New Value For Control Panels

Innovation in Control Panel Building

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 *1 concept for the specifications of products used in control panels.

*1 Value Design for Panel

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.

Process

Conceptual design → Detailed design → Assembly/Wiring → Shipment

Conceptual design → Detailed design → Assembly/Wiring → Shipment

Innovation for panel building

Process

New Value For Control Panels

Simple & Easy for panel business

People

People

New Value For
Control Panels

Panels

Further Evolution for Panels

Our compact and highly reliable Value Design products

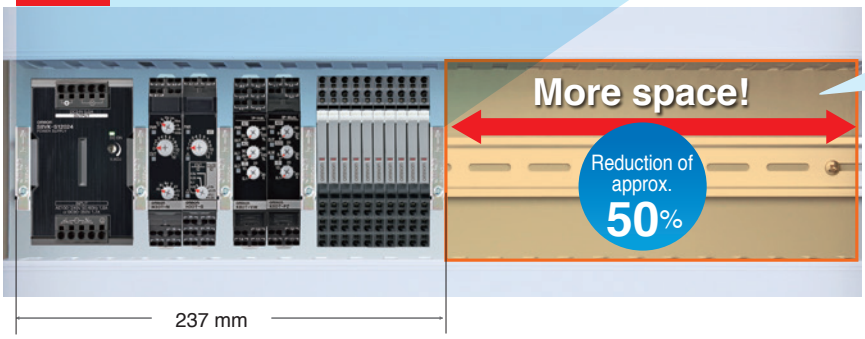
More-advanced Control Panels

By adding devices in the newly available space, you can mount more devices in the same size of control panel to increase control panel functionality.

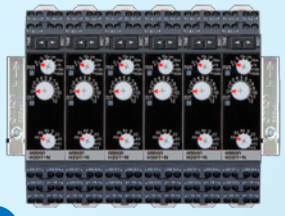
Previous

Refer to "*1" for the models.

NEW



Add More Devices



AND Side-by-side mounting is possible for each model at an ambient temperature of 55°C. You can install devices without wasting space. Panel

Refer to "*2" for the models.

Downsizing Control Panels

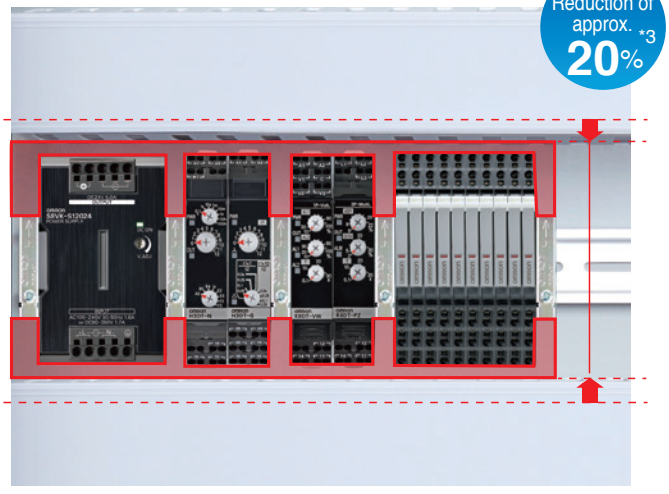
We'll help you downsize control panels by reducing the width between wiring ducts and dead space.

* This is in comparison with previous OMRON products.

Previous The different heights create a lot of dead space.

Previous Models *1
One S8VS-12024A Power Supply
Two H3CR-A Solid-state Timers + P2CF-11
Two APR-S Reverse Protection Relays + PF-083A
Ten G2R-1-S General-purpose Relays + P2RF-05
Five PFP-M End Plates

NEW Dead space is reduced and the width between wiring ducts is optimized. Panel



New Models *2
One S8VK-S12024 Power Supply
Two H3DT Solid-state Timers
Two K8DT-PH Phase-sequence Phase-loss Relays
Ten G2RV-SR Slim I/O Relays
Five PFP-M End Plates

*3: A space of 10 mm is allowed above and below the products.

for control panels take control panels to a new level.

Control Panels That Resist Vibration

You can use the products with Push-In Plus technology (refer to page 8.) to create robust control panels that withstand vibration during shipping and operation.

