

# 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

# New Value For Control Panels

Control Panels: The Heart of Manufacturing Sites.

Evolution in control panels results in large evolution in production facilities.

And if control panel design, control panel manufacturing processes, and human interaction with them are innovated, control panel manufacturing becomes simpler and takes a leap forward.

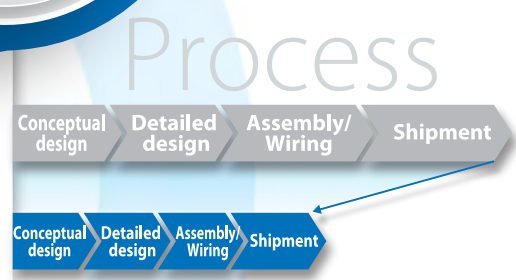
OMRON will continue to achieve a control panel evolution and process innovation through many undertakings starting with the shared Value Design for Panel <sup>\*1</sup> concept for the specifications of products used in control panels.

## \*1 Value Design for Panel



Our shared Value Design for Panel (herein after referred to as "Value Design") concept for the specifications of products used in control panels will create new value to our customer's control panels.

Combining multiple products that share the Value Design concept will further increase the value provided to control panels.



Panels

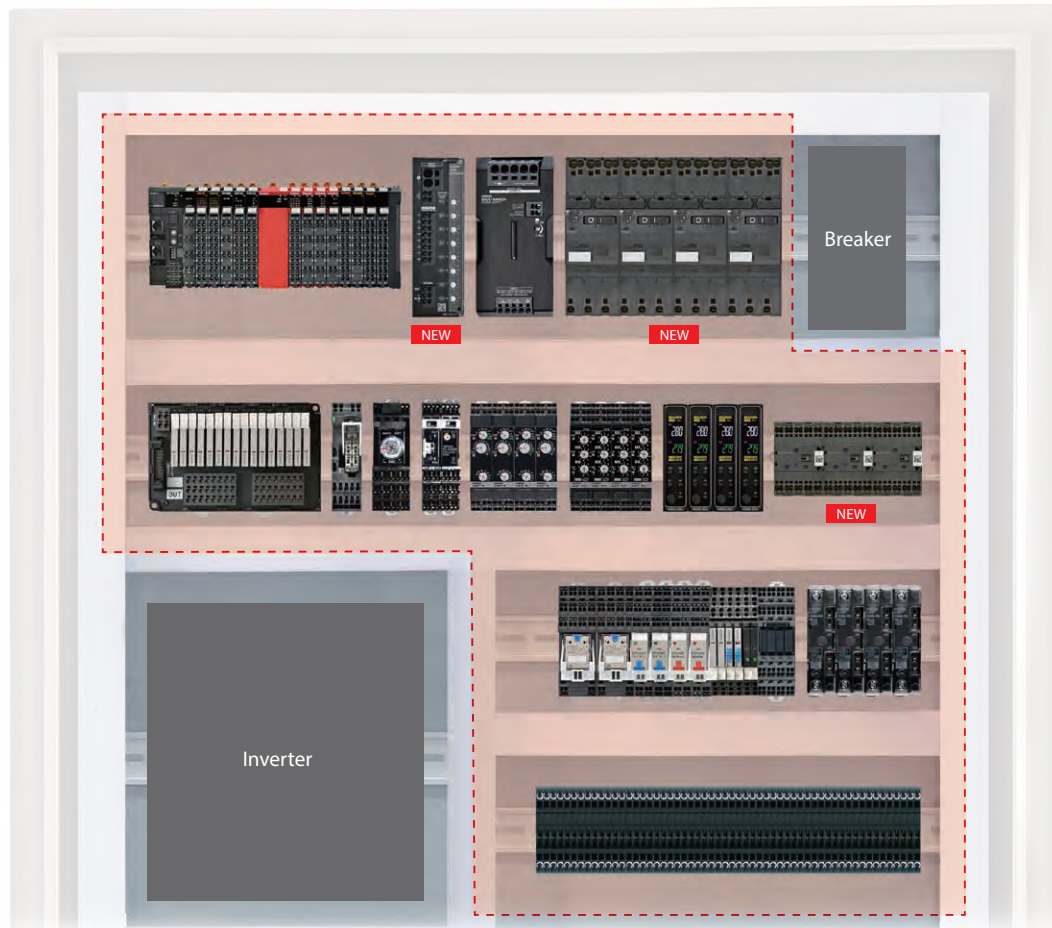
People





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

A wide product lineup of Control Panel Solution that cover even motor control contributes to TCO\*1 reduction in control panel manufacturing.



