Oriental motor

NEW PRODUCTS

αSTEP

AZ Series

Connector Type
Frame Size 42 mm (1.65 in.), 60 mm (2.36 in.)

One cable, IP66 rated locking connector enables a simple direct connection between the motor and the driver.

Standard Type

Standard Type with Electromagnetic Brake

Features

Direct Connection Motor to Driver

One cable locking connector allows for a maximum of 10 m (32.8 ft.) between the motor and driver with the same motor performance specifications as our standard **AZ** Series. The one motor and driver cable includes the power line to the motor, signal line, electromagnetic brake line (brake motor type) and the ground wire for easy motor connection with no separate connection required for extension cables.

A Lock Lever Connector is Used To Ensure Connection

Connecting the cable is easy due to the lock lever that does not require screws.

Insert the connector

Turn down the lock lever

Connection complete

Three Cable Outlet Directions Can be Selected

The product line contains multiple cable outlet directions. This allows for choosing the cable type based on the cable outlet direction required.

Cable outlet in output shaft direction

Cable outlet in vertical direction

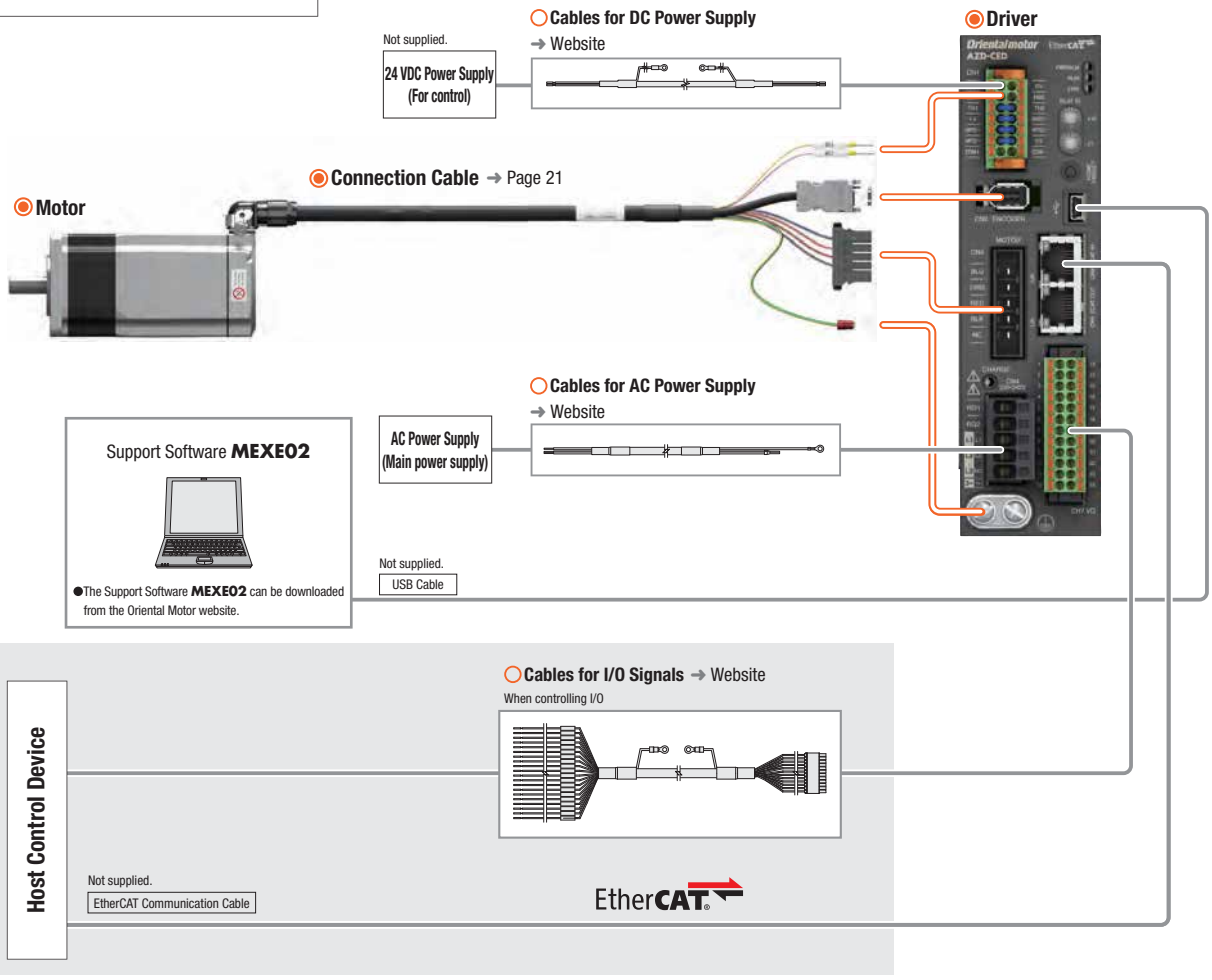
Cable outlet opposite to output shaft direction

System Configuration

Combination of Connector Type Motor with Electromagnetic Brake and EtherCAT Drive Profile-compatible Driver

Motors, drivers, and connection cables/flexible connection cables must be ordered individually.

◉ Please be sure to purchase one
○ Please purchase as needed



○Peripheral Equipment for Motors → Website

Motor Mounting Brackets

○Peripheral Equipment for Drivers → Website

Regeneration Units

Mounting Brackets for Circuit Products

●Example of System Configuration

Motor		Driver		Cables			Peripheral Equipment	
				Connection Cable Cable Outlet Direction Output Shaft Side (1 m)	I/O Signal Cable Connector Type (1 m)		Motor Mounting Bracket	Mounting Bracket for Circuit Product
AZM66MCH	+	AZD-CED	+	CCM010Z1BFF	CC24D010C-1	+	PALW2P-5	MADP06
$656.00		$721.00		$76.00	$180.00		$18.00	$27.00
◉		◉		◉	○		○	○

● The system configuration shown above is an example. Other combinations are also available.

Product Number

Motor

◇Standard Type

AZM 6 6 A 0 C H

① ② ③ ④ ⑤ ⑥ ⑦

①	Motor Type	**AZM**: **AZ** Series Motor
②	Motor Frame Size	**4**: 42 mm (1.65 in.) **6**: 60 mm (2.36 in.)
③	Motor Case Length	
④	Output Shaft Type	**A**: Single Shaft **M**: Electromagnetic Brake Type
⑤	Additional Function*	**0**: Round Shaft **1**: Key Shaft
⑥	Motor Type	**C**: AC Power Supply Input Specifications
⑦	Motor Connection Method	**H**: Connector Type

*If there isn't a number for an additional function, it is a single shaft flat.

Connection Cables/Flexible Connection Cables

CCM 010 Z1 A F F

① ② ③ ④ ⑤ ⑥

①		**CCM**: Cable
②	Length	**010**: 1 m (3.2 ft.), **020**: 2 m (6.56 ft.), **030**: 3 m (9.84 ft.), **050**: 5 m (16.40 ft.), **070**: 7 m (22.96 ft.), **100**: 10 m (32.80 ft.)
③	Applicable Model	**Z1**: **AZ** Series Connector Type
④	Description	**A**: AC Input For Motor / Encoder **B**: AC Input For Motor / Encoder / Electromagnetic Brake Type
⑤	Cable Outlet Direction*	**F**: Output Shaft Direction **V**: Vertical **B**: Opposite to Output Shaft Direction
⑥	Cable Type	**F**: Connection Cable **R**: Flexible Connection Cable

*Three types of the connection cables with different cable outlet directions are available. Please select the cable outlet direction needed for the installation.

F: Output Shaft Direction

V: Vertical

B: Opposite to Output Shaft Direction

Product Line

Motors, drivers, and connection cables must be ordered individually.

Motor

◇Standard Type

Frame Size	Product Name	List Price
42 mm (1.65 in.)	**AZM46ACH** **AZM46A0CH**	$367.00
	AZM48ACH **AZM48A0CH**	$380.00
	AZM48A1CH	$392.00
60 mm (2.36 in.)	**AZM66ACH** **AZM66A0CH**	$428.00
	AZM66A1CH	$440.00
	AZM69ACH **AZM69A0CH**	$434.00
	AZM69A1CH	$446.00

◇Standard Type with Electromagnetic Brake

Frame Size	Product Name	List Price
42 mm (1.65 in.)	**AZM46MCH** **AZM46M0CH**	$544.00
60 mm (2.36 in.)	**AZM66MCH** **AZM66M0CH**	$656.00
	AZM66M1CH	$668.00
	AZM69MCH **AZM69M0CH**	$661.00
	AZM69M1CH	$674.00

Connection Cables/Flexible Connection Cables

A connection cable is needed to connect the motor and driver. Please be sure to purchase one.
Use a flexible connection cable in applications where the cable is bent and flexed. Refer to page 21 for details.

List of Combinations

Product Line	Type	Product Name
Motor	Standard Type	**AZM46□□CH**, **AZM48A□CH** **AZM66□□CH**, **AZM69□□CH**

＋

Product Line	Type	Product Name
Driver	EtherCAT Drive Profile-compatible	**AZD-AED**, **AZD-CED**
	EtherNet/IP-compatible	**AZD-AEP**, **AZD-CEP**
	PROFINET-compatible	**AZD-APN**, **AZD-CPN**
	MECHATROLINK-Ⅲ-compatible	**AZD-AM3**, **AZD-CM3**
	SSCNET Ⅲ/H-compatible	**AZD-AS3**, **AZD-CS3**
	Built-in Controller Type	**AZD-AD**, **AZD-CD**
	Pulse Input Type with RS-485 Communication	**AZD-AX**, **AZD-CX**
	Pulse Input Type	**AZD-A**, **AZD-C**

＋

Product Line	Type	Product Name
Connection Cables/Flexible Connection Cables	Connection Cable	For motor/encoder: **CCM◇◇◇Z1A■F** For motor/encoder/electromagnetic brake: **CCM◇◇◇Z1B■F**
	Flexible Connection Cable	For motor/encoder: **CCM◇◇◇Z1A■R** For motor/encoder/electromagnetic brake: **CCM◇◇◇Z1B■R**

● A number indicating the following is specified where the code is located in the product name.

□: Output Shaft Type

□: Additional Function

■: Cable Outlet Direction

◇: Cable Length

Standard Type Frame Size 42 mm (1.65 in.), 60 mm (2.36 in.)

Specifications

Motor Product Name	Single Shaft		AZM46A□CH	AZM48A□CH	AZM66A□CH	AZM69A□CH
	With Electromagnetic Brake		AZM46M□CH	–	AZM66M□CH	AZM69M□CH
Driver Product Name			AZD-A■, AZD-C■			
Max. Holding Torque		N·m (oz-in)	0.3 (42)	0.77 (109)	1.2 (170)	2 (280)
Holding Torque at Motor Standstill	Power ON	N·m (oz-in)	0.15 (21)	0.38 (53)	0.6 (85)	1 (142)
	Electromagnetic Brake	N·m (oz-in)	0.15 (21)	–	0.6 (85)	1 (142)
Rotor Inertia		J: kg·m^2 (oz-in^2)	55×10^{-7} (0.30) [71×10^{-7} (0.39)]✻	115×10^{-7} (0.6)	370×10^{-7} (2) [530×10^{-7} (2.9)]✻	740×10^{-7} (4) [900×10^{-7} (4.9)]✻
Resolution		1000 P/R	0.36°/Pulse			
Power Supply Input			Please check "■Driver Specifications" on page 6 for the driver current specifications when combined with a motor.			
Control Power Supply						

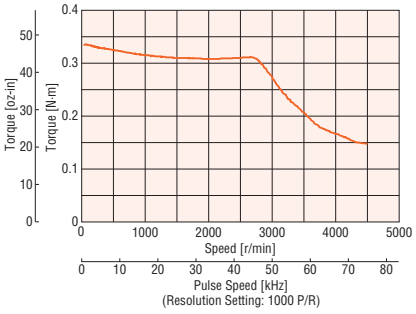
● Either a **0** (straight type) or **1** (key type) indicating the additional function is specified where the box □ is located in the product name. (**AZM46** is straight type only) For single shaft flat type motors, there is no number in the □ box.

