

## Oriental Motor held it's First Motor Fair in Singapore!

On 14th October 2011, Oriental Motor attracted a desirable crowd of 97 participants to the First Motor Fair held in Singapore.

Held at the prestigious Raffles Country Club. Each participant was welcomed by the friendly staff with goodie bags packed with the latest brochures and premiums.

With the utmost support from the customers, Singapore Oriental Motor has concluded its first Motor Fair successfully, with appreciation.

### Exhibitions held in year 2011

Oriental Motor strives its best to provide the required support to all customers, participating the following exhibitions for the year 2011:

[Metaltech KL](#), [Semicon Singapore](#), [MTA Vietnam](#), [Nepcon Penang](#), [Assembly Tech Thailand](#), [Manufacturing Indonesia](#) and [IA India](#).

We would like to sincerely thank you for visiting and supporting us at our exhibitions and products.



### New Website . New Outlook

With a new year 2012, more exhibitions has been mapped out to reach out to our customers and the new schedule for our technical seminars will be out on our New Website too!

Receive a Seminar Certificate upon attendance of 4 Seminars!



INFORMATION

# New Motion

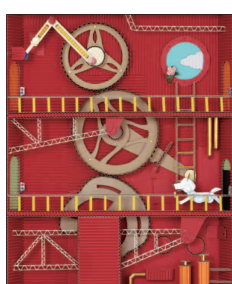
ORIENTAL MOTOR NEWS

18  
2012



- Highlights  
Affordable Standard AC Motors with Three-Phase Power Supply
- New Product Introduction  
CRK Series Pulse Input Type 24 VDC Microstep Drive  
FM Series Cooling Modules
- Teach Me Please! Ms. Ori  
When do we need to utilise Thermal Management System?

■ Information  
Oriental Motor Held the First Motor Fair in Singapore  
Check out the latest Oriental Motor Website



### About our front cover

The rattling sound of gears reflects the bustling situation of a factory. Using the corrugated cardboard of gift packages and milk boxes to form this piece of art, the theme focus on the rotary gears, with the teeth bridging the gap of each, moving one another as the main rotor turns.

The porthole window on the art piece reveals a part of the beautiful sky view, which perhaps, the artist's idea of having a short rest while at work, sometime...

## Orientalmotor

### SALES NETWORK

### Oriental Motor Provides You with Full Support



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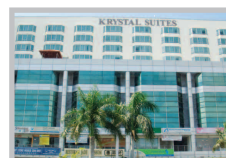
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# GO LITE.

Paying only for what you need to have - an electric motor to move your conveyor, or any application.



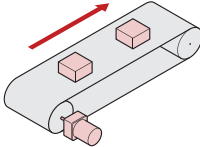
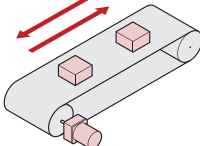
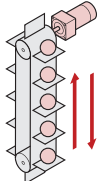
**NEW**

Standard AC Motor • Asia Voltage Compliant Model

## World K Series

### Lineup



Types	Features	Frame Size (mm), Output Power			□60		□70		□80		□90	
		Voltage	Frequency	Type	6W	15W	25W	40W	60W	90W		
Induction Motors	Suitable for applications where the motor is operated continuously in one direction 	Single-Phase 110 VAC	60 Hz	Lead Wire Type	●	●	●	●	●	●	●	
		Single-Phase 220 VAC	50/60 Hz		●	●	●	●	●	●	●	
		Single-Phase 230 VAC	50 Hz		●	●	●	●	●	●	●	
		Three-Phase 200/220 VAC	60Hz		●	●	●	●	●	●	●	
Reversible Motors	Suitable for applications where the motor must frequently switch direction 	Single-Phase 110 VAC	60 Hz	Lead Wire Type	●	●	●	●	●	●		
		Single-Phase 220 VAC	50/60 Hz		●	●	●	●	●	●		
		Single-Phase 230 VAC	50 Hz		●	●	●	●	●	●		
Electromagnetic Brake Motors	Suitable for applications in which the load must be held 	Single-Phase 110 VAC	60 Hz	Lead Wire Type	●	●	●	●	●	●		
		Single-Phase 220 VAC	50/60 Hz		●	●	●	●	●	●		
		Single-Phase 230 VAC	50 Hz		●	●	●	●	●	●		
		Three-Phase 200/220 VAC	60Hz		●	●	●	●	●	●		

## Features

### ● Conforms to Major Safety Standards

All World **K** Series models have a built-in overheat protection device and conform to various safety standards.

