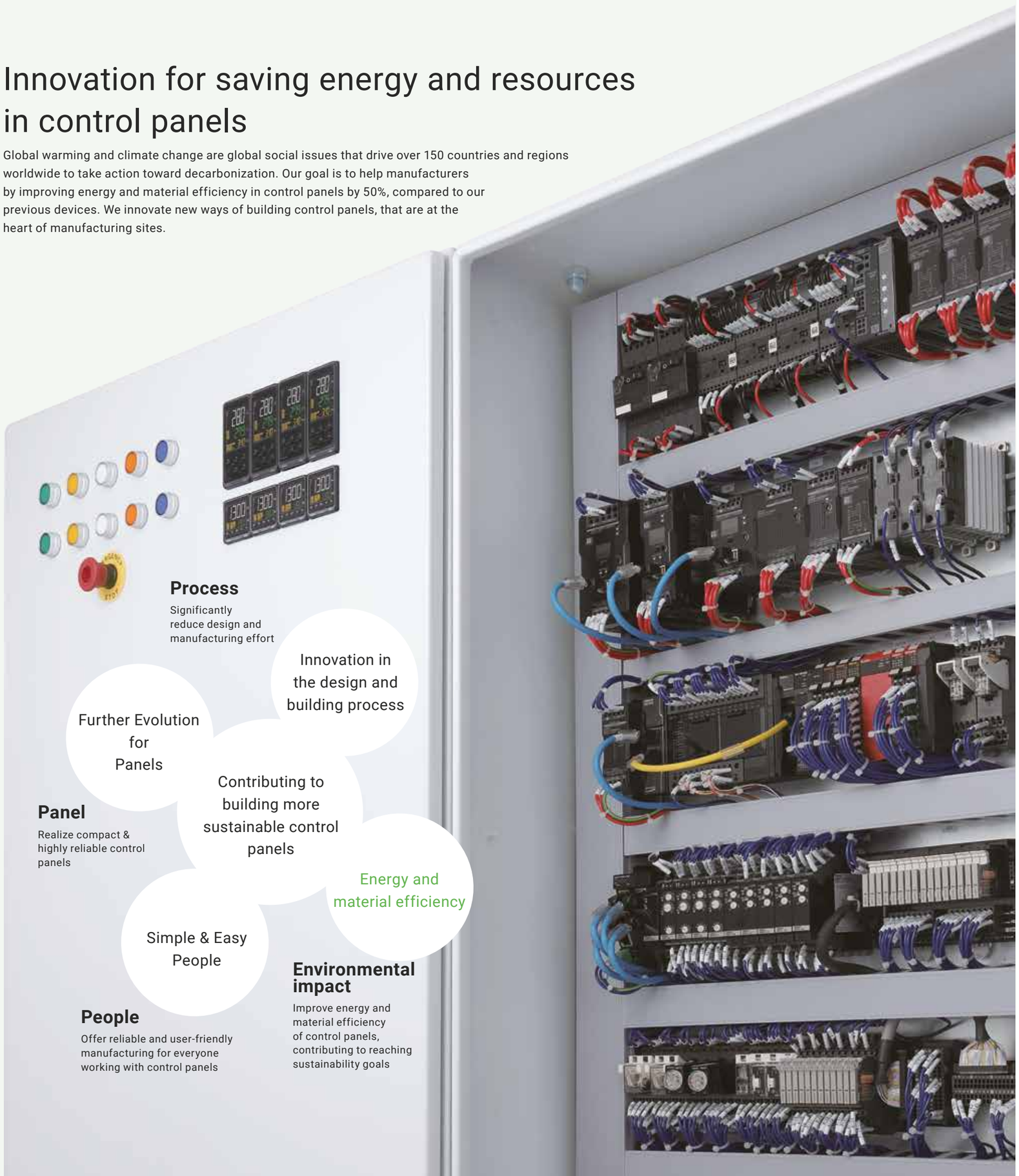
OMRON

Improved energy and material efficiency for control panels

Innovation for saving energy and resources in control panels

Global warming and climate change are global social issues that drive over 150 countries and regions worldwide to take action toward decarbonization. Our goal is to help manufacturers by improving energy and material efficiency in control panels by 50%, compared to our previous devices. We innovate new ways of building control panels, that are at the heart of manufacturing sites.



Process
Significantly reduce design and manufacturing effort

Innovation in the design and building process

Further Evolution for Panels

Contributing to building more sustainable control panels

Panel
Realize compact & highly reliable control panels

Energy and material efficiency

Simple & Easy People

Environmental impact
Improve energy and material efficiency of control panels, contributing to reaching sustainability goals

People
Offer reliable and user-friendly manufacturing for everyone working with control panels

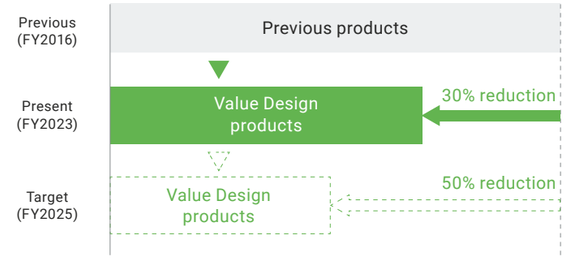
Integrating green perspectives into Value Design

Value Design for Panel (Value Design) is the common concept shared across OMRON's in-panel product specifications to deliver new value to your control panels.
This Value Design also integrate environment consideration concept that enable earth and user-friendly control panel building.

