

New Value for Control Panels



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.



Process

Realize greatly reduces design/manufacturing work

Innovation for design, building
Process

Further Evolution for
Panels

New Value for
Control Panels

Panel

Realize compact & highly reliable control panels

Simple & Easy
People

People

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



Innovation for Control Panels Building with Value Design

Our shared concept for the specifications of products used in control panels, " Value Design for Panel " (herein after referred to as Value Design) 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.



- 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

*1. Expect for some products

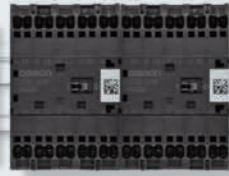
*2. Side-by-side mounting is possible in the same series

Overwhelming Line up That Innovates Your Control Panel Manufacturing

DIN Track Terminal Blocks



Magnetic Contactors



Ultra-Compact Interface Wiring System



Common Terminal Blocks



Switch mode power supplies / Related equipment



I/O Relay Terminals



Timers



Motor Protective Relays



Power Monitors



Wireless Pushbutton Switches



Condition Monitoring Devices



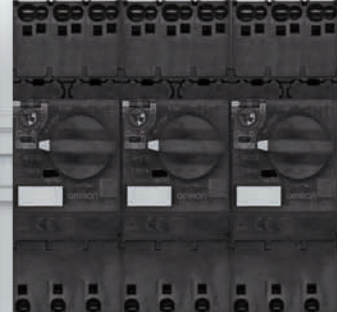
Temperature Controllers



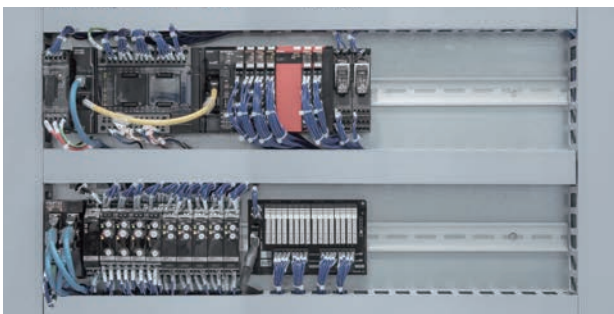
Switch mode power supplies / Related equipment



Manual Motor Starters



Our Value Design Products Deliver Innovation to Your Manufacturing Site

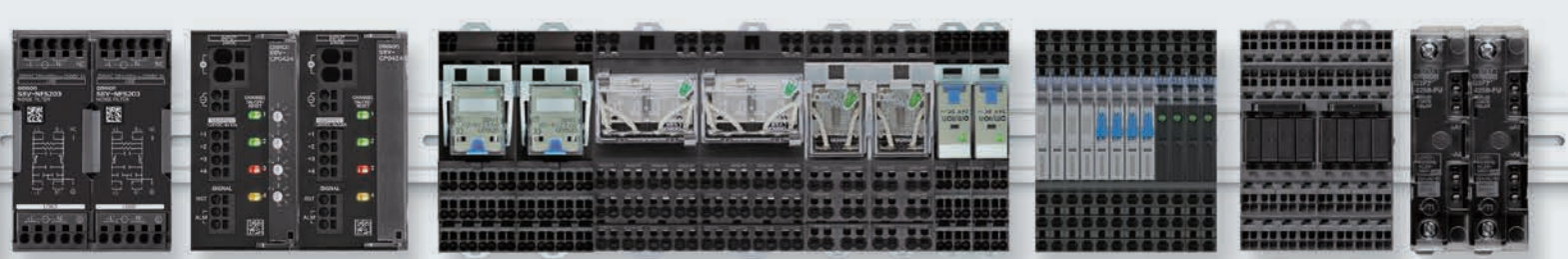


Saving Space and More-advanced Control Panels P6



Reducing Wiring Work P8

Relays, Solid-state Relays



Uninterruptible Power Supplies

Machine Automation Controllers

Safety Relays

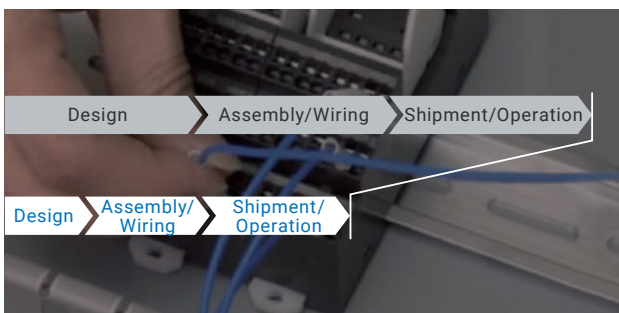


Pushbutton Switches



Power Monitors

Temperature Controllers



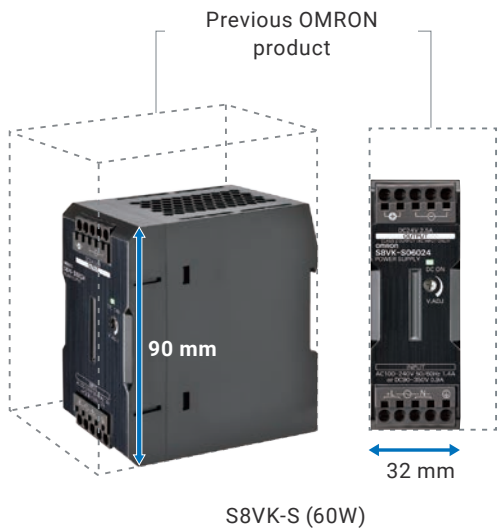
Shortening Lead Time for Control Panel Building P10

Saving Space and More-advanced Control Panels

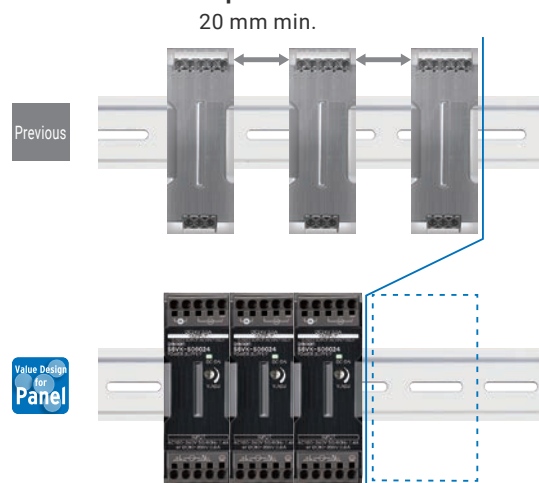
Unified size and side-by-side mounting help delivering more compact control panels with additional functionality.



Unified height & slim size^{*1}



Side by side mounting at (55°C) ambient temperature^{*2}

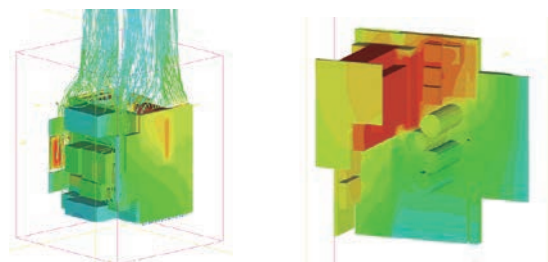


*1. Expect for some products

*2. Side-by-side mounting is possible in the same series

Heat Control Technology that allows side-by-side mounting

OMRON's unique heat modeling know-how let you understand the accurate heat flow and thereby achieve a device layout with high heat dissipation.



Slim + Side-by-side mounting technology save space, and make more-advanced Control Panels

You can add a new function, at the re-engineering stage for improving product quality and securing safety of the production line.

Previous

Reduction of approx. 50%

The saved space can be used for implementing additional functions such as safety or IoT.

Value Design for Panel

Safety Controllers Condition Monitoring Devices Networks

Unified height reduces dead space and downsizes control panels

When newly designing, you can decrease the height of a control panel to secure a wide view of a whole production line for improved safety.

Reduction of approx. 20% *1

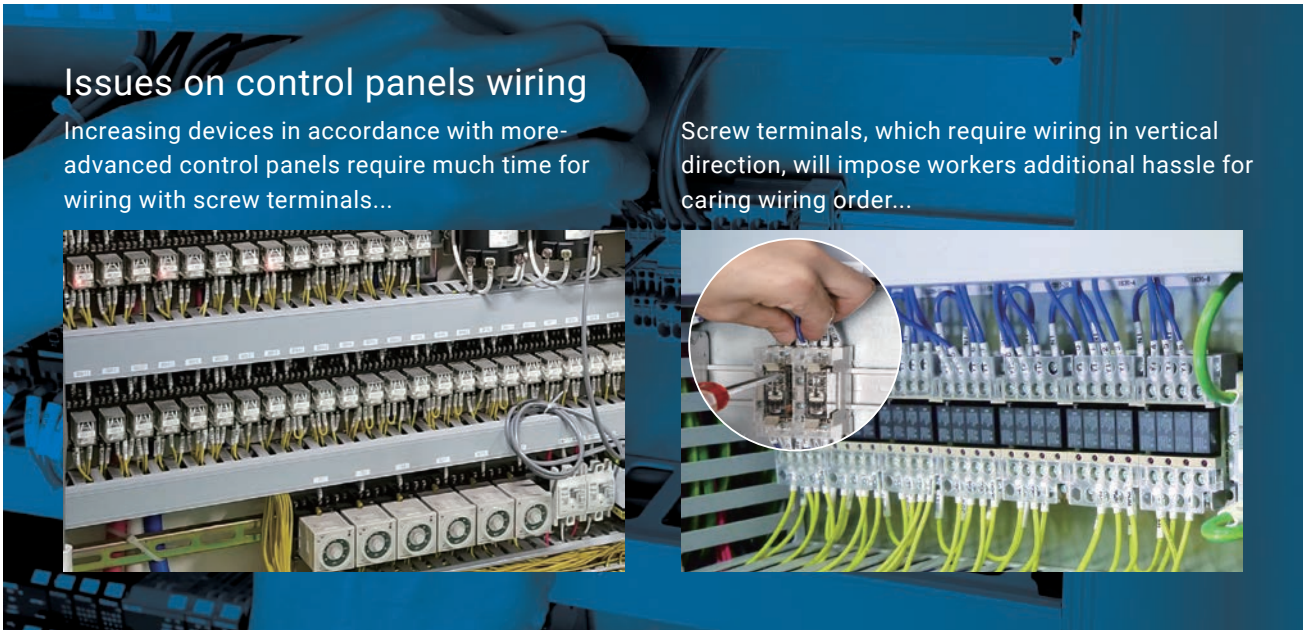
Previous The different heights create a lot of dead space.

Value Design for Panel Dead space is reduced and the width between wiring ducts is optimized.

*1. A space of 10 mm is allowed above and below the products (This is in comparison with previous OMRON products.).

Reducing Wiring Work

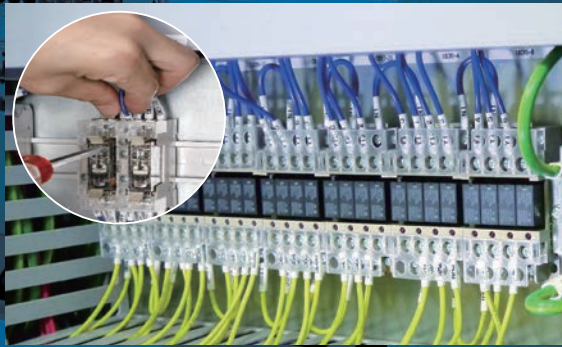
Push-In Plus technology and Front-in / Front-release Wiring allow wiring work easier and speedier.



Issues on control panels wiring

Increasing devices in accordance with more-advanced control panels require much time for wiring with screw terminals...

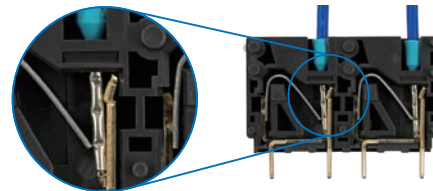
Screw terminals, which require wiring in vertical direction, will impose workers additional hassle for caring wiring order...



OMRON Push-In Plus technology for easy wire insertion and firm wire holding ability



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



IEC standard *1 Push-In Plus*2 Screw*2

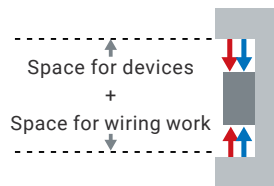
20 N min.

125 N

112 N

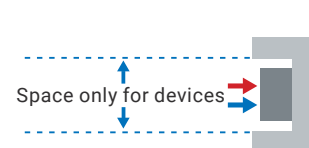
Even though less insertion force is required, the wires are held firmly in place by a unique spring structure that ensures reliability.

Front-in and Front-release Wiring that allows easy insertion to terminal holes facing forward



Previous

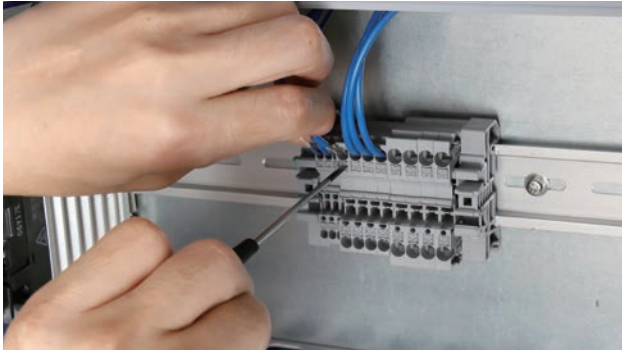
Wiring in vertical direction is hard and need more space...



