

INDUSTRIAL COMPONENTS

Product Selector 2004/2005



- Electromechanical relays
- Timers
- Counters
- Programmable relays
- Level and leakage controllers
- Industrial switches
- Pushbutton switches
- Low voltage switch gear
- Temperature controllers
- Solid state relays
- Digital panel indicators
- Power supplies
- Sockets

Advanced Industrial Automation

OMRON

How to order industrial component products from Omron

Omron manufactures a very wide range of industrial components and each product, or variation of a product, has a specific ordering code which must be specified correctly when ordering. This catalog is organized to help you choose the right product for the job and construct the correct ordering code.

- **Product family introduction** Describes the available range within a family.
- **Product comparison table** Contains all available product variations from Omron’s wide selection. Use to choose the right product for the application.
- **Product specific ordering code tables** For constructing the ordering codes according to specifications and options required.

An example ordering code: **E5GN-Q03TC-FLK-500ACDC24**

Example product

		Ordering code										
Model	24 x 48 mm	E5GN -	^{*1}				03	TC		-FLK	- 500	ACDC24
	48 x 48 mm	E5CN -								- 500		
	In-panel, DIN-rail mounted	48 x 48 mm	E5CN -					T		U		
	96 x 48 mm	E5EN -			3					- 500		
	96 x 96 mm	E5AN -			3					- 500		
Output type	Relay		R	R	R							
	Voltage (for driving SSR)		Q		Q							
Number of alarms	No alarm (STANDARD)											
	One alarm		1	1	1							
Communications	No communications function (STANDARD)											
	RS-485 & serial communications			03					-FLK			
Input type	Thermocouple					TC						
	Platinum resistance thermometer (Pt100)					P						
	Temperature (thermocouple and Pt100)						T					
Options	With terminal cover									-500		
	DIN-rail mounted, in-panel type									U		
Input voltage	100 to 240 VAC										AC100-240	
	24 VAC/VDC											ACDC24

^{*1} Voltage can only be used by 24x28mm and 48x48mm models.

Ordering code:

E5GN-Q03TC-FLK-500ACDC24

- 1
- The code starts here.
- 2
- *1 refers to the note at the bottom of the table. The box may be filled with a choice of relay or voltage, in this case the Q for voltage.
- 3
- 'No alarm' has been chosen. This choice box has no code so the box remains empty (so also no space, or dash (-) either).
- 4
- RS-485 & serial communications with the codes 03 and FLK has been chosen: both should be used in the code. Double codes are joined with an arrow.
- 5
- A thermocouple with the code TC has been chosen and entered into the code.
- 6
- A fixed element of the code that should always be included.
- 7
- The choice of input voltage with the code 24AC/DC has been chosen and entered.
- 8
- The ordering code is complete.

- White box: to be filled with code information from table.
- ^{*1}

White box with ^{*1}: refers to the note at the bottom of the table.
- Colored areas: no option, not to be filled. Color refers to product comparison table.
- M

Colored areas with information: standard option to be included in code.
- Empty box (standard).
- ↔

Double codes, joined by an arrow, both should be used in the ordering code if an option is chosen.
- ↑

Choose an option and fill in on top in this box:

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OMRON ADVANCED INDUSTRIAL AUTOMATION

Today's industrial manufacturers are constantly faced with new challenges posed by ever increasing demands on performance, quality and cost. In an environment where every movement, every component and every assembly operation must be immediately and automatically recorded, checked and documented for maximum efficiency, Omron can provide the solution.

Omron's industrial automation product range includes optical sensors and measuring systems, high-speed industrial-grade image processing systems, controlling and switching devices, highly dynamic drives and product tracking systems for information interchange, all of which meet today's industrial automation challenges.

Omron also caters to the logistics and information processing sectors by developing advanced network and field bus systems, which ensure that relevant data collected in the field by sensors and other equipment can be easily accessed and analyzed by production managers through standard Office applications.

Omron is your one-stop shop for future-oriented products matched to perform in perfect unison. We are constantly developing new products and enhancing existing ones. Each year sees the introduction of at least 20 new product ranges in industrial components, safety engineering, sensors, image processing, drives and automation systems.

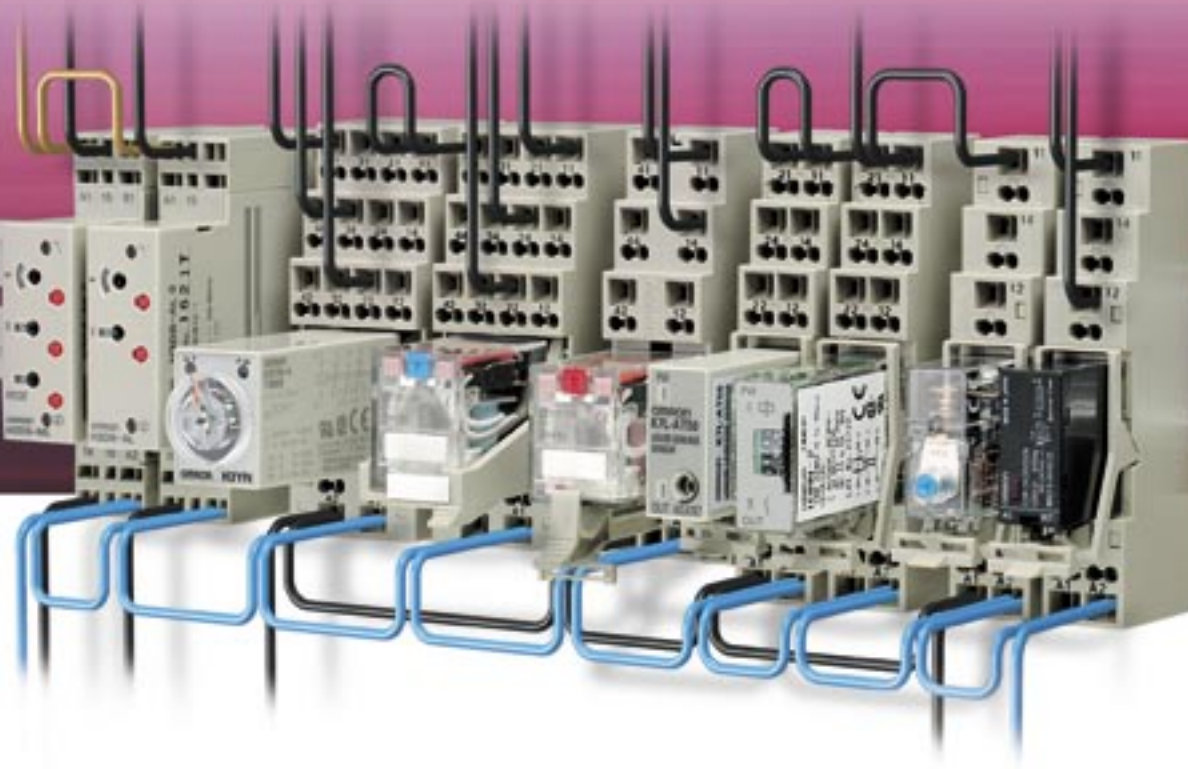
Our close relations with customers and partners in industry mean we are well-positioned to quickly identify new trends which we can incorporate in the development of our own new products. In this, we are helped by our Research and Development (R&D) Centers and our highly efficient production sites in the major regions of the world. With such distributed facilities, Omron can achieve customer-specific solutions and modifications with a very short time to market.

In fact our customers see us more as joint developers for their own machinery and plant and as solution providers for their increasingly complex automation requirements, while we see our customers as providing the product ideas and development impetus so vital to our own future. It's a partnership that works very well on both sides.

You too can choose such a partnership.

Choose Advanced Technology & Services – choose Omron.

NEW PRODUCT SOLUTIONS



Screw-Less Clamp solutions

Omron is the first manufacturer to use SLC (Screw-Less Clamp) technology in a standard socket for industrial relays. These SLC sockets offer significant savings on material (crimp terminals) and wiring time. There's no over- or under-tightening of the cable connection, so better contact reliability is always achieved. Omron's sockets can be used with solid or stranded wire, with or without crimped terminals. Double wiring and easy bridge and branch connections are all possible on all terminals. And because each socket is wired from the top instead of the side, the cable troughs can be mounted directly at the socket, saving space in the switch cabinet.

The use of SLC technology also eliminates the need to check clamp screws regularly in case they need tightening. Omron has designed a complete range of timers with Screw-Less Clamps, as well as sockets for a wide range of relays, timers and controllers. When used in combination with associated products these sockets guarantee safe switching and meet the most demanding specifications. In addition, a unique ejector in each socket makes product replacement very easy.

Unique 1-2-3 step wiring process!

The timer and socket's unique mechanism uses no screws, so there's no time wasted turning screws during wiring. Just three steps are required:

1. Insert the screwdriver
2. Insert the wire
3. Withdraw the screwdriver

This procedure takes less than half the conventional wiring time, and is much more reliable!

How Omron's SLC technology works!



Unique 1-2-3 step wiring process!

NEW PRODUCT SOLUTIONS



E5CN - the best temperature controller around

Omron's E5CN was the first temperature controller to offer the high-clarity, back-lit LCD display with color change technology in a 1/16 DIN format. Now Omron has brought this world's best-selling controller to the next level. The E5CN display shows not only the process value in large, 11mm digits, it also has a tri-color back-lit matrix that produces red, green and orange.

These colors can be configured to occur on events such as an alarm condition or out-of-band warning. The new E5CN can be automatically tuned to give the maximum control performance, and thanks to Omron's unique 2-PID control, this applies to both approach-to-set value and response-to-disturbance. The benefits of this over normal PID include faster start-up times and improved response, which means that the quality of the end product can be maintained in changing circumstances. The user doesn't have to take any special action; the controller's built-in technology does all the work! Many features have been further improved along with the introduction of some innovative technologies that users will greatly appreciate.

Color change - the new display characteristics

Omron has a range of panel instruments where the process value color visualizes the status of a process. This unique function alerts any member of staff to an alarm condition by changing the display color from green to red or vice versa. The display colors can be pre-programmed so that they change in an alarm situation, when reaching a preset value, or when values vary outside a preset threshold.



COLOR CHANGE DISPLAY

Each panel instrument features a high-tech crystal-clear LCD display that provides excellent visibility in all lighting conditions and from a wide angle. All instruments have dust-and waterproof fronts that meet IP66 rating, and they conform to all general approvals. Omron is currently the only company to feature a range of panel instruments with such color display characteristics. Products that are equipped with this function include E5CN Temperature Controllers, K3GN and K3MA Two-color Display Panel Indicators, H5CX Digital Timers and H7CX Digital Counters. These panel instruments are suitable for a wide range of applications. They can be used as alarm indicators that show a particular status of a process, in a furnace to indicate the completion of a process, or to grasp the idling state of equipment. In pump and valve applications these instruments are ideal for monitoring whether the valve is open or closed, and whether or not the pump is operational.



S8VS – compact DIN rail power supply with LED display

Omron's S8VS power supply series features a unique 3-digit, 7-segment LED display that provides data on output voltage, output current and output peak current for faster, easier diagnostics. The S8VS is ultra-compact, so it requires less panel space than competitors' models. Its DIN-rail click-on system makes installation a very easy process, and it is available in a variety of power ratings from 60W to 240W.

The S8VS series is the first power supply family in the world to have an LED display. Via this display you can check the status of voltage, current, and peak current of the unit. The display makes diagnostics and maintenance easier, and helps detect power supply and power line problems faster. The S8VS also features a built-in run-time monitor that indicates the total operation time of the power supply. This helps with preventative maintenance and thus reduces operational and maintenance costs as a whole. Mounting the S8VS is easy, thanks to its DIN-rail click-on system.



K3HB – Omron's new panel indicator

Omron has developed an innovative range of analog input panel indicators built around state-of-the-art technology to set new benchmark standards in functionality and visibility. In the development of the 1/8 DIN K3HB range, Omron has focused on making the indicators simple to read, even at a distance, and to make interpreting those readings as intuitive as possible.

The K3HB indicators provide a bar-graph position indication, which is unique in 1/8 DIN horizontal housing panel indicators. The sampling speed of this new range has been increased to 50 times per second, or 2,000 times per second for the linear sensor indicator version. Furthermore, users can specify DeviceNet communications, with the option of a DeviceNet output module delivering high-speed data communication with PLCs, without the need for special programming. The full range of K3HB analog input panel indicators includes a process indicator (K3HB-X), a temperature indicator (K3HB-H), a weighing indicator (K3HB-V) and a linear sensor indicator (K3HB-S). These indicators provide convenient, high performance solutions in a broad spectrum of applications in the process industry, as well as in machinery applications such as binding, soldering, semiconductor manufacture, moulding and mixing machines. The K3HB indicators are modular in design, which enables users to select exactly the functionality they require.

NEW PRODUCT SOLUTIONS



ZEN - the logical automatic tools for small scale flexible control

The ZEN is a modular, expandable, programmable relay that is designed to provide flexible, automatic control for small-scale machines and facilities. The ZEN combines all the functionality of timers, counters and relays to control multiple input and output signals, while being easy to install and program. It enables any daily routine that involves switching and control to be easily automated, which saves time and effort. And it is the perfect solution for building automation applications where multiple timer control is very important.

Programming the ZEN is easy, thanks to a dedicated Omron support software package. Once you have created a program you can even save it to a memory module and copy to another ZEN without having to use a PC! In addition, you can enhance the ZEN's operating capability simply by connecting more expansion I/O units. The ZEN can be used to control everything from fans and pumps to complex lighting sequences and escalators. And it is ideal for replacing dedicated printed-circuit boards, enabling you to make process changes without having to redesign a new board. A very flexible, cost-effective automation tool indeed!



S8TS - Omron's power supply with system back-up options

Omron's S8TS is an innovative DC power supply series with a unique 'building-block' concept that offers flexibility, reliability, standardization and redundancy in any industrial automation system. The S8TS is available with a DC battery back-up unit and a Buffer unit that can be easily added to the power supply to ensure system integrity at all times.

This building-block concept produces one of the most flexible power supply systems around, and should appeal to those who need to maintain production in the event of a power failure. The S8TS has three output types (5, 12 and 24VDC) that enable more than 100 different power supplies to be configured. Each 'plug-together' power unit allows you to create collectives of 2.5, 5, 7.5 or 10A in 12 or 24VDC output voltages. A 5VDC, 5A block is also available.

The standard sized, DIN-rail mounting units make initial panel layout a simple operation. As load requirements change, increasing or decreasing power output capacity takes just minutes to achieve. At just 42mm wide, these units can be added as required up to a maximum of 10A per group. Unique bus connectors enable you to connect the input voltage internally to all linked power supply units.



J7 - Minimum size, maximum performance

Omron's J7 series of high-quality contactors, thermal overload relays, and motor protection circuit breakers is designed to complement the existing portfolio. This series of feature-packed products uses state-of-the-art technology and is built by Omron on a product line that has been certified according to quality standards ISO 9001. The J7 series offers impressive power handling capabilities on compact footprints.

Most models of the contactor range can operate in temperatures from -40°C to $+90^{\circ}\text{C}$, making them ideal for use in extreme, environmentally harsh conditions. Constructed according to European and International standards, these contactors, thermal overload relays and motor protection circuit breakers conform to EN/IEC and are approved by UL/CSA, enabling them to be used in any part of the world. They are suitable for any industrial application and will appeal to panel builders, OEMs and engineers in the automotive, chemical and heavy power industries looking for the best choice in top-quality products from one supplier.



E5ZN - in-panel temperature control solutions

At just 22.5mm wide, Omron's new E5ZN temperature controller series is one of the slimmest dual-loop controllers on the market. The E5ZN features all standard temperature control functionality, and thanks to its innovative design, mounting it onto a DIN-rail is simply a matter of click-and-go!

Its innovative design and built-in Omron quality guarantees process stability and saves panel builders valuable installation time, space and wiring costs. Each slim-line unit controls two temperature loops, and as many as 16 units can be mounted side by side. This allows you to control up to 32 loops in the minimum amount of space, and at a lower cost-per-loop than anything the competition has to offer!

The E5ZN features a DeviceNet option, Retransmission outputs and current control. It has two control loops in one 22.5mm module. Modules are fast and easy to replace, without rewiring. The E5ZN also has voltage (SSR), transistor or current outputs, two alarm outputs as standard, and a heater burnout alarm or retransmission output. A new addition to the series is the linear current control unit, which is equipped as standard with (volt) transfer output.

NEW PRODUCT SOLUTIONS



Controllers and SSRs - Omron's perfect partnership

Omron is the world's largest supplier of temperature controllers. This product range is unrivaled, and includes everything from the simplest controllers to advanced communication units that help you master any control application. Omron also offers a comprehensive range of solid-state relays (SSRs) that provides the perfect load switching for temperature control applications.

These SSRs are a fast reliable and cost-effective partner to our temperature controllers. Combinations of temperature controller and SSR are available to handle almost any application, including heater bands for plastics extrusion processes, packaging machinery and heater elements in general manufacturing. Only Omron could bring you such a product choice, and all from one supplier! Designed and tested to Omron's renowned high standards, each product in this range meets all relevant international standards and provides consistently superb quality throughout its working life.



G2RS - Omron's general-purpose relays

With the G2RS relay Omron sets new standards in feature design and reliability. Since pioneering the widespread use of slim-line interface relays over a decade ago, Omron continues to be the first choice for relay users. The G2RS relay brings enhanced features and flexibility for more user-friendly installation, commissioning and operation.

Omron's G2RS relays offer unrivaled reliability, performance and product choice. Three relay types are available, in both single and double-pole changeover contact arrangements, as well as AC and DC coil voltages. All models feature a mechanical indicator, and a nameplate onto which identification data can be added. The mainstream and full-featured models have an LED indicator which lights green for DC coil voltage types and red for AC coil voltage types. The G2RS relays are robust and compact in design yet have a high switching capacity; the single-pole versions can switch an impressive 440VAC. They are built to Omron's own high quality and environmentally friendly standards, so a long, reliable working life is guaranteed. They meet all international standards, including UL, CSA, VDE, LR and CE. In addition, with the G2RS plug-in relay users have the choice of screw terminal or Screw-Less Clamp terminal sockets for maximum installation flexibility.



S8T-DCBU-02 - Power management control range with new DC buffer unit

The S8T-DCBU-02 is a buffer block that is designed to prevent interruptions in equipment operation, loss of data or other problems resulting from a momentary power loss. It does this by providing a back-up power source as well as a shutdown time off process for at least 500ms (at 2.5A) to 1s (at 1A) in the event of a glitch or transient interruptions in the power supply.

The S8T-DCBU-02 can be used with all of Omron's power supplies, and is one of the most cost-efficient ways of ensuring the supply of power in industrial automation systems. Up to four such buffer blocks can be connected in parallel to increase the back-up time and current handling capacity. The S8T-DCBU-02 operates by using built-in capacitors that act as a temporary power source during a power failure. In addition, the capacitors charge the energy that has been increasingly generated by a boosted charging voltage to them, to deliver more power and provide a longer back-up time than can be expected from a standard back-up system. When the power supply recovers, these capacitors start recharging. Like other Omron power supplies, built-in over-current and over-voltage protection circuits in the buffer block protect equipment against damage caused by shorts and overloads.

Sockets

Omron offers a wide range of sockets into which products like relays, timers and controllers can be connected. The most innovative of these is the Screw-Less Clamp (SLC) socket, which offers an effective, timesaving, no-compromise wiring solution in industrial environments. With SLC sockets wiring time is drastically reduced, routine maintenance is eliminated and a very reliable connection is assured. Because there are no screws to be tightened during initial wiring there's no over- or under-tightening of cable connections and no damaged threads. Once the clamp secures the wire, it stays secured, eliminating the risk of the wiring coming loose through shock or vibration.

Omron also provides a range of Screw Terminal Sockets, with and without external clips, which are suitable for both DIN-rail and surface mounting. In addition, Omron has a range of solder terminals, plug-in terminals, PCB terminals and wire-wrap terminals, which are suitable for back-mounting and which are also available with and without external clips.

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.



Electromechanical relays

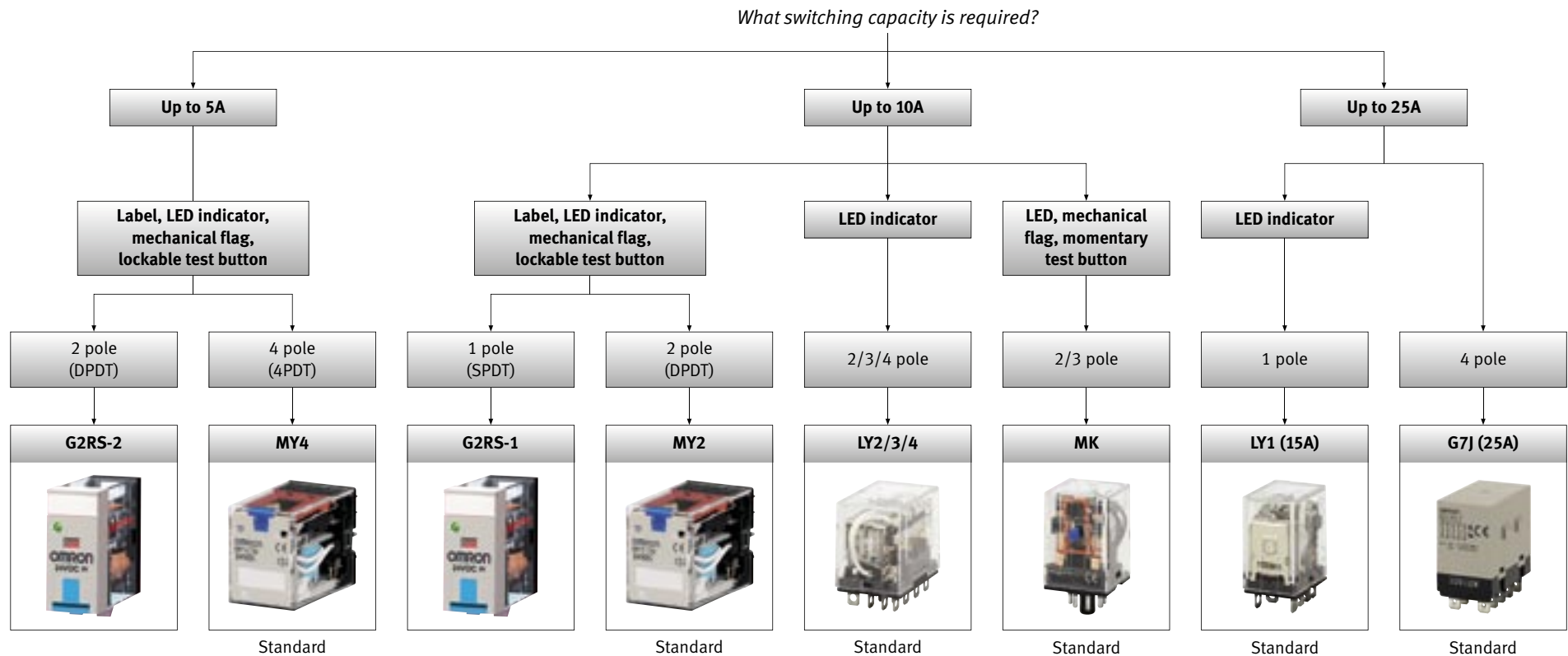
Omron has been supplying the industry with reliable, high-quality relays for over 40 years. These relays bring enhanced features and flexibility to the market for more user-friendly installation, commissioning and operation. They are built to Omron's own high quality and environmentally friendly standards, and guarantee a long, reliable working life.

- Excellent quality and reliability
- Slim, space-saving designs
- Push-to-test buttons – momentary and lockable
- Mechanical indicator and LED indicator
- Diode suppression
- Screw and screw-less terminal sockets with relay eject mechanism
- All relevant approvals, including UL, CSA, TÜV, VDE and CE

Omron's best-selling industrial relay is the MY series, which has sold in excess of 600 million pieces since its introduction.

Omron's range of industrial relays is capable of switching loads from micro-amps to 25A, and incorporate many features and contact configurations.

They cover a wide range of applications whilst meeting all the relevant International Standards for global use. They also meet and often exceed environmental standards.