#### ● Applicable Standards

- Certified under the China Compulsory Certification System (CCC System)
- CE Making (Low Voltage Directive)

#### ● Motor Overheat Protection Device

Thermal protector, Impedance protected

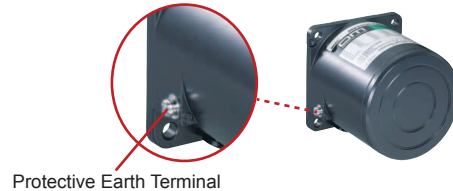
### ● RoHS Directive-Compliant

Conforms to the RoHS Directive that prohibits the use of six chemical substances including lead and cadmium.

### ● Twice the Motor Bearing Life (Compared with a conventional model)

A motor's life is determined by its bearing. We adopted high-performance bearing grease to lubricate this important component. Life is twice as long as a conventional model.

### ● Protective Earth Terminal on Motor



## Features and Types of Gearheads

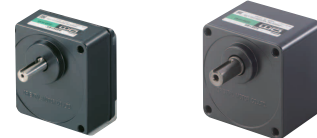
### ● Easy Speed Reduction and Torque Increase

Combination with a gearhead allows the motor to slow down to a required speed and generate higher torque.

### ● Wide Variety of Products



Gearheads are available with 20 different gear ratios from 1:3 to 1:180. Use together with a decimal gearhead also allows for large gear ratios of 1:180 or more.

Parallel Shaft Gearhead



**GN-K** Gearhead  
**GN-S** Gearhead

**GE-KB** Gearhead  
**GE-S** Gearhead

Gearheads		Applicable Motor		Rated Life (Hours)
Type of Gearhead	Type of Pinion	Output Power	Type of Pinion	
 <b>GN-K</b> Gearhead	<b>GN</b> Type Pinion	6 W ~ 40 W	<b>GN</b> Type Pinion	5000
 <b>GE-KB</b> Gearhead	<b>GE</b> Type Pinion	60 W, 90 W	<b>GE</b> Type Pinion	5000

## ● Brake Pack **SB50W**

The brake pack provides instantaneous stop, bi-directional operation and electromagnetic brake control functions for motors integrated into one unit. This brake pack can sense when the thermal protector is opened, further ensuring the safety of your equipment.

### ● Specifications



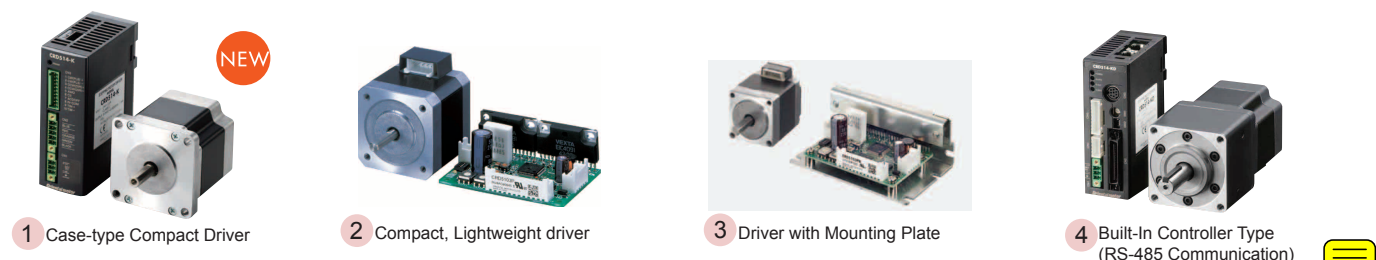
Product Name	Power Supply Voltage	Frequency	Applicable Motor Output Power	Functions
<b>SB50W</b>	Single-Phase 100-230 VAC ±10%	50/60 Hz	6 W ~ 90 W	Instantaneous Stop Bi-Directional Operation Electromagnetic Brake Control (Electromagnetic brake motors) Thermal Protector Open Detection (Alarm output) Sink/Source Logic Switch





RoHS Compliant

A Wide Range of **CRK Series** available for your selection:



Brochures available



## 1 Case-type Compact Driver

### Compact Driver Compatible with DIN Rails

#### ● Compact Case-type DC Power Supply Input Driver

This compact driver features dimensions of 35 mm (w) x 100 mm (h) x 70 mm (d). This contributes to space saving for the control box and equipment.