A letter indicating the driver type is specified where the box ■ is located in the product name. Please check "■ List of Combinations" on page 4 for driver product names.

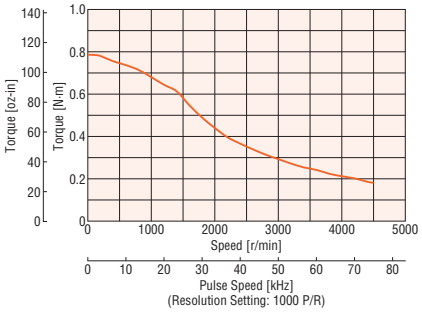
✻The value inside the ( ) represents the value when an electromagnetic brake motor is connected.

Speed – Torque Characteristics (Reference values)

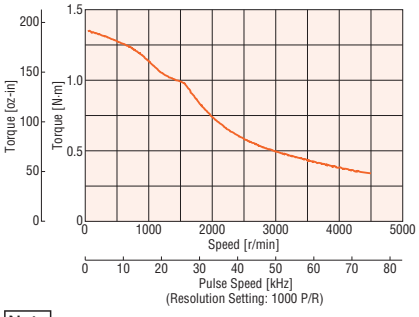
AZM46



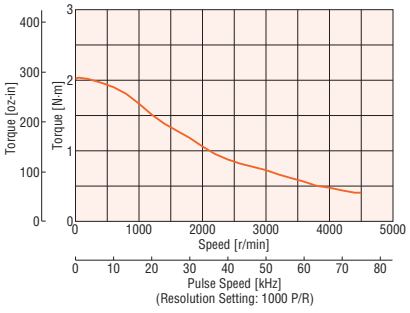
AZM48



AZM66



AZM69



Note

● Data for the speed – torque characteristics is based on Oriental Motor's internal measurement conditions. If the conditions are changed, the characteristics may also change as a result.

● Depending on the driving conditions, a considerable amount of heat may be generated by the motor. To protect the Absolute Sensor, be sure to keep the temperature of the motor case at 80°C (176°F) or less. (When conforming to the UL or CSA Standards, the temperature of the motor case must be kept at 75°C (167°F) or less since the motor is recognized as heat-resistant class A.)

Driver Specifications

Driver Product Name			AZD-AED AZD-AEP AZD-APN AZD-AX AZD-A	AZD-CED AZD-CEP AZD-CPN AZD-CX AZD-C	
Main Power Supply	Input Voltage		Single-phase 100-120 VAC −15～+6% 50/60 Hz	Single-phase 200-240 VAC −15～+6% 50/60 Hz	Three-phase 200-240 VAC −15～+6% 50/60 Hz
	Input Current	**AZM46**	2.7 A	1.7 A	1.0 A
		AZM48	2.7 A	1.6 A	1.0 A
		AZM66	3.8 A	2.3 A	1.4 A
		AZM69	5.4 A	3.3 A	2.0 A
Control Power Supply	Input Voltage		24 VDC±5%		
	Input Current		0.25 A (0.5 A)*		
Interface	Pulse Input		・2 points, Photocoupler ・Max. input pulse frequency Line driver: 1 MHz (at 50% duty) Open collector: 250 kHz (at 50% duty)		
	Control Input		6 points, Photocoupler		
	Pulse Output		2 points, Line driver		
	Control Output		6 points, Photocoupler and Open collector		
	Power Shut Down Signal Input		2 points, Photocoupler		
	Power Shut Down Monitor Output		1 point, Photocoupler and Open collector		

✻The value inside the ( ) represents the value when an electromagnetic brake motor is connected. **AZM46** is 0.33 A.

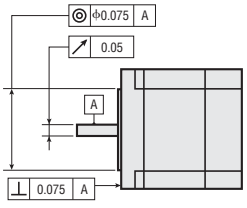
Driver Product Name			AZD-AM3 AZD-AS3	AZD-CM3 AZD-CS3		AZD-AD	AZD-CD	
Main Power Supply	Input Voltage		Single-phase 100-120 VAC −15～+6% 50/60 Hz	Single-phase 200-240 VAC −15～+6% 50/60 Hz	Three-phase 200-240 VAC −15～+6% 50/60 Hz	Single-phase 100-120 VAC −15～+6% 50/60 Hz	Single-phase 200-240 VAC −15～+6% 50/60 Hz	Three-phase 200-240 VAC −15～+6% 50/60 Hz
	Input Current	**AZM46**	2.7 A	1.7 A	1.0 A	2.7 A	1.7 A	1.0 A
		AZM48	2.7 A	1.6 A	1.0 A	2.7 A	1.6 A	1.0 A
		AZM66	3.8 A	2.3 A	1.4 A	3.8 A	2.3 A	1.4 A
		AZM69	5.4 A	3.3 A	2.0 A	5.4 A	3.3 A	2.0 A
Control Power Supply	Input Voltage		24 VDC±5%					
	Input Current		0.25 A (0.5 A)*					
Interface	Control Input		4 points, Photocoupler			10 points, Photocoupler		
	Pulse Output		-			2 points, Line driver		
	Control Output		3 points, Photocoupler and Open collector			6 points, Photocoupler and Open collector		
	Power Shut Down Signal Input		2 points, Photocoupler					
	Power Shut Down Monitor Output		1 point, Photocoupler and Open collector					

✻The value inside the ( ) represents the value when an electromagnetic brake motor is connected. **AZM46** is 0.33 A.

General Specifications

		Motor	Driver	
			EtherCAT Drive Profile Compatible EtherNet/IP Compatible PROFINET Compatible Built-in Controller Type Pulse Input Type with RS-485 Communication	MECHATROLINK-Ⅲ Compatible SSCNETⅢ/H Compatible Pulse Input Type
Thermal Class		130 (B) [UL Recognized 105 (A)]	–	
Insulation Resistance		100 MΩ or more when 500 VDC megger is applied between the following places: ・Case – Motor windings ・Case – Electromagnetic Brake Windings*1	100 MΩ or more when 500 VDC megger is applied between the following places: ・PE Terminal – Power Supply Terminal ・Encoder Connector – Power Supply Terminal ・I/O Signal Terminal – Power Supply Terminal	
Dielectric Strength		Sufficient to withstand the following for 1 minute: ・Case – Motor Winding 1.5 kVAC 50/60 Hz ・Case – Electromagnetic Brake Windings*1 1.5 kVAC 50/60 Hz	Sufficient to withstand the following for 1 minute: ・PE Terminal – Power Supply Terminal 1.5 kVAC 50/60 Hz ・Encoder Connector – Power Supply Terminal 1.8 kVAC 50/60 Hz ・I/O Signal Terminal – Power Supply Terminal 1.8 kVAC 50/60 Hz	
Operating Environment (In Operation)	Ambient Temperature	0 to +40°C (+32 to +104°F) (Non-Freezing)*2	0 to +55°C (+32 to +131°F) (Non-Freezing)*3	
	Ambient Humidity	85% or less (Non-Condensing)		
	Altitude	Max. of 1000 m (3300 ft.) above sea level		
	Surrounding Atmosphere	No corrosive gas or dust. No water or oil.		
Degree of Protection		When connecting the connection cable IP66 (excluding the mounting surface and connector on the driver side of the connection cable)	IP10	IP20
Stop Position Accuracy		**AZM46**, **AZM48**: ±4 arcmin (±0.067°) **AZM66**, **AZM69**: ±3 arcmin (±0.05°)		
Shaft Runout		0.05 T.I.R. (mm)*4	–	
Concentricity of Installing Pilot to the Shaft		0.075 T.I.R. (mm)*4	–	
Perpendicularity of Installation Surface to the Shaft		0.075 T.I.R. (mm)*4	–	
Multiple Rotation Detection Range in Non-Conduction State		±900 Revolutions (1800 Revolutions)		

*1 Electromagnetic brake type only.
*2 Based on Oriental Motor's measurement conditions.
*3 When a heat sink of a capacity at least equivalent to an aluminum plate with a size of 200×200 mm (7.87×7.87 in.), 2 mm (0.08 in.) thick is installed.
*4 T. I. R. (Total Indicator Reading): The total dial gauge reading when the measurement section is rotated once around the reference axis center.



Note

● Separate the motor and driver when measuring insulation resistance or performing a dielectric strength test.
Also, do not perform these tests on the Absolute Sensor part of the motor.

Electromagnetic Brake Specifications

Product Name		**AZM46**	**AZM66**	**AZM69**
Type		Power Off Activated Type		
Power Supply Voltage		24 VDC±5%		
Power Supply Current	A	0.08	0.25	0.25
Time Rating		Continuous		

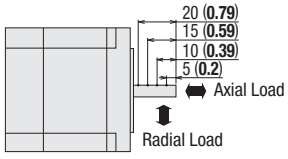
Permissible Radial Load and Permissible Axial Load

Unit: N (lb.)

Type	Motor Frame Size mm [in.]	Product Name	Permissible Radial Load Distance from Shaft End mm [in.]					Permissible Axial Load
			0 [0]	5 [0.2]	10 [0.39]	15 [0.59]	20 [0.79]	
Standard Type	42 (1.65)	**AZM46**	35 (7.8)	44 (9.9)	58 (13)	85 (19.1)	–	15 (3.3)
		AZM48	30 (6.7)	35 (7.8)	44 (9.9)	58 (13)	85 (19.1)	
	60 (2.36)	**AZM66**, **AZM69**	90 (20)	100 (22)	130 (29)	180 (40)	270 (60)	30 (6.7)

●Radial Load and Axial Load

Distance from Shaft End mm (in.)



Dimensions Unit = mm (in.)

Motor

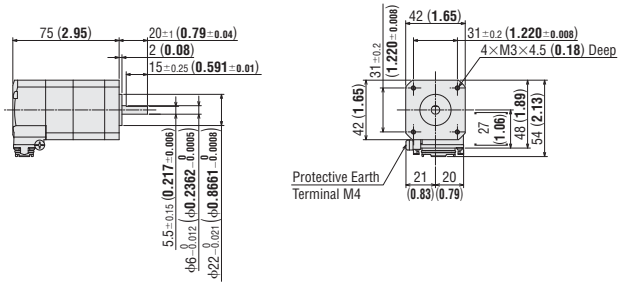
◇Standard Type

Frame Size 42 mm (1.65 in.)