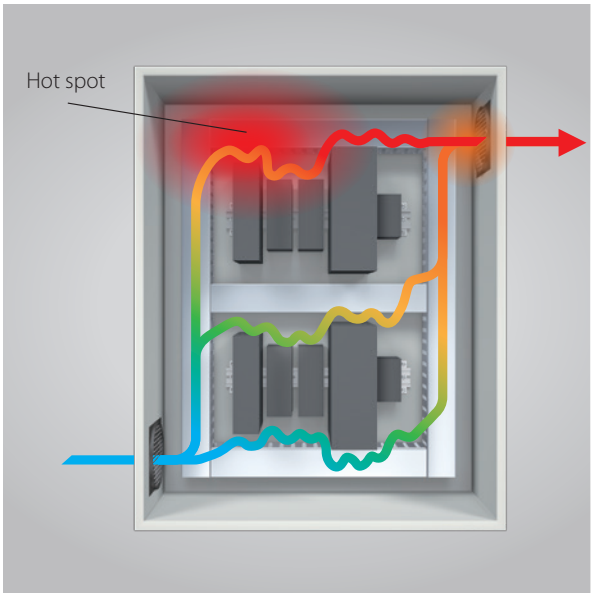
Panel

Increase the Reliability of Mounted Devices

Uneven heat dissipation is reduced because air circulation is improved.

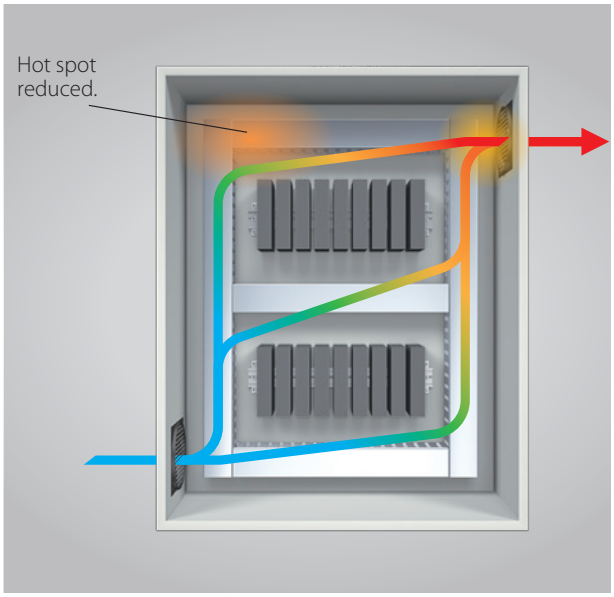
Reducing the temperature inside the panel increases product reliability, decreases the failure rate, and lengthens life expectancies.

Previous Differences in heights and depths create hot spots.



NEW The unified heights and depths help reduce hot spots.

Panel



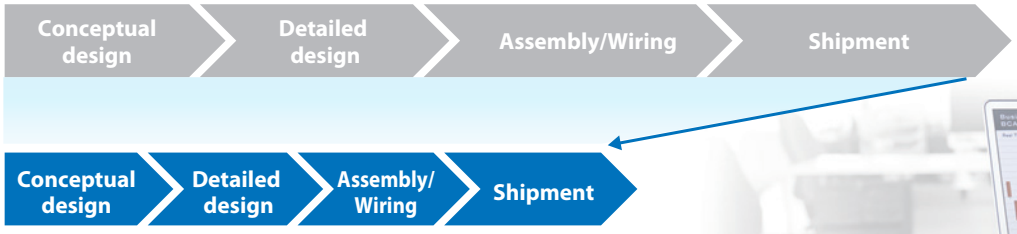
New Value For Control Panels

Process

Innovation for Panel Building Process

Manufacturing Innovation That Greatly Reduces

Meet Customer Needs by Increasing Process Speed

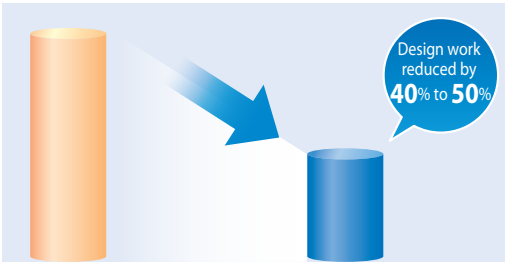


Faster Designing for New Products

Electrical Control CAD can be successfully used for OMRON products to reduce design work.

