New Value for Control Panels

Control Panels: The Heart of Manufacturing Sites
Recent evolutions in control panel design and manufacturing are benefiting panel builders as well as end users and machine builders, resulting in an evolution within production facilities that reduces total cost of ownership. With the goal of making panel manufacturing simpler and more efficient, we have developed new techniques and technologies for panel design, panel manufacturing and wiring. Our Value Design for Panel concept guides the development of control panel products that reduce time and labor costs, power consumption, and control cabinet size.

Value Design for Panel Concept Advantages
Specifications for Value Design products focus on uniform mounting height and depth, reduced overall volume and side-by-side mounting to make room for more components. Wiring capabilities without tools using front access Push-In Plus wiring terminals decreases installation time.

A panel built around Value Design Concept products provides competitive advantages for panel builders, machine builders and end users. Combining multiple products that share the Value Design Concept increases the value to all stakeholders involved with control panel design and use.
Innovation for panel building

New Value For Control Panels

Simple & Easy for People
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 sized control panel to increase control panel functionality.

Downsizing Control Panels

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

Previous Models

- 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 Models

- 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

Add More Devices

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

Reduction of approx. 50%

More space!

Reduction of approx. 20%

Previous

The different heights create dead space.

NEW

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

* This is in comparison with previous OMRON products.

*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 Push-In Plus Terminal Blocks (refer to page 8.) to create robust control panels that withstand vibration during shipping and operation.

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
Innovation in Control Panel Building

Manufacturing Innovation That Greatly Reduces Work

Meet Customer Needs by Increasing Process Speed

Faster Designing By 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.

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
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 Terminal Blocks.

Retightening is not required with Push-In Plus Terminal Blocks.

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
Innovation in Control Panel Building

Simple & Easy for Panel Builders

Reliable Wiring and Assembly for Panel Builders

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

Push-In Plus Terminal Blocks were 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.

**What Are Push-In Plus Terminal Blocks?**

OMRON’s Push-In Plus terminal blocks are as easy as inserting to an earphone jack. This reduces the load on worker’s fingers.

**Easy to Insert**

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.

**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.

**Wiring Possible with Stranded Wires**
You can insert wires with ferrules or you can also insert stranded wires.

* Patents relating to Push-In Plus Terminal Blocks: Patent-pending
Front-in and Front-release Wiring

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

Saving Space

- Our users often request to add devices. We often directly mount devices in available space, so saving space in control panels is great (company C).

Downsizing Control Panels

- Downsizing is our highest priority. The usage of Push-In Terminal Blocks will be an effective measure to downsize control panels (company A).
- We need to downsize control panels, so side-by-side mounting at an ambient temperature of 55°C is appealing (company B).

Main Features of Value Design

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

**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 E).”
- “I want to use push-in terminal blocks to eliminate managing screw tightening torque and retightening work after shipping.”

**Reducing Wiring Work**
- “I’m considering push-in terminal blocks to increase the speed of wiring work.”
- “The push-in terminal blocks with less insertion force increase wiring speed (company G).”

**Reducing Design Work and Increasing Speed for Exporting**
- “We give priority to UL-listed components. That makes UL recognition more efficient (company I).”
Our Value Design Products Increase the Value of Your New Products

Switch Mode Power Supplies
S8VK-S

Solid-state Timers
H3DT

Measuring and Monitoring Relays
K8DT

Power Monitors
KM-N2

Sockets for MY Relays
H3Y-B and H3YN-B
PYF-PU

Sockets for G2R-S
H3RN-B and K7L-B P2RF-PU

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

I/O Relay Terminals
G70V

DIN Track Terminal Blocks
XWST

Digital Temperature Controllers
E5C Series

Solid State Relays for Heaters
G3PJ

Innovation in Control Panel Building

Our Value Design Products Increase the Value of Your New Products

12
Control Panels

Design Renewal

Solid-state Timers
H3Y-□-B/H3YN-□-B

Solid-state Timers
H3RN-□-B

Liquid Leakage
Sensor Amplifiers
K7L-□□B

2015 Released

EtherCAT Slave
Terminals NX series
NX-10

Uninterruptible Power
Supply (UPS)
S8BA
Controllers & I/O
- Machine Automation Controllers (MAC) • Motion Controllers
- Programmable Logic Controllers (PLC) • Temperature Controllers • Remote I/O

Robotics
- Industrial Robots • Mobile Robots

Operator Interfaces
- Human Machine Interface (HMI)

Motion & Drives
- Machine Automation Controllers (MAC) • Motion Controllers • Servo Systems
- Frequency Inverters

Vision, Measurement & Identification
- Vision Sensors & Systems • Measurement Sensors • Auto Identification Systems

Sensing
- Photoelectric Sensors • Fiber-Optic Sensors • Proximity Sensors
- Rotary Encoders • Ultrasonic Sensors

Safety
- Safety Light Curtains • Safety Laser Scanners • Programmable Safety Systems
- Safety Mats and Edges • Safety Door Switches • Emergency Stop Devices
- Safety Switches & Operator Controls • Safety Monitoring/Force-guided Relays

Control Components
- Power Supplies • Timers • Counters • Programmable Relays
- Digital Panel Meters • Monitoring Products

Switches & Relays
- Limit Switches • Pushbutton Switches • Electromechanical Relays
- Solid State Relays

Software
- Programming & Configuration • Runtime