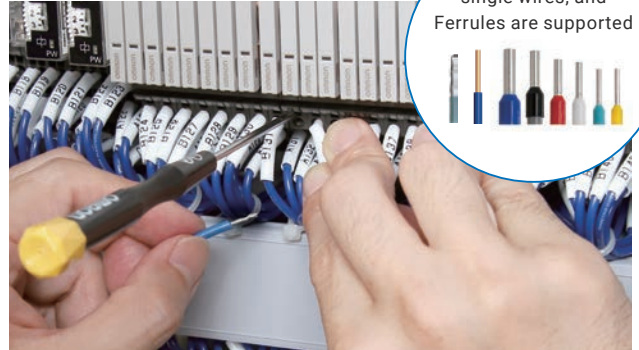
Easy insertion to the terminal holes facing forward, and saving space in a vertical direction

*1. In the case that a cable diameter is AWG20, 0.5 mm² *2. OMRON's actual measurement value data for the XW2R.

Easy wiring with both hands for stranded wires with holding screwdriver

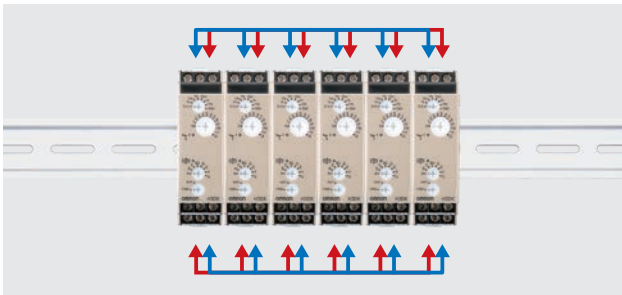


Previous One hand wiring with the other hand holding the screwdriver...

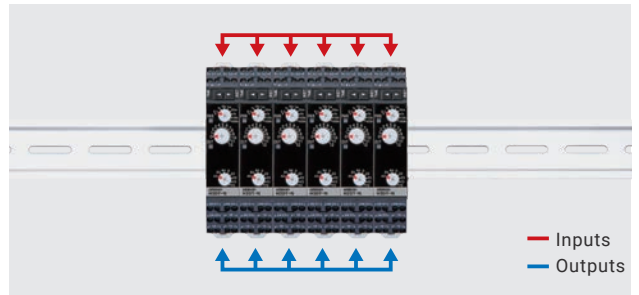


Value Design for Panel Wiring with both hands, because the screwdriver is held in the release hole

Improved wiring workability by unified I/O terminal positions on the top and bottom

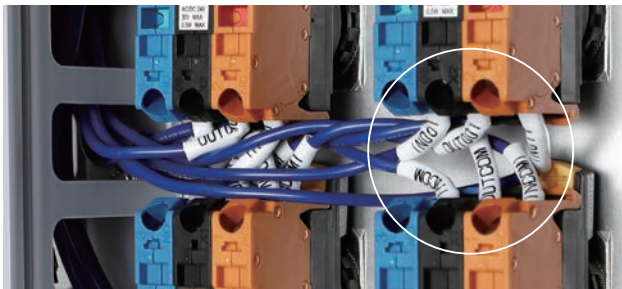


Previous Hard wiring due to mixed I/O terminals located on the top and bottom...

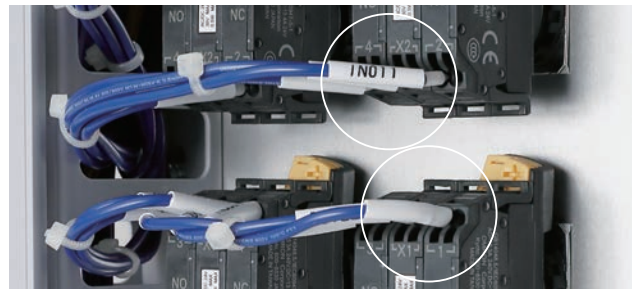


Value Design for Panel Unified method so that inputs are on the top and outputs are on the bottom, and make work easier.

Front-in Wiring improves workability and safety without interference of wires even in the narrow space among devices



Previous Hard wiring in the narrow space by the interference of wires due to the screw terminals requiring wiring in vertical direction....



Value Design for Panel No interference of wiring helps improve workability and safety

Shortening Lead Time for Control Panel Building

Compatible with eCAD and worldwide safety standards, accelerating an entire process of control panel manufacturing.

Issues on control panels process
Our response is required to meet customer needs by increasing process speed...

Design

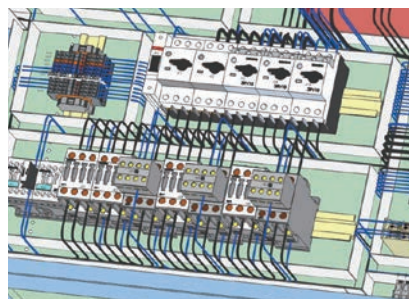
eCAD library provided for all models greatly reduces design work

Up to **50%***¹

OMRON provides the libraries for over 45,000 models^{*2}, highest in the industry, to achieve the great reduction of works for electrical design drawing and data creation.

部品表

| 品番 | 品名 | 数量 | 単位 | 仕様 | メーカー | 注記 |
|-----|-----|-----|-----|-----|------|-----|
| ... | ... | ... | ... | ... | ... | ... |



接続リスト

| 番号 | 端子名 | 接続先 | 接続先端子名 | 接続先機種 | 接続先端子番号 | 接続先端子形状 | 接続先端子色 | 接続先端子規格 | 接続先端子メーカー |
|-----|-----|-----|--------|-------|---------|---------|--------|---------|-----------|
| ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |

BOM (Bills of materials)

Wiring length data

Wiring list

*1. In the case of ZUKEN E3 series

*2. In the case of EPLAN, based on OMRON's investigation as of 2019 September

eCAD Partners

By cooperating with various partners, we offer you more choices for your eCAD solutions.

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.



Zuken Inc.

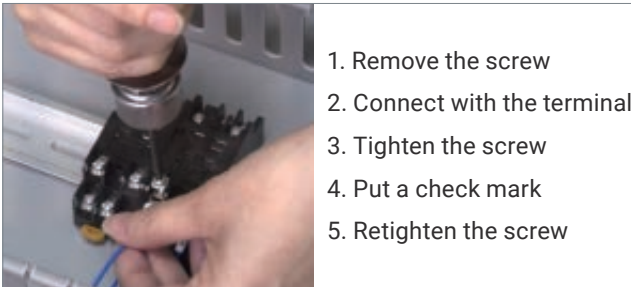


EPLAN

Assembly/Wiring

Push-In Plus technology requires only a single step, greatly reducing wiring work

Reduction of approx. 60%*1



1. Remove the screw
2. Connect with the terminal
3. Tighten the screw
4. Put a check mark
5. Retighten the screw



1. Insert the terminal

Previous A lot of steps are required to complete wiring for the screw terminal...

Value Design for Panel Push-In Plus technology completes by a single step

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

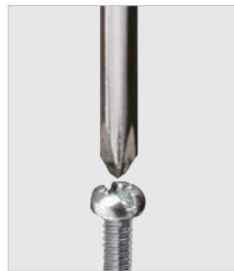
Shipment/Operation

No need for retightening, even when vibration is applied on terminals

The pressure of the clamp spring holds the ferrule or wire securely with Push-In Plus technology, eliminating worries about screws loosening or disconnection due to vibration.



Previous The screw is loosened and dropped by vibration...



Retightening is needed before export and shipment...



Value Design for Panel No drop-off or retightening of screws

Smooth shipment with our products compliant with worldwide safety standards CE, UL, and CSA.

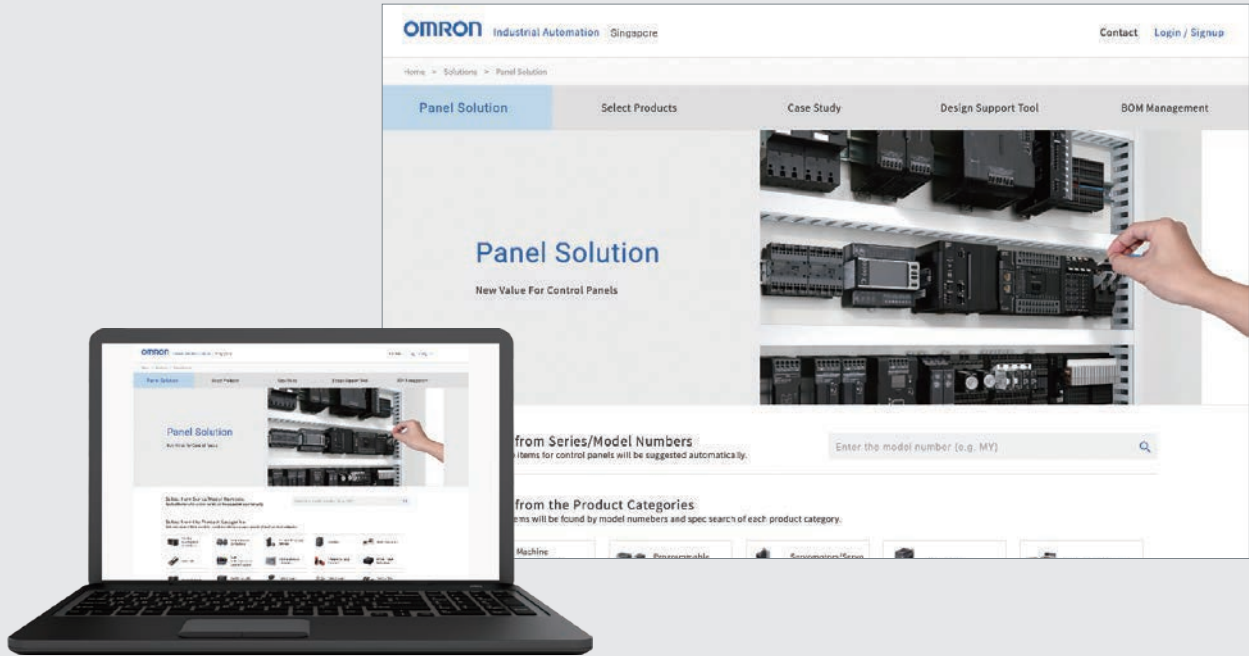
All of Value Design products are certified for CE, UL, and CSA, and shipment to abroad goes smoothly. Further, Express Delivery Services to 37*2 countries and regions worldwide offer easy troubleshooting.



*2. According to OMRON investigation in September 2019.

Simplify and Accelerate Panel Designing with Panel Solution Site

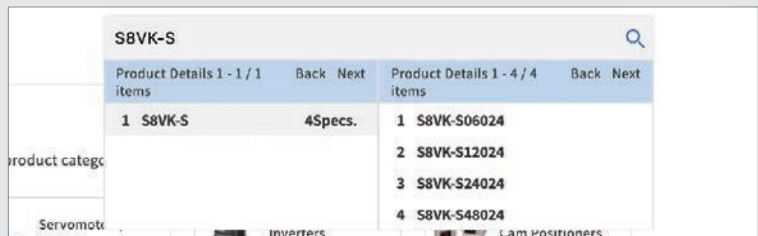
Panel Solution Site supports your control panel manufacturing through from selection to design.



You can select your best product by searching with models, categories and solutions

Select based on model

Entering a model name with a first few letters will show you a list of model candidates, where you can review those product specifications.



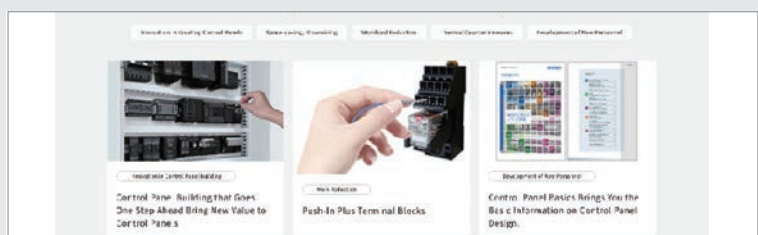
Select based on categories

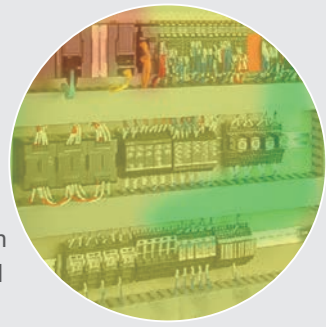
Select a category, and you can narrow model selection by the specifications.



Case Study

Various contents introduce you the solutions for your control panel manufacturing issues.





Thermal Simulation Tool

For customers who need to understand heat risks in advance, Thermal Simulation Tool supports the heat design from a simple calculation of heat inside the control panel to selection of fans.

Input control panel information

Input the specification of your control panel.

Input product information. For OMRON products, selecting a type will automatically display its heat value.

Simulation results

temperature in panel 59.9 (°C) **margin (difference from allowable temperature)** -4.9 (°C)

measures by adding FAN Target characteristics of FAN to be added.

target airflow : 4.523 (m³/min)
target static pr... : 0.11 (Pa)

components that the temperature is considered too high

model number: S8VK-S48024 calorific value 47.4 (...)

