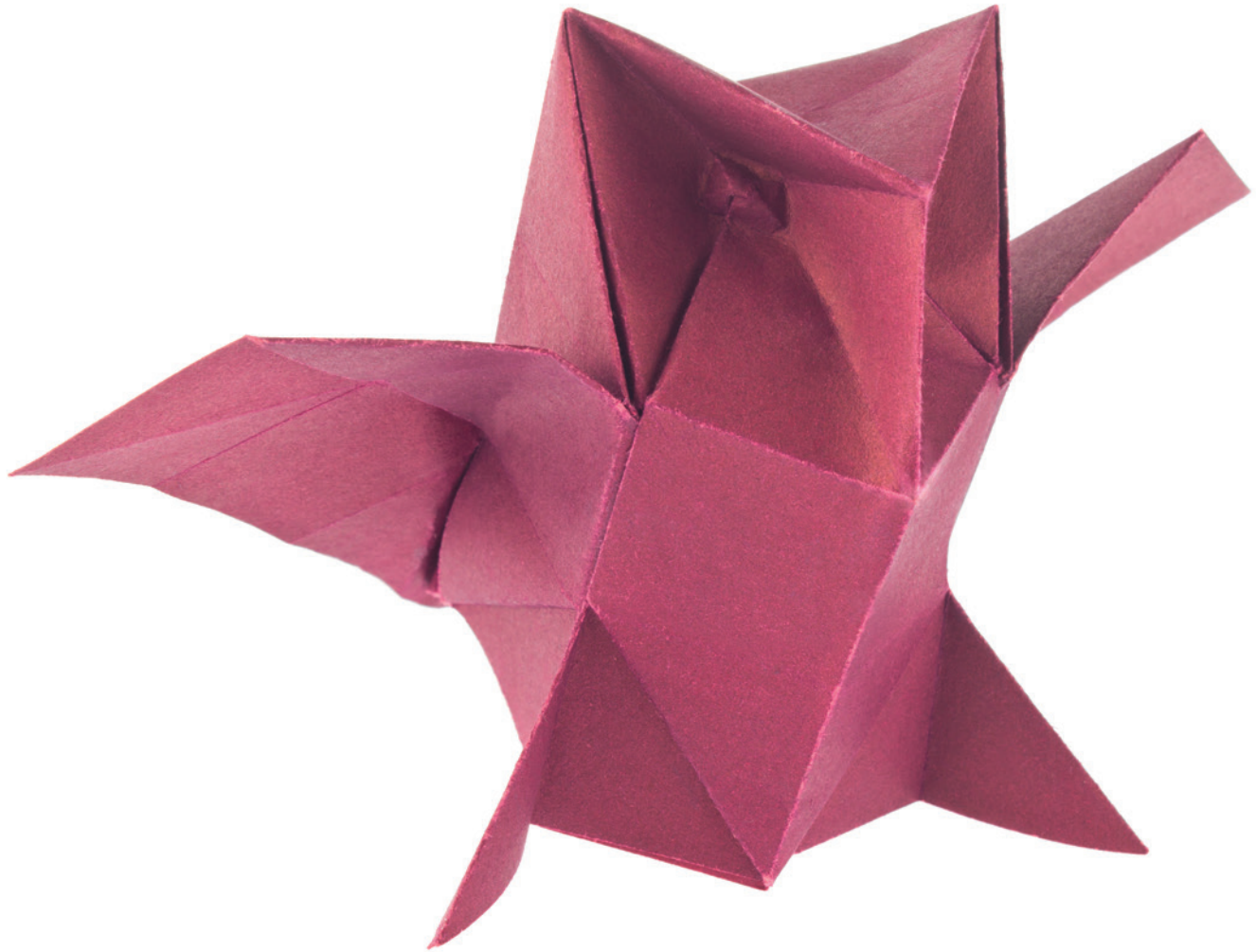


**Orientalmotor**



# New**m**otion

**VOL. 65**  
07/2023



## Security Camera

with Motors and Drivers from Oriental Motor

# Improving building security

## using the example of a PTZ Camera

The PTZ camera is used by many companies for the security of buildings, premises and products. This type of camera can capture large areas through 3 features: Pan, Tilt and Zoom



Application: Motor-powered PTZ camera

### Conventional device

- Security camera rotates in the direction of the x- and y-axis
- A stepper motor is used to rotate the pan mechanism