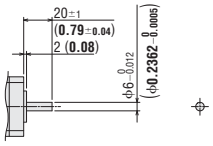
2D & 3D CAD

Shaft Type	Product Name	Mass kg (lb.)	2D CAD		
			Cable Drawn in the Same Direction As the Output Shaft	Cable Drawn Vertically	Cable Drawn in the Opposite Direction of the Output Shaft
Single Shaft Flat Type	**AZM46ACH**	0.4 (0.88)	B-1542_F	B-1542_V	B-1542_B
Straight Type	**AZM46A0CH**		B-1544_F	B-1544_V	B-1544_B

Single Shaft Flat Type

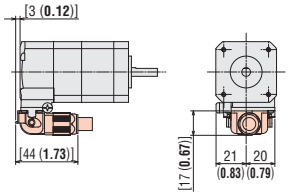


Straight Type

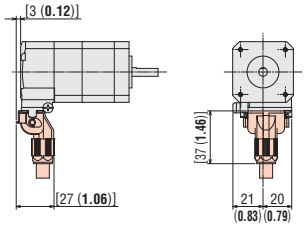


With Connection Cable Attached

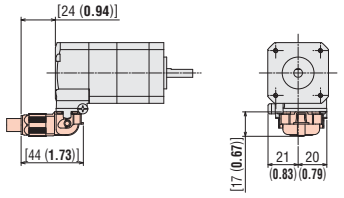
Cable Drawn in the Same Direction As the Output Shaft



Cable Drawn Vertically



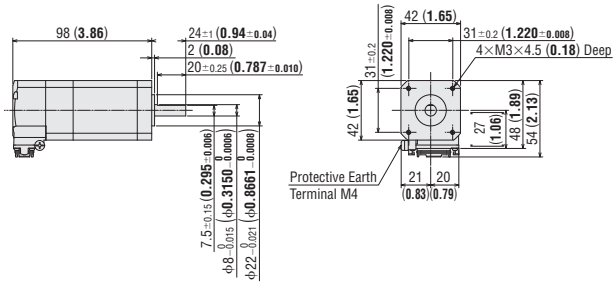
Cable Drawn in the Opposite Direction of the Output Shaft



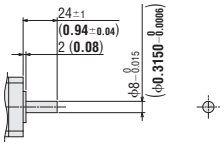
2D & 3D CAD

Shaft Type	Product Name	Mass kg (lb.)	2D CAD		
			Cable Drawn in the Same Direction As the Output Shaft	Cable Drawn Vertically	Cable Drawn in the Opposite Direction of the Output Shaft
Single Shaft Flat Type	**AZM48ACH**	0.63 (1.38)	B-1546_F	B-1546_V	B-1546_B
Straight Type	**AZM48A0CH**		B-1547_F	B-1547_V	B-1547_B
Key Shaft Type	**AZM48A1CH**		B-1548_F	B-1548_V	B-1548_B

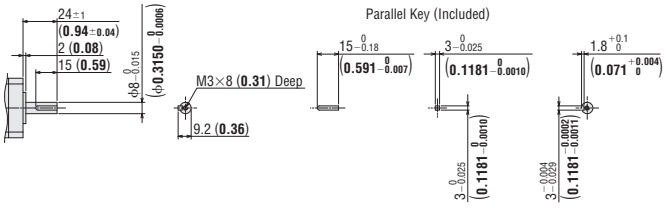
Single Shaft Flat Type



Straight Type

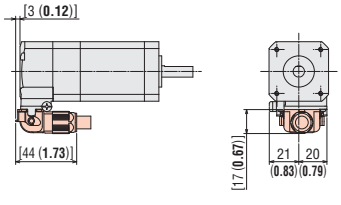


Key Shaft Type

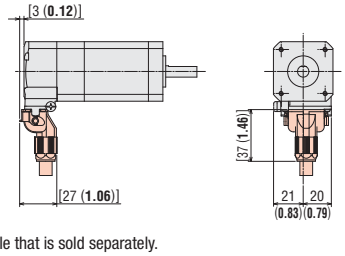


With Connection Cable Attached

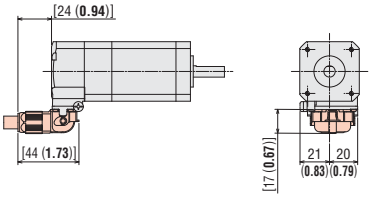
Cable Drawn in the Same Direction As the Output Shaft



Cable Drawn Vertically



Cable Drawn in the Opposite Direction of the Output Shaft



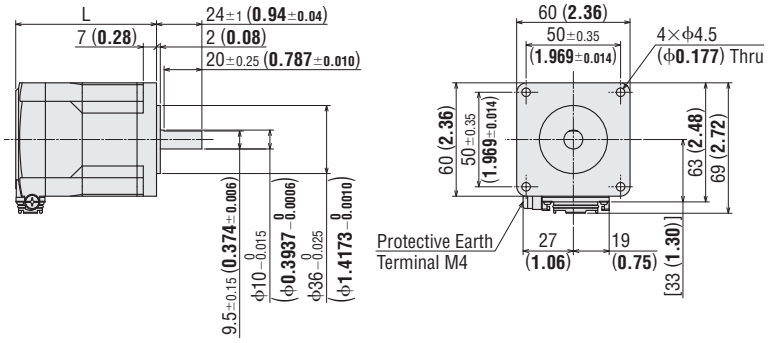
● The color in the dimensions indicates the connection cable that is sold separately.

Frame Size 60 mm (2.36 in.)

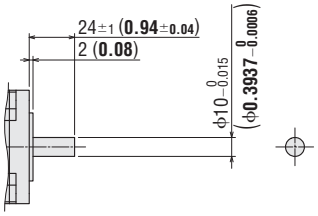
2D & 3D CAD

Shaft Type	Product Name	L	Mass kg (lb.)	2D CAD		
				Cable Drawn in the Same Direction As the Output Shaft	Cable Drawn Vertically	Cable Drawn in the Opposite Direction of the Output Shaft
Single Shaft Flat Type	**AZM66ACH**	74.5 (2.93)	0.84 (1.85)	B-1525_F	B-1525_V	B-1525_B
Straight Type	**AZM66A0CH**			B-1527_F	B-1527_V	B-1527_B
Key Type	**AZM66A1CH**			B-1529_F	B-1529_V	B-1529_B
Single Shaft Flat Type	**AZM69ACH**	100 (3.93)	1.3 (2.86)	B-1531_F	B-1531_V	B-1531_B
Straight Type	**AZM69A0CH**			B-1533_F	B-1533_V	B-1533_B
Key Type	**AZM69A1CH**			B-1535_F	B-1535_V	B-1535_B

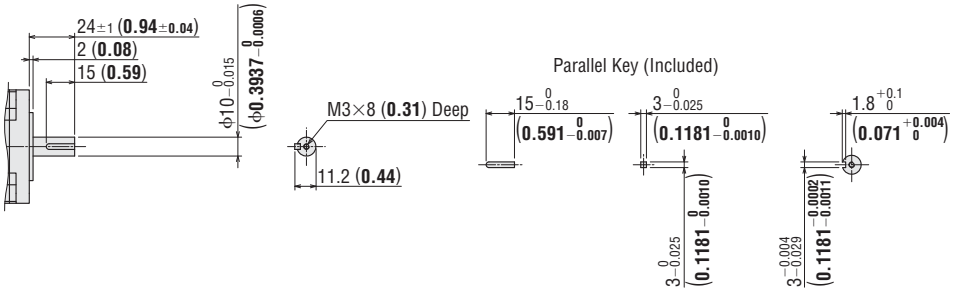
Single Shaft Flat Type



Straight Type

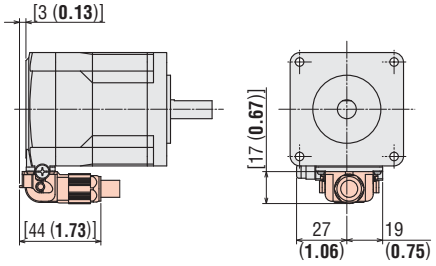


Key Type

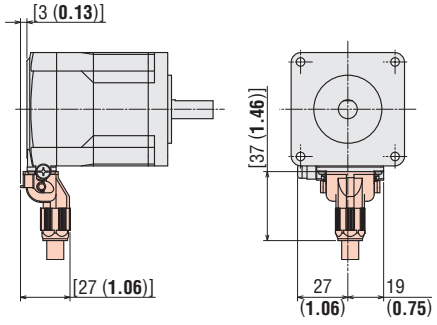


● With Connection Cable Attached

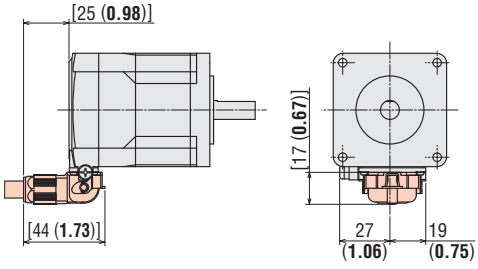
Cable Drawn in the Same Direction As the Output Shaft



Cable Drawn Vertically



Cable Drawn in the Opposite Direction of the Output Shaft



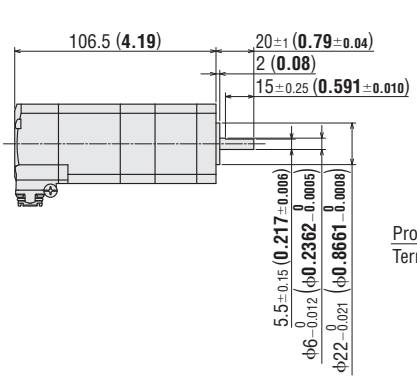
● The color in the dimensions indicates the connection cable that is sold separately.

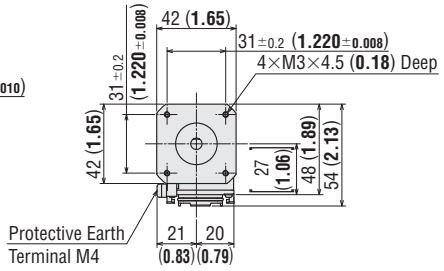
◇Standard Type with Electromagnetic Brake
Frame Size 42 mm (1.65 in.)

2D & 3D CAD

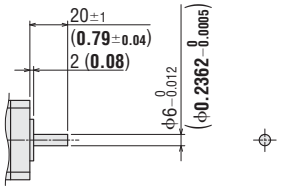
Shaft Type	Product Name	Mass kg (lb.)	2D CAD		
			Cable Drawn in the Same Direction As the Output Shaft	Cable Drawn Vertically	Cable Drawn in the Opposite Direction of the Output Shaft
Single Shaft Flat Type	**AZM46MCH**	0.54 (1.19)	B1543_F	B1543_V	B1543_B
Straight Type	**AZM46M0CH**		B1545_F	B1545_V	B1545_B

Single Shaft Flat Type



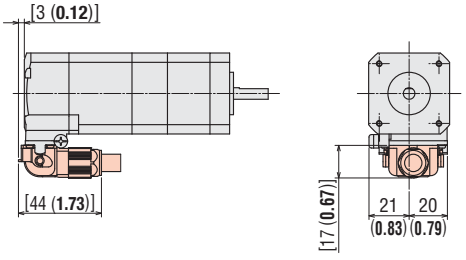


Straight Type

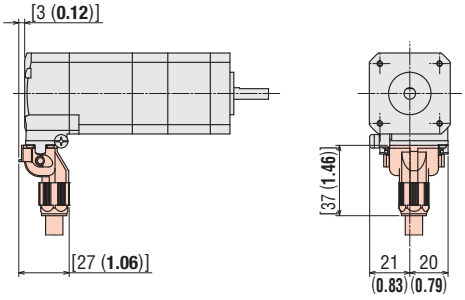


● With Connection Cable Attached

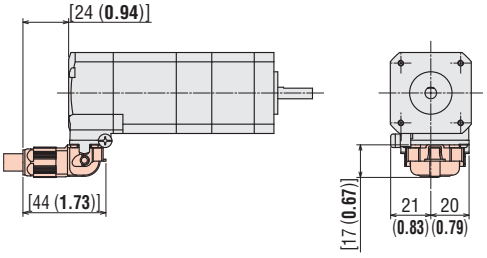
Cable Drawn in the Same Direction As the Output Shaft



Cable Drawn Vertically



Cable Drawn in the Opposite Direction of the Output Shaft



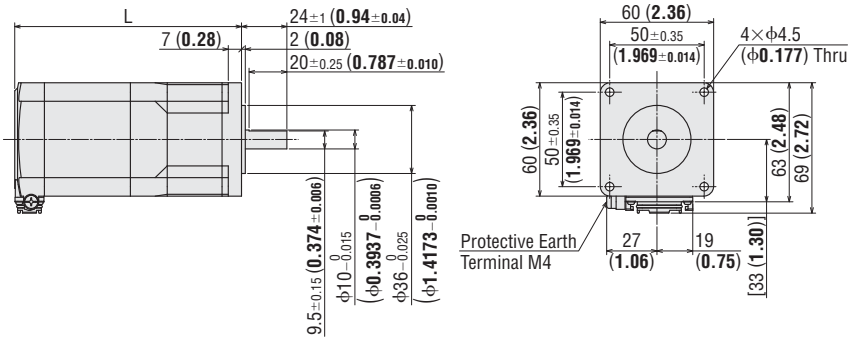
● The color in the dimensions indicates the connection cable that is sold separately.