Provides proposed measures for bringing temperature to a target value and information about the parts with a risk of being overheated.

Customer's voice

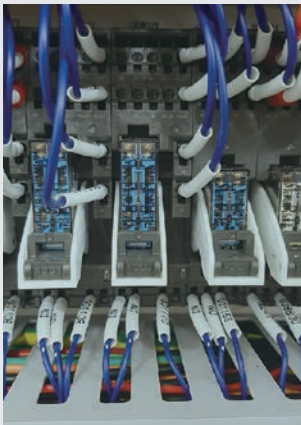
Our Value Design products help solve issues with many customers.

Reduce the size by 30 % as well as the wiring lead time by half.

Semiconductor / FPD manufacturing equipment manufacturer

[Issues] Reducing wiring work at site was necessary to shorten the electric construction period. To achieve it, smaller, simpler control panels are required. He adds that smaller control panels can be incorporated into equipment, thus saving space at client factories.

[Effect] Not only downsized components, but also terminal holes on the front helped a lot to reduce wiring lead time. Terminal holes on the front eliminate the need for maintaining work space, thus downsizing the control panels and reducing wiring work drastically.



Reduction by 30 % for both of control panel footprint and lead time

Transferring machine manufacturer

[Issues] Our existing transferring line systems are mostly driven by mechanical structures. Advancing them to meet customer needs will result in increase in control I/Os and size of the control panels. On the other hand, needs for saving space are growing at the customers' factories. Further, the demand for built-in control panel in line system is also increasing to operate and maintain system close, not at the standalone control panel installed on the wall.

[Effect] The effect was obvious, because the maintenance work completed in three days earlier than planned, where 10 days are allowed in the beginning. We will promote adoption of the Value Design products in our systems in order to reduce the cost and lead time of existing products as well as to accelerate space-saving.



Streamline control panel manufacturing with improved reliability

Control panel builder

[Issues] As demand increases for quality assurance, one of most possible errors with switchboards and control panels is a screw loosening error. All control panel and switchboard manufacturers perform the inspection of course; however, a possibility of human error still exists.

[Effect] Once the devices in control panel are unified to Push-In Plus technology and engineers get used to the wiring work, we can expect workability greatly improves. In addition, we expect for the reliability enhancement in the future by reducing workload of engineers who check for loose screws and recheck for recurrence prevention.



Improved maintainability for equipment by saving space

Confectionery equipment manufacturer

[Issues] The control panel for existing oven line is engineered with a basic design of 20 years ago. The electrical control devices for the panel are large and so the control panel itself should be, as those devices also need much space for mounting with screws. It was in a situation that many devices are mounted on the door of the control panel due to no space inside.

[Effect] I am fully convinced that a wide variety of OMRON lineups help downsize our control panels. Replacing the existing devices mounted in the control panel are with OMRON panel solution devices will save space by approx. 40%. We achieved zero-cabinet by utilizing those devices, and now the control panels are not conspicuous. Further, we have changed the connection method for input cables coming from the machine body to the Push-In Plus technology. This allows us to complete the wiring work in about one and a half hours, which used to take a half day before.

Needless of retightening allows wiring time reduction to one-fourth

Packaging machine manufacturer

[Issues] To achieve space-saving on machines, the needs for downsizing control panels has increased year by year. The devices can be forcibly mounted in the machine when considering only design aspect. However, workability at the manufacturing process and maintainability at the after-sales service will need a hassle. We were thinking if the devices in the control panels would become more compact.

[Effect] For the conventional screw terminal, we provided the works relating to screws such as check and retightening to have three times, though, for the Push-In Plus technology, retightening is needless, resulting in the work reduction. Considering it as a work time, it is reduced to about a quarter.





Selection Guide

Available in a wide range from input to control, output, and safety.

>P.18-19

| | |
|--|--|
| <p>Switch Mode Power Supplies (Single-phase) S8VK-S</p>  | <p>Switch Mode Power Supplies (Single-phase/With displays and communications) S8VK-X</p>  |
| <p>Switch Mode Power Supplies (Three-phase/single-phase) S8VK-WA (Three-phase) S8VK-WB</p>  | <p>Noise Filters S8V-NF</p>  <p>DC Electronic Circuit Protectors S8V-CP</p>  |


>P.20-21

| |
|---|
| <p>Magnetic Contactors(Contactor) J7KC</p>  |
| <p>Manual Motor Starters J7MC</p>  |
| <p>Thermal Overload Relays J7TC</p>  |
| <p>Auxiliary Relay (Contactor Relays) J7KCA</p>  |

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| |
|--|
| <p>Solid-state Timers H3DT</p>  |
|--|



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| |
|---|
| <p>Motor Protective Relays K8DT</p>  |
|---|

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| |
|---|
| <p>DIN Track Terminal Blocks XW5T</p>  |
|---|

>P.29

| |
|--|
| <p>Ultra-Compact Interface Wiring System XW2K</p>  |
| <p>Ultra-Compact Common Terminal Blocks XW2K-COM</p>  |



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Common Terminal Blocks
XW6T



>P.31

Uninterruptible Power Supplies
S8BA



>P.30

Power Monitors
KM-N2/KM-N3



>P.32-33

Temperature Controllers
E5CC-B/E5EC-B/E5DC-B



>P.30

Solid State Relays for Heater
G3PJ



>P.31

Pushbutton Switches
Emergency Stop Pushbutton Switches
A22N-P/A22NE-P



>P.22-23

Sockets with Push-In Plus
technology
PYF-□□-PU/PTF-□□-PU
P2RF-□□-PU/P7SA-PU



Slim I/O Relays
G2RV-ST



Slim I/O Solid State Relays
G3RV-ST



Terminal Relays
G6D-F4PU/G3DZ-F4PU



I/O Relay Terminals
G70V



Single-phase input type S8VK-S

Cat. No. T205

- Compact and side-by-side mounting, contributing to space saving.
- Coated PCBs for Better Resistance to Environment



| Rated input voltage | Rated output voltage | Power rating | Rated output current | Maximum boost current | Model | Size W×H×D (mm) |
|--|----------------------|--------------|----------------------|-----------------------|-------------|-----------------|
| 100 to 240 VAC (allowable range: 85 to 264VAC or 90 to 350 VDC) | 24 VDC | 30 W | 1.3 A | 1.56 A | S8VK-S03024 | 32×90×86 |
| | | 60 W | 2.5 A | 3 A | S8VK-S06024 | 32×90×86 |
| | | 120 W | 5 A | 6 A | S8VK-S12024 | 55×90×86 |
| | | 240 W | 10 A | 15 A | S8VK-S24024 | 38×124×117.8 |
| | | 480 W | 20 A | 30 A | S8VK-S48024 | 60×124×117.8 |

Single-phase input type (With Indication and communication) S8VK-X

Cat. No. T210

- Product replacement time, output voltage, output current, and more are acquired on the network and can be managed all at once.
- Product status can be checked on-site using the indication monitor.



With Indication Monitor

| Rated input voltage | Rated output voltage | Power rating | Rated output current | Maximum boost current | Model | Size W×H×D (mm) |
|---|----------------------|--------------|----------------------|-----------------------|------------------|-----------------|
| 100 to 240 VAC (allowable range: 85 to 264 VAC, 90 to 350 VDC) | 24 VDC | 90 W | 3.75 A | — | S8VK-X09024A-EIP | 55×90×86 |
| | | 120 W | 5 A | 6 A | S8VK-X12024A-EIP | 55×90×86 |
| | | 240 W | 10 A | 15 A | S8VK-X24024A-EIP | 38×124×117 |
| | | 480 W | 20 A | 30 A | S8VK-X48024A-EIP | 60×124×117 |

Without Indication Monitor

| Rated input voltage | Rated output voltage | Power rating | Rated output current | Maximum boost current | Model | Size W×H×D (mm) |
|---|----------------------|--------------|----------------------|-----------------------|-----------------|-----------------|
| 100 to 240 VAC (allowable range: 85 to 264 VAC, 90 to 350 VDC) | 5 VDC | 30 W | 5 A *1 | 6 A | S8VK-X03005-EIP | 40×90×86 |
| | 12 VDC | 60 W | 4.5 A *2 | 5.4 A | S8VK-X06012-EIP | 40×90×86 |
| | | | 2.5 A | 3 A | S8VK-X06024-EIP | 40×90×86 |
| | 24 VDC | 90 W | 3.75 A | — | S8VK-X09024-EIP | 55×90×86 |
| | | 120 W | 5 A | 6 A | S8VK-X12024-EIP | 55×90×86 |
| | | 240 W | 10 A | 15 A | S8VK-X24024-EIP | 38×124×117 |
| | | 480 W | 20 A | 30 A | S8VK-X48024-EIP | 60×124×117 |

*1. Output power is 25 W at rated output current.

*2. Output power is 54 W at rated output current.

For detailed information such as formats and options other than those listed, please refer to the catalog data sheet of each product. D (depth) of the external dimension is the length from the front to the DIN rail.

Three-phase input type S8VK-W

Cat. No. T219

- Three-phase Input Power Supplies harmonized with Value design for Panel concept.
- With a line-up that includes two model types, 200 to 240 V input and 380 to 480 V input.



| Rated input voltage | Rated output voltage | Power rating | Rated output current | Maximum boost current | Model | Size W×H×D (mm) |
|--|----------------------|--------------|----------------------|-----------------------|--------------|-----------------|
| Three-phase / single-phase 200 to 240 VAC(Allowable range:Three-phase / single-phase170 to 264 VAC, 240 to 350 VDC) | 24 VDC | 240 W | 10 A | 15 A | S8VK-WA24024 | 55×124×117 |
| | | 480 W | 20 A | 30 A | S8VK-WA48024 | 65×124×117 |
| | | 960 W | 40 A | 60 A | S8VK-WA96024 | 118×124×117 |
| Rated input voltage | Rated output voltage | Power rating | Rated output current | Maximum boost current | Model | Size W×H×D (mm) |
| Three-phase / two-phase 380 to 480 VAC (Allowable range: Three-phase / two-phase 320 to 576 VAC, 450 to 810 VDC) | 24 VDC | 240 W | 10 A | 15 A | S8VK-WB24024 | 55×124×117 |
| | | 480 W | 20 A | 30 A | S8VK-WB48024 | 65×124×117 |
| | | 960 W | 40 A | 60 A | S8VK-WB96024 | 118×124×117 |
| | 48 VDC | 240 W | 5 A | 7.5 A | S8VK-WB24048 | 55×124×117 |
| | | 480 W | 10 A | 15 A | S8VK-WB48048 | 65×124×117 |
| | | 960 W | 20 A | 30 A | S8VK-WB96048 | 118×124×117 |

Noise Filters S8V-NF

Cat. No. T212

- Featuring a Slim Design that Saves Space
- Push-In Connections for Safe and Easy Wiring



| Rated input voltage | Rated output voltage | Model | Size W×H×D (mm) |
|---------------------|----------------------|------------|-----------------|
| 250 VAC 250 VDC | 3 A | S8V-NFS203 | 32×90×86 |
| | 6 A | S8V-NFS206 | |

DC Electronic Circuit Protectors S8V-CP

Cat. No. T226

- Simplified safety design of DC circuits
- Saves space even with multi-channel



| Number of Outputs | UL Class 2 output | Rated output voltage | Model | Size W×H×D (mm) |
|-------------------|-------------------|----------------------|-------------|-----------------|
| 4 ch | NO | 24 VDC | S8V-CP0424 | 44.8×90×90.8 |
| | YES | | S8V-CP0424S | |
| 8 ch | NO | | S8V-CP0824 | 42×127×118.1 |

Magnetic Contactors (Contactor) J7KC

Cat. No. J230



- Motor Control up to 2.2 kW (200 to 240 VAC) ,5.5 kW (380 to 440 VAC), AC-3 class compatible, ideal for small pumps such as conveyors and coolant pumps.
- Ideal for safety applications thanks to mirror contact mechanism with feedback function.

| Product Type | Operation | Coil rating | Auxiliary contact | Model | Size W×H×D (mm) |
|--|--|-------------|-------------------|-------------------|-----------------|
| Magnetic contactor | AC-operated | 24 VAC | SPST-1NO | J7KC-12-10 AC24 | 45×67.5×49 |
| | | | SPST-1NC | J7KC-12-01 AC24 | |
| | | 100 VAC | SPST-1NO | J7KC-12-10 AC100 | |
| | | | SPST-1NC | J7KC-12-01 AC100 | |
| | | 200 VAC | SPST-1NO | J7KC-12-10 AC200 | |
| | | | SPST-1NC | J7KC-12-01 AC200 | |
| | | 230 VAC | SPST-1NO | J7KC-12-10 AC230 | |
| | | | SPST-1NC | J7KC-12-01 AC230 | |
| DC-operated (With built-in surge absorption unit) | 24 VDC | SPST-1NO | J7KC-12-10 DC24 | | |
| | | SPST-1NC | J7KC-12-01 DC24 | | |
| Reversing magnetic contactor | AC-operated | 200 VAC | SPST-1NO | J7KCR-12-10 AC200 | 90.5×77.5×78 |
| | | | SPST-1NC | J7KCR-12-01 AC200 | |
| | DC-operated (With built-in surge absorption unit) | 24 VDC | SPST-1NO | J7KCR-12-10 DC24 | |
| | | | SPST-1NC | J7KCR-12-01 DC24 | |

Auxiliary contact unit

| Number of poles | Auxiliary contact | Model |
|-----------------|-------------------|-------------|
| 2 Poles | 2PST-1NO 1NC | J73KC-AM-11 |
| 4 Poles | 4PST-4NO | J73KC-AM-40 |
| | 4PST-2NO 2NC | J73KC-AM-22 |
| | 4PST-4NC | J73KC-AM-04 |

Auxiliary Relays(Contactor Relay) J7KCA

Cat. No. J232



- Same shape as J7KC magnetic contactors Ideal for standardizing panel design

| Coil rating | Contact configuration | Model | Size W×H×D (mm) |
|-------------|-----------------------|---------------|-----------------|
| 24 VDC | 4PST-4NO | J7KCA-40 DC24 | 45×67.5×49 |
| | 4PST-3NO 1NC | J7KCA-31 DC24 | |
| | 4PST-2NO 2NC | J7KCA-22 DC24 | |

For detailed information such as formats and options other than those listed, please refer to the catalog data sheet of each product.

