

Industrial Automation Guide 2016



Industrial Products & Systems

Targeted Technologies

Creating maximum output with minimum input

By identifying the many ways of innovation in specific industries we developed the 'targeted technologies' concept. It's a way of thinking about technology in a prioritized format. Prioritized according to our customers' most pressing needs. The result? A set of solutions that make immediate impact on the core of our customers' businesses. A set of solutions that hit the target every time. Take a look at the examples on our website.

industrial.omron.eu/technologies



Welcome to our world

Our best-in-class devices for your automation system

Welcome to Omron's world of advanced industrial automation. The INDUSTRIAL AUTOMATION GUIDE is your essential tool to select best-in-class devices for your automation system. It highlights our core competences in sensing, control, visualisation, motion and panel components.

Of course, Omron offers a much larger range of products than you can find on the attached DVD. For more information on services and company competence visit our website.

Here you will find:

- Latest product news
- Technical product specifications
- 2D / 3D CAD Library
- Customer references
- Technology concepts
- Supporting product documentation
- Knowledge Base - "myOmron"
- Events Calendar
- Contact information

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Industrial Automation Guide 2016

	Omron at a glance	3
	The 361° Approach	4
	Sysmac: A fully integrated platform	6
	Product selection table	8
Automation systems	Machine automation controller	12
	Programmable logic controllers (PLC)	26
	Remote I/O	54
	Human machine interfaces (HMI)	68
	I/O cables and terminal blocks	82
	Ethernet cables and accessories	91
Motion & Drives	Motion controllers	96
	Servo systems	112
	Robots	170
	Frequency inverters	202
Sensing	Photoelectric sensors	236
	Mark and Color sensors	278
	Lightcurtains and area sensors	284
	Fiber optic sensors and amplifiers	292
	Inductive sensors	324
	Mechanical sensors/Limit switches	344
	Rotary encoders	358
	Cable connectors	366
Quality control & Inspection	Inspection & Ident systems	370
	Measurement sensors	426
Safety	Emergency stop and control devices	462
	Safety limit switches	472
	Safety door switches	480
	Safety sensors	506
	Safety logic control systems	544
	Safety outputs	566
Control components	Temperature controllers	574
	Power supplies	596
	Uninterruptible power supplies (UPS)	614
	Timers	622
	Counters	632
	Programmable relays	642
	Digital panel indicators	650
	Energy monitoring devices	660
	Photovoltaic	674
Switching components	Electromechanical relays	682
	Solid state relays	696
	Low voltage switchgear	706
	Monitoring products	722
	Pushbutton switches	750
Software	Software	766
	Outline of Major Standards	772
	Index	775

“To the machine the work of the machine,
to man the thrill of further creation.”

Kazuma Tateisi, founder of Omron

Omron at a glance

200.000 products ranging
input, logic and output

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

7%

Investment in Research & Development

Innovation track
record of 80 years

Top 150 global patent assignee

1.200 employees dedicated to R&D

11.000 + issued and pending patents

37.000

Employees worldwide

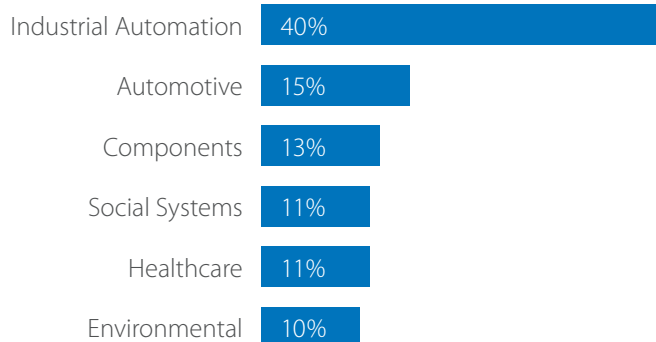
210

Locations worldwide

22

Countries in EMEA

Working for the
benefit of society



Close to your needs

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

Your needs, our focus

Solutions perfectly matching your needs

We asked ourselves: 'What do you need in sensors and components?' Well, first you need reliability. Then a variety and choice of performance levels. You may also want advanced functionality, with special features defined by you – or you may want standardized solutions, with highly competitive prices.

Whatever it is, it can all add up to a wish list that is difficult to fulfil. Until now. That's because our new 361° Approach not only provides a complete all-round offer without gaps, it also puts you at the very centre of the product selection process. It's an approach that leads to a Perfect Match – one with the extra degree of confidence that comes from choosing Omron.

361° in one view



Quality



Line-up



Application



Customization



Global availability



Specs

	Quality	Line-up	Application	Customization	Global availability	Specs
PRO^{plus}	Premium	Tailored	Special	Yes	Yes	Application oriented
PRO	Premium	Complete	Advanced	Yes	Yes	Above Standard
LITE	Premium	Standard	Basic	No	No	Basic
	'Quality' refers to the standard of manufacturing and the materials used – this translates into reliability	'Line-up' refers to the number of model types	'Application' indicates the complexity of the automation	'Customization' is the possibility to modify the product		'Specs' refers to the choice of performance levels

The extra degree of advantage

Three distinct lines of sensors and components

Three distinct lines

361° Approach offers three distinct lines within each sensor or component product category. LITE products are cost-effective without any compromise in quality. PRO products represent the “install & forget” option, offering longer lifetime, higher protection, and more features. While PROplus products are designed for specific applications or customer demands.