Value Design for Panel

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
7 ..... Features that save energy and resources※3

Power consumption and size of devices



※1. Except for some products
※2. Side-by-side mounting is possible in the same series
※3. Lower power consumption and smaller size of devices compared to previous (2016) products

Extensive lineup of products for building energy and material efficient control panels

DIN Track Terminal Blocks

Magnetic Contactors

Ultra-Compact Interface Wiring System

Common Terminal Blocks

Switch mode power supplies / Related equipment

Relays, Solid-state Relays

I/O Relay Terminals

Timers

Motor Protective Relays

Power Monitors

Wireless Pushbutton Switches

Condition Monitoring Devices

Temperature Controllers

Uninterruptible Power Supplys

Machine Automation Controllers

Safety Relays

Switch mode power supplies / Related equipment

Manual Motor Starters

Pushbutton Switches

Power Monitors

Temperature Controllers

Products that can significantly contribute to improving energy and material efficiency

The below products incorporate power-saving, resource-saving, and waste-reducing features, resulting in up to 50% improvement (according to OMRON investigation in March 2023).

Switch Mode Power Supplies (Three-phase)

Switch Mode Power Supplies (Single-phase)

Slim I/O Relays

Ultra-Compact Interface Wiring System

DC Electronic Circuit Protectors

Motor Protective Relays/ Timers

Temperature Controllers

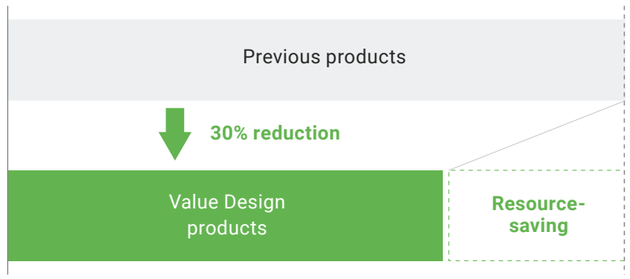
Improve energy efficiency

Build power-saving control panels

Our low power consumption devices allow you to easily build power-saving control panels, without compromising the design philosophy.

Low power consumption devices enable power-saving control panels

Power consumption of control panel



Reduce control panel power consumption by replacing devices

BEFORE	Maximum power consumption		Value Design for Panel	Maximum power consumption		
	S8FS-G (600 W × 3 units)	228 W		S8VK-W (2 kW type)	99 W	57% reduction
	S8VS (240W)	33 W		S8VK-S (240W)	18 W	44% reduction
	E5CN	7.5 W		E5CC	6.5 W	13% reduction
	H3DK-M	1.1 W		H3DT-N	0.2 W	78% reduction
	K8AK-PH	4.1 W		K8DT-PH	2.6 W	37% reduction

Reducing power consumption by reviewing specifications

Review of power supply specifications

Specification change point:
Circuit change associated with switching from transformer + single phase to three phase

60% reduction in power consumption

Transformer

S8VS
Switch Mode Power Supplies (Single-phase)

S8VK-WA
Switch Mode Power Supplies (Three-phase)

Optimization of endurance specifications

Specification change point:Relay endurance:
500,000 operations min. → 100,000 operations min. (at 5A)
(Switchable when the required endurance is 100,000 times or less.)

41% reduction in power consumption

MY2 ▶

G2R-2-S

Specification change point:Relay endurance:
250,000 operations min. → 70,000 operations min. (at 5A)
(Switchable when the required current is 6A or less and endurance is 70,000 times or less)

43% reduction in power consumption

G2R-1-S ▶

G2RV-ST

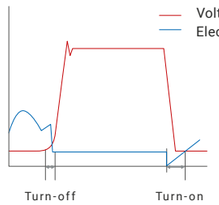
Power consumption can be easily reduced by reviewing to the latest model with reduced power consumption and reviewing the most suitable model to optimize the application.