■ Download a High-quality Electrical Control CAD Library

Over **6,000** models



Previous — With Electrical Control CAD

*Example for Zuken E3.series.

Partners for Electrical Control CAD

Zuken Inc. E3.series

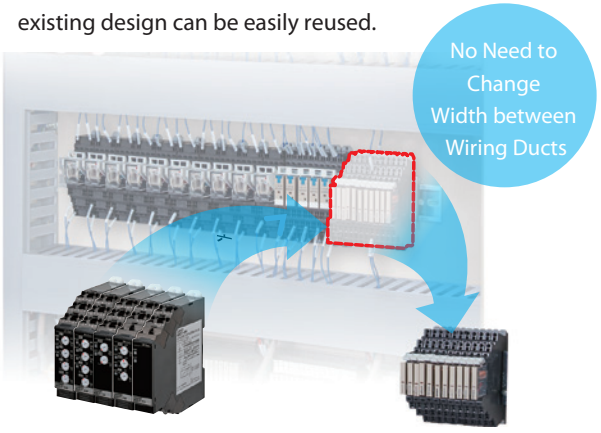
EPLAN ePLAN

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.

Faster Designing When Reusing Designs

The unified specifications let you easily customize panels for each customer.

■ Product heights and depths are unified, so an existing design can be easily reused.

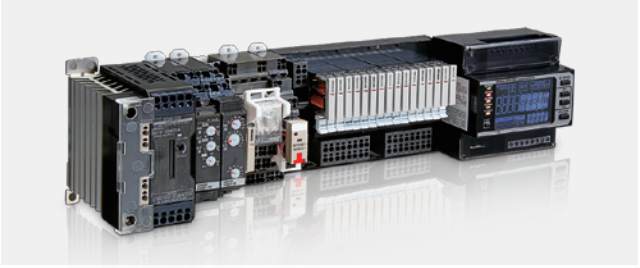


■ The wide range of products with unified specifications gives you a wider selection.

Panel

Value Design Products

Power Supplies, Timers, Measuring and Monitoring Relays, Sockets (for Relays, Timers, Liquid Leakage Sensor Amplifiers), SSR, DIN Track Terminal Blocks, Temperature Controllers, Power Monitors, UPSs, EtherCAT Slave Terminals

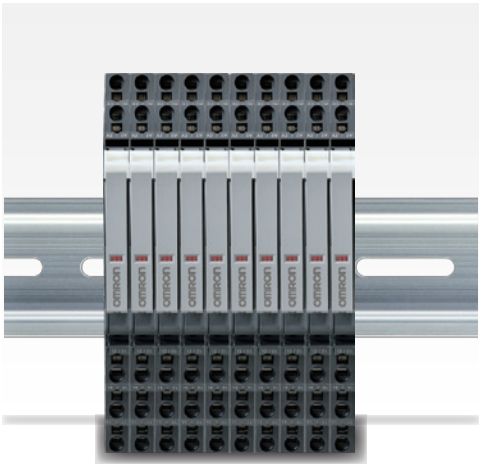


Work

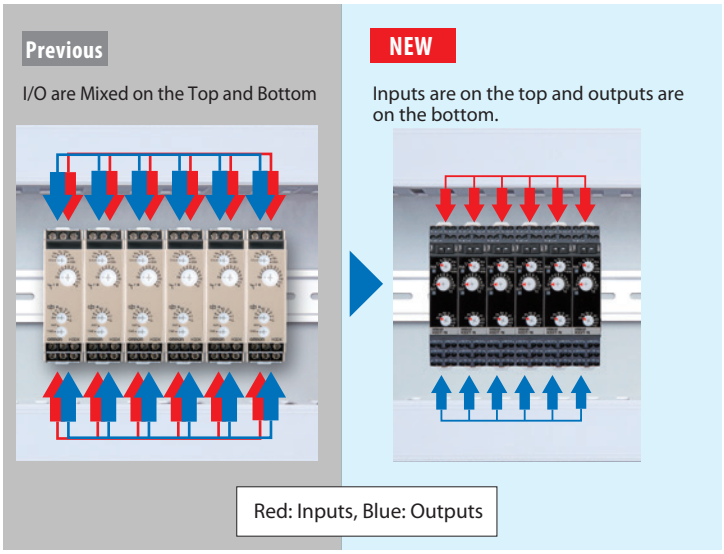
Faster Wiring

Unified wiring methods and specifications help shorten delivery times.