### Problem

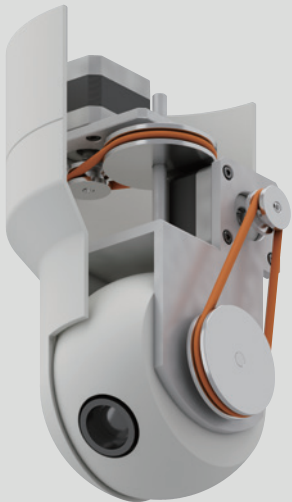
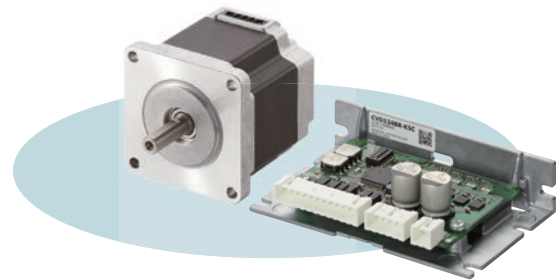
- The camera image is blurred by the vibrations during panning
- When moving the camera, the feedback about the actual position of the camera is missing

# Low vibration movement

with stepper motors and drivers from Oriental Motor

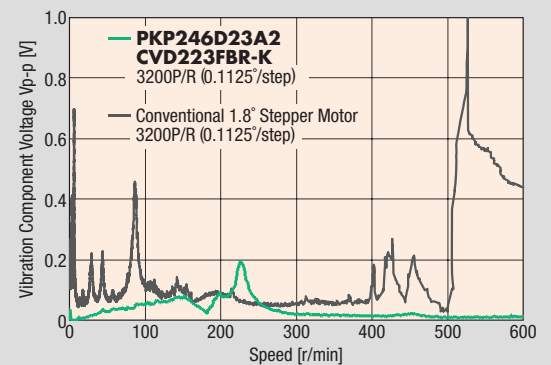
## Solution

Using the **PKP** series in combination with a **CVD** driver enables operation with low vibrations. This allows the image sharpness to be increased.



### Permanent microstepping reduces blurred images

The use of a digitally controlled and permanently generated microstep reduces vibration levels throughout the speed range. Additional vibration suppression at low and at high speeds also makes the driver ideal for other applications with vibration and noise problems.



### Compact drivers for flexible installation

A compact and lightweight driver contributes to space saving in equipment. Oriental Motor offers 2 driver designs that can be selected depending on the mounting method.

#### Right Angle Type with Installation Plate

The connector points outward.



#### Verticle Type with Installation Plate

The connector points upward.

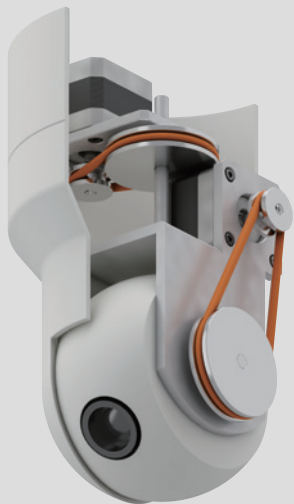
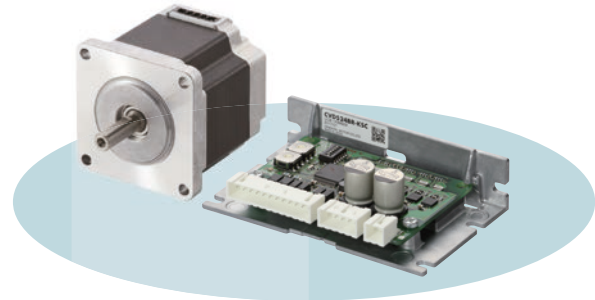


# Precise position control

with stepper motors and drivers from Oriental Motor

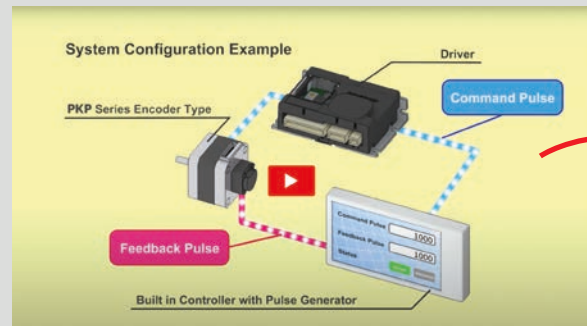
## Solution

Encoder feedback can be used to monitor the camera position.



### Information about motor position is available

It is possible to monitor the current position through the encoder signal. A position deviation can also be detected by checking the difference between the actual value detected by the encoder and the target value generated by the control.



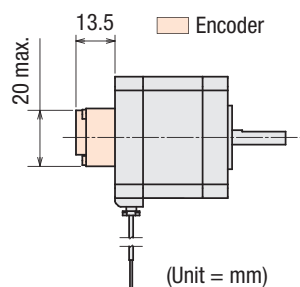
Click here for the **PKP Series High-Resolution Type** Video!



