

# Low Voltage Switching Gears

Magnetic Contactor (Contactor) J7KC / Thermal Overload Relay J7TC / Manual Motor Starter J7MC / Reversing Magnetic Contactor J7KCR / Auxiliary Relay (Contactor Relay) J7KCA

Finally Low Voltage Switching Gears joining  
into the OMRON's Panel Solution portfolio



- Push-In Plus technology allows easy wiring
- Unified width (45 mm) among Magnetic Contactors, Thermal Relay and MMS for space-saving
- Applicable to a wide range of motor applications in every industry

# For building green control panels

Natural disasters caused by global warming and climate change are becoming a global social issue, that drives over 150 countries and regions worldwide to take action toward decarbonization. Our goal is to reduce greenhouse gas (GHG) emissions toward half by through new ways of building control panels, that key figure of the manufacturing site.



## Process

Realize greatly reduces design/ manufacturing work

Innovation for design, building Process

Further Evolution for Panels

## Panel

Realize compact & highly reliable control panels

Building sustainable control panels

Creating green control panels

Simple & Easy People

## Green

Reducing GHG emission of control panels to achieve carbon neutrality

## People

Provide reliable and comfortable manufacturing for all people who deal with control panels

## Integrating green perspectives into Value Design

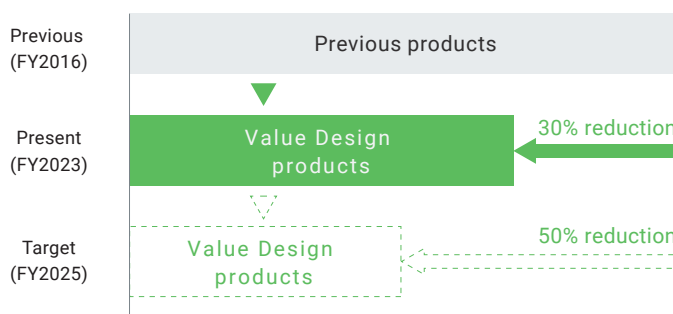
Value Design for Panel (Value Design) is the common concept shared across OMRON's in-panel product specifications to deliver new value to your control panels.

This Value Design also integrate environment consideration concept that enable earth and user-friendly control panel building.



- 1 ..... Unified height & slim size\*1
- 2 ..... Side-by-side mounting at (55°C) ambient temperature\*2
- 3 ..... Unique Push-In Plus technology\*1
- 4 ..... Front-in and front-release wiring
- 5 ..... eCAD library
- 6 ..... Certification for CE, UL, and CSA
- 7 ..... **Green features that save energy and resources\*3**

CFP of control panel (total GHG emissions)\*4

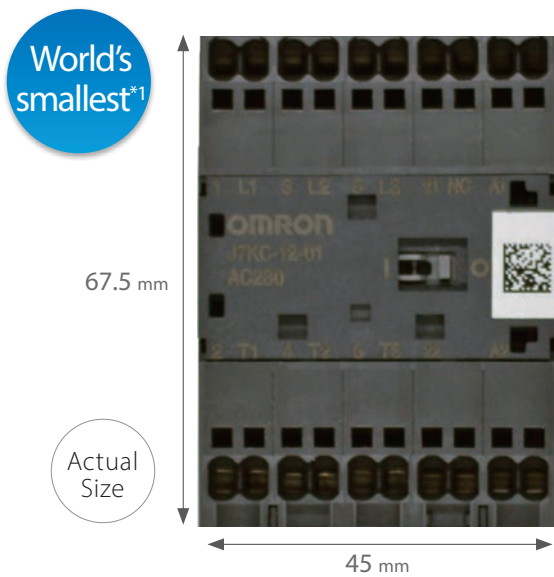


\*1. Expect for some products  
 \*2. Side-by-side mounting is possible in the same series  
 \*3. Greener design compared to previous (2016) products  
 \*4. CFP (carbon footprint) of control panel is a calculation result of referring the life cycle assessment method that based on international standards ISO14067 which define CO2 quantitative conversion of the environmental burden at every stage, from manufacturing, transportation, use, and disposal of the control panel (product). According to OMRON investigation in May 2023.