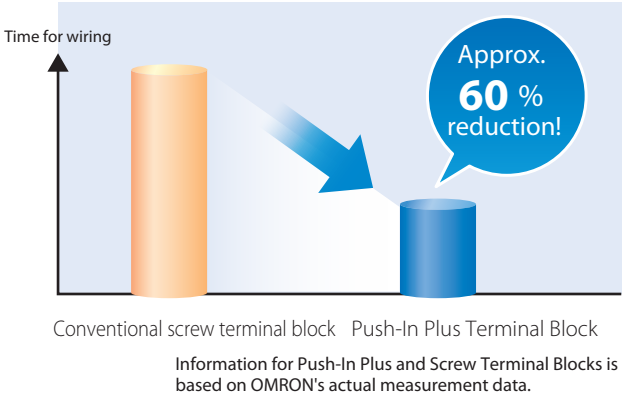
■ Easy-to-understand terminal positions enable more accurate work.



■ Unified I/O terminal positions help you organize control panel wiring and reduce the need of reworking.

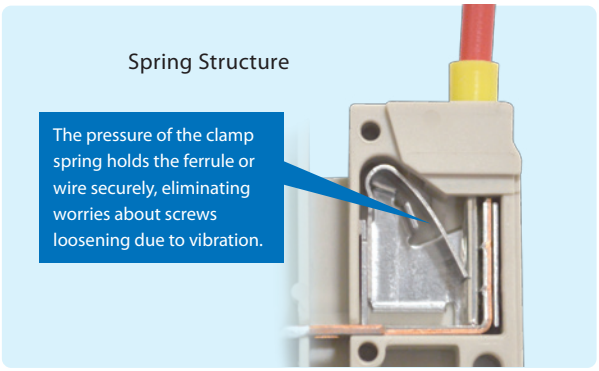


■ Greatly reduce wiring work with Push-In Plus technology.



Information for Push-In Plus and Screw Terminal Blocks is based on OMRON's actual measurement data.

■ Retightening is not required with Push In-Plus technology.



Faster Shipping to Destinations Abroad

Value Design products are certified for CE, UL, and CSA.

Faster Response to Problems during Assembly and after Shipping

Express Delivery Services to 35 Countries Worldwide

New Value For
Control Panels

People

Simple & Easy for Panel Business People

Reliable and Comfortable Manufacturing for All

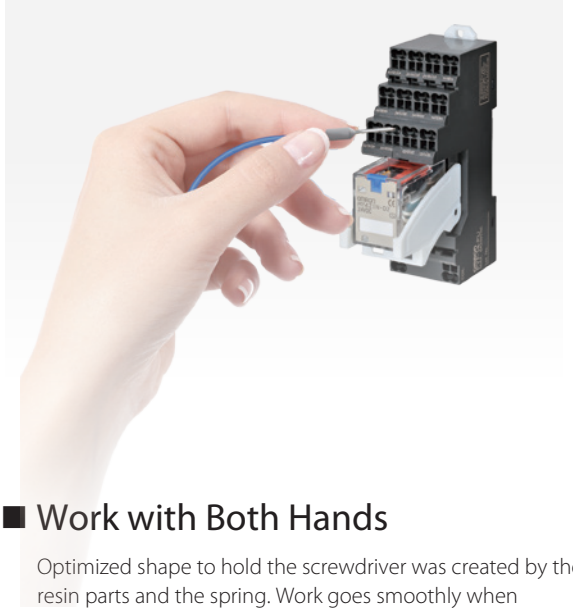
Easy Wiring Push-In Plus technology let you finish the wirings just by inserting wires.

What is Push-In Plus technology

Push-In Plus technology is independently developed by OMRON for easy wire insertion and firm wire holding ability. It' s as easy as inserting to an earphone jack: No tools are required. They help reduce the time and work involved in wiring.