Manual Motor Starters J7MC

Cat. No. T212

- MPCB system, protection from Overload, Phase failure and Short Circuit
- In combination with magnetic contactor model J7KC, it is ideal for control of motors to AC-3 class, 2.2 kW (200 to 240 VAC) *1 or 5.5 kW (380 to 440 VAC).



*1. Based on JIS C 8201-4-1

| 3-phase standard motor capacity and full load current (reference values)*2 200 to 240 VAC | | Current setting range Rated operating current [A] | Rocker switch (standard type) | | Rotary switch (high-performance type) | | Magnetic contactor model |
|--|-------------|--|-------------------------------|-----------------|---------------------------------------|-----------------|--------------------------|
| Capacity [kW] | Current [A] | | Model | Size W×H×D (mm) | Model | Size W×H×D (mm) | |
| — | — | 0.1-0.16 | J7MC-3P-E16 | 45×130×74.7 | J7MC-3R-E16 | 45×130×94.7 | J7KC-12 |
| 0.03 | 0.24 | 0.16-0.25 | J7MC-3P-E25 | | J7MC-3R-E25 | | |
| 0.06 | 0.37 | 0.25-0.4 | J7MC-3P-E4 | | J7MC-3R-E4 | | |
| — | — | 0.4-0.63 | J7MC-3P-E63 | | J7MC-3R-E63 | | |
| 0.1 | 0.68 | 0.63-1 | J7MC-3P-1 | | J7MC-3R-1 | | |
| 0.2 | 1.3 | 1-1.6 | J7MC-3P-1E6 | | J7MC-3R-1E6 | | |
| 0.4 | 2.3 | 1.6-2.5 | J7MC-3P-2E5 | | J7MC-3R-2E5 | | |
| 0.75 | 3.5 | 2.5-4 | J7MC-3P-4 | | J7MC-3R-4 | | |
| — | — | 4-6.3 | J7MC-3P-6 | | J7MC-3R-6 | | |
| 1.5 | 6.9 | 6.3-10 | J7MC-3P-10 | | J7MC-3R-10 | | |
| 2.2 | 9.5 | | | | J7MC-3R-13 | | |
| 2.2 | 9.5 | | | | J7MC-3P-13 | | |

*2. The 3-phase motor full load current is a reference value. When applying, check the full load current of the motor you will use.

Thermal Overload Relays J7TC

Cat. No. T212

- One-touch Installation with magnetic contactor J7KC to configure a magnetic starter
- Motor Protection from Overload and Phase -loss by Combination with J7KC for up to 2.2 kW (240 VAC) ,5.5 kW (440 VAC).



*. Based on JIS C 8201-4-1

| Main circuit voltage | 3-phase standard motor capacity and full load current (reference values) | | Setting current range [A] | Model | Size W×H×D (mm) | Magnetic contactor model |
|----------------------|--|----------------|---------------------------|-------------|-----------------|--------------------------|
| | Capacity P(kW) | Current Ie (A) | | | | |
| 4P AC200V 50Hz | 0.1 | 0.68 | 0.48 - 0.72 | J7TC-01-E72 | 45×79.5×63.5 | J7KC-12 |
| | 0.2 | 1.3 | 0.95 - 1.45 | J7TC-01-1E4 | | |
| | 0.4 | 2.3 | 1.7 - 2.6 | J7TC-01-2E6 | | |
| | 0.75 | 3.8 | 2.8 - 4.2 | J7TC-01-4E2 | | |
| | 1.5 | 7 | 5 - 7.5 | J7TC-01-7E5 | | |
| | 2.2 | 9.8 | 7 - 10.5 | J7TC-01-10 | | |

Note: The 3-phase motor full load current is a reference value. When applying, check the full load current of the motor you will use.

Sockets with Push-In Plus technology

PYF-□□-PU/PTF-□□-PU/

P2RF-□□-PU/P7SA-PU

Cat. No. J212, J120






- Sockets with Push-In Plus technology to Save Work Added to Series for MY, LY , G2R-S Relays and G7SA Relays with Forcibly Guided Contacts









| Applicable model (typical example) | | | No. of poles | Model | Size W×H×D (mm) |
|--------------------------------------|------------------|------------|--------------|---------------------|-----------------|
| General Purpose Relays | MY Seires | MY2 | 2 | PYF-08-PU | 31×90×71.4 |
| | | MY4 | 4 | PYF-14-PU | |
| | LY Seires | LY2 | 2 | PTF-08-PU | 24.8×90×70.1 |
| | | LY2-CR | 2 | PTF-08-PU-L | 24.8×90×52.1 |
| | | LY4 | 4 | PTF-14-PU-L | 43.4×90×52.1 |
| | G3H Seires | G3H | 1 | PTF-08-PU | 24.8×90×70.1 |
| | | G3HD | | | |
| | G9H Seires | G9H | | | |
| | G2R-□-S Seires | G2R-1-S | 1 | P2RF-05-PU | 15.5×90×57 |
| G2R-2-S | | 2 | P2RF-08-PU | | |
| Timers | H3Y, H3YN Seires | H3Y(N)-2-B | 2 | PYF-08-PU-L | 31×90×57 |
| | | H3Y(N)-4-B | 4 | PYF-14-PU-L | |
| | H3RN Seires | H3RN-1-B | 1 | P2RF-05-PU | 15.5×90×57 |
| | | H3RN-2-B | 2 | P2RF-08-PU | |
| Liquid Leakage Sensors | K7L Seires | K7L-□B | 2 | | |
| Relays with Forcibly Guided Contacts | G7SA Seires | G7SA | 4 | P7SA-10F-ND-PU DC24 | 22.5×100×61 |
| | | | 6 | P7SA-14F-ND-PU DC24 | 27.7×100×61 |

For detailed information such as formats and options other than those listed, please refer to the catalog data sheet of each product.

PYF-PU-Applicable Models

| Applicable models | General Purpose Relays | | SSRs | Timers | |
|-------------------|---|---|---|---|---|
| | MY2 | MY4 | G3F/G3FD | H3Y(N)-2-B | H3Y(N)-4-B |
| No. of poles | 2 | 4 | 1 | 2 | 4 |
| Socket model | PYF-08-PU | PYF-14-PU | PYF-08-PU | PYF-08-PU-L*1 | PYF-14-PU-L*1 |
| Appearance |  |  |  |  |  |



PTF-PU-Applicable Models

| Applicable models | General Purpose Relays | | | SSRs | Temperature Controllers | |
|-------------------|--|--|--|---|--|--|
| | LY2 | LY2-CR | LY4 | G3H/G3HD/G9H | E5L-A | E5L-C |
| No. of poles | 2 | 2 | 4 | 1 | — | — |
| Socket model | PTF-08-PU | PTF-08-PU-L*1 | PTF-14-PU-L*1 | PTF-08-PU | PTF-14-PU-L*1 | PTF-14-PU-L*1 |
| Appearance |  |  |  |  |  |  |

P2RF-PU-Applicable Models

| Applicable models | General Purpose Relays | | SSRs | Timers | | Liquid Leakage Sensor Amplifiers |
|-------------------|---|---|---|--|---|---|
| | G2R-1-S | G2R-2-S | G3R-I/O/G3RZ | H3RN-1-B | H3RN-2-B | K7L-B |
| No. of poles | 1 | 2 | 1 | 1 | 2 | — |
| Socket model | P2RF-05-PU | P2RF-08-PU | P2RF-05-PU | P2RF-05-PU | P2RF-08-PU | P2RF-08-PU |
| Appearance |  |  |  |  |  |  |

P7SA-PU-Applicable Models

| Applicable models | Relays with Forcibly Guided Contacts | |
|-------------------|---|---|
| | G7SA | G7SA |
| No. of poles | 4 | 6 |
| Socket model | P7SA-10F-ND-PU DC24 | P7SA-14F-ND-PU DC24 |
| Appearance |  |  |

*A release lever is not included.

Slim I/O Relays G2RV-ST

Cat. No. J267



- Slim I/O relay with width 6.2 mm
- The test button function and mounted relay use plug-in terminals that are difficult to bend when exchanging.
- Since G2RV is a transparent case, confirming the state of the contact with the naked eye is possible, and easy to confirm abnormality on-site (installed location).

| Classification | Latching lever (Test switch) | Rated input voltage | Model | Size W×H×D (mm) |
|----------------|------------------------------|---------------------|--------------------------|-----------------|
| Standard | No | 12 VDC | G2RV-ST500 12 VDC | 6.2×90×88 |
| | | 24 VDC | G2RV-ST500 24 VDC | |
| | | 24 VAC/VDC | G2RV-ST500 24 VAC/VDC | |
| | | 48 VAC/VDC | G2RV-ST500 48 VAC/VDC | |
| | | 100 VAC | G2RV-ST500 100 VAC | |
| | | 200 VAC | G2RV-ST500 200 VAC | |
| | Yes | 24 VDC | G2RV-ST501 24 VDC | |
| | | 24 VAC/VDC | G2RV-ST501 24 VAC/VDC | |
| Microloads | No | 12 VDC | G2RV-ST500-AP 12 VDC | |
| | | 24 VDC | G2RV-ST500-AP 24 VDC | |
| | | 24 VAC/VDC | G2RV-ST500-AP 24 VAC/VDC | |

Slim I/O Solid State Relays G3RV-ST

Cat. No. J267



- Width 6.2 mm., high frequency, high-speed opening and closing SSR (solid state relay).

| Applicable output load | Zero cross function | Rated input voltage | Model | Size W×H×D (mm) |
|--|---------------------|---------------------|---------------------------|-----------------|
| DC load | — | 12 VDC | G3RV-ST500-D 12 VDC | 6.2×90×88 |
| | | 24 VDC | G3RV-ST500-D 24 VDC | |
| | | 24 VAC/VDC | G3RV-ST500-D 24 VAC/VDC | |
| | | 100 VAC | G3RV-ST500-D 100 VAC | |
| | | 200 VAC | G3RV-ST500-D 200 VAC | |
| DC load (high-speed opening and closing) | — | 24 VDC | G3RV-ST500-D-H 24 VDC | |
| | | 24 VAC/VDC | G3RV-ST500-D-H 24 VAC/VDC | |
| AC load | Yes | 12 VDC | G3RV-ST500-A 12 VDC | |
| | | 24 VDC | G3RV-ST500-A 24 VDC | |
| | | 24 VAC/VDC | G3RV-ST500-A 24 VAC/VDC | |
| | No | 12 VDC | G3RV-ST500-AL 12 VDC | |
| | | 24 VDC | G3RV-ST500-AL 24 VDC | |
| | | 24 VAC/VDC | G3RV-ST500-AL 24 VAC/VDC | |

For detailed information such as formats and options other than those listed, please refer to the catalog data sheet of each product.

Terminal Relays

G6D-F4PU/G3DZ-F4PU

Cat. No. J228



- Model with Push-In Plus technology Added to Terminal Relays with Four-point Output Lineup.
- Rated 5A is achieved with optimum designs than conventional screw-type G6D-F4B (rated 3A).

Wide Variety of Application

| Mounted Relay type | Contact form | Operation coil ratings | Model | Size W×H×D (mm) |
|---------------------|-----------------------|------------------------|---------------|--------------------|
| Mechanical Relay | SPST x 4 (1NO x 4) | 12 VDC | G6D-F4PU DC12 | 31×90×35 |
| | | 24 VDC | G6D-F4PU DC24 | |
| 12 VDC | | G3DZ-F4PU DC12 | | |
| 24 VDC | | G3DZ-F4PU DC24 | | |
| Power MOS FET relay | | | | |

I/O Relay Terminals

G70V

Cat. No. J215



- I/O Relay Terminals with 16 Points and Push-In Plus terminal blocks to Downsize Control Panels and Save Labor

| Classification | Point | Common Line | | Rated voltage | Model | Size W×H×D (mm) |
|----------------|-------|--|----------------|---------------|-------------------|--------------------|
| | | Terminal Block Side | Connector Side | | | |
| Input | 16 | No internal connections | NPN(- common) | 24 VDC | G70V-SID16P | 143×90×56 |
| | | | PNP(+ common) | | G70V-SID16P-1 | |
| | | 16 points internally connected | NPN(- common) | | G70V-SID16P-C16 | |
| | | | PNP(+ common) | | G70V-SID16P-1-C16 | |
| Output | | No internal connections | NPN(+ common) | | G70V-SOC16P | |
| | | | PNP(- common) | | G70V-SOC16P-1 | |
| | | Every 4 points internally connected at terminal block bottom row | NPN(+ common) | | G70V-SOC16P-C4 | |
| | | | PNP(- common) | | G70V-SOC16P-1-C4 | |

- Width 6.2 mm., high frequency, high-speed opening and closing SSR (solid state relay).
- Realized a slim shape with a switching capacity up to 3 A (DC), and 2 A (AC)

Solid-state Timers

H3DT



Cat. No. M090

- Slim Timers (17.5-mm width) with two sets of contacts: One of the slimmest Timers worldwide. *1
- Reduces power consumption (active power) by up to 60% to help reduce heat generation in control panels.*2

*1.According to OMRON investigation in February 2020.