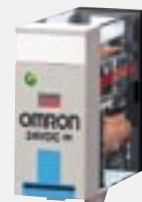
Electromechanical relays

Selection criteria										Features								
Type	Label	Flag	Family		1 pole	2 pole	3 pole	4 pole	Contacts	LED indicator	Momentary test button	Lockable test button	Min load	Max current	SLC socket	Sealed type	Plug-in/solder terminals	
Control panel relay	With label	Mechanical flag	MY			●			DPDT	○	○	○	1 mA	10A	●		●	
								●	4PDT	○	○	○	1 mA	5A	●	○	●	
								●	4PDT bifurcated	○	○	○	0.1 mA	5A	●	○	●	
			G2RS		●				SPDT	○	○	○	100 mA	10A	●		●	
						●			DPDT	○	○	○	10 mA	5A	●		●	
			MK-I			●			DPDT	○			10 mA	10A			●	
							●		3PDT	○			10 mA	10A			●	
	Without label	No mechanical flag	LY		●				SPDT	○			100 mA	15A			○	
						●			DPDT	○			100 mA	10A			○	
						●			DPDT bifurcated	○			10 mA	7A			○	
							●		3PDT	○			100 mA	10A			○	
								●	4PDT	○			100 mA	10A			○	
			G7J		●				SPST-NC				100 mA 10 mA	8A			●	
						●			DPST-NO/NC				100 mA	25A			●	
							●		3PDT-NO				100 mA 10 mA	25A			●	
								●	4PST-NO				100 mA 10 mA	25A			●	
Special purpose relay		Mechanical flag	MYK			●			DPDT				1 mA	3A			●	
		No mechanical flag	G4Q			●			DPDT				100 mA	5A			●	

					AC voltage						DC voltage					Approvals												
	PCB terminals	Quick connect terminals	Diode	Varistor	6V	12V	24V	48/50V	110/120V	220/240V	6V	12V	24V	48/50V	110/120V	CE	SP	UL US	LR	UL US	+	△	Y	D'E	D	N	S	
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MY



G2RS



MK-I



MK-S

MY Electromechanical relays

Ordering code			
Model	Without LED indicator	MY	(S)
	With LED indicator, standard coil polarity	MY	(S)
	With LED indicator, reversed coil polarity	MY	(S)
Contact form	DPDT	2	
	4PDT	4	
	4PDT (bifurcated)	4Z	
Classification	with LED indicator	N	
	with LED indicator and test button	IN	
Built in feature	Built-in diode (DC only)	D2	
	Built-in CR (220/240 VAC, 110/120 VAC only)	CR	
Rated coil voltage	6 VAC	AC6	
	12 VAC	AC12	
	24 VAC	AC24	
	48/50 VAC	AC4850	
	110/120 VAC	AC110120	
	220/240 VAC	AC220240	
	6 VDC	DC6	
	12 VDC	DC12	
	24 VDC	DC24	
	48 VDC	DC48	
	100/110 VDC	DC100110	

G2RS Electromechanical relays

Ordering code			
Model	G2R -	- S	(S)
Number of poles	1 pole	1	
	2 poles	2	
Classification	General purpose (STANDARD)		
	LED indicator	N	
	Diode (DC only)	D	
	LED indicator and diode (DC only)	ND	
	LED indicator with test button	NI	
	LED indicator and diode with test button (DC only)	NDI	
Rated coil voltage	24 VAC	AC24	
	110 VAC	AC110	
	120 VAC	AC120	
	230 VAC	AC230	
	240 VAC	AC240	
	6 VDC	DC6	
	12 VDC	DC12	
	24 VDC	DC24	
	48 VDC	DC48	

MK-I/S Electromechanical relays Standard models

Ordering code			
Industrial relays	Dust cover	MK	P
Contact form	DPDT	2	
	3PDT	3	
Internal connecting construction	Standard (STANDARD)		
	Non-standard (refer to datasheet)	2	
	Non-standard (refer to datasheet, only 3PDT)	5	
Mechanical indicator pushbutton	Mechanical indicator and pushbutton	S	
	Mechanical indicator	I	
Approved standards	UL, CSA, DEMKO, NEMKO, SEMKO, SEV, TÜV (STANDARD)		
	VDE	VD	
Rated voltage	6 VAC	AC6	
	12 VAC	AC12	
	24 VAC	AC24	
	50 VAC	AC50	
	100 VAC	AC100	
	110 VAC	AC110	
	120 VAC	AC120	
	200 VAC	AC200	
	220 VAC	AC220	
	230 VAC	AC230	
	240 VAC	AC240	
	6 VDC	DC6	
	12 VDC	DC12	
	24 VDC	DC24	
	48 VDC	DC48	
	100 VDC	DC100	
	110 VDC	DC110	

MK-I/-S Electromechanical relays Special models

Ordering code			
Industrial relays	Dust cover	MK	P
Contact form	DPDT	2	3PDT
Classification	LED indicator	N	Diode
	Diode	D	Varistor
	Varistor	V	LED indicator and diode
	LED indicator and diode	ND	LED indicator and varistor
	LED indicator and varistor	NV	
Coil polarity	Standard (STANDARD)		Reverse
Internal connection construction	Standard (STANDARD)		Non-standard (refer to datasheet)
	Non-standard (refer to datasheet, only 3PDT)	2	5
Mechanical indicator/pushbutton	Mechanical indicator and pushbutton	S	Mechanical indicator
Approved standards	UL, CSA only (STANDARD)		VDE(N and D models only)
	VDE(N and D models only)	VD	
Rated voltage	6 VAC	AC6	12 VAC
	12 VAC	AC12	24 VAC
	24 VAC	AC24	50 VAC
	50 VAC	AC50	100 VAC
	100 VAC	AC100	110 VAC
	110 VAC	AC110	120 VAC
	120 VAC	AC120	200 VAC
	200 VAC	AC200	220 VAC
	220 VAC	AC220	230 VAC
	230 VAC	AC230	240 VAC
	240 VAC	AC240	6 VDC
	6 VDC	DC6	12 VDC
	12 VDC	DC12	24 VDC
	24 VDC	DC24	48 VDC
	48 VDC	DC48	100 VDC
	100 VDC	DC100	110 VDC
	110 VDC	DC110	



LY

LY Electromechanical relays

Ordering code			
Model	Plug-in/solder terminals	LY -	-
	Plug-in/solder terminals with LED	LY -	N -
	PCB terminals	LY -	- 0
	Upper-mounting plug-in/solder terminals	LY -	F
Contact form	SPDT	1	DPDT
	DPDT	2	DPDT (bifurcated)
	DPDT (bifurcated)	2Z	3PDT
	3PDT	3	4PDT
	4PDT	4	
Built-in feature	Built-in diode (DC only)	D	D2
	Built-in CR (DPDT AC models only)	CR	CR
Rated coil voltage	6 VAC	AC6	12 VAC
	12 VAC	AC12	24 VAC
	24 VAC	AC24	50 VAC
	50 VAC	AC50	110/120 VAC
	110/120 VAC	AC110120	200/220 VAC
	200/220 VAC	AC200220	220/240 VAC
	220/240 VAC	AC220240	6 VDC
	6 VDC	DC6	12 VDC
	12 VDC	DC12	24 VDC
	24 VDC	DC24	48 VDC
	48 VDC	DC48	100/110 VDC
	100/110 VDC	DC100110	



G7J

G7J Electromechanical relays

Industrial relays		Ordering code	
Model with PCB terminals (single contact)	G7J -	- P	
Model with W-brancket screw terminals (single contact)	G7J -	- B	
Model with tab terminals, quick-connect terminals (#250 terminals) (single contact)	G7J -	- T	
Model of 1NO with PCB terminals (bifurcated contact)	G7J -	4A	- P - Z
Model of 1NC with PCB terminals (bifurcated contact)	G7J -	3A1B	- P - Z
Model with screw terminals (bifurcated contact)	G7J -	3A1B	- B - Z
Model with tab terminals, quick-connect terminals (#250 terminals) (bifurcated contact)	G7J -	3A1B	- T - Z
		200/240 AC	
Contact form		4PST-NO	4A
		3PST-NO/SPST-NS	3A1B
		DPST-NO/DPST-NC	2A2B
Rated coil voltage		24 VAC	AC24
		50 VAC	AC50
		100 to 120 VAC	AC100120
		200 to 240 VAC	AC200240
		6 VDC	DC6
		12 VDC	DC12
		24 VDC	DC24
		48 VDC	DC48
		100 VDC	DC100

NOTES: For bifurcated contact type, the output is 1NO (4PST-NO) or 1NC (3PST-NO/SPST-NC).
The screw terminal and quick connect terminal relay types need a W-bracket: R99-04 (sold seperately).



MYK

MYK Electromechanical relays

Model		Ordering code	
	MY2K -		
Terminals	Plug-in/ solder terminals (STANDARD)		
	PCB terminals	02	
Rated coil voltage		12 VAC	AC12
		24 VAC	AC24
		50 VAC	AC50
		100 VAC	AC100
		12 VDC	DC12
		24 VDC	DC24

G4Q Electromechanical relays

Model		Ordering code	
Model with casing, DPDT, single contact, plug in terminal Model without casing, DPDT, single contact, solder terminal	G4Q - 212S		
	G4Q - 211A		
Rated voltage		6 VAC	AC6
		12 VAC	AC12
		24 VAC	AC24
		50 VAC	AC50
		100/(110) VAC	AC100(110)
		200/(220) VAC	AC200(220)
		6 VDC	DC6
		12 VDC	DC12
		24 VDC	DC24
		48 VDC	DC48
		100 VDC	DC100
		200 VDC	DC200



G4Q



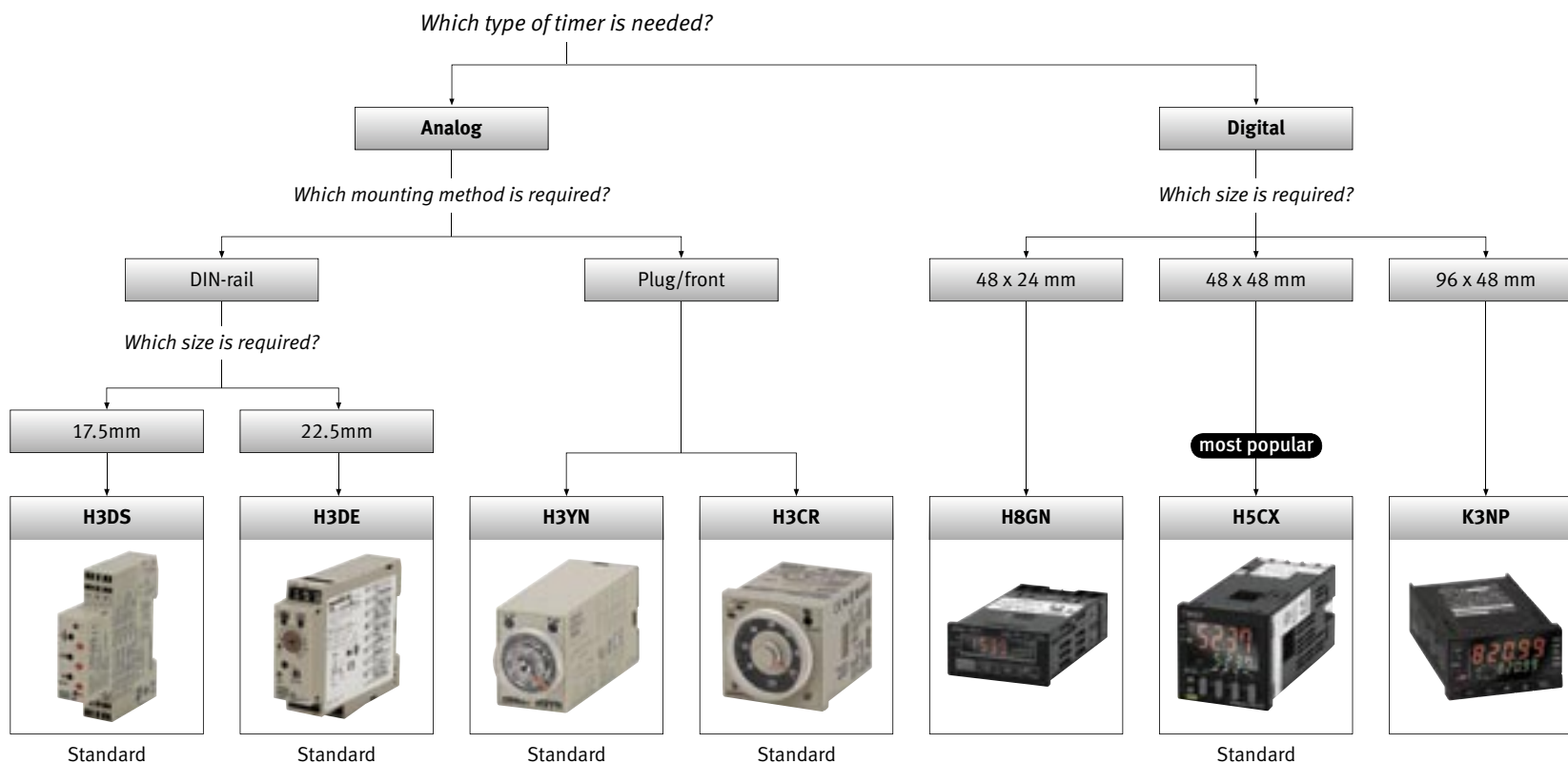
Timers

With over 70 years experience in timers, Omron knows exactly how to satisfy every timer function need. Our range includes electronic timers, standard and digital timers, all available in a wide variety of housing and mounting methods to suit any customer requirement.

- An extensive range of electronic timers and digital timers
- A wide range of timer function modes
- Conformance to all safety standards
- A wide range of housing varieties to suit every application
- Timer range from 0.001 seconds to 9999 hours
- Relay outputs, contact and transistor outputs

At just 17.5mm wide, the H3DS series fits into standard, modular 45mm panels and is available with screw terminals and screw-less clamp technology for faster, easier, more reliable wiring. Where space is limited, we offer the H3RN and H3YN series.

The H5CX series is a complete range of digital timers offering multiple time ranges and covering basically all timing functions, including real twin-timer function, memory function, an intuitive way of programming, and a two-color, back-lit negative transmissive LCD display.



Timers

Selection criteria							Contact configuration											Inputs	Outputs								
Category	Mounting	Size	Family	Type	Model		Key points	Time limit	Instantaneous	Programmable contacts	14 pins	11 pins	8 pins	5 pins	Screw terminals	Screw-less clamp terminals	Screw-less clamp sockets	Voltage input	Transistor	Relay	SCR	Relay output type					
																						SPDT	SPST-NO	DPST-NO	DPDT	4PDT	
Analog solid state timer	DIN-rail	17.5 mm	H3DS	Multi-functional	H3DS-M		Smart lock system Screw-less clamp available	●							●	○		○		●		●					
					H3DS-S			●						●	○		○		●		●						
					H3DS-A			●						●	○		○		●		●						
				Twin timer	H3DS-F			●						●	○				●		●						
					Star-delta	H3DS-G			●						●	○				●			● (2x)				
					Two-wired	H3DS-X			●						●	○						●					
		22.5 mm	H3DE	Multi-functional	H3DE-M		Solid state multi-functional timer	●	●	●						●			○		●		○			○	
					H3DE-S			●	●	●					●			○		●		●					
				Twin timer	H3DE-F		Independent on and off settings	●						●						●		●					
				Star-delta	H3DE-G		Wide star time range (120s) and star-delta transfer time (0.5s)	●						●						●		● (2x)					
				Power OFF delay	H3DE-H		Covers wide range of supply voltage, two delay-time models	●							●						●		●				
	Socket/ on panel	21.5 mm	H3YN	Miniature	H3YN		Multiple time ranges and multiple operating modes, compatible with MY power relay socket	●				●		●				○			●				○	○	
		12.8 mm	H3RN	Ultra slim	H3RN		Pin configuration compatible with G2R socket, multiple time range	●						○	○			○			●		○		○		
		1/16 DIN	H3CR	Multi-functional	H3CR-A		Wide power supply range, 4 or 6 operating modes, PNP input models available	●	●				○	○					○	○	○		○			○	
				Twin timer	H3CR-F		Wide power supply range independent time settings, 14 time ranges	●					○	○							●				●		
				Star-delta	H3CR-G		Wide star-time range (120s) and star-delta transfer time (0.5s)	●	●				○	○							●			● (2x)			
				Power OFF delay	H3CR-H		Long power OFF-delay times, models with forced-reset input are available	●	●				○	○							●		○			○	
			H5	Multi-functional	H5CX		Programmable PV color, ergonomic up/down digit keys, twin timer in one body, PNP/NPN switchable, IP66	●		●			○	○		○				○	○		○				
		1/32 DIN	H8	Preset counter/timer	H8GN		Cyclic control possible, 4 preset values, IP66, RS-485 communication available, reset	●		●						●					●		●				
Digital timer		1/8 DIN	K3	Period meter	K3NP		Many option boards: BCD, linear, comms, relays, NPN/PNP, sensor power supply, teaching, pre-scale function	●		●					●			●	○	○		○					

	Features				Functions											Remarks			Approvals		
	Time range		Supply voltage	Number of operating modes	ON-delay	Flicker OFF start	Flicker ON start	Signal ON/ OFF-delay	Signal OFF-delay	Interval (signal or power start)	Signal ON/ OFF-delay	One-shot output (ON delay)	On delay (fixed)	Independent ON/OFF time setting	Star-delta	Lineair	BCD	Transistor			
	Total time range	Number of sub ranges																			
	0.1s to 120h	7	24 to 230 VAC or 24 to 48 VDC	8	●	●	●	●	●	●	●	●							●	●	●
	1s to 120h	7	24 to 230 VAC or 24 to 48 VDC	4	●		●			●		●							●	●	●
	2s to 120h	7	24 to 230 VAC or 24 to 48 VDC	1									●						●	●	●
	0.1s to 12h	6	24 to 230 VAC or 24 to 48 VDC	2		●	●												●	●	●
	1s to 120s	2	24 to 230 VAC or 24 to 48 VDC	1											●				●	●	●
	0.1s to 120h	7	24 to 230 VAC or 24 to 48 VDC	1	●													●	●	●	●
	0.1s to 120h	8	24 to 230 VAC or 12 VDC	8	●	●	●	●	●	●	●	●							●	●	●
	0.1s to 120h	8	24 to 230 VAC/DC or 12 VDC	4	●		●			●		●							●	●	●
	0.1s to 120h	8	24 to 230 VAC/DC	1		●	●												●	●	●
	1 to 120s	2	24 to 230 VAC/DC	1											●				●	●	●
	0.1s 120s	2 (model dependent)	100 to 120 VAC, 200 to 230 VAC, 24 VAC/DC, 48 VAC/DC	1					●										●	●	●
	0.1s to 10h (model dependent)	2	24, 100 to 120, 200 to 230 VAC, 12, 23, 48, 100 to 110, 125 VDC	4	●	●	●			●									●	●	●
	0.1s to 10 min or 0.1 min to 10h (model dependent)	0	24 VAC, 12, 24 VDC	4	●	●	●			●									●	●	●
	0.05s to 300h, 0.1s to 600h (model dependent)	9	100 to 240 VAC, 100 to 125 VDC, 24 to 48 VAC, 12 to 48 VDC	6 (model dependent)	○	○	○	○	○	○	○	○						○	●	●	●
	0.05s to 30h or 1.2s to 300h (model dependent)	14	100 to 240 VAC, 12 VDC, 24 VAC/DC, 48 to 125 VDC			●	●												●	●	●
	0.5s to 120s	4	100 to 120 VAC, 200 to 240 VAC	2											●				●	●	●
	0.05s to 12s, 1.2s to 12 min	4	100 to 120 VAC, 200 to 240 VAC, 24 VAC/DC, 48 VDC, 100 to 125 VDC	1					●										●	●	●
	0.001s to 9999h (configurable)		100 to 240 VAC, 24 VAC, 12 to 24 VDC	12	●	●	●	●	●	●	●	●	●	●				●	●	●	●
	0.000s to 9999h (configurable)	0	24 VDC	6	●	●			●	●				●					●	●	●
	0 to 999999		12 to 24 VDC, 100 to 240 VAC													○	○	○			



H3DS-M



H3DS-A



H3DE-M



H3DE-S



H3DE-F

H3DS Timers

Ordering code		
Model	Smart lock mechanism	H3DS - - L
Type	Multi-function type	M
	Standard type	S
	Single function type	A
	Twin timers	F
	Star-delta timer	G
	Two-wired timer	X
Mounting	Screw terminal type	
	Screw-less clamp type	C



H3DS-F



H3DS-G

Accessories for H3DS

Ordering code	
Lock key	Y92S - 38
End plate	PFP - M
Spacer	PEP - S



H3DS-S



H3DS-X

H3DE Timers

Ordering code		
Model	Multi-function or standard model	H3DE -
	Power OFF-delay timer	H3DE - H
	Other models	H3DE -
Type	Multi-function type	M
	Standard type	S
	Twin timers	F
	Star-delta timer	G
Output	DPDT	2
	SPDT	1
Output	12 VDC (only for DPDT output)	DC12
	24 to 230 VAC/DC	ACDC24230
	100 to 120 VAC	AC100120
	200 to 230 VAC	AC200230
	24 VAC/VDC	ACDC24
	48 VAC/VDC	ACDC48
Time span code	S series: 0.1 to 12 s	S
	L series: 1 to 120 s	L



H3DE-G



H3DE-H

Accessories for H3DE

Ordering code	
End plate	PFP - M
Spacer	PEP - S



H3YN

H3YN Timers

Ordering code		
Model	H3YN -	
Output	DPDT 2 4PDT 4	
Time range	Short time range (0.1s to 10 min) Long-time range (0.1 min to 10 h) 1	
Contact type	Single contact Twin contacts (supply voltage only 24 VDC and 4PDT only) Z	
Supply voltage	24 VAC 100 to 120 VAC 200 to 230 VAC 12 VDC 24 VDC 48 VDC 100 to 110 VDC 125 VDC	AC24 AC100120 AC200230 DC12 DC24 DC48 DC100110 DC125



H3RN

H3RN Timers

Ordering code		
Model	H3RN -	
Output	SPDT 1 DPST-NO 2	
Time range	Short time range (0.1s to 10 min) Long-time range (0.1 min to 10 h) 1	
Supply voltage	24 VAC 12 VDC 24 VDC	AC24 DC12 DC24



H3CR-A

H3CR-A Timers

Ordering code	
Model	Multi-function timer H3CR - A -
Number of pins	11-pin model
	8-pin model 8
Input type for 11-pin models	No-voltage input (NPN)
	Voltage input (PNP) P
Output	Relay output (DPDT) (STANDARD)
	Transistor output (NPN/PNP universal use) (supply voltage 24-48AC/12-48DC only) S
	Relay output (SPDT) with instantaneous relay output (SPDT) E
Suffix	Dual mode models (signal ON/OFF delay and one-shot) 300
	Double time scale (range) models (0.1 s to 600 h) 301
Supply voltage	100 to 240 VAC (50/60Hz)/100 to 125 VDC AC100240DC100125
	24 to 48 VAC (50/60Hz) / 12 to 48 VDC (not available for H3CR-A8E model) AC2448DC1248
	24 to 48 VDC/VAC (50/60Hz) (only for H3CR-A8E model) ACDC2448



H3CR-F

H3CR-F Timers

Ordering code	
Model	Twin timers H3CR - F -
Number of pins	11-pin model
	8-pin model 8
Twin timer mode	Flicker OFF start (STANDARD)
	Flicker ON start N
Time range	0.05 s to 30 h (STANDARD)
	1.2 s to 300 h 300
Supply voltage	100 to 240 VAC AC100240
	24 VAC/DC ACDC24
	12 VDC DC12
	48 to 125 VDC DC48125

H3CR-G Timers

Ordering code	
Model	Star-delta timer, 8-pin, long body model H3CR - G - 8 L
Outputs	Star-delta operation contact
	Star-delta operation and instantaneous contact E
Supply voltage	100 to 120 VAC (50/60Hz) AC100120
	200 to 240 VAC (50/60Hz) AC200240



H3CR-G



H3CR-H

H3CR-H Timers

Ordering code	
Model	Power OFF-delay timer, long body model
Number of pins	11-pin model 8-pin model
Input	Without reset input With reset input
Supply voltage	100 to 120 VAC (50/60 Hz) 200 to 240 VAC (50/60Hz) 24 VAC/VDC 48 VDC 100 to 125 VDC
Time unit code	S series: 0.05 to 12 s M series: 0.05 to 12 min

Accessories for H3CR Series

		Ordering code
Flush mounting adapter		Y92F - 30
		Y92F - 73
		Y92F - 74
Mounting track	50 cm (l) x 7.3 mm (t)	PFP - 50N
	1 m (l) x 7.3 mm (t)	PFP - 100N
	1 m (l) x 16 mm (t)	PFP - 100N2
End plate		PFP - M
Spacer		PFP - S
Protective cover		Y92A - 48B
Track mounting	8-pin	P2CF - 8
Front connecting socket	8-pin, finger safe type	P2CF - 8 - E
	11-pin	P2CF - 11
	11-pin, finger safe type	P2CF - 11 - E
Back connecting socket	8-pin	P3G - 8
	8-pin, finger safe type	P3G - 08 with Y92A - 48G
	11-pin	P3GA - 11
	11-pin, finger safe type	P3GA - 11 with Y92A - 48G
Time setting ring	Setting a specific time	Y92S - 27
	Limiting the setting range	Y92S - 28
Panel cover	Light grey (SY7/1)	Y92P - 48GL
	Black (N1.5)	Y92P - 48GB
	Medium grey (SY5/1)	Y92P - 48GM
Hold-down clip	For PL08 and PL11 sockets	Y92H - 7
	For PF085A socket	Y92H - 8



H5CX

H5CX Timers

Ordering code			
Model	Standard type	H5CX - A	
	Economy type	H5CX - L	8
External connection	Screw terminals		
	8-pin socket		8
	11-pin socket	11	
Output type	Contact output		
	Transistor output	S	
Supply voltage	100 to 240 VAC 50/60 Hz	AC100240	
	12 to 24 VDC / 24 VAC 50/60 Hz	AC24DC1224	
Case color	Black (STANDARD)		



K3NP

K3NP Timers

Ordering code			
Model	K3NP -		
Input sensors	NPN inputs/voltage pulse inputs	NB	
	PNP inputs	PB	
Supply voltage	100 to 240 VAC	1	
	12 to 24 VDC	2	
Display	Basic	A	
	Set value LED display	C	

K3NP output boards Timers

Ordering code			
Model	For basic display type	K31 -	
	For set value LED display type	K31 -	
Output type codes	3 comparative relay contact outputs (H, PASS, L: SPDT)	C1	C1
	5 comparative relay contact outputs (HH, H, L, LL: SPSTNO;PASS: SPDT)	C2	C2
	5 comparative relay contact outputs (HH, H, L, LL: SPSTNC;PASS: SPDT)	C5	C5
	5 comparative transistor outputs (NPN open collector)	T1	T1
	5 comparative transistor outputs (PNP open collector)	T2	T2
	BCD output (NPN open collector)	B2	
	BCD output + 5 transistor outputs (NPN open collector)	B4	B4
	Linear output (4 to 20 mA)	L1	
	Linear output (1 to 5 VDC)	L2	
	Linear output (1 mV/10 digits)	L3	
	Linear output, 4 to 20 mA + 5 transistor outputs (NPN open collector)	L4	L4
	Linear output, 1 to 5 V + 5 transistor outputs (NPN open collector)	L5	L5
	Linear output, 1 mV/10 digits + 5 transistor outputs (NPN open collector)	L6	L6
	Linear output, 0 to 5 VDC	L7	
	Linear output, 0 to 10 VDC	L8	
	Linear output, 0 to 5 VDC + 5 transistor outputs (NPN open collector)	L9	L9
	Linear output, 0 to 10 VDC + 5 transistor outputs (NPN open collector)	L10	L10
	Communication RS-232C	FLK1	
	Communication RS-485	FLK2	
	Communication RS-422	FLK3	
	RS-232C + 5 transistor outputs (NPN open collector)	FLK4	FLK4
	RS-485 + 5 transistor outputs (NPN open collector)	FLK5	FLK5
	RS-422 + 5 transistor outputs (NPN open collector)	FLK6	FLK6



H8GN

H8GN Timers/Counters

Ordering code			
Model	24 VDC	H8GN - AD -	
Communications output type	Communications not supported (STANDARD)		
	RS-485	FLK	



Counters

With over three decades in the counter market, Omron can provide a solution to every measurement process requirement, including total counting, timing, preset counting and specific cam positioning applications.