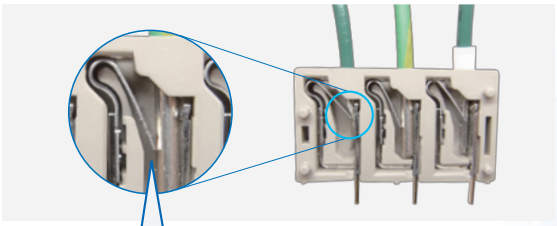
■ Easy to Insert

OMRON's Push-In Plus technology is as easy as inserting to an earphone jack. This reduces the load on worker fingers.



■ Held Firmly in Place

Even though less insertion force is required, the wires are held firmly in place. The advanced mechanism design technology and manufacturing technology produced a spring that ensures better workability and reliability.



IEC standard (cable diameter)	**Push-In Plus terminal block**	Screw terminal block
20 N min. (AWG20, 0.5mm^2)	**125 N**	112 N

* Information for Push-In Plus terminal blocks and Screw terminal blocks is based on OMRON's actual measurement value data for the XW2R.

■ Work with Both Hands

Optimized shape to hold the screwdriver was created by the resin parts and the spring. Work goes smoothly when connecting stranded wires directly to the terminal because it's easier to aim at the desired terminal.

■ Wiring Possible with Stranded Wires

You can insert wires with ferrules or you can also insert solid wires or stranded wires.

* Patents relating to Push-In Plus technology: Patent-pending

People That Deal with Control Panels

Front-in and Front-release Wiring

■ The terminal holes on OMRON's independently developed Push-In Plus technology all face forward for easy insertion.

Previous

NEW

Acquiring Practical Knowledge

OMRON provides support to foster engineers.

■ Practical resources containing useful knowledge for control panels are provided.

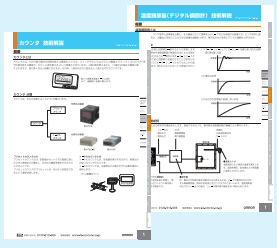
e-Learning

Provides product information, as well as basic information on electricity and control components.
Available in 13 languages.

Control Panel Basics

Provides basic information on control panel design.

Technical Explanation



Provide information required to select models of products used in control panels.

To browse and download contents, go to the Panel Assist Web (www.ia.omron.com/solution/panel/).

Panel Assist Web

Simplify and Accelerate Panel Designing. Information to

Panel Assist Web | New Value For Control Panels

The Panel Assist Web is a new website for our customers that work with control panels. You can select products and search for documents. Or you can find solutions for the issues you face in control panel manufacturing and you can manage BOM. Use this website to more efficiently design control panels.

Take a Look Now!

▶www.ia.omron.com/solution/panel/

Easy Product Selection: No Registration Required

Find Information to

Help Solve Issues

You can find information to help you solve control panel issues, such as downsizing or work reduction issues.
(e.g., explanatory videos for Push-In Plus technology is available.)

Solution Display Examples

Sample: Specifications Search

Easy Selection

of In-panel Devices

It can be added to BOM

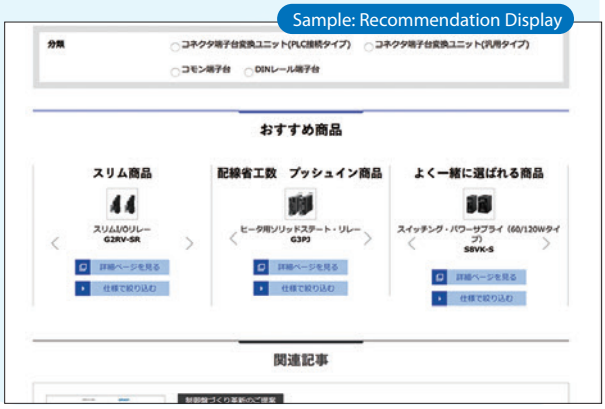
You can greatly reduce model selection work.
You can filter selection by model and then compare product specifications for easy selection.

Find Information without

Getting Lost

Just the right products and documents will be recommended in response to operations. You can find the information you need quickly and select the optimum products.

Sample: Recommendation Display



Solve Your Control Panel Manufacturing Issues

Even More Convenient Functions with Member Registration (Free Registration)

Create BOM Easily

You can create and save BOM of OMRON and non-OMRON products.
Convenient tools are provided for more-advanced designing.