Optimized reliability

All three lines are backed by the Omron commitment to quality, so even when you need a price-competitive advantage, you can be confident that they will never let you down.

Solutions that perfectly match your needs

The 361° Approach ensures that you can quickly and easily identify the perfect match solution to your needs – nothing more, nothing less.

Optimized costs

Your sensor and component costs are also minimized – because it eliminates over-specification.

Why an extra 1°?

The extra degree is what you get when you do business with Omron, and that means different things to different customers – all depending on their needs. For example, if you need specification advice, the extra degree is ‘service’. But ultimately, to everyone it means “an extra degree of confidence in the perfect match”.



Sysmac: A fully integrated platform

Integration and Functionality

Sysmac is an integrated automation platform dedicated to providing complete control and management of your automation plant. At the core of this platform, the Machine Controller series offers synchronous control of all machine devices and advanced functionality such as motion, robotics and database connectivity. This multidisciplinary concept allows you to simplify solution architecture, reduce programming and optimize productivity.

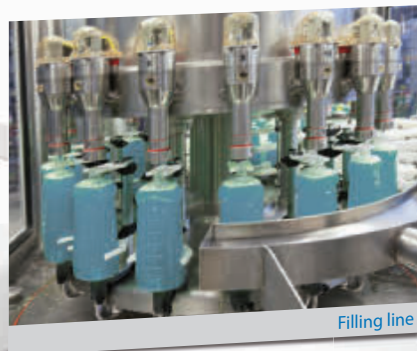


Machine Automation Controller

FACTORY
AUTOMATION

MACHINE
CONTROL

Motion



Filling line

- Motion Control: Integrated within the IDE, and operating in real-time
- Standard PLCopen Function Blocks plus Omron generated motion FB's
- Direct Synchronous control for Position, Speed and Torque

Safety



Assembly

- All safety related data is synchronized with the whole network
- Safety functions such as muting, guard locking, EDM and valve monitoring are simple to manage

- ✓ **One Integrated Development Environment software** for Configuration, Programming, Simulation and Monitoring



Information



- Sysmac communicates in real-time with Databases such as SQL
- Secure Data: In the event of a server going down or losing communications, data is automatically stored in internal memory
- Sysmac operates with Databases at high speed [1000 table element/ 100 ms] ensuring realistic Big Data Processing to improve productivity and aid predictive maintenance etc.

✓ Integrated Automation Control:

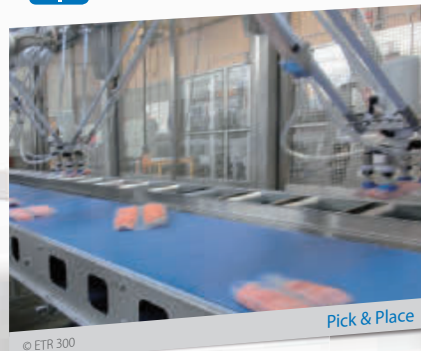
The Sysmac platform is scalable and provides the performance and functionality for a wide range of solutions from simple machines through to manufacturing cells

Vision



- Higher resolution images available without increasing the vision processing time
- Shape search technology: Provides more stable and accurate object detection for Pick & Place projects

Robotics



- Up to 8 Delta robots with one controller
- Time-based Robotic Function Blocks make programming easier

Sensing



- Full control of the process parameter setting and predictive maintenance functions
- High precision detection and positioning data synchronized on the network

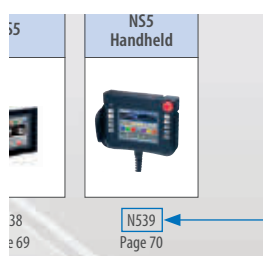
Product selection table

Automation systems				
	12 Machine automation controller	26 Programmable logic controllers (PLC)	54 Remote I/O	68 Human machine interfaces (HMI)
				
	96 Motion controllers	112 Servo systems	170 Robots	202 Frequency inverters
Sensing				
	236 Photoelectric sensors	278 Mark and Color sensors	284 Lightcurtains and area sensors	292 Fiber optic sensors and amplifiers
				
	370 Inspection & Ident systems	426 Measurement sensors		
Safety				
	462 Emergency stop and control devices	472 Safety limit switches	480 Safety door switches	506 Safety sensors
				
	574 Temperature controllers	596 Power supplies	614 Uninterruptible power supplies (UPS)	622 Timers
Switching components				
	682 Electromechanical relays	696 Solid state relays	706 Low voltage switchgear	722 Monitoring products
				