Introduction of Technology for Realizing Low Power Consumption Device

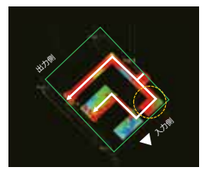
High-density/high-efficiency design that reduces power consumption of power supplies

S8VK

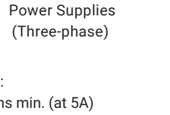
Switching loss reduced through soft switching (minimizing intersection of voltage and current waveforms)



Noise filtering optimized through thermal analysis



Unique low power consumption display method that reduces temperature controller power consumption


E5CC

BEFORE

Direct lit

Number of lit LEDs: 13

AFTER

Edge lit

Number of lit LEDs: 3

Improve material efficiency

Build material-saving control panels

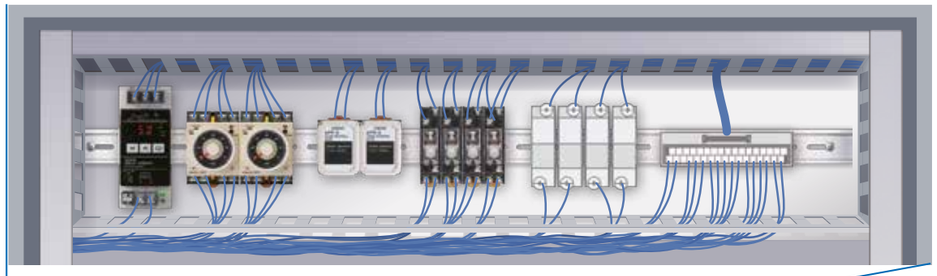
Compact, slim devices with unified height and devices with reduced wiring allow for resource-saving purchased components for control panels.

Compact devices and devices with reduced wiring enable resource-saving control panels

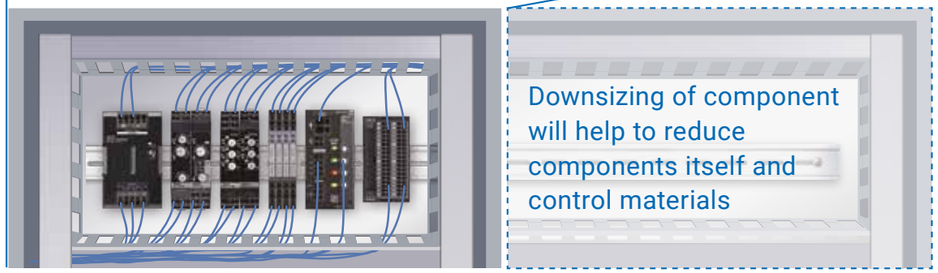
Weight and size of components

Miniaturization of equipment and reduced wiring enable resource conservation of control panel materials

BEFORE



Value Design for Panel



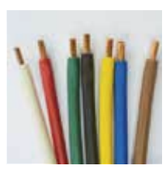
Control components for which resource-saving can be applied

Cabinet

Product

Duct

DIN rail



Electric wire

Lightweight components contribute to material savings in control panels

BEFORE

		Weight
	S8FS-G (600 W 3 units)	4,620 g
	XW2R	113 g
	G7TC	728 g
	S8VS	1,600 g
	E5CN	190 g
	H3DK-M	145 g
	K8AK-PH	171 g

Value Design for Panel

		Weight	
	S8VK-W (2 kW type)	3,600 g	22% reduction
	XW2K	83 g	27% reduction
	G70V	408 g	44% reduction
	S8VK-S	945 g	41% reduction
	E5CC	157 g	17% reduction
	H3DT-N	122 g	16% reduction
	K8DT	118 g	31% reduction

Save energy

Monitor the power consumption of control panels

OMRON helps you measure how effectively Value Design products actually reduce control panel power consumption.

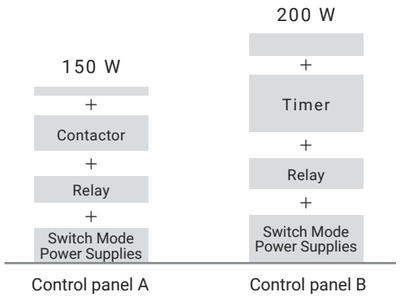
Power monitoring enables easy assessment of the power saving effect

Power monitors provide visualization of the power consumption reduction effects for each control panel

BEFORE

Assessment of power consumption reduction effect requires massive effort because each control panel has different device configuration and therefore has to be measured separately

Measurements taken per model and then totaled



Value Design for Panel

Power monitor constantly visualizes power consumption, with no need for separate measurements

Continuous measurement at once without individual measurement

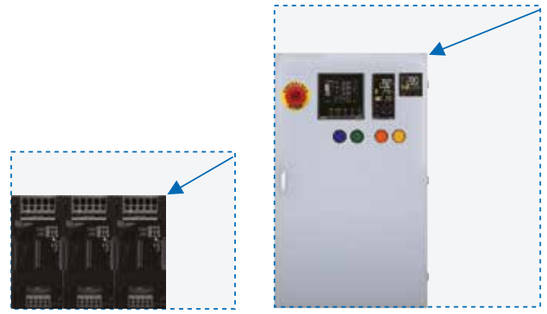
Power Monitors (KM-N2-FLK)

Further Evolution for Panels

Space-Efficient and Advanced Control Panels

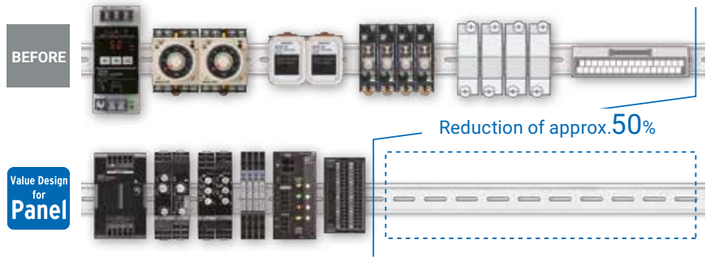
Unified size and side-by-side mounting help delivering more compact control panels with additional functionality.