BOM Example

BOM to Reduce Design Work

You can use the tool and various kinds of convenient functions starting from BOM.

Reduce Work with the Terminal Block Support Tool

The electrical specifications and applicable wires are automatically displayed for the selected devices.
You can easily select the Terminal Blocks required to wire devices without wasting time.

BOM Example

Checking in Advance with Thermal Simulation Tool

Just input basic control panel information in addition to the selected device information to understand heat risks and thereby reduce the need of working later.

Replacement with the Latest Products

You can import an existing BOM to check product manufacturing status and stock status, and to replace products with the most suitable up-to-date products.

Download Documents as Soon as You Select Parts

You can download CAD data or catalogs in multiple languages.

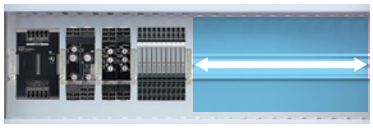
Examples of the Global Benefits of Value Design

Comments from Customers That Realized New Value to

Designer

Saving Space

Customer requests for additions often result in an increasing number of mounted devices. We often directly mount devices in available space, so saving space in control panels with downsized components and side-by-side mounting is great (company A).



Reducing Dead Space/ Making More-advanced Control Panels

The number of devices used in control panels is increasing due to more advanced and more composite machine functionality. Devices with the same size will reduce work required for layout design inside control panels (company B).

Reducing Design Work and Increasing Speed for Exporting

When exporting equipment to North America, time is required to obtain standard certification.
By using UL-listed components, we could greatly reduce the time required for certification (company C).

Design Standardization

We just introduced electrical control CAD to make the inhouse design process more efficient.
This is one reason we adopted in-panel components with plenty of electrical control CAD data as our inhouse standard (company D).

Value Design for Panel

Main Features of Value Design

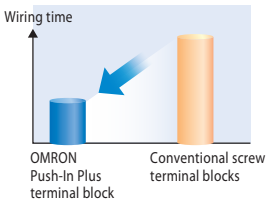
- Unified slim size. (Expect for some products)
- Side-by-side mounting at an ambient temperature of 55°C. (Applicable only within the same series.)
- Push-In Plus technology is used. (Expect for some products)
- Front-in and front-release wiring.
- Certification for CE, UL, and CSA.

Their Control Panels

Manager

Higher Productivity

The work reduction in manufacturing panels that was made possible with Push-In Plus technology increased production capacity past previous limits. We expect large increase of production capacity with the same resources and manufacturing processes as present, allowing us to develop new business opportunities even during intensive production periods! (company E)



Downsizing Control Panels

Downsizing demands from customers are an urgent issue. Value Design products with their unified size and side-by-side mounting are an effective means to downsize and allowed us to meet customer demands (company F).

We need to downsize control panels, so side-by-side mounting at an ambient temperature of 55°C is appealing (company G).

Worker

Vibration Resistance and No Need for Retightening

I'm considering using push-in terminal blocks because of screws that are loosened by device vibration cause problems (company H).

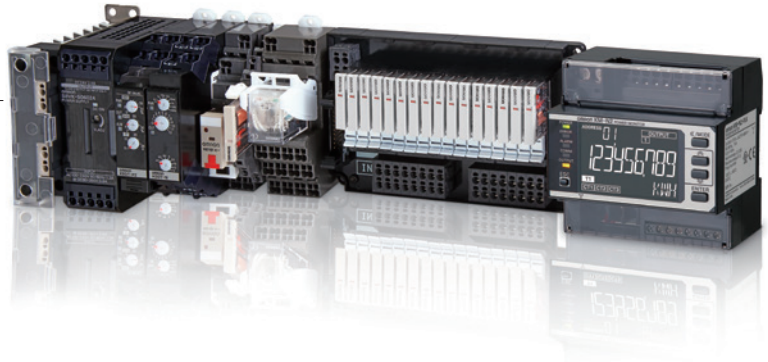
I want to use push-in terminal blocks to eliminate managing screw tightening torque and retightening work after shipping (company I).

Reducing Wiring Work

I'm considering push-in terminal blocks to increase the speed of wiring work(company J).

Push-In Plus technology with less insertion force increase wiring speed (company K).

*The portraits are for illustrative purposes only.



