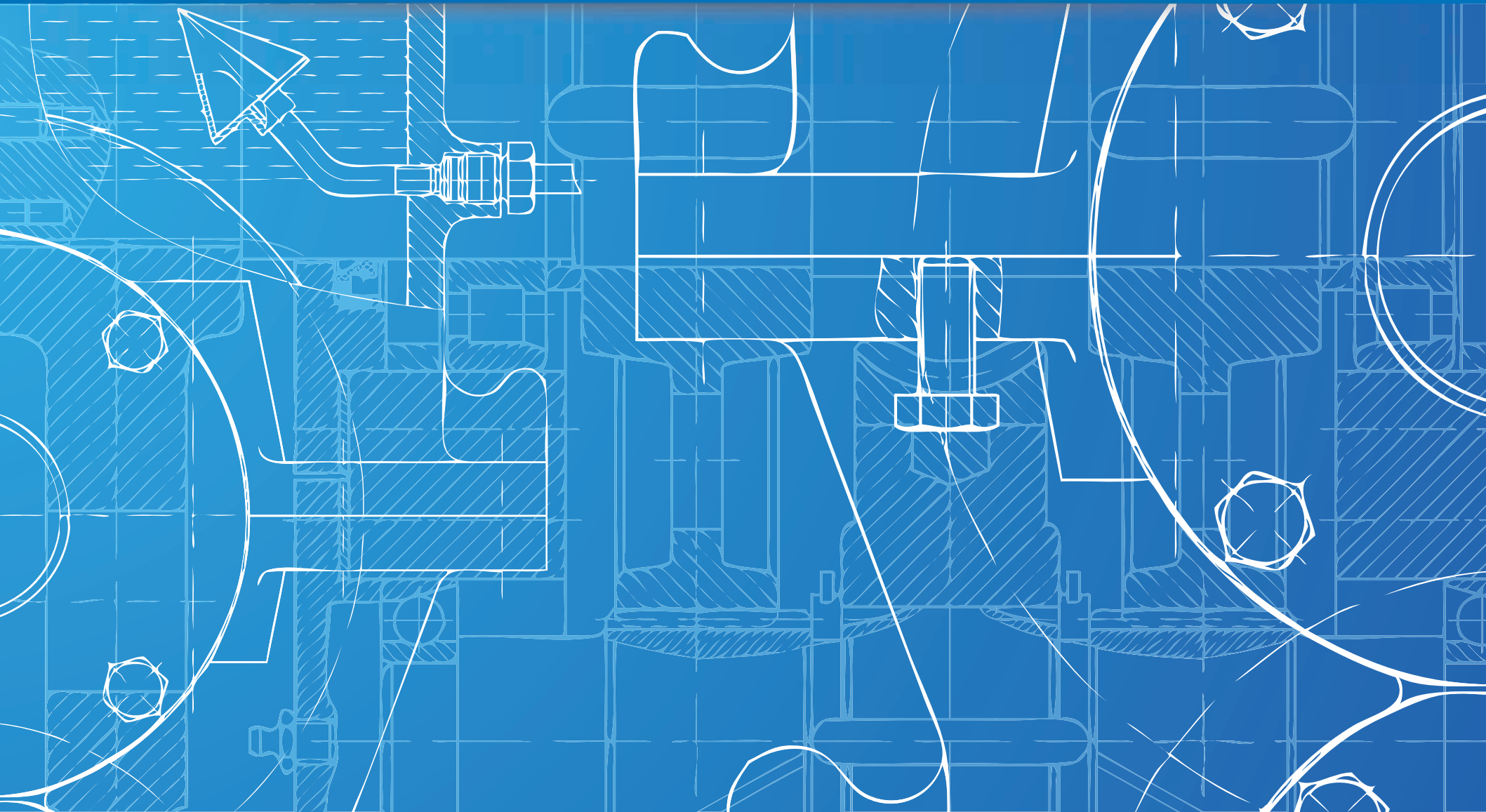


Industrial Automation Portfolio

Input, Logic, Output & Safety



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 PORTFOLIO is your essential tool to select best-in-class devices for your automation system. It highlights our core competence in sensing, control, visualisation, motion and panel components.

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- Technical product specifications
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- Technology concepts
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Automation Systems

Industrial PC



Machine Automation Controllers

Programmable Logic Controllers (PLC)

Remote I/O

Human Machine Interfaces (HMI)








Industrial PC

Product	NYB	NYP
		
Type	Industrial PC	Industrial PC
Hardware	Industrial Box PC	Industrial Panel PC
Operating system	No operating system Windows 10 IoT Enterprise – 64-bit Windows Embedded Standard 7 – 32-bit Windows Embedded Standard 7 – 64-bit	No operating system Windows 10 IoT Enterprise – 64-bit Windows Embedded Standard 7 – 32-bit Windows Embedded Standard 7 – 64-bit
Intel® processor	E3-1515M v5, 6th generation CPU (fan for active cooling) i5-7300U, 7th generation CPU (fanless for active cooling) 3965U, 7th generation CPU (fanless for active cooling) i7-4700EQ, 4th generation CPU (fan for active cooling) i5-4300U, 4th generation CPU (fanless for active cooling) 2980U, 4th generation CPU (fanless for active cooling)	i5-7300U, 7th generation CPU (fanless for active cooling) 3965U, 7th generation CPU (fanless for active cooling) i7-4700EQ, 4th generation CPU (fan for active cooling) i5-4300U, 4th generation CPU (fanless for active cooling) 2980U, 4th generation CPU (fanless for active cooling)
Additional feature	–	–
RAM memory	2 GB, non-ECC 4 GB, non-ECC 8 GB, non-ECC 8 GB, ECC 16 GB, non-ECC 16 GB, ECC	2 GB, non-ECC 4 GB, non-ECC 8 GB, non-ECC 8 GB, ECC 16 GB, non-ECC 16 GB, ECC
Built-in port	DVI EtherNet USB 3.0/2.0	DVI EtherNet USB 3.0/2.0
Screen size	–	12.1 inches 15.4 inches







Product	NY5	NYM
Type	IPC Machine Controller	Industrial Monitor
Hardware	Industrial Box PC Industrial Panel PC	Industrial Monitor
Operating system	Windows Embedded Standard 7 – 64-bit	–
Intel® processor	i7-4700EQ, 4th generation CPU (fan for active cooling)	–
Additional feature	CNC functionality	–
RAM memory	8 GB, non-ECC	–
Built-in port	DVI EtherCAT EtherNet EtherNet/IP USB 3.0/2.0	DVI USB A/B
Screen size	12.1 inches 15.4 inches	12.1 inches 15.4 inches










Machine Automation Controllers

Product	NY5	NX7	NX1	NX1P	NJ5	NJ3	NJ1
							
Type	IPC controller	Modular controller	Modular controller	Compact controller	Modular controller	Modular controller	Modular controller
Functions	Motion CNC	Database connection Motion	Database connection OPC UA Motion	Motion	Database connection OPC UA Motion Robotics CNC	Motion	Database connection Motion
Number of synchronised axes	16 32 64	128 256	0 2 4 8	0 2 4	16 32 64	4 8	0 2
EtherCAT slaves	192	512	64	16	192	192	64
Max. number of NX units	4096	4096	400 + 32 local	16 + 8 local	4096	4096	400
Program capacity	40 MB	80 MB	5 MB	1.5 MB	20 MB	5 MB	3 MB
Fastest cycle time	500 µs	125 µs	1 ms	2 ms	500 µs	500 µs	1 ms
Built-in I/O points	–	–	–	24 40	–	–	–
Motion core	Synchronised motion core	2 parallel motion cores	Synchronised motion core	Synchronised motion core	Synchronised motion core	Synchronised motion core	Synchronised motion core

Programmable Logic Controllers (PLC)

Product	CJ2H	CJ2M	CP1H	CP1L	CP1E	CS1D
						
Type	Modular	Modular	Compact	Compact	Compact	Rack
Max. Local I/O points	2560	2560	320	180	180	960 to 5120
Supported axes	4 axes PTO I/O line driver	4 axes PTO I/O line driver	4 axes PTO I/O line driver	2 axes PTO I/O and PWM	2 axes PTO I/O and PWM	–
Program memory	50 to 400K steps	5 to 60K steps	20K steps	10K steps	2 or 8K steps	10 to 250K Steps
Data memory	160 to 832K words	64 to 160K words	32K words	32K words	2 or 8K words	64 to 448K Words
Communications	CompoBus/S CompoNet Controller Link DeviceNet EtherNet EtherNet/IP ModBus PROFIBUS-DP PROFINET CAN (freely configurable)	CompoBus/S CompoNet Controller Link DeviceNet EtherNet EtherNet/IP ModBus PROFIBUS-DP PROFINET CAN (freely configurable)	CompoBus/S Controller Link DeviceNet EtherNet PROFIBUS-DP Serial CAN	CompoBus/S DeviceNet EtherNet PROFIBUS-DP Serial	CompoBus/S DeviceNet EtherNet PROFIBUS-DP Serial	CompoBus/S Controller Link (duplex/ optical ring) DeviceNet EtherNet PROFIBUS-DP Serial CAN
Supported programming language	Function Block Ladder programming Structured Text programming with structures and arrays	Function Block Ladder programming Structured Text programming with structures and arrays	Function Block Ladder programming	Function Block Ladder programming	Ladder programming	–