Small slim size and clos mounting solves the space problem of the control panel

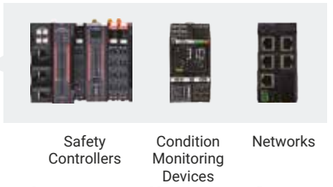


Slim, side-by-side mounting technology saves space and enables the creation of advanced control panels

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

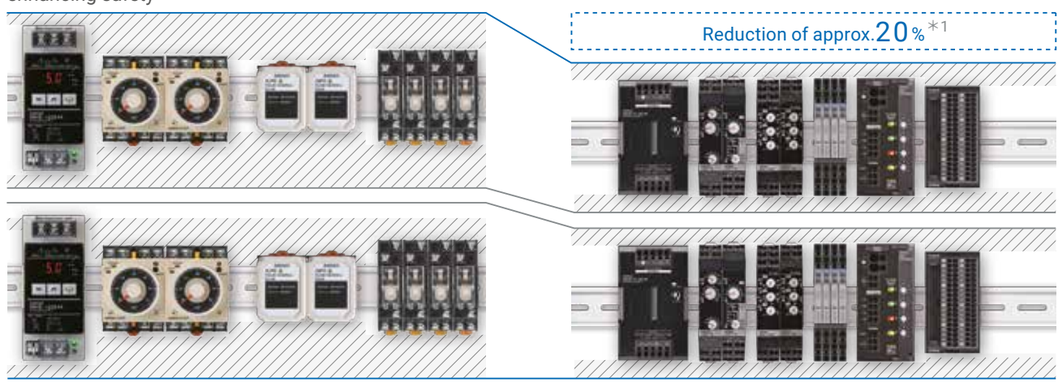


The saved space can be used for implementing additional functions such as safety or IoT.



Uniform height minimizes unused space and reduces the overall size of control panels

When designing new control panels, reducing their height provides a clear view of the entire production line, enhancing safety



BEFORE

The different heights create a lot of unused space

Value Design for Panel

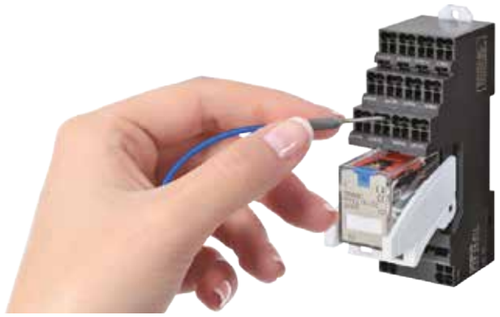
Unused space is minimized, and the spacing between wiring ducts is optimized

Simple and easy to use

Reducing Wiring Work

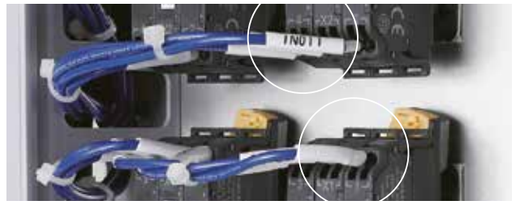
Push-In Plus technology and Front-in / Front-release Wiring make wiring work simpler and faster.

Push-in Plus technology solves control panel wiring issues



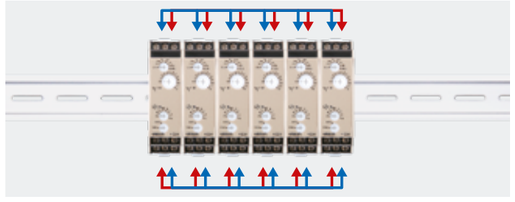
Front-in Wiring improves workability and safety without interference of wires even in the narrow space among devices

BEFORE Wiring in confined spaces is challenging due to wire interference caused by screw terminals that require vertical wiring

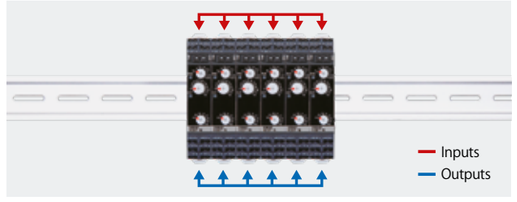


Value Design for Panel No interference of wiring helps improve workability and safety

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

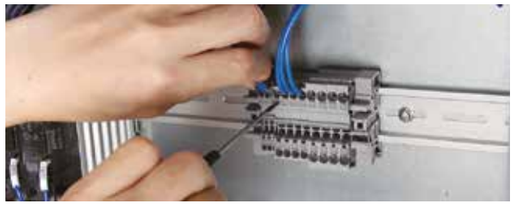


BEFORE Difficult wiring due to mixed I/O terminals located on both the top and bottom