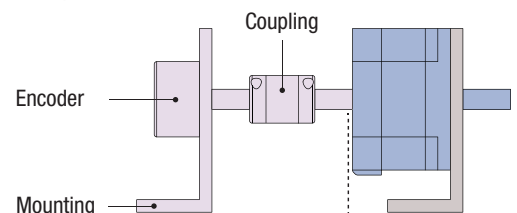
### Compact encoder helps space saving in security cameras

Since the encoder is pre-installed, there is no requirement for extra mountingspace. In addition, it is a small encoder which does not take up much space in the equipment.

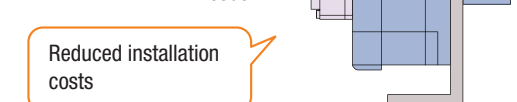
Encoder dimensions, here on a motor with 56.4 mm frame size:



#### Example with external encoder



#### Example of motor with encoder





Reduced installation costs

# Line up

## PKP Series

The **PKP** Series Stepper Motors with basic step angles 0.9°/1.8° and 0.36°/0.72°:

● Extensive Product Line

	Basic Step Angle	Frame Size [mm]									Driver	
		20	28	35	42	51	56.4	60	61	85		
Standard Type	1.8°	●	●	●	●	—	●	—	—	●	 <p>Driver for 1.8°/0.9° Stepper Motor</p>	
	0.72°	—	●	—	●	—	●	●	—	—		
Standard Type with Encoder	1.8°	●	●	●	●	—	●	—	—	—		
	0.72°	—	—	—	●	—	●	●	—	—		
Standard Type with Brake	1.8°	—	●	●	●	—	●	—	—	—		
High-Resolution Type	0.9°	—	—	—	●	—	●	—	—	—		 <p>Driver for 0.72°/0.36° Stepper Motor</p>
	0.36°	—	—	—	●	—	—	●	—	—		
High-Resolution Type with Encoder	0.9°	—	—	—	●	—	●	—	—	—		
High Resolution Type with Brake	0.9°	—	—	—	●	—	●	—	—	—		
Flat Type	1.8°	—	—	—	●	—	—	●	—	—		
Flat Type with Harmonic Gear	1.8°	—	—	—	—	●	—	—	●	—		
<b>SH</b> -Geared Type	0.5° - 0.05°	—	●	—	●	—	—	●	—	—		

Motor examples:



Standard Type  
42 mm



Standard Type with Encoder  
56.4 mm



Standard Type with Brake  
35 mm



Flat Type  
60 mm



Flat Type with Harmonic Gear  
42 mm

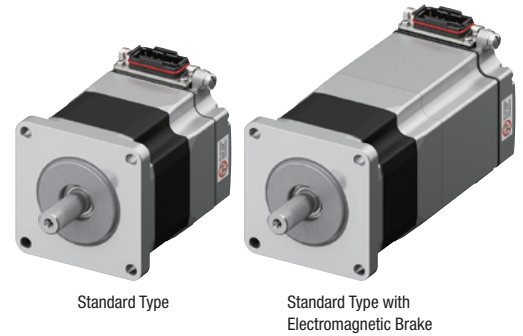


**SH**-Geared Type  
42 mm

# Product news in the AZ Series

## AZ Series Connector Type

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



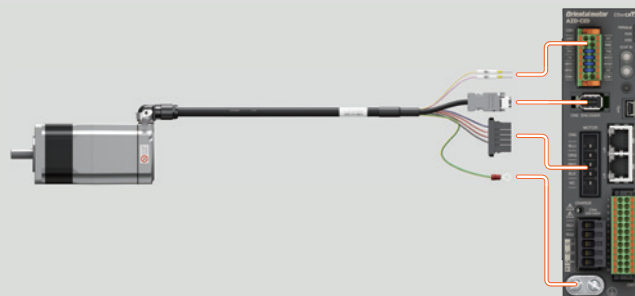
Standard Type

Standard Type with Electromagnetic Brake

### Features

#### Direct Connection Motor to Driver

One cable locking connector allows for a maximum of 10 m 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



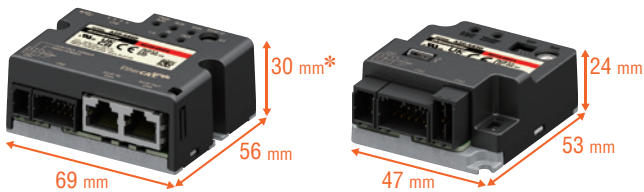
# Product news in the AZ Series

## AZ Series mini driver

The **AZ** Series mini driver is ideal for limited installation space due to its compact desing. The volume is greatly reduced compared to a standard DC driver.



### Compact Design to Fit in Small Spaces



**AZD-KRED AZD-KREP**  
**AZD-KRPN AZD-KRX**

**AZD-KR2D**

\*The **AZD-KRX** is 25 mm.

### Installation Space is Minimized

No DIN rail required. Can be installed directly to equipment with 2 screws.