#### ● Installable on DIN Rails

The driver can be installed directly on a DIN rail. No installation screws are required.

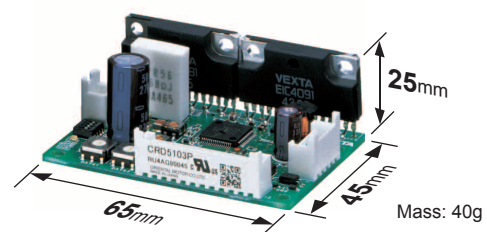
- Can be installed on DIN rails only.



#### ● Easy Wiring

Wiring with connectors eliminates the need for special crimp tools, and makes wiring easy.

## 2 Compact, Lightweight Driver



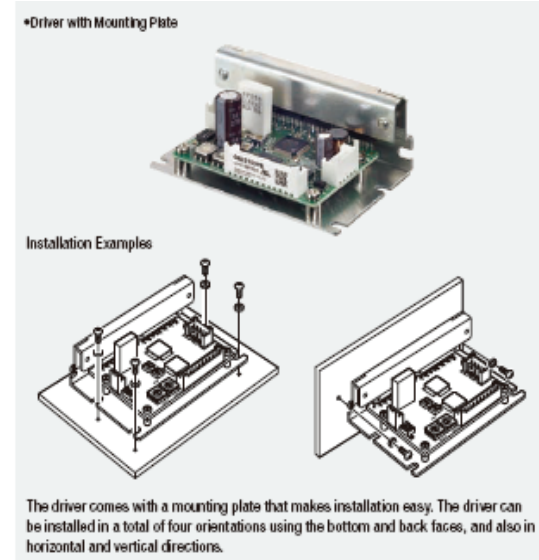
The driver in the **CRK Series** achieves microstep drive in a compact, lightweight body (Mass: 40g).

A new IC allows the driver to provide various functions, including the following:

- Smooth Drive Function
- 1-pulse/2-pulse input mode switching
- 25 preset step angles
- Power LED
- Photocoupler input
- Connector with safety lock (by MOLEX)

## 3 Driver with Mounting Plate

◇ Mounting Plate for Easy Installation



## 4 Built-In Controller Type (RS-485 Communication)



This 5-Phase DC-input stepping motor and driver package adopts a microstep drive technology, designed for low vibration and low noise.

The driver incorporates the stored-data type controller function and information of the position can be monitored with the encoder motor.

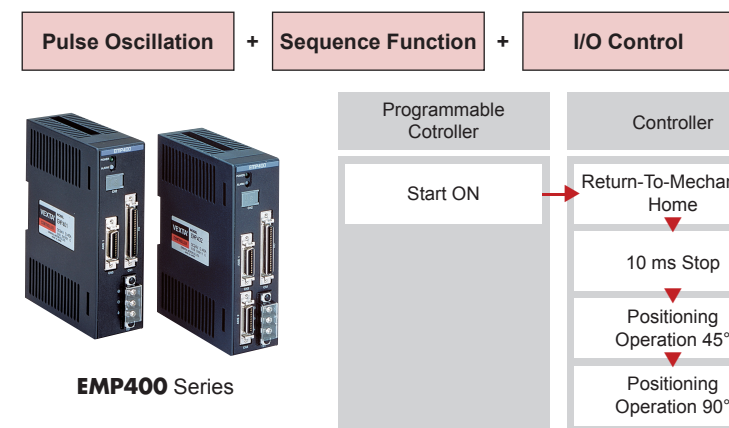
Either I/O control or RS-485 communication can be selected for the purpose of controlling the motor.

The **CRK Series**, Built-In Controller type is available in the driver and motor package model.