Frame Size 60 mm (2.36 in.)

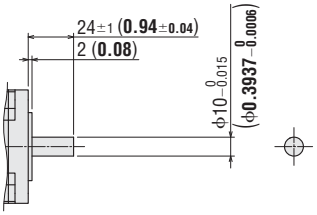
2D & 3D CAD

Shaft Type	Product Name	L	Mass kg (lb.)	2D CAD		
				Cable Drawn in the Same Direction As the Output Shaft	Cable Drawn Vertically	Cable Drawn in the Opposite Direction of the Output Shaft
Single Shaft Flat Type	**AZM66MCH**	120 (4.72)	1.2 (2.64)	B1526_F	B1526_V	B1526_B
Straight Type	**AZM66M0CH**			B1528_F	B1528_V	B1528_B
Key Type	**AZM66M1CH**			B1530_F	B1530_V	B1530_B
Single Shaft Flat Type	**AZM69MCH**	145.5 (5.72)	1.7 (3.74)	B1532_F	B1532_V	B1532_B
Straight Type	**AZM69M0CH**			B1534_F	B1534_V	B1534_B
Key Type	**AZM69M1CH**			B1536_F	B1536_V	B1536_B

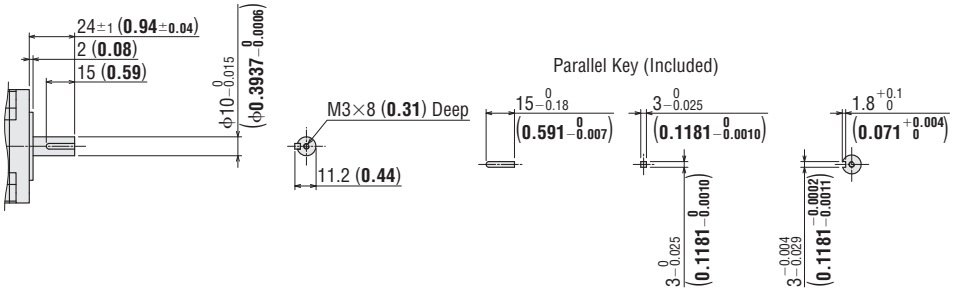
Single Shaft Flat Type



Straight Type

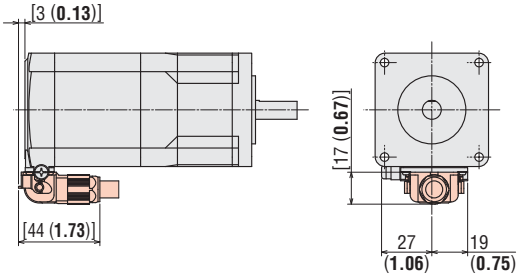


Key Type

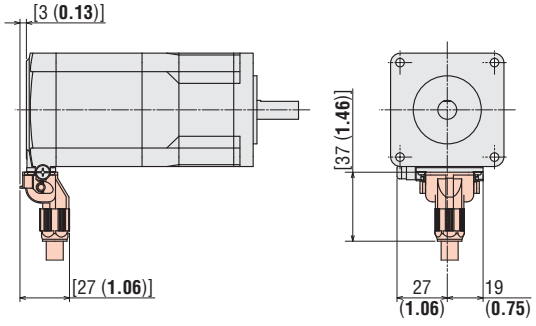


With Connection Cable Attached

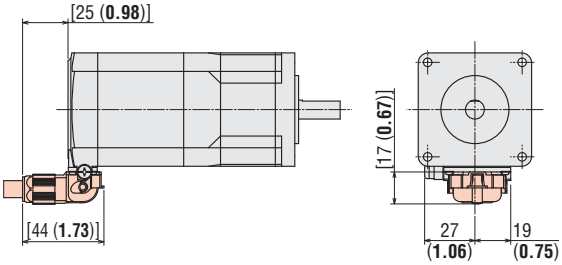
Cable Drawn in the Same Direction As the Output Shaft



Cable Drawn Vertically



Cable Drawn in the Opposite Direction of the Output Shaft



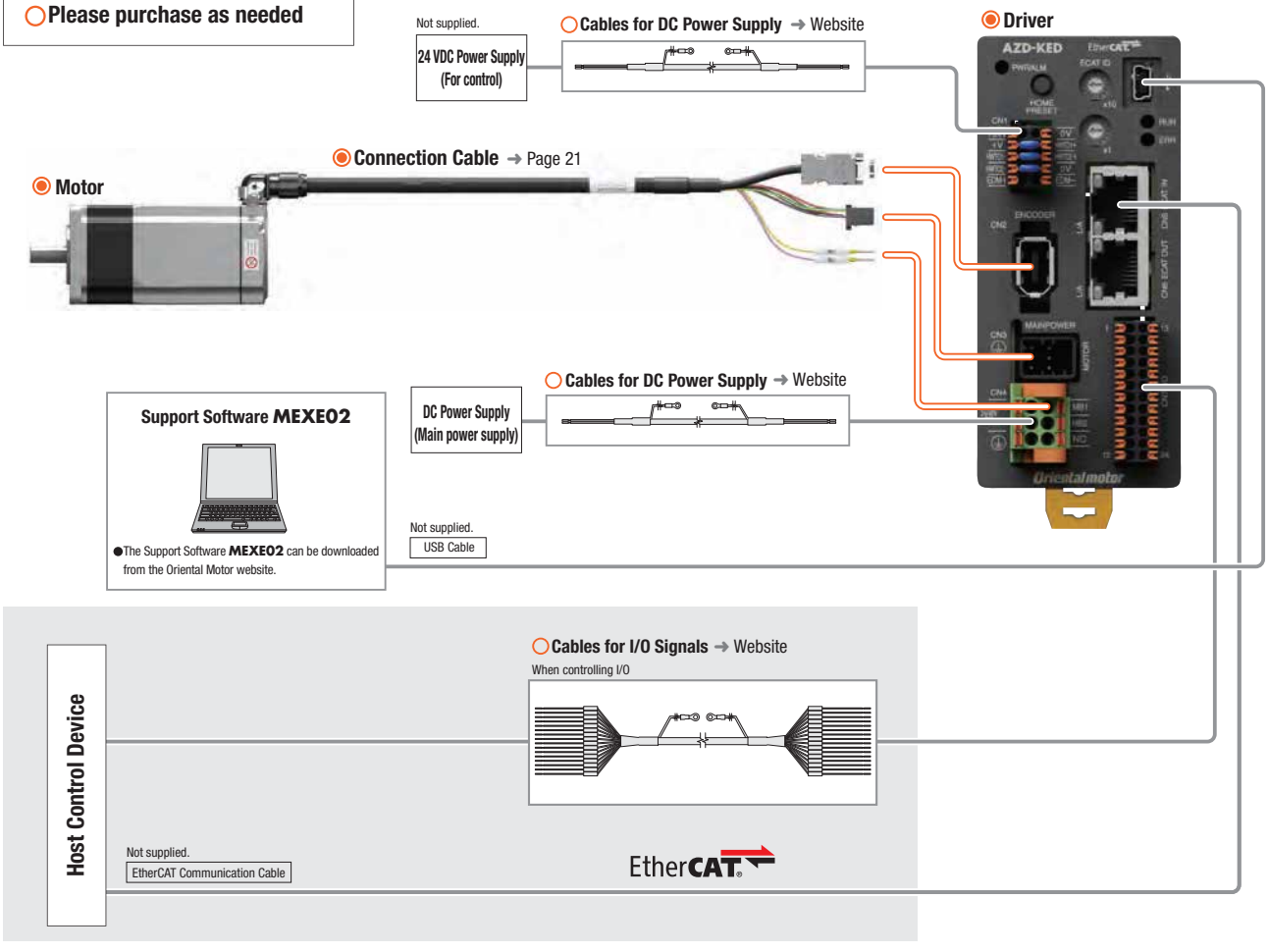
● The color in the dimensions indicates the connection cable that is sold separately.

System Configuration

Combination of Connector Type Motor with Electromagnetic Brake and EtherCAT Drive Profile-compatible Driver

Motors, drivers, and connection cables/flexible connection cables must be ordered individually.

● Please be sure to purchase one
○ Please purchase as needed



○ Peripheral Equipment for Motors → Website

Motor Mounting Brackets

○ Peripheral Equipment for Drivers → Website

Mounting Brackets for Circuit Products

●Example of System Configuration

Motor		Driver		Cables			Peripheral Equipment	
				Connection Cable Cable Outlet Direction Output Shaft Side (1 m)	I/O Signal Cable General Purpose Type (1 m)		Motor Mounting Bracket	Mounting Bracket for Circuit Product
AZM66MKH	+	AZD-KED	+	CCM010Z1DFF	CC16D010B-1	+	PALW2P-5	MAFP02
$656.00		$557.00		$76.00	$28.00		$18.00	$10.00
●		●		●	○		○	○

● The system configuration shown above is an example. Other combinations are also available.

Product Number

Motor

◇Standard Type

AZM 6 6 A 0 K H

① ② ③ ④ ⑤ ⑥ ⑦

①	Motor Type	**AZM**: **AZ** Series Motor
②	Motor Frame Size	**4**: 42 mm (1.65 in.) **6**: 60 mm (2.36 in.)
③	Motor Case Length	
④	Output Shaft Type	**A**: Single Shaft **M**: Electromagnetic Brake Type
⑤	Additional Function*	**0**: Round Shaft **1**: Key Shaft
⑥	Motor Type	**K**: DC Input Type
⑦	Motor Connection Method	**H**: Connector Type

*If there isn't a number for an additional function, it is a single shaft flat.

Connection Cables/Flexible Connection Cables

CCM 010 Z1 C F F

① ② ③ ④ ⑤ ⑥

①		**CCM**: Cable
②	Length	**005**: 0.5 m (1.64 ft.), **010**: 1 m (3.2 ft.), **020**: 2 m (6.56 ft.), **030**: 3 m (9.84 ft.), **050**: 5 m (16.40 ft.), **070**: 7 m (22.96 ft.), **100**: 10 m (32.80 ft.)
③	Applicable Model	**Z1**: **AZ** Series Connector Type
④	Description	**C**: DC Input Motor / Encoder **D**: DC Input Motor / Encoder / Electromagnetic Brake Type
⑤	Cable Outlet Direction*	**F**: Output Shaft Direction **V**: Vertical **B**: Opposite to Output Shaft Direction
⑥	Cable Type	**F**: Connection Cable **R**: Flexible Connection Cable

*Three types of the connection cables with different cable outlet directions are available. Please select the cable outlet direction needed for the installation.

F: Output Shaft Direction

V: Vertical

B: Opposite to Output Shaft Direction

Product Line

Motors, drivers, and connection cables must be ordered individually.