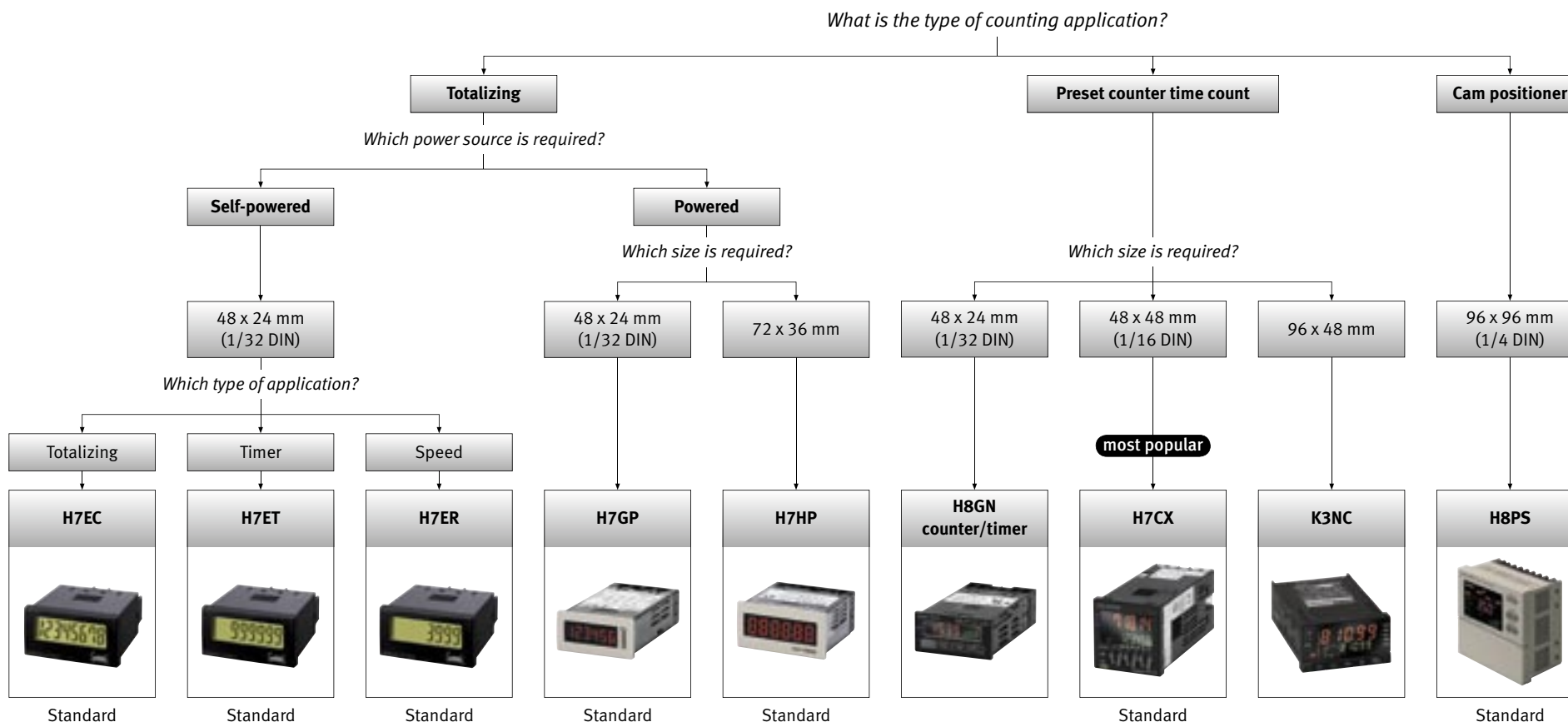
- Full range of battery-powered counters for total, timing- and speed counting
- Preset version has highly visible color-change feature
- Relay output and transistor output for preset counters
- Models available with communication capability
- Conform to all relevant safety standards
- LCD negative transmission back-lit display in most models

Our H7GP/H7HP and H7E models are available as total counter, time counter and speed counter. Our multi-functional preset counter series H7CX (1/16 DIN) offers intuitive programming and the H8GN is the first miniature format (48 x 24 mm):

1/32 DIN), programmable preset counter/timer with an integrated RS-485 communication port.

The H8PS is our special-function counter offering positioning control in combination with a rotary encoder.

The front housing of all of these products is IP66 approved, making them suitable for the most demanding industrial applications.



Counters

Selection criteria							Outputs									Inputs	Features								
Display	Size	Counter type	Family	Model		Key points	Control outputs	2 stage	5 stage	Total	Time	Pre-set	Batch	Dual	Tachometer	Control inputs	Dual operation	Number of digits	NPN/PNP switch	Back-lit	External reset	Manual reset	Number of banks		
LCD	1/32 DIN	Self-powered total	H7E	H7EC		Dual input speed, self-powered (LCD type without backlight)				●					●	No-voltage, PNP/NPN, DC voltage, AC/DC multi-voltage		8	●	○	●	●			
		Self-powered timer		H7ET		Dual time range, self-powered (LCD without backlight)				●	●					No-voltage, PNP/NPN, DC voltage, AC/DC multi-voltage		7	●	○	●	●			
		Self-powered tachometer		H7ER		Dual revolution display according to encoder resolution used, self-powered (without backlight)								●	No-voltage, PNP/NPN		4 or 5	●	○						
LCD negative transmissive	72 x 36 mm	Total counter/ time counter	H7□P	H7GP		High visibility, negative transmissive display, built-in red LED backlight at low power consumption				○	○					No-voltage or DC-voltage (switchable)		6	●		●	●			
				H7HP		High visibility, negative transmissive display, built-in red LED backlight at low power consumption				○	○					No-voltage or DC-voltage (switchable)		7	●		●	●			
	1/32 DIN	Pre-set counter/timer	H8□N	H8GN		Switch between counter and timer, pre-scaling, cyclic control, SV-bank, dual operation	1 relay (SPDT)	●		●	●	●	●	●		No-voltage	●	PV: 4, SV: 4			●	●	4		
	1/16 DIN	Pre-set counter	H7C	H7CX		Multi-function, colour change on PV, dual operation	1 relay (SPDT), transistor	○		○		○	○	○	○	No-voltage, PNP/NPN	●	PV: 4, SV: 4 or PV: 6, SV: 6	●	●	●	●			
LED	1/8 DIN	Up/down counting meter	K3	K3NC		High speed, pre-scale, sensor power supply, several output types, double display, 4 memory banks	3 or 5 relays, 5 NPN or 5 PNP, linear, BCD (5 digit)	●	●	●	●		●	●	●	No-voltage, voltage pulse, open collector		5		○	●	●	4		
LCD	1/4 DIN	Cam positioner	H8P	H8PS		Accepts 330-rpm input, up to 16-cam control possible using parallel input and 2 H8PS, back-lit	NPN or PNP, cam outputs (8 lines), run out, tachometer										Encoder	○	7						
	44.8 x 22.4 mm	PCB mounting	H7E□	H7E□-N□P		Total counter or total timer, dedicated for PCB				○	○					No-voltage		7 or 8		●	●	●			

			Terminals			Supply voltage			Comms	Functions						Color		Approvals		
			Screw terminals	PCB terminals	11-pin socket	100 to 240 VAC	12 to 24 VDC	24 VDC		Up	Down	Up/down	Reversible	Speed	Counting range	Beige	Black	CE	SP	UL
		IP66	●					○		●				0 to 30 Hz or 0 to 1 kHz	0 to 99999999	●	●	●	●	●
		IP66	●					○		●					0.0h to 999999.9h ⇔ 0.0h to 3999d23.9h or 0s to 999h59min59s ⇔ 0.0min to 9999h59.9min	●	●	●	●	●
		IP66	●					○						1 or 10 kHz	1000 s ⁻¹ or 1000 min ⁻¹ ; 1000 s ⁻¹ or 1000 min ⁻¹ ⇔ 10000 min ⁻¹	●	●	●	●	●
		IP66G	●			○	○			●				0 to 30 Hz or 0 to 5 kHz	0.1 to 99999.9h or 1s to 99h59m59s	●	●	●	●	●
		IP66G	●			○	○			●			●	1 to 30 Hz or 0 to 5 kHz	0.1 to 99999.9h or 1s to 99h59m59s	●	●	●	●	●
		IP66	●					●	○	●	●		●	0 to 30 Hz or 0 to 5 kHz	-1999 to 9999		●	●	●	●
	●	IP66	●		○	●	●			●	●	●	●	0 to 30 Hz or 0 to 5 kHz	-999 to 9999 or -99999 to 999999		●	●		●
	●	IP66	●			●	●		●	●	●	●	●	No voltage contact: 0 to 30 Hz; Voltage pulse/open collector: 0 to 50 kHz	-19999 to 99999		●	●	●	●
		IP50	●	●				●								●		●	●	●
		IP00		●				3 VDC		●				0 to 30 Hz or 0 to 1 kHz	0.0h to 999999.9h	●		●	●	●

● Standard

○ Available

□ Not available



H7EC

H7EC Counters

		Ordering code				
Model	NPN/PNP universal DC voltage input	H7EC - N	V	-		
	Other models	H7EC - N		-		
Count input			V			
			FV			
Case color					Black	B
Display	7-segment LCD without backlight					
	7-segment LCD with backlight					H



H7ER

H7ER Counters

		Ordering code		
Model	No-voltage input	H7ER - N		
	NPN/PNP universal DC voltage input	H7ER - NV		
Number of digits				
			4 digits (STANDARD)	
			5 digits	1
Case color			Light grey	
			Black	B
Display	7-segment LCD without backlight			
	7-segment LCD with backlight			H

H7ET Counters

		Ordering code				
Model	NPN/PNP universal DC voltage input	H7ET - N	V	-		
	Other models	H7ET - N		-		
Count input			V			
			FV			
Time range						
Case color					Black	B
Display	7-segment LCD without backlight					
	7-segment LCD with backlight					H



H7ET



H7GP

H7GP Counters

		Ordering code		
Model		H7GP -		
Classification	Total counter	C		
	Time counter	T		
Supply voltage				
			100 to 240 VAC (STANDARD)	
			12 to 24 VDC	D
Case color of front section			Light grey (Munsell 5Y7/1) (STANDARD)	
			Black	B



H7HP

H7HP Counters

		Ordering code	
Model	Total counter/time counter, 6 digits	H7HP - A	
	Total counter, 8 digits	H7HP - C8	
			↑
Supply voltage	100 to 240 VAC		↑
	12 to 24 VDC	D	↑
Case color of front section	Light grey (Munsell 5Y7/1)		↑
	Black	B	↑



H8GN

H8GN Counters/Timers

		Ordering code	
Model	24 VDC	H8GN - AD -	
			↑
Communications output type	Communications not supported		↑
	RS-485	FLK	↑



H7CX

H7CX Counters

		Ordering code	
Screw terminal type	6 digits	1-stage setting, contact output	H7CX - A
		Factory-set to 1-stage setting, contact and transistor	H7CX - AU
		Factory-set to 2-stage setting, contact output	H7CX - AW
		1-stage setting, transistor output	H7CX - AS
	4 digits	Factory-set to 1-stage setting, transistor output	H7CX - AUS D1
		Factory-set to 2-stage setting, transistor output	H7CX - AWS
		1-stage setting, contact output	H7CX - A4
		Factory-set to 2-stage setting, contact output	H7CX - A4W
	11-pin socket type	1-stage setting, transistor output	H7CX - A4S
		Factory-set to 2-stage setting, transistor output	H7CX - A4WS D
		1-stage setting, contact output	H7CX - A11
		1-stage setting, transistor output	H7CX - A11S
	6 digits	1-stage setting, contact output	H7CX - A114
		1-stage setting, transistor output	H7CX - A114S
Supply voltage/external power supply	AC100240 (50/60Hz), 12 VDC power supply		
	12 to 24 VDC without external power supply		D
	DC1224AC24 (50/60Hz), 12 VDC power supply		D1
Case color		Black	



K3NC

K3NC Counters

Ordering code			
Model	Basic display type	K3NC -	
Input sensors	NPN inputs/voltage pulse inputs	NB	
	PNP inputs	PB	
Supply voltage	100 to 240 VAC	1	
	12 to 24 VDC	2	
Display	Basic	A	
	Set value LED display	C	

K3NC output boards Counters

Ordering code			
Model	For basic display type	K31 -	
	For set value LED display type	K31 -	
Output type codes	5 comparative relay contact outputs (OUT1, 2, 4, 5; SPST-NO;OUT3; SPDT)	C2	C2
	5 comparative relay contact outputs (OUT1, 2, 4, 5; SPST-NC;OUT3; SPDT)	C5	C5
	5 comparative transistor outputs (NPN open collector)	T1	T1
	5 comparative transistor outputs (PNP open collector)	T2	T2
	BCD output (NPN open collector)	B2	
	BCD output + 5 transistor outputs (NPN open collector)	B4	B4
	Linear output (4 to 20 mA)	L1	
	Linear output (1 to 5 VDC)	L2	
	Linear output (1 mV/10 digits)	L3	
	Linear output, 4 to 20 mA + 5 transistor outputs (NPN open collector)	L4	L4
	Linear output, 1 to 5 V + 5 transistor outputs (NPN open collector)	L5	L5
	Linear output, 1 mV/10 digits+ 5 transistor outputs (NPN open collector)	L6	L6
	Linear output, 0 to 5 VDC	L7	
	Linear output, 0 to 10 VDC	L8	
	Linear output, 0 to 5 VDC + 5 transistor outputs (NPN open collector)	L9	L9
	Linear output, 0 to 10 VDC + 5 transistor outputs (NPN open collector)	L10	L10
	Communication RS-232C	FLK1	
	Communication RS-485	FLK2	
	Communication RS-422	FLK3	
	RS-232C + 5 transistor outputs (NPN open collector)	FLK4	FLK4
	RS-485 + 5 transistor outputs (NPN open collector)	FLK5	FLK5
	RS-422 + 5 transistor outputs (NPN open collector)	FLK6	FLK6



H8PS

H8PS Counters

Ordering code			
Model	Front panel language: English	H8PS - 8B	
Mounting method	Flush mounting (STANDARD)		
	Surface/track mounting	F	
Output configuration	NPN transistor output (STANDARD)		
	PNP transistor output	P	



H7E_N_P

H7E_N_P Counters

Ordering code			
Model	Total counter	H7EC - N	
	Time counter	H7ET - N	
Max counting speed for H7EC models	1 kHz (STANDARD)		
	30 Hz	L	



Programmable relays

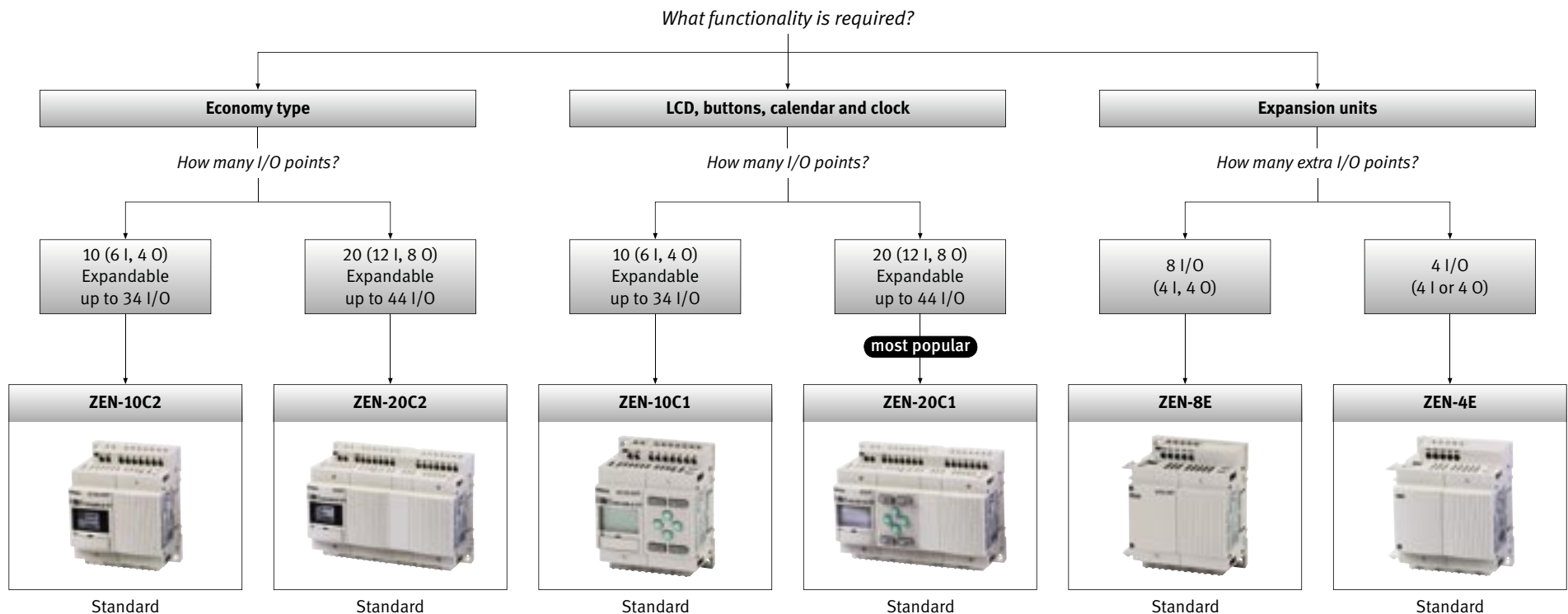
The ZEN is a compact, modular, expandable programmable relay that can be installed in almost any location for a variety of simple control applications. Two versions are available, both of which are available in two CPU sizes, 10 I/O and 20 I/O, expandable up to 34 I/O and 44 I/O respectively.

- **C1, with advanced functionality and display**
- **C2, a dedicated economy version**
- **Requires just simple programming skills**
- **Up to 44 I/O available by adding up to three expansion units**
- **Relay or transistor outputs, can be mixed**
- **Intuitive software programming and testing**
- **Memory cards for copying programs to another ZEN unit**
- **Two analog DC outputs for PNP input version**

The advanced C1 version features an integrated display, programming and function buttons, calendar, clock and up to 16 display messages. The C2 economy version offers basic functionality and programming through Omron's easy-to-use software.

The ZEN's menus are available in multiple languages, as is the supporting software. Front-panel pushbuttons can be used for menu navigation and programming.

The ZEN is available as DC or AC input/power supply voltage models, and relay or transistor output. A switch-mode power supply is also available to meet all of the ZEN's application requirements.



Programmable relays

Selection criteria

Name	Number of I/O points	Inputs	Inputs / power supply	Outputs		Type	Model		Key points
CPU units	10 expandable up to 34 I/O	6	100 to 240 VAC	4	Relays	LCD	ZEN-10C1AR-A-V1		- Up to 3 expansion units - Screen menus in 6 languages - Ladder programming - Easy programming - Flexible expansion - Hold functions for peace of mind - Operations determined after wiring
						LED	ZEN-10C2AR-A-V1		
		6	24 VDC	4	Relays	LCD	ZEN-10C1DR-D-V1		
						LED	ZEN-10C2DR-D-V1		
		6	24 VDC	4	Transistors	LCD	ZEN-10C1DT-D-V1		
						LED	ZEN-10C2DT-D-V1		
	20 expandable up to 44 I/O	12	100 to 240 VAC	8	Relays	LCD	ZEN-20C1AR-A-V1		
						LED	ZEN-20C2AR-A-V1		
		12	24 VDC	8	Relays	LCD	ZEN-20C1DR-D-V1		
						LED	ZEN-20C2DR-D-V1		
		12	24 VDC	8	Transistors	LCD	ZEN-20C1DT-D-V1		
						LED	ZEN-20C2DT-D-V1		
Expansion I/O units	8	4	100 to 240 VAC	4	Relays		ZEN-8EAR		- Up to 3 expansion I/O units can be connected, regardless of the I/O specifications or unit type
		4	24 VDC	4	Relays		ZEN-8EDR		
		4	24 VDC	4	Transistors		ZEN-8EDT		
	4	4	100 to 240 VAC				ZEN-4EA		
		4	24 VDC				ZEN-4ED		
				4	Relays		ZEN-4ER		

Accessories and options	EEPROM (for data security and copying)	ZEN-ME01	Enables programs and parameter settings to be saved or copied to another ZEN
	Battery (keeps time, date and bit values for 10 years at 25°C)	ZEN-BAT01	10 year min. battery life (at 25°C)
	Connecting cable for the programming software, RS-232C cable, 9-way 'D' connector for PC	ZEN-CIF01	2-m RS-232C (9-pin D-sub connector)
	Support software for Windows	ZEN-SOFT01-V3	Runs on Windows 95, 98, 2000, ME, XP and NT 4.0
	PS unit 24 VDC, 1.3A (30W)	ZEN-PA03024	ZEN Power supply unit
	Zen kit - with LCD display AC version	ZEN-KIT01-EV3	Set containing CPU unit (ZEN-10C1AR-A-V1), support software connecting cable, ZEN support software and manual
	Zen kit - with LCD display DC version	ZEN-KIT02-EV3	Set containing CPU unit (ZEN-10C1DR-D-V1), support software connecting cable, ZEN support software and manual

	Features												Approvals	
	LCD, buttons, calandar and clock	Analog input (PNP)	Timers	Holding timers	Counters	Weekly timers	Calendar timers	Displays	Work bits	Holding bits	Analog comparators (PNP)	Comparators		
	●		16	8	16	16	16	16	16	16		16	●	●
											●		●	
	●	●				16	16	16			4		●	●
		●											●	●
	●	●				16	16	16					●	●
		●											●	●
	●					16	16	16			4		●	●
													●	●
	●	●				16	16	16					●	●
		●											●	●
	●	●				16	16	16					●	●
		●											●	●
		●											●	●
														●
												●	●	
												●	●	
												●	●	
												●	●	
												●	●	



ZEN-10C1



ZEN-10C2



ZEN-20C1



ZEN-20C2



ZEN-8E



ZEN-4E

ZEN Programmable relays

Ordering code	
Model	ZEN - [] [] [] [] - [] V1
Number of I/O	10 I/O 10
	20 I/O 20
Type	With display, buttons, calendar & clock C1
	Without display, buttons, calendar & clock C2
Input type and power supply	AC input/100-240 VAC power supply A
	DC input/240 VDC power supply D
Output type	Relay R
	Transistor T

Expansion I/O units

Ordering code	
Model	ZEN - [] E [] []
Number of I/O	4 I or 4 O 4
	4 I / 4 O 8
Input voltage	No input, 40 relay output model (STANDARD)
	100-240 VAC A
	24 VDC D
Output type	No output, 4 input model (STANDARD)
	Relay R
	Transistor (only for 4I/4O, DC input type ZEN-8EDT) T

Accessories for ZEN

Ordering code	
EEPROM (for data security and copying)	ZEN - ME01
Battery (keeps time, date and bit values for 10 years at 25°C)	ZEN - BAT01
For the programming software, RS-232 cable, 9-way "D" connector for PC	ZEN - CIF01
Support software for WINDOWS	ZEN - SOFT01 - V3
Power supply unit 24 VDC, 1.3A (30W)	ZEN - PA03024
Zen Kit - with display, AC input models	ZEN - KIT01 - EV3
Zen Kit - with display, DC input models	ZEN - KIT02 - EV3



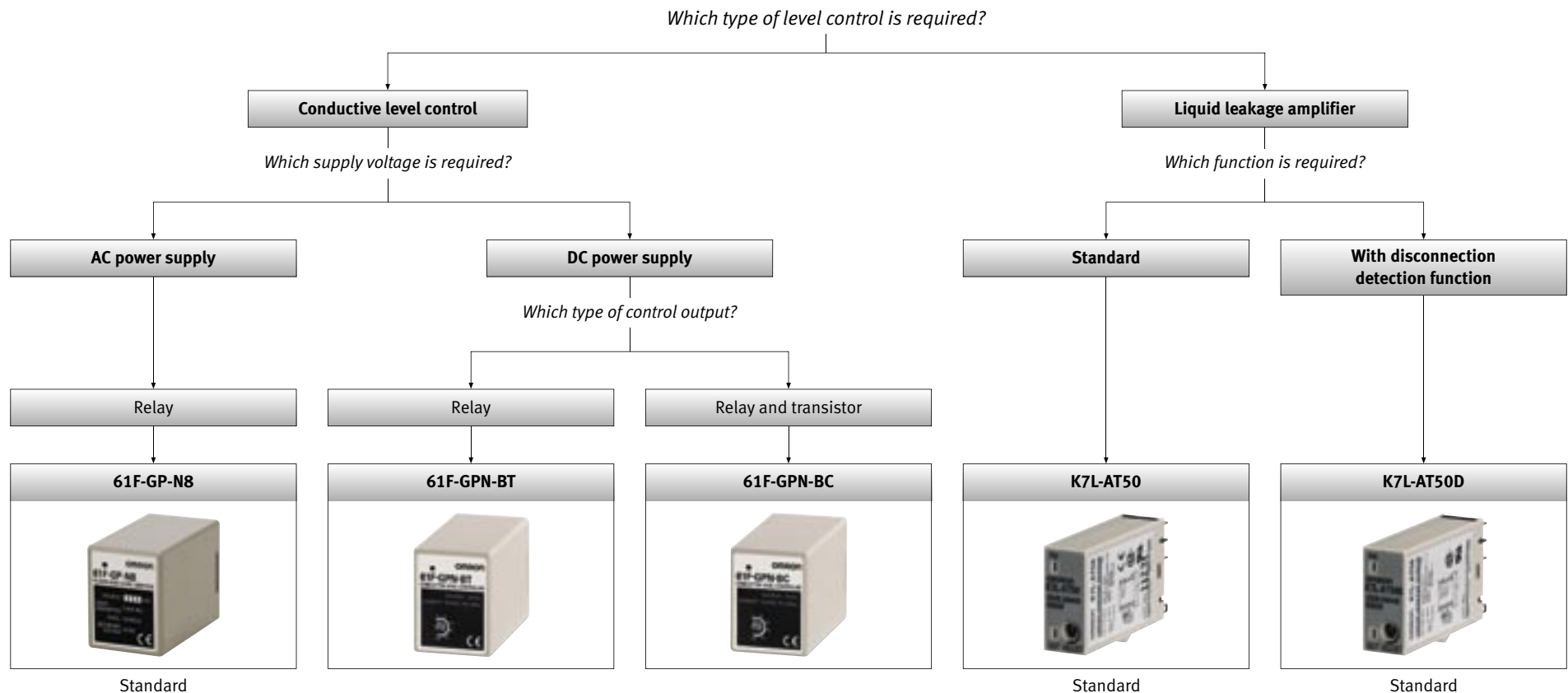
Level and leakage controllers

Omron's liquid controllers consist of level and leakage controllers that sense the conductivity of liquids. The range includes models for long distance, high sensitivity, low sensitivity and two-wired control as well as a general-purpose version.

- **Wide range of sensitivity (up to 50 MΩ) can detect pure water**
- **Safe, low AC voltage on sensors**
- **Relay and transistor outputs available**
- **Wide range of electrodes and sensing bands**
- **Controllers with AC and DC power supplies**
- **Conformance to all relevant safety standards**
- **K7L has disconnection detection capability**

The level controllers (61F) are plug-in types for 8-pin or 11-pin sockets, using safe AC voltage levels for the electrodes. Typical applications include water purification, drainage, food and beverage production lines and wastewater treatment.

The leakage controller (K7L) uses an ultra-miniature amplifier to detect a wide variety of liquids, from pure water to chemical liquids with very low conductivity. A sensing band (F03-16E) is designed specially for use with this controller.