# To further improve control panels with newly added

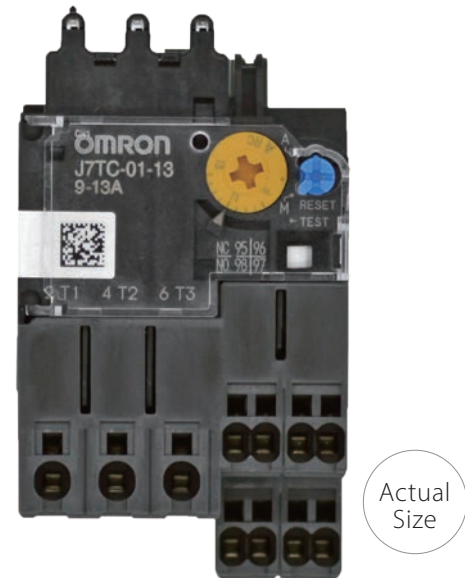
## Magnetic Contactor (Contactor) J7KC

Best match for a motor drive (AC3 Class) and a primary side of drive control equipment



## Thermal Overload Relay J7TC

Protects loads from burning damage by detecting overload



**Compact** The widths of all series models are unified to 45 mm. Compactly mountable in a control panel

## Conform to Main Safety Standards



**Mirror contact mechanism** Supports safety applications

**High endurance** One million times or more of electrical endurance<sup>2</sup>

## Other models

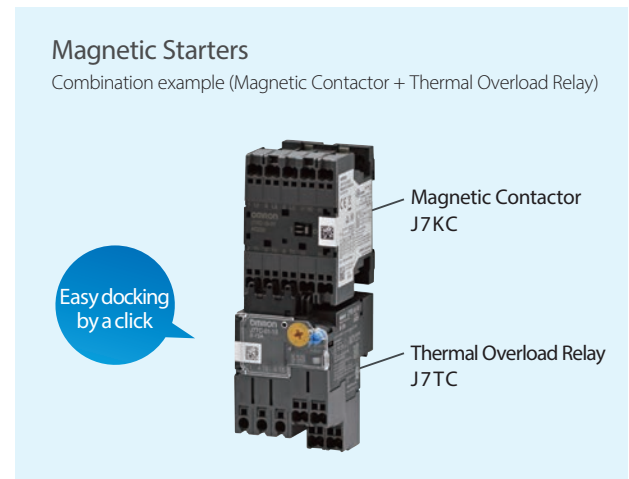
### Reversing Magnetic Contactor (Contactor) J7KCR

Reversible wiring (main circuit, control circuit), with interlock mechanism. Appropriate for forward/reverse control of motors, and plugging control.



### Auxiliary Relay (Contactor Relay) J7KCA

The contactor relay with the same size as the Magnetic Contactor J7KC. Includes a linked contact mechanism.



\*1. Based on June 2019 OMRON investigation. On the Push-In models.  
\*2. Shutting off by thermal overload relay is excluded.

# Low Voltage Switch Gears for motor control

## Manual Motor Starter J7MC

MMS is mainly used to Motor Breaker Application and provide protection from short-circuit, overload and phase failures.



Rocker switch  
(Standard type)  
J7MC-3P

Rotary switch  
(High performance type)  
J7MC-3R

### High tripping capacity

Shutting off the large current at short-circuit accidents.