Motor

◇Standard Type

Frame Size	Product Name	List Price
42 mm (1.65 in.)	**AZM46AKH** **AZM46A0KH**	$367.00
	AZM48AKH **AZM48A0KH**	$380.00
	AZM48A1KH	$392.00
60 mm (2.36 in.)	**AZM66AKH** **AZM66A0KH**	$428.00
	AZM66A1KH	$440.00
	AZM69AKH **AZM69A0KH**	$434.00
	AZM69A1KH	$446.00

◇Standard Type with Electromagnetic Brake

Frame Size	Product Name	List Price
42 mm (1.65 in.)	**AZM46MKH** **AZM46M0KH**	$544.00
60 mm (2.36 in.)	**AZM66MKH** **AZM66M0KH**	$656.00
	AZM66M1KH	$668.00
	AZM69MKH **AZM69M0KH**	$661.00
	AZM69M1KH	$674.00

Connection Cables/Flexible Connection Cables

A connection cable is needed to connect the motor and driver. Please be sure to purchase one.
Use a flexible connection cable in applications where the cable is bent and flexed. Refer to page 21 for details.

List of Combinations

Product Line	Type	Product Name
Motor	Standard Type	**AZM46**□□**KH**, **AZM48A**□**KH** **AZM66**□□**KH**, **AZM69**□□**KH**

＋

Product Line	Type	Product Name
Driver	EtherCAT Drive Profile-compatible	**AZD-KED**
	EtherNet/IP-compatible	**AZD-KEP**
	PROFINET-compatible	**AZD-KPN**
	Built-in Controller Type	**AZD-KD**
	Pulse Input Type with RS-485 Communication	**AZD-KX**
	Pulse Input Type	**AZD-K**

✻**AZ** mini drivers and multi-axis drivers are not eligible for combination.

＋

Product Line	Type	Product Name
Connection Cables/Flexible Connection Cables	Connection Cable	For motor/encoder: **CCM**◇◇◇**Z1C**■**F** For motor/encoder/electromagnetic brake: **CC**◇◇◇**Z1D**■**F**
	Flexible Connection Cable	For motor/encoder: **CCM**◇◇◇**Z1C**■**R** For motor/encoder/electromagnetic brake: **CC**◇◇◇**Z1D**■**R**

● A number indicating the following is specified where the code is located in the product name.

□: Output Shaft Type

□: Additional Function

■: Cable Outlet Direction

◇: Cable Length

Standard Type Frame Size 42 mm (1.65 in.), 60 mm (2.36 in.)

Specifications

Motor Product Name	Single Shaft		AZM46A□KH	AZM48A□KH	AZM66A□KH	AZM69A□KH
	With Electromagnetic Brake		AZM46M□KH	–	AZM66M□KH	AZM69M□KH
Driver Product Name			AZD-K□			
Max. Holding Torque		N·m (oz-in)	0.3 (42)	0.72 (109)	1 (141)	2 (280)
Holding Torque at Motor Standstill	Power ON	N·m (oz-in)	0.15 (21)	0.36 (53)	0.5 (70)	1 (142)
	Electromagnetic Brake	N·m (oz-in)	0.15 (21)	–	0.5 (70)	1 (142)
Rotor Inertia		J: kg·m^2 (oz-in^2)	55×10^{-7} (0.30) [71×10^{-7} (0.38)]*1	115×10^{-7} (0.6)	370×10^{-7} (2) [530×10^{-7} (2.9)]*1	740×10^{-7} (4) [900×10^{-7} (4.9)]*1
Resolution		1000 P/R	0.36°/Pulse			
Power Supply Input			Please check "■Driver Specifications" on page 16 for the driver current specifications when combined with a motor.			
Control Power Supply*2						

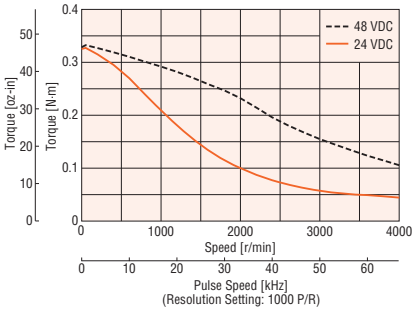
- Either a **0** (straight type) or **1** (key type) indicating the additional function is specified where the box □ is located in the product name. (**AZM46** is straight type only) For single shaft flat type motors, there is no number in the □ box.
  A letter indicating the driver type is specified where the box ■ is located in the product name. Please check "■List of Combinations" on page 14 for driver product names.
- When the motor is operated from 48 VDC input, as a reference, use an inertial load 10 times the rotor inertial ratio or less and twice the safety factor or more when calculating the acceleration torque. (Except for **AZM46**)

*1 The value inside the ( ) represents the value when an electromagnetic brake motor is connected.

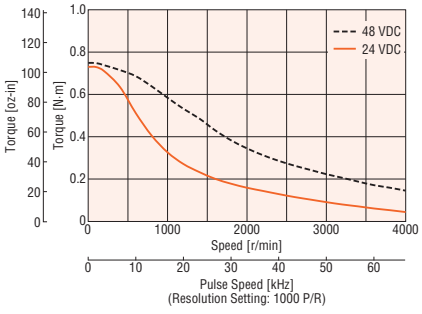
*2 Except for **AZD-KD**, **AZD-KX**, and **AZD-K**

Speed – Torque Characteristics (Reference values)

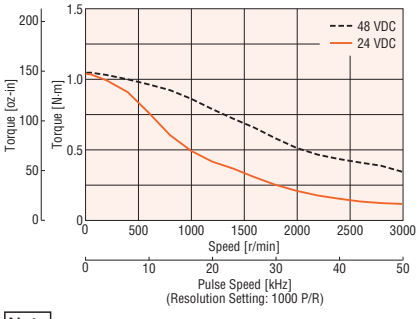
AZM46



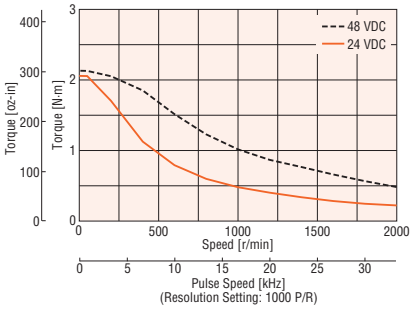
AZM48



AZM66



AZM69



Note

- Data for the speed – torque characteristics is based on Oriental Motor's internal measurement conditions. If the conditions are changed, the characteristics may also change as a result.
- Depending on the driving conditions, a considerable amount of heat may be generated by the motor. To protect the Absolute Sensor, be sure to keep the temperature of the motor case at 80°C (176°F) or less. (When conforming to the UL or CSA Standards, the temperature of the motor case must be kept at 75°C (167°F) or less since the motor is recognized as heat-resistant class A.)

Driver Specifications

Driver Product Name			AZD-KED AZD-KEP AZD-KPN	AZD-KX AZD-K	AZD-KD
Main Power Supply	Input Voltage		・24 VDC±5% ・48 VDC±5%		
	Input Current	**AZM46**	1.5 A	1.72 A (1.8 A)*1	
		AZM48	2.1 A	2.2 A	
		AZM66	3.3 A	3.55 A (3.8 A)*1	
		AZM69	3.1 A	3.45 A (3.7 A)*1	
Control Power Supply	Input Voltage		24 VDC±5%	–	
	Input Current		0.15 A (0.4 A)*2	–	
Interface	Pulse Input		・2 points, Photocoupler ・Maximum Input Pulse Frequency Line driver: 1 MHz (at 50% duty) Open collector: 250 kHz (at 50% duty)		–
	Control Input		6 points, Photocoupler		10 points, Photocoupler
	Pulse Output		2 points, Line driver		
	Control Output		6 points, Photocoupler and Open collector		
	Power Shut Down Signal Input		2 points, Photocoupler	–	
	Power Shut Down Monitor Output		1 point, Photocoupler and Open collector	–	

*1 The value inside the ( ) represents the value when an electromagnetic brake motor is connected.
*2 The value inside the ( ) represents the value when an electromagnetic brake motor is connected. **AZM46** is 0.23 A.

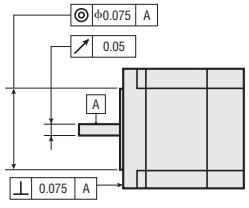
General Specifications

		Motor	Driver
Thermal Class		130 (B) [UL Recognized 105 (A)]	–
Insulation Resistance		100 MΩ or more when 500 VDC megger is applied between the following places: ・Case – Motor windings ・Case – Electromagnetic Brake Windings*1	100 MΩ or more when 500 VDC megger is applied between the following places: ・PE Terminal – Power Supply Terminal
Dielectric Strength		Sufficient to withstand the following for 1 minute: ・Case – Motor Winding 1.0 kVAC 50/60 Hz ・Case – Electromagnetic Brake Windings*1 1.0 kVAC 50/60 Hz	–
Operating Environment (In Operation)	Ambient Temperature	0 to +40°C (+32 to +104°F) (Non-Freezing)	0 to +50°C (+32 to +122°F) (Non-Freezing)
	Ambient Humidity	85% or less (Non-Condensing)	
	Altitude	Max. of 1000 m (3300 ft.) above sea level	
	Surrounding Atmosphere	No corrosive gas or dust. No water or oil.	
Degree of Protection		When connecting the connection cable IP66 (excluding the mounting surface and connector on the driver side of the connection cable)	IP10
Stop Position Accuracy		**AZM46**, **AZM48**: ±4 arcmin (±0.067°)	**AZM66**, **AZM69**: ±3 arcmin (±0.05°)
Shaft Runout		0.05 T.I.R. (mm)*2	–
Concentricity of Installing Pilot to the Shaft		0.075 T.I.R. (mm)*2	–
Perpendicularity of Installation Surface to the Shaft		0.075 T.I.R. (mm)*2	–
Multiple Rotation Detection Range in Non-Conduction State		±900 Revolutions (1800 Revolutions)	

*1 Electromagnetic brake type only.
*2 T. I. R. (Total Indicator Reading): The total dial gauge reading when the measurement section is rotated once around the reference axis center.

Note

● Separate the motor and driver when measuring insulation resistance or performing a dielectric strength test.
Also, do not perform these tests on the Absolute Sensor part of the motor.



Electromagnetic Brake Specifications

➜ Page 7

Permissible Radial Load and Permissible Axial Load

➜ Page 7

Dimensions Unit = mm (in.)

Motor

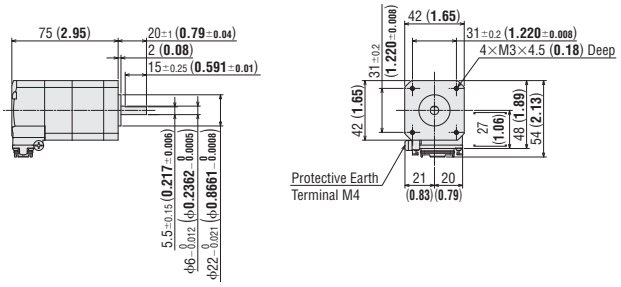
◇Standard Type

Frame Size 42 mm (1.65 in.)