Level and leakage controllers

Selection criteria								Supply voltage AC								
Detection method	Type	Family	Specialty	Model		Key points	Sensing range (configurable)	24V	100V	110V	120V	200V	220V	230V	240V	
Conductive	Conductive level controller	61F	Single or two-point	61F-GP-N8		- Compact & plug-in - Two-point level control - Long-distance, high and low sensitivity models, two-wired models	4 to 50 kΩ	○	○	○	○	○	○	○	○	
			AC sine wave between electrodes for stable detection with no electrolysis	61F-GPN-BT		2-point, adjustable sensitivity for use in a wide range of liquids	0 to 100 kΩ									
			AC sine wave between electrodes for stable detection with no electrolysis	61F-GPN-BC		2-point, adjustable sensitivity for use in a wide range of liquids	1 to 100 kΩ									
	Liquid leakage sensor amplifier	K7L	Sensor amplifier, AC sine wave between electrodes for stable detection with no electrolysis	K7L-AT50		Ultra miniature, to be used for a wide variety of liquids	0 to 50 MΩ									
			Sensor amplifier with disconnection detection function	K7L-AT50D		Ultra miniature, to be used for a wide variety of liquids	1 to 50 MΩ									

Supply voltage DC			Control output			Features			Approvals		
24V	12...24V		Transistor NPN	Transistor PNP	Relay	LED operation indicator	Adjustable sensitivity	Electrode types	CE	SP	cULus
					●	●		Electrode holder: PS-□S, PS-31, BF-1 and BS-1	●	●	●
●					●	●	●	Electrode holder: PS-□S, PS-31, BF-1 and BS-1	●		●
●			●		●	●	●		●		●
	○		●	●		●	●	Liquid leakage sensor band F03-16PE	●	●	●
	○		●	●		●	●		●	●	●

● Standard

○ Available

□ Not available



61F-GP-N8



61F-GPN-BT



61F-GPN-BC



K7L-AT50



K7L-AT50D

61F-GP-N8 Level controllers

		Ordering code
Model	Plug in, compact 8-pin type	61F - GP - N8
Applications	General purpose type	
	Long-distance type	L
	High-sensitivity type (reverse acting)	H
	High-sensitivity type (standard acting)	HY
	Low-sensitivity type	D
	Two-wired type	R

61F-GPN-BT/-BC Level controllers

		Ordering code
Model		61F - GPN - B
Contacts	Open collector (NPN)	T
	Relay contact (SPST-NO)	C

K7L Liquid leakage sensor

		Ordering code
Model	Liquid leakage sensor amplifier	K7L - AT50 -
Disconnection detection function	No (STANDARD)	
	Yes	D
Terminator	With terminator (STANDARD)	
	Without terminator	S



Industrial switches

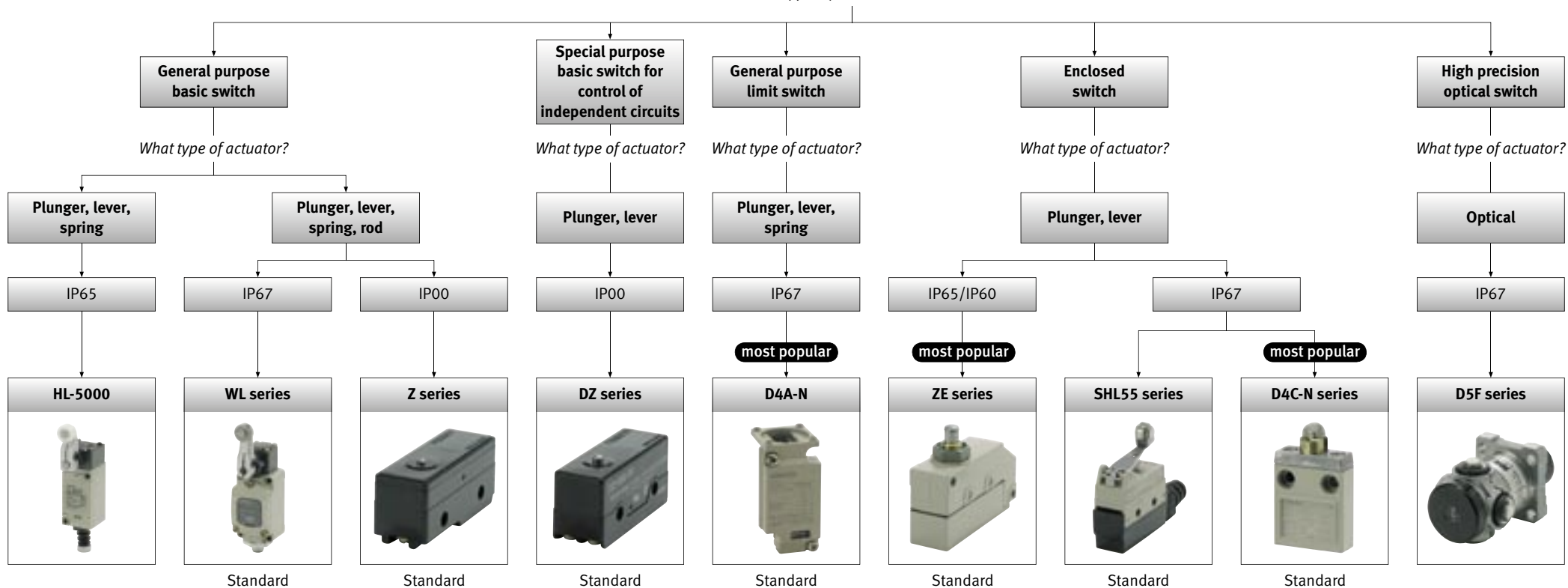
Omron designs and manufactures an extensive range of high-quality limit switches that bring easier, more effective switching solutions to machines and systems.

- More contacts for increased functionality
- Compact, space-saving design without compromising safety or performance
- Robust construction for operating in the harshest environments
- Cost-effective, high-performance switches meeting the highest safety standards
- UL/CSA, TÜV, BIA, SUVA approvals
- Designed for global use

Models are available with a variety of roller lever heads, as well as various types of plunger heads. Better seals, higher resistance to shock and stronger covers make these switches the perfect solution for any industrial application, even in extreme environmental conditions.

These general purpose limit switches are ideal for use in applications across the industry including lifts, garages, production lines, machine tools, automotive, security, domestic goods and vending machines.

Which type of switch is needed?



Limit switches

Selection criteria														Features			Actuators													
Category	Type	Degree of protection		Rated current (A)							Product				Weather resistant models	Microload type	Operation indicator	Adjustable rod lever	Adjustable roller lever	Bevel plunger	2,4,6 plungers	Center roller lever	Coil spring	Cone-shaped actuator	Cross roller plunger	Flexible rod	Fork lever lock	Hemispheric actuator		
		IEC	JIS	30 VDC	125/250 VDC	115 VAC	125 VAC	250 VAC	480 VAC	500 VAC	Family	Model		Key points																
General purpose switches	General purpose basic switch	IP00						20		A	A-20		Inrush currents up to 75A																	
					10/3A						X	X-10		Built-in magnetic blowout																
		IP00/IP62 (drip-proof)					15	15	0,1		Z	Z-1..		High precision switching		0.1A														
		IP65	Jet-proof	5			5	5		HL	HL-5000		Miniature limit switch				●	●			●									
		IP67	Immersion-proof				10	10	10		D4	D4A-N		Operates between -40 to +100°C	●		●			●	●			●						
		IP67					10	10	10	10		D4B		Snap action & slow action			●	●	●	●										
		IP65	Jet-proof				10	10	10	10		D4D		Fail safe mechanism				●	●					●	●					
Special purpose switches	Small sealed switch	IP67		1			5			D4	D4E-N		Small sealed switch		0.1A															
	Miniature limit switch	IP67	Immersion-proof	1			1				D4CC		16mm thick with connector			●		●		●			●							
				4			5	5				D4C		Miniature limit switch		0.1A	●		●			●								
	Enclosed switch	IP67		6		0,5	10	10	3			D4MC		High utility enclosed switch		0.1A														
		IP67	Immersion-proof	5		0,4	10	10	2		SHL	SHL55		Sub miniature enclosed switch		0.1A														
				6		0,5	10	10		ZC	ZC-55		High precision enclosed switch																	
		IP65/IP60	Jet-/dust-proof	15		10	15	15	10	Z	ZE/ZV/XE/XV		Large breaking power									●								
	High precision switch	IP67	Immersion-proof							D5	D5A		High precision switch for micro units		10mA			●												
	Mechanical touch switch										D5B		High sensity touch switch		10mA					●			●							
	High-precision optical switch											D5F		Operating position in 4 ways. Cable 1 to 3m. Optical actuator: NPN/PNP open collector		0.1A														
	High temperature	IP00		1		0,4	1	1		TZ	TZ		Operation up to 400°C																	
	Special purpose basic switch					0,5	10	10	2	DZ	DZ		2 independent circuits																	
	Multiple limit switch	IP67	Immersion-proof			0,6	10	10		VB	VB		High sealing multiple limit switch		0.1A				●											
	Long life two circuit limit switch	IP67	Immersion-proof	6						W	WLM		Prewired version available			●														
	Two circuit limit switch						10	10	10		10	WL		Microload types available		0.1A	●							●						



A-20

A-20 Industrial switches

Ordering code		
Model	20A (250 VAC), 0.5mm contact gap	A - 20G -
Actuator	Pin plunger (STANDARD)	
	Short spring plunger	D
	Panel mount plunger	Q
	Panel mount cross roller plunger	Q21
	Panel mount roller plunger	Q22
	Hinge lever	V
	Hinge roller lever	V2
	Short hinge lever	V21
	Short hinge roller lever	V22
Terminals	Solder terminal (STANDARD)	
	Screw terminal (with toothed washer)	B



X-10

X-10 Industrial switches

Ordering code		
Model	10A (125 VDC), 0.5mm contact gap	X - 10G
Actuator	Pin plunger (STANDARD)	
	Short spring plunger	D
	Slim spring plunger	S
	Panel mount plunger	Q
	Panel mount cross roller plunger	Q21
	Panel mount roller plunger	Q22
	Leaf spring	L
	Hinge lever	W
	Hinge roller lever	W2
	Short hinge lever	W21
	Short hinge roller lever	W22
	Low-force hinge lever	W4
	Reverse hinge lever	M
	Reverse hinge roller lever	M2
	Reverse short hinge roller lever	M22
Terminals	Solder terminal (STANDARD)	
	Screw terminal (with toothed washer)	B

Z Industrial switches

Ordering code		
Model	Z -	
Ratings	0.1A (for micro load)	01
	15A	15
Contact gap	0.25mm (high-sensitivity, micro load)	H
	0.5mm (standard)	G
	1.8mm (high-capacity)	E
Actuator	Pin plunger (STANDARD)	
	Slim spring plunger	S
	Short spring plunger	D
	Spring plunger (medium OP)	K
	Spring plunger (high OP)	K3
	Panel mount plunger (low OP)	Q3
	Panel mount plunger (medium OP)	Q
	Panel mount plunger (high OP)	Q8
	Panel mount roller plunger	Q22
	Panel mount cross roller plunger	Q21
	Leaf spring (high OF)	L
	Roller leaf spring	L2
	Short hinge lever	W21
	Hinge lever (low OF)	W
	Hinge lever (medium OF)	W3
	Hinge lever (high OF)	W32
	Low-force hinge lever	W4
	Long hinge lever	W44
	Low-force wire hinge lever (low OF)	W78
	Low-force wire hinge lever (high OF)	W52
	Short hinge roller lever	W22
	Hinge roller lever	W2
	Hinge roller lever (large roller)	W25
	Short hinge cross roller lever	W49
	Hinge cross roller lever	W54
	Unidirectional short hinge roller lever (low OF)	W2277
	Reverse hinge lever	M
	Reverse short hinge roller lever	M22
	Reverse hinge roller lever	M2
	Flexible rod (high OF)	NJ
	Flexible rod (low OF)	NJS
Degree of protection	General purpose (STANDARD)	
	Drip-proof	55
	Drip-proof (including the terminals)	A55
Terminals	Solder terminal (STANDARD)	
	Screw terminal (with toothed washer)	B
	Screw terminal with terminal cover (for Z-15G@A55 only)	BSV

Note: For combinations of models, refer to the datasheet.



Z-15G

Z-10 split-contact models Industrial switches

		Ordering code	
Model	10A, 1mm (high-capacity), split-contact models screw terminal (with toothed washer)	Z - 10F	Y - B
Actuator		Pin plunger (STANDARD) Slim spring plunger Short spring plunger Panel mount plunger Panel mount roller plunger Hinge lever Short hinge roller lever Hinge roller lever Reverse short hinge roller lever S D Q Q22 W W22 W2 M22	

Z-15 maintained contact models Industrial switches

		Ordering code	
Model	15A, 1.8mm (high-capacity), maintained contact models	Z - 15 - E	R
Actuator		Pin plunger (STANDARD) Slim spring plunger Hinge lever S W	



HL-5000

HL-5000 Industrial switches

		Ordering code	
Model		HL - 5 -	
Actuators		Roller lever Adjustable roller lever Adjustable rod lever Sealed plunger Sealed roller plunger Coil spring 000 030 050 100 200 300	
Ground terminal specifications		Without ground terminal (STANDARD) With ground terminal/M5 tapping on the rear side G	

D4A-N Industrial switches

Ordering code		
Model	D4A -	N
Receptacle Box	(STANDARD) 1/2-14 NPT conduit (SPDT, double-break)	1
	(STANDARD) 1/2-14 NPT conduit (DPDT, double-break)	2
	G 1/2 conduit (SPDT, double-break)	3
	G 1/2 conduit (DPDT, double-break)	4
	M20 x 1.5 conduit (SPDT, double-break)	5
	M20 x 1.5 conduit (DPDT, double-break)	6
Switch Box	SPDT, double-break, without indicator	1
	SPDT, double-break, neon lamp	3
	SPDT, double-break, LED (12 VDC)	A
	SPDT, double-break, LED (24 VDC, leakage current 4mA)	C
	SPDT, double-break, LED (24 VDC, leakage current 1.3mA)	E
	SPDT, double-break, LED (48 VDC)	G
	DPDT, double-break, simultaneous operation, without indicator	5
	DPDT, double-break, sequential operation, without indicator *1	7
	DPDT, double-break, center neutral operation, without indicator *2	9
	DPDT, double-break, simultaneous operation, neon lamp	L
	DPDT, double-break, sequential operation, neon lamp *1	M
	DPDT, double-break, center neutral operation, neon lamp *2	N
	DPDT, double-break, simultaneous operation, LED	P
	DPDT, double-break, sequential operation, LED *1	Q
	DPDT, double-break, center neutral operation, LED *2	R
Head	Roller lever, standard	01
	Roller lever, high-sensitivity	02
	Roller lever, low torque	03
	Roller lever, high-sensitivity, low torque	04
	Roller lever, maintained	05
	Roller lever, sequential operation	17
	Roller lever, center neutral operation	18
	Side plunger, standard	06
	Side plunger, vertical roller	07-V
	Side plunger, horizontal roller	07-H
	Side plunger, adjustable	08
	Top plunger, standard	09
	Top plunger, roller	10
	Top plunger, adjustable	11
	Flexible rod, spring wire	12
	Flexible rod, plastic rod	14
	Flexible rod, cat whisker	15
	Flexible rod, coil spring	16

*1 Use the D4A-0017N special head.
*2 Use the D4A-0018N special head.



D4A



D4B-N

D4B Industrial switches

Ordering code		
Model	D4B -	N
Conduit	PG13.5 (1-conduit)	1
	G 1/2 (PF 1/2) (1-conduit)	2
	1/2-14NPT (1-conduit)	3
	PG13.5 (3-conduit)	5
	G 1/2 (PF 1/2) (3-conduit)	6
	1/2-14NPT (3-conduit)	7
Built-in switch	1NC/1NO (snap-action)	1
	2NC (slow-action)	A
	1NC/1NO (slow-action, excluding D4B-□□81N and D4B-□□87N models)	5
Actuator	Switch box (without head)	00
	Roller lever (standard)	11
	Adjustable roller lever	16
	Adjustable rod lever	17
	Roller lever (conventional D4B-compatible)	1R
	Top plunger	70
	Top roller plunger	71
	Coil spring	81
	Plastic rod	87



D4D

D4D-N Industrial switches

Ordering code		
Model	D4D -	N
Conduit	PG13.5 (1-conduit)	1
	G 1/2 (1-conduit)	2
	1/2-14NPT (1-conduit)	3
	PG13.5 (2-conduit)	5
	G 1/2 (2-conduit)	6
Built-in switch	1NC/1NO (snap-action)	1
	2NC (slow-action)	A
	1NC/1NO (slow-action)	5
Actuator	Roller lever (standard, resin lever)	20
	Adjustable roller lever	21
	Roller lever (metal lever)	22
	Adjustable roller lever (with 50 dia. rubber roller)	27
	Top plunger	31
	Top roller plunger	32
	One-way roller arm lever (horizontal)	62
	One-way roller arm lever (vertical)	72
	Cat whisker	80
	Plastic rod	87
	Fork lever lock (right operation)	RE
	Fork lever lock (left operation)	LE

D4D-R Industrial switches

Ordering code		
Model	D4D -	R
Conduit	PG13.5 (1-conduit)	1
	G 1/2 (1-conduit)	2
	1/2-14NPT (1-conduit)	3
	PG13.5 (2-conduit)	5
	G 1/2 (2-conduit)	6
Built-in switch	2NC (slow-action)	A
	1NC/1NO (slow-action)	5
Actuator	Roller lever	20
	Adjustable roller lever	21
	Adjustable roller lever (with rubber roller)	27
	Plunger	31
	Roller plunger	32
	One-way roller arm lever (horizontal)	62
	One-way roller arm lever (vertical)	72



D4E-N

D4E-N Industrial switches

Model		Ordering code				
		D4E -				N
Rated current	5A at 125 VAC (1A at 125 VAC/30 VDC for model with a connector)	1				
	0.1A at 125 VAC (0.1A at 125 VAC/30 VDC for model with a connector)	2				
Actuator	Roller plunger	A				
	Crossroller plunger	B				
	Plunger	C				
	Sealed roller plunger	D				
	Sealed crossroller plunger	E				
	Sealed plunger	F				
	Roller lever	G				
	One-way action roller lever	H				
Terminals	AC connector	00				
	DC connector	10				
	Screw terminals without a cable	20				
	Screw terminals with a cable (right-hand) (cable is S-FLEX VCTF 3m)	21				
	Screw terminals with a cable (left-hand) (cable is S-FLEX VCTF 3m)	22				
	Molded terminals with a cable (right-hand) (cable is S-FLEX VCTF 3m)	23				
	Molded terminals with a cable (left-hand) (cable is S-FLEX VCTF 3m)	24				
Operation indicator						
	Neon lamp (250 VAC)	L				
	LED (12 VDC)	L1				
	LED (24 VDC)	L2				
	LED (48 VDC)	L3				

Notes: Only the molded terminal models can be equipped with an operation indicator.
 Desired Switches may not be manufactured depending on the combination between molds and indicators.
 Contact our sales representative for further information.



D4CC

D4CC Industrial switches

Model		Ordering code			
		D4CC -		O	
Rated load	1A at 125 VAC	1			
	1A at 125 VAC (with LED indicator)	2			
	1A at 30 VDC	3			
	1A at 30 VDC (with LED indicator)	4			
Actuator	Pin plunger	01			
	Roller plunger	02			
	Crossroller plunger	03			
	Bevel plunger	10			
	Roller lever	24			
	Sealed pin plunger	31			
	Sealed roller plunger	32			
	Sealed crossroller plunger	33			
	Panel mount pin plunger	41			
	Panel mount roller plunger	42			
	Panel mount crossroller plunger	43			
Plastic rod	50				
Center roller lever	60				

Note: With standard models, the operation indicator turns OFF when the switch operates. If models with operation indicators that turn ON when the switch operates are required, add "-B" to the end of the model number.



D4C

D4C Industrial switches

Model		Ordering code		
		D4C -		
Rated current	5A at 250 VAC, 4A at 30 VDC	1	↑	↑
	5A at 125 VAC (with LED indicator)	2		
	4A at 30 VDC (with LED indicator)	3		
	0.1A at 125 VAC, 0.1A at 30 VDC	4		
	0.1A at 125 VAC (with LED indicator)	5		
	0.1A at 30 VDC (with LED indicator)	6		
Cable specifications	VCTF oil-resistant cable (3m)	2	↑	↑
	VCTF oil-resistant cable (5m)	3		
	VCTF (3m)	4		
	VCTF (5m)	5		
	SJT(O) (3m)	6		
	SJT(O) (5m)	7		
	VCTF oil-resistant cable (2m)	8		
	VCTF (2m)	9		
Actuator	Pin plunger	01	↑	↑
	Roller plunger	02		
	Crossroller plunger	03		
	Bevel plunger	10		
	Roller lever	20		
	Roller lever (high-sensitivity model)	24		
	Sealed pin plunger	31		
	Sealed roller plunger	32		
	Sealed crossroller	33		
	Panel mount pin plunger	41		
	Panel mount roller plunger	42		
	Panel mount crossroller plunger	43		
	Plastic rod	50		
	Center roller lever plunger	60		

Notes: Some combinations of the above may not be supported.
With standard models, the operation indicator turns OFF when the switch operates.
If models with operation indicators that turn ON when the switch operates are required, add "-8" to the end of the model number.



D4MC

D4MC Industrial switches

Model		Ordering code	
		D4MC -	
Actuator	Panel mount plunger	5000	↑
	Panel mount roller plunger	5020	
	Panel mount crossroller plunger	5040	
	Short hinge lever	1020	
	Hinge lever	1000	
	Hinge roller lever	2000	
	Short hinge roller lever	2020	
	One-way action short hinge roller lever	3030	



SHL-55

SHL55 Industrial switches

Model		Ordering code		
		SHL -		55 -
Actuator	Plunger	D	↑	↑
	Panel mount plunger	Q		
	Panel mount roller plunger	Q22		
	Panel mount crossroller plunger	Q21		
	Short hinge lever	W		
	Hinge lever	W1		
	Short hinge roller lever	W2		
	Hinge roller lever	W21		
	One-way action short hinge roller lever	W3		
	One-way action hinge roller lever	W31		
Rated current	Standard		↑	↑
	Micro load	01		

Note: See catalog.



ZC-55

ZC-55 Industrial switches

Model		Ordering code
ZC -		55
Actuator	Plunger	D
	Panel mount plunger	Q
	Panel mount roller plunger	Q22
	Panel mount crossroller plunger	Q21
	Sealed roller plunger	N22
	Sealed crossroller plunger	N21
	Short hinge lever	W
	Hinge lever	W1
	Short hinge roller lever	W2
	Hinge roller lever	W21
	One-way action short hinge roller lever	W3
	One-way action hinge roller lever	W31



ZE/ZV/XE/XV

ZE/ZV/XE/XV Industrial switches

Model		Ordering code
		- 2
Built-in switch	SPDT (AC)	Z
	SPDT (DC)	X
Mounting direction	Side mounting	E
	Base mounting	V
	Diagonal side mounting	V2
Actuator	Plunger	Q
	Roller plunger	Q22
	Crossroller plunger	Q21
	Roller arm lever	QA2
	One-way action roller arm lever	QA277
	Sealed plunger	N
	Sealed roller plunger (ZE, ZV, ZV2 only)	N22
	Sealed crossroller plunger (ZE, ZV, ZV2 only)	N21
	Sealed roller arm lever	NA2
	Sealed one-way action roller arm lever	NA277
Conduit/ground terminal	G 1/2/without ground terminal (STANDARD)	
	G 1/2/with ground terminal	G1
	Pg13.5/with ground terminal	G
	1/2-14NPSM/with ground terminal	SG1
	M20/with ground terminal	YG1
	1/2-14NPSM/without ground terminal	S
	M20/without ground terminal	Y



D5A

D5A Industrial switches

Model		Ordering code
		D5A -
Actuator	Pin plunger, type M5, repeat accuracy 1µm max, IP40	1
	Pin plunger, type M5, repeat accuracy 3µm max, IP40	2
	Pin plunger, type M8, repeat accuracy 1µm max, IP67	3
	Pin plunger, type M16, repeat accuracy 3µm max, IP67	7
	Pin plunger, type slim, repeat accuracy 1µm max, IP67	5
	Top plunger, type limit, repeat accuracy 3µm max, IP67	8
	Bevel plunger, type limit, repeat accuracy 3µm max, IP67	9
Operating force	0.29N max	1
	0.49N max	2
	0.98N max	3
	2.45N max (M16 type only)	4
	3.92N max (limit type only)	5
Model	Contact output model (without operation indicator)	0
	Solid-state output models (with operation indicator)	1
Cable outlet	Pre-wired, 1m	0
	Pre-wired, 3m	1
	Pre-wired, 5m	2
	Connector, 1m	3
	Connector, 3m	4
	Connector, 5m	5



D5B

D5B Industrial switches

		Ordering code	
Model	D5B -		
Size	M5	5	↑
	M8	8	
	M10	1	
Actuator	Hemispheric	01	↑
	Cone-shaped	02	
	Wobble stick (short spring)	51	
	Wobble stick (long spring), M10 type only	53	
Cable length	1m	1	↑
	3m	3	
	5m	5	



D5F

D5F Industrial switches

		Ordering code	
Model	D5F -		0
Output configuration	PNP open collector (+common), SPST-NC, indicator on when not operated	2B	↑
	NPN open collector (+common), SPST-NO, indicator on when operated	3C	
Cable length	1 m	1	↑
	3 m	3	



TZ

TZ Industrial switches

		Ordering code	
Model	1A (250 VAC), 0.5mm contact gap	TZ - 1G	
Actuator	Pin plunger (STANDARD)	V	↑
	Hinge lever	V2	
	Hinge roller lever	V22	
	Short hinge roller lever	V22	

DZ Industrial switches

Ordering code		
Model	10A (250 VAC), 0.5mm contact gap, DPDT	DZ - 10G - 1
Actuator	Pin plunger (STANDARD)	
	Hinge lever	V
	Short hinge roller lever	V22
	Hinge roller lever	V2
	Hinge lever	W
	Short hinge roller lever	W22
	Hinge roller lever	W2
	Terminals	Solder terminal
Screw terminal		B



DZ

VB Industrial switches

Ordering code		
Model	VB -	
Number of plungers	2 plungers	2
	3 plungers	3
	4 plungers	4
	5 plungers	5
	6 plungers	6
	Actuator	Bevel plunger
Roller plunger		2
Switch box	Flange switch box with two conduit holes on the side	1
	Flange switch box with four conduit holes	2
	Non-flange switch box with two conduit holes on the side	4
	Non-lange switch box with four conduit holes	5
Scraper	NBR scraper	1
	FPM scraper	2
Contact	10A (STANDARD)	
	0.1A (micro load)	A
Ground terminal	Without ground terminal (STANDARD)	
	With ground terminal	E