Remote I/O

Product	NX Series	SmartSlice	GX	GX-ILM	DRT2	CRT1	SRT2
							
Application	Modular I/O	Modular I/O	Compact I/O	Compact I/O	Compact I/O	Compact I/O	Compact I/O
Network connection	EtherCAT EtherNet/IP	CompoNet DeviceNet EtherCAT MECHATROLINK-II PROFIBUS DP PROFINET IO	EtherCAT in- and outgoing connections by RJ45 Ethernet plug	EtherCAT	DeviceNet with baud rate auto-select, open-style push-in terminal block	CompoNet with baud rate auto-select, latching IDC connectors on flat cable	CompoBus/S, high-speed mode (0.8 ms, 100 m) + long-distance mode (6 ms, 500 m)
Ingress protection class	IP20	IP20	IP20	IP67	IP20	IP20	IP20
I/O types	Analogue input Analogue output Digital input Digital output Encoder input IO-Link Load cell input Pulse output Safety I/O Serial Communication Temperature input	Analogue input Analogue output Digital input Digital output Encoder input Temperature input	Analogue input Analogue output Digital input Digital output Encoder input	IO-Link	Analogue input Analogue output Digital input Digital output Temperature input	Analogue input Analogue output Digital input Digital output Temperature input	Analogue input Analogue output Digital input Digital output

Product	DRT2-*C*	SRT2-*C*
Application	Field I/O	Field I/O
Network connection	DeviceNet with baud rate auto-select, M12 micro connector	CompoBus/S, high-speed mode (0.8 ms, 100 m) + long-distance mode (6 ms, 500 m)
Ingress protection class	IP67	IP67
I/O types	Digital input Digital output	Digital input Digital output



Human Machine Interfaces (HMI)

Product	NYP	NA series	NS15/NS12/NS10/NS8	NS5	NS5 Handheld	NB series	NT2S
							
Type	Industrial PC	Advanced	Advanced	Advanced	Advanced	Compact	Function key
Display	15 inch TFT colour 12.1 inch TFT colour	15 inch widescreen TFT colour 12 inch widescreen TFT colour 9 inch widescreen TFT colour 7 inch widescreen TFT colour	15 inch TFT colour 12.1 inch TFT colour 10.4 inch TFT colour 8.4 inch TFT colour	5.7 inch TFT colour	5.7 inch TFT colour	10 inch widescreen TFT colour 7 inch widescreen TFT colour 5.6 inch TFT colour 3.5 inch TFT colour	LED backlight LCD
Resolution	1280 × 800 pixels	1280 × 800 pixels 800 × 480 pixels	1024 × 768 pixels 800 × 600 pixels 640 × 480 pixels	320 × 240 pixels	320 × 240 pixels	800 × 480 pixels 320 × 240 pixels 320 × 234 pixels	–
Number of colours	16,770,000 colours	24-bit full colour	256 (32,768 for image data)	256 (32,768 for image data)	256 (4,096 colours for image data)	65,536 (16-bit)	–
Memory size	–	–	60 MB screen memory, 32,768 words + 32,768 bits internal memory and 8192 words + 8192 bits retentative memory	60 MB screen memory, 32,768 words + 32,768 bits internal memory and 8192 words + 8192 bits retentative memory	20 MB screen memory, 32,768 words + 32,768 bits internal memory and 8192 words + 8192 bits retentative memory	128 MB	–

Motion & Drives






Motion Controllers






CNC






Servo Systems

Frequency Inverters



Motion Controllers

Product	NY5	NX7	NX1	NX1P	NJ5
					
Motion architecture	IPC machine controller	Machine controller	Machine controller	Machine controller	Machine controller
Drive control method	EtherCAT	EtherCAT	EtherCAT	EtherCAT	EtherCAT
Number of axes	16 32 64	128 256	0 2 4 8	0 2 4	16 32 64
Additional feature	CNC functionality	–	–	–	CNC functionality
Applicable servo drive	1S Accurax G5 Integrated servo motor	1S Accurax G5 Integrated servo motor	1S Accurax G5 Integrated servo motor	1S Accurax G5 Integrated servo motor	1S Accurax G5 Integrated servo motor
PLC series	IPC Machine controller	NX/NJ series	NX/NJ series	NX/NJ series	NX/NJ series






Product	NJ3	NJ1	NY51-A	CK3E	Trajexia
					
Motion architecture	Machine controller	Machine controller	Programmable multi axis controller	Programmable multi axis controller	Programmable multi axis controller
Drive control method	EtherCAT	EtherCAT	EtherCAT	EtherCAT	Analogue output EtherCAT MECHATROLINK-II Pulse Train Output
Number of axes	4 8	0 2	128	8 16 32	4 16 64
Additional feature	–	–	CNC functionality	CNC functionality	–
Applicable servo drive	1S Accurax G5 Integrated servo motor	1S Accurax G5 Integrated servo motor	1S Accurax G5	1S Accurax G5	Accurax G5 G-Series
PLC series	NX/NJ series	NX/NJ series	Stand-alone	Stand-alone	Stand-alone

Product	NC EtherCAT	Trajexia PLC	NC MECHATROLINK-II	CJ1W-NC_3	CJ1W-NC_4
					
Motion architecture	Omron-PLC based	Omron-PLC based	Omron-PLC based	Omron-PLC based	Omron-PLC based
Drive control method	EtherCAT	MECHATROLINK-II	MECHATROLINK-II	Pulse Train Output	Pulse Train Output
Number of axes	2 4 8 16	4 30	2 4 16	1 2 4	2 4
Additional feature	–	–	–	–	–
Applicable servo drive	Accurax G5	Accurax G5 G-Series	Accurax G5 G-Series	Accurax G5 SmartStep 2	Accurax G5 SmartStep 2
PLC series	CJ	CJ	CJ	CJ	CJ

CNC

Product	NY5	NJ5
		
Type	IPC controller with monitor integrated	Modular controller
Operating system	Windows Embedded Standard 7	–
Number of synchronised axes	32	16
Synchronised axes per channel	4	4
Number of channels	8	4
Screen size	12.1 inches 15.4 inches	–
Program capacity	40 MB	20 MB
Built-in port	DVI EtherCAT EtherNet EtherNet/IP USB	EtherCAT EtherNet/IP USB

Servo Drives

Product	Accurax G5 Drives	1S Drives	G-Series Drives	SmartStep 2 Drives	Sigma-5 Drives
					
Drive control method	EtherCAT MECHATROLINK-II Pulse train input Analogue input	EtherCAT	MECHATROLINK-II Pulse train input Analogue input	Pulse train input	EtherCAT MECHATROLINK-II Pulse train input Analogue input
Power range	Up to 15 kW	Up to 3 kW	Up to 1.5 kW	Up to 750 W	Up to 15 kW
Safety function	Hardwired Safe Torque Off - PLd (EN ISO 13849-1) SIL2 (IEC61508)	Hardwired Safe Torque Off - PLe (EN ISO 13849-1) SIL3 (IEC61508) Network Safe Torque Off - PLd (EN ISO 13849-1), SIL2 (IEC61508)	–	–	Hardwired Safe Torque Off - PLd (EN ISO 13849-1) SIL2 (IEC61508)
Applicable servo motor	Accurax G5 rotary motor Accurax linear motor G-Series rotary motor	1S rotary motor	G-Series rotary motor	G-Series rotary motor	Sigma linear motor Sigma-5 rotary motor
Full closed loop	Built-in	–	–	–	With option unit

Servo Motors








Product	Accurax G5 Motors	1S Motors	G-Series Motors	Sigma-5 Motors	Integrated Servo Motor
					
Type	Rotary motor	Rotary motor	Rotary motor	Rotary motor	Integrated servo motor
Rated torque	Up to 95.5 Nm Up to 47.8 Nm	Up to 28,7 Nm	Up to 8.62 Nm	Up to 95.5 Nm	Up to 25 Nm
Rated speed	3,000 rpm 2,000 rpm 1,500 rpm 1,000 rpm	3,000 rpm 2,000 rpm 1,000 rpm	3,000 rpm 2,000 rpm 1,000 rpm	3,000 rpm 1,500 rpm	3,000 rpm
Maximum speed	2,000 to 3,000 rpm 4,500 to 6,000 rpm 2,000 rpm 3,000 rpm 5,000 rpm	2,000 rpm 3,000 rpm 5,000 rpm 6,000 rpm	4,500 to 5,000 rpm 2,000 rpm 3,000 rpm 5,000 rpm	2,000 rpm 3,000 rpm 5,000 rpm 6,000 rpm	4,000 rpm
Sizes	Up to 15 kW	Up to 3 kW	Up to 1.5 kW	Up to 15 kW	Up to 7.85 kW
Applicable servo drive	Accurax G5	1S	Accurax G5 G-series SmartStep 2	Sigma-5	–
Encoder resolution	17-bit absolute 20-bit incremental	23-bit absolute (battery-less) 23-bit incremental	10,000 pulses incremental 17-bit absolute	13-bit incremental 20-bit absolute 20-bit incremental	15-bit incremental 18-bit absolute
Model	Standard High inertia	Standard Low inertia	Standard	Standard	Standard
IP rating	IP65 IP67	IP67	IP65	IP55 IP65 IP67	IP65

Linear motors

Product	Accurax FW	Accurax GW	SGLFW	SGLTW	SGLGW
					
Type	Iron-core linear motor	Ironless linear motor	Iron-core linear motor	Iron-core linear motor	Ironless linear motor
Applicable servo drive	Accurax-G5 linear	Accurax-G5 linear	Sigma-5	Sigma-5	Sigma-5
Rated force range	Up to 760 N	Up to 423 N	Up to 2,250 N	Up to 2,000 N	Up to 325 N
Peak force range	105 to 2,000 N	100 to 2,100 N	86 to 5,400 N	600 to 7,500 N	40 to 1,300 N
Maximum Speed	10 m/sec	16 m/sec	5 m/sec	5 m/sec	5 m/sec