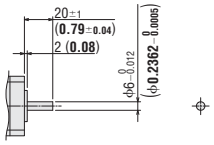
2D & 3D CAD

Shaft Type	Product Name	Mass kg (lb.)	2D CAD		
			Cable Drawn in the Same Direction As the Output Shaft	Cable Drawn Vertically	Cable Drawn in the Opposite Direction of the Output Shaft
Single Shaft Flat Type	**AZM46AKH**	0.4 (0.88)	B-1542_F	B-1542_V	B-1542_B
Straight Type	**AZM46A0KH**		B-1544_F	B-1544_V	B-1544_B

Single Shaft Flat Type

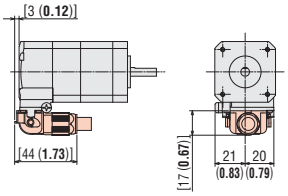


Straight Type

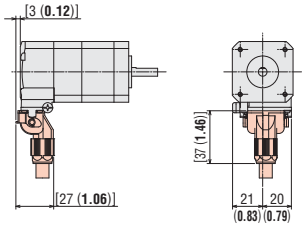


● With Connection Cable Attached

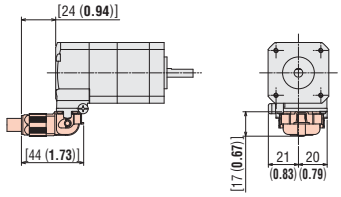
Cable Drawn in the Same Direction As the Output Shaft



Cable Drawn Vertically



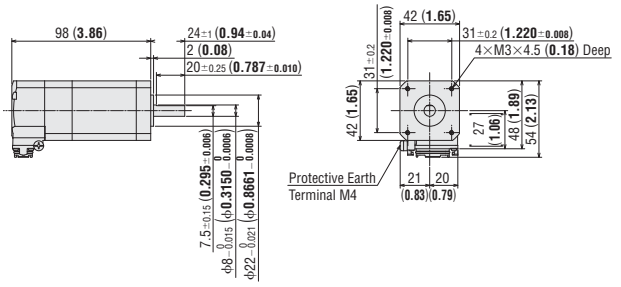
Cable Drawn in the Opposite Direction of the Output Shaft



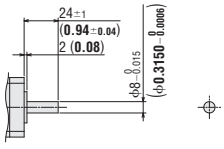
2D & 3D CAD

Shaft Type	Product Name	Mass kg (lb.)	2D CAD		
			Cable Drawn in the Same Direction As the Output Shaft	Cable Drawn Vertically	Cable Drawn in the Opposite Direction of the Output Shaft
Single Shaft Flat Type	**AZM48AKH**	0.63 (1.38)	B-1546_F	B-1546_V	B-1546_B
Straight Type	**AZM48A0KH**		B-1547_F	B-1547_V	B-1547_B
Key Type	**AZM48A1KH**		B-1548_F	B-1548_V	B-1548_B

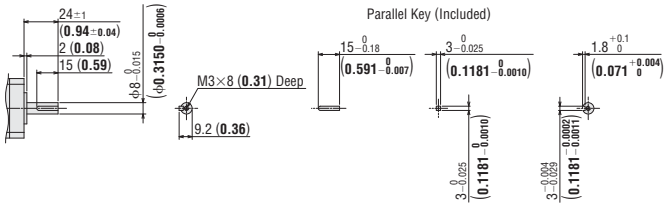
Single Shaft Flat Type



Straight Type

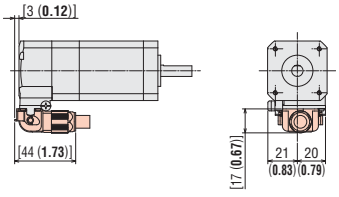


Key Type

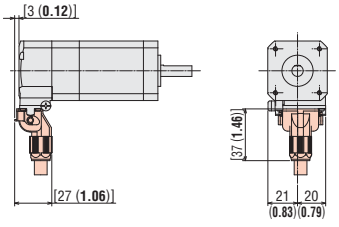


● With Connection Cable Attached

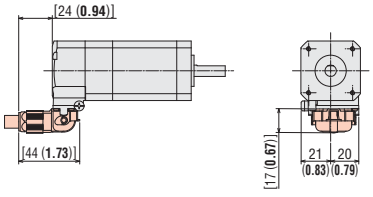
Cable Drawn in the Same Direction As the Output Shaft



Cable Drawn Vertically



Cable Drawn in the Opposite Direction of the Output Shaft



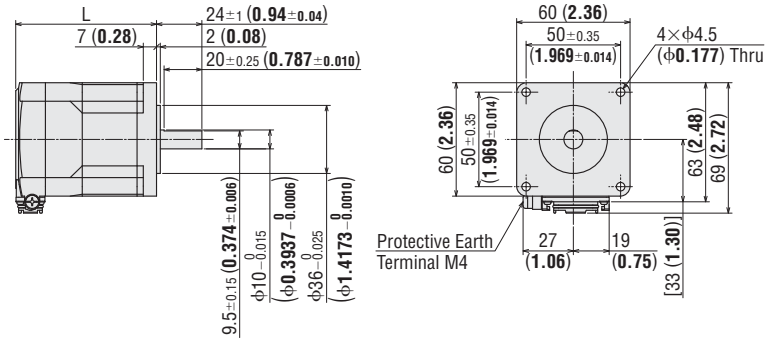
● The color in the dimensions indicates the connection cable that is sold separately.

Frame Size 60 mm (2.36 in.)

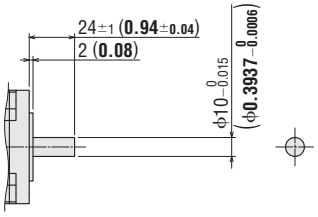
2D & 3D CAD

Shaft Type	Product Name	L	Mass kg (lb.)	2D CAD		
				Cable Drawn in the Same Direction As the Output Shaft	Cable Drawn Vertically	Cable Drawn in the Opposite Direction of the Output Shaft
Single Shaft Flat Type	**AZM66AKH**	74.5 (2.93)	0.84 (1.85)	B-1525_F	B-1525_V	B-1525_B
Straight Type	**AZM66A0KH**			B-1527_F	B-1527_V	B-1527_B
Key Type	**AZM66A1KH**			B-1529_F	B-1529_V	B-1529_B
Single Shaft Flat Type	**AZM69AKH**	100 (3.93)	1.3 (2.86)	B-1531_F	B-1531_V	B-1531_B
Straight Type	**AZM69A0KH**			B-1533_F	B-1533_V	B-1533_B
Key Type	**AZM69A1KH**			B-1535_F	B-1535_V	B-1535_B

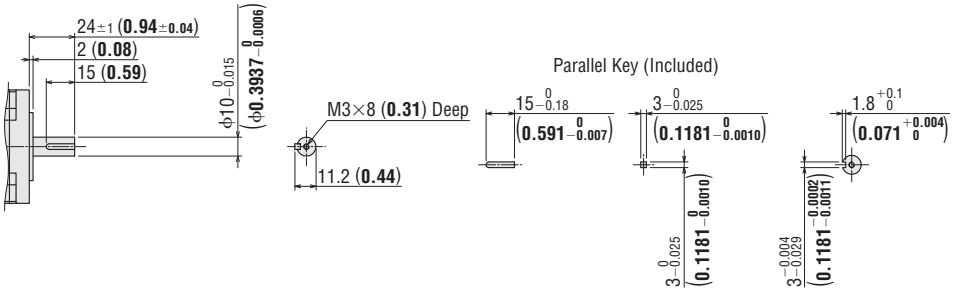
Single Shaft Flat Type



Straight Type

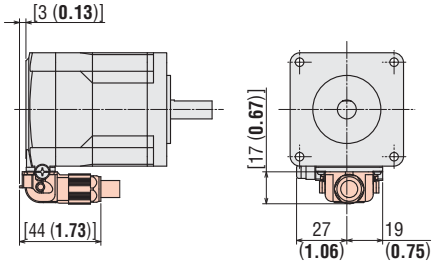


Key Type

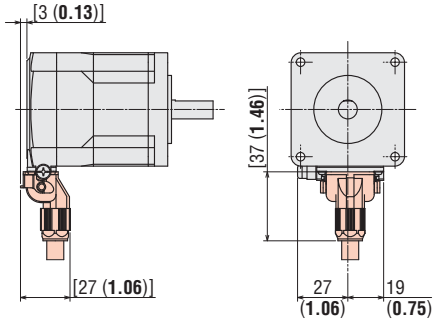


With Connection Cable Attached

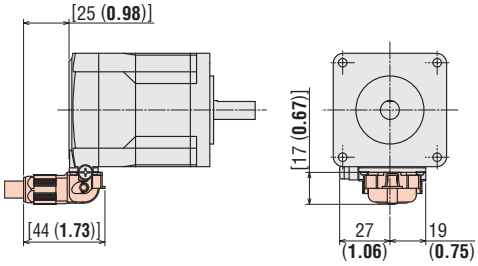
Cable Drawn in the Same Direction As the Output Shaft



Cable Drawn Vertically



Cable Drawn in the Opposite Direction of the Output Shaft



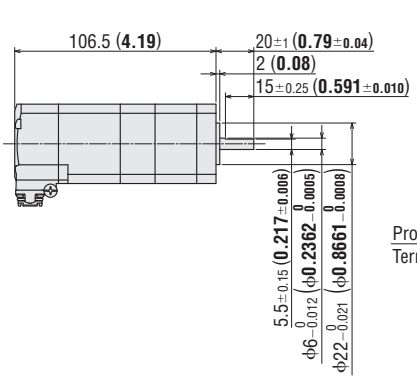
● The color in the dimensions indicates the connection cable that is sold separately.

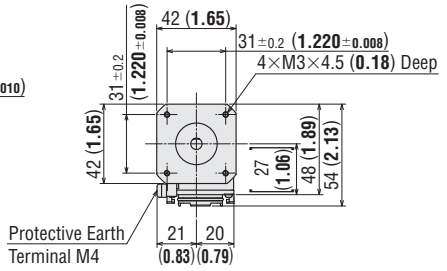
◇Standard Type with Electromagnetic Brake
Frame Size 42 mm (1.65 in.)

2D & 3D CAD

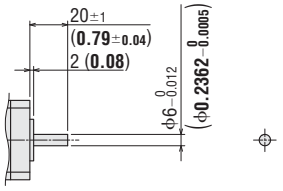
Shaft Type	Product Name	Mass kg (lb.)	2D CAD		
			Cable Drawn in the Same Direction As the Output Shaft	Cable Drawn Vertically	Cable Drawn in the Opposite Direction of the Output Shaft
Single Shaft Flat Type	**AZM46MKH**	0.54 (1.19)	B1543_F	B1543_V	B1543_B
Straight Type	**AZM46M0KH**		B1545_F	B1545_V	B1545_B

Single Shaft Flat Type



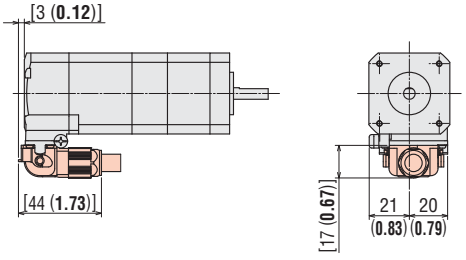


Straight Type

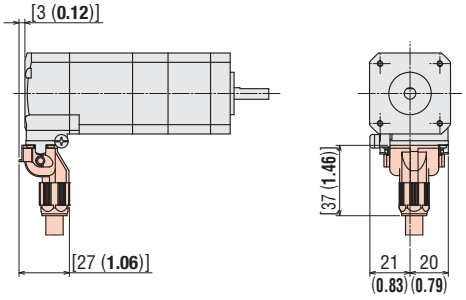


● With Connection Cable Attached

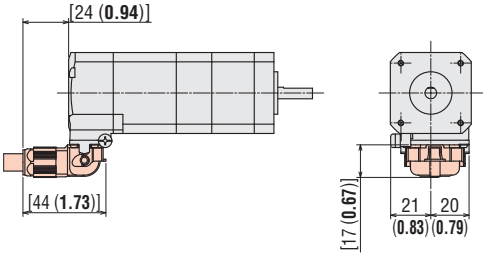
Cable Drawn in the Same Direction As the Output Shaft



Cable Drawn Vertically



Cable Drawn in the Opposite Direction of the Output Shaft



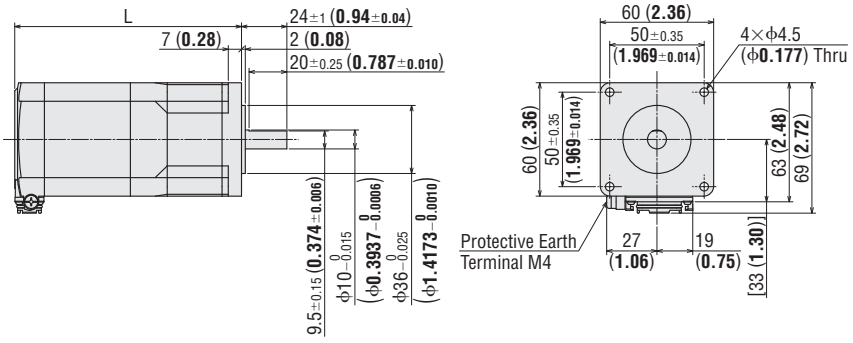
● The color in the dimensions indicates the connection cable that is sold separately.