## 5 Types of Controllers available

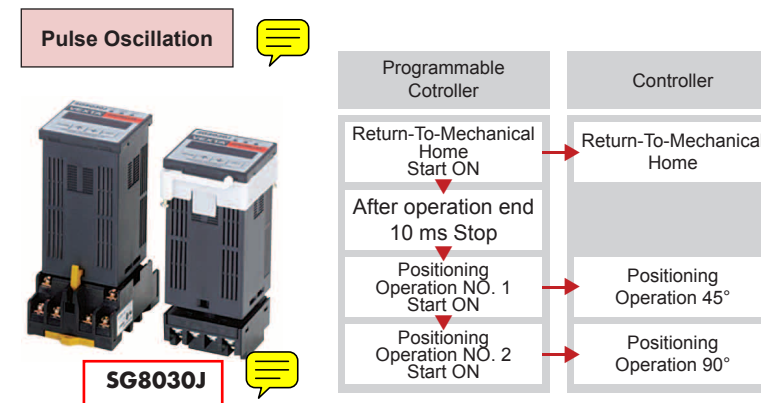
#### ● Stored-Program Type

- In addition to motor positioning and speed setting, supporting conditional branching using general-purpose I/Os, wait processes using internal timers, and other operations based on sequence control are possible.
- Single axis and dual axis types are available. The dual axis controller supports positioning operation based on linear interpolation.



#### ● Stored-Data Type

- With these controllers, you can operate the motor with ease by a start signal from the programmable controller, as long as the speed, traveling amount and other conditions for motor operation have been set.
- Stored data controllers are available in two types: those operated in the data-select positioning mode and others operated in the sequential mode.





# NEW FM Series

## IP43/IP55 Specifications

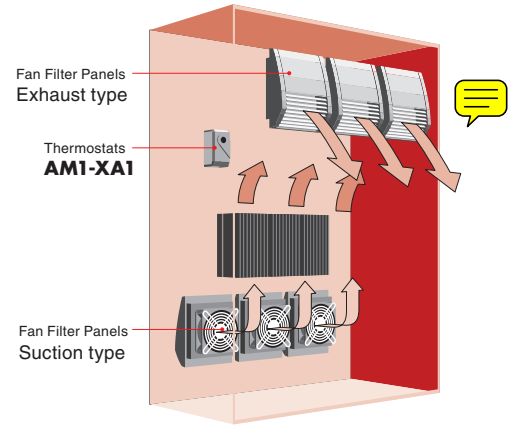
- Suitable for applications where intrusion of dust, foreign objects, water droplets, etc. must be prevented to ensure a high degree of protection.



129×134

157×170

209×226



## IP4X Specifications

- Wide variety of fan motors
- Multiple fans can be used simultaneously
- Module Dimensions WxH [mm]



155×155  
180×180

305×180

430×180

Number of installed fans

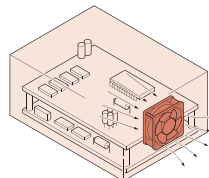
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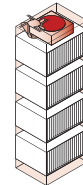
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## Axial Flow Fans

A large air flow is a feature of these fans. Various types are available, from small to large.



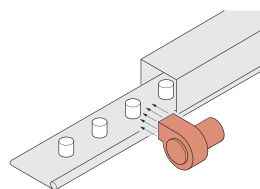
Equipment ventilation and cooling



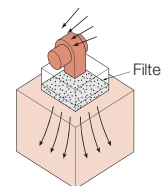
Cooling of high-density packaging equipment

## Centrifugal Blowers

A large static pressure and strong directional air flow are features of these fans.



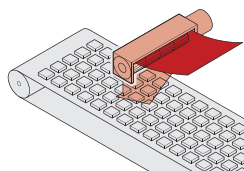
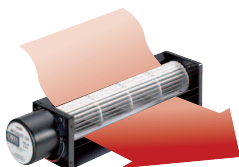
Air-blow cooling and drying



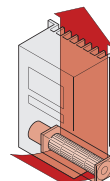
Cooling with high static pressure

## Cross Flow Fans

A wide, uniform air flow is a feature of these fans.



Uniform cooling and drying



Cooling of long and thin spaces

# Teach Me Please! Ms. Ori



Ms. Ori

## How can we efficiently release heat inside a distribution board?

- At Oriental Motor Fair -



Mr. Vex

**Mr. Vex:** The Oriental Motor Fair has finally started.

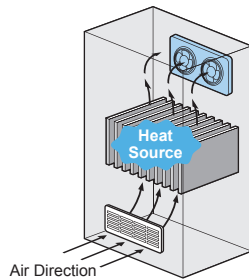
**Ms. Ori:** Mr.Vex, you are in charge of the fan corner, so be sure to explain well, OK?

**Mr. Vex:** Yes, I will do my best. Good afternoon, welcome to our booth.

**Customer:** Well, I'd like to ask you about the way to use a fan. I'm designing a distribution board now, and how can I install a fan to efficiently release heat inside the distribution board?