Frequency Inverters

Product	Q2A	RX	MX2	LX	SX (400 V)	SX (690 V)	SX-AFE
							
Type	General purpose Regenerative solution	General purpose Regenerative solution	Compact solution	Lift application	General purpose IP54 solutions	General purpose IP54 solutions	Regenerative solution
Control method	Vector control V/F control	Vector control V/F control	Sensor-less vector V/F control	Vector control	Vector control V/F control	Vector control V/F control	Vector control
Voltage class	400 V Three-Phase	200 V Three-Phase 400 V Three-Phase	200 V Single-Phase 200 V Three-Phase 400 V Three-Phase	400 V Three-Phase	400 V Three-Phase	690 V Three-Phase	400 V Three-Phase 690 V Three-Phase
Power supply	0.55 to 315 kW	0.4 to 55 kW 0.4 to 132 kW	0.1 to 2.2 kW 0.1 to 15 kW 0.4 to 15 kW	3.7 to 18.5 kW	0.55 to 800 kW	75 to 1000 kW	55 to 900 kW 110 to 1,100 kW
Application software	–	Crane application Pump sequencer Indexer positioning Winder / Unwinder	Pump sequencer Winder / Unwinder	–	Crane application Pump sequencer	Crane application Pump sequencer	Crane application Pump sequencer
Regenerative solution	DC Supply with Regenerative Active Front End Regenerative Braking unit	DC Supply with Regenerative Active Front End Regenerative Braking unit	–	–	–	–	Inverter with Regenerative Active Front End DC Supply with Regenerative Active Front End
Connectivity	EtherCAT EtherNet/IP PROFINET POWERLINK Modbus TCP	EtherCAT DeviceNet CompoNet PROFIBUS Modbus MECHATROLINK-II	EtherCAT EtherNet/IP DeviceNet CompoNet PROFIBUS Modbus MECHATROLINK-II	Modbus	EtherCAT PROFINET Modbus TCP DeviceNet PROFIBUS Modbus	EtherCAT PROFINET Modbus TCP DeviceNet PROFIBUS Modbus	EtherCAT PROFINET Modbus TCP DeviceNet PROFIBUS Modbus

Product	MX2 IP54	A1000	U1000	V1000	J1000	L1000A	G7
							
Type	IP54 solutions	General purpose Regenerative solution	Regenerative solution	Compact solution	Basic solution	Lift application	General purpose
Control method	Sensor-less vector V/F control	Vector control V/F control		Sensor-less vector V/F control	V/F control	Vector control	Vector control V/F control
Voltage class	200 V Single-Phase 200 V Three-Phase 400 V Three-Phase	200 V Three-Phase 400 V Three-Phase	200 V Three-Phase 400 V Three-Phase	200 V Single-Phase 200 V Three-Phase 400 V Three-Phase	200 V Single-Phase 200 V Three-Phase 400 V Three-Phase	200 V Three-Phase 400 V Three-Phase	200 V Three-Phase 400 V Three-Phase
Power supply	0.1 to 2.2 kW 0.1 to 15 kW 0.4 to 15 kW	0.4 to 110 kW 0.4 to 630 kW	8 kVA to 300 kVA	0.1 to 4.0 kW 0.1 to 15 kW 0.2 to 15 kW	0.1 to 4.0 kW 0.2 to 4.0 kW 0.2 to 1.5 kW	4.0 to 45 kW 4.0 to 75 kW	0.4 to 110 kW 0.4 to 300 kW
Application software	-	Crane application	-	-	-	-	-
Regenerative solution	-	DC Supply with Regenerative Active Front End Regenerative Braking unit	Regenerative Matrix Inverter	-	-	-	-
Connectivity	EtherCAT EtherNet/IP DeviceNet CompoNet PROFIBUS Modbus MECHATROLINK-II	EtherCAT EtherNet/IP PROFINET DeviceNet PROFIBUS CANopen Modbus MECHATROLINK-II	EtherCAT EtherNet/IP PROFINET POWERLINK Modbus TCP/IP DeviceNet PROFIBUS-DP CANopen MECHATROLINK-II	EtherNet/IP DeviceNet CompoNet PROFIBUS CANopen Modbus LONworks	Modbus	CANopen Modbus	EtherNet/IP DeviceNet PROFIBUS CANopen Modbus LONworks

Robotics

Industrial Robots

Linear Axis (Cartesian) – Accurax


Mobile Robot

Industrial Robots

Product	Cobra	eCobra	X-Series	Viper	Hornet
					
Type	SCARA	SCARA	SCARA	Articulated	Delta
Max. reach	350 mm	600 mm 800 mm	120 mm 350 mm 600 mm 800 mm 1,200 mm	650 mm 850 mm	–
Max. working diameter	–	–	–	–	1,130 mm
Max. payload	5 kg	5.5 kg	1 kg 5 kg 10 kg 20 kg 50 kg	5 kg	8 kg
No. of axes	4	4	4	6	3 4
Protection class	IP20 Cleanroom C10	IP65 IP20 Cleanroom C10	IP65 IP40 Cleanroom C10	IP40 Cleanroom C10	IP65
Robot controller	SmartController EX e-MotionBlox NX/NY/NJ series	Embedded SmartController EX NX/NY/NJ series	YRC	SmartController EX e-MotionBlox NX/NY/NJ series	Embedded SmartController EX NX/NY/NJ series
Mounting type	Table Floor	Table Floor Inverted	Table Floor Inverted Wall-mount	Table Floor Inverted	Inverted

Product	Quattro	X-Delta 2+1	X-Delta 3+1	X-Delta 5
				
Type	Delta	Delta	Delta	Delta
Max. reach	–	–	–	–
Max. working diameter	1,300 mm 1,600 mm	800 mm 1,000 mm 1,500 mm	500 mm 650 mm 1,100 mm 1,300 mm 1,600 mm	650 mm 1,100 mm 1,300 mm
Max. payload	10 kg 12 kg 15 kg	3 kg 30 kg 35 kg	1 kg 2 kg 3 kg 8 kg	1 kg
No. of axes	4	2 3	3 4	5
Protection class	IP66 IP65	IP65	IP69K IP67 IP65	IP65
Robot controller	SmartController EX NX/NY/NJ series	NJ Robotics NJ Robotics		NJ Robotics
Mounting type	Inverted	Inverted	Inverted	Inverted

Linear Axis (Cartesian) – Accurax

Product	Accurax linear motor axis 
Type	Linear motor
Continuous force range	48 to 760 N
Peak force range	105 to 2,000 N
Maximum speed	5 m/s
Magnetic attraction force	300 to 4,440 N
Applicable servo drive	Accurax G5 linear servo drive

Mobile Robot

Product	OEM Mobile Platform		Cart transporter	
Type	Mobile robot			
Max. Load	60 kg	90 kg	105 kg	130 kg
Max. Speed	1.8 m/s	1.35 m/s	1.35 m/s	0.9 m/s
Max. Rotation speed	180°/s		100°/s	
Stop position accuracy ^{*1}	±100 mm position, ±2° rotation			
Run time ^{*2}	15 h (continuous) approx.			
Protection class	IP20			
Special models	ESD technology		-	



^{*1} With High Accuracy Positioning System option.

^{*2} With no payload condition.

Sensing

Photoelectric Sensors

Mark and colour sensors

Lightcurtains and area sensors

Fiber Optic Sensors and amplifiers

Inductive Sensors


Mechanical sensors/Limit switches

Rotary Encoders






Standard application

Product	E3Z	E3Z_-IL	E3ZM	E3Z Laser	E3S-CL	E3JK
						
Type	Compact square	Compact square	Compact square	Compact square Longer distance	Longer distance	Longer distance
Key feature	Reliable and accurate object detection	IO-Link sensor in compact plastic housing	Detergent resistant stainless steel housing	Small visible light spot	Accurate background suppression in robust housing	AC/DC multipurpose sensors with long sensing distance
Through-beam	15 m 30 m	15 m	15 m	60 m	–	40 m
Retro-reflective with M.S.R.	5 m	4 m	4 m	15 m	–	7 m
Diffuse-reflective (energetic)	1 m	1 m	1 m	–	–	2.5 m
Diffuse-reflective (BGS)	200 mm	–	200 mm	300 mm	500 mm	–

Product	E3FA/E3FB	E3F1	E3FC	E3H2	E3T-C	E3T
						
Type	Cylindrical	Cylindrical	Cylindrical	Cylindrical Miniature	Cylindrical Miniature	Miniature
Key feature	Full line up in straight and radial versions	Standard line up at attractive price	Stainless steel housing and enhanced detergent resistance	M8 or M12 sized metal housing	M5 through-beam (axial and radial) and M6 diffuse reflective	3.5mm flat or side view housing and precision pin point LED
Through-beam	20 m	15 m	20 m	2 m 4 m	1 m	1 m 2 m
Retro-reflective with M.S.R.	4 m	3 m	4 m	2 m	–	–
Diffuse-reflective (energetic)	1 m	300 mm	1 m	300 mm	50 mm	30 mm
Diffuse-reflective (BGS)	200 mm	–	200 mm	–	–	30 mm

Product	EE-SX47/67	EE-SX95	EE-SX97	EE-SX77/87	EE-SPX_03	E3Z-G
						
Type	Fork Miniature	Fork Miniature	Fork Miniature	Fork Miniature	Fork Miniature	Fork
Key feature	Photomicro sensor in fork shape plastic housing	High-frequency photomicro sensor in small housing	Miniature photomicro sensor in plastic housing	Thin shape photomicro sensor, plastic housing	Photomicro sensor in plastic housing	Plastic housing, 1 or 2 optical axes
Through-beam	5 mm (slot width)	5 mm (slot width)	5 mm (slot width)	5 mm (slot width)	13 mm (slot width)	25 mm
Retro-reflective with M.S.R.	-	-	-	-	-	-
Diffuse-reflective (energetic)	-	-	-	-	-	-
Diffuse-reflective (BGS)	-	-	-	-	-	-

Special application




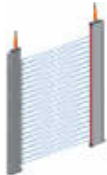
Product	E3ZM-C	E3ZR-C	E3ZM-B	E3Z-B	E3F_-B/-V
					