	766 Software			
Software				

Control components

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Quick Link

Control components

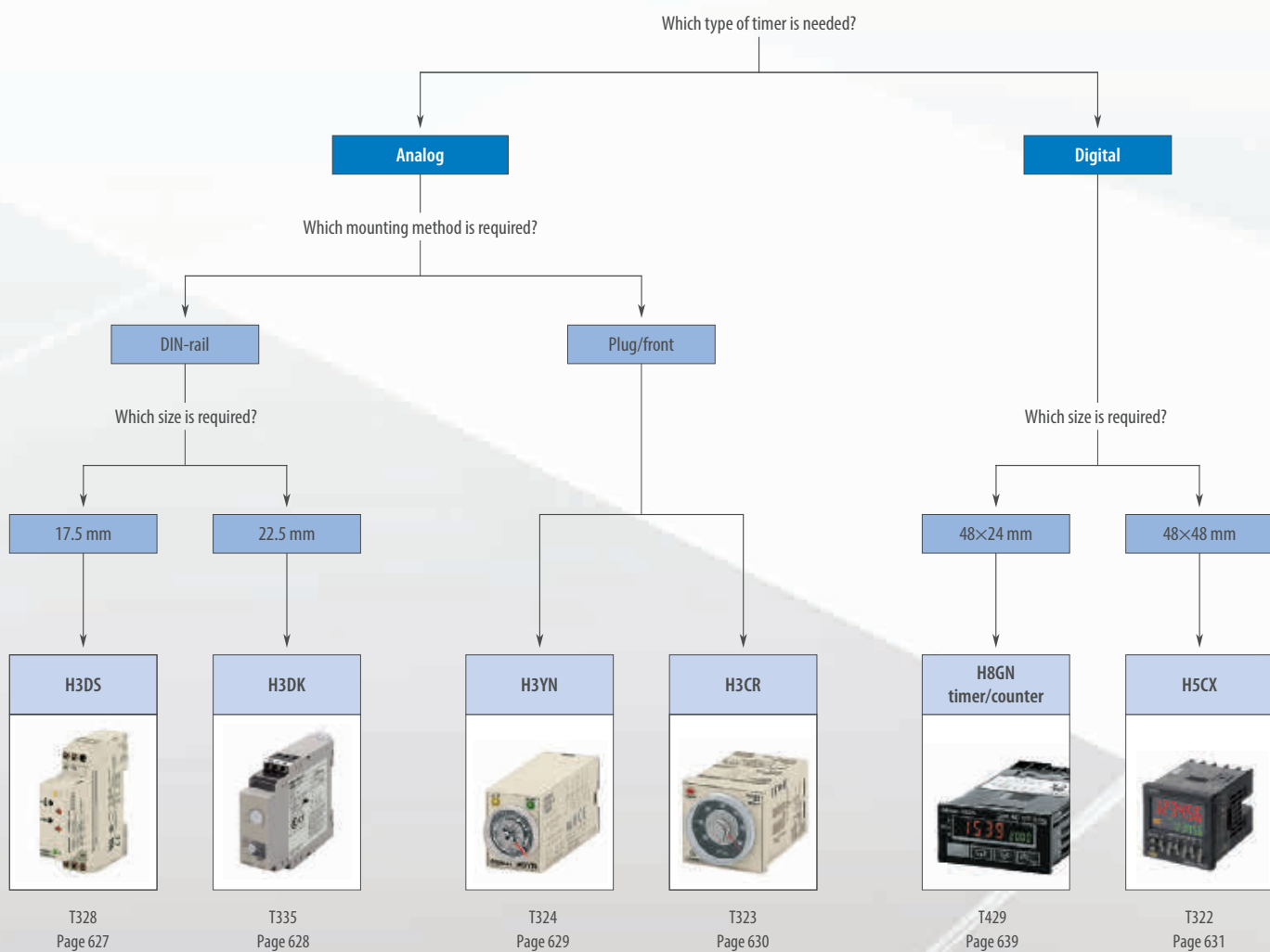
Temperature controllers	574	Timers	622
Selection table	576	Selection table	624
Basic temperature controllers		Analog solid state timers	
E5C2	579	H3DS	627
E5CSV	581	H3DK	628
E5CB	582	H3YN	629
K8AK-TH	749	H3CR	630
E5L	574	Digital timers	
E5L-A/C	576	H5CX	631
E5_L	576	H8GN	639
General purpose temperature controllers		Counters	632
E5_C	583	Selection table	634
Advanced and Multi-Loop controllers		Totalisers	
E5_C-T	587	H7EC	636
E5_R/E5_R-T	589	H7ET	637
CelciuX® (EJ1)	591	H7ER	638
E5_N-H/E5_N-HT	575	Pre-set counters	
Temperature sensors		H8GN	639
E52-E	593	H7CX	640
Auxiliaries		Cam positioners	
PRT1-SCU11/ES1B	594	H8PS	641
ES1C/EJ1N-HFU-ETN	595	Programmable relays	642
Power supplies	596	Selection table	645
Selection table	598	Programmable relays	
Single-phase		ZEN-10C	646
S8VK-C	601	ZEN-20C	647
S8VK-G	602	ZEN-8E	648
S8FS-C	603	ZEN-PA	649
S8JX-G	605	Digital panel indicators	650
S8JX-P	607	Selection table	652
S8EX	608	1/32 DIN multi-function	
Power back-up unit		K3GN	654
S8TS	609	1/8 DIN standard indicators	
S8T-DCBU-01/-02	610	K3MA-J, -L, -F	655
S8BA	618	1/8 DIN advanced indicators	
Three-phase		K3HB-X, -H, -V, -S	656
S8VK-T	611	K3HB-C, -P, -R	658
Digital multi circuit protector		Energy monitoring devices	660
S8M	612	Selection table	662
Redundancy unit		Smart power monitors	
S8VK-R	613	KM1 series	665
Uninterruptible power supplies (UPS)	614	KM50-E1-FLK	669
Selection table	617	Air flow sensors	
Uninterruptible power supplies (UPS)		D6FZ-FGT200/500/-FGS1000	671
S8BA	618	Power sensor stations	
BU_2RWL	620	ZN-KMX21	673
Photovoltaic	674	Photovoltaic	674
Selection table	677	Selection table	677
Three-phase		Three-phase	
KP100L	678	KP100L	678
PID recovering		PID recovering	
PID box series	679	PID box series	679

WHEN TIMING ACCURACY MATTERS!