VB



WL

Model	Ordering code											
Electrical rating	WL -											
	Standard (STANDARD)	Micro										
Actuator and head specifications	Switches without levers											
	Roller lever: standard model (R38)	WLCA2										
	Roller lever: standard, standard model (R50)	WLCA2										
	Roller lever: standard, standard model (R63)	WLCA2										
	Roller lever: overtravel, general purpose model, 80	WLRH2										
	Roller lever: overtravel, high-sensitivity, 80	WLRG2										
	Roller lever: overtravel, 90	WLCA2-2N										
	Roller lever: high-precision	WLRGCA2										
	Adjustable roller lever: standard	WLCA2										
	Adjustable roller lever: overtravel, general purpose model, 80	WLRH2										
	Adjustable roller lever: overtravel, high-sensitivity, 80	WLRG2										
	Adjustable roller lever: overtravel, 90	AdjustWLCA2-2N										
	Adjustable rod lever: standard	WLRL										
	Adjustable rod lever: overtravel, general purpose model, 80, 25 to 140 mm	WLRH2										
	Adjustable rod lever: overtravel, general purpose model, 80, 350 to 380 mm	WLRH2										
	Adjustable rod lever: overtravel, high-sensitivity, 80, 25 to 140 mm	WLRG2										
	Adjustable rod lever: overtravel, 90, 25 to 140 mm	AWLRCA2-2N										
	Rod spring lever: protective, overtravel, general purpose model, 80	WLRH2										
	Fork lever lock: protective, WL-5A100	WLCA32										
	Fork lever lock: protective, WL-5A102	WLCA32										
	Fork lever lock: protective, WL-5A104	WLCA32										
	Plunger: top plunger	---										
	Plunger: top-roller plunger	---										
	Plunger: sealed top-roller plunger	---										
	Plunger: top-ball plunger	---										
	Plunger: horizontal plunger	---										
	Plunger: horizontal-roller plunger	---										
	Plunger: horizontal-ball plunger	---										
	Flexible rod: coil spring	---										
	Flexible rod: coil spring, multi-wire	---										
	Flexible rod: coil spring, resin rod	---										
	Flexible rod: steel wire	---										
Environment-resistant model specifications												
Standard (STANDARD)												
Corrosion-proof RP												
Weather-resistant P1												
General purpose built-in switch (STANDARD)												
Hermetically-sealed built-in switch 55												
Temperature specifications												
Standard: -10°C to 80°C (STANDARD)												
Heat-resistive: 5°C to 120°C TH												
Low temperature: -40°C to 40°C TC												
Special hermetic model specifications												
No cables or molding (STANDARD)												
General purpose built-in switch with cables attached and molded conduit opening and cover (cover cannot be removed).												
Airtight built-in switch with cables attached and molded conduit opening, cover, and case cover (cover cannot be removed).												
Airtight built-in switch with cables attached and molded conduit opening, cover, and case cover (cover cannot be removed), the head opening is created to protect it from cutting powder.												
Airtight built-in switch with cables attached and molded conduit opening, cover, and case cover (cover cannot be removed), head can be mounted in any of 4 directions). The head opening is created to protect it from cutting powder.												
Airtight built-in switch with cables attached, SC Connector can be used, molded conduit opening, cover, and case cover (cover cannot be removed, head direction can be changed).												
Airtight built-in switch with cables attached, fluorine rubber-molded conduit opening, cover, and case cover (cover cannot be removed, head direction cannot be changed).												
Conduit size, ground terminal specifications*1												
G 1/2 without ground terminal (STANDARD)												
G 1/2 with ground terminal G1												
Pg13.5 with ground terminal G												
M20 with ground terminal Y												
1/2-14NPT with ground terminal TS												
Neon lamp: 125 VAC / 0.6mA leakage current or 250 VAC / 1.9mA leakage current LE												
LED: 10 to 115 VAC/VDC / 0.5mA leakage current LD												
Lamp wiring												
NC connection: light-ON when operating 2												
NO connection: light-ON when not operating 3												
Standard lever (STANDARD)												
Double nut lever A												

*1 Switches with ground terminals meet EN/IEC standards (and have the CE marking).

*1 Switches with ground terminals meet EN/IEC standards (and have the CE marking).

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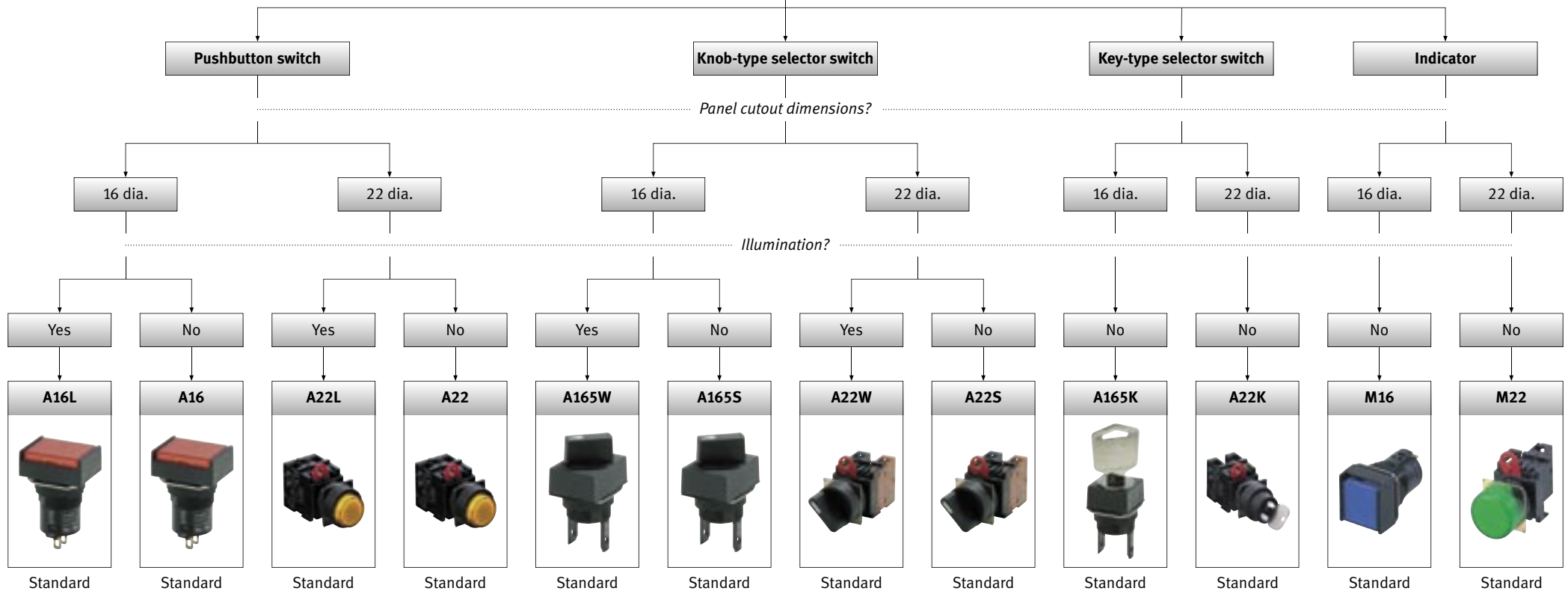
Pushbutton switches

Omron worked closely together with many leading machine manufacturers to produce this diverse range of high quality pushbutton switches that offer practical solutions for industrial applications.

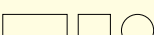
- 2-piece construction
- Snaps together for quick assembly
- 16 to 22 mm housings
- IP40 and IP65, oil-tight
- Variety of shapes: rectangular, square, round
- Illuminated and non-illuminated types

Omron's pushbutton switches include models in 16 mm or 22 mm diameter. Available in a variety of shapes, sizes, colors and functions, the range allows you to select the right product for your application.

Which application is required?



Pushbutton switches

							Pushbutton color																			
Selection criteria							Incandescent lamp-lighted						LED-lighted					Non-lighted								
Type	Mounting	Size	Model		Key points	Shape	Red	Amber	Green	White	Blue	Orange	Red	Amber	Green	White	Blue	Red	Amber	Green	White	Blue	Black			
Pushbutton switch	Nut mounting	16mm	A16		Modular construction		●	●	●	●	●		●	●	●	●	●							●		
		22mm	A22		Easy mounting & removing		●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●		
16mm		A165K		Oil-resistant																			●			
22mm		A22K		3-row mounting of switch blocks																			●			
Knob-type selector switch		16mm	A165S/W		Short mounting depth									●	●	●										
		22mm	A22S/W		Finger-protection mechanism		●	●	●		●		●	●	●		●							●		
Indicator		16mm	M16		LED, incandescent and neon lamp		●	●	●	●	●		●	●	●	●	●									
		22mm	M22		Easy mounting & removing		●	●	●	●	●		●	●	●	●	●									

	Features								Switch ratings [A]			Terminals		Operating voltage			Form										Approvals		
	Momentary operation	Self-holding	No of contacts	IP rating	Buzzer	Legend plate	Reset method manual	Reset method automatic	125 VAC	250 VAC	30 VDC	Solder	Screw-less clamp	5 VDC	12 VDC	24 VDC	SPDT	DPDT	2 notches	3 notches	SPST-NO	SPST-NC	SPST-NO + SPST-NC	DPST-NO	DPST-NC				
	●	●	2	IP40/IP65		●	●		5	3	3	●														●	●	●	
			6	IP65		●			10	6	10			●	●	●					●	●	●	●	●	●	●	●	●
			2	IP65		●	●	●	5	3	3	●		●	●	●	●	●	●	●						●	●	●	
	●	●	6	IP65		●	●		10	6	10								●	●	●	●	●	●	●	●	●	●	●
	●	●	2	IP65		●			5	3	3	●		●	●	●	●	●	●	●						●	●	●	
	●	●	6	IP65		●	●		10	6	10								●	●	●	●	●	●	●	●	●	●	●
				IP40/IP65		●						●	●	●	●	●										●	●	●	
				IP65		●								●	●	●										●	●	●	



A16

A16 Pushbutton switches

Ordering code			
Pushbutton	A16	L	
Degree of protection	IP40 (STANDARD)		
	IP65	5	
Flange shape	Rectangular	J	
	Round	T	
	Square	A	
Pushbutton color code	Red	R	
	Yellow	Y	
	Green	G	
	Blue	A	
	White	W	
	Black *1	B	
Operation	Momentary	M	
	Alternate	A	
Illumination/voltage	None	(STANDARD)	
	LED	5 VDC	5D
		12 VDC	12D
		24 VDC	24D
		120 VAC	TV
	Incandescent lamp	5 VAC/VDC	5
		12 VAC/VDC	12
		24 VAC/VDC	24
Contacts	SPDT	1	
	DPDT	2	

*1 Models with B (Black) only available without illumination.

A16 Subassembled pushbutton switches

Pushbutton

Ordering code			
Pushbutton	A16	L	
Degree of protection	IP40 (STANDARD)		
	IP65 oil-resistant	5	
Flange shape	Rectangular	J	
	Round	T	
	Square	A	
Illumination color	Non-lighted models	Red	R
		Green	G
		Yellow	Y
		White	W
		Blue	A
		Black	B
	Lighted models	LED/incandescent lamp	Red
			Yellow
			White
			Blue
		LED	Green
		Incandescent lamp	Green

Case

Ordering code			
Case	A16	-	
Degree of protection	IP40 (STANDARD)		
	IP65 oil-resistant	5	
Flange shape	Rectangular	CJ	
	Round	CT	
	Square	CA	
Switch action	Momentary	M	
	Alternate	A	

Lamp

Ordering code			
Lamp	A16	-	
Operating voltage (rated)	Incandescent lamp	5 (6) VAC/VDC	5
		12 (14) VAC/VDC	12
		24 (28) VAC/VDC	24
	LED	5 VDC	5DS
		12 VDC	12DS
		24 VDC	24DS
Illumination color	Incandescent lamp		
	Red (LED)		R
	Green (LED)		G
	Yellow (LED)		Y
	White (LED)		W
	Blue (LED)		A

Switch

Ordering code			
Switch (solder terminals)	A16	-	
Voltage reduction circuit	Without (STANDARD)		
	Operating/rated voltage	100 VAC/110 VAC	T1
Contacts	SPDT	1	
	DPDT	2	



A16



A22

A22 Subassembled pushbutton switches

Pushbutton

		Ordering code	
Pushbutton	Non-lighted	A22 -	
	Lighted	A22 L -	
Flange shape			
Non-Lighted	Round/flat	F	
	Round/projection	T	
	Round/full-guard	G	
	Round/half guard	H	
	Square/projection	C	
	Square/full-guard	D	
	Round/mushroom (30-dia, head)	S	
	Round/mushroom (40-dia, head)	M	
Lighted	Round/projection	T	
	Round/full-guard	G	
	Round/half guard	H	
	Square/projection	C	
Illumination color			
Red		R	
Green		G	
Yellow		Y	
White		W	
Blue		A	
Black (for non-lighted models only)		B	

Lamp

		Ordering code	
Lamp		A22 -	
Operating voltage (rated voltage)	Incandescent lamp	5 VAC/DC (5V)	5
		12 VAC/DC (12V)	12
		24 VAC/DC (24V)	24
	LED	100 VAC/DC (100V)	H1
		6 VDC (6 VDC)	6D
		6 VAC (6 VAC)	6A
Illumination color	Incandescent lamp (STANDARD)		
	Red		R
	Green		G
	Yellow		Y
		Blue	A

Switch

		Ordering code	
Switch		A22	
Lighted/ non-lighted	Non-lighted (STANDARD)		
	Lighted	L	
Contacts			
	SPST-NO	10	
	SPST-NC	01	
	SPST-NO+SPST-NC	11	
	DPST-NO	20	
	DPST-NC	02	
Switch action			
	Momentary	M	
	Alternative	A	
Voltage reduction unit (lighted type only)			
	Without voltage reduction unit (STANDARD)		
	110 VAC (95-115 VAC)	T1	
	220 VAC (190-230 AC)	T2	



A165K

A165K Key-type selector switches - subassembled pushbutton switches

Selector

Ordering code		
Selector	A165K -	
Flange shape	Rectangular	J
	Round	T
	Square	A
Number of notches/reset method/key release position	2 notches/manual/left	2ML
	2 notches/manual/right	2MR
	2 notches/manual/right and left	2M
	2 notches/automatic/left	2AL
	3 notches/manual/centre	3MC
	3 notches/manual/right	3MR
	3 notches/manual/left	3ML
	3 notches/manual/right, left and centre	3M
	3 notches/automatic/centre	3AC

Switch

Ordering code		
Switch, solder terminals	A16S -	
Number of notches	2 notches	2N
	3 notches	3N
Contacts	SPDT	1
	DPDT	2



A22K

A22K Key-type selector switch subassembled pushbutton switches

Selector

Ordering code		
Selector	A22K -	
Number of notches/reset method/key release position	2 notches/manual/left	2ML
	2 notches/manual/left and right	2M
	2 notches/automatic/left	2AL
	3 notches/manual/left	3ML
	3 notches/manual/left and right	3M
	3 notches/manual/centre	3MC
	3 notches/automatic/centre	3AC

Switch

Ordering code		
Switch	A22 -	M
Contacts	SPST-NO (2 notch models only)	10
	SPST-NC (2 notch models only)	01
	SPST-NO+SPST-NC	11
	DPST-NO	20
	DPST-NC	02



A165S/W

A165S/W Knob-type selector switches - subassembled pushbutton switches

Selector

Ordering code			
Selector, IP65	A165	-	
Lighted/non-lighted	Non-lighted	S	
	Lighted	W	
Flange shape	Rectangular	J	
	Round	T	
	Square	A	
Number of notches	2 notches/manual	2M	
	2 notches/automatic	2A	
	3 notches/manual	3M	
	3 notches/mixed-operation	3A	
	3 notches/CCW-manual/CW-automatic	3MA	
	3 notches/CCW-automatic/CW-manual	3AM	
Illumination color	Red	R	
	Yellow	Y	
	Green	G	
	Black *1	B	

*1 Models with B (Black) only available without illumination.

Switch

Ordering code			
Switch, solder terminals, IP65	A16S	-	N
Number of notches	2		
	3		
Contacts	SPDT	1	
	DPDT	2	
Lighted/non-lighted	Non-lighted		
	Lighted	L	

Lamp

Ordering code			
Lamp	A16S	-	
Operating voltage (rated voltage)	5 VDC	5DS	
	12 VDC	12DS	
	24 VDC	24DS	
Illumination color	Red (LED)	R	
	Green (LED)	G	
	Yellow (LED)	Y	



A22S/W

A22S/W Subassembled knob-type selector switches - pushbutton switches

Pushbutton

Ordering code		
Pushbutton	Non-lighted	A22S -
	Lighted	A22W -
Number of notches/reset method	2 notches/manual	2M
	2 notches/automatic	2A
	3 notches/manual	3M
	3 notches/automatic	3A
Illumination color	Black (for non-lighted models only) (STANDARD)	
	Red	R
	Green	G
	Yellow	Y
	Blue	A

Lamp

Ordering code		
Lamp		A22 -
Operating voltage (rated voltage)	<i>Incandescent lamp</i> 5 VAC/DC (5V)	5
	12 VAC/DC (12V)	12
	24 VAC/DC (24V)	24
	100 VAC/DC (100V)	H1
	<i>LED</i> 6 VDC (6 VDC)	6D
	6 VAC (6 VAC)	6A
	12 VAC/VDC (12 VAC/VDC)	12A
	24 VAC/VDC (24 VAC/VDC)	24A
Illumination color	Incandescent lamp (STANDARD)	
	Red	R
	Green	G
	Yellow	Y
	Blue	A

Switch

Ordering code		
Switch		A22 - -
Lighted/non-lighted	Non-lighted (STANDARD)	
	Lighted	L
Contacts	SPST-NO (2 notch models only)	10
	SPST-NC (2 notch models only)	01
	SPST-NO+SPST-NC	11
	DPST-NO	20
	DPST-NC	02
Voltage reduction unit (lighted type only)	Without voltage reduction unit (STANDARD)	
	110 VAC (95-115 VAC)	T1
	220 VAC (190-230 VAC)	T2



M16

M16 Indicators - subassembled pushbutton switches

Display

Ordering code			
Display	For LED-lighted models	A16	L -
	Incandescent lamps	A16	L -
Degree of protection	IP40 (STANDARD)		
	IP65 oil-resistant	5	
Flange shape	Rectangular	J	
	Square	A	
	Round	T	
Illumination color	Red	R	R
	Yellow	Y	Y
	Pure Yellow	PY	PY
	Green	G	GY
	White	W	W
	Blue	A	A

Case

Ordering code			
Case	A16	- C	M
Degree of protection	IP40 (STANDARD)		
	IP65 oil-resistant	5	
Flange shape	Rectangular	J	
	Square	A	
	Round	T	

Socket

Ordering code			
Socket	M16 -		
Terminals	Solder terminals	0	
	Solder terminals, voltage reduction lighting, 100V	T1	
	Screw-less clamp, voltage reduction lighting, 200V	T2-S	

Lamp

Ordering code			
Lamp	LED	A16 -	
	Incandescent lamps	A16 -	
Operating voltage	5 VDC	5D	
	12 VDC	12D	
	24 VDC	24D	
	5 VAC/VDC	5	
	12 VAC/VDC	12	
	24 VAC/VDC	24	
Illumination color	Red	SR	
	Yellow	SY	
	Green	SG	
	White	SW	
	Blue	A	



M22

M22 Indicators - subassembled pushbutton switches

Display

Ordering code		
Display	M22	
Flange shape	Round/flat	F
	Square/projection	C
Cap color	Red	R
	Green	G
	Yellow	Y
	White	W
	Blue	A

Socket

Ordering code		
Socket	M22 - 00 -	
Voltage reduction unit	Without voltage reduction unit (STANDARD)	
	110 VAC	T1
	220 VAC	T2

Lamp

Ordering code		
Lamp	LED	A22 -
Operating voltage (rated voltage)	Incandescent lamp 5 VAC/DC (5V)	5
	12 VAC/DC (12V)	12
	24 VAC/DC (24V)	24
	100 VAC/DC (100V)	H1
	LED 6 VDC (6 VDC)	6D
	6 VAC (6 VAC)	6A
	12 VAC/VDC (12 VAC/VDC)	12A
	24 VAC/VDC (24 VAC/VDC)	24A
	Incandescent lamp	
	Red	R
Illumination color	Green	G
	Yellow	Y
	Blue	A



Low voltage switch gear

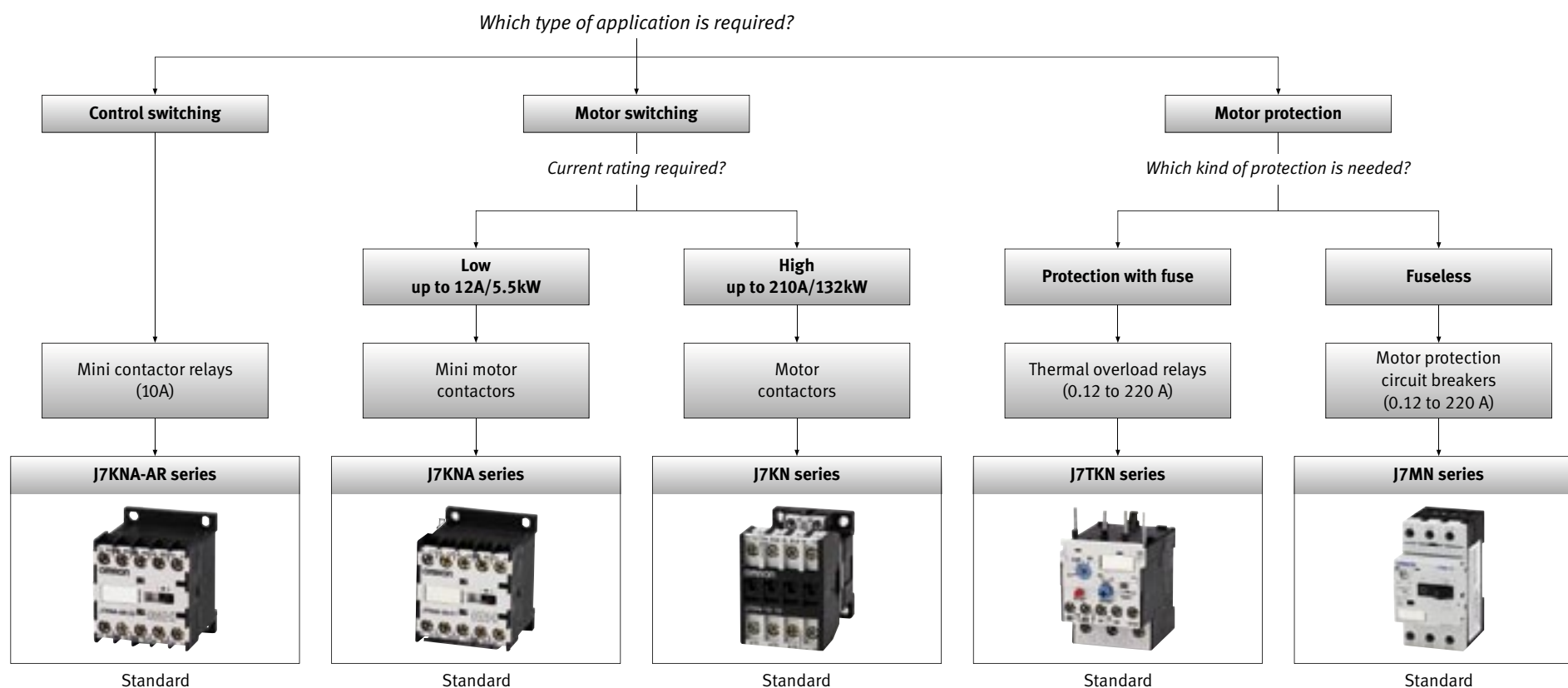
Omron is an established global manufacturer of low voltage switch gear (LVSG) products, and the company's new series (J7) complements the existing portfolio.

- High power-handling on very compact footprints
- State-of-the-art technology
- Designed and built to quality standards ISO 9001
- Contactor range, up to 55kW, can operate in temperatures from -40°C to $+90^{\circ}\text{C}$
- Conformance to EN/IEC
- UL/CSA approval

This series has been designed using state-of-the-art technology and includes high-quality contactors, thermal overload relays and motor protection circuit breakers.

The contactors, up to 110kW, offer impressive power-handling capabilities on a small footprint. They conform to EN/IEC and are approved by UL/CSA.

Suitable for any industrial application, they will appeal to panel builders, OEMs and engineers looking for top-quality products from one supplier.



