supply Connector: F32FSS-03V-KX (JST)
- Control Power Supply Connector: F32FSS-02V-KX (JST)
- Contact for Main Power Supply Connector and Control Power Supply Connector: LF3F-41GF-P2.0 (JST)
- Input Signal Connector: FK-MC 0,5/ 5-ST-2,5 (PHOENIX CONTACT)
- Output Signal Connector: FK-MC 0,5/ 7-ST-2,5 (PHOENIX CONTACT)

● Connection Cables, Flexible Connection Cables (Sold separately)

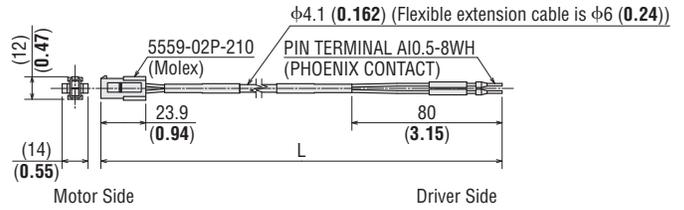
◇ Motor Cable for **AZ** Series Multi-Axis Driver

● For Frame Size 20 mm (0.79 in.), 28 mm (1.10 in.)

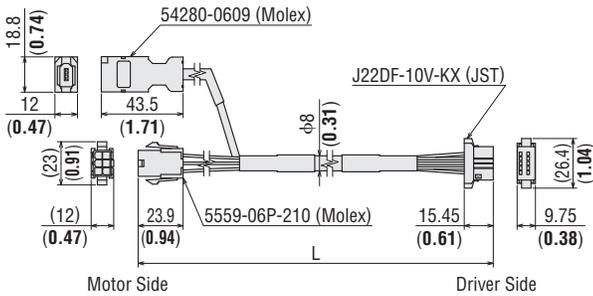


◇ Motor Cable for **AZ** Series Electromagnetic Brake Type

● For Frame Size 42 mm (1.65 in.), 60 mm (2.36 in.)



● For Frame Size 42 mm (1.65 in.), 60 mm (2.36 in.)

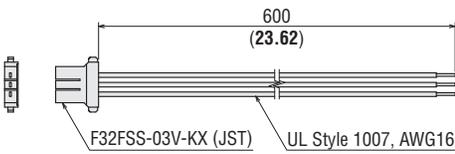


● The length L [m (ft.)] from "Connection Cables, Flexible Connection Cables (Sold separately)" on page 2 is used for the length L in the dimensions diagram.

● Power Cables (Sold Separately)

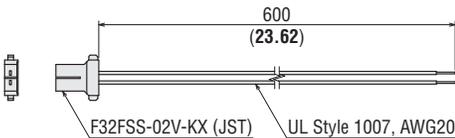
◇ **AZ** Series Multi-Axis Driver

Main Power Cable
LC03D06A



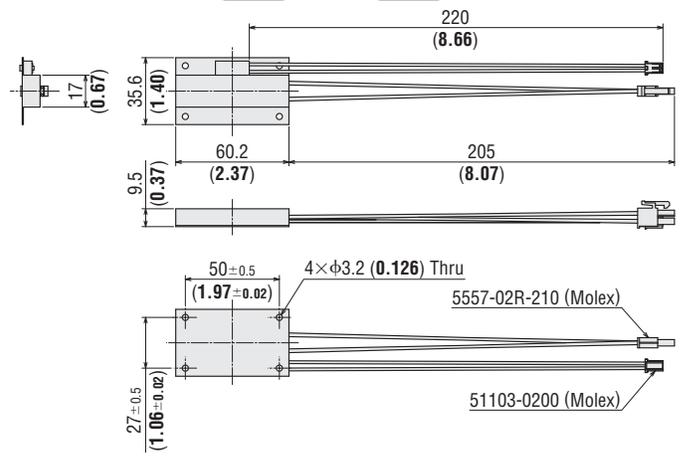
◇ **AZ** Series Multi-Axis Driver

Control Power Cable
LC02D06A



● Regeneration Unit **RGC40** (Sold Separately)

Mass: 0.03 kg (0.07 lb.) **2D CAD** B1209 **3D CAD**



Specifications are subject to change without notice. This catalog was published in September, 2017.

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