*2.Based on OMRON comparison (excluding the H3DT-H).

| Operating modes | Supply voltage | Type | Control output | Model | Size W×H×D (mm) |
|--------------------------------|------------------|--|--|----------|--------------------|
| Eight-mode Timer | 24 to 240 VAC/DC | Standard Eight-mode Timer | Contact output, DPDT (time-limit DPDT, or timelimit SPDT + instantaneous SPDT) Changed using a switch. | H3DT-N2 | 17.5×90×90 |
| | | Expansion Eight-mode Timer | | H3DT-L2 | |
| | | Standard Eight-mode Timer | Contact output, SPDT (time-limit SPDT) | H3DT-N1 | |
| | | Expansion Eight-mode Timer | | H3DT-L1 | |
| Power ON-delay | | — | Contact output, DPDT (time-limit DPDT) | H3DT-A2 | |
| | | — | Contact output, SPDT (time-limit SPDT) | H3DT-A1 | |
| Flicker OFF Start, ON start | | Twin Timer (Independent ON time and OFF time settings) | Contact output: SPDT | H3DT-F | |
| Star-delta | | — | Contact outputs Delta circuit: SPDT, Star circuit: SPDT | H3DT-G | |
| Power OFF-delay | 100 to 120 VAC | S Series (time range: 0.1 to 12 s) | Contact output: SPDT | H3DT-HCS | |
| | | L Series (time range: 1.0 to 120 s) | | H3DT-HCL | |
| | 200 to 240 VAC | S Series (time range: 0.1 to 12 s) | | H3DT-HDS | |
| | | L Series (time range: 1.0 to 120 s) | | H3DT-HDL | |
| | 24 to 48 VAC/DC | S Series (time range: 0.1 to 12 s) | | H3DT-HBS | |
| | | L Series (time range: 1.0 to 120 s) | | H3DT-HBL | |

For detailed information such as formats and options other than those listed, please refer to the catalog data sheet of each product.

Measuring and Monitoring Relays K8DT



- Models with transistor outputs available for long-term contact reliability.
- Control panel downsizing and reduced wiring; flexible layout with a 17.5-mm width
- Push-In Plus terminal blocks for easy wiring

| Measuring and Monitoring object | | Input | Output | Alarm operation | Function | Series name*1 | Size W×H×D (mm) |
|---------------------------------|---|---------|---|--|--|--------------------------|-----------------|
| Motor protection | Single phase | Current | One SPDT relay output or One Transistor | Upper or lower limit (switched) | Single-phase Undercurrent or Single-phase Overcurrent | K8DT-AS Cat. No. N201 | 17.5×90×90 |
| | | | | Upper and lower limits (redundant operation) | Single-phase Undercurrent Single-phase Overcurrent | K8DT-AW Cat. No. N202 | |
| | | Voltage | | Upper or lower limit (switched) | Single-phase Undervoltage or Single-phase Overvoltage | K8DT-VS Cat. No. N203 | |
| | | | | Upper and lower limits (redundant operation) | Single-phase Undervoltage Single-phase Overvoltage | K8DT-VW Cat. No. N204 | |
| | Three phase | Voltage | | Fixed | Phase sequence、 Phase loss | K8DT-PH Cat. No. N206 | |
| | | | | Upper and lower limits | Phase sequence、 Phase loss、 Three-phase Undervoltage、 Three-phase Overvoltage | K8DT-PM Cat. No. N207 | |
| | | | | | Phase sequence、 Phase loss、 Three-phase Undervoltage、 Three-phase Overvoltage、 Three-phase Asymmetry | K8DT-PZ Cat. No. N208 | |
| | | | | Upper or lower limit (switched) | Temperature Monitoring | K8DT-TH Cat. No. N209 | |
| Temperature monitoring | Thermocouple or platinum resistance thermometer | | | | | | |
| Water level control | Electrode | | Water supply or discharge (switched) | Water level control | K8DT-LS Cat. No. N205 | | |

*1.For detailed format specifications and inventory information, please refer to Catalog or data sheet.

DIN Track Terminal Blocks

XW5T

Cat. No. G124

- Push-in Plus Terminal Blocks to Downsize Control Panels and Save Work



| Common specifications | | | | Feed Through Terminal blocks (Dark gray) | Grounding Terminal blocks (Green / Yellow) | Size W×H×D (mm) |
|---------------------------|--|------------------|--------|--|--|-----------------|
| Product Type | Applicable wire sizes* ¹ | Number of levels | Wiring | Model | Model | |
| Standard terminals | 0.08 mm ² to 1.5 mm ² AWG28 to AWG16 | 1 | 1:1 | XW5T-P1.5-1.1-1 | XW5G-P1.5-1.1-1 | 3.5×45×30.5 |
| | 0.14 mm ² to 2.5 mm ² AWG26 to AWG14 | | | XW5T-P2.5-1.1-1 | XW5G-P2.5-1.1-1 | 5.2×48.8×35.3 |
| | 0.2 mm ² to 4.0 mm ² AWG24 to AWG12 | | | XW5T-P4.0-1.1-1 | XW5G-P4.0-1.1-1 | 6.2×56.1×35.3 |
| Multi tiers terminal | 0.08 mm ² to 1.5 mm ² AWG28 to AWG16 | 2 | 1:1 | XW5T-P1.5-1.1-2 | XW5G-P1.5-1.1-2 | 3.5×65.7×41.1 |
| | 0.14 mm ² to 2.5 mm ² AWG26 to AWG14 | | | XW5T-P2.5-1.1-2 | XW5G-P2.5-1.1-2 | 5.2×78.8×45.9 |
| | 0.2 mm ² to 4.0 mm ² AWG24 to AWG12 | | | XW5T-P4.0-1.1-2 | XW5G-P4.0-1.1-2 | 6.2×85×45.9 |
| Multi conductor terminals | 0.08 mm ² to 1.5 mm ² AWG28 to AWG16 | 1 | 1:2 | XW5T-P1.5-1.2-1 | XW5G-P1.5-1.2-1 | 3.5×54.1×30.5 |
| | 0.14 mm ² to 2.5 mm ² AWG26 to AWG14 | | | XW5T-P2.5-1.2-1 | XW5G-P2.5-1.2-1 | 5.2×60.5×35.3 |
| | 0.2 mm ² to 4.0 mm ² AWG24 to AWG12 | | | XW5T-P4.0-1.2-1 | XW5G-P4.0-1.2-1 | 6.2×66.5×35.3 |
| | 0.08 mm ² to 1.5 mm ² AWG28 to AWG16 | 1 | 2:2 | XW5T-P1.5-2.2-1 | XW5G-P1.5-2.2-1 | 3.5×63.2×30.5 |
| | 0.14 mm ² to 2.5 mm ² AWG26 to AWG14 | | | XW5T-P2.5-2.2-1 | XW5G-P2.5-2.2-1 | 5.2×72.2×35.3 |
| | 0.2 mm ² to 4.0 mm ² AWG24 to AWG12 | | | XW5T-P4.0-2.2-1 | XW5G-P4.0-2.2-1 | 6.2×76.9×35.3 |

Common Terminal Blocks

XW6T

Cat. No. G139

- Downsize Control Panels and Save Work with Common Terminal Blocks with Visible Indicators
- Indicators make wiring completion simply visible. Proper wiring without skillful operators.



| Common specifications | | Applicable wire sizes* ¹ | Model | Size W×H×D (mm) | Applicable wire sizes* | Model | Size W×H×D (mm) |
|-----------------------|---------------------|--|------------------|------------------|---|------------------|--------------------|
| Number of pins | Color of Short Bars | | | | | | |
| 8 | Red | 0.08~1.5 mm ² / AWG28~16 | XW6T-COM1.5X8RD | 9.2×78 ×31.3 | 0.14 to 2.5 mm ² / AWG26 to 14 | XW6T-COM2.5X8RD | 12.6×82.6× 36.1 |
| | Blue | | XW6T-COM1.5X8BL | | | XW6T-COM2.5X8BL | |
| | Yellow | | XW6T-COM1.5X8YL | | | XW6T-COM2.5X8YL | |
| 12 | Red | | XW6T-COM1.5X12RD | 12.7×78×31.3 | | XW6T-COM2.5X12RD | 17.8×82.6× 36.1 |
| | Blue | | XW6T-COM1.5X12BL | | | XW6T-COM2.5X12BL | |
| | Yellow | | XW6T-COM1.5X12YL | | | XW6T-COM2.5X12YL | |
| 16 | Red | | XW6T-COM1.5X16RD | 16.2×78×31.3 | | XW6T-COM2.5X16RD | 23.0×82.6 ×36.1 |
| | Blue | | XW6T-COM1.5X16BL | | | XW6T-COM2.5X16BL | |
| | Yellow | | XW6T-COM1.5X16YL | | | XW6T-COM2.5X16YL | |
| 20 | Red | | XW6T-COM1.5X20RD | 19.7×78×31.3 | | XW6T-COM2.5X20RD | 28.2×82.6 ×36.1 |
| | Blue | | XW6T-COM1.5X20BL | | | XW6T-COM2.5X20BL | |
| | Yellow | | XW6T-COM1.5X20YL | | | XW6T-COM2.5X20YL | |
| 40 | Red | XW6T-COM1.5X40RD | 37.2×78×31.3 | XW6T-COM2.5X40RD | 54.2×82.6 ×36.1 | | |
| | Blue | XW6T-COM1.5X40BL | | XW6T-COM2.5X40BL | | | |
| | Yellow | XW6T-COM1.5X40YL | | XW6T-COM2.5X40YL | | | |

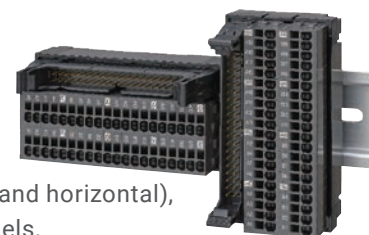
*1.For stranded lines

For detailed information such as formats and options other than those listed, please refer to the catalog data sheet of each product.

Ultra-Compact Interface Wiring System

XW2K

Cat. No.G152



- This product is the industry's smallest*1 and is mountable in two ways (vertical and horizontal), so you can use space efficiently to downsize and save space on your control panels.
- Wiring patterns specifically designed for connections with the PLCs of each company reduce the work required for signal layout checking.