Type	Oil-resistant	Oil-resistant	Transparent detection	Transparent detection	Transparent detection
Key feature	Oil-resistant stainless steel housing	Robust sensors with special design resistant to cutting oil	Optimised transparent materials or PET detection	Standard transparent material detection	Optimised transparent material detection
Through-beam	20 m	30 m	–	–	–
Retro-reflective with M.S.R.	4 m	2,5 m	500 mm	500 mm 2 m	2 m
Diffuse-reflective (energetic)	1 m	500 mm	–	–	–
Diffuse-reflective (BGS)	200 mm	–	–	–	50 mm

Product	E3S-DB	E3NC	E3C-LDA	E3S-LS3	E3JM
					
Type	Transparent detection	High precision positioning & detection	High precision positioning & detection	Structured object detection	Multi voltage power supply
Key feature	High performance on all transparent objects, Smart Teach, Narrow gap detection	Minute spot of 0.1 mm, Variable spot, retro-reflective and diffuse models, BGS with HDSR CMOS	Up to 10 μm accuracy with LASER	Wide beam	AC/DC power supply, relay output and timer function
Through-beam	–	–	–	–	10 m
Retro-reflective with M.S.R.	4.5 m	8 m	7 m	–	4 m
Diffuse-reflective (energetic)	–	1.2 m	1 m	60 mm	700 mm
Diffuse-reflective (BGS)	–	250 mm	–	–	–






Mark and colour sensors

Product	E3S-DC	E3NX-CA	E3ZM-V	FQ2-CLR	Xpectia-Lite
					
Detection sensor	Mark detection	Mark detection	Mark detection	Mark detection	Colour detection
Type	Challenging designs Easy-teach colour detection sensor	Challenging designs Easy-teach colour detection sensor	Standard	Complex detection and advanced features	High performance vision colour detection
Key Features	Bank switching up to 9 memories IO-Link communication & functionalities RGB LED light	Bank switching up to 8 memories Network connectivity White LED and RGB ratio comparison	White LED, stainless steel housing	1 to 32 colour and inspection tasks	–

Lightcurtains and area sensors






Product	F3EM2	F3ET2	E32 Area monitoring	F3E
				
Application	Measurement	Detection	Detection Measurement	Detection
Type	Measuring light curtain	Object detection	Area monitoring	Elevator light curtain
Key features	Height measurement models from 15 cm up to 2.1 m	Area monitoring from 15 cm up to 2.1 m	Area monitoring from 10 mm up to 70 mm	Thin 9 mm housing for easy installation in elevators
Max. detection height	2.1 m	2.1 m	70 mm	1.8 m
Max. Sensing Distance	15 m	15 m	4 m	5 m





Fiber sensor heads

Product	E32 Standard cylindrical	E32 Square shape	E32 Miniature	E32 Longer distance	E32 Chemical resistant
					
Application	General application	General application	General application	General application	Enhanced environmental resistance
Type	Cylindrical	Square shape	Miniature	Longer distance	Chemical resistant
Key features	Standard and high-flex fibers and sizes M3 to M6	3 or 4 mm thin housing Optics in X,Y or Z-axis	Sizes from dia 500 μm to 3 mm; with bendable sleeves	Built in focal lenses	Fluoroplastic cover or coating








Product	E32 Heat resistant	E32 Vacuum resistant	E32 Robot application	E32 Precision detection	E32 Special application
Application	Enhanced environmental resistance	Enhanced environmental resistance	Special objects or Installations	Special objects or Installations	Special objects or Installations
Type	Heat resistant	Vacuum resistant	Robot application	Precision detection	Special application
Key features	Heat resistant up to 400°C	Leakage rate of $1 \times 10^{-10} \text{ Pa} \cdot \text{m}^3/\text{s}$ max	>1 Mio bending cycles	Detection accuracy up to 100 μm	Detection of special objects

Fiber amplifiers








Product	E3NX-FA	E3NX-MA	E3NX-CA	E3X-HD	E3X-SD
					
Application	Advanced functionality	Advanced functionality	Advanced functionality	Easy usage	Easy usage
Type	High functionality	Double amplifier	Color mark detection	Easy-teach	Easy-teach
Key features	High speed and resolution Network connectivity Smart tuning Analog output models Infrared models	2 outputs and signal comparison Network connectivity Smart tuning	Network connectivity Smart tuning White LED and RGB ratio comparison	Highest detection stability	Two-point teaching and auto teach during operation

Product	E3X-NA 	E3X-NA_F 	E3X-MDA 	E3X-DAH-S 
Application	Easy usage	Advanced functionality	Advanced functionality	Advanced functionality
Type	Potentiometer adjuster	High speed	Double amplifier	Infrared
Key features	Easy adjustment by potentiometer	Short turn on time of 20 μs	2 inputs and AND, OR signal comparison	-






Inductive Sensors




Product	E2B	E2E-IL	E2EQ-IL	E2E NEXT	E2EQ NEXT	E2A	E2A-S
							
Type	Compact Cylindrical	Compact Cylindrical	Special models	Compact Cylindrical	Special models	Compact Cylindrical	Compact Cylindrical
Mounting	Flush Non-flush	Flush	Flush	Flush Non-flush	Flush	Flush Non-flush	Flush Non-flush
Max. Sensing Distance	4 mm (M8) 16 mm (M18) 8 mm (M12) 30 mm (M30)	3 mm 7 mm 10 mm	3 mm 7 mm 10 mm	6 mm (M8) 10 mm (M12) 20 mm (M18) 40 mm (M30)	3 mm (M8) 11 mm (M18) 7 mm (M12) 20 mm (M30)	4 mm (M8) 16 mm (M18) 8 mm (M12) 30 mm (M30)	4 mm (M8) 16 mm (M18) 8 mm (M12) 20 mm (M30)
Housing material	Brass Stainless steel	Brass	Fluororesin coated	Brass Stainless steel	Fluororesin coated	Brass Stainless steel	Stainless steel
Key features	All-round-visible indicator Laser printed part numbers	Control of sensing positioning IO-Link communication Internal diagnostic for prevent maintenance Programmable operation	Control of sensing positioning Fluororesin coating for spatter resistance in welding application areas IO-Link communication Internal diagnostic for prevent maintenance Programmable operation	High-brightness LED visible from 360° Mounting Sleeve for fast replacement Oil-resistant cable The longest sensing distance	Fluororesin coating for spatter resistance in welding application areas High-brightness LED visible from 360° Oil-resistant cable The longest sensing distance	Available in short and standard barrel lengths Extended (double) sensing distance	–

Product	E2A-4	E2A3	μPROX E2E	TL-W	E2S	E2Q5	E2Q6
							
Type	Compact Cylindrical	Cylindrical Longer distance	Cylindrical Miniature	Compact Square/Block style	Miniature Square/Block style	Square/Block style Longer distance	Square/Block style Longer distance
Mounting	Flush Non-flush	Flush	Flush Non-flush	Flush Non-flush	Non-flush	Flush Non-flush	Flush Non-flush
Max. Sensing Distance	2 mm (M8) 4 mm (M8) 4 mm (M12) 8 mm (M12)	3 mm (M8) 11 mm (M18) 6 mm (M12) 20 mm (M30)	2 mm (M4) 2 mm (dia. 3) 3 mm (M5) 3 mm (dia. 4) 4 mm (dia. 6.5)	1.5 mm (25 × 8 × 5) 3 mm (22 × 8 × 6) 5 mm (31 × 18 × 10) 20 mm (53 × 40 × 23)	1.6 mm (19 × 6 × 2) 2.5 mm (23 × 8 × 8)	20 mm 40 mm	20 mm 30 mm
Housing material	Brass Stainless steel	Brass	Stainless steel	Plastic (ABS)	Plastic (polyarylate)	Plastic (PBT)	Plastic (PBT)
Key features	–	Triple distance for enhanced sensor protection from mechanical damage	High frequency of 5 kHz, suitable for high-speed counting	Front and side facing surface Rugged die-cast metal or heat-resistant ABS plastic housing	Miniature housing	Standard M12 cable connection	Free wire connection

Product	E2ER/E2ERZ	E2EH	E2FQ	E2FM	E2C-EDA	E2EC	E2V-X
							
Type	Cylindrical Special models	Special models	Special models	Special models	Special models	Cylindrical Miniature	Cylindrical Longer distance
Mounting	Flush	Flush	Flush	Flush	Flush Non-flush	Flush	Flush Non-flush
Max. Sensing Distance	2 mm (M8) 3 mm (M12) 4 mm (M12) 7 mm (M18) 8 mm (M30) 10 mm (M30)	3 mm (M12) 7 mm (M18) 10 mm (M30)	2 mm (M12) 5 mm (M18) 10 mm (M30)	1.5 mm (M8) 2 mm (M12) 5 mm (M18) 10 mm (M30)	0.6 mm (dia. 3) 1 mm (dia. 5.4) 2 mm (M10) 2 mm (M12) 2 mm (dia. 8) 6 mm (30 × 14 × 4.8 mm) 7 mm (M18)	0.8 mm (dia. 3) 1.5 mm (dia. 5.4) 3 mm (dia. 8) 4 mm (M12)	–
Housing material	Brass (M12-M30) Stainless steel (M8)	Stainless steel SUS361L PTFE		Stainless steel	Brass (M10) Brass (M12) Brass (M18) Brass (dia. 3) Brass (dia. 8) Stainless steel (dia. 5.4) Zinc (30 × 14 × 4.8 mm)	Brass	Brass
Key features	–	Detergent resistant Stainless steel housing and 120 degrees Celsius temperature resistant	Chemical resistant	Full metal housing and oil resistant	Precision positioning Typically < 500 μm detection precision	Small diameter with separate sensing head and amplifier	Aluminum detection Nickel-plated brass