Value Design for Panel A unified method with inputs at the top and outputs at the bottom

Easy wiring with both hands for stranded wires with holding screwdriver



BEFORE One hand wiring with the other hand holding the screwdriver

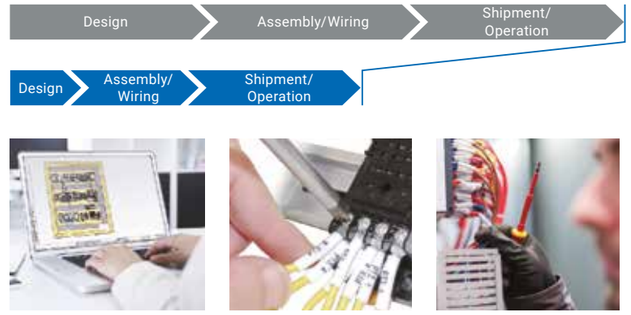
Value Design for Panel Wiring with both hands, because the screwdriver is held in the release hole

Design and building process

Shortening Lead Time for Control Panel Building

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

Solving process issues in control panel building



Design

eCAD library provided for all models greatly reduces design work

Up to 50 %※1

OMRON provides the libraries for over 48,000 models※2, highest in the industry, to achieve the great reduction of works for electrical design drawing and data creation.

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

※1. In the case of ZUKEN E3 series
※2. In the case of EPLAN, based on OMRON's investigation as of 2020 December

Assembly/Wiring

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

Reduction of approx. 60 %※3

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

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

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

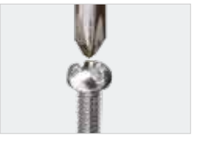
※3. Information for Push-In Plus and Screw Terminal Blocks is based on OMRON's actual measurement data

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.

BEFORE 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

Selection Guide

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

>P.18-19

Switch Mode
Power Supplies
(Single-phase) S8VK-S

Switch Mode Power Supplies
(Single-phase/With displays
and communications) S8VK-X

Noise Filters
S8V-NF

Switch Mode Power Supplies
(Three-phase/single-phase) S8VK-WA
(Three-phase) S8VK-WB

DC Electronic Circuit Protectors
S8V-CP

>P.20-21

Magnetic Contactors(Contactor)
J7KC

Manual Motor Starters
J7MC

Thermal Overload Relays
J7TC

Auxiliary Relay (Contactor Relays)
J7KCA

>P.26

Solid-state Timers
H3DT

>P.27

Motor Protective Relays
K8DT

>P.28

DIN Track Terminal Blocks
XW5T

>P.29

Ultra-Compact Interface Wiring System
XW2K

Ultra-Compact Common Terminal Blocks
XW2K-COM

>P.28

Common Terminal Blocks
XW6T

>P.31

Uninterruptible Power Supplies
S8BA

>P30

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
	24 VDC		2.5 A	3 A	S8VK-X06024-EIP	40×90×86
		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
Three-phase / single-phase 200 to 240 VAC(Allowable range: Three-phase / singlephase 170 to 264 VAC, 240 to 384 VAC)	24 VDC	2000 W	85 A	127.5 A	S8VK-WA20224	190×124×129
	48 VDC		45 A	67.5 A	S8VK-WA20248	190×124×129

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.
- Magnetic Contactor with Mirror contacts according to EN 60947-4-1 in safety applications, whose switching function is controlled by a safety-related system.

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-2NO	J7KCR-12-10 AC200	90.5×77.5×78
			SPST-2NC	J7KCR-12-01 AC200	
	DC-operated (With built-in surge absorption unit)	24 VDC	SPST-2NO	J7KCR-12-10 DC24	
			SPST-2NC	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		Current setting range Rated operating current [A]	Rocker switch (standard type)		Rotary switch (high-performance type)		Magnetic contactor model
200 to 240 VAC			Model	Size W×H×D (mm)	Model	Size W×H×D (mm)	
Capacity [kW]	Current [A]						
-	-	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						
2.2	9.5	9-13	J7MC-3P-13		J7MC-3R-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

3-phase standard motor capacity and full load current (reference values)			Setting current range [A]	Model	Size W×H×D (mm)	Magnetic contactor model
Main circuit voltage	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	
Power MOS FET relay		12 VDC	G3DZ-F4PU DC12	
		24 VDC	G3DZ-F4PU DC24	