\*1.TCO: Total Cost of Ownership. Total cost from control panel design / production to operation / maintenance.

## Main Features of Value Design

### Saving Space

- Unied slim size \*2



- Side-by-side mounting at an ambient temperature of 55°C\*3



### Workload Reduction

- Push-In Plus technology is used \*2

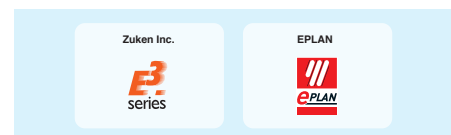


- No retightening required



### Lead Time Reduction

- Electrical control CAD Library



E3.series is a product name of Zuken Inc. for their Electrical and Control Cable Design Solution.  
EPLAN is a registered trademark of EPLAN Software & Service GmbH & Co. KG.

- Certification for CE, UL, and CSA



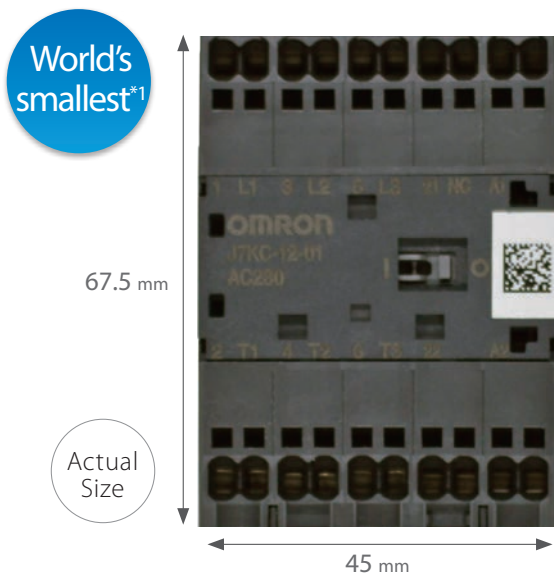
\*2. Expect for some products.

\*3. Applicable only within the same series.

# To further improve control panels with newly added

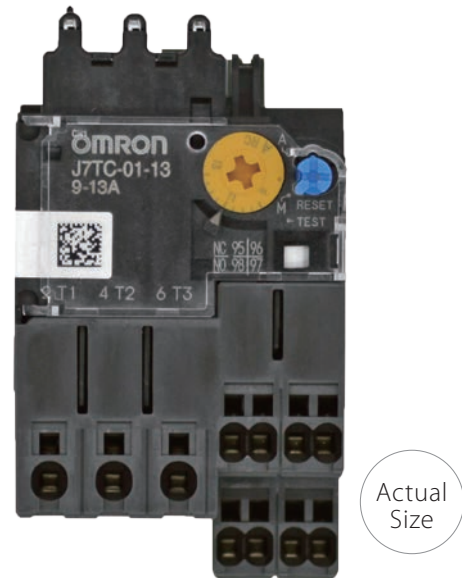
## Magnetic Contactor (Contactor) J7KC

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

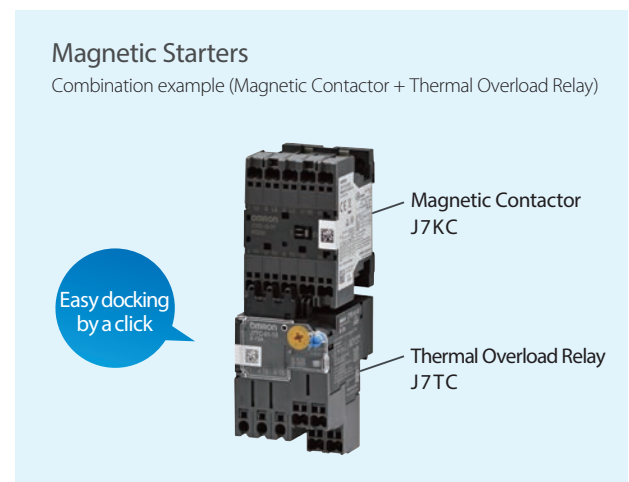
### Reversing Magnetic Contactor (Contactor) J7KCR