*1. According to OMRON investigation in March 2022

Ultra-Compact Connector-Terminal Blocks (For PLC Connection)

| Applicable PLCs | Circuit | I/O Points | Model | Dimension W×H×D (mm) | |
|--|-------------------|------------|---------------|----------------------|------------------|
| | | | | Vertical mount | Horizontal mount |
| OMRON, Yokogawa Electric, Hitachi Industrial Equipment Systems | Circuit pattern A | 32 Points | XW2K-40G-032A | 39×75×40.8 | 75×39×40.8 |
| | Circuit pattern B | | XW2K-40G-032B | | |
| | Circuit pattern A | | XW2K-40G-032C | | |
| | Mixed I/O | | XW2K-40G-M32 | | |
| Mitsubishi Electric, Fuji Electric | Mixed I/O | | XW2K-40G-K32 | | |
| KEYENCE | Mixed I/O | | | | |

Ultra-Compact Connector-Terminal Blocks (For PLC Connection • Integrated Common Terminal Type)

| Applicable PLCs | Circuit | I/O Points | Model | Dimension W×H×D (mm) | |
|--|---------------------------|------------|-------------------|----------------------|------------------|
| | | | | Vertical mount | Horizontal mount |
| OMRON | Input | 16 Points | XW2K-20G-016A-IN | 52.7×75×40.8 | 75×52.7×40.8 |
| | Output | | XW2K-20G-016B-OUT | 39×75×40.8 | 75×39×40.8 |
| OMRON, Yokogawa Electric, Hitachi Industrial Equipment Systems | Input(Circuit pattern A) | 32 Points | XW2K-40G-032A-IN | 52.7×124×40.8 | 124×52.7×40.8 |
| | Input(Circuit pattern C) | | XW2K-40G-032C-IN | | |
| | Output(Circuit pattern B) | | XW2K-40G-032B-OUT | 39×124×40.8 | |
| | Input(Circuit pattern C) | | XW2K-40G-032C-OUT | | |
| Mitsubishi Electric, Fuji Electric | Input | | XW2K-40G-M32-IN | 52.7×124×40.8 | 124×52.7×40.8 |
| | Output | | XW2K-40G-M32-OUT | 39×124×40.8 | 124×39×40.8 |
| KEYENCE | Input | | XW2K-34G-K32-IN | 52.7×124×40.8 | 124×52.7×40.8 |
| | Output | | XW2K-34G-K32-OUT | 39×124×40.8 | 124×39×40.8 |

Ultra-Compact Connector-Terminal Blocks (General-Purpose)

| Circuit | Connector poles | Model | Dimension W×H×D (mm) | |
|----------------------------------|-----------------|------------|----------------------|------------------|
| | | | Vertical mount | Horizontal mount |
| Straight wiring (1:1 Circuit) | 20 poles | XW2K-20G-T | 39×56×40.8 | 56×39×40.8 |
| | 34 poles | XW2K-34G-T | 39×75×40.8 | 75×39×40.8 |
| | 40 poles | XW2K-40G-T | 39×75×40.8 | 75×39×40.8 |
| | 50 poles | XW2K-50G-T | 39×92.5×40.8 | 92.5×39×40.8 |

■ Applicable PLCs

- OMRON : CS, C, J and NX series
- Mitsubishi Electric : MELSEC L, Q and iQ-R series
- KEYENCE : KV-1000, 3000, 5000, 5500 and Nano series
- Yokogawa Electric : FA-M3 series
- Hitachi Industrial Equipment Systems : EH-150/EHV series
- Fuji Electric : MICREX-SX series

Ultra-Compact Common Terminal Blocks

(For Sensor Power Supply)

XW2K-COM

Cat. No.G152



- Ideal for supplying power to a sensor or actuator

| Number of poles | Application | Model | Dimension W×H×D (mm) |
|-----------------|--------------|-------------|----------------------|
| 20 poles | For + common | XW2K-COM20N | 14.8×75×29.4 |
| | For - common | XW2K-COM20P | |
| | +/- mix | XW2K-COM20 | |

Note. It is a small model that is ideal for sensor power supply, but it can also be used for uses other than sensor power supply (e.g. AC circuit).

Solid State Relays for Heater G3PJ



Cat. No. J210

- Single-phase SSR for low heat generation enables carrying 25 A even for close mounting of three SSRs to contribute to downsizing of control panels.

| Input terminal | Output terminal | Insulation method | Rated input voltage | Zero cross function | Rated load voltage | Rated load current (ambient temperature of 40 °C)* | | Model | Size W×H×D (mm) |
|------------------------------|-----------------|--------------------|---------------------|---------------------|--------------------|--|-------------------|-------------------------|-----------------|
| | | | | | | Close mounting (Three SSRs) | Separate mounting | | |
| Push-In Plus terminal blocks | Screw terminals | Phototriac coupler | 12 to 24 VDC | Yes | 24 to 240 VAC | 15A | 18A | G3PJ-215B-PU DC12-24 | 22.5×84×100 |
| | | | | | | 25A | 27A | G3PJ-225B-PU DC12-24 | |
| | | | | | 100 to 480 VAC | 15A | 23A | G3PJ-515B-PU DC12-24 | |
| | | | | | | 25A | 27A | G3PJ-525B-PU DC12-24 | |

Power Monitors KM-N2/KM-N3

Cat. No. N213

- Power Monitors applicable around the globe
- Solve design, installation, and operation topics with one model for each installation type
- Handle circuits up to 3-phase 4-wire and 3-phase 480 V



| Installation method | Applicable phase wiring methods | | Power supply voltage | Communications | Model | Size W×H×D (mm) |
|-----------------------|---------------------------------|--|--|-------------------------------------|-----------|-----------------|
| DIN Rail mounting | Single-phase, 2-wire | 100 to 277 VAC | Same as measured circuits: 100 to 277 VAC (L-N) 173 to 480 VAC (L-L) | RS-485 communications, pulse output | KM-N2-FLK | 90×90×65 |
| | Single-phase, 3-wire | 100 to 240 VAC(L-N) 200 to 480 VAC(L-L) | | | | |
| | Three-phase, 3-wire | 173 to 480 VAC(L-L) | | | | |
| | Three-phase, 4-wire | 100 to 277 VAC(L-N) 173 to 480 VAC(L-L) | | | | |
| On-panel installation | Single-phase, 2-wire | 100 to 277 VAC | 100 to 240 VAC Separate from measurement voltage | RS-485 communications, pulse output | KM-N3-FLK | 96×96×64 |
| | Single-phase, 3-wire | 100 to 240 VAC(L-N) 200 to 480 VAC(L-L) | | | | |
| | Three-phase, 3-wire | 173 to 480 VAC(L-L) | | | | |
| | Three-phase, 4-wire | 100 to 277 VAC(L-N) 173 to 480 VAC(L-L) | | | | |

For detailed information such as formats and options other than those listed, please refer to the catalog data sheet of each product.

Uninterruptible Power Supply (UPS) S8BA

Cat. No. U701

- DIN rail to provide an ideal countermeasure for momentary power losses and power failures in industrial computers (IPC) and controllers.



Integrated battery type

| Input voltage | Output current/ capacity | Model | Size W×H×D(mm) |
|---------------|-----------------------------|------------------|----------------|
| 24 VDC | 5 A/120 W | S8BA-24D24D120LF | 94×100×100 |
| | 10 A/240 W | S8BA-24D24D240LF | 148×100×100 |
| | 15 A/360 W | S8BA-24D24D360LF | 270×100×100 |
| | 20 A/480 W*1 | S8BA-24D24D480LF | |

*1.16.7 A/400 W for use as a UL compliant device.

Separated battery type: Control unit

| Input voltage | Output current/ capacity | Model | Size W×H×D(mm) |
|---------------|-----------------------------|-------------------|----------------|
| 24 VDC | 20 A/480 W | S8BA-24D24D480SBF | 44×124×120.9 |
| | 40 A/960 W | S8BA-24D24D960SBF | 52×124×120.9 |

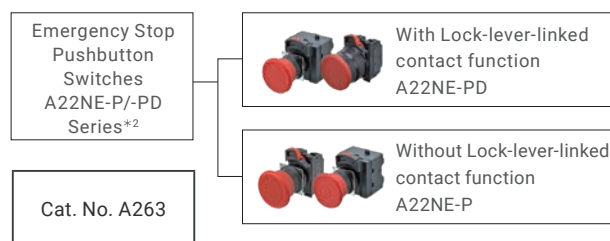
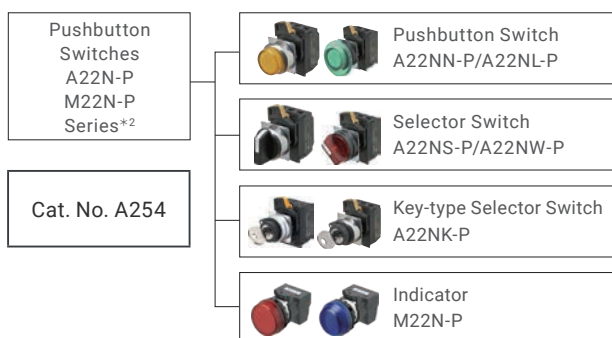
Separated battery type: Battery unit

| Rated voltage | Rated capacity | UPS Model : Required units | Model | Size W×H×D (mm) |
|---------------|----------------|----------------------------|------------|-----------------|
| 25.2 VDC | 3900 mAh | S8BA-24D24D480SBF | S8BA-S480L | 80×124×120.9 |
| | | S8BA-24D24D480SBF | S8BA-S960L | |
| | 7800 mAh | S8BA-24D24D960SBF | | 150×124×120.9 |

Pushbutton Switches / Emergency Stop Pushbutton Switches A22N-P/A22NE-P

- Pushbutton with Push-In Plus technology for easy wiring
- Improved workability in wiring and installation
- Changes to the wiring direction and a shorter body provide freedom in the layout

- In a model equipped with Lock-lever-linked contact function, the improper installation of the Switch Unit can be detected.
- Improved Workability in Wiring and Installation
- Pushbutton with Push-In Plus technology for easy wiring



*2. For detailed format specifications and inventory information, please refer to Catalog or data sheet.

Temperature Controllers E5CC-B/E5EC-B/E5DC-B

Cat. No. H177

- Large White PV Display That's Easier to Read.
- High-speed sampling at 50 ms.
- Easy to Use, from Model Selection to Setup and Operation.
- Push-In Plus technology for easy wiring.
- Easy connections to a PLC with programless communications.
Use component communications to link Temperature Controllers to each other.



E5CC-B (48 × 48 mm)

| Control outputs | Auxiliary outputs | Power supply voltage | Options | | | | | Model | Size W×H×D (mm) | |
|--|-------------------|----------------------|-----------------------|----------------|--------------|-----------------|-----------------|-----------------|-----------------------|-----------------|
| | | | HB alarm and HS alarm | Communications | Event inputs | Remote SP Input | Transfer output | | | |
| Control output 1 : Relay output Control output 2 : None | 2 | 100 to 240 VAC | — | — | — | — | — | E5CC-RX2ABM-000 | 48×48× 67.4*1 | |
| | | | 1 | — | 2 | — | — | E5CC-RX2ABM-001 | | |
| | | | 1 | RS-485 | — | — | — | E5CC-RX2ABM-002 | | |
| | | | — | RS-485 | 2 | — | — | E5CC-RX2ABM-004 | | |
| | | | — | — | 2 | — | Provided. | E5CC-RX2ABM-006 | | |
| | | | — | — | — | — | — | E5CC-RX2DBM-000 | | |
| | | 24 VAC/ DC | 1 | — | 2 | — | — | E5CC-RX2DBM-001 | | |
| | | | 1 | RS-485 | — | — | — | E5CC-RX2DBM-002 | | |
| | | | — | RS-485 | 2 | — | — | E5CC-RX2DBM-004 | | |
| | | | — | — | 2 | — | Provided. | E5CC-RX2DBM-006 | | |
| | | | 100 to 240 VAC | — | — | — | — | — | | E5CC-QX2ABM-000 |
| | | | | 1 | — | 2 | — | — | | E5CC-QX2ABM-001 |
| 1 | RS-485 | — | | — | — | E5CC-QX2ABM-002 | | | | |
| — | RS-485 | 2 | | — | — | E5CC-QX2ABM-004 | | | | |
| — | — | 2 | | — | Provided. | E5CC-QX2ABM-006 | | | | |
| — | — | — | | — | — | E5CC-QX2DBM-000 | | | | |
| 24 VAC/ DC | 1 | — | 2 | — | — | E5CC-QX2DBM-001 | | | | |
| | 1 | RS-485 | — | — | — | E5CC-QX2DBM-002 | | | | |
| | — | RS-485 | 2 | — | — | E5CC-QX2DBM-004 | | | | |
| | — | — | 2 | — | Provided. | E5CC-QX2DBM-006 | | | | |
| | 100 to 240 VAC | — | — | — | — | — | E5CC-CX2ABM-000 | | | |
| | | — | RS-485 | 2 | — | — | E5CC-CX2ABM-004 | | | |
| — | | — | — | — | — | E5CC-CX2DBM-000 | | | | |

*1.The depth is the size under the neck.

For detailed information such as formats and options other than those listed, please refer to the catalog data sheet of each product.