Low voltage switch gear

Selection criteria									Thermal overload relay	Auxiliary contacts		
Category	Mounting	Distinction number according to EN 50011	AC15 230V [A]	AC15 400V [A]	Thermal rated current I _n [A]	Model		Key points		Integrated auxiliary contacts	Additional auxiliary contacts block	
Mini contactor relay	35mm DIN-rail or base	40E	3	2	10	J7KNA-AR-40		AC & DC operated		4 NO	J73-KNA-11 (1 NO + 1 NC) J73KN-A-02 (2 NC) J73KN-A-40 (4 NO) J73KN-A-22 (2 NO + 2 NC)	
		31E	3	2	10	J7KNA-AR-31		Positively guided contacts		3 NO + 1 NC		
		22E	3	2	10	J7KNA-AR-22		For el. devices DIN 19240		2 NO + 2 NC		

Selection criteria									Thermal overload relay	Auxiliary contacts				
Category	Mounting	AC1 up to 690V [A]	Motor AC3 up to 400V [kW]	Motor AC3 380-415V [kW]	Motor AC3 660-690V [kW]	Model		Key points		Integrated auxiliary contacts	Additional auxiliary contacts block			
Mini motor contactor	35mm DIN-rail or base	20	4	4	4	J7KNA-09		AC & DC operated Integrated auxiliary contacts	 J7TKN-A	1 NO/1 NC	J73KN-AM-11 (1 NO + 1 NC) J73KN-AM-02 (2 NC) J73KN-AM-22 (2 NO + 2 NC)			
			5.5	5.5	5.5	J7KNA-12				1 NO/1 NC				
Motor contactors			25	4	5.5	5.5	J7KN-10		AC & DC operated Integrated auxiliary contacts Screw fixing Snap fitting up to 45 kW Front mounted single Pole auxiliary contacts (1 NC or 1 NO) Side mounted Auxiliary contacts (1 NC/1 NO) Mechanical interlock Suppressors Pneumatic timer modules Linking modules MPCB – contactor	 J7TKN-B	1 NO/1 NC	J73KN-B-10 (1 NO) J73KN-B-01 (1 NC)		
				5.5	7.5	7.5	J7KN-14				1 NO/1 NC			
			32	7.5	10	10	J7KN-18				1 NO/1 NC			
				11	10	10	J7KN-22				1 NO/1 NC			
			50	11	15	15	J7KN-24			 J7TKN-C		J73KN-B-10 (1 NO) J73KN-B-01 (1 NC) J73KN-C-11S (1 NO + 1 NC)		
			65	15	18.5	18.5	J7KN-32							
			80	18.5	18.5	18.5	J7KN-40							
			110	22	30	30	J7KN-50			 J7TKN-D				
		120	30	37	37	J7KN-62								
		130	37	45	45	J7KN-74								
	Base	150	45	55	55	J7KN-85		 J7TKN-E		2 NO + 2 NC				
		170	55	55	55	J7KN-110				2 NO + 2 NC				
		200	75	75	75	J7KN-150		 J7TKN-F		1 NO/1 NC				
250		90	90	90	J7KN-175	1 NO/1 NC								
350		110	110	110	J7KN-200	2 NO + 2 NC								

	AC power consumption of coils		DC power consumption of coils		Cable cross-section			Auxiliary contact		Features					Approvals		
	Inrush [VA]	Sealed [VA]	Inrush [W]	Sealed [W]	Solid or stranded [mm²]	Flexible [mm²]	Cables per clamp [mm²]	I _{th}	AC15 at 230V	Rated insulation voltage U _i	AC operated	DC operated	4 pole version	Short circuit protection	CE	SP	cULUS
	25	4 – 5	2.5	2.5	0.75 – 2.5	0.75 – 2.5	2	10A	3A	690 VAC	●	●	○	20A	●	●	●
	25	4 – 5	2.5	2.5	0.75 – 2.5	0.75 – 2.5	2	10A	3A	690 VAC	●	●	○	20A	●	●	●
	25	4 – 5	2.5	2.5	0.75 – 2.5	0.75 – 2.5	2	10A	3A	690 VAC	●	●	○	20A	●	●	●

	AC power consumption of coils		DC power consumption of coils		Cable cross-section			Auxiliary contact		Features					Approvals		
	Inrush [VA]	Sealed [VA]	Inrush [VA]	Sealed [VA]	Solid or stranded [mm²]	Flexible [mm²]	Cables per clamp [mm²]	I _{th}	AC15 at 230V	Maximum power (AC3-380/415V)	AC operated	DC operated	4 pole version	Short circuit protection	CE	SP	cULUS
	25	4 – 5	2.5	2.5	0.75 – 2.5	0.75 – 2.5	2	10A	3A	690 VAC	●	●	●	20A	●	●	●
											●	●			●	●	●
	33 – 45	7 – 10	75	2	0.75 – 6	1 – 4	2	16A	12A		●	●		25A	●	●	●
											●	●			●	●	●
											●	●			●	●	●
											●	●			●	●	●
											●	●			●	●	●
											●	●			●	●	●
	90 – 115	9 – 13	140	2	1.5 – 25	2.5 – 16	1	16A	12A		●	●			●	●	●
											●	●			●	●	●
											●	●			●	●	●
	140 – 165	13 – 18	200	6	4 – 50	10 – 35	1	16A	12A		●	●			●	●	●
											●	●			●	●	●
											●	●			●	●	●
	280 – 350	16 – 23	170	2	10 – 70	6 – 50	1	16A	12A		●	●		25A	●	●	●
	350 – 420	23 – 29	320	4		16 – 50					●	●			●	●	●
	550	120			95	Screw	1	10A	3A	●			10A	●	●	●	
					120					●				●	●	●	
					185					●				●	●	●	

Ordering code[illegible]



J7KNA-AR



J7TKNA-09



J7TKN-10



J7TKN-B

Accessories for auxiliary contact models

Ordering code	
Model	For mini contactor relays, front mounting
	For mini contactors, front mounting
	For mini contactor reversing starter left hand side, front mounting
	For mini contactor reversing starter right hand side, front mounting
	For motor contactors 4-37kW, front mounting
	For motor contactors 11-37kW, side mounting
	J73KN - A -
	J73KN - AM -
	J73KN - AM - 11V
	J73KN - AM - 11X
	J73KN - B -
	J73KN - C -
	11
	S
Combination of NO/NC contacts	0NO 1NC
	1NO 0NC
	1NO 1NC
	0NO 2NC
	2NO 2NC
	4NO 0NC
	01
	10
	11
	11
	11V
	11X
	02
	02
	22
	22
	40

Accessories for motor contactors: RC suppressor units

Ordering code	
Model	A-type for mini motor contactor and motor contactor (4-18.5kW)
	B-type for mini motor contactor and motor contactor (4-55kW)
	C-type for motor contactors 4-37kW
	J74KN - A - RC
	J74KN - B
	J74KN - C - RC
Voltage	24-48 VAC/DC
	110-230 VAC/DC
	250-415 VAC/DC
	12-48 VAC (50/60 Hz)/DC
	48-127 VAC (50/60 Hz)/DC
	110-250 VAC (50/60 Hz)/DC
	48
	230
	400
	24
	110
	230

Accessories for motor contactors: varistor units

Ordering code	
Varistor units	J74KN - - VG
For which model	For motor contactor (4-11kW) to snap on to coil terminals
	For motor contactor (4-37kW) to snap on to contactor
	A
	B
Voltage	110-230 VAC/DC
	250-415 VAC/DC
	230
	400

Accessories for motor contactors: pneumatic timers

Ordering code	
Model	For motor contactor 4-11kW
	J74KN - B - TP
Time	40 seconds
	180 seconds
	40
	180
Delay	ON-delayed
	OFF-delayed
	DA
	IA

Accessories for motor contactors: mechanical interlock

Ordering code	
Model	J74KN - - ML
For which model	Motor contactor 4-18.5kW
	Motor contactor 22-37kW
	Motor contactor 45-55kW
	B
	C
	D

Low voltage switch gear – Motor protection circuit breakers (MPCB)

Selection criteria

Category	Type	Current range	Family		Rated current [A]	Suitable for motors 3~400V [kW]	Current thermal overload release [A]	Setting range instantaneous short-circuit release [A]	Short-circuit breaking capacity at 3~400V [kA]	Model
Motor protection circuit breaker	Switch type	0.11 - 12A	J7MN-12		0.16		0.11 – 0.16	2.1	100	J7MN-12-E16
					0.2		0.14 – 0.2	2.6		J7MN-12-E2
					0.25	0.06	0.18 – 0.25	3.3		J7MN-12-E25
					0.32	0.09	0.22 – 0.32	4.2		J7MN-12-E32
					0.4		0.28 – 0.4	5.2		J7MN-12-E4
					0.5	0.12	0.35 – 0.5	6.5		J7MN-12-E5
					0.63	0.18	0.45 – 0.63	8.2		J7MN-12-E63
					0.8		0.55 – 0.8	10		J7MN-12-E8
					1	0.25	0.7 – 1	13		J7MN-12-1
					1.25	0.37	0.9 – 1.25	6		J7MN-12-1E25
					1.6	0.55	1.1 – 1.6	21		J7MN-12-1E6
					2	0.75	1.4 – 2	26		J7MN-12-2
					2.5		1.8 – 2.5	33		J7MN-12-2E5
					3.2	1.1	2.2 – 3.2	42		J7MN-12-3E2
					4	1.5	2.8 – 4	52		J7MN-12-4
					5		3.5 – 5	65		J7MN-12-5
					6.3	2.2	4.5 – 6.3	82		J7MN-12-6E3
					8	3	5.5 – 8	104	50	J7MN-12-8
					10	4	7 – 10	130		J7MN-12-10
					12	5.5	9 – 12	156		J7MN-12-12
					0.16		0.11 – 0.16	2.1		J7MN-25-E16
	Rotary type	0.16 - 25A	J7MN-25		0.2		0.14 – 0.2	2.6	100	J7MN-25-E2
					0.25	0.06	0.18 – 0.25	3.3		J7MN-25-E25
					0.32	0.09	0.22 – 0.32	4.2		J7MN-25-E32
					0.4		0.28 – 0.4	5.2		J7MN-25-E4
					0.5	0.12	0.35 – 0.5	6.5		J7MN-25-E5
					0.63	0.18	0.45 – 0.63	8.2		J7MN-25-E63
					0.8		0.55 – 0.8	10		J7MN-25-E8
					1	0.25	0.7 – 1	13		J7MN-25-1
					1.25	0.37	0.9 – 1.25	6		J7MN-25-1E25
					1.6	0.55	1.1 – 1.6	21		J7MN-25-1E6
					2	0.75	1.4 – 2	26		J7MN-25-2
					2.5		1.8 – 2.5	33		J7MN-25-2E5
					3.2	1.1	2.2 – 3.2	42		J7MN-25-3E2
					4	1.5	2.8 – 4	52		J7MN-25-4
					5		3.5 – 5	65		J7MN-25-5
					6.3	2.2	4.5 – 6.3	82		J7MN-25-6E3
					8	3	5.5 – 8	104		J7MN-25-8
					10	4	7 – 10	130		J7MN-25-10
					12.5	5.5	9 – 12.5	163	50	J7MN-25-12E5
					16	7.5	11 – 16	208		J7MN-25-16
					20		14 – 20	260		J7MN-25-20
					22		17 – 22	286		J7MN-25-22
					25	11	20 – 25	325		J7MN-25-25
					25	11	18 – 25	325		J7MN-50-25
		32 - 50A	J7MN-50		32	15	22 – 32	416		J7MN-50-32
					40	18.5	28 – 40	520		J7MN-50-40
					45	18.5	36 – 45	585		J7MN-50-45
					50	22	40 – 50	650		J7MN-50-50
		45 - 100A	J7MN-100		63	30	45 – 63	819	100	J7MN-100-63
					75	37	57 – 75	975		J7MN-100-75
					90	37	70 – 90	1170		J7MN-100-90
					100	45	80 – 100	1235		J7MN-100-100

J7MN - Motor protection circuit breakers

		Ordering code	
Model	Switch type (0.11-12A)	J7MN - 12 -	
	Rotary type (0.16-25A)	J7MN - 25 -	
	Rotary type (32-40A)	J7MN - 50 -	
	Rotary type (45-100A)	J7MN - 100 -	
Setting range		0.11 - 0.16	E16 E16
		0.14 - 0.2	E2 E2
		0.18 - 0.25	E25 E25
		0.22 - 0.32	E32 E32
		0.28 - 0.4	E4 E4
		0.35 - 0.5	E5 E5
		0.45 - 0.63	E63 E63
		0.55 - 0.8	E8 E8
		0.7 - 1	1 1
		0.9 - 1.25	1E25 1E25
		1.1 - 1.6	1E6 1E6
		1.4 - 2	2 2
		1.8 - 2.5	2E5 2E5
		2.2 - 3.2	3E2 3E2
		2.8 - 4	4 4
		3.5 - 5	5 5
		4.5 - 6.3	6E3 6E3
		5.5 - 8	8 8
		7 - 10	10 10
		9 - 12	12
		9 - 12.5	12E5
		11 - 16	16
		14 - 20	20
		17 - 22	22
		20 - 25	25
		18 - 25	25
		22 - 32	32
		28 - 40	40
		36 - 45	45
		40 - 50	50
		45 - 63	63
		57 - 75	75
		70 - 90	90
		80 - 100	100



J7MN-12



J7MN-25



J7MN-50



J7MN-100

Accessories for auxiliary contacts for MPCB

		Ordering code	
Model	1NO 1NC	J73MN - 11	
Mounting	Side mounting	S	
	Front mounting	F	

Accessories for line side terminals

		Ordering code	
Model	J74MN - TC -		
Type	Switch type	12	
	Rotary type	25	

Accessories for door coupling rotary mechanism

		Ordering code	
Model	J74MN - DC		
Colour	Black/grey	B	
	Red/yellow	RY	

Accessories for release

		Ordering code	
Model	Shunt release, 210-230V 50/60Hz	J74MN - S - N2	
	Under voltage release, 230V 50Hz / 240V 60Hz	J74MN - U - N1	

Accessories for auxiliary contacts for MPCB

		Ordering code	
Model	Trip indicating contact, 1NO 1NC, side mounting	J73MN - T11S	

Accessories for motor contactors: link modules MPCB - motor contactors

		Ordering code	
Link modules MPCB - motor contactor	Link module type	J74MN - VD	
	DIN-Rail adapter type	J74MN - HU	
For which model	Motor contactor 4 - 7.5 kW	12	
	Motor contactor 11 - 15 kW	25	

Accessories for busbar systems

		Ordering code	
Model	3-phase busbar system (45mm modular spacing)	J74MN - L3 -	
	Shroud for unused terminal	J74MN - DS	
Selection	For 2 circuit breakers	1/2	
	For 3 circuit breakers	1/3	
	For 4 circuit breakers	1/4	
	For 5 circuit breakers	1/5	

Accessories for mounting

		Ordering code	
Model	Molded plastic enclosure/front plate	J74MN -	
	Holder for front plate	J74MN - PH	
Type	Enclosure IP55	PF	
	Module plastic front plate	P	
	Holder for front plate	PH	
MPCB Type	Switch type	12	
	Rotary type	25	



Temperature controllers

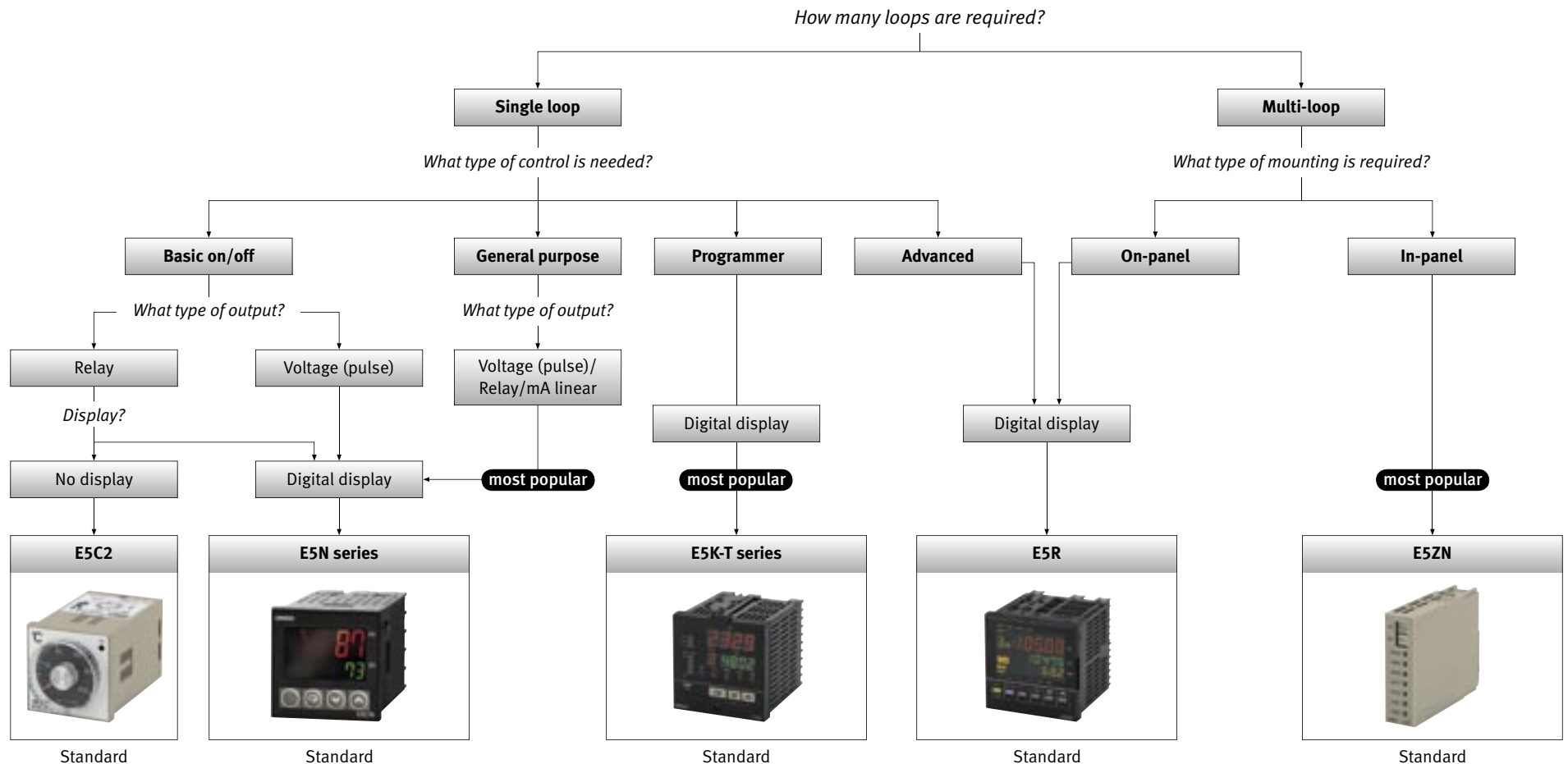
Omron is the largest supplier of temperature controllers in the world, and has products ranging from the simplest controllers to advanced units with communication options that help you master any control application.

- Heating or heating/cooling control
- Variety of selectable input ranges
- Auto-tuning and self-tuning options for optimum control
- Parameter linked crystal-clear color change displays
- Conformance to all relevant standards (including CE, UL, IEC & CSA)

The E5N and E5K series meet all standard control requirements, from simple on/off control up to complex high-speed process applications.

Where space is limited the slim E5ZN (just 22.5mm wide) is the ideal choice. In-panel E5ZN models can be plugged together to control a system of up to 32 loops.

The new E5CN features a unique PID-control algorithm that ensures very stable temperature control, and an 11-segment LCD, 3-color change display provides clear read-outs at all times.



Temperature controllers

Selection criteria									Control mode					Features								
Panel	Loops	Category	Type	Family	Size	Model		Key points	ON/OFF	PID	2-PID *4	Operation *6	Position proportional *1	Accuracy	Auto-tuning	Self-tuning	Transfer output	Remote input	Number of alarms	Heater burnout	IP rating front panel	
On-panel type	Single loop	Analogue TC	Basic	E5C2	1/16 DIN	E5C2		- Compact - Cost-effective - In- & on-panel	●	● *3		H									IP40	
				E5CS-X	1/16 DIN	E5CS-X		- Easy to read - Deviation indicator - Dip switch set-up	●	●		H/C		0.5% FS		●			1		IP50	
		Digital temperature controller	General purpose	E5_N	1/4 DIN	E5AN		- Compact & intelligent - Various temperature inputs - Heating or heating/cooling - Comms optional	●		●	H&C		±0.5%	●	●			3	○	IP66	
					1/8 DIN	E5EN			●		●	H&C		±0.5%	●	●			3	○	IP66	
					1/16 DIN	E5CN			●		●	H&C		±0.5%	●	●	○		2/3	○ *7	IP66	
					1/32 DIN	E5GN			●		●	H&C		±0.5%	●	●			1	○	IP66	
		Digital process controller	Universal	E5_K	1/4 DIN	E5AK		- Modular structure - High accuracy - Advanced tuning	●		●	H&C	●	±0.3%	●	●	○	○	3	○	IP66	
					1/8 DIN	E5EK			●		●	H&C	●	±0.3%	●	●	○	○	3	○	IP66	
					1/16 DIN	E5CK			●		●	H&C		±0.3%	●	●	○		3	Loop burnout	IP66	
			Universal/programmer	E5_K-T	1/4 DIN	E5AK-T			●		●	H&C	●	±0.3%	●	●	○		3	○	IP66	
					1/8 DIN	E5EK-T			●		●	H&C	●	±0.3%	●	●	○		3	○	IP66	
					1/16 DIN	E5CK-T			●		●	H&C		±0.3%	●	●	○		3	Loop burnout	IP66	
	Multi-loop	Advanced		E5_R	1/4 DIN	E5AR		- High speed and high accuracy applications - Multi-loop, cascade and proportional control	●		●	H&C	●	±0.1%	●		●	●	4		IP66	
					1/8 DIN	E5ER			●		●	H&C	●	±0.1%	●		●	●	4		IP66	
In-panel type		Digital temperature controller	Modular	E5ZN	22.5 x 130 mm	E5ZN		- Modular - Two channels per module - Replacement without rewiring	●		●	H&C		±0.5%	●		●		3	●		

*1 Positon proportional = Valve control (relay up & down). *2 Profibus communication option via gateway for E5_N, E5_R, E5ZN, ask your local Omron representative. *3 P only. *4 2 PID is Omron's unique high-performance PID control. *5 Fuzzy PID available. *6 H = Heat, H/C = Heat or Cool, H&C = Heat and Cool.

		Supply voltage		Comms *2					Control output					Input type - linear			Input type - thermocouple													Input type - RTD			Approvals				
	Display	110/220 VAC	24 VAC/ VDC	RS232	RS485	Event IP	QLP port	DeviceNet	Relay	SSR	Voltage (pulse)	Linear voltage	Linear current	mA	mV	V	K	J	T	E	L	U	N	R	S	B	W	PLII	Pt100	JPt100	THE	CE	SP	UL US	UL US		
	SV dial	●							●		●						●	●			●								●		●	●	●	●	●		
	Single 3 digit	●	○						●		●						●	●			●								●	●	●	●	●	●	●	●	
	Dual 4 digit	●	○	○	○	○	●		●		●		●	○	●		●	●	●	●	●	●	●	●	●	●	●		●	●		●	●	●	●	●	
	Dual 4 digit	●	○	○	○	○	●		●		●		●	○	●		●	●	●	●	●	●	●	●	●	●	●		●	●		●	●	●	●	●	
	Dual 4 digit colour change	●	○		○	○	●		●		●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●		●	●	●	●	●	
	Dual 4 digit	●	○		○		●		●		●			○	●		●	●	●	●	●	●	●	●	●	●	●		●	●		●	●	●	●	●	
	Dual 4 digit	●	○	○	○	○	●		●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●
	Dual 4 digit	●	○	○	○	○	●	○	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●
	Dual 4 digit	●	○	○	○	○	●		●		●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●
	Dual 4 digit	●	○	○	○	○	●		●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●
	Dual 4 digit	●	○	○	○	○	●		●		●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●
	Triple 5 digit	●	○		○	●	●	○	●		●		●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●	
	Triple 5 digit	●	○		○	●	●	○	●		●		●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●	
	○ Dual 4 digit		●		●	●		○			●		●	○	●		●	●	●	●	●	●	●	●	●	●			●	●		●	●	●	●	●	

*7 Heater alarm = Heater burnout & SSR failure detection.

☒ Standard
 ☐ Available
 ☐ Not available



E5C2

E5C2 Temperature controllers

Input type		Ordering code									
K-type thermocouple		E5C2 -			K						
J-type thermocouple		E5C2 -			J						
L-type thermocouple (J-DIN type)		E5C2 -			L-D						
Platinum resistance thermometer (Pt100)		E5C2 -			P-D						
Thermistor (THE)		E5C2 -			G						
Control output											
Relay			R								
Voltage			Q								
Control method											
ON-OFF control			20								
P control			40								
Voltage											
100-120 VAC					AC100120						
200-240 VAC					AC200240						
24 VDC					DC24						
Temperature range											
0 to 100 C							0-100		0-100		
0 to 200 C					0-200		0-200		0-200		
0 to 300 C					0-300		0-300		0-300		
0 to 400 C					0-400		0-400		0-400		
0 to 600 C					0-600						
0 to 800 C					0-800						
0 to 1,000 C					0-1000						
0 to 1,200 C					0-1200						
-50 to 50 C							-50-50		-50-50		
-20 to 80 C							-20-80				
0 to 50 C							0-50				
50 to 150 C									50-150		
100 to 200 C									100-200		
150 to 300 C									150-300		

Note: Call customer service for temperature range.



E5CS-X

E5CS-X Temperature controllers

Ordering code					
Model	E5CS -				X
Control output					
Relay			R		
Voltage			Q		
Number of alarms					
No alarm (STANDARD)					
1 alarm				1	
Input type					
Thermocouple K type or J type				KJ	
Platinum resistance thermometer (Pt100)				P	
Thermistor				G	

**Ordering code**

Accessories for E5AN and E5EN

Ordering code

Option units	RS-232C communication	E53 - AK01
	RS-485 communication	E53 - AK03
	Event input	E53 - AKB
Current transformer	5.8 dia. (0-50A)	E54 - CT1
	12.0 dia. (0-12A)	E54 - CT3
Terminal cover	2x included in E5AN, E5EN	E53 - COV11

Accessories for E5CN

Ordering code

Option units	RS-485 and heater alarm	E53 - CNH03N	for relay and voltage output
	RS-485 communication	E53 - CN03N	for current output
	Event input and heater alarm	E53 - CNHBN	for relay and voltage output
	Event input	E53 - CNBN	for current output
	RS-485 and 3-phase heater alarm	E53 - CNHH03N	for relay and voltage output
	RS-485 and voltage output	E53 - CNQ03N	all types
	Heater alarm and voltage output	E53 - CNQHBN	all types
Current transformer	5.8 dia. (0-50A)	E54 - CT1	
	12.0 dia. (0-12A)	E54 - CT3	
Terminal cover	Included in E5CN	E53 - COV10	

NOTE: The heater burnout alarm is available by mounting the E53-CNH03 or E53-CNHB option on the E5CN. Heater burnout is not used with current output type.



E5AK



E5EK



E5CK



E5AK-T



E5EK-T



E5CK-T

E5_K Temperature controllers

Ordering code			
Model	48 x 48 mm, terminal cover	E5CK -	AA 1 - 500
	96 x 48 mm, terminal cover	E5EK -	2 - 500
	96 x 96 mm, terminal cover	E5AK -	2 - 500
Constant values/program Constant values (STANDARD) Program			
Model Standard model Position proportional model			
Auxiliary outputs 1 auxiliary output 2 auxiliary outputs			
Inspection report None (STANDARD) Inspection report			
Input voltage 100 to 240 VAC 24 VAC/VDC			

Accessories for E5CK and E5CK-T

Ordering code		
Option units	RS-232C	E53 - CK01
	RS-485	E53 - CK03
	Event input: 1 point	E53 - CKB
	Transfer output (4 to 20 mA)	E53 - CKF
Terminal cover	Order seperately	E53 - COV07
Output units	Relay/relay	E53 - R4R4
	Pulse (NPN)/relay	E53 - Q4R4
	Pulse (PNP)/relay	E53 - Q4HR4
	Linear (4 to 20 mA)/relay	E53 - C4R4
	Linear (0 to 20 mA)/relay	E53 - C4DR4
	Linear (0 to 10 V)/relay	E53 - V44R4
	Pulse (NPN)/pulse (NPN)	E53 - Q4Q4
	Pulse (PNP)/pulse (PNP)	E53 - Q4HQ4H

Accessories for E5EK/E5AK and E5EK-T/E5AK-T

Ordering code		
Output units	Relay	E53 - R
	SSR	E53 - S
	Pulse (NPN) 12 VDC	E53 - Q
	Pulse (NPN) 24 VDC	E53 - Q3
	Pulse (PNP) 24 VDC	E53 - Q4
	Linear (4 to 20 mA)	E53 - C3
	Linear (0 to 20 mA)	E53 - C3D
	Linear (0 to 10 V)	E53 - V34
Option units	Event input	E53 - AKB
	Communication (RS-232C)	E53 - AK01
	Communication (RS-422)	E53 - AK02
	Communication (RS-485)	E53 - AK03
	Transfer output	E53 - AKF
Current transformer	5.8 dia. (0 to 50 A)	E54 - CT1
	12.0 dia. (0 to 120 A)	E54 - CT3
Terminal cover	E5AK	E53 - COV09
	E5EK	E53 - COV08

Note: Maximum 3 option units for E5AK, maximum 1 for E5EK.