Mechanical sensors/Limit switches

Product	WL-N	D4C	ZC	Z	D4E, D4MC, ZE, ZV
					
Type	Standard	Compact	Compact	Basic housing for subassemblies	Mounting shape and pitch variations
Housing material	Aluminium diecast	Metal	Metal	Metal	Metal
Degree of protection	IP67	IP67	IP67	IP00	–

Product	D4E, SHL 	D4ER-N 	D4N 	D4B 	D5B 
Type	Connection and wiring variations	Connection and wiring variations	Safety application	Safety application	High precision multi direction detection
Housing material	Metal	Zinc diecast	Plastic	Aluminium diecast	Plastic
Degree of protection	–	IP67	IP67	IP67	–

Rotary Encoders

Product	E6A2-C	E6B2-C	E6C2-C/E6C3-C	E6F-C	E6H-C	E6C3-A	E6F-A	E6CP-A
								
Output	Incremental	Incremental	Incremental	Incremental	Incremental	Absolute	Absolute	Absolute
Type	Small diameter shaft	Small diameter shaft	Standard shaft	Robust type	Hollow shaft	Standard shaft	Robust type	Standard shaft
Resolution range (min/max)	10/500	10/2,000	10/2,000 100/3,600	100/1,000	300/3,600	6/1,024	256/1,024	254
Size	dia 25 mm	dia 40 mm	dia 50 mm	dia 60 mm	dia 40 mm	dia 50 mm	dia 60 mm	dia 50 mm
Shaft diameter	4 mm	6 mm	6 mm 8 mm	10 mm	8 mm (hollow shaft)	8 mm	10 mm	6 mm
Max. force in N (Radial/Axial)	10/50	30/20	50/30 80/50	120/50	29.4/4.9	80/50	120/50	29,4/19,6
IP rating	IP50	IP50	IP64 IP65	IP65	IP50	IP65	IP65	IP50
Max. rotation frequency (rounds/min)	5,000	6,000	5,000	5,000	10,000	5,000	5,000	1

Quality control & Inspection

Ident systems









Inspection systems

Measurement Sensors

Verification products









Cameras

Ident systems

Product	FQ-CR1	FQ-CR2	FQ2-CH	FQ2-S4	V400-H	V400-R2	V500-R2	V680/V680S
								
Type	Code reader	Code reader	Code reader	Code reader	2D only Code reader	1D and 2D Code reader	1D only Code reader	RFID
Brand	Omron	Omron	Omron	Omron	Omron	Omron	Omron	Omron
Interface	-	-	-	-	-	-	-	-
Camera type	Monochrome Smart camera	Monochrome Smart camera	Monochrome Smart camera	Color Monochrome Smart camera	Digital black & white	Monochrome	Laser	-
Communication distance	8 to 970 mm	8 to 970 mm	8 to 970 mm	8 to 970 mm	40 mm	65 to 125 mm	60 to 270 mm	Up to 100 mm
Number of simultaneous inspections	32	32	32	32	Limited by SD card	-	-	-
IP rating of tags	IP67	IP67	IP67	IP67	IP64	IP65	IP54	IP67

Product	V640 SEMI	V780	MS-3	QX-830	QX-870	MicroHAWK ID-20	MicroHAWK ID-30	MicroHAWK ID-40
								
Type	RFID	RFID	1D only Laser scanner	1D only Laser scanner	1D only Laser scanner	1D and 2D Code reader	1D and 2D Code reader	1D and 2D Code reader
Brand	Omron	Omron	Microscan	Microscan	Microscan	Microscan	Microscan	Microscan
Interface	-	-	RS-232	Ethernet Ethernet/IP RS-232	Ethernet Ethernet/IP RS-232	USB	RS-232 USB	Ethernet Ethernet/IP ProfiNET IO RS-232
Camera type	-	-	Laser	Laser	Laser	Color Monochrome Smart camera	Color Monochrome Smart camera	Color Monochrome Smart camera
Communication distance	70 mm	Up to 380 mm	40 to 425 mm	40 to 425 mm	40 to 425 mm	40 to 425 mm	40 to 425 mm	40 to 425 mm
Number of simultaneous inspections	-	-	-	-	-	-	-	-
IP rating of tags	IP68	IP54	IP54	IP64	IP65	IP40	IP54	IP65 IP67

Inspection systems

Product	FQ2	FQ-M	Xpectia FH	Xpectia FZ5/Lite	MicroHAWK MV-20	MicroHAWK MV-30	MicroHAWK MV-40	HAWK MV4000
								
Type	Easy vision sensors	Pick & place sensors	Pick & place sensors	Vision systems	Vision systems	Vision systems	Vision systems	Vision systems
Brand	Omron	Omron	Omron	Omron	Microscan	Microscan	Microscan	Microscan
Interface	-	-	-	-	USB	RS-232 USB	Ethernet Ethernet/IP ProfiNET IO RS-232	Ethernet Ethernet/IP ProfiNET IO RS-232
Software	-	-	-	-	AutoVISION	AutoVISION	AutoVISION	AutoVISION
Number of cameras	-	-	2 4 8	2 4	-	-	-	-
Camera type	Color Monochrome Smart camera	Color Monochrome Smart camera	Digital black & white Digital color	Digital black & white Digital color	Color Monochrome Smart camera	Color Monochrome Smart camera	Color Monochrome Smart camera	Color Monochrome Smart camera
Communication distance	8 to 970 mm	Depends on selected lens	Depends on selected lens	Depends on selected lens	40 to 425 mm	40 to 425 mm	40 to 425 mm	Depends on selected lens
Number of simultaneous inspections	32	32	Limited only by memory space	Limited only by memory space	255	255	255	255
IP rating of tags	IP67	IP40	IP20 Depends on setup & tools	IP20 Depends on setup & tools	IP40	IP54	IP65	IP67

Measurement Sensors

Product	ZX1	ZX2	ZS-HL	ZX-L	ZW
					
Measurement type	Displacement	Displacement	Displacement	Displacement	Displacement
Measurement methods	2D CMOS Laser Triangulation	2D CMOS Laser Triangulation	Laser Triangulation	Laser Triangulation PSD	White Light Confocal Fiber Principle
Measurement range (Min.)	50±10 mm	50±10 mm	10±0.5 mm	30±2 mm	7 mm
Measurement range (Max.)	600±400 mm	100±35 mm	1,500±500 mm	350 mm	40 mm
Resolution	2 to 80 μm	1.5 to 5 μm	0.25 to 5 μm	0.25 to 300 μm	0,01 to 0.25 μm
Linearity (±% of full scale)	0.15%	0.05%	0.05%	0.2%	0.1%
Surfaces	Black rubber Glass Metal Mirror Paper Plastic	Black rubber Glass Metal Mirror Paper Plastic	Black rubber Glass Metal Mirror Paper Plastic	Metal Paper Plastic	Black rubber Glass Metal Mirror Paper Plastic

Product	ZX-E	ZX-T	ZG2	ZX-GT
				
Measurement type	Displacement	Displacement	Profile	Position/Diameter/Width
Measurement methods	Inductive measurement	Contact measurement	–	CCD technology
Measurement range (Min.)	0.5 mm	1 mm	20±0.5 mm (Z); 3 mm (X)	–
Measurement range (Max.)	7 mm	10 mm	210±30 mm (Z); 70 mm (X)	28 mm
Resolution	1 µm	0.1 µm	0.2 µm (Z); 4 µm (X)	10 µm
Linearity (±% of full scale)	0.5%	0.3%	0.5%	0.1%
Surfaces	Metal	Black rubber Glass Metal Mirror Plastic	Black rubber Glass Metal Mirror Paper Plastic	Black rubber Glass Metal Mirror Paper Plastic

Verification products

Product	LVS-9510	LVS-9570	LVS-9580	LVS-9585
				
Use	Desktop	Handheld	Handheld	Handheld
Verification type	Labels Barcode	Labels Barcode Large 1D codes / direct box printing	Labels Barcode	Labels Barcode DPM codes
Brand	Microscan	Microscan	Microscan	Microscan
Field of view	Varies by model	137 mm vertical 203 mm horizontal	57 mm vertical 76 mm horizontal	44 mm x 44 mm for DPM codes 57 mm vertical 76 mm horizontal
Minimum resolution	Varies by model	1D 8.8 mil (0.223 mm) 2D 12.5 mil (0.317 mm)	1D 4 mil (0.10 mm) 2D 5.9 mil (0.15 mm)	1D 4 mil (0.10 mm) 2D 5.9 mil (0.15 mm)
Supported verification standards	ISO/IEC 15415 ISO/IEC 15416	ISO/IEC 15415 ISO/IEC 15416	ISO/IEC 15415 ISO/IEC 15416 ISO/IEC TR 29158 DPM Cat 0	ISO/IEC 15415 ISO/IEC 15416 ISO/IEC TR 29158 DPM Cat 0 DPM Cat 1 DPM Cat 2

Cameras

Product (Part 1 of 2)	GigE Vision	USB3.0 Series	CoaxPress	CameraLink Series
Scan type	Area scan	Area scan	Area scan	Area scan
Interface	GigE	USB3.0	CoaXPress	Camera Link
Resolution 1	0.4 MP 1.3 MP 1.6 MP 2.0 MP 2.3 MP 3.1 MP 4.0 MP 5.0 MP 8.3 MP 10.0 MP 12.0 MP	0.4 MP 1.3 MP 1.6 MP 2.0 MP 2.3 MP 3.1 MP 4.0 MP 5.0 MP 8.9 MP 12.0 MP	4.0 MP 12.0 MP	0.3 MP 0.4 MP 1.6 MP 2.0 MP 3.1 MP 4.0 MP 5.0 MP 8.9 MP 12.0 MP
Resolution 2	720 × 540 1280 × 1024 1440 × 1080 1920 × 1200 2048 × 1088 2048 × 1536 2048 × 2048 2448 × 2048 2592 × 1944 3840 × 2160 4000 × 3000	720 × 540 1280 × 1024 1440 × 1080 1920 × 1200 2048 × 1088 2048 × 1536 2048 × 2048 2448 × 2048 2592 × 1944 4096 × 2160 4096 × 3000	2048 × 2048 4096 × 3072	642 × 484 720 × 540 1440 × 1080 2048 × 1088 2048 × 1536 2048 × 2048 2448 × 2048 2592 × 1944 4096 × 2160 4096 × 3000 4096 × 3072
Shutter	Global Rolling	Global Rolling	Global	Global Rolling