E5EC-B (48 ×96 mm)

| Control outputs | Auxiliary outputs | Power supply voltage | Options | | | | | Model | Size W×H×D (mm) |
|---|-------------------|----------------------|-----------------------|----------------|--------------|-----------------|-----------------|-----------------|-----------------|
| | | | HB alarm and HS alarm | Communications | Event inputs | Remote SP Input | Transfer output | | |
| Control output 1 : Relay output Control output 2 : None | 2 | 100 to 240 VAC | — | — | — | — | — | E5EC-RX2ABM-000 | 48×96× 67.4 |
| | | | 1 | RS-485 | 2 | — | — | E5EC-RX2ABM-008 | |
| | | | 1 | — | 4 | — | — | E5EC-RX2ABM-010 | |
| | 4 | 100 to 240 VAC | 1 | — | 6 | Provided. | Provided. | E5EC-RX2ABM-011 | |
| | | | — | — | — | — | — | E5EC-RX2DBM-000 | |
| | | | — | — | — | — | — | E5EC-RX4ABM-000 | |
| Control output 1 : Voltage output (for driving SSR) Control output 2 : None | 2 | 100 to 240 VAC | — | — | — | — | — | E5EC-RX4ABM-008 | |
| | | | 1 | RS-485 | 2 | — | — | E5EC-RX4ABM-010 | |
| | | | 1 | — | 4 | — | — | E5EC-RX4ABM-011 | |
| | 4 | 100 to 240 VAC | — | — | — | — | — | E5EC-QX2ABM-000 | |
| | | | 1 | — | 6 | Provided. | Provided. | E5EC-QX2ABM-008 | |
| | | | 1 | — | — | — | — | E5EC-QX2ABM-010 | |
| Control output 1 : Linear current output Control output 2 : None | 2 | 100 to 240 VAC | — | — | — | — | — | E5EC-QX2DBM-000 | |
| | | | — | RS-485 | 2 | — | — | E5EC-QX4ABM-000 | |
| | | | — | — | — | — | — | E5EC-QX4ABM-008 | |
| | 4 | 100 to 240 VAC | — | — | — | — | — | E5EC-QX4ABM-010 | |
| | | | 1 | RS-485 | 2 | — | — | E5EC-QX4ABM-011 | |
| | | | 1 | — | 4 | — | — | E5EC-QX4ABM-010 | |
| Control output 1 : Linear current output Control output 2 : None | 2 | 100 to 240 VAC | — | — | — | — | — | E5EC-CX2ABM-000 | |
| | | | — | RS-485 | 2 | — | — | E5EC-CX2ABM-004 | |
| | | | — | — | — | — | — | E5EC-CX2DBM-000 | |
| | 4 | 100 to 240 VAC | — | — | — | — | — | E5EC-CX4ABM-000 | |
| | | | — | RS-485 | 2 | — | — | E5EC-CX4ABM-004 | |
| | | | — | — | — | — | — | E5EC-CX4DBM-000 | |

E5DC-B (22.5 mm Wide, and DIN Track-mounting Type)

| Control outputs | Auxiliary outputs | Power supply voltage | Options | | | | | Model | Size W×H×D (mm) |
|---|-------------------|----------------------|-----------------------|----------------|--------------|-----------------|-----------------|-----------------|------------------|
| | | | HB alarm and HS alarm | Communications | Event inputs | Remote SP Input | Transfer output | | |
| Control output 1 : Relay output Control output 2 : None | — | 100 to 240 VAC | — | RS-485 | — | — | — | E5DC-RX0ABM-015 | 22.5×96× 90*1 |
| | | 24 VAC/ DC | — | RS-485 | — | — | — | E5DC-RX0DBM-015 | |
| | 2 | 100 to 240 VAC | — | — | — | — | — | E5DC-RX2ABM-000 | |
| | | 24 VAC/ DC | 1 | RS-485 | — | — | — | E5DC-RX2ABM-002 | |
| Control output 1 : Voltage output (for driving SSR) Control output 2 : None | — | 100 to 240 VAC | — | — | — | — | — | E5DC-RX2DBM-000 | |
| | | 24 VAC/ DC | 1 | RS-485 | — | — | — | E5DC-RX2DBM-002 | |
| | 2 | 100 to 240 VAC | — | RS-485 | — | — | — | E5DC-QX0ABM-015 | |
| | | 24 VAC/ DC | — | RS-485 | — | — | — | E5DC-QX0DBM-015 | |
| | | 100 to 240 VAC | — | — | — | — | — | E5DC-QX2ABM-000 | |
| | | 24 VAC/ DC | 1 | RS-485 | — | — | — | E5DC-QX2ABM-002 | |
| Control output 1 : Linear current output Control output 2 : None | — | 100 to 240 VAC | — | — | — | — | — | E5DC-QX2DBM-000 | |
| | | 24 VAC/ DC | 1 | RS-485 | — | — | — | E5DC-QX2DBM-002 | |
| | 2 | 100 to 240 VAC | — | RS-485 | — | — | — | E5DC-CX0ABM-015 | |
| | | 24 VAC/ DC | — | RS-485 | — | — | — | E5DC-CX0DBM-015 | |
| | | 100 to 240 VAC | — | — | — | — | — | E5DC-CX2ABM-000 | |
| | | 24 VAC/ DC | 1 | RS-485 | — | — | — | E5DC-CX2ABM-002 | |

*1.The depth is the size under the neck.

Table of applicable wires for control panel solution products and recommended products

Recommended ferrules and applicable wires^①

| Wire diameter | | | | | | Common to S8VK-S/S8VK-W | | | | | | | | S8VK-S03024 S8VK-S06024 | | S8VK-S12024 | | S8VK-S24024 | |
|-----------------|-------|----------------------------|---------------------------------|----------------------------|----------------------|-------------------------|-----|------------|-------------|------------|-------------|------------|-------------|----------------------------|-------------|-------------|--|-------------|--|
| | | | | | | Applicable termina | PE | Input side | Output side | Input side | Output side | Input side | Output side | Input side | Output side | | | | |
| mm ² | AWG | Stripping length (Unit:mm) | Manufactured by Phoenix Contact | Manufactured by Weidmuller | Manufactured by Wago | mm ² | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | | | |
| 0.14 | 26 | 10 | A10,14-8 | H0.14/12 | - | | 2 | 2.5 | 22 | 14 | 0.34 | 2.5 | 0.34 | 2.5 | 0.5 | 2.5 | | | |
| 0.25 | 24 | 10 | A10,25-8 | H0.25/12 | 216-301 | | | | | | | | | | | | | | |
| | | 12 | A10,25-10 | - | - | | | | | | | | | | | | | | |
| | | 14 | A10,25-12 | - | - | | | | | | | | | | | | | | |
| 0.34 | 22 | 10 | A10,34-8 | H0.34/12 | 216-302 | | | | | | ○ | | ○ | | | | | | |
| | | 12 | A10,34-10 | - | - | | | | | | ○ | | ○ | | | | | | |
| | | 14 | A10,34-12 | - | - | | | | | | | | | | | | | | |
| 0.5 | 20 | 10 | A10,5-8 | H0.5/14 | 216-201 | | | | | | ○ | ○ | ○ | ○ | ○ | ○ | | | |
| | | 12 | A10,5-10 | H0.5/16 | 216-241 | | | | | | ○ | ○ | ○ | ○ | ○ | ○ | | | |
| | | 14 | A10,5-12 | - | 216-261 | | | | | | | | | | | | | | |
| 0.75 | 18 | 10 | A10,75-8 | H0.75/14 | 216-202 | | | | | | ○ | ○ | ○ | ○ | ○ | ○ | | | |
| | | 12 | A10,75-10 | H0.75/16 | 216-242 | | | | | | ○ | ○ | ○ | ○ | ○ | ○ | | | |
| | | 14 | A10,75-12 | H0.75/18 | 216-262 | | | | | | | | | | | | | | |
| 1/1.25 | 18/17 | 10 | A11-8 | H1.0/14 | 216-203 | | | | | | ○ | ○ | ○ | ○ | ○ | ○ | | | |
| | | 12 | A11-10 | H1.0/16 | 216-243 | | | | | | ○ | ○ | ○ | ○ | ○ | ○ | | | |
| | | 14 | A11-12 | H1.0/18 | 216-263 | | | | | | | | | | | | | | |
| 1.25/1.5 | 17/16 | 10 | A11,5-8 | H1.5/14 | 216-204 | | | | | | ○ | ○ | ○ | ○ | ○ | ○ | | | |
| | | 12 | A11,5-10 | H1.5/16 | 216-244 | | | | | | ○ | ○ | ○ | ○ | ○ | ○ | | | |
| | | 14 | A11,5-12 | H1.5/18D | 216-264 | | | | | | | | | | | | | | |
| 2/2.5 | 14 | 12 | A12,5-10 | H2.5/16DS | 216-246 | | | | | | ○ | ○ | ○ | ○ | ○ | ○ | | | |
| | | 14 | A12,5-12 | H2.5/19D | 216-266 | | | | | | | | | | | | | | |
| 3.5/4 | 12 | 14 | A14-12 | H4.0/20D | 216-267 | | | | | | | | | | | | | | |
| 6 | 10 | 16 | A16-12 | H6.0/20 | 216-208 | | | | | | | | | | | | | | |
| 10 | 8 | 21 | A110-18 | H10.0/28 | 216-289 | | | | | | | | | | | | | | |

Note :Some models may use ferrules without an insulation sleeve. For details, please check the data sheet for each product.

Recommended crimp tool

| Phoenix Contact | | Weidmuller | | Wago | |
|---|---|--------------------|--|--|--|
| Name / Model | Applicable wire diameter | Name / Model | Applicable wire diameter | Name / Model | Applicable wire diameter |
| CRIMPFOX 6 CRIMPFOX 6T-F CRIMPFOX 10S CRIMPFOX 25R | 0.25~6 mm ² /AWG24-10 0.25~6 mm ² /AWG24-10 0.14~10 mm ² /AWG25-7 10~25 mm ² /AWG8-4 | PZ 6 roto PZ 16 | 0.14~6 mm ² 6~16 mm ² | Variocrimp 4, 206-1204 Variocrimp 16 206-225, 206-1225 | 0.25~4 mm ² /AWG24-12 6-16 mm ² /AWG10-6 10,16,22,25 mm ² |

| Product category/Model | | | | | | | | | | | | | | | |
|----------------------------|-------------|-------------------------------|--------------|-------------|--------------|-------------|--------------|-------------|---------------------|------------------|------------|-------------|---------------------------------------|-------------|----|
| Switch Mode Power Supplies | | | | | | | | | | Noise Filter | | | DC Electronic Circuit Protector | | |
| S8VK-S48024 | | Common to S8VK-S24024/S48024 | S8VK-WA24024 | | S8VK-WA48024 | | S8VK-WA96024 | | Common to S8VK-W | Common to S8V-NF | S8V-NFS203 | S8V-NFS206 | S8V-CP | | |
| Input side | Output side | Undervoltage detection output | Input side | Output side | Input side | Output side | Input side | Output side | Signal Output / COM | PE | Input side | Output side | All terminals (Excluding Power input) | Power input | |
| 0.75 | 4 | 0.25 | 0.34 | 2 | 0.5 | 4 | 0.75 | 10 | 0.25 | 2 | 0.5 | 0.75 | 0.25 | 0.25 | |
| 2.5 | 6 | 2.5 | 2.5 | 2.5 | 2.5 | 6 | 2.5 | | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 6 |
| 18 | 12 | 24 | 22 | 14 | 20 | 12 | 18 | 8 | 24 | 14 | 20 | 18 | 24 | 24 | |
| 14 | 10 | 14 | 14 | | 14 | 10 | 14 | | 14 | | 14 | 14 | 14 | 14 | 14 |
| | | ○ | | | | | | | ○ | | | | ○ | ○ | |
| | | ○ | | | | | | | ○ | | | | ○ | ○ | |
| | | ○ | ○ | | | | | | ○ | | | | ○ | ○ | |
| | | ○ | ○ | | | | | | ○ | | | | ○ | ○ | |
| | | ○ | ○ | | ○ | | | | ○ | | ○ | | ○ | ○ | |
| | | ○ | ○ | | ○ | | | | ○ | | ○ | | ○ | ○ | |
| ○ | | ○ | ○ | | ○ | | ○ | | ○ | | ○ | ○ | ○ | ○ | |
| ○ | | ○ | ○ | | ○ | | ○ | | ○ | | ○ | ○ | ○ | ○ | |
| ○ | | ○ | ○ | | ○ | | ○ | | ○ | | ○ | ○ | ○ | ○ | |
| ○ | | ○ | ○ | | ○ | | ○ | | ○ | | ○ | ○ | ○ | ○ | |
| ○ | | ○ | ○ | | ○ | | ○ | | ○ | ○ | ○ | ○ | ○ | ○ | |
| | ○ | | | | | | | | | | | | | ○ | |
| | ○ | | | | | | | | | | | | | ○ | |
| | | | | | | | | ○ | | | | | | | |

Recommended Flat-blade screwdriver

| Phoenix Contact | Weidmuller | Wago | Wera | Wiha | Facom | Vessel |
|---------------------------------|-----------------|---------|----------------|----------------|------------|----------------|
| SZS 0,4×2,5 SZF 0-0,4×2,5 *1 | SDIS 0.4×2.5×75 | 210-719 | ESD 0,40 x 2,5 | 0.4×2.5×75 302 | AEF.2,5×75 | 9900 (-2.5×75) |

*1. OMRON's exclusive purchase XW4Z-00B is available to order as SZF 0-0,4×2,5 (manufactured by Phoenix Contact).