H5CX – The most complete digital timer








The H5CX series offers multiple-functions and -timing ranges for precise timing control, as well as real twin-timing and memory function. These and other added-value features ensure that the H5CX covers almost every possible user requirement in timers.

- 15 different time functions
- Three color display value, red, orange or green
- Models with instantaneous contact outputs
- 0.001 s to 9999 h, 10 ranges



Selection table

Category		Analog solid state timer										
												
Model		H3DS-M	H3DS-S	H3DS-A	H3DS-F	H3DS-G	H3DS-X	H3DK-M	H3DK-S	H3DK-F	H3DK-G	H3DK-H
Selection criteria	Mounting	DIN-rail										
	Size	17.5 mm						22.5 mm				
	Type	Multi-functional			Twin timer	Star-delta	Two-wired	Multi-functional		Twin timer	Star-delta	Power OFF-delay
Contact configuration	Time limit	■	■	■	■	■	■	■	■	■	■	■
	Instantaneous	–	–	–	–	–	–	■	■	–	–	–
	Programmable contacts	–	–	–	–	–	–	■	■	–	–	–
	14 pins	–	–	–	–	–	–	–	–	–	–	–
	11 pins	–	–	–	–	–	–	–	–	–	–	–
	8 pins	–	–	–	–	–	–	–	–	–	–	–
	Screw terminals	■	■	■	■	■	■	■	■	■	■	■
	Screw-less clamp terminals	□	□	□	□	□	□	–	–	–	–	–
	Screw-less clamp sockets	–	–	–	–	–	–	–	–	–	–	–
Inputs	Voltage input	□	□	□	–	–	–	□	□	–	–	–
	Transistor	–	–	–	–	–	–	–	–	–	–	–
Outputs	Relay	■	■	■	■	■	–	■	■	■	■	■
	SCR	–	–	–	–	–	■	–	–	–	–	–
	Relay output type	SPDT	■	■	■	–	–	□	■	■	■ (2x)	■
		SPST-NO	–	–	–	■ (2x)	–	–	–	–	–	–
		DPDT	–	–	–	–	–	□	■	–	–	–
		4PDT	–	–	–	–	–	–	–	–	–	–
Features	Time range	Total time range	0.1 s to 120 h	1 s to 120 h	2 s to 120 h	0.1 s to 12 h	1 s to 120 s	0.1 s to 120 h	0.1 s to 1,200 h	0.1 s to 1,200 h	1 s to 120 s	0.1 s to 120 s
		Number of sub ranges	7	7	7	6	2	7	12	12	8	2 (model dependent)
	Supply voltage	24 to 230 VAC or 24 to 48 VDC	24 to 230 VAC or 24 to 48 VDC	24 to 230 VAC or 24 to 48 VDC	24 to 230 VAC or 24 to 48 VDC	24 to 230 VAC or 24 to 48 VDC	24 to 230 VAC or 24 to 48 VDC	24 to 240 VAC/DC or 12 VDC	24 to 240 VAC/DC or 12 VDC	24 to 240 VAC/DC or 12 VDC	24 to 240 VAC/DC, 240 to 440 VAC, 12 VDC	100 to 120 VAC, 200 to 240 VAC, 24 to 48 VAC/DC
	Number of operating modes	8	4	1	2	1	1	8	4	1	1	1
Functions	ON-delay	■	■	–	–	–	■	■	■	–	–	–
	Flicker OFF start	■	–	–	■	–	–	■	–	■	–	–
	Flicker ON start	■	■	–	■	–	–	■	■	■	–	–
	Signal ON-/OFF-delay	■	–	–	–	–	–	■	–	–	–	–
	Signal OFF-delay	■	–	–	–	–	–	■	–	–	–	■
	Interval (signal or power start)	■	■	–	–	–	–	■	■	–	–	–
	One-shot output (ON-delay)	■	■	–	–	–	–	■	■	–	–	–
	ON-delay (fixed)	–	–	■	–	–	–	–	–	–	■	–
	Independent ON/OFF time setting	–	–	–	–	–	–	–	–	–	–	–
	Star-delta	–	–	–	–	■	–	–	–	–	–	–
Remarks	Transistor	–	–	–	–	–	■	–	–	–	–	–
Page/Quick Link		627/T328						628/T335				