Frame Size 60 mm (2.36 in.)

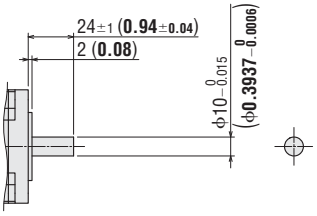
2D & 3D CAD

Shaft Type	Product Name	L	Mass kg (lb.)	2D CAD		
				Cable Drawn in the Same Direction As the Output Shaft	Cable Drawn Vertically	Cable Drawn in the Opposite Direction of the Output Shaft
Single Shaft Flat Type	**AZM66MKH**	120 (4.72)	1.2 (2.64)	B1526_F	B1526_V	B1526_B
Straight Type	**AZM66M0KH**			B1528_F	B1528_V	B1528_B
Key Type	**AZM66M1KH**			B1530_F	B1530_V	B1530_B
Single Shaft Flat Type	**AZM69MKH**	145.5 (5.72)	1.7 (3.74)	B1532_F	B1532_V	B1532_B
Straight Type	**AZM69M0KH**			B1534_F	B1534_V	B1534_B
Key Type	**AZM69M1KH**			B1536_F	B1536_V	B1536_B

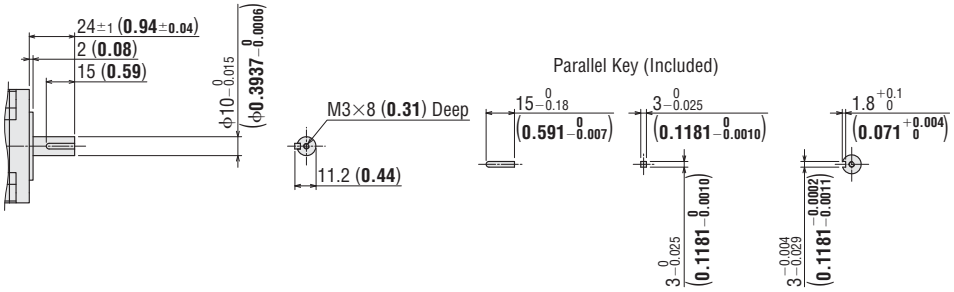
Single Shaft Flat Type



Straight Type

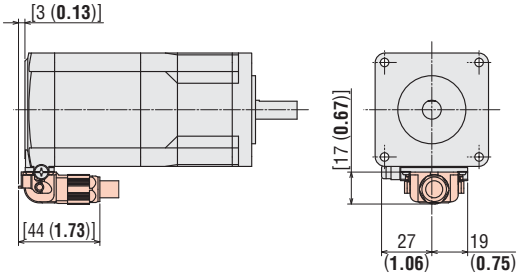


Key Type

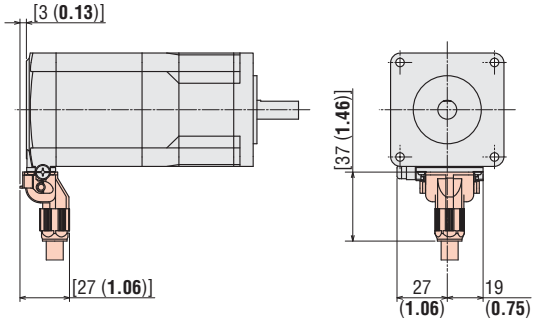


● With Connection Cable Attached

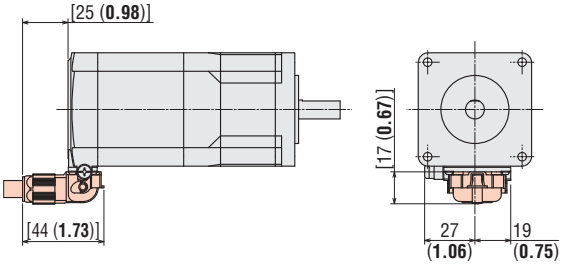
Cable Drawn in the Same Direction As the Output Shaft



Cable Drawn Vertically



Cable Drawn in the Opposite Direction of the Output Shaft



● The color in the dimensions indicates the connection cable that is sold separately.

Cables

Connection Cables/Flexible Connection Cables

These cables directly connect a motor and driver. Use a flexible connection cable in applications where the cable is bent and flexed.

● Three types of cables with different drawing directions are available. Please select the drawing direction that suits the installation.

Cable Outlet Direction
Output Shaft Side

Cable Outlet Direction
Vertical

Cable Outlet Direction
Opposite Side of Output Shaft

● Product Line

◇ Connection cable

[For AC Input]

● For Motor/Encoder

Cable Outlet Direction	Length L m (ft.)	Product Name	List Price
Output Shaft Direction	1 (3.3)	**CCM010Z1AFF**	$61.00
	2 (6.6)	**CCM020Z1AFF**	$74.00
	3 (9.8)	**CCM030Z1AFF**	$86.00
	5 (16.4)	**CCM050Z1AFF**	$133.00
	7 (23.0)	**CCM070Z1AFF**	$160.00
	10 (32.8)	**CCM100Z1AFF**	$201.00
Vertical	1 (3.3)	**CCM010Z1AVF**	$61.00
	2 (6.6)	**CCM020Z1AVF**	$74.00
	3 (9.8)	**CCM030Z1AVF**	$86.00
	5 (16.4)	**CCM050Z1AVF**	$133.00
	7 (23.0)	**CCM070Z1AVF**	$160.00
	10 (32.8)	**CCM100Z1AVF**	$201.00
Opposite to Output Shaft Direction	1 (3.3)	**CCM010Z1ABF**	$61.00
	2 (6.6)	**CCM020Z1ABF**	$74.00
	3 (9.8)	**CCM030Z1ABF**	$86.00
	5 (16.4)	**CCM050Z1ABF**	$133.00
	7 (23.0)	**CCM070Z1ABF**	$160.00
	10 (32.8)	**CCM100Z1ABF**	$201.00

● For Motor/Encoder/Type with Electromagnetic Brake

Cable Outlet Direction	Length L m (ft.)	Product Name	List Price
Output Shaft Direction	1 (3.3)	**CCM010Z1BFF**	$76.00
	2 (6.6)	**CCM020Z1BFF**	$91.00
	3 (9.8)	**CCM030Z1BFF**	$106.00
	5 (16.4)	**CCM050Z1BFF**	$159.00
	7 (23.0)	**CCM070Z1BFF**	$191.00
	10 (32.8)	**CCM100Z1BFF**	$239.00
Vertical	1 (3.3)	**CCM010Z1BVF**	$76.00
	2 (6.6)	**CCM020Z1BVF**	$91.00
	3 (9.8)	**CCM030Z1BVF**	$106.00
	5 (16.4)	**CCM050Z1BVF**	$159.00
	7 (23.0)	**CCM070Z1BVF**	$191.00
	10 (32.8)	**CCM100Z1BVF**	$239.00
Opposite to Output Shaft Direction	1 (3.3)	**CCM010Z1BBF**	$76.00
	2 (6.6)	**CCM020Z1BBF**	$91.00
	3 (9.8)	**CCM030Z1BBF**	$106.00
	5 (16.4)	**CCM050Z1BBF**	$159.00
	7 (23.0)	**CCM070Z1BBF**	$191.00
	10 (32.8)	**CCM100Z1BBF**	$239.00

[For DC Input]

● For Motor/Encoder

Cable Outlet Direction	Length L m (ft.)	Product Name	List Price
Output Shaft Direction	0.5 (1.64)	**CCM005Z1CFF**	$61.00
	1 (3.3)	**CCM010Z1CFF**	$61.00
	2 (6.6)	**CCM020Z1CFF**	$74.00
	3 (9.8)	**CCM030Z1CFF**	$86.00
	5 (16.4)	**CCM050Z1CFF**	$133.00
	7 (23.0)	**CCM070Z1CFF**	$160.00
	10 (32.8)	**CCM100Z1CFF**	$201.00
Vertical	0.5 (1.64)	**CCM005Z1CVF**	$61.00
	1 (3.3)	**CCM010Z1CVF**	$61.00
	2 (6.6)	**CCM020Z1CVF**	$74.00
	3 (9.8)	**CCM030Z1CVF**	$86.00
	5 (16.4)	**CCM050Z1CVF**	$133.00
	7 (23.0)	**CCM070Z1CVF**	$160.00
	10 (32.8)	**CCM100Z1CVF**	$201.00
Opposite to Output Shaft Direction	0.5 (1.64)	**CCM005Z1CBF**	$61.00
	1 (3.3)	**CCM010Z1CBF**	$61.00
	2 (6.6)	**CCM020Z1CBF**	$74.00
	3 (9.8)	**CCM030Z1CBF**	$86.00
	5 (16.4)	**CCM050Z1CBF**	$133.00
	7 (23.0)	**CCM070Z1CBF**	$160.00
	10 (32.8)	**CCM100Z1CBF**	$201.00

● For Motor/Encoder/Type with Electromagnetic Brake

Cable Outlet Direction	Length L m (ft.)	Product Name	List Price
Output Shaft Direction	0.5 (1.64)	**CCM005Z1DFF**	$76.00
	1 (3.3)	**CCM010Z1DFF**	$76.00
	2 (6.6)	**CCM020Z1DFF**	$91.00
	3 (9.8)	**CCM030Z1DFF**	$106.00
	5 (16.4)	**CCM050Z1DFF**	$159.00
	7 (23.0)	**CCM070Z1DFF**	$191.00
	10 (32.8)	**CCM100Z1DFF**	$239.00
Vertical	0.5 (1.64)	**CCM005Z1DVF**	$76.00
	1 (3.3)	**CCM010Z1DVF**	$76.00
	2 (6.6)	**CCM020Z1DVF**	$91.00
	3 (9.8)	**CCM030Z1DVF**	$106.00
	5 (16.4)	**CCM050Z1DVF**	$159.00
	7 (23.0)	**CCM070Z1DVF**	$191.00
	10 (32.8)	**CCM100Z1DVF**	$239.00
Opposite to Output Shaft Direction	0.5 (1.64)	**CCM005Z1DBF**	$76.00
	1 (3.3)	**CCM010Z1DBF**	$76.00
	2 (6.6)	**CCM020Z1DBF**	$91.00
	3 (9.8)	**CCM030Z1DBF**	$106.00
	5 (16.4)	**CCM050Z1DBF**	$159.00
	7 (23.0)	**CCM070Z1DBF**	$191.00
	10 (32.8)	**CCM100Z1DBF**	$239.00

◇Flexible Connection Cable

[For AC Input]