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

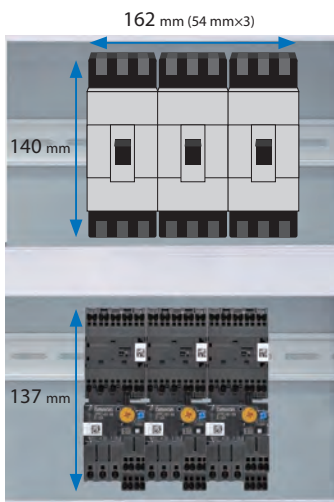


### Conform to Main Safety Standards

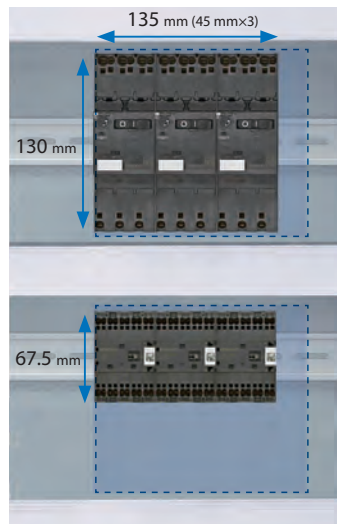


## Space-saving design helps downsize control panels.

### ■ Breaker + Magnetic Starters



### ■ Manual Motor Starters + Magnetic Contactor



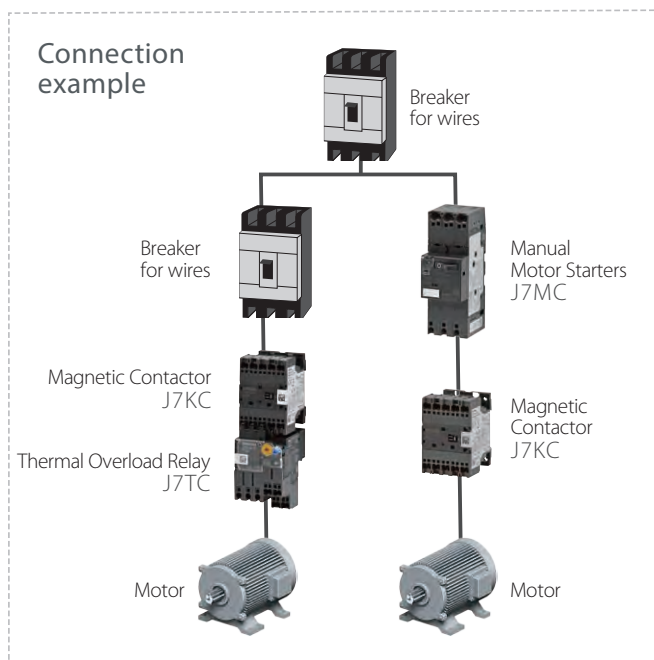
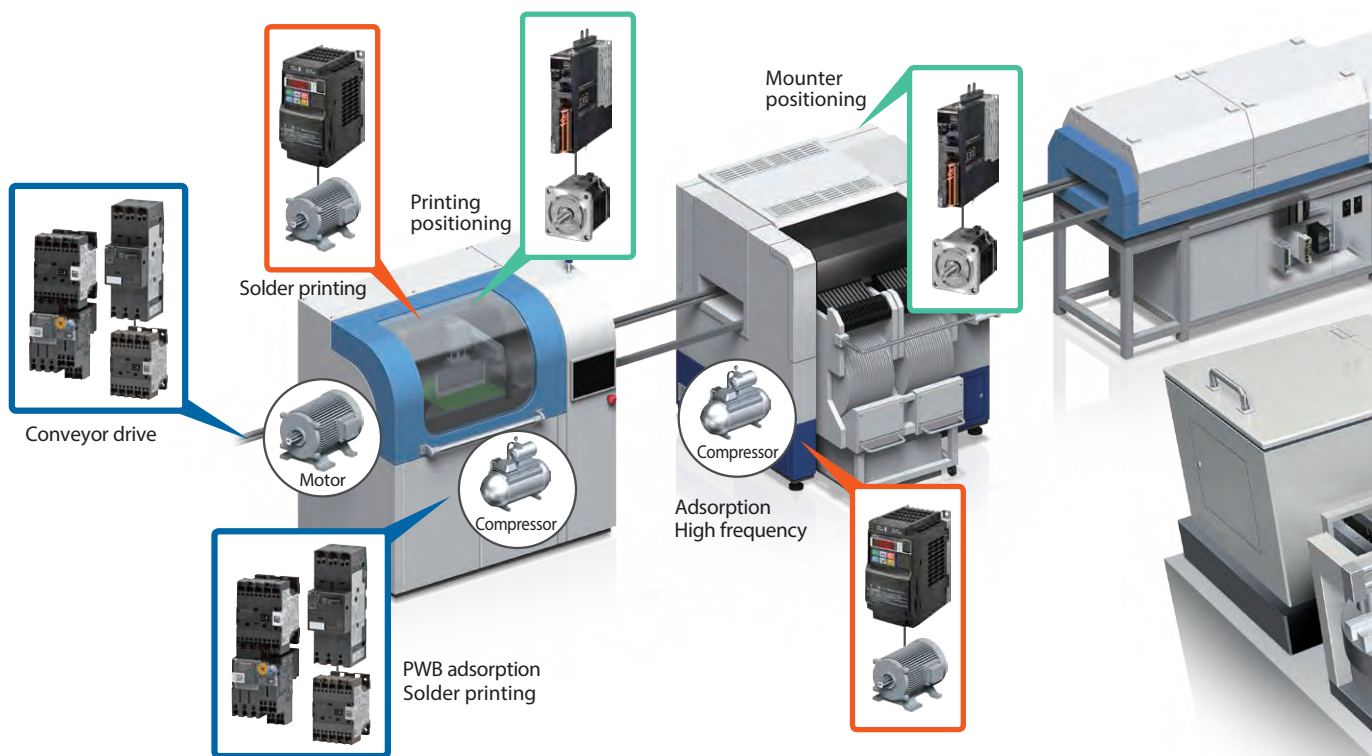
\* OMRON investigation