E5_R Temperature controllers

		Ordering code										
Model	96 x 48 mm, constant value	E5ER -										
	96 x 96 mm, constant value	E5AR -										
Control method	Standard or heating/cooling control (STANDARD)											
	Position proportional control	P										
Output 1	DPST-NO relay outputs	R										
	Pulse voltage and pulse voltage/current outputs	Q										
	Current and current outputs	C										
Output 2	None (STANDARD)											
	Relay outputs	R										
	Pulse voltage and pulse voltage/current outputs	Q										
	Current and current outputs	C										
Auxiliary outputs	None (STANDARD)											
	4PST-NO relay output	4										
	2 transistor outputs	T										
Optional function 1	None (STANDARD)											
	RS-485 communication	3										
Optional function 2	None (STANDARD)											
	4 event inputs	D										
Input 1	Multi-input and 2 event inputs	B										
	Multi-input and FB (potentiometer impedance)	F										
	Multi-input and multi-input	W										
Input 2	None (STANDARD)											
	Multi-input and multi-input	W										
Communication method	None (STANDARD)											
	Compoway/F or MODBUS	FLK										
	DeviceNet	DRT										
Input voltage	100 to 240 VAC	AC100240										
	24 VAC/VDC	ACDC24										

Available E5_R Models

E5ER - Q 4 B
 E5ER - Q 4 3 B - FLK 100-240AC
 E5ER - Q T B - DRT
 E5ER - Q T W - DRT
 E5ER - Q T 3 D B - FLK 100-240AC
 E5ER - Q T 3 D W - FLK
 E5ER - Q C 4 3 B - FLK
 E5ER - C 4 B
 E5ER - C 4 3 B - FLK 100-240AC
 E5ER - C T B - DRT
 E5ER - C T W - DRT
 E5ER - C T 3 D B - FLK 100-240AC
 E5ER - C T 3 D W - FLK
 E5ER - P R T F - DRT
 E5ER - P R T D F
 E5ER - P R Q 4 3 F - FLK
 E5AR - Q 4 3 B - FLK 100-240AC
 E5AR - Q 4 3 D B - FLK 100-240AC
 E5AR - Q 4 3 D W - FLK 100-240AC
 E5AR - Q 4 B - DRT
 E5AR - Q 4 B
 E5AR - Q Q 4 W - DRT
 E5AR - Q Q 4 3 D W - FLK
 E5AR - Q Q 4 3 D W W - FLK 100-240AC
 E5AR - Q C 4 B - DRT
 E5AR - Q C 4 3 D B - FLK
 E5AR - C 4 B
 E5AR - C 4 B - DRT
 E5AR - C 4 3 B - FLK 100-240AC
 E5AR - C 4 3 D B - FLK 100-240AC
 E5AR - C 4 3 D W - FLK 100-240AC
 E5AR - C C 4 W W - DRT
 E5AR - C C 4 3 D W W - FLK
 E5AR - P R 4 D F
 E5AR - P R Q 4 3 D F - FLK
 E5AR - P R 4 F - DRT
 E5AR - P R Q 4 F - DRT



E5AR



E5ER



E5ZN

E5ZN Temperature controllers

Ordering code			
Model	Two control points, RS-485, Compoway/F serial communications	E5ZN - 2	03 - FLK
Control output & options	Voltage output (for driving SSR) & heater burnout alarm	Q	H
	Transistor output & heater burnout alarm	T	H
	Current output & transfer output	C	F
Auxiliary output	Transistor (sourcing)	P	
	Transistor (sinking)	N	
Input type	Thermocouple	TC	
	Platinum resistance thermometer	P	

Accessories for E5ZN

Ordering code			
Terminal unit	18 terminals	E5ZN - SCT18S - 500	Extension socket
	24 terminals	E5ZN - SCT24S - 500	Master socket with power and communication terminals
Current transformer	5.8 dia. (0 to 50A)	E54 - CT1	
	12.0 dia. (0 to 120A)	E54 - CT3	
Setting display unit	24 VDC	E5ZN - SDL	Purchase sockets seperately
Sockets for setting display unit	Front-connecting socket (with finger protection)	P2CF - 11 - E	Din-rail mounting
	Back-connecting socket	P3GA - 11	Panel mounting
	Terminal cover for finger protection	Y92A - 48G	For P3GA-11
Terminal cover	For SCT18S-500 models	E53 - COV13	
	For SCT24S-500 models	E53 - COV12	



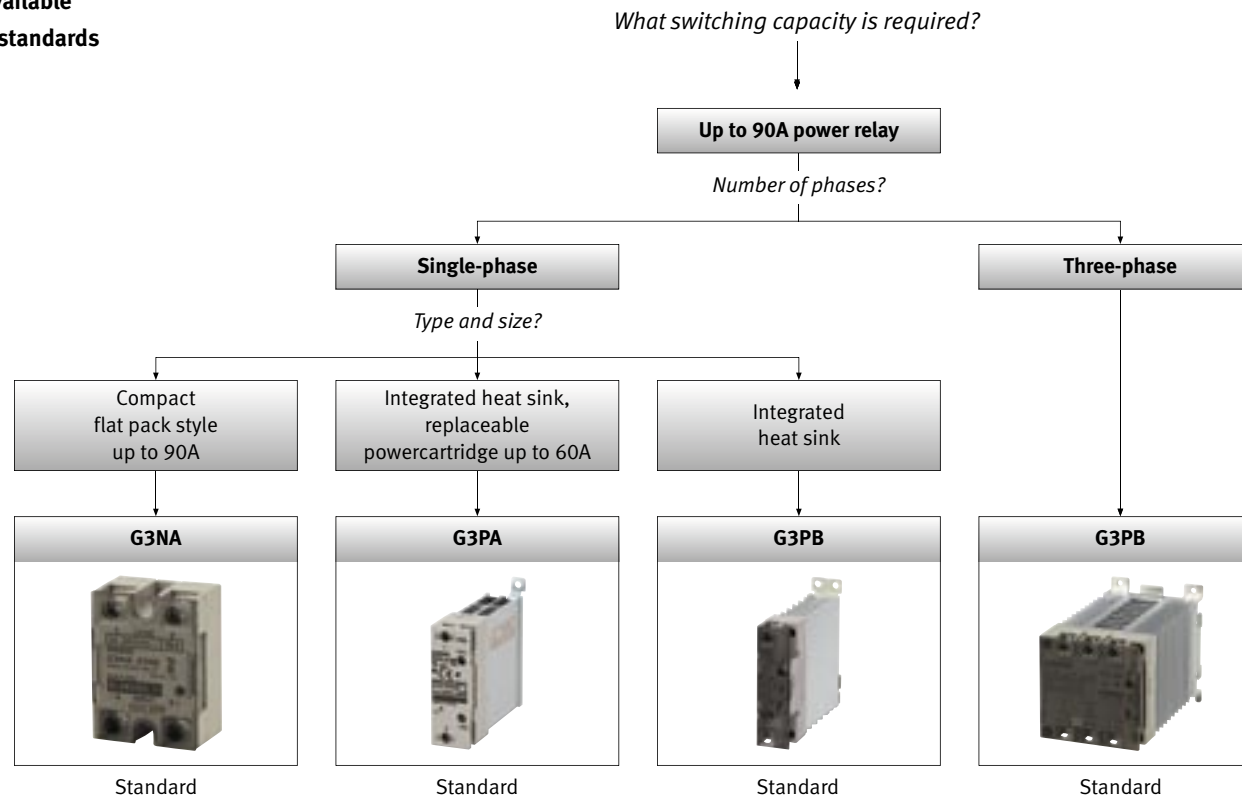
Solid state relays

Omron's range of solid state relays is faster, more reliable and more cost-effective than any similar range on the market. There's an Omron solid state relay for almost every need, from heater control and motor control to interfacing and general applications that simply require high frequency, noiseless switching. What's more, these relays provide the perfect switching control for temperature controllers.

- Output current ranging from 2 to 150 A
- Replaceable, easy-to-install power device cartridges for ease of maintenance
- Zero cross AC load switching
- Built-in heat sinks
- For use in single- and three-phase applications
- Space saving design
- Operational indicator
- Built-in surge suppression
- Cycle control, AC input, voltage, short-circuit and failure detection modules available
- Conformance to all relevant standards

Omron's range of solid state relays (SSRs) is the fastest, most reliable and most cost-effective on the market. There's an Omron SSR for almost every application, from heater and motor control to interfacing, that requires high frequency, noiseless switching.

What's more, these SSRs are ideal for use in combination with temperature controllers, for controlling heater bands for plastics extrusion processes, packaging machinery and heater elements in general manufacturing.



Solid state relays

Selection criteria											Load voltage/current [VAC]						Load voltage/current [VDC]				
Mounting	Application	Type of load	1-phase control	2-phase control	3-phase control	Function	Model		Max. current rating	Relay compatible	24 to 240	100 to 240	180 to 440	200 to 480	100/110	200/230	5 to 200	5 to 110	4 to 48	5 to 24	
Socket mounting type		Normal resistors Middle and long wave IR heater	●			Panel-mounted interfaces	G3B		5A	MK compatible		●									
Control panel mounting type			●			Heater control	G3PB		45A				●		●						
		Normal resistors Middle and long wave IR heater	●			Heater control, motor control	G3NA		50A			●		●			●				
			Transformers and inductors	●			Heater control	G3PA		60A			●		●						
			Normal resistors		●	●	Heater control	G3PB		45A				●							
Power regulator		Normal resistors Middle and long wave IR heater Quarz heaters, short wave IR heater, elements made from siliconcarbide Normal resistive load With open delta connection	●			Heater control	G3PX		60A						●	●					

	Input voltages [VDC or VAC]								Features											Mounting		Approvals					
	5 VDC	12 VDC	24 VDC	5 to 24 VDC	12 to 24 VDC	24 VAC	100 to 120 VAC	200 to 240 VAC	Built-in heat sink	Zero-cross	Built-in varistor	LED operation indicator	Protective cover	3-phase loads via 3 single-phase SSRs	Replaceable power cartridge	Alarm output	Built-in failure detection	SSR open circuits detection	SSR short circuits detection	DIN-rail	Screw	CE	SP	cULus	△	RU	VDE
				●								●								●	●	●		●		●	●
					●				●	●		●	●							●	●	●		●		●	●
				●			●	●		●	●	●	●	●	●					●	●	●	●	●	●	●	●
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					●				●	●	●	●	●	●						●	●	●		●		●	●
									●	●		●			●			●			●		●				



G3B



G3BD

G3B/BD Solid state relays

Ordering code						
Model	200V type, switches AC loads	G3B -	2	05	S	- VD DC5 - 24
	100V type switches DC loads	G3BD -	1	03	S	- VD DC5 - 24
Rated load power supply voltage	100 to 240 VAC		2			
	5 to 110 VDC		1			
Rated load current	3A			03		
	5A			05		
Terminal type	Plug-in terminals				S	
Certification	Certified by UL, CSA and TÜV					-VD
Rated input voltage (V)	5 to 24 VDC					DC5-24



G3PB

G3PB single-phase Solid state relays

Ordering code				
Model	100 to 240 VAC, screw terminal, single-phase models certified by UL, CSA and VDE, 12 to 24 VDC	G3PB - 2		B - VDDC12 - 24
Rated load current	15A		15	
	25A		25	
	35A		35	
	45A		45	
Single phase type	Din-rail mounting and built-in heat sink			



G3NA

G3NA Solid state relays

Ordering code					
Model	24 to 240 VAC	G3NA - 2		B	
	24 to 240 VAC	G3NA - 2		B	
	200 to 480 VAC	G3NA - 4		B	
	200 to 480 VAC	G3NA - 4		B	
	5 to 200 VDC	G3NA - D2		B	

Rated output load (A)	5A	05			
	10A	10	10	10	
	20A	20	20		
	40A	40	40		
	50A		50		
	75A	75			
	90A	90			

Rated input voltage (V)	5 to 24 VDC	DC5-24	DC5-24
	100 to 120 VAC	AC100-120	
	100 to 240 VAC		AC100-240
	200 to 240 VAC	AC200-240	



G3PA

G3PA Solid state relays

Ordering code					
Model	200V, equipped with zero cross function, screw terminals, certified by UL, CSA and VDE	G3PA - 2		B - VD	
	200V, not equipped with zero cross function, screw terminals, certified by UL, CSA and VDE	G3PA -		BL - VD	DC5 - 24
	400V, screw terminals, certified by UL, CSA and VDE	G3PA -		B - VD	DC12 - 24

Rated load power supply voltage	24 to 240 VAC	2			
	180 to 400 VAC	4			
	200 to 480 VAC	4		-2	

Rated load current	10A	10			
	20A		20		
	30A		30		
	40A		40		
	50A		50		
	60A		60		

Special functions	Standard models (STANDARD)				
	480V Models	-2			

Rated input voltage (V)	5 to 24 VDC	DC5-24	DC5-24
	12 to 24 VDC		DC12-24
	24 VAC	AC24	



G3PB

G3PB three-phase Solid state relays

Ordering Code			
Model	Screw terminals, DIN-rail mounting and built-in heat sink certified by UL, CSA and VDE, 12 to 24 VDC	G3PB -	B - N - VDDC12 ~24
Rated load power supply voltage	100 to 240 VAC	2	
	200 to 480 VAC	5	
Rated load current	15A	15	
	25A	25	
	35A	35	
	45A	45	
Number of phases & elements	3-phase, 2-element models	2	
	3-phase, 3-element models	3	



G3PX

G3PX Solid state relays

Ordering code			
Model	Simple model, 100/110 VAC and 200/230 VAC, single number of phases	G3 PX - 2	E UN
	Function model, 100/110 VAC and 200/230 VAC, single number of phases	G3 PX - 2	E -
Rated load current	20A	20	
	40A	40	
	60A	60	
Functions	Simple models	UN	
	Single heater open circuit detection function	H	
	Multiple heater open circuit detection function	HN	
	Constant current function	C	
CT unit type	CT unit, 30cm length of wires	CT03	
	CT unit, 100cm length of wires	CT10	

G3PX cartridge Solid state relays

Ordering code		
Model	Power device cartridge	G32 X - A
Rated load current	20A	20
	40A	40
	60A	60

Variable resistor Solid state relays

Ordering code		
Model		G32 X -
Basic model name	3k Ω variable resistor	V3K
	2k Ω variable resistor	V2K

CT unit Solid state relays

Ordering code			
Model	CT unit	G32 X - CT	
Length of lead wires	30cm	03	
	100cm	10	
Series	Series for single heater open circuit detection	for G3PX-2EH (STANDARD)	
	Series for multiple heater op circuit detection	for G3PX-2EH	HN
	Series for constant current	for G3PX-2EC	C



Digital panel indicators

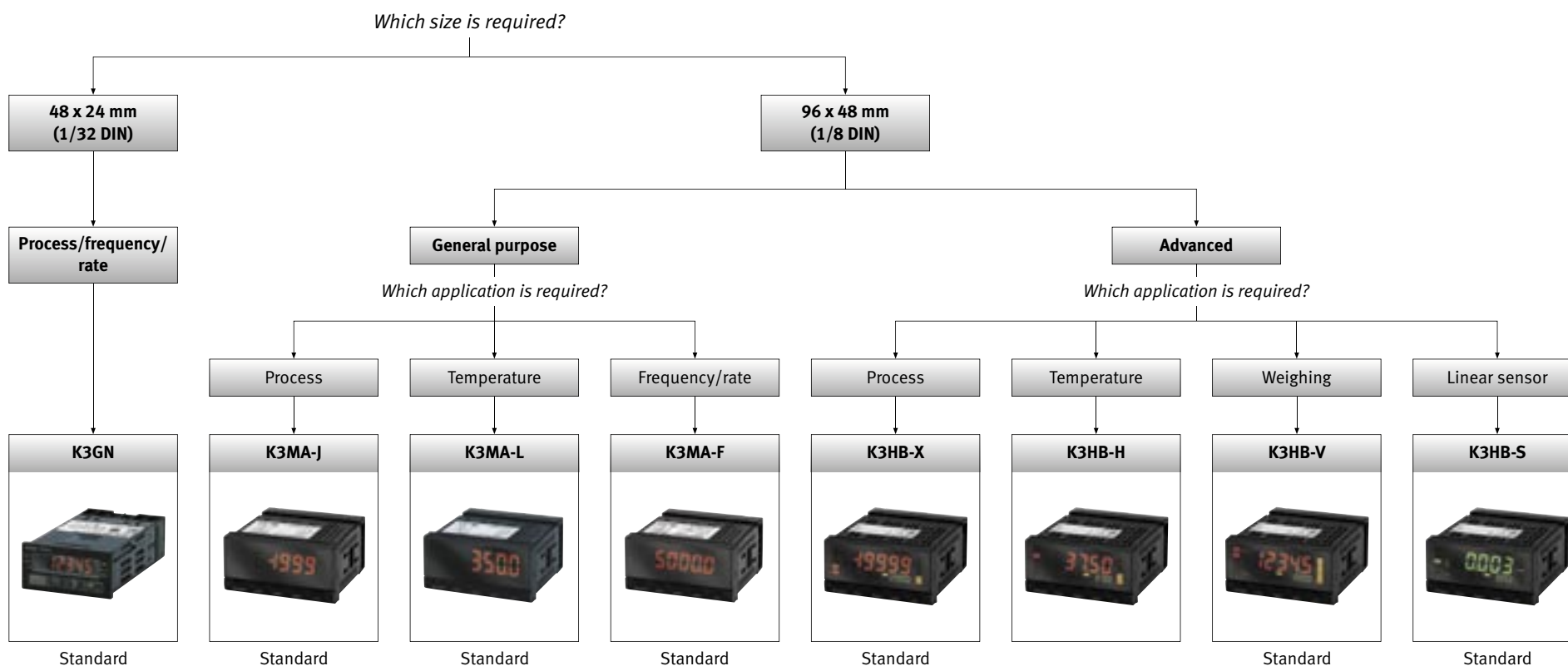
Omron's digital panel indicator series accepts a wide range of input signals (process, temperature, pulse/impulse, weight, etc.), that can be displayed in any required value. The series also includes a green/red color change display feature, which clearly visualizes the status of a process.

- Multiple inputs, including process, temperature, frequency and many more!
- Highly visible display provides a clear, highly stable read-out of values
- Large, front-panel keys for unambiguous, user-friendly programming
- Dust-proof and waterproof front case that complies with NEMA4X (IP66 equivalent) standards
- Wide range of models with communication capability including DeviceNet

The K3MA is a basic indicator (1/8 DIN) that accepts process, temperature and frequency inputs with basic output functionality.

The K3GN (1/32 DIN) is a very compact multi-functional, five-digit indicator handling process, frequency and data inputs. Covering all basic functionality, it has a variety of outputs, including a communication (RS-485) output.

The K3HB is a modular, input indicator (1/8 DIN) featuring a unique bar-graph position indication and double display feature. It has a sampling speed of 20ms for the process/temperature/weight indicators, and 0.5ms for the linear sensor indicator.



Digital panel indicators

Selection criteria						Features														
Panel indicator type	Size	Family	Model		Key points	Color change display	Number of digits	Leading zero suppression	Forced zero function	Min/max hold function	Average processing	User selectable inputs	Start-up compensating time	Key protection	Decimal point position setting	Accuracy	Sample rate	Additional features	Sensor power supply	
Multifunctional digital panel indicator	1/32 DIN	K3GN	K3GN		DC voltage/current input, frequency input	●	5	●	●	●	●	●	●	●	●	± 0.1% of full scale	4Hz	Remote/local processing, parameter initialisation, programmable output configuration, process value hold		
Process indicator	1/8 DIN	K3MA	K3MA-J		DC voltage/current input	●	5	●	●	●	●	●		●	●	± 0.1% of full scale	4Hz	Teaching, comparative output pattern selection, parameter initialisation, programmable output configuration, process value hold		
Temperature indicator			K3MA-L		Temperature meter	●	5	●	●	●	●	●		●	●	± 0.1% of full scale	0 to 30Hz or 0 to 5 kHz	Programmable output configuration, process value hold		
Frequency/rate indicator			K3MA-F		Frequency/rate meter	●	5	●	●	●	●	●	●	●	●	± 0.1% of full scale	0 to 30Hz or 0 to 5 kHz	Teaching, comparative output pattern selection, programmable output configuration, process value hold	●	
Process indicator			K3HB-X		DeviceNet, high-speed sampling (50Hz), bargraph	●	5	●	●	●	●	●		●	●	± 0.1% of full scale (DC voltage & DC current), ± 0.5% of full scale (AC voltage & AC current)	50Hz	Scaling, teaching, averaging, output hysteresis, output off delay, output test, bank selection, reset, comparative output	○	
Temperature indicator		K3HB	K3HB-H		High-speed, high-precision, DeviceNet, high-resolution, bargraph	●	5	●	●	●	●	●		●	●	Thermocouple: ± 0.3% of full scale, Pt-100: ± 0.2% of full scale	50Hz	Scaling, teaching, averaging, output hysteresis, output off delay, output test, bank selection, reset, comparative output	○	
Weighing indicator			K3HB-V		DeviceNet, high-speed sampling (50Hz), bargraph, easy judgement for pressure, load, torque, weight	●	5	●	●	●	●	●		●	●	± 0.1% of full scale	50Hz	Scaling, teaching, averaging, output hysteresis, output off delay, output test, bank selection, reset, comparative output	○	
Linear sensor indicator			K3HB-S		High speed position indicator (2000Hz), DeviceNet, easy recognition & judgement, bargraph	●	5	●	●	●	●			●	●	One input: ± 0.1% of full scale Two inputs: ± 0.2% of full scale	2000Hz	Scaling, 2-input calculation, teaching, averaging, output hysteresis, output off delay, output test, bank selection, reset, comparative output	○	
Up/down counting indicator		K3N	K3NC		High-speed up/down counting (50 kHz), serial communication, models with only PV display & PV and SV display, 4 memory banks		5	●	●			NPN, voltage pulse or PNP	●		●		Voltage pulse & open collector: 50 kHz; no-voltage contact: 30Hz	Scaling, variable linear output range, remote/local processing, counting value reset, security, memory power failure	●	
Period indicator			K3NP		50 kHz input range, serial communication, models with only PV display & PV and SV display, 4 memory banks		5	●	●	●		NPN, voltage pulse or PNP	●		●		Voltage pulse & open collector: 50 kHz; no-voltage contact: 30Hz	Scaling, variable linear output, remote/local processing, max/min value data reset, comparative output pattern, process time for averaging measured values, time unit display, security, teaching	●	
Frequency/rate indicator			K3NR		50 kHz input range, intelligent interface modules with seven operating modes, single or dual input, serial communication, models with only PV display & PV and SV display, 4 memory banks		5	●	●	●	●	NPN, voltage pulse or PNP	●		●		Voltage pulse & open collector: 50 kHz; no-voltage contact: 30Hz	Scaling, variable linear output, remote/local processing, max/min value data reset, comparative output pattern, process time for averaging measured values, time unit display, security, teaching	●	

	Front protection	Supply voltage	Inputs										Outputs					Comms	Approvals			
	IP grade		NPN	PNP	Temperature	Contact	Voltage pulse	Load cell	DC voltage	DC current	AC voltage	AC current	Relay	NPN	PNP	Linear	BCD		CE	SP	UL US	UL US
	IP66	24 VDC	●	●					●	●			●	●	●			●	●			
	IP66	24 VDC/AC or 100 to 240 VAC							●	●			●						●			●
	IP66	24 VDC/AC or 100 to 240 VAC	●	●					●				●						●			●
	IP66	24 VDC/AC or 100 to 240 VAC	●	●		●	●						●						●			●
	IP66	100 to 240 VAC or 24 VAC/VDC	○	○					○	○	○	○	○	○	○	○	○	○	●			●
	IP66	100 to 240 VAC or 24 VAC/VDC	○	○	●								○	○	○	○		○	●			●
	IP66	100 to 240 VAC or 24 VAC/VDC	○	○			●						○	○	○	○		○	●			●
	IP66	100 to 240 VAC or 24 VAC/VDC	○	○					●	●			○	○	○	○		○	●			●
	IP66	100 to 240 VAC or 12 to 24 VAC/VDC	○	○		○	○						○	○	○	○	○	○	●	●	●	
	IP66	100 to 240 VAC or 12 to 24 VAC/VDC	○	○		○	○						○	○	○	○	○	○	●	●	●	
	IP66	100 to 240 VAC or 12 to 24 VAC/VDC	○	○		○	○						○	○	○	○	○	○	●	●	●	



K3GN

K3GN Digital panel indicators

Ordering code				
Model	DC voltage/current, NPN	K3GN - ND	-	24VDC
	DC voltage/current, PNP	K3GN - PD	-	24VDC
Output type	2 relay contact outputs (SPST-NO)	C	C	
	3 transistor outputs (NPN open collector)	T1		
	3 transistor outputs (PNP open collector)		T2	
Communication output type	Not supported (STANDARD)			
	RS-485		FLK	



K3MA-J



K3MA-L



K3MA-F

K3MA Digital panel indicators

Ordering code				
Model	Process meter, DC voltage/current	K3MA - J		
	Temperature meter, platinum resistant thermometer	K3MA - L		
	Frequency/rate meter, rotary pulse	K3MA - F		
Output type	No output (STANDARD)			
	2 relay contact outputs (SPST-NO)	A2		
	With relay contact output (SPDT)		C	
Supply voltage	100 to 240 VAC			100-240AC
	24 VAC/VDC			24AC/DC



K3HB-X



K3HB-H



K3HB-V



K3HB-S

K3HB Digital panel indicators

Ordering code			
Base units	Temperature indicator	K3HB - H	TA
	Weighing indicator	K3HB - V	LC
	Linear sensor indicator	K3HB - S	SD
	Process indicator	K3HB - X	
Input sensor codes	Temperature input thermocouple/resistance thermometer input	TA	
	Load cell input (DC low-voltage input)	LC	
	DC voltage/current input	SD	
	DC voltage input	VD	
	DC current input	AD	
	AC voltage input	VA	
	AC current input	AA	
Supply voltage		100 to 240 VAC	AC100-240
		24 VAC/VDC	AC/DC24

K3HB Digital panel indicators Sensor supply/output boards

Ordering code		
Sensor power supply/output boards		K33 -
Types	Relay output (PASS: SPDT) + sensor power supply (12 VDC +/- 10%, 80mA)	CPA
	Relay output (PASS: SPDT) + sensor power supply (10 VDC +/- 5%, 100mA)	CPB
	Linear current output (DC 0(4) - 20 mA) + sensor power supply (12 VDC +/- 10%, 80mA)	L1A
	Linear current output (DC 0(4) - 20 mA) + sensor power supply (10 VDC +/- 5%, 100mA)	L1B
	Linear voltage output (DC 0(1) - 5V, 0 to 10 V) + sensor power supply (12 VDC +/- 10%, 80mA)	L2A
	Linear voltage output (DC 0(1) - 5V, 0 to 10 V) + sensor power supply (10 VDC +/- 5%, 100mA)	L2B
	Sensor power supply (12 VDC +/- 10%, 80mA)	A
	Sensor power supply (10 VDC +/- 5%, 100mA)	B
	Communications (RS-232C) + sensor power supply (12 VDC +/- 10%, 80mA)	FLK1A
	Communications (RS-232C) + sensor power supply (10 VDC +/- 5%, 100mA)	FLK1B
	Communications (RS-485) + sensor power supply (12 VDC +/- 10%, 80mA)	FLK3A
	Communications (RS-485) + sensor power supply (10 VDC +/- 5%, 100mA)	FLK3B

NOTES: CPA and CPB can be combined with relay outputs only.
Only one of the communications (BCD of DeviceNet) can be used by each indicator.

