Innovations in Panel Building
New value for control panels

• An evolution for control panels
• Innovating the panel building process
• Simple and easy for panel builders

industrial.omron.eu/panelbuilding
New value for control panels

Control panels: The heart of manufacturing sites
Any evolution within control panel design and manufacturing will result in a follow-on evolution within production facilities, therefore benefitting not only panel builders, but the end users or machine builders. If panel design, panel manufacturing processes and human interaction with panels can be innovated by way of new products, wiring techniques and technologies, then control panel manufacturing becomes simpler and makes a huge leap forward in terms of efficiency. Starting with our shared Value Design for Panel concept for control panel product specification, we offer you control panel evolution and process innovation.

Further Evolution for Panels
Innovation for panel building Process
New Value For Control Panels
Simple & Easy for panel building People

*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 within control panels will create new value for our control panel customers. Combining multiple products that share the Value Design concept will further increase the value provided.
Further Evolution for Panels

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

Add More Devices

Side-by-side mounting is possible due to reduced power consumption (therefore generating less heat) for each model at an ambient temperature of 55°C.

You can install devices without wasting space.

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

Previous models *
- One S8VS-12024A Power Supply
- Two H3CP-A Solid-state Timers + P2CF-11
- Two APR-5 Reverse Protection Relays + PF-080A
- Ten G2R-1-5 General-purpose Relays + P2RF-05
- Five PFP-M End Plates

New models
- One S8VK-S12024 Power Supply
- Two H3DT Solid-state Timers
- Two K8DT-PH Phase-sequence Phase-loss Relays
- Ten G2RV-5R Slim I/O Relays
- Five PFP-M End Plates

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

Improve airflow
The use of components with a uniform height ensures unobstructed airflow. As a result, heat is easily dissipated. Reducing the temperature inside the panel increases product reliability, decreases failure rates, and prolongs product life expectancies.

Previous
The different heights create a lot of dead space.

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

Previous
Different heights and depths create hot spots.

New
Unified heights and depths help reduce hot spots.
Innovation for panel building **Process**

**Meeting customer needs by reducing process time**

- Capacitor design
- Detailed design
- Assembly/Wiring
- Shipment

**Efficient Designing**

Our electrical control CAD library of our products (industrial.omron.eu/cadlibrary) can assist in reducing design effort.

- Download a high-quality electrical control CAD library
- Partners for electrical control CAD

**Swift customisation**

Devices with unified specifications allow you to easily customise panels for each customer.

- Devices with unified specifications give you a wider selection.

**Value Design Products**

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

**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 allow you to organize the wiring of control panels.

**Efficient wiring methods**

- Retightening is not required with Push-In Plus technology.
- The pressure of the clamp spring holds the ferrule or wire securely, eliminating issues related to screws loosening due to vibration.

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**Global shipping**

- Our Value Design products are certified for UL and CSA & bear a CE-mark.
Simple & Easy for panel business People

Easy wiring
Push-In Plus technology help to simplify wiring.

What is Push-In Plus technology?
Push-In Plus technology has been developed to provide easy wire insertion and firm wire holding, therefore reducing the time and work involved in wiring.

Easy to insert
Using our terminals with Push-In Plus technology is easier than inserting an earphone jack.

Held firmly in place
Even though less insertion force is required, the wires are held firmly in place. With our advanced mechanism design and manufacturing technology, we have produced a spring that allows low insertion force while ensuring high pull-out force.

Work with both hands
The terminal mechanism has been designed to hold the screwdriver, enabling you to have both hands free to insert the wiring into the front-facing cable entry point.

Wiring possible with stranded wires
It is possible to insert wires with ferrules, solid or stranded wires.

What is Push-In Plus technology?
Patents relating to Push-In Plus technology: Patent-pending

<table>
<thead>
<tr>
<th>INSERTION FORCE</th>
<th>PULL-OUT FORCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earphone Jack</td>
<td>10 N</td>
</tr>
<tr>
<td>Push-In Plus technology</td>
<td>8 N</td>
</tr>
<tr>
<td>IEC standard (cable diameter)</td>
<td>20 N min. (AWG26/0.5mm)</td>
</tr>
<tr>
<td>Screw technology</td>
<td>112 N</td>
</tr>
</tbody>
</table>

Front-in and front-release wiring
The terminal cable entry of our independently developed terminals with Push-In Plus technology all face forward for easy wire insertion.
Benefits of Value Design

Downsizing control panels
• Downsizing is our highest priority.
  The use of Push-In Plus technology will be an effective measure to downsize control panels (company A).
• We need to downsize our control panels, so side-by-side mounting (enabled by reduced power consumption) is appealing to us as it will generate less heat (company B).

Saving space
• Our users often ask us to add-in additional devices. We often have to mount these devices in any space available, therefore space-saving in control panels would be a huge benefit for us (company C).

Reducing dead space/
Making more-advanced control panels
• The number of devices required in control panels is increasing due to more advanced and more composite machine functionality. Devices with unified dimensions will help to reduce the design work required for the layout inside the control panel (Company D).

Vibration resistance and no need for retightening
• I'm considering using Push-In Plus technology because screw-type terminals can become loose from device vibration and this can cause connection issues (company E).
• I want to use Push-In Plus technology to eliminate screw tightening torque and retightening work after shipping (company F).

Reducing wiring work
• I'm considering Push-In Plus technology to increase wiring speed.
• Push-In Plus technology with less insertion force will increase wiring speed (company G).

Reducing design work and increasing speed for exporting
• We give priority to UL-listed components during device selection for our control panels if we are exporting them to North America. That makes UL recognition more efficient (company I).

Main Features of our Value Design
• Unified slim size (except for some products)
• Front-in and front-release wiring
• Side-by-side mounting at an ambient temperature of 55ºC (applicable only within the same series.)
• Certification for UL and CSA + CE-mark
• Push-In Plus technology (except for some products)
Our Value Design products increase the Value of your control panels

2017 Released in October

Wide lineup that adds new value to your control panel
“To the machine the work of the machine, to man the thrill of further creation.”

Kazuma Tateisi, founder of Omron

Omron at a glance

200,000 products ranging Input, Logic, Output & Safety

Sensing, Control Systems, Visualisation, Drives, Robots, Safety, Quality Control & Inspection, Control and Switching Components

6%

Innovation track record of 80 years

1,200 employees dedicated to R&D
12,500 + issued and pending patents

37,500 Employees worldwide

Working for the benefit of society

Industrial automation 39%
Automotive components 16%
Electronic & mechanical components 12%
Healthcare 12%
Other businesses 11%
Social systems, solutions & services 10%

200 Locations worldwide

22 Countries in EMEA

Close to your needs

Technical training & seminars, technical support, Automation Technology Centers, online community (MyOmron), online catalogues and technical documentation, customer service & sales support, inter-operability labs (Tsunagi), safety services, repairs.
Product brochures for Control Panels

Digital temperature and process controllers

Worldwide reliable and easy operation

The smart way to protect your system

More advanced Timers for new control panels

Solid State Relays for Heaters

Relay series with push-in plus technology

Rise above your energy challenges

DIN Track Terminal Blocks

Pushbutton Switches

Would you like to know more?

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