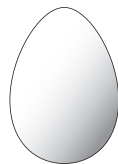
**AZD-KRED AZD-KREP**  
**AZD-KRPN AZD-KRX**

**AZD-KR2D**

### Light Weight Design Reduces Load on Equipment

**56 g**

**Ca. 60 g**



● The mass of all models except the **AZD-KR2D** is 84-110 g.

1 medium egg

### Compatible with Various Interfaces

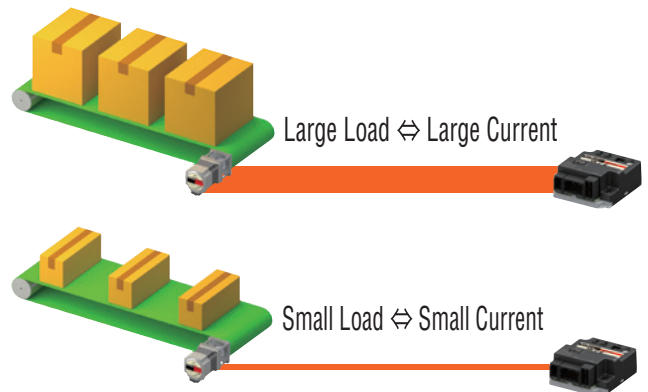
These are compatible with the major industrial networks used around the globe. Pulse control is also possible.

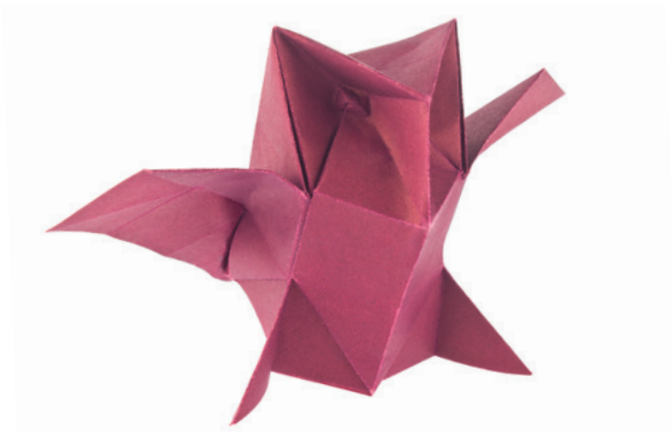
Interface	Driver Type (Driver type name)
EtherCAT	EtherCAT Drive Profile-Compatible
EtherNet/IP	EtherNet/IP
PROFINET	PROFINET
Modbus RTU	RS-485 Communication Type
Pulse	Pulse Input Type with RS-485 Communication

- The **AZD-KRED** passes the official EtherCAT conformance test.
- The **AZD-KR2D** is also compatible with CC-Link and MECHATROLINK control when used with a network converter (gateway).

### Energy Savings through Optimized Current Control

The servo emulation mode optimises the current provided to the motor to match the load conditions.





## ORIGAMI OWL

Try it yourself

You can find instructions in the following video:



## **ADDITIONAL INFORMATION**

Do you need information about our products? Our latest flyers, brochures and catalogues can be downloaded from our website:

[www.orientalmotor.eu/uk/products](http://www.orientalmotor.eu/uk/products)



Please **register** for our digital **technical magazine** and get Solution ideas for your application.



## YOU CAN REACH US

Customer Service Center



**00800-22 55 66 22**

Free Call Europe

Mon - Thu: 08:00 - 16:30 CET

Friday: 08:00 - 15:00 CET



[info@orientalmotor.de](mailto:info@orientalmotor.de)  
[www.orientalmotor.eu](http://www.orientalmotor.eu)

## **WE'RE EXHIBITING 2023**

**SPS**

Nuremberg, Germany

**14.11.23 - 16.11.23**

Hall 1, Booth 1-424

**sps**

smart production solutions

# ***Orientalmotor***

### IMPRESSUM

#### EDITOR:

Oriental Motor (UK) Ltd.  
Unit 5 Faraday Office Park  
Rankine Road, Basingstoke  
Hampshire RG24 8QB  
Phone: +44 - 1256347090  
[www.orientalmotor.eu/uk](http://www.orientalmotor.eu/uk)  
Managing Director:  
Jiro Kuribayashi, Hirokazu Harada, Eiji Kawahito  
Frequency of publication: Monthly

#### EDITORS OFFICE:

Timo Krüssel, Mike Larsen, Sylvia Lopez,  
Andreas Rey, Arne Schipper

#### PROOF:

ALBERSDRUCK GmbH & Co. KG  
Leichlinger Straße 11, 40591 Düsseldorf

#### PICTURE PROOF:

Adobe Stock, Freepik, The Noun Project

The information in this brochure is presented as general information. For accurate technical specifications please contact the Oriental Motor (UK) Ltd office.

This brochure was published in July 2023.

Order this brochure free of charge at [info@oriental-motor.co.uk](mailto:info@oriental-motor.co.uk)