Product (Part 2 of 2)	GigE Vision	USB3.0 Series	CoaxPress	CameraLink Series
Chip size	1" 1/1.2" 1/1.7" 1/1.8" 1/2.3" 1/2.5" 1/2.9" 2/3"	1" 1.1" 1/1.2" 1/1.8" 1/2.5" 1/2.9" 2/3"	1" 1.76"	1" 1.1" 1/1.8" 1/2.5" 1/2.9" 1/3" 1.76" 2/3"
Pixel size (µm)	1.62 × 1.62 1.67 × 1.67 1.85 × 1.85 2.2 × 2.2 6.9 × 6.9 3.45 × 3.45 5.3 × 5.3 5.5 × 5.5 5.86 × 5.86	2.2 × 2.2 6.9 × 6.9 3.45 × 3.45 5.3 × 5.3 5.5 × 5.5 5.86 × 5.86	5.5 × 5.5	2.2 × 2.2 6.9 × 6.9 3.45 × 3.45 5.5 × 5.5 7.4 × 7.4
Max. Framerate	8.7 fps up to 265 fps	14 fps up to 527.1 fps	142.5 fps up to 180 fps	14 fps up to 523.5 fps
Sensor manufacturer	Aptina CMOSIS eV2 Sony	Aptina CMOSIS eV2 Sony	CMOSIS	Aptina CMOSIS Sony
Camera type	Color Monochrome	Color Monochrome	Color Monochrome	Color Monochrome

Product	DVI Series	HD-SDI Series	S133 Series	Line Scan Camera
				
Scan type	Area scan	Area scan	Area scan	Line scan
Interface	HD Output	HD Output	Analog UVC	Camera Link
Resolution 1	1080 p	1080 p	0.65 MP	2000 p 2000 p × 2 4000 p 4000 p × 2 8000 p 8000 p × 2 16000
Resolution 2	1920 × 1080	1920 × 1080	1280 × 486	2048 × 1 2048 × 2 4096 × 1 4096 × 2 8192 × 1 16384 × 1
Shutter	Rolling	Rolling	Global	–
Chip size	1/2.8"	1/2.8"	1/3.2"	14.336 mm 28.672 mm 57.344 mm
Pixel size (µm)	2.8 × 2.8	2.8 × 2.8	3.5 × 3.5	3.5 × 3.5 7.0 × 7.0
Max. Framerate	60 fps	60 fps	30 fps 50 Hz up to 59.94 Hz	40 kHz 80 kHz
Sensor manufacturer	Sony	Sony	Sony	AWAIBA
Camera type	Color	Color	Color	Color Monochrome

Safety

Emergency stop and control devices

Safety Limit Switches

Safety Door Switches







Safety Mats – UMA Series

Safety Sensors






Safety logic control systems

Safety outputs

Emergency stop and control devices






Product	A165E	A22E/A22NE-P	ER5018	ER6022	ER1022	ER1032
						
Type	Emergency stop pushbutton switches	Emergency stop pushbutton switches	Rope pull emergency stop switches	Rope pull emergency stop switches	Rope pull emergency stop switches	Rope pull emergency stop switches
Housing material	Plastic	Plastic	Aluminium alloy	Aluminium alloy Stainless Steel	Aluminium alloy	Aluminium alloy
Protection class	IP65	IP65	IP67	IP67	IP67	IP67
Head size	30 to 40 mm	30 to 60 mm	–	–	–	–
Maximum rope span	–	–	Up to 40 m	Up to 80 m	Up to 125 m	Up to 200 m
Unlock operation	Turn-reset	Push-pull Turn-reset	–	–	–	–
Contact configuration	DPST-NC SPST-NC TPST-NC	DPST-NC SPST-NC SPST-NC/NO	2NC+1NO 3NC	2NC+1NO 3NC	4NC+2NO	4NC+2NO

Safety Limit Switches

Product	D4B-_N	D4F	D4N	D4NH	D4N-_R
					
Application	General purpose limit switches	General purpose limit switches	General purpose limit switches	Hinge operation	General purpose limit switches
Housing	Metal	Metal	Plastic	Plastic	Plastic
Contact configuration	1NC/1NO 2NC	1NC/1NO 2NC 2 H3/2 HO 4NC	1NC/1NO 2NC 2NC/1NO 3NC	1NC/1NO 2NC	1NC/1NO 2NC 2NC/1NO 3NC
Actuator	Various lever, plunger and roller actuators	Various lever, plunger and roller actuators	Various lever, plunger and roller actuators	Shaft and arm lever actuator	Various lever, plunger and roller actuators
Connectivity	M20 G1/2	3 m pre-wired 5 m pre-wired	M12 M20 G1/2 PG 13.5	M20 G1/2 PG 13.5	M12 M20 G1/2 PG 13.5

Safety Door Switches

Product	F3S-TGR-N_C	F3S-TGR-N_R	F3S-TGR-N_M/-N_U	F3S-TGR-S_A/-S_D	F3S-TGR-N_X
					
Application	Non-contact switches	Non-contact switches	Non-contact switches	Non-contact switches	Non-contact switches
Housing	Metal Plastic	Metal Plastic	Plastic	Metal Plastic	Metal
Contact configuration	2NC/1NO	1NC/1NO 2NC 2NC/1NO	2NC/1NO	2NC	2NC/1NO
Holding force	–	–	–	–	–
Connectivity	5 m pre-wired 10 m pre-wired M12 connector pigtail	5 m pre-wired 10 m pre-wired M8 connector M12 connector pigtail	5 m pre-wired 10 m pre-wired M12 connector pigtail	5 m pre-wired 10 m pre-wired M12 connector pigtail	5 m pre-wired 10 m pre-wired M8 connector
Protection class	IP67 IP69K	IP67 IP69K	IP67 IP69K	IP67 IP69K	IP67




Product	D40A/G9SX-NS	D4NS	D4GS	F3S-TGR-KM15/-KM16 /-KH16	D4BS
					
Application	Non-contact switches	Key operated switches	Key operated switches	Key operated switches	Key operated switches
Housing	Plastic	Plastic	Plastic	Plastic Stainless steel Metal head	Metal
Contact configuration	1NC/1NO	1NC/1NO 2NC 2NC/1NC 3NC	1NC/1NO 2NC 2NC/1NO 3NC	2NC/1NO 3NC	1NC/1NO 2NC
Holding force	–	–	–	–	–
Connectivity	2 m pre-wired 5 m pre-wired	M12 connector M20 connector G1/2 1/2-14NPT PG 13.5	1 m pre-wired 3 m pre-wired 5 m pre-wired	M20 connector	M20 connector G1/2 1/2-14NPT PG 13.5
Protection class	IP67	IP67	IP67	IP69K	IP67

Product	D4NL	D4SL-N	F3S-TGR-KHL1	F3S-TGR-KHL3	D40ML
					
Application	Key operated switches	Key operated switches	Key operated switches	Key operated switches	
Housing	Plastic	Plastic Metal head	Stainless steel	Stainless steel	Metal Plastic Stainless steel
Contact configuration	NC and NO combinations	NC and NO combinations	2NC safety contacts 2NO auxiliary contacts	2NC safety contacts 2NO auxiliary contacts	–
Holding force	1300 N	1300 N	1600 N	2000 N	600 N 900 N 950 N 1500 N
Connectivity	M20 connector G1/2 PG 13.5	M20 connector G1/2 1/2-14NPT	M20 connector	M20 connector	5 m pre-wired 10 m pre-wired M12 connector
Protection class	IP67	IP67	IP69K	IP69K	IP67 IP69K

Safety Mats – UMA Series







Safety Sensors

Product	OS32C	F3SG-RA	F3SG-RE	F3S-TGR-CL_A/_B
				
Application	Safety laser scanner	Safety light curtains	Safety light curtains	Safety light curtains
Safety category	Type 3 acc. IEC 61496-1	Type 2 acc. IEC 61496-1 Type 4 acc. IEC 61496-1	Type 2 acc. IEC 61496-1 Type 4 acc. IEC 61496-1	Type 2 acc. IEC 61496-1 Type 4 acc. IEC 61496-1
Housing	133 × 104 × 143 mm	35 × 35 mm	35 × 35 mm	37 × 48 mm
Resolution	30 mm 40 mm 50 mm 70 mm	14 mm 30 mm	14 mm 30 mm	14 mm 35 mm
Operating Range	3 m 4 m	0.3 to 10 m (14 mm resolution) 0.3 to 20 m (30 mm resolution)	0.3 to 10 m (14 mm resolution) 0.3 to 20 m (30 mm resolution)	0.2 to 6 m (14 mm) 0.2 to 14 m (35 mm)
Degree of protection	IP65	IP65 IP67	IP65 IP67	IP65
Safety related functions	EDM Manual/Auto start Reference boundary monitoring	Blanking EDM Muting Series connection Software tool with PC settings	Fast response for simple ON/OFF detection applications Simple wiring	Blanking (_A) Cyclic operation EDM Interlock function Muting (_A) Pre-reset (_A)