**Mr. Vex:** OK, generally, the hot air flows upward and the cold air flows downward, so, if you install the fan where the air can emit from the top, you can lower the temperature efficiently. For example, you can install an exhaust fan in the upper part of the distribution board, then install an inlet or intake fan at the bottom of the distribution board. [Figure 1]

[Figure 1] Example of Fan Installation



**Customer:** I get it now!

**Mr. Vex:** Also, do you know about this product called Thermostats **AM1-XA1**?

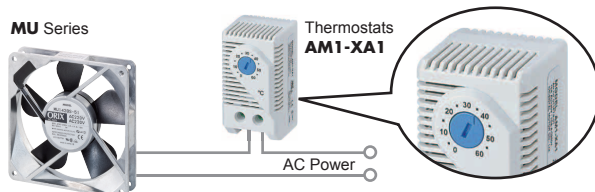
**Customer:** No, I've never heard of Thermostats **AM1-XA1**. What kind of product is this?

**Mr. Vex:** By using this thermostat, you can automatically control ON/OFF of the fan in accordance with temperature fluctuation inside the distribution board.

**Customer:** Really? How do you use it?

**Mr. Vex:** You install this inside of the distribution board. As this is a DIN rail mounting type, you can easily mount to the DIN rail. Then, connect the thermostat between fan and power.

[Figure 2] Example of Thermostat Installation



**Customer:** This blue dial, right? 0°C to 60°C, it says here.

**Mr. Vex:** For example, if you set up this dial to 40°C, when the temperature inside the distribution board gets more than 40°C ( $\pm 10^\circ\text{C}$ ), the thermostat turns on to start the fan. The fan lowers the temperature inside the distribution board and when "operation temperature gets below -7°C" ( $\pm 4^\circ\text{C}$ ) the thermostat turns off to stop the fan. As the fan runs only when it is necessary, energy saving and low noise effects are ensured.

**Customer:** It sounds convenient as you can control temperature without complex control. By the way, do you need a thermostat on every fan?

**Mr. Vex:** The number of the fan which can be connected varies depending on the series or size of the fan. For example, with the **MRS** series which are large type with high air volume, though it varies depending on the size, you'll need from one to five fans, and with the **MU** series which are small and thin, you can connect up to 9 fans. You can check the number of fans for connection in the general catalog. As I've explained, the temperature in the distribution board tends to be higher in the upper part and lower at the bottom, we recommend you to install the thermostat to the upper part of the distribution board.

**Customer:** I see, the location for installation is also important. Let me try that.

**Mr. Vex:** Thank you very much. I hope you found it useful.

**Ms. Ori:** So, how did it go?

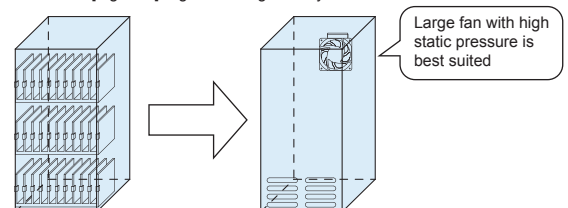
**Mr. Vex:** The customer asked me how to release heat efficiently in the distribution board, and I explained where to install a fan and talked about the thermostat. He seemed to be interested.

**Ms. Ori:** That's great. Did you also explain the type of fan used will be dependable on the internal mounting condition of the distribution board?

**Mr. Vex:** What do you mean?

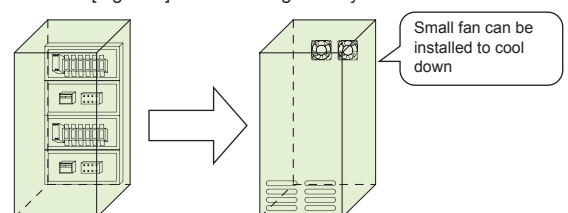
**Ms. Ori:** For example, when many control equipment is installed and the mounting density is high, airflow tends to be disrupted. In this case, a large fan with high static pressure is more suitable. For propeller fans, the **MRS** series or **MRE** series, and for blowers, **MMS** series are suitable. [Figure 3]

[Figure 3] High Mounting Density



On the other hand, when there are a few control equipment and the mounting density is low, air tends to flow smoothly which enables small fan to completely cool down. The **MU** series are best suited for propeller fans as the air volume is high. [Figure 4]

[Figure 4] Low Mounting Density



**Mr. Vex:** Now I get it, you can use them depending on the condition as well. Let me explain this to the customers too.

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