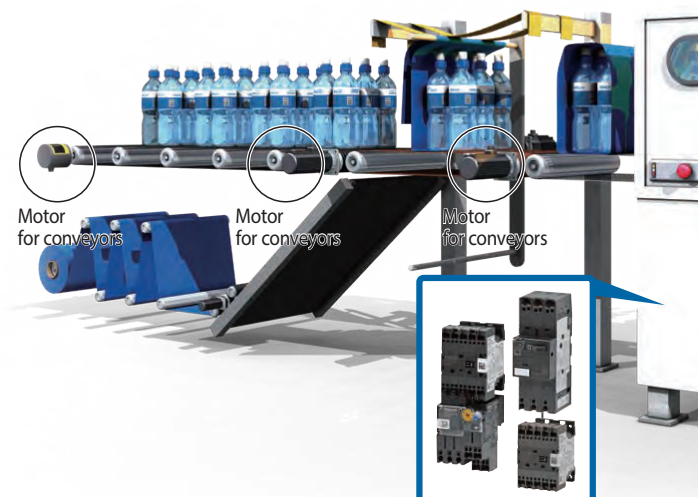
# Total solution for motor applications

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

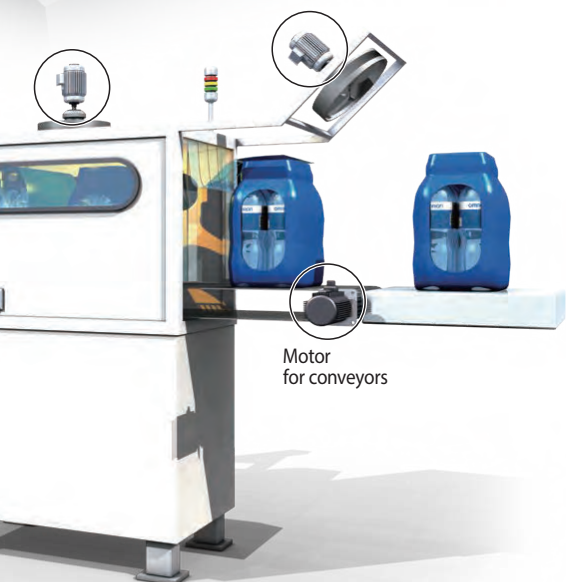