● For Motor/Encoder

Cable Outlet Direction	Length L m (ft.)	Product Name	List Price
Output Shaft Direction	1 (3.3)	**CCM010Z1AFR**	$108.00
	2 (6.6)	**CCM020Z1AFR**	$123.00
	3 (9.8)	**CCM030Z1AFR**	$135.00
	5 (16.4)	**CCM050Z1AFR**	$166.00
	7 (23.0)	**CCM070Z1AFR**	$205.00
	10 (32.8)	**CCM100Z1AFR**	$261.00
Vertical	1 (3.3)	**CCM010Z1AVR**	$108.00
	2 (6.6)	**CCM020Z1AVR**	$123.00
	3 (9.8)	**CCM030Z1AVR**	$135.00
	5 (16.4)	**CCM050Z1AVR**	$166.00
	7 (23.0)	**CCM070Z1AVR**	$205.00
	10 (32.8)	**CCM100Z1AVR**	$261.00
Opposite to Output Shaft Direction	1 (3.3)	**CCM010Z1ABR**	$108.00
	2 (6.6)	**CCM020Z1ABR**	$123.00
	3 (9.8)	**CCM030Z1ABR**	$135.00
	5 (16.4)	**CCM050Z1ABR**	$166.00
	7 (23.0)	**CCM070Z1ABR**	$205.00
	10 (32.8)	**CCM100Z1ABR**	$261.00

● For Motor/Encoder/Type with Electromagnetic Brake

Cable Outlet Direction	Length L m (ft.)	Product Name	List Price
Output Shaft Direction	1 (3.3)	**CCM010Z1BFR**	$138.00
	2 (6.6)	**CCM020Z1BFR**	$159.00
	3 (9.8)	**CCM030Z1BFR**	$176.00
	5 (16.4)	**CCM050Z1BFR**	$216.00
	7 (23.0)	**CCM070Z1BFR**	$266.00
	10 (32.8)	**CCM100Z1BFR**	$337.00
Vertical	1 (3.3)	**CCM010Z1BVR**	$138.00
	2 (6.6)	**CCM020Z1BVR**	$159.00
	3 (9.8)	**CCM030Z1BVR**	$176.00
	5 (16.4)	**CCM050Z1BVR**	$216.00
	7 (23.0)	**CCM070Z1BVR**	$266.00
	10 (32.8)	**CCM100Z1BVR**	$337.00
Opposite to Output Shaft Direction	1 (3.3)	**CCM010Z1BBR**	$138.00
	2 (6.6)	**CCM020Z1BBR**	$159.00
	3 (9.8)	**CCM030Z1BBR**	$176.00
	5 (16.4)	**CCM050Z1BBR**	$216.00
	7 (23.0)	**CCM070Z1BBR**	$266.00
	10 (32.8)	**CCM100Z1BBR**	$337.00

[For DC Input]

● For Motor/Encoder

Cable Outlet Direction	Length L m (ft.)	Product Name	List Price
Output Shaft Direction	0.5 (1.64)	**CCM005Z1CFR**	$108.00
	1 (3.3)	**CCM010Z1CFR**	$108.00
	2 (6.6)	**CCM020Z1CFR**	$123.00
	3 (9.8)	**CCM030Z1CFR**	$135.00
	5 (16.4)	**CCM050Z1CFR**	$166.00
	7 (23.0)	**CCM070Z1CFR**	$205.00
	10 (32.8)	**CCM100Z1CFR**	$261.00
Vertical	0.5 (1.64)	**CCM005Z1CVR**	$108.00
	1 (3.3)	**CCM010Z1CVR**	$108.00
	2 (6.6)	**CCM020Z1CVR**	$123.00
	3 (9.8)	**CCM030Z1CVR**	$135.00
	5 (16.4)	**CCM050Z1CVR**	$166.00
	7 (23.0)	**CCM070Z1CVR**	$205.00
	10 (32.8)	**CCM100Z1CVR**	$261.00
Opposite to Output Shaft Direction	0.5 (1.64)	**CCM005Z1CBR**	$108.00
	1 (3.3)	**CCM010Z1CBR**	$108.00
	2 (6.6)	**CCM020Z1CBR**	$123.00
	3 (9.8)	**CCM030Z1CBR**	$135.00
	5 (16.4)	**CCM050Z1CBR**	$166.00
	7 (23.0)	**CCM070Z1CBR**	$205.00
	10 (32.8)	**CCM100Z1CBR**	$261.00

● For Motor/Encoder/Type with Electromagnetic Brake

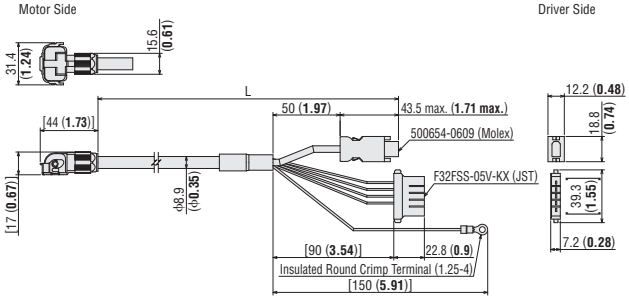
Cable Outlet Direction	Length L m (ft.)	Product Name	List Price
Output Shaft Direction	0.5 (1.64)	**CCM005Z1DFR**	$138.00
	1 (3.3)	**CCM010Z1DFR**	$138.00
	2 (6.6)	**CCM020Z1DFR**	$159.00
	3 (9.8)	**CCM030Z1DFR**	$176.00
	5 (16.4)	**CCM050Z1DFR**	$216.00
	7 (23.0)	**CCM070Z1DFR**	$266.00
	10 (32.8)	**CCM100Z1DFR**	$337.00
Vertical	0.5 (1.64)	**CCM005Z1DVR**	$138.00
	1 (3.3)	**CCM010Z1DVR**	$138.00
	2 (6.6)	**CCM020Z1DVR**	$159.00
	3 (9.8)	**CCM030Z1DVR**	$176.00
	5 (16.4)	**CCM050Z1DVR**	$216.00
	7 (23.0)	**CCM070Z1DVR**	$266.00
	10 (32.8)	**CCM100Z1DVR**	$337.00
Opposite to Output Shaft Direction	0.5 (1.64)	**CCM005Z1DBR**	$138.00
	1 (3.3)	**CCM010Z1DBR**	$138.00
	2 (6.6)	**CCM020Z1DBR**	$159.00
	3 (9.8)	**CCM030Z1DBR**	$176.00
	5 (16.4)	**CCM050Z1DBR**	$216.00
	7 (23.0)	**CCM070Z1DBR**	$266.00
	10 (32.8)	**CCM100Z1DBR**	$337.00

●Dimensions Unit = mm (in.)

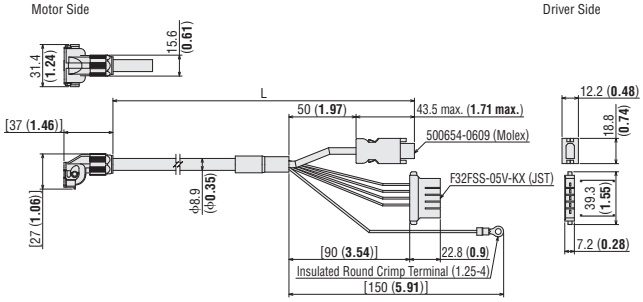
[For AC Input]

●For Motor/Encoder

- Cable drawn on output shaft direction, Cable drawn on opposite to output shaft direction

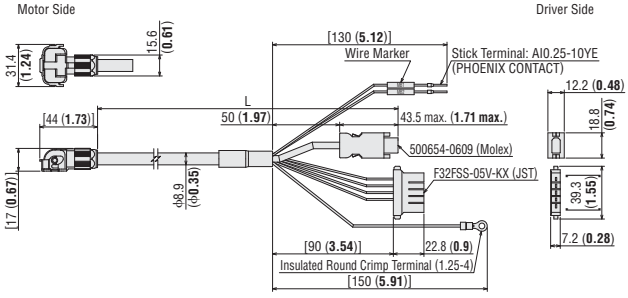


- Cable drawn vertically

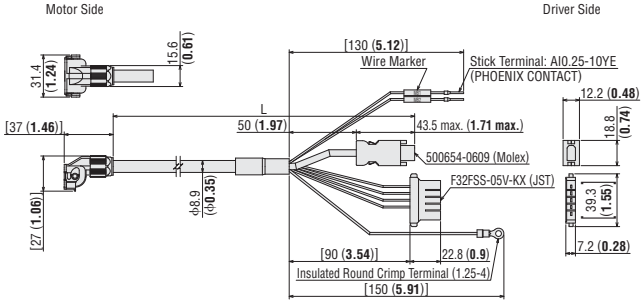


●For Motor/Encoder/Type with Electromagnetic Brake

- Cable drawn on output shaft direction, Cable drawn on opposite to output shaft direction



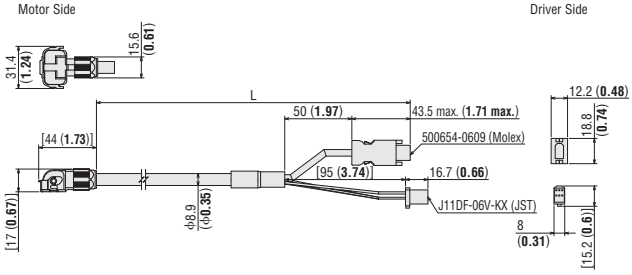
- Cable drawn vertically



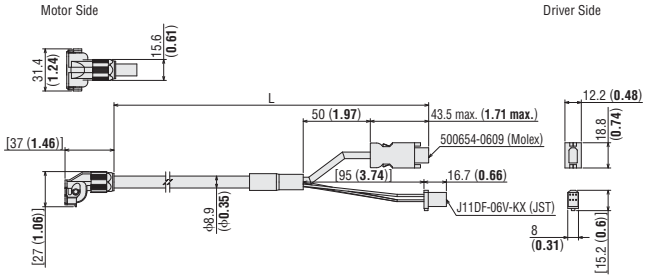
[For DC Input]

●For Motor/Encoder

- Cable drawn on output shaft direction, Cable drawn on opposite to output shaft direction

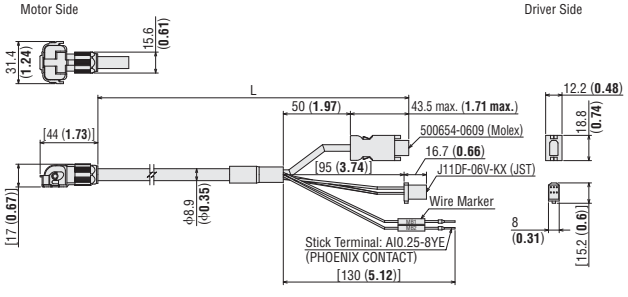


- Cable drawn vertically

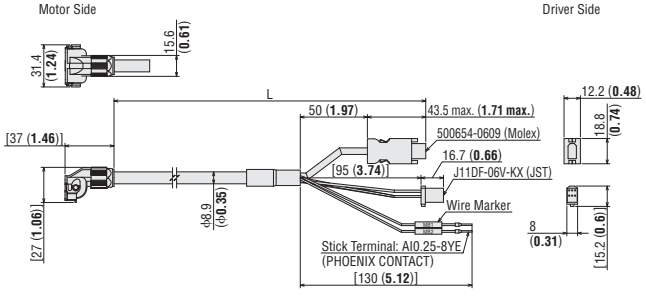


●For Motor/Encoder/Type with Electromagnetic Brake

- Cable drawn on output shaft direction, Cable drawn on opposite to output shaft direction



- Cable drawn vertically



Specifications are subject to change without notice. This catalog was published in March 2023

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