At AC400 V

(Standard type) 25,50,100 kA

(High performance type) 50,100 kA

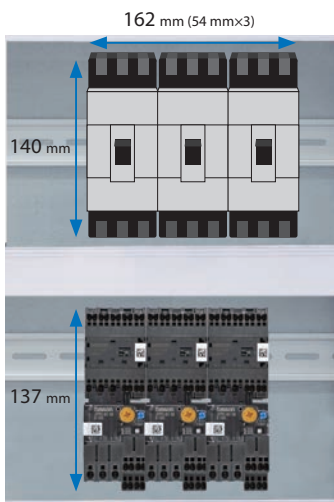


### Conform to Main Safety Standards

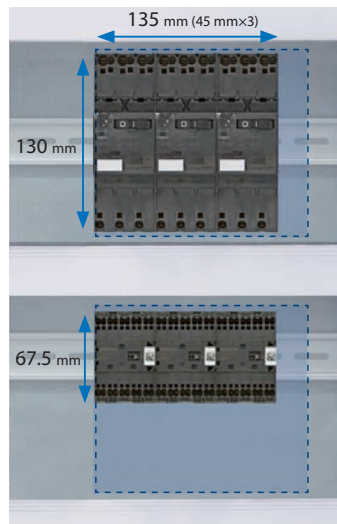


## Space-saving design helps downsize control panels.

### ■ Breaker + Magnetic Starters



### ■ Manual Motor Starters + Magnetic Contactor

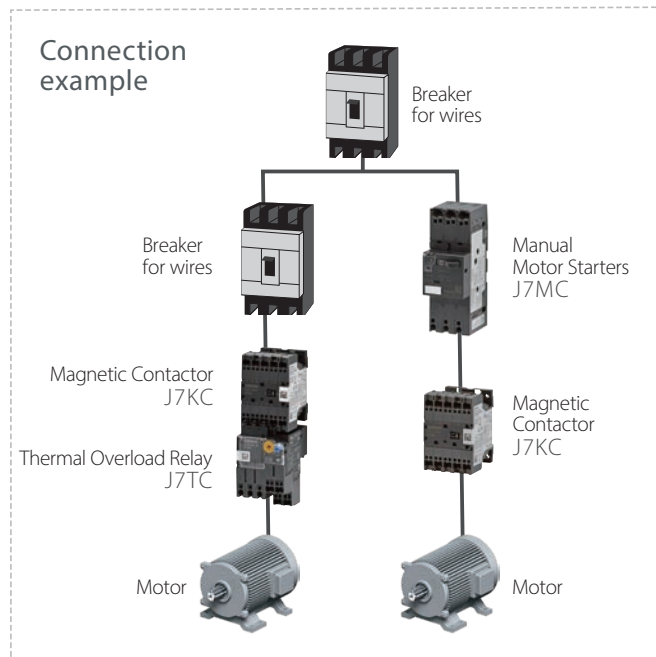
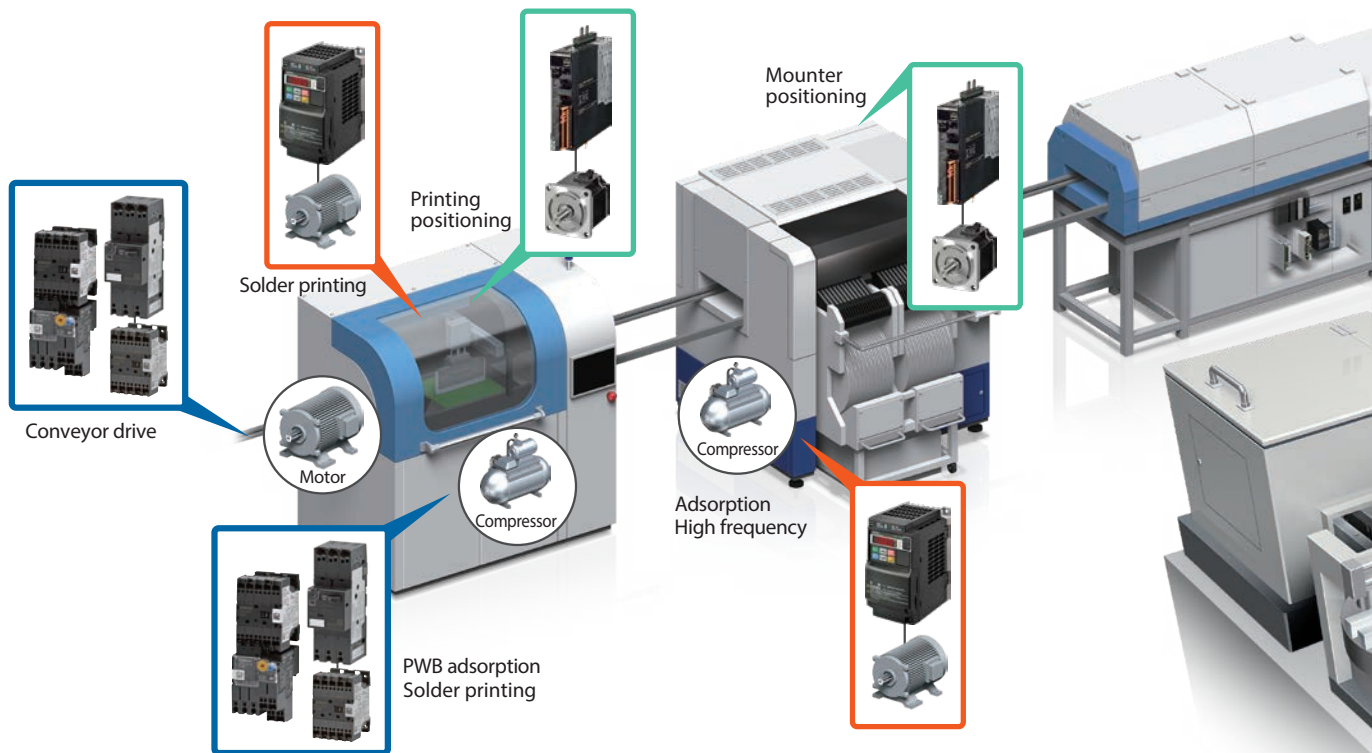