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 Feburary 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	
Temperature monitoring		Thermocouple or platinum resistance thermometer		Upper or lower limit (switched)	Temperature Monitoring	K8DT-TH Cat. No. N209	
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 / Yeloow)	Size W×H×D (mm)
Product Type	Applicable wire sizes*1	Number of levels	Wiring	Model	Model	
Standard terminals	0.08 mm² to 1.5 mm² 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 mm² to 2.5 mm² AWG26 to AWG14			XW5T-P2.5-1.1-1	XW5G-P2.5-1.1-1	5.2×48.8×35.3
	0.2 mm² to 4.0 mm² 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 mm² to 1.5 mm² 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 mm² to 2.5 mm² AWG26 to AWG14			XW5T-P2.5-1.1-2	XW5G-P2.5-1.1-2	5.2×78.8×45.9
	0.2 mm² to 4.0 mm² 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 mm² to 1.5 mm² 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 mm² to 2.5 mm² AWG26 to AWG14			XW5T-P2.5-1.2-1	XW5G-P2.5-1.2-1	5.2×60.5×35.3
	0.2 mm² to 4.0 mm² AWG24 to AWG12			XW5T-P4.0-1.2-1	XW5G-P4.0-1.2-1	6.2×66.5×35.3
	0.08 mm² to 1.5 mm² 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 mm² to 2.5 m² AWG26 to AWG14			XW5T-P2.5-2.2-1	XW5G-P2.5-2.2-1	5.2×72.2×35.3
	0.2 mm² to 4.0 m² 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.

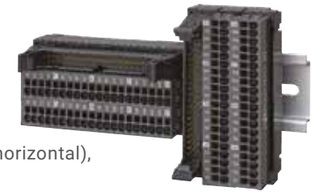
Common specifications		Applicable wire sizes*1	Model	Size W×H×D (mm)	Applicable wire sizes*1	Model	Size W×H×D (mm)
Number of pins	Color of Short Bars						
8	Red	0.08~1.5 m2/ AWG28~16	XW6T-COM1.5X8RD	9.2×78 ×31.3	0.14 to 2.5 mm²/ AWG26 to 14	XW6T-COM2.5X8RD	12.6×82.6 ×36.1
	Blue		XW6T-COM1.5X8BL			XW6T-COM2.5X8BL	
	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-O32A	39×75×40.8	75×39×40.8
	Circuit pattern B		XW2K-40G-O32B		
	Circuit pattern A		XW2K-40G-O32C		
Mitsubishi Electric, Fuji Electric	Mixed I/O		XW2K-40G-M32		
KEYENCE	Mixed I/O		XW2K-40G-K32		

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-O16A-IN	52.7×75×40.8	75×52.7×40.8
	Output		XW2K-20G-O16B-OUT	39×75×40.8	75×39×40.8
OMRON, Yokogawa Electric, Hitachi Industrial Equipment Systems	Input(Circuit pattern A)	32 Points	XW2K-40G-O32A-IN	52.7×124×40.8	124×52.7×40.8
	Input(Circuit pattern C)		XW2K-40G-O32C-IN		
	Output(Circuit pattern B)		XW2K-40G-O32B-OUT	39×124×40.8	124×39×40.8
	Input(Circuit pattern C)		XW2K-40G-O32C-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, CJ 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	Rated input voltage (Common terminals of a power supply and a measurement voltage input.)	Communications	Model	Size W×H×D (mm)
DIN Rail mounting	1-phase 2-wire: 100 to 277 VAC 1-phase 3-wire: 100 to 220 VAC (L-N), 200 to 440 VAC (L-L) 3-phase 3-wire: 173 to 277 VAC (L-L) 3-phase 4-wire (earthed neutral): 100 to 254 VAC (L-N), 173 to 440 VAC (L-L) 3-phase 4-wire (unearthed neutral): 100 to 120 VAC (L-N), 173 to 208 VAC (L-L)	RS-485 communications, pulse output	KM-N2-FLK	90×90×65

Installation method	Applicable phase wiring methods	Power supply voltage	Communications	Model	Size W×H×D (mm)
On-panel nstallation	Single-phase, 2-wire: 100 to 277 VAC Single-phase, 3-wire: 100 to 240 VAC (L-N), 200 to 480 VAC (L-L) Three-phase, 3-wire: 173 to 277 VAC (L-L) Three-phase, 4-wire (earthed neutral): 100 to 277 VAC (L-N), 173 to 480 VAC (L-L) Three-phase, 4-wire (unearthed neutral): 100 to 120 VAC (L-N), 173 to 208 VAC (L-L)	100 to 240 VAC Separate from measurement voltage	RS-485 communications, pulse output	KM-N3-FLK	96×96×64

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 industrialcomputers (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

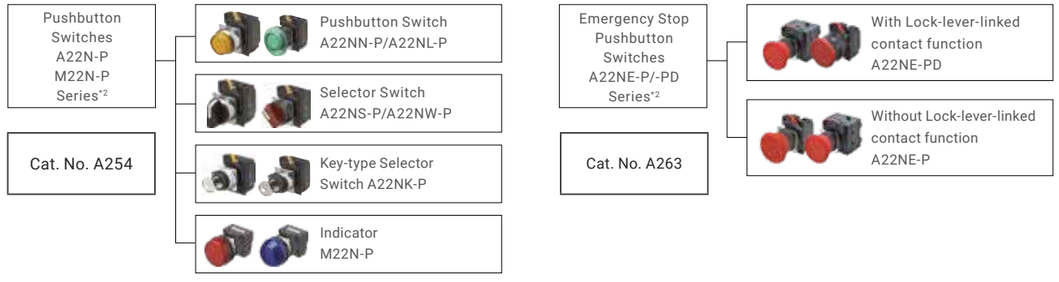
Input voltage	Output current/ capacity	Model	Size W×H×D)(mm)
24 VDC	20 A/480 W	S8BA-24D24D480SBF	44×124×120.9
	40 A/960 W	S8BA-24D24D960SBF	52×124×120.9