Category		Analog solid state timer					Digital timer	
								
Model		H3YN	H3CR-A	H3CR-F	H3CR-G	H3CR-H	H5CX	H8GN
Selection criteria	Mounting	Socket/on panel						
	Size	21.5 mm	1/16 DIN					
	Type	Miniature	Multi-functional	Twin timer	Star-delta	Power OFF-delay	Multi-functional	Preset counter/timer
Contact configuration	Time limit	■	■	■	■	■	■	■
	Instantaneous	–	■	–	■	■	■	–
	Programmable contacts	–	–	–	–	–	■	■
	14 pins	■	–	–	–	–	–	–
	11 pins	–	□	□	□	□	□	–
	8 pins	■	□	□	□	□	□	–
	Screw terminals	–	–	–	–	–	□	■
	Screw-less clamp terminals	–	–	–	–	–	–	–
	Screw-less clamp sockets	□	–	–	–	–	–	–
Inputs	Voltage input	–	□	–	–	–	–	–
Outputs	Transistor	–	□	–	–	–	□	–
	Relay	■	□	■	■	■	□	■
	SCR	–	–	–	–	–	–	–
	Relay output type	SPDT	□	–	–	□	□	■
		SPST-NO	–	–	■ (2x)	–	–	–
Features	Time range	Total time range	0.1 s to 10 h (model dependent)	0.05 s to 300 h, 0.1 s to 600 h (model dependent)	0.05 s to 30 h or 1.2 s to 300 h (model dependent)	0.5 s to 120 s	0.05 s to 12 s, 1.2 s to 12 min	0.001 s to 9999 h (configurable)
		Number of sub ranges	2	9	14	4	4	10
	Supply voltage		24, 100 to 120, 200 to 230 VAC, 12, 24, 48, 100 to 110, 125 VDC	100 to 240 VAC, 100 to 125 VDC, 24 to 48 VAC, 12 to 48 VDC	100 to 240 VAC, 12 VDC, 24 VAC/DC, 48 to 125 VDC	100 to 120 VAC, 200 to 240 VAC	100 to 120 VAC, 200 to 240 VAC, 24 VAC/DC, 48 VDC, 100 to 125 VDC	100 to 240 VAC, 24 VAC, 12 to 24 VDC
	Number of operating modes		4	6 (model dependent)	–	1	1	15
								6
Functions	ON-delay		■	□	–	–	–	■
	Flicker OFF start		■	□	■	–	–	■
	Flicker ON start		■	□	■	–	–	–
	Signal ON/OFF-delay		–	□	–	–	■	–
	Signal OFF-delay		–	□	–	–	■	■
	Interval (signal or power start)		■	□	–	–	■	■
	One-shot output (ON-delay)		–	□	–	–	■	–
	ON-delay (fixed)		–	–	–	–	■	–
	Independent ON/OFF time setting		–	–	–	–	■	■
Remarks	Star-delta		–	–	–	■	–	–
	Transistor		–	□	–	–	■	–
Page/Quick Link		629/T324	630/T323				631/T322	639/T429

■ Standard □ Available – No/not available



DIN-rail mounted, standard 17.5 mm wide solid state timer range

This broad range of timers includes many functionalities and has a wide AC/DC power supply range. Models with screwless clamp connection available.

- 17.5 mm width, modular 45 mm
- DIN-rail mounting
- 24-48 VDC and 24-230 VAC
- 0.1 s to 120 h, 7 ranges

Ordering information

Type	Supply voltage	Control output	Time setting range	Operating modes	Order code	
					Screw terminal type	Screw-less clamp type
Multi-functional timer	24 to 230 VAC (50/60 Hz)/ 24 to 48 VDC	SPDT	0.1 s to 120 h	ON-delay, flicker OFF start, flicker ON start, signal ON/OFF-delay, signal OFF-delay, interval, one-shot	H3DS-ML	H3DS-MLC
Standard timer				ON-delay, flicker ON start, interval, one-shot	H3DS-SL	H3DS-SLC
Single function timer				ON-delay	H3DS-AL	H3DS-ALC
Twin timer		Relay SPDT	0.1 s to 12 h	Flicker OFF start, flicker ON start	H3DS-FL	H3DS-FLC
Star-delta timer	24 to 230 VAC/VDC (50/60 Hz)	2× Relay SPST-NO	1 s to 120 s	Star-delta	H3DS-GL	H3DS-GLC
Two-wired timer		SCR output	0.1 s to 120 h	ON-delay	H3DS-XL	H3DS-XLC

Specifications

Terminal block	Screw terminal type: Clamps two 2.5 mm ² max. bar terminals without sleeves Screw-less clamp type: Clamps two 1.5 mm ² max. bar terminals without sleeves
Mounting method	DIN-rail mounting
Operating voltage range	85 to 110% of rated supply voltage
Power reset	Minimum power-off time: 0.1 s, 0.5 s for H3DS-G
Reset voltage	2.4 VAC/VDC max., 1.0 VAC/VDC max. for H3DS-X
Voltage input	Max. permissible capacitance between input lines (terminals B1 and A2): 2,000 pF
	Load connectable in parallel with inputs (terminals B1 and A1)
	H-level: 20.4 to 253 VAC/20.4 to 52.8 VDC
	L-level: 0 to 2.4 VAC/VDC
Control output	Contact output: 5 A at 250 VAC with resistive load ($\cos\phi = 1$)
	5 A at 30 VDC with resistive load ($\cos\phi = 1$)
Ambient temperature	Operating: -10 to 55°C (with no icing)
	Storage: -25 to 65°C (with no icing)
Accuracy of operating time	±1% max. of FS (±1% ±10 ms max. at 1.2 s range)
Setting error	±10% ±50 ms max. of FS
Influence of voltage	±0.7% max. of FS (±0.7% ±10 ms max. at 1.2 s range)
Influence of temperature	±5% max. of FS (±5% ±10 ms max. at 1.2 s range)
Life expectancy (not H3DS-X)	Mechanical: 10 million operations min. (under no load at 1,800 operations/h)
	Electrical: 100,000 operations min. (5 A at 250 VAC, resistive load at 360 operations/h)
Size in mm(HxWxD)	80x17.5x73



DIN-rail mounted, standard 22.5 mm wide solid state timer range

The H3DK series of timers provides a wide AC/DC power supply and time range to reduce the number of items.