\* OMRON investigation

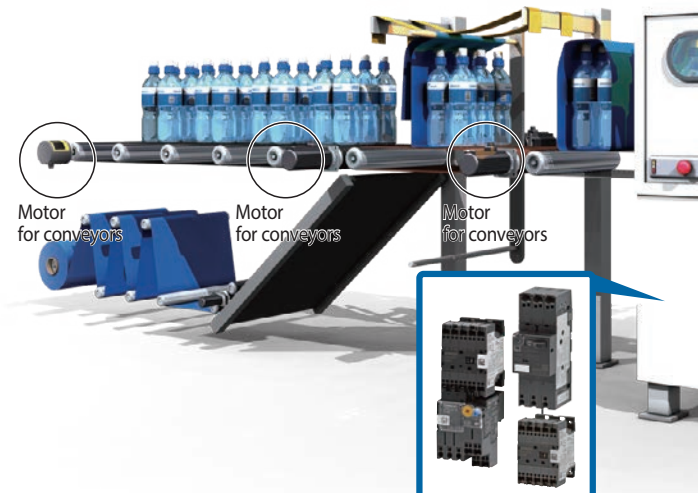
# Total solution for motor applications

New lineup of ON/OFF controllable Low Voltage Switching Gears supports total motor application,

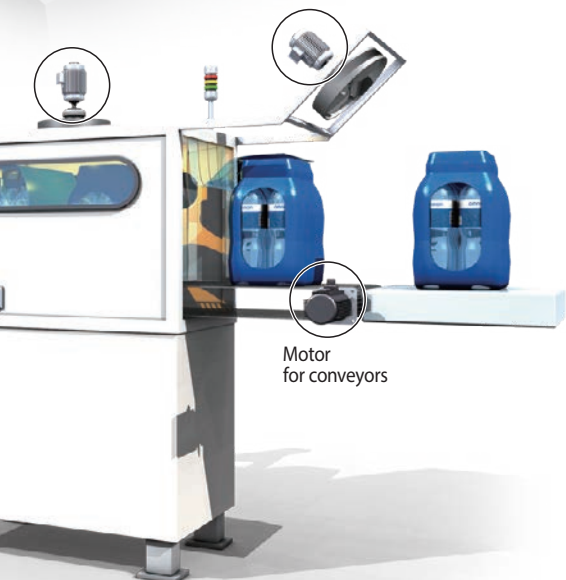
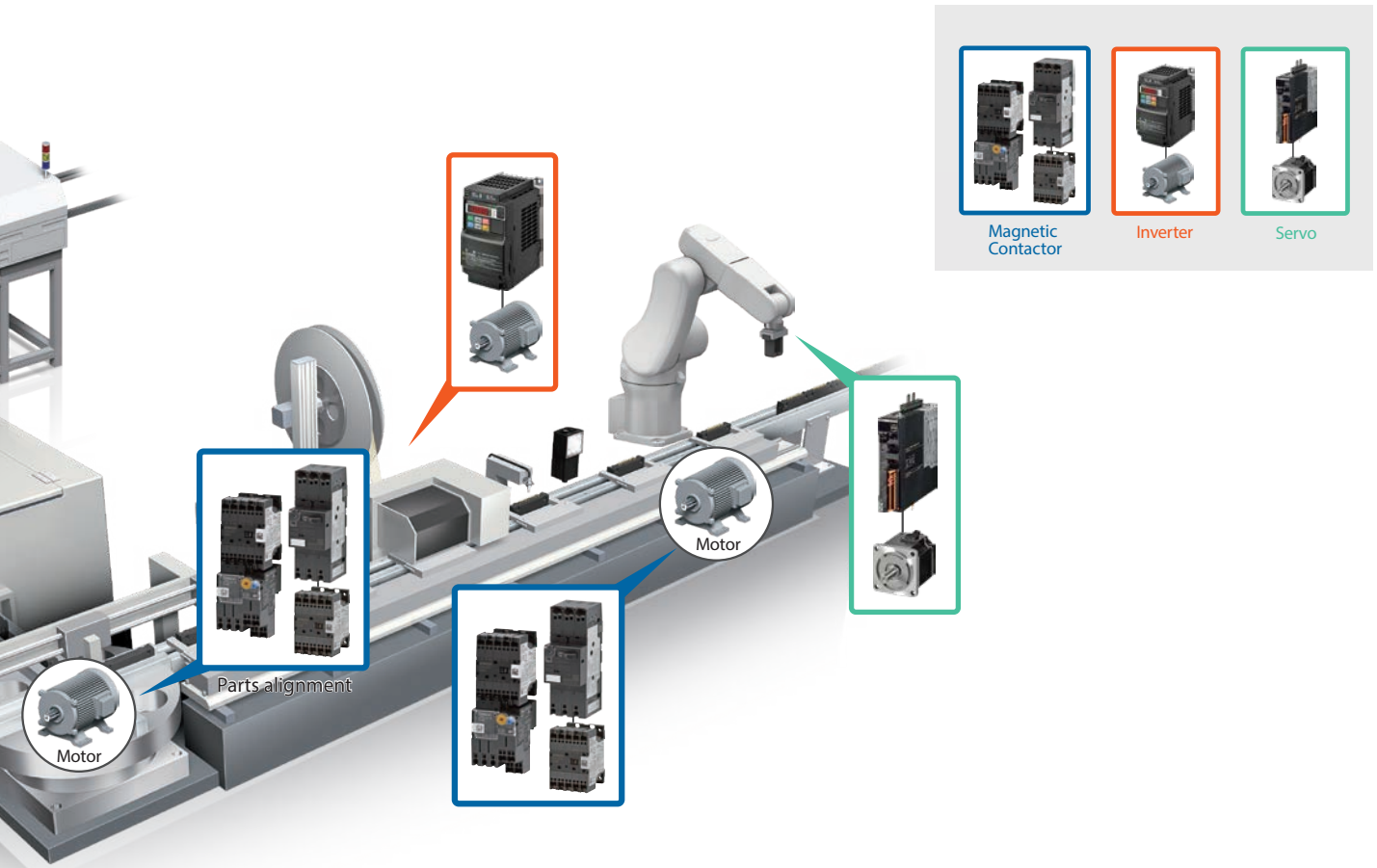
## PCB assembly production line



## Packaging machine






in addition to inverters and servos



### Machining center



		Magnetic Contactor	Thermal Overload Relay	Manual Motor Starters
Product lineup				
Model		J7KC	J7TC	J7MC
Number of poles		-		3
Rated current		15 A	0.1~13 A	0.16 ~ 20 A
Degree of protection		IP20		
Three-phase squirrelcage motor	200-240 V	2.2 KW (12 A)		
	380-440 V	5.5 KW (12 A)		
	500-550 V	5.5 KW (9 A)		
Dimensions (W×H×D)(mm)		45 × 67.5 × 46	45 × 79.5 × 55.5	Rocker : 45 × 130 × 71 Rotary : 45 × 130 × 91
Safety standard		JIS, IEC(CE), c-UL, TÜV, GB/T(CCC)		



## Creating green control panels

Cat. No. Y235-E1

Natural disasters caused by global warming and climate change are a global social issue, driving over 150 countries and regions worldwide to take action toward decarbonization. Our goal is to cut greenhouse gas (GHG) emissions by half through new ways of building control panels, which constitute the core of the manufacturing site.

**Note: Do not use this document to operate the Unit.**

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