For the DC output terminal of S8VK-WA96024, use the following flat-blade screwdriver.

| Phoenix Contact | Weidmuller | STANLEY | Wera | Wiha | Facom | Vessel |
|-----------------|-----------------|----------|--------------|----------|----------|--------------|
| SZF 2-0,8×4,0 | SDS 0.8×4.0×100 | 1-65-017 | ESD 0,80×4,0 | 302S4010 | AEF.4×75 | 990 (-4×100) |

Recommended ferrules and applicable wires②

| | | | | | | Low Voltage Switching Gears | | | | |
|-----------------|----------------------------|----|---------------------------------|----------------------------|----------------------|---------------------------------------|-----------------|------|---------------|-----|
| | | | | | | J7KC、J7TC、J7KCA | | J7MC | | |
| | | | | | | Applicable terminals Wire diameter | All terminals | | All terminals | |
| | | | | | | | mm ² | MIN | 0.5 | 0.5 |
| | | | | | | AWG | MAX | 2 | 4 | |
| | | | | | | mm ² | MIN | 20 | 20 | |
| | | | | | | AWG | MAX | 14 | 12 | |
| Wire diameter | Stripping length (Unit:mm) | | Recommended ferrules | | | | | | | |
| mm ² | AWG | | Manufactured by Phoenix Contact | Manufactured by Weidmuller | Manufactured by Wago | | | | | |
| 0.14 | 26 | 10 | AI0,14-8 | H0.14/12 | - | | | | | |
| 0.25 | 24 | 10 | AI0,25-8 | H0.25/12 | 216-301 | | | | | |
| | | 12 | AI0,25-10 | - | - | | | | | |
| | | 14 | AI0,25-12 | - | - | | | | | |
| 0.34 | 22 | 10 | AI0,34-8 | H0.34/12 | 216-302 | | | | | |
| | | 12 | AI0,34-10 | - | - | | | | | |
| | | 14 | AI0,34-12 | - | - | | | | | |
| 0.5 | 20 | 10 | AI0,5-8 | H0.5/14 | 216-201 | ○ | ○ | | | |
| | | 12 | AI0,5-10 | H0.5/16 | 216-241 | ○ | | | | |
| | | 14 | AI0,5-12 | - | 216-261 | | | | | |
| 0.75 | 18 | 10 | AI0,75-8 | H0.75/14 | 216-202 | ○ | ○ | | | |
| | | 12 | AI0,75-10 | H0.75/16 | 216-242 | ○ | | | | |
| | | 14 | AI0,75-12 | H0.75/18 | 216-262 | | ○ | | | |
| 1/1.25 | 18/17 | 10 | AI1-8 | H1.0/14 | 216-203 | ○ | ○ | | | |
| | | 12 | AI1-10 | H1.0/16 | 216-243 | ○ | | | | |
| | | 14 | AI1-12 | H1.0/18 | 216-263 | | ○ | | | |
| 1.25/1.5 | 17/16 | 10 | AI1,5-8 | H1.5/14 | 216-204 | ○ | ○ | | | |
| | | 12 | AI1,5-10 | H1.5/16 | 216-244 | ○ | | | | |
| | | 14 | AI1,5-12 | H1.5/18D | 216-264 | | ○ | | | |
| 2/2.5 | 14 | 12 | AI2,5-10 | H2.5/16DS | 216-246 | △ *1 | | | | |
| | | 14 | AI2,5-12 | H2.5/19D | 216-266 | | ○ | | | |
| 3.5/4 | 12 | 14 | AI4-12 | H4.0/20D | 216-267 | | ○ | | | |
| 6 | 10 | 16 | AI6-12 | H6.0/20 | 216-208 | | | | | |
| 10 | 8 | 21 | AI10-18 | H10.0/28 | 216-289 | | | | | |

Note :Some models may use ferrules without an insulation sleeve. For details, please check the data sheet for each product.

*1. Wide Muller-made ferrules cannot be used.

Recommended crimp tool

| Phoenix Contact | | Weidmuller | | Wago | |
|---|---|--------------------|--|--|--|
| Name / Model | Applicable wire diameter | Name / Model | Applicable wire diameter | Name / Model | Applicable wire diameter |
| CRIMPFOX 6 CRIMPFOX 6T-F CRIMPFOX 10S CRIMPFOX 25R | 0.25~6 mm ² /AWG24-10 0.25~6 mm ² /AWG24-10 0.14~10 mm ² /AWG25-7 10~25 mm ² /AWG8-4 | PZ 6 roto PZ 16 | 0.14~6 mm ² 6~16 mm ² | Variocrimp 4, 206-1204 Variocrimp 16 206-225, 206-1225 | 0.25~4 mm ² /AWG24-12 6-16 mm ² /AWG10-6 10,16,22,25 mm ² |

| Product category/Model | | | | | |
|------------------------|---------------|--|---------------------------|--------------------|---|
| Sockets for Relays | | Sockets for Relays with Forcibly Guided Contacts | Slim I/O Relays | Terminal Relays | I/O Relay Terminals |
| PYF-□-PU P2RF-□-PU | PTF-□-PU | P7SA | G2RV-ST500 G3RV-ST500□ | G6D-F4PU、G3DZ-F4PU | G70V |
| All terminals | All terminals | All terminals | All terminals | All terminals | All terminals (Excluding communication connector) |
| 0.25 | 0.25 | 0.5 | 0.25 | 0.25 | 0.25 |
| 1.5 | 2.5 | 1.5 | 2.5 | 2.5 | 2.5 |
| 24 | 24 | 20 | 24 | 24 | 24 |
| 16 | 14 | 16 | 14 | 14 | 14 |
| ○ | ○ | | ○ | ○ | ○ |
| ○ | ○ | | ○ | ○ | ○ |
| ○ | ○ | | ○ | ○ | ○ |
| ○ | ○ | | ○ | ○ | ○ |
| ○ | ○ | ○ | ○ | ○ | ○ |
| ○ | ○ | ○ | ○ | ○ | ○ |
| ○ | ○ | ○ | ○ | ○ | ○ |
| ○ | ○ | ○ | ○ | ○ | ○ |
| ○ | ○ | ○ | ○ | ○ | ○ |
| ○ | ○ | ○ | ○ | ○ | ○ |
| ○ | ○ | ○ | ○ | ○ | ○ |
| ○ | ○ | ○ | ○ | ○ | ○ |
| ○ | ○ | ○ | ○ | ○ | ○ |
| | ○ | | ○ | ○ | ○ |
| | ○ | | | ○ | ○ |
| | | | | | |
| | | | | | |

Recommended Flat-blade screwdriver

| Phoenix Contact | Weidmuller | Wago | Wera | Wiha | Facom | Vessel |
|---------------------------------|-----------------|---------|----------------|----------------|------------|----------------|
| SZS 0,4×2,5 SZF 0-0,4×2,5 *2 | SDIS 0.4×2.5×75 | 210-719 | ESD 0,40 x 2,5 | 0.4×2.5×75 302 | AEF.2,5×75 | 9900 (-2.5×75) |

*2. OMRON's exclusive purchase XW4Z-00B is available to order as SZF 0-0,4×2,5 (manufactured by Phoenix Contact).

Recommended ferrules and applicable wires③

| Recommended ferrules | | | | | | DIN Track Terminal Blocks | | | | |
|----------------------|-------|-------------------------------|---------------------------------|----------------------------|----------------------|---------------------------|-----|---------------|---------------|---------------|
| Wire diameter | | Stripping length (Unit:mm) | Manufactured by Phoenix Contact | Manufactured by Weidmuller | Manufactured by Wago | Applicable terminals | | All terminals | All terminals | All terminals |
| mm ² | AWG | | | | | mm ² | AWG | | | |
| 0.14 | 26 | 10 | A10,14-8 | H0.14/12 | - | ○ | ○ | ○ | ○ | ○ |
| 0.25 | 24 | 10 | A10,25-8 | H0.25/12 | 216-301 | ○ | ○ | ○ | ○ | ○ |
| | | 12 | A10,25-10 | - | - | ○ | ○ | ○ | ○ | ○ |
| | | 14 | A10,25-12 | - | - | ○ | ○ | ○ | ○ | ○ |
| 0.34 | 22 | 10 | A10,34-8 | H0.34/12 | 216-302 | ○ | ○ | ○ | ○ | ○ |
| | | 12 | A10,34-10 | - | - | ○ | ○ | ○ | ○ | ○ |
| | | 14 | A10,34-12 | - | - | ○ | ○ | ○ | ○ | ○ |
| 0.5 | 20 | 10 | A10,5-8 | H0.5/14 | 216-201 | ○ | ○ | ○ | ○ | ○ |
| | | 12 | A10,5-10 | H0.5/16 | 216-241 | ○ | ○ | ○ | ○ | ○ |
| | | 14 | A10,5-12 | - | 216-261 | ○ | ○ | ○ | ○ | ○ |
| 0.75 | 18 | 10 | A10,75-8 | H0.75/14 | 216-202 | ○ | ○ | ○ | ○ | ○ |
| | | 12 | A10,75-10 | H0.75/16 | 216-242 | ○ | ○ | ○ | ○ | ○ |
| | | 14 | A10,75-12 | H0.75/18 | 216-262 | ○ | ○ | ○ | ○ | ○ |
| 1/1.25 | 18/17 | 10 | A11-8 | H1.0/14 | 216-203 | ○ | ○ | ○ | ○ | ○ |
| | | 12 | A11-10 | H1.0/16 | 216-243 | ○ | ○ | ○ | ○ | ○ |
| | | 14 | A11-12 | H1.0/18 | 216-263 | ○ | ○ | ○ | ○ | ○ |
| 1.25/1.5 | 17/16 | 10 | A11,5-8 | H1.5/14 | 216-204 | ○ | ○ | ○ | ○ | ○ |
| | | 12 | A11,5-10 | H1.5/16 | 216-244 | ○ | ○ | ○ | ○ | ○ |
| | | 14 | A11,5-12 | H1.5/18D | 216-264 | ○ | ○ | ○ | ○ | ○ |
| 2/2.5 | 14 | 12 | A12,5-10 | H2.5/16DS | 216-246 | ○ | ○ | ○ | ○ | ○ |
| | | 14 | A12,5-12 | H2.5/19D | 216-266 | ○ | ○ | ○ | ○ | ○ |
| 3.5/4 | 12 | 14 | A14-12 | H4.0/20D | 216-267 | ○ | ○ | ○ | ○ | ○ |
| 6 | 10 | 16 | A16-12 | H6.0/20 | 216-208 | ○ | ○ | ○ | ○ | ○ |
| 10 | 8 | 21 | A110-18 | H110.0/28 | 216-289 | ○ | ○ | ○ | ○ | ○ |

Note :Some models may use ferrules without an insulation sleeve. For details, please check the data sheet for each product.

Recommended crimp tool

| Phoenix Contact | | Weidmuller | | Wago | |
|---|---|--------------------|--|--|--|
| Name / Model | Applicable wire diameter | Name / Model | Applicable wire diameter | Name / Model | Applicable wire diameter |
| CRIMPFOX 6 CRIMPFOX 6T-F CRIMPFOX 10S CRIMPFOX 25R | 0.25~6 mm ² /AWG24-10 0.25~6 mm ² /AWG24-10 0.14~10 mm ² /AWG25-7 10~25 mm ² /AWG8-4 | PZ 6 roto PZ 16 | 0.14~6 mm ² 6~16 mm ² | Variocrimp 4, 206-1204 Variocrimp 16 206-225, 206-1225 | 0.25~4 mm ² /AWG24-12 6-16 mm ² /AWG10-6 10,16,22,25 mm ² |

| Product category/Model | | | | | | |
|------------------------|---------------|---------------------------------------|--|----------------|-----------------------|--|
| Common Terminal Blocks | | Ultra-Compact Interface Wiring System | Timers, Digital Temperature Controllers, Pushbutton Switches, Solid State Relays for Heater, Component Protective Components | Power Monitors | | |
| XW6T-COM1.5 | XW6T-COM2.5 | XW2K | H3DT、E5□C-B、E5□D-B、A22N-P□、M22N-P□、A22NE-P、A22NE-PD、G3PJ、K8DT | KM-N2、KM-N3 | | |
| All terminals | All terminals | All terminals | All terminals (input terminals for G3PJ) | Power supply | Pulse output / RS-485 | |
| 0.14 | 0.14 | 0.14 | 0.25 | 0.5 | 0.25 | |
| 0.75 | 2.5 | 0.5 | 1.5 | 1.5 | 1.5 | |
| 26 | 26 | 26 | 24 | 20 | 24 | |
| 18 | 14 | 20 | 16 | 16 | 16 | |
| ○ | ○ | ○ | | | | |
| ○ | ○ | ○ | ○ | | ○ | |
| ○ | ○ | ○ | ○ | | ○ | |
| | | | | | | |
| ○ | ○ | ○ | ○ | | ○ | |
| ○ | ○ | ○ | ○ | | ○ | |
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| ○ | ○ | ○ | ○ | ○ | ○ | |
| ○ | ○ | ○ | ○ | ○ | ○ | |
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| ○ | ○ | | ○ | ○ | ○ | |
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Recommended Flat-blade screwdriver

| Phoenix Contact | Weidmuller | Wago | Wera | Wiha | Facom | Vessel |
|---------------------------------|-----------------|---------|----------------|----------------|------------|----------------|
| SZS 0,4×2,5 SZF 0-0,4×2,5 *1 | SDIS 0.4×2.5×75 | 210-719 | ESD 0,40 x 2,5 | 0.4×2.5×75 302 | AEF.2,5×75 | 9900 (-2.5×75) |

*1. OMRON's exclusive purchase XW4Z-00B is available to order as SZF 0-0,4×2,5 (manufactured by Phoenix Contact).

OMRON's Products Support IoT for Control Panels and Production Lines



Heater Condition Monitoring Device
K7TM

Cat. No. N229-E1



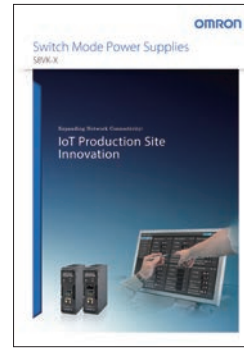
Panel condition monitoring device
K6PM

Cat. No. H232-E1



Motor Condition Monitoring Devices
K6CM

Cat. No. N220-E1



Switch Mode Power Supplies
S8VK-X

Cat. No. T211-E1



Digital Temperature Controllers
E5□D/NX-TC

Cat. No. H222-E1

2019 Released in October



Low Voltage Switching Gears
J7KC / J7TC / J7MC

Cat. No. J229-E1



DC Electronic Circuit Protector
S8V-CP

Cat. No. T227-E1



Push-In Plus Terminal Block Relay Series
PTF-PU

Cat. No. J213-E1

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