- Size in mm (H×W×D): 79×22.5×100
- DIN-rail mounting
- 12 VDC and 24-240 VAC/VDC (except -H). 240-440 VAC for -G
- Wide time setting range: 0.10 s - 1,200 h (except -H and -G), 12 ranges (for -M and -S)

Ordering information

Type	Supply voltage	Control output	Time setting range	Operating modes	Order code
Multi-functional standard timers	12 VDC	SPDT	0.1 s to 1200 h	ON-delay, flicker OFF start, flicker ON start, signal ON/OFF-delay, signal OFF-delay, interval, one-shot	H3DK-M1A DC12
		DPDT			H3DK-M2A DC12 ^{*1}
		SPDT		ON-delay, flicker ON start, interval, one-shot	H3DK-S1A DC12
		DPDT			H3DK-S2A DC12 ^{*1}
	24 to 240 VAC/VDC	SPDT		ON-delay, flicker OFF start, flicker ON start, signal ON/OFF-delay, signal OFF-delay, interval, one-shot	H3DK-M1 AC/DC24-240
		DPDT			H3DK-M2 AC/DC24-240 ^{*1}
		SPDT		ON-delay, flicker ON start, interval, one-shot	H3DK-S1 AC/DC24-240
		DPDT			H3DK-S2 AC/DC24-240 ^{*1}
Twin timer	12 VDC	SPDT	0.1 s to 12 h	Flicker OFF start, flicker ON start	H3DK-FA DC12
	24 to 240 VAC/VDC				H3DK-F AC/DC24-240
Star-delta timer	12 VDC	2× SPDT	1 to 120 s	Star-delta	H3DK-GA DC12
	24 to 240 VAC/VDC				H3DK-G AC/DC24-240
	240 to 440 VAC				H3DK-GE AC/DC240-440
Power OFF-delay timer	24 to 48 VAC/VDC	SPDT	1 to 120 s	Signal OFF-delay	H3DK-HBL AC/DC24-48
			0.1 to 12 s		H3DK-HBS AC/DC24-48
	100 to 120 VAC		1 to 120 s		H3DK-HCL AC100-120V
			0.1 to 12 s		H3DK-HCS AC100-120V
	200 to 240 VAC		1 to 120 s		H3DK-HDL AC200-240V
			0.1 to 12 s		H3DK-HDS AC200-240V

^{*1} One output can be set to instantaneous.

Specifications

Operating voltage range	85 to 110% of rated supply voltage (90 to 110% for the 12 VDC models).
Power reset	Minimum power-off time: H3DK-M/S, H3DK-F: 0.1 s, H3DK-G: 0.5 s. (Not for H3DK-H)
Reset voltage	10% of rated voltage. (Not for H3DK-H)
Voltage input (H3DK-M/-S)	24 to 240 VAC/DC: H-level 20.4 to 264 VAC/VDC, L-level 0 to 2.4 VAC/VDC. 12 VDC: H-level 10.8 to 13.2 VDC, L-level 0 to 1.2 VDC.
Control output	Contact output: 5 A at 250 VAC with resistive load ($\cos\phi = 1$), 5 A at 24 VDC (30 VDC for -M/-S) with resistive load (not for H3DK-GE)
Ambient temperature	Operating: -20 to 55°C (with no icing), storage: -40 to 70°C (with no icing)
Accuracy of operating time	±1% of FS max. (±1% ±10 ms max. at 1.2 s range)
Setting error	±10% of FS ±0.05 s max.
Minimum input signal width	50 ms (start input) (Only for H3DK-M/S)
Influence of voltage	±0.5% of FS max. (±0.5% ±10 ms max. at 1.2 s range). For H3DK-G: ±0.5% of FS max.
Influence of temperature	±2% of FS max. (±2% ±10 ms max. at 1.2s range). For H3DK-G: ±2% of FS max.
Life expectancy	Mechanical: 10 million operations min. (under no load at 1,800 operations/h) Electrical: 100,000 operations min. (5 A at 250 VAC, resistive load at 360 operations/h)
Degree of protection	IP30 (terminal block: IP20)
Terminal block	Clamps two 2.5 mm ² max. bar terminals without sleeves
Size in mm (H×W×D)	79×22.5×100



Miniature timer with multiple time ranges and multiple operating modes

H3YN features 4 multi-operating modes: ON-delay, interval, flicker ON start and flicker OFF start.

- Size in mm (H×W×D): 28×21.5×52.6
- Plug-in
- All supply voltages available
- 0.1 s to 10 h
- DPDT (5A) or 4PDT (3A)

Ordering information

Supply voltage	Functions	Time-limit contact	Order code	
			Short-time range model (0.1 s to 10 min)	Long-time range model (0.1 min to 10 h)
12 VDC	ON-delay Interval Flicker ON Flicker OFF	DPDT	H3YN-2 12DC	H3YN-21 12DC
24 VAC			H3YN-2 24AC	H3YN-21 24AC
24 VDC			H3YN-2 24DC	H3YN-21 24DC
100 to 120 VAC			H3YN-2 100-120AC	H3YN-21 100-120AC
200 to 230 VAC			H3YN-2 200-230AC	H3YN-21 200-230AC
12 VDC		4PDT	H3YN-4 12DC	H3YN-41 12DC
24 VAC			H3YN-4 24AC	H3YN-41 24AC
24 VDC			H3YN-4 24DC	H3YN-41 24DC
100 to 120 VAC			H3YN-4 100-120AC	H3YN-41 100-120AC
200 to 230 VAC			H3YN-4 200-230AC	H3YN-41 200-230AC