New Value For Control Panels

Our Value Design Products Increase the Value of Your Control

NEW 2017 Released in October

NEW **Emergency Stop Switches**
A22NE-P

Cat. No. A253

NEW **Digital Temperature Controllers**
E5CD-B/E5ED-B

Cat. No. H222

Wide lineup that adds new value to your control panel

Switch Mode Power Supplies
S8VK-S(High-capacity models)

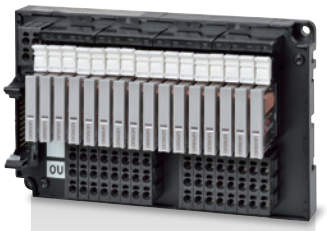
Cat. No. T206

Common Sockets
(for MY/H3Y(N)-B)
PYF-PU(-L)

Common Sockets
(for G2R-S/H3RN-B/K7L-B)
P2RF-PU

Slim I/O Relays
G2RV-SR/G3RV-SR

Sockets for Safety ReLays (for G7SA)
P7SA-PU



I/O Relay Terminals
G70V

Cat. No. J213

Solid-state Timers
H3DT
Note: The picture above is an H3DT-N model.

Cat. No. M091

Solid-state Timers
H3Y(N)-B

Cat. No. M092

Solid-state Timers
H3RN-B

Cat. No. M093

Measuring and Monitoring Relays
K8DT
Note: The picture above is a K8DT-AS model.

Cat. No. N210

Liquid Leakage Sensor Amplifiers
K7L-B

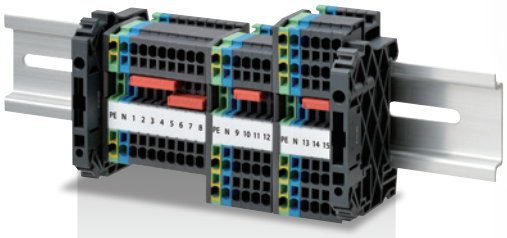
Cat. No. N211

Pushbutton Switches
A22N-P/A30N-P/M22N-P

Cat. No. A253

Panels

Value Design for Panel

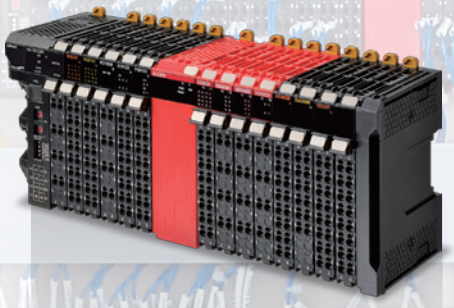


DIN Track Terminal Blocks
XW5T

Cat. No. G123

Machine Automation Controllers NX Series
NX1P

Cat. No. P115



EtherCAT Slave Terminals NX Series
NX-IO

Cat. No. R183

Digital Temperature Controllers
E5CC-B/E5EC-B
Note: The picture above is an E5EC-B model.

Cat. No. H220

Solid State Relays for Heaters
G3PJ

Cat. No. J211

Power Monitors Mounted to DIN Track
KM-N2

Power Monitors Mounted On-Panel
KM-N3

Cat. No. N213

Uninterruptible Power Supply (UPS)
S8BA

Cat. No. U700

OMRON Corporation **Industrial Automation Company**
Kyoto, JAPAN
Contact: www.ia.omron.com

Regional Headquarters
OMRON EUROPE B.V.
Wegalaan 67-69, 2132 JD Hoofddorp
The Netherlands
Tel: (31)2356-81-300/Fax: (31)2356-81-388

OMRON ELECTRONICS LLC
2895 Greenspoint Parkway, Suite 200
Hoffman Estates, IL 60169 U.S.A.
Tel: (1) 847-843-7900/Fax: (1) 847-843-7787

OMRON ASIA PACIFIC PTE. LTD.
No. 438A Alexandra Road # 05-05/08 (Lobby 2),
Alexandra Technopark,
Singapore 119967
Tel: (65) 6835-3011/Fax: (65) 6835-2711

OMRON (CHINA) CO., LTD.
Room 2211, Bank of China Tower,
200 Yin Cheng Zhong Road,
PuDong New Area, Shanghai, 200120, China
Tel: (86) 21-5037-2222/Fax: (86) 21-5037-2200

Authorized Distributor:

Cat. No. Y218-E1-03 0817(0316)