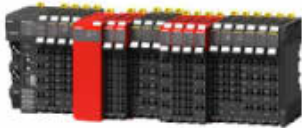

Product	F3SJ-A	F3SJ-B	F3SJ-E	F3S-TGR-CL_A-K/_B-K_
				
Application	Safety light curtains	Safety light curtains	Safety light curtains	Multi beam safety sensor
Safety category	Type 4 acc. IEC 61496-1	Type 4 acc. IEC 61496-1	Type 4 acc. IEC 61496-1	Type 2 acc. IEC 61496-1 Type 4 acc. IEC 61496-1
Housing	24 × 30 mm	30 × 30 mm	30 × 30 mm	37 × 48 mm
Resolution	14 mm 30 mm	25 mm	25 mm	–
Operating Range	0.3 to 9 m (14 mm resolution) 0.3 to 9 m (30 mm resolution)	0.2 to 7.0 m	0.2 to 7.0 m	0.2 to 12 m (K2C) 0.2 to 40 m (K)
Degree of protection	IP65	IP65	IP65	IP65
Safety related functions	Blanking EDM External test Interlock function Muting Override Warning zone	EDM External test Interlock function Muting	External test	EDM Interlock function Muting (_A-K_) Pre-reset (_A-K_)

Safety Modules


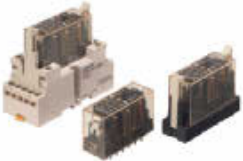
Product	G9SE	G9SA	G9SB	G9SR	G9SX
					
Safety function	Safety relay units	Safety relay units	Safety relay units	Safety relay units	Safety relay units
Features	Safe off delay 15ms Max. response time LED diagnosis	Safe off delay Output extension	Basic safety function	Safe on- and off delay DIP-switch setup Input and output extension LED diagnosis	Safe off delay Flexible safety unit solid state outputs
Safety category	SIL3 (IEC 61508) Cat-4 (EN ISO 13849-1) Up to PLe (EN ISO 13849-1) depending on application	Up to Cat-4 (EN ISO 13849-1) Up to PLe (EN ISO 13849-1) depending on application	Up to Cat-4 (EN ISO 13849-1) Up to PLe (EN ISO 13849-1) depending on application	SIL3 (IEC 61508) Up to Cat-4 (EN ISO 13849-1) Up to PLe (EN ISO 13849-1) depending on application	SIL3 (IEC 61508) Cat-4 (EN ISO 13849-1) Up to PLe (EN ISO 13849-1) depending on application
Supply voltage	24 VDC	24 VDC 100 to 240 VAC	24 VDC	24 VDC	24 VDC
Terminal type	Push-in terminals	Screw terminals	Screw terminals	Removable cage clamp terminals	Removable cage clamp terminals Screw terminals
Applications	Door switch monitoring E-Stop EDM monitoring Interlock function Manual/ automatic reset Non-contact switches monitoring Safe OFF delay timer Safety light curtain monitoring	Door switch monitoring E-Stop EDM monitoring Interlock function Manual/ automatic reset Safe OFF delay timer Safety light curtain monitoring Two-Hand control	Door switch monitoring E-Stop EDM monitoring Interlock function Manual/ automatic reset Multiple inputs for one safety function Safety light curtain monitoring	Door switch monitoring E-Stop EDM monitoring Guard switching/ enabling function Interlock function Logic function blocks Manual/ automatic reset Multiple inputs for one safety function Non-contact switches monitoring Safe OFF delay timer Safe ON delay timer Safety light curtain monitoring	Door switch monitoring E-Stop EDM monitoring Guard switching/ enabling function Interlock function Limited speed monitoring Manual/ automatic reset Non-contact switches monitoring Safe OFF delay timer Safety light curtain monitoring Standstill monitoring
Output type	Safety relay outputs Solid state outputs	Safety relay outputs	Safety relay outputs	Safety relay outputs Solid state outputs	Safety relay outputs Solid state outputs

Product	G9SX-GS/A4EG	G9SX-LM	G9SX-SM	D40A/G9SX-NS
				
Safety function	Dedicated safety function	Dedicated safety function	Dedicated safety function	Dedicated safety function
Features	LED diagnosis Maintenance mode in machinery	LED diagnosis Limited speed presetting Maintenance mode in machinery	LED diagnosis	LED diagnosis Monitoring of D40A non-contract switch
Safety category	Cat-4 (EN ISO 13849-1)	Cat-3 (EN ISO 13849-1)	Cat-4 (EN ISO 13849-1)	Cat-3 (EN ISO 13849-1)
Supply voltage	24 VDC	24 VDC	24 VDC	24 VDC
Terminal type	Removable cage clamp terminals Screw terminals	Removable cage clamp terminals Screw terminals	Removable cage clamp terminals Screw terminals	Removable cage clamp terminals Screw terminals
Applications	Guard switching/ enabling function	Limited speed monitoring Standstill monitoring	Standstill monitoring	Door switch monitoring Non-contact switches monitoring
Output type	Solid state outputs	Solid state outputs	Solid state outputs	Solid state outputs

Programmable Safety System

Product	G9SP-N_	NX-Safety stand alone	NE1A-SCPU_	NX Safety distributed
				
Safety architecture	Compact	Modular	Distributed	Distributed Integrated
Max. number of safety I/O points	10/20	10/20 40 Up to 256	10/20 40 Up to 256 Up to 1024	10/20 40 Up to 256 Up to 1024
Centralised / distributed	Centralised	Centralised	Distributed	Distributed
Safety category	SIL3 (IEC 61508) Cat-4 (EN ISO 13849-1) PL e (EN ISO 13849-1)	SIL3 (IEC 61508) PL e (EN ISO 13849-1)	SIL3 (IEC 61508) Cat-4 (EN ISO 13849-1)	SIL3 (IEC 61508) PL e (EN ISO 13849-1)
Terminal type	Screw terminals	Clamping terminals	Removable cage clamp terminals	Clamping terminals

Safety outputs

Product	G7SA	G7S
Number of output contacts	 4 poles 6 poles	 6 poles
Rated load	6 A at 240 VAC 6 A at 30 VDC	NC contact 6 A at 250 VAC/30 VDC NO contact 10 A at 250 VAC/30 VDC
Response time	10 ms max.	50 ms max.
Dielectric strength	1,500 V between contacts of same polarity 2,500 VAC between contacts	2,000 VAC

Control Components

Temperature Controllers & Sensors

Power Supplies

Uninterruptible Power Supplies (UPS)

Timers








Counters







Programmable Relays

Digital Panel Indicators

Energy monitoring devices

Temperature Controllers






Product	K8AK-TH	E5C2	E5L	E5CSV	E5CB	E5_C	E5_C-T
							
Type	Basic/standard	Basic/standard	Basic/standard	Basic/standard	Basic/standard	Advanced	Advanced
Loops	Single loop	Single loop	Single loop	Single loop	Single loop	Single loop	Single loop
Terminals	Screw	Screw	Screw	Screw	Screw	Push-in plus Screw Screwless	Screw
Mounting	In-panel On-panel	In-panel On-panel	In-panel	On-panel	On-panel	In-panel On-panel	On-panel
Number of alarms	1	–	–	1	1	1 2 3 4	3 4
Operation	Heating/cooling	Heating/cooling	Heating/cooling	Heating/cooling	Heating/cooling	Heating & cooling	Heating & cooling
Display	Indication LEDs	SV dial	Single 3 digit	Single 3.5 digit	Dual 4 digit	Dual/Triple 4 digit	Dual/Triple 4 digit

Product	E5_N-H/E5_N-HT	E5_D	E5_R/E5_R-T	CelciuX°	E5ZN	NX-TC
						
Type	Advanced	Advanced	Advanced	Advanced	Advanced	Advanced
Loops	Single loop	Single loop	Multi-loop	Multi-loop	Multi-loop	Multi-loop
Terminals	Screw	Screw	Screw	Screw Screwless	Screw	Push-in plus
Mounting	On-panel	On-panel	On-panel	In-panel	In-panel	In-panel
Number of alarms	2 3	2 4	2 3	2	2	-
Operation	Heating & cooling	Heating & cooling	Heating & cooling	Heating & cooling	Heating & cooling	Heating & cooling
Display	Dual/Triple 5 digit	Dual/Triple 4 digit	Triple 5 digit	-	Indication LEDs	Indication LEDs




Temperature Sensors




Product	E52-EL	E52-E	E52-ES, E52-E_E, E52-E_S	ES1B	ES1C
Type	Cost effective temperature sensors	High performance sensors	Standard temperature sensors	High performance sensors	High performance sensors
Key features	Housing material (SUS 304) Popular size and connection models	High performance materials (SUS 316, Inconel 600) Wide range of housing and connection options	Wide range of application optimized models	Infrared Thermosensor (Four temperature ranges available to cover wide range of application)	Infrared Thermosensor with superior environmental resistance
Temperature range	0 to 400°C	-80 to 1150°C	-	10 to 70°C 60 to 120°C 115 to 165°C 140 to 260°C	0 to 400°C

Power Supplies


Product (Part 1 of 2)	S8VK-X	S8VK-S	S8VK-C	S8VK-G	S8VK-T
					
Type	Book type	Book type	Book type	Book type	Book type
Output voltage	5 V 12 V 24 V	24 V	24 V	5 V 12 V 24 V 48 V	24 V
Terminals	Push-in plus	Push-in plus	Screw	Screw	Screw
Rated input voltage	100 to 240 VAC 90 to 350 VDC	100 to 240 VAC 90 to 350 VDC	100 to 240 VAC	100 to 240 VAC 90 to 350 VDC	3x 320 to 576 VAC
Output current base on 24VDC	2.5 A 3.75 A 5 A 10 A 20 A	1.3 A 2.5 A 5 A 10 A 20 A	2.5 A 5 A 10 A 20 A	0.65 A 1.3 A 2.5 A 5 A 10 A 20 A	5 A 10 A 20 A 40 A