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
	7800 mAh	S8BA-24D24D480SBF	S8BA-S960L	150×124×120.9
		S8BA-24D24D960SBF		

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	
		24 VAC/ DC	-	-	-	-	-	E5CC-RX2DBM-000	
			1	-	2	-	-	E5CC-RX2DBM-001	
			1	RS-485	-	-	-	E5CC-RX2DBM-002	
			-	RS-485	2	-	-	E5CC-RX2DBM-004	
			-	-	2	-	Provided.	E5CC-RX2DBM-006	
Control output 1 : Voltage output (for driving SSR) Control output 2 : None	2	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	
		24 VAC/ DC	-	-	-	-	-	E5CC-QX2DBM-000	
			1	-	2	-	-	E5CC-QX2DBM-001	
			1	RS-485	-	-	-	E5CC-QX2DBM-002	
			-	RS-485	2	-	-	E5CC-QX2DBM-004	
			-	-	2	-	Provided.	E5CC-QX2DBM-006	
Control output 1 : Linear current output Control output 2 : None	2	100 to 240 VAC	-	-	-	-	-	E5CC-CX2ABM-000	
			-	RS-485	2	-	-	E5CC-CX2ABM-004	
		24 VAC/ DC	-	-	-	-	-	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	
			1	-	6	Provided.	Provided.	E5EC-RX2ABM-011	
		24 VAC/ DC	-	-	-	-	-	E5EC-RX2DBM-000	
	4	100 to 240 VAC	-	-	-	-	-	E5EC-RX4ABM-000	
			1	RS-485	2	-	-	E5EC-RX4ABM-008	
			1	-	4	-	-	E5EC-RX4ABM-010	
Control output 1 : Voltage output (for driving SSR) Control output 2 : None	2	100 to 240 VAC	-	-	-	-	-	E5EC-QX2ABM-000	
			1	RS-485	2	-	-	E5EC-QX2ABM-008	
			1	-	4	-	-	E5EC-QX2ABM-010	
			1	-	6	Provided.	Provided.	E5EC-QX2ABM-011	
		24 VAC/ DC	-	-	-	-	-	E5EC-QX2DBM-000	
	4	100 to 240 VAC	-	-	-	-	-	E5EC-QX4ABM-000	
			1	RS-485	2	-	-	E5EC-QX4ABM-008	
			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	
		24 VAC/ DC	-	-	-	-	-	E5EC-CX2DBM-000	
	4	100 to 240 VAC	-	-	-	-	-	E5EC-CX4ABM-000	
			-	RS-485	2	-	-	E5EC-CX4ABM-004	
		24 VAC/ DC	-	-	-	-	-	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	
			1	RS-485	-	-	-	E5DC-RX2ABM-002	
		24 VAC/ DC	-	-	-	-	-	E5DC-RX2DBM-000	
			1	RS-485	-	-	-	E5DC-RX2DBM-002	
Control output 1 : Voltage output (for driving SSR) Control output 2 : None	-	100 to 240 VAC	-	RS-485	-	-	-	E5DC-QX0ABM-015	
		24 VAC/ DC	-	RS-485	-	-	-	E5DC-QX0DBM-015	
	2	100 to 240 VAC	-	-	-	-	-	E5DC-QX2ABM-000	
			1	RS-485	-	-	-	E5DC-QX2ABM-002	
		24 VAC/ DC	-	-	-	-	-	E5DC-QX2DBM-000	
			1	RS-485	-	-	-	E5DC-QX2DBM-002	
Control output 1 : Linear current output Control output 2 : None	-	100 to 240 VAC	-	RS-485	-	-	-	E5DC-CX0ABM-015	
		24 VAC/ DC	-	RS-485	-	-	-	E5DC-CX0DBM-015	
	2	100 to 240 VAC	-	-	-	-	-	E5DC-CX2ABM-000	
			1	RS-485	-	-	-	E5DC-CX2ABM-002	
		24 VAC/ DC	-	-	-	-	-	E5DC-CX2DBM-000	
			1	RS-485	-	-	-	E5DC-CX2DBM-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		Stripping length (Unit:mm)	Recommended ferrules			商品カテゴリ／形式		パワーサプライ																		Noise Filter			DC Electronic Circuit Protector	
								Common to S8VK-S/S8VK-W		S8VK-S03024 S8VK-S06024		S8VK-S12024		S8VK-S24024		S8VK-S48024		Common to S8VK-S24024/ S48024	S8VK-WA24024		S8VK-WA48024		S8VK-WA96024		S8VK-WA 202□□		Common to S8VK-W	Common to S8V-NF	S8V-NFS203	S8V-NFS206	S8V-CP	
						Applicable termina / Wire diameter		PE	Input side	Output side	Input side	Output side	Input side	Output side	Input side	Output side	Undervoltage detection output	Input side	Output side	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
						mm²	MIN	2	0.34	0.5	0.34	0.75	0.5	2	0.75	4	0.25	0.34	2	0.5	4	0.75	10	2	6	0.25	2	0.5	0.75	0.25	0.25
							MAX	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	6	2.5	2.5	2.5	2.5	6	2.5		2.5	10	2.5	2.5	2.5	2.5	2.5	6
						AWG	MIN	14	22	20	22	18	20	14	18	12	24	22	14	20	12	18	8	14	10	24	14	20	18	24	24
							MAX		14	14	14	14	14		14	10	14	14		14	10	14		14	8	14		14	14	14	10
mm²	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		○	○	○	○	○	○	○	○			○	○	○	○		○			○	○	○	○	○	○
		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										○						○										○
6	10	21	AI 6-18	H6.0/26DS	FE-6.0-18N-YE																			○							
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.