Accessories

Connecting socket

Timer	DIN-rail mounting/ front-connecting socket	Back-connecting socket
		PCB terminal
H3YN-2/-21	PYF08A, PYF08A-N, PYF08A-E	PY08-02
H3YN-4/-41	PYF14A, PYF14A-N, PYF14A-E	PY14-02

Hold-down clips

Applicable socket	Order code
PYF08A, PYF08A-N, PYF08A-E, PYF14A, PYF14A-N, PYF14A-E	Y92H-3 (pair)
PY08, PY08-02, PY14-02	Y92H-4

Specifications

Item	H3YN-2/-4	H3YN-21/-41
Time ranges	0.1 s to 10 min (1 s, 10 s, 1 min, or 10 min max. selectable)	0.1 min to 10 h (1 min, 10 min, 1 h, or 10 h max. selectable)
Rated supply voltage	24, 100 to 120, 200 to 230 VAC (50/60 Hz) 12, 24, 48, 100 to 110, 125 VDC	
Pin type	Plug-in	
Operating mode	ON-delay, interval, flicker OFF start, or flicker ON start (selectable with DIP switch)	
Operating voltage range	85 to 110% of rated supply voltage (12 VDC: 90 to 110% of rated supply voltage)	
Reset voltage	10% min. of rated supply voltage	
Control outputs	DPDT: 5 A at 250 VAC, resistive load ($\cos\phi = 1$), 4PDT: 3 A at 250 VAC, resistive load ($\cos\phi = 1$)	
Accuracy of operating time	$\pm 1\%$ FS max. (1 s range: $\pm 1\% \pm 10$ ms max.)	
Setting error	$\pm 10\% \pm 50$ ms FS max.	
Reset time	Min. power-opening time: 0.1 s max. (including halfway reset)	
Influence of voltage	$\pm 2\%$ FS max.	
Influence of temperature	$\pm 2\%$ FS max.	
Ambient temperature	Operating: -10 to 50°C (with no icing), storage: -25 to 65°C (with no icing)	
Degree of protection	IP40	
Size in mm (H×W×D)	28×21.5×52.6	



DIN 48 × 48 mm multi-functional timer series

This elaborate range of solid state timers provides you with a multi-functional timer, twin timer, star-delta timer and a power OFF-delay timer.

- 48 × 48 mm front-panel/plug-in
- High-/low-voltage models (except -H and -G)
- 0.05 s to 300 h (except -H and -G)
- DPDT, 5 A at 250 VAC
- Transistor 100 mA at 30 VDC

Ordering information

Output	Number of pins	Supply voltage	Time range	Operating mode	Order code		
Relay DPDT	11	100 to 240 VAC/100 to 125 VDC	0.05 s to 300 h	ON-delay, flicker OFF start, flicker ON start, signal ON/OFF-delay, signal OFF-delay, interval	H3CR-A 100-240AC/100-125DC		
		24 to 48 VAC/12 to 48 VDC			H3CR-A 24-48AC/12-48DC		
Transistor		24 to 48 VAC/12 to 48 VDC	0.05 s to 300 h		H3CR-AS 24-48AC/12-48DC		
Relay DPDT	8	100 to 240 VAC/100 to 125 VDC	0.05 s to 300 h	ON-delay, flicker ON start, interval, one-shot	H3CR-A8 100-240AC/100-125DC		
		24 to 48 VAC/12 to 48 VDC			H3CR-A8 24-48AC/12-48DC		
Transistor		24 to 48 VAC/12 to 48 VDC	0.05 s to 300 h		H3CR-A8S 24-48AC/12-48DC		
Relay SPDT		100 to 240 VAC/100 to 125 VDC			H3CR-A8E 100-240AC/100-125DC		
		24 to 48 VAC/VDC		H3CR-A8E 24-48AC/DC			
Relay DPDT	11	100 to 240 VAC	0.05 s to 30 h	Flicker OFF start	H3CR-F 100-240AC		
		24 VAC/VDC			H3CR-F 24AC/DC		
	8	100 to 240 VAC			0.05 s to 30 h	Flicker ON start	H3CR-F8 100-240AC
		24 VAC/VDC					H3CR-F8 24AC/DC
	11	100 to 240 VAC	0.05 s to 30 h	Flicker ON start			H3CR-FN 100-240AC
		24 VAC/VDC					H3CR-FN 24AC/DC
	8	100 to 240 VAC			0.05 s to 30 h	Flicker ON start	H3CR-F8N 100-240AC
		24 VAC/VDC					H3CR-F8N 24AC/DC
Time-limit contact and instantaneous contact		100 to 120 VAC		Star-delta			H3CR-G8EL 100-120AC
		200 to 240 VAC					H3CR-G8EL 200-240AC
DPDT	8	100 to 120 VAC	0.05 to 12 s	Power OFF-delay	H3CR-H8LS 100-120AC		
		200 to 240 VAC			H3CR-H8LS 200-240AC		
		24 VAC/VDC			H3CR-H8LS 24AC/DC		
		100 to 120 VAC	0.05 to 12 m		H3CR-H8LM 100-120AC		
		200 to 240 VAC			H3CR-H8LM 200-240AC		
		24 VAC/VDC			H3CR-H8LM 24AC/DC		