K3HB Digital panel indicators Relay/transistor output boards

Ordering code		
Relay/transistor output boards		K34 -
Types	Relay contact (H/L: SPDT each)	C1
	Relay contact (HH/H/LL/L: SPST-NO each)	C2
	Transistor (NPN open collector: HH/H/PASS/L/LL)	T1
	Transistor (PNP open collector: HH/H/PASS/L/LL)	T2
	DeviceNet	DRT

K3HB Digital panel indicators Event input boards

Ordering code		
Event input boards		K35 -
Types	5 points (M3 terminal blocks) NPN open collector	1
	8 points (10-pin MIL connector) NPN open collector	2
	5 points (M3 terminal blocks) PNP open collector	3
	8 points (10-pin MIL connector) PNP open collector	4



K3NC

K3NC Digital panel indicators

Ordering code			
Model	Basic display type	K3NC -	
Input sensors	NPN inputs/voltage pulse inputs	NB	
	PNP inputs	PB	
Supply voltage	100 to 240 VAC	1	
	12 to 24 VDC	2	
Display	Basic	A	
	Set value LED display	C	

K3NC Digital panel indicators Counters

Ordering code			
Model	For basic display type	K31 -	
	For set value LED display type	K31 -	
Output type codes	5 comparative relay contact outputs (OUT1, 2, 4, 5; SPST-NO;OUT3; SPDT)	C2	C2
	5 comparative relay contact outputs (OUT1, 2, 4, 5; SPST-NC;OUT3; SPDT)	C5	C5
	5 comparative transistor outputs (NPN open collector)	T1	T1
	5 comparative transistor outputs (PNP open collector)	T2	T2
	BCD output (NPN open collector)	B2	
	BCD output + 5 transistor outputs (NPN open collector)	B4	B4
	Linear output (4 to 20 mA)	L1	
	Linear output (1 to 5 VDC)	L2	
	Linear output (1mV/10 digits)	L3	
	Linear output, 4 to 20 mA + 5 transistor outputs (NPN open collector)	L4	L4
	Linear output, 1 to 5 V + 5 transistor outputs (NPN open collector)	L5	L5
	Linear output, 1mV/10 digits + 5 transistor outputs (NPN open collector)	L6	L6
	Linear output, 0 to 5 VDC	L7	
	Linear output, 0 to 10 VDC	L8	
	Linear output, 0 to 5 VDC + 5 transistor outputs (NPN open collector)	L9	L9
	Linear output, 0 to 10 VDC + 5 transistor outputs (NPN open collector)	L10	L10
	Communication RS-232C	FLK1	
	Communication RS-485	FLK2	
	Communication RS-422	FLK3	
	RS-232C + 5 transistor outputs (NPN open collector)	FLK4	FLK4
	RS-485 + 5 transistor outputs (NPN open collector)	FLK5	FLK5
	RS-422 + 5 transistor outputs (NPN open collector)	FLK6	FLK6



K3NP

K3NP Digital panel indicators

Ordering code			
Model		K3NP -	
Input sensors	NPN inputs/voltage pulse inputs	NB	
	PNP inputs	PB	
Supply voltage	100 to 240 VAC	1	
	12 to 24 VDC	2	
Display	Basic	A	
	Set value LED display	C	

K3NP Digital panel indicators Timers

Ordering code			
Model	For basic display type	K31 -	
	For set value LED display type	K31 -	
Output type codes	3 comparative relay contact outputs (H, PASS, L: SPDT)	C1	C1
	5 comparative relay contact outputs (HH, H, L, LL: SPSTNO; PASS: SPDT)	C2	C2
	5 comparative relay contact outputs (HH, H, L, LL: SPSTNC; PASS: SPDT)	C5	C5
	5 comparative transistor outputs (NPN open collector)	T1	T1
	5 comparative transistor outputs (PNP open collector)	T2	T2
	BCD output (NPN open collector)	B2	
	BCD output + 5 transistor outputs (NPN open collector)	B4	B4
	Linear output (4 to 20 mA)	L1	
	Linear output (1 to 5 VDC)	L2	
	Linear output (1mV/10 digits)	L3	
	Linear output, 4 to 20 mA + 5 transistor outputs (NPN open collector)	L4	L4
	Linear output, 1 to 5 V + 5 transistor outputs (NPN open collector)	L5	L5
	Linear output, 1mV/10 digits + 5 transistor outputs (NPN open collector)	L6	L6
	Linear output, 0 to 5 VDC	L7	
	Linear output, 0 to 10 VDC	L8	
	Linear output, 0 to 5 VDC + 5 transistor outputs (NPN open collector)	L9	L9
	Linear output, 0 to 10 VDC + 5 transistor outputs (NPN open collector)	L10	L10
	Communication RS-232C	FLK1	
	Communication RS-485	FLK2	
	Communication RS-422	FLK3	
	RS-232C + 5 transistor outputs (NPN open collector)	FLK4	FLK4
	RS-485 + 5 transistor outputs (NPN open collector)	FLK5	FLK5
	RS-422 + 5 transistor outputs (NPN open collector)	FLK6	FLK6

K3NR Digital panel indicators

Ordering code			
Model	Basic display type	K3NR -	
Input sensors	NPN inputs/voltage pulse inputs	NB	
	PNP inputs	PB	
Supply voltage	100 to 240 VAC	1	
	12 to 24 VDC	2	
Display	Basic	A	
	Set value LED display	C	



K3NR Digital panel indicators Counters

Ordering code			
Model	For basic display type	K31 -	
	For set value LED display type	K31 -	
Output type codes	3 comparative relay contact outputs (H, PASS, L: SPDT)	C1	C1
	5 comparative relay contact outputs (HH, H, L, LL: SPSTNO; PASS: SPDT)	C2	C2
	5 comparative relay contact outputs (HH, H, L, LL: SPSTNC; PASS: SPDT)	C5	C5
	5 comparative transistor outputs (NPN open collector)	T1	T1
	5 comparative transistor outputs (PNP open collector)	T2	T2
	BCD output (NPN open collector)	B2	
	BCD output + 5 transistor outputs (NPN open collector)	B4	B4
	Linear output (4 to 20 mA)	L1	
	Linear output (1 to 5 VDC)	L2:	
	Linear output (1mV/10 digits)	L3:	
	Linear output, 4 to 20 mA + 5 transistor outputs (NPN open collector)	L4:	L4:
	Linear output, 1 to 5 V + 5 transistor outputs (NPN open collector)	L5:	L5:
	Linear output, 1mV/10 digits + 5 transistor outputs (NPN open collector)	L6:	L6:
	Linear output, 0 to 5 VDC	L7:	
	Linear output, 0 to 10 VDC	L8:	
	Linear output, 0 to 5 VDC + 5 transistor outputs (NPN open collector)	L9:	L9:
	Linear output, 0 to 10 VDC + 5 transistor outputs (NPN open collector)	L10:	L10:
	Communication RS-232C	FLK1:	
	Communication RS-485	FLK2:	
	Communication RS-422	FLK3:	
	RS-232C + 5 transistor outputs (NPN open collector)	FLK4:	FLK4:
	RS-485 + 5 transistor outputs (NPN open collector)	FLK5:	FLK5:
	RS-422 + 5 transistor outputs (NPN open collector)	FLK6:	FLK6:

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Power supplies

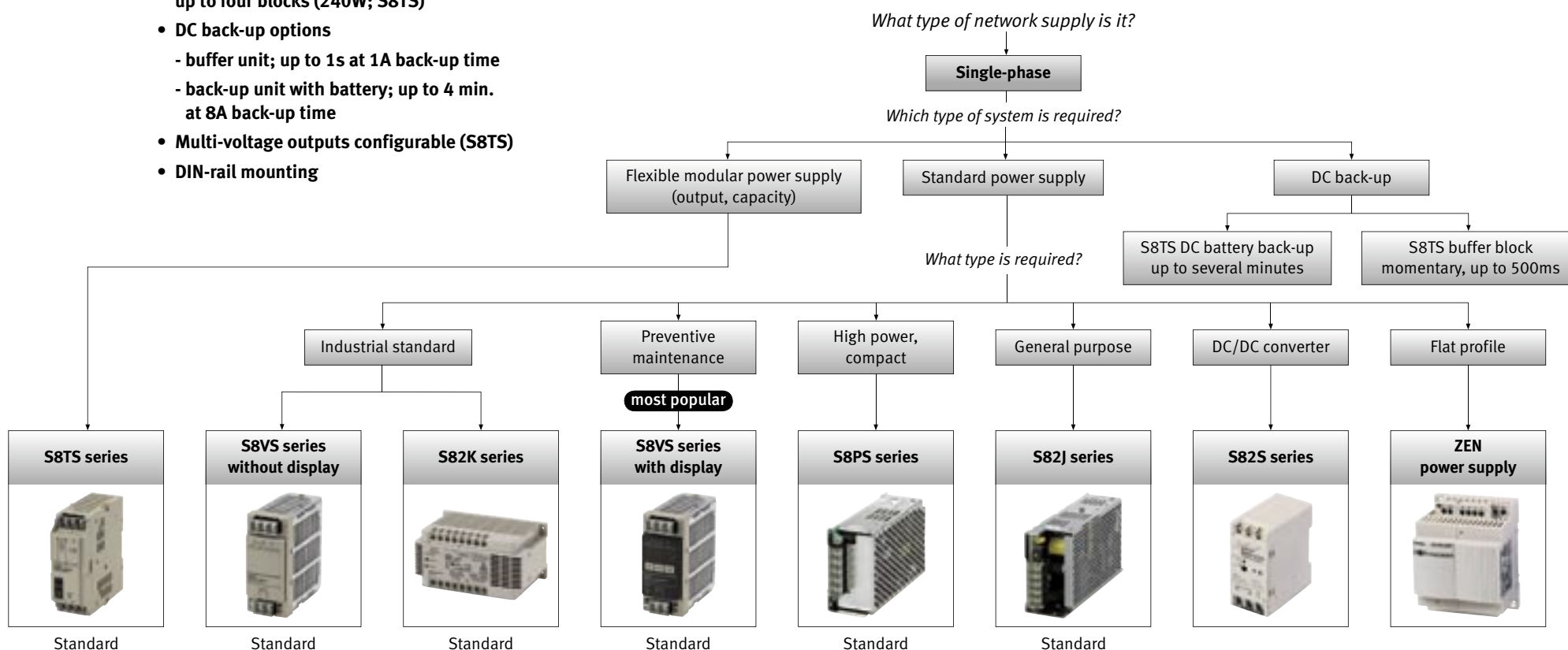
Omron's power supplies combine innovative features with high performance, high reliability and compact designs, making them ideal for modern industrial control panels where space is often at a premium.

- AC voltages switchable from 85 to 264 VAC
- DC output voltages: 5, 12 or 24 VDC
- Variety of outputs up to 600W
- Under-voltage detection
- Displays for preventive maintenance (S8VS)
 - diagnostics of output
 - remaining life of power supply
 - run-time monitor
- Parallel operation with BUS connectors possible up to four blocks (240W; S8TS)
- DC back-up options
 - buffer unit; up to 1s at 1A back-up time
 - back-up unit with battery; up to 4 min. at 8A back-up time
- Multi-voltage outputs configurable (S8TS)
- DIN-rail mounting

The S8TS features a unique 'building-block' concept and can be plugged together to give a power supply capacity of 60 to 240 W for standard operation.

The ultra-compact S8VS model features a unique 3-digit, 7-segment LED display for output voltage, output current and output peak current for faster, easier diagnostics. The S8VS is available in a variety of power ratings from 60 to 240 W (15/30W models released).

The S8T-DCBU-02 buffer unit is designed to ensure the supply of power in your systems for Omron's following power supplies: S8TS, S8VS, S82J, S82K, S8PS.



Power supplies

Selection criteria							Power [W]																	Features					
Phases	Rated voltage	Category	Family		Key points	Voltage	3W	7.5W	10W	15W	25W	30W	50W	60W	90W	100W	120W	150W	180W	240W	300W	480W	600W	960W	PFC built-in/conforms to EN61000-3-2 A14				
Single-phase	100/230 VAC or 100...240 VAC	Modular	S8TS		- 60 to 240 W - Multi-power supply configurations - Modular: just one model	5V					● 5A														●				
						12V					● 2.5A		● 5A	● 7.5A		● 10A									●				
						24V							● 2.5A			● 5A		● 7.5A	● 10A							●			
		Back-up				- Momentary power back-up	24V							● 2.5A															
		With status monitor	S8VS-Bx/Ax		Display features: - Output status monitor - Run time monitor - Maintenance forecast monitor - Ultra compact size	24V								● 2.5A	● 3.75A		● 5A		● 7.5A	● 10A						●			
		Industrial standard	S8VS		- Ultra compact size	24V								● 2.5A	● 3.75A		● 5A		● 7.5A	● 10A							●		
			S82K		- Wide power range - Widely used world-wide - Dual output type available	5V	● 0.6A	● 1.5A		● 2.5A	● 5A																	○	
						12V	● 0.25A	● 0.6A		● 1.2A	● 2.5A																		○
		15V	● 0.2A	● 0.5A																							○		
		24V	● 0.13A	● 0.3A		● 0.6A	● 1.3A	● 2.1A		● 3.75A	● 4.2A								○ 10A								○		
		Compact	S8PS		- Open-frame and covered types - Most compact up to 600W	5V								● 10A														●	
						12V							● 4.2A															●	
						24V							● 2.1A			● 4.5A	● 6.5A			● 14A	● 27A							●	
		General purpose	S82J		- Compact & economical - Open frame, cover type and enclosed type	5V			● 2A	● 5A	● 10A		● 20A																
						12V			● 1A	● 2.1A	● 4.2A		● 8.5A																
						15V			● 0.7A	● 1.7A			● 7A																
	24V							● 0.5A	● 1.1A	● 2.1A		● 4.5A	● 6.5A			● 14A	● 27A												
	12 - 24 VDC	DC/DC converter	S82S		- Ideal for applications with limited space - Wide input voltage ranges: 10.2 to 27.6 VDC - Dual output type available	5V	● 0.6A	● 1.5A																					
						12V	● 0.25A	● 0.6A																					
						15V	● 0.2A	● 0.5A																					
24V						● 0.13A	● 0.3A																						

Note. A low-profile power supply is available, see more in detail.

													Approvals						
																			
	DC back-up	Capacitor back-up	Undervoltage detection	Overvoltage protection	Overload protection	DIN-rail mounting	Screw mounting (with bracket)	Class B	Class 2	N+1 redundancy	Parallel operation	Series operation	Based on EMC & LVD	CSA22.2-14	UL508	EN50178 (VDE0160)/ EN60950 (VDE0806)	UL1310, UL60950 (UL1950), CSA22.2-14, CSA22.2-60950	UL508	UL1310, UL60950
	○		●	●	●	●		●	●	●	●	●	●		●	●	●		
	○		●	●	●	●		●	●	●	●	●	●		●	●	●		
	○	○	●	●	●	●		●	●	●	●	●	●		●	●	●		
		●		●	●	●		●	●		●		●		●	●	● UL1604/CSA213		
		○	●	●	●	●			● Only 60W model			●	●		●	●	●	●	
		○	●	●	●	●			● Only 60W model			●	●		●	●	●	●	
			●		●	●	●	●	●				●	●		●		●	●
			●		●	●	●	●	●				●	●		●		●	●
			●		●	●	●	●	●				●	●		●		●	●
		○	○	● Only 240W model	●	●	●		●		● Only 100/240W models	● Only 90/100/240W models	●	●		●		●	●
				●	●	●	●	●				● Only 50W model	●	●		●		●	●
				●	●	●	●	●				● Only 50W model	●	●		●		●	●
		○		●	●	●	●	●			● Only 300/600W models	●	●	●		●		●	●
				● Only 100W model	●	●	●		● Except 10/25W models			● Except 10/25W models	●	●		●		●	●
					●	●	●		●			● Except 10/25W models	●	●		●		●	●
					●	●	●		●			● Except 10/25W models	●	●		●		●	●
		○		● Only 100/300/600W models	●	● Except 300/600W models	●		● Only 50W model		● Only 300/600W models	● Except 10/25W models	●	●		●		●	●
					●	●								●					●
					●	●								●					●
					●	●								●					●
					●	●								●					●



S8TS

S8TS Power supplies

Ordering code				
Model	25W 5V 5A	S8TS - 02505		
	30W 12V 2.5A	S8TS - 03012		-
	60W 24V 2.5A	S8TS - 06024		-
Terminals	Connector terminals	F	↑	
Bus line connectors	Basic block only (STANDARD)			
	S8T-BUS01 and S8T-BUS02 included*1	E1		

*1 Not for 5V models.

Accessories: S8TS bus line connector

Ordering code				
AC line+ DC line bus (parallel operation)	S8TS-BUS		1	
AC line bus (series or isolated operation)	S8TS-BUS		2	
Quantity	Single connector	0	↑	
	10 connectors	1		



S8VS-Bx/Ax



S8VS

S8VS Power supplies

Ordering code				
Model	60W, 24V	S8VS - 060	24	
	90W, 120W, 180W, 240W, 24V	S8VS -		24
Capacity	90W	090	↑	
	120W	120		
	180W	180		
	240W	240		
Configuration	No display			
	With maintenance forecast monitor		A	
	With total run-time monitor		B	
	With maintenance forecast monitor and undervoltage alarm (sinking)		A	
	With total run-time monitor and undervoltage alarm (sinking)		B	
	With maintenance forecast monitor and undervoltage alarm (sourcing)		AP	
	With total run-time monitor and undervoltage alarm (sourcing)		BP	

New – No Display

S8VS 15W and 30W

Ordering code				
Model	15W	S8VS - 015	-	
	30W	S8VS - 030	-	
Output voltage	5V	05	↑	
	12V	12		
	24V	24		



S82K

S82K Power supplies

Ordering code				
Model	3W	S82K -	003	
	7.5W	S82K -	007	
	15W	S82K -	015	
	30W	S82K -	030	
	50W	S82K -	050	24
	90W	S82K -		090 24
	100W	S82K -		100 24
Power factor correction	No		↑	
	Yes	P		
Output voltage	+5 VDC	05	05	05
	+12 VDC	12	12	12
	+15 VDC	15	15	15
	+24 VDC	24	24	24
	12 VDC	27		
	15 VDC	28		
Undervoltage alarm indicator/output	No			



S8PS

S8PS Power supplies

Ordering code				
Model	50W	S8PS - 050		
	100W	S8PS - 100	24	
	150W	S8PS - 150	24	
	300W	S8PS - 300	24	
	600W	S8PS - 600	24	C
↑ ↑ ↑				
Output voltage	5V		05	
	12V		12	
	24V		24	
↑ ↑				
Configuration	Open-frame type with front-mounting bracket			
	Covered type with front-mounting bracket		C	C
	Open-frame type with DIN-rail mounting bracket		D	
	Covered type with DIN-rail mounting bracket		CD	CD



S82J

S82J Power supplies

Ordering code				
Model	10W	S82J - 010		
	25W	S82J - 025		
	50W	S82J - 050		
	100W	S82J - 100		*1
	150W	S82J - 150	24	
	300W	S82J - 300	24	
	600W	S82J - 600	24	
↑ ↑ ↑ ↑ ↑				
Output voltage	5V		05	05
	12V		12	12
	15V		15	
	24V		24	24
↑ ↑ ↑				
Configuration	Enclosed type, front terminals with mounting bracket			
	Open-frame type, front terminals		A	A
	Covered type, front terminals		D	D
↑				
Mounting bracket	Front-mounting bracket type			
	DIN-rail mounting bracket type		D	

*1 Top terminals (B&E) and connector type (C&F) not for 24V type.



S82S

S82S Power supplies

Ordering code				
Model	3W 12 to 24 VDC	S82S - 73		
	7.5W 12 to 24 VDC	S82S - 77		
↑ ↑				
Output voltage	5V		05	05
	12V		12	12
	15V		15	15
	24V		24	24
	±12V		27	
	±15V		28	

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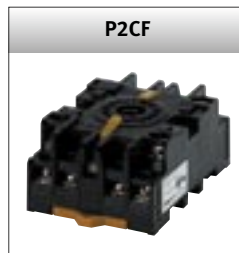
Sockets

Omron is the first manufacturer to use SLC technology in a standard socket for plug-in electromechanical relays, level controllers, solid-state relays and timers. User benefits include reduced wiring time compared with screw terminals, and constant wire clamp pressure that eliminates the need to re-tighten terminals.

- Unique release lever ensures easy product replacement
- Different gauge wires to be connected to the same terminal
- Standard DIN-rail connection for faster, easier panel building
- Safe terminal arrangement; coil terminals separated from contact terminals
- Environmentally friendly; no Pb, Cd or Be used

When used in combination with associated products these sockets guarantee safe switching and meet the most demanding specifications. Double wiring and easy bridge and branch connections are all possible on all terminals. And because each

socket is wired from the top instead of the side, the cable troughs can be mounted directly at the socket, saving space in the switch cabinet. In addition, a unique ejector in each socket makes product replacement very easy.



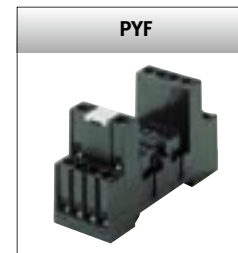
Standard



Standard



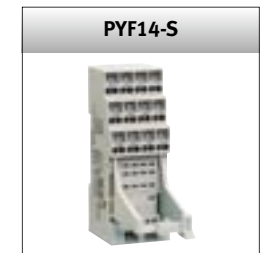
Standard



Standard



Standard



Standard

Sockets

Selection criteria						Product group				
						Relays				
Mounting	Terminals	Hold down clip	Poles	Model	Color	MY	G2RS	LY	MK-I/S	MYK
Front mounting (DIN-rail)	Screw-less clamp	Without clips	1	P2RF-05-S	Grey		●			
			2	P2RF-08-S	Grey		●			
			2	PYF08A-S	Grey	●				
			4	PYF14-A-S	Grey	●				
Front-mounting (DIN-rail/screw)	Screw terminal	With external clip	1 or 2	PTF08A-E	Black			●		
			1 or 2	PTF08A	Black			●		
			2	PF083A	Black				●	
			2	PF083A-E	Black				●	
			2	PYF08A	Black	●				
			3	PYF11A	Black	●				
			3	PF113A	Black					
			3	PF113A-E	Black				●	
			3	PTF11A	Black			●	●	
			4	PTF14A	Black			●		
			4	PTF14A-E	Black			●		
			4	PYF14A-E	Black	●				●
			4	PYF14A-N	Grey	●				●
			2	PYF08A-E	Black	●				
			2	PYF08A-N	Grey	●				
			4	PYF14A	Black	●				●
		With integral clip	1	P2RF-05	Black		●			
			1	P2RF-05-E	Grey		●			
			2	P2CF-08	Black					
			2	P2CF-08-E	Black					
			2	P2RF-08	Black		●			
			2	P2RF-08-E	Grey		●			
			2	P3G-08	Black					
			3	P2CF-11	Black					
			3	P2CF-11-E	Black					
			3	P3GA-11	Black					
Back mounting	Solder terminals	With external clip	2	PL08	Black					
			3	PL11	Black					
			2	PY08	Black	●				
			3	PY11	Black	●				
			4	PY14	Black	●				●
		With integral clip	2	PY08-Y1	Black	●				
			3	PY11-Y1	Black	●				
			4	PY14-Y1	Black	●				●
			1	P2R-05A	Black		●			
			2	P2R-08A	Black		●			
	Plug-in/solder	With external clip	1 or 2	PT08	Black			●		
			3	PT11	Black			●		
			4	PT14	Black			●		
			1 or 2	PT08-0	Black			●		
	PCB terminals	With external clip	2	PY08-02	Black	●				
			3	PY11-02	Black	●				
			3	PT11-0	Black			●		
			4	PT14-0	Black			●		
			4	PY14-02	Black	●				●
		With integral clip	1	P2R-05P	Black		●			
			1	P2R-057P	Grey		●			
			2	P2R-08P	Black		●			
			2	P2R-087P	Grey		●			
		With external clip	1 or 2	PT08QN	Black			●		
			3	PT11QN	Black			●		
			4	PT14QN	Black			●		
			2	PY08QN	Black	●				
			2	PY08QN2	Black	●				
			3	PY11QN	Black	●				
			3	PY11QN2	Black	●				
			4	PY14QN	Black	●				●
			4	PY14QN2	Black	●				●
	Wire-wrap	With integral clip	2	PY08QN2-Y1	Black	●				
			2	PY08QN-Y1	Black	●				
			3	PY11QN-Y1	Black	●				
			3	PY11QN2-Y1	Black	●				
			4	PY14QN2-Y1	Black	●				
			4	PY14QN-Y1	Black	●				●
			4	PY14QN-Y1	Black	●				
			4	PY14QN-Y1	Black	●				

☒ Standard
 ☐ Available
 ☐ Not available

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Warranty

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