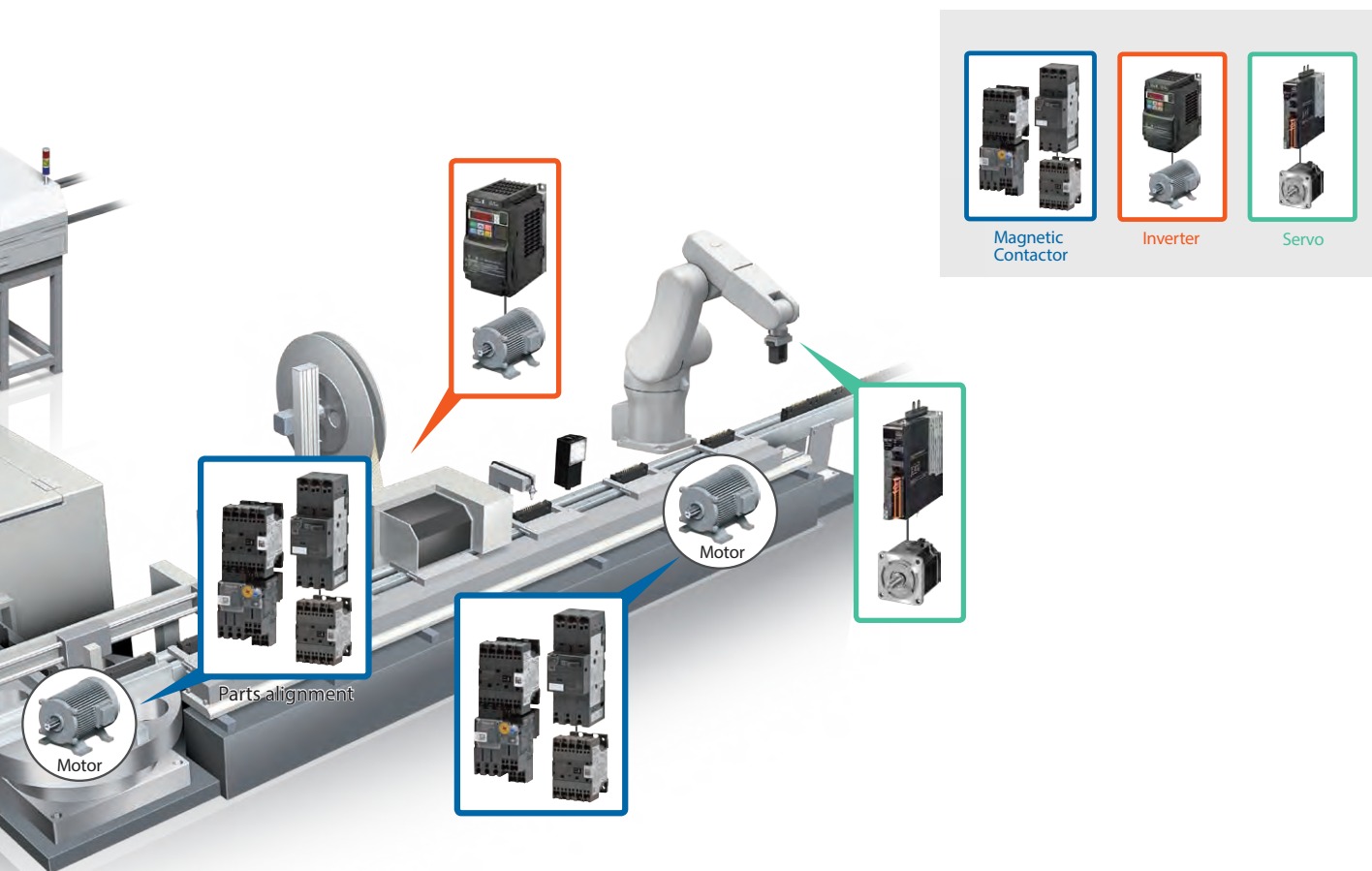
## PCB assembly production line



## 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)		

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