Accessories

Name/specifications		Order code
Flush-mounting adapter		Y92F-30
Protective cover		Y92A-48B
Front connecting socket	8-pin, finger-safe type, DIN-rail	P2CF-08-E
Front connecting socket	11-pin, finger-safe type, DIN-rail	P2CF-11-E
Back connecting socket	8-pin	P3G-08
	11-pin	P3GA-11

Name/specifications		Order code
Time setting ring	Setting a specific time	Y92S-27
	Limiting the setting range	Y92S-28
Panel cover	Light grey (5Y7/1)	Y92P-48GL
	Black (N1.5)	Y92P-48GB

Specifications

Accuracy of operating time		±0.2% FS max. (±0.2% ±10 ms max. in a range of 1.2 s)
Influence of voltage		±0.2% FS max. (±0.2% ±10 ms max. in a range of 1.2 s)
Influence of temperature		±1% FS max. (±1% ±10 ms max. in a range of 1.2 s)
Ambient temperature		Operating: -10 to 55°C (with no icing), storage: -25 to 65°C (with no icing)
Life expectancy	Mechanical	20,000,000 operations min. (under no load at 1,800 operations/h)
	Electrical	100,000 operations min. (5 A at 250 VAC, resistive load at 1,800 operations/h)
Size in mm (H×W×D)		48×48×66.6 (H3CR-A, -F), 48×48×78 (H3CR-G, -H)
Setting error		±5% FS ±50 ms
Degree of protection		IP40 (panel surface)
Weight		Approx. 90 g



The most complete digital standard timer on the market

H5CX offers you the most complete series of products on the market today. Based on extensive customer research, these new timers have been designed with value added features that users both need and appreciate.

- Size in mm (H×W×D): 48×48×59 to 78 mm
- Three color display value, red, green or orange
- Models with Instantaneous Contact Outputs
- 0.001 s to 9999 h, 10 ranges
- Input NPN, PNP and contact

Ordering information

Output type	Supply voltage	Functions	External connection	Size in mm (H×W×D)	Inputs	Order code
Contact output	100 to 240 VAC	A: Signal ON-delay	Screw terminals	48×48×84	Signal, Reset, Gate (NPN/PNP inputs)	H5CX-A-N
	12 to 24 VDC/24 VAC	A-1: Signal ON-delay 2		48×48×65		H5CX-AD-N
Transistor output	100 to 240 VAC	A-2: Power ON-delay 1		48×48×84		H5CX-AS-N
	12 to 24 VDC/24 VAC	A-3: Power ON-delay 2		48×48×65		H5CX-ASD-N
Contact output	100 to 240 VAC	b-1: Repeat cycle 1	11-pin socket	48×48×69.7	Signal, Reset, Gate (NPN/PNP inputs)	H5CX-A11-N
	12 to 24 VDC/24 VAC	b-2: Repeat cycle 2				H5CX-A11D-N
Transistor output	100 to 240 VAC	d: Signal OFF-delay				H5CX-A11S-N
	12 to 24 VDC/24 VAC	E: Interval				H5CX-A11SD-N
Contact output	100 to 240 VAC	F: Cumulative	8-pin socket	48×48×69.7	Signal, Reset (NPN inputs)	H5CX-L8-N
	12 to 24 VDC/24 VAC	Z: ON/OFF-duty adjustable flicker				H5CX-L8D-N
Transistor output	100 to 240 VAC	toff: Twin timer OFF start				H5CX-L8S-N
	12 to 24 VDC/24 VAC	ton: Twin timer ON start				H5CX-L8SD-N
Contact output	100 to 240 VAC	A-2: Power ON-delay 1	Screw terminals	48×48×65	—	H5CX-L8E-N
Models with instantaneous contact outputs	12 to 24 VDC/24 VAC	b: Repeat cycle 1				H5CX-L8ED-N
		E: Interval				
		Z: ON/OFF-duty adjustable flicker				
Transistor output	12 to 24 VDC	toff: Twin timer OFF start 1	Screw terminals	48×48×65	Signal, Reset, Gate (NPN/PNP inputs)	H5CX-BWSD-N
		ton: Twin timer ON start 1				

Accessories

Name	Order code
Flush-mounting adapter	Y92F-30
Waterproof packing	Y92S-29
Front-connecting socket	8-pin, finger safe type
	11-pin, finger safe type
Back-connecting socket	8-pin
	11-pin
Hard cover	Y92A-48
Soft cover	Y92A-48F1
Front panels (4-digit models)	Light gray
	White

Specifications

Item	H5CX-A_	H5CX-A11_	H5CX-L8_
Display	7-segment, negative transmissive LCD		
	Present value: 12 mm high characters		
	red, orange or green (programmable)		
	Set value: 6 mm high characters, green		
Digits	4 digits		
Total time range	0.001 s to 9,999 h (configurable)		
Timer mode	Elapsed time (Up), remaining time (Down) (selectable)		
Input signals	Signal, reset, gate		Signal, reset
Key protection	Yes		
Memory backup	EEPROM (overwrites: 100,000 times min.) that can store data for 10 years min.		
Ambient temperature	Operating: -10 to 55°C (no icing or condensation), side-by-side mounting: -10 to 50°C		
Case color	Black (N1.5)		