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 mm²/AWG24-10 0.25~6 mm²/AWG24-10 0.14~10 mm²/AWG25-7 10~25 mm²/AWG8-4	PZ 6 roto PZ 16	0.14~6 mm² 6~16 mm²	Variocrimp 4, 206-1204 Variocrimp 16 206-225, 206-1225	0.25~4 mm²/AWG24-12 6-16 mm²/AWG10-6 10,16,22,25 mm²

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 wires ②

Wire diameter		Stripping length (Unit:mm)	Recommended ferrules			Product category/Model							
						Low Voltage Switching Gears		Sockets for Relays		Sockets for Relays with Forcibly Guided Contacts	Slim I/O Relays	Terminal Relays	I/O Relay Terminals
						J 7 KC、J7TC、J7KCA	J7MC	PYF-□-PU P2RF-□-PU	PTF-□-PU	P7SA	G2RV-ST500 G3RV-ST500□	G6D-F4PU, G3DZ-F4PU	G70V
						Applicable termina / Wire diameter	All terminals	All terminals	All terminals	All terminals	All terminals	All terminals	All terminals (Excluding communication connector)
mm²	AWG		Manufactured by Phoenix Contact	Manufactured by Weidmuller	Manufactured by Wago								
mm²						MIN	0.5	0.5	0.25	0.25	0.5	0.25	0.25	0.25
mm²						MAX	2	4	1.5	2.5	1.5	2.5	2.5	2.5
AWG						MIN	20	20	24	24	20	24	24	24
AWG						MAX	14	12	16	14	16	14	14	14
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 mm²/AWG24-10 0.25~6 mm²/AWG24-10 0.14~10 mm²/AWG25-7 10~25 mm²/AWG8-4	PZ 6 roto PZ 16	0.14~6 mm² 6~16 mm²	Variocrimp 4, 206-1204 Variocrimp 16 206-225, 206-1225	0.25~4 mm²/AWG24-12 6-16 mm²/AWG10-6 10,16,22,25 mm²

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

Wire diameter		Stripping length (Unit:mm)	Recommended ferrules		
mm²	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
		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

Product category/Model										
DIN Track Terminal Blocks				Common Terminal Blocks		Ultra-Compact Interface Wiring System	Timers, Digital Temperature Controllers, Pushbutton Switches, Solid State Relays for Heater, Component Protective Components	Power Monitors	
XW5□-P1.5-□		XW5□-P2.5-□	XW5□-P4.0-□	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	
Applicable termina / Wire diameter		All terminals	All terminals	All terminals	All terminals	All terminals	All terminals	All terminals (input terminals for G3PJ)	Power supply	Pulse output / RS-485
mm²	MIN	0.14	0.14	0.25	0.14	0.14	0.14	0.25	0.5	0.25
	MAX	1.25	2.5	4	0.75	2.5	0.5	1.5	1.5	1.5
AWG	MIN	26	26	24	26	26	26	24	20	24
	MAX	18	14	12	18	14	20	16	16	16
○		○	○		○	○	○			
○		○	○		○	○	○	○		○
○		○	○		○	○	○	○		○
				○						
○		○	○		○	○	○	○		○
○		○	○		○	○	○	○		○
○		○	○		○	○	○	○	○	○
○		○	○		○	○	○	○	○	○
				○						
○		○	○		○		○	○	○	○
○		○	○		○		○	○	○	○
				○						
○		○	○		○		○	○	○	○
○		○	○		○		○	○	○	○
				○						
○		○	○		○					
				○						
				○						

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 mm²/AWG24-10 0.25~6 mm²/AWG24-10 0.14~10 mm²/AWG25-7 10~25 mm²/AWG8-4	PZ 6 roto PZ 16	0.14~6 mm² 6~16 mm²	Variocrimp 4, 206-1204 Variocrimp 16 206-225, 206-1225	0.25~4 mm²/AWG24-12 6-16 mm²/AWG10-6 10,16,22,25 mm²

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)

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