Product (Part 2 of 2)	S8VK-X	S8VK-S	S8VK-C	S8VK-G	S8VK-T
Features	 <p>EN61000-3-2 Capacitor back-up Undervoltage alarm Overvoltage protection Overload protection DIN-rail mounting EMI Class B UL Class 2 (up to 90 W) N+1 Redundancy Parallel operation by 2 units Power boost 120% (30, 60 and 120 W models) Power boost 150% (240 and 480 W models) Indication monitor (7 - segment LED) Network (Ethernet/IP, Modbus TCP) Replacement Time Calculation Function Display of output voltage/ current/peak hold current Display of total run time Self-diagnostics function</p>	 <p>EN61000-3-2 Capacitor back-up Undervoltage alarm (240 and 480 W models) Overvoltage protection Overload protection DIN-rail mounting EMI Class B UL Class 2 (up to 60 W) N+1 Redundancy Parallel operation by 2 units Power boost 120% (30, 60 and 120 W models) Power boost 150% (240 and 480 W models)</p>	 <p>Capacitor back-up Overvoltage protection Overload protection DIN-rail mounting Screw mounting (with bracket) N+1 Redundancy</p>	 <p>EN61000-3-2 Capacitor back-up Overvoltage protection Overload protection DIN-rail mounting Screw mounting (with bracket) EMI Class B UL Class 2 (up to 60 W) N+1 Redundancy Parallel operation by 2 units Power boost 120%</p>	 <p>EN61000-3-2 Capacitor back-up Overvoltage protection Overload protection DIN-rail mounting Screw mounting (with bracket) EMI Class B N+1 Redundancy Parallel operation by 2 units Power boost 120%</p>
Accessories	<p>–</p>	<p>S8VK-R S8T-DCBU-02 S8M S8V-NF</p>	<p>S8VK-R S8T-DCBU-02 S8M S8V-NF</p>	<p>S8VK-R S8T-DCBU-02 S8M S8V-NF</p>	<p>S8VK-R S8T-DCBU-02 S8M</p>





Product	S8VS-A/B	S8AS	S8FS-C	S8FS-G	S8JX-G
					
Type	Book type	Book type	Metal frame	Metal frame	Metal frame
Output voltage	24 V	24 V	5 V 12 V 15 V 24 V 36 V 48 V	5 V 12 V 15 V 24 V 48 V	5 V 12 V 15 V 24 V 48 V
Terminals	Screw	Screw	Screw	Screw	Screw
Rated input voltage	100 to 240 VAC	100 to 240 VAC	100 to 240 VAC	100 to 240 VAC	100 to 240 VAC
Output current base on 24VDC	2.5 A 3.8 A 5 A 7.5 A 10 A 20 A	10 A with 6 branches 20 A with 8 branches	0.7 A 1.1 A 1.5 A 2.2 A 3.2 A 4.5 A 6.5 A 8.8 A 14.6 A	0.65 A 1.5 A 2.2 A 4.5 A 6.5 A 14 A 27 A	0.65 A 1.5 A 2.1 A 4.5 A 6.5 A 14 A 27 A
Features	EN61000-3-2 Undervoltage alarm Overvoltage protection Display of output value Maintenance forecast Runtime monitor	EN61000-3-2 Undervoltage alarm Overvoltage protection Display of output value Maintenance forecast Runtime monitor	EN61000-3-2 (up to 150 W) Overvoltage protection Overload protection DIN-rail mounting Screw mounting (with bracket) EMI Class B (up to 150 W)	EN61000-3-2 Overvoltage protection Overload protection DIN-rail mounting Screw mounting (with bracket) EMI Class B Parallel operation by 5 units (600 W/24VDC)	Overvoltage protection Overload protection DIN-rail mounting Screw mounting (with bracket) Parallel operation by 5 units (300 W, 600 W only)
Accessories	S8VK-R S8T-DCBU-02 S8M S8V-NF	S8VK-R S8T-DCBU-02 S8V-NF	S8VK-R S8T-DCBU-02 S8M S8V-NF	S8VK-R S8T-DCBU-02 S8M S8V-NF	S8VK-R S8T-DCBU-02 S8M S8V-NF





Product	S8JX-P	S8TS	S8EX
			
Type	Metal frame	Modular	Open frame
Output voltage	5 V 12 V 24 V 48 V	5 V 12 V 24 V	5 V 12 V 15 V 24 V 36 V 48 V
Terminals	Screw	Screw	Connector
Rated input voltage	100 to 240 VAC	100 to 240 VAC	85 to 264 VAC 100 to 240 VAC
Output current base on 24VDC	2.1 A 4.5 A 6.5 A 14 A 27 A	2.5 A 5 A 7.5 A 10 A	0.7 A 1.3 A 2.1 A 4.3 A 6.3 A 10 A
Features	EN61000-3-2 Overvoltage protection Overload protection DIN-rail mounting Screw mounting (with bracket) EMI Class B Parallel operation by 5 units (300 W, 600 W only) Power boost 115% (300 W, 600 W at 24 V)	DC back-up Capacitor back-up Overvoltage protection Overload protection DIN-rail mounting EMI Class B UL Class 2 N+1 Redundancy Parallel operation (24/12 V models only)	EN61000-3-2 Overvoltage protection Overload protection Screw mounting (with bracket) EMI Class B Power boost 150% (5 V of 50 W, 12 V) Power boost 200% (24 V, 36 V, 48 V)
Accessories	S8VK-R S8T-DCBU-02 S8M S8V-NF	S8VK-R S8T-DCBU-02 S8T-DCBU-01 S8M S8V-NF	S8VK-R S8T-DCBU-02 S8M S8V-NF





Uninterruptible Power Supplies (UPS)

Product	S8BA Integrated battery type	S8BA Separated battery type	BU_2RWL	BU_2SWG
				
Type	DIN-rail mounting	DIN-rail mounting	19 inch rack mounting	Tower
Input-Output type	DC-DC	DC-DC	AC-AC	AC-AC
Terminals	Push-in plus	Push-in plus	Screw	Screw
Power	120 W 240 W 360 W 480 W	480 W 960 W	1400 W 2100 W 3500 W	700 W 2100 W
Input rated voltage	24 VDC	24 VDC	200 to 240 VAC	220 to 240 VAC
Input maximum current	5.9 A 11.7 A 17.5 A 23.3 A	21.5 A 43.5 A	9 A 14 A 23 A	5.8 A 16 A
Input terminal	Push-in terminal block	Push-in terminal block	Terminal block NEMA L6-30P	Schuko CEE 7/7
Output rated voltage	24 VDC	24 VDC	200 to 240 VAC	220 to 240 VAC
Output maximum current	5 A 10 A 15 A 20 A	20 A 40 A	10 A 15 A 25 A	4.6 A 15 A
Output terminal	Push-in terminal block	Push-in terminal block	Terminal block NEMA L6-30R x 2	Terminal block IEC C13 IEC C19
Type of battery	Lithium-ion	Lithium-ion 3.9 Ah/7.8 Ah 7.8 Ah	Sealed lead	Sealed lead
Communication interface	I/O signal RS232C USB	I/O signal RS232C USB	I/O signal RS232C	Ethernet (Optional) I/O signal RS232C USB

Timers





Product (Part 1 of 2)	H3DT	H3DS	H3DK	H3YN/H3YN-B
				
Type	Analog	Analog	Analog	Analog
Mounting	DIN-rail	DIN-rail	DIN-rail	Socket/on-panel
Terminals	Push-in plus	Screw	Screw	Push-in plus Screw
Operating mode	ON-delay Flicker OFF start Flicker ON start Signal ON-/OFF-delay Interval (signal or power start) Star-delta Cummulative Instantaneous operation (time-limit reset) One-shot output (signal or power ON start) Time-limit operation (self-resetting)	ON-delay ON-delay (fixed) Flicker OFF start Flicker ON start Signal ON-/OFF-delay Interval (signal or power start) Star-delta One-shot output (ON-delay)	ON-delay ON-delay (fixed) 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 Flicker OFF start Flicker ON start Interval (signal or power start)
Outputs	Relay	Relay SCR	Relay	Relay
Relay output type	DPDT SPDT	SPDT SPST-NO	DPDT SPDT	4PDT DPDT





Product (Part 2 of 2)	H3DT 	H3DS 	H3DK 	H3YN/H3YN-B 
Total time range	0.1 to 120 s 0.1 s to 1,200 h 1 to 120 s	0.1 s to 12 h 0.1 s to 120 h 1 to 120 s 1 s to 120 h 2 s to 120 h	0.1 to 120 s 0.1 s to 1,200 h 1 to 120 s	0.1 s to 10 h
Supply voltage	100 to 120 VAC 200 to 240 VAC 24 to 48 VAC/DC 24 to 240 VAC/DC	24 to 230 VAC 24 to 48 VDC	240 to 440 VAC 24 to 48 VAC/DC 24 to 240 VAC/DC 12 VDC 24 to 48 VDC	24 VAC 100 to 120 VAC 200 to 230 VAC 12 VDC 24 VDC
Size	17.5 mm wide	17.5 mm wide	22.5 mm wide	31 mm wide

Product (Part 1 of 2)	H3RN/H3RN-B	H3CR	H5CX	H3AM
				
Type	Analog	Analog	Digital	Motor
Mounting	Socket/on-panel	Socket/on-panel	Socket/on-panel	Socket/on-panel
Terminals	Push-in plus Screw	Screw	Screw	Screw
Operating mode	ON-delay Flicker OFF start Flicker ON start Interval (signal or power start)	ON-delay Flicker OFF start Flicker ON start Signal ON-/OFF-delay Signal OFF-delay Interval (signal or power start) Star-delta One-shot output (ON-delay)	ON-delay ON-delay (fixed) Flicker OFF start Flicker ON start Signal ON-/OFF-delay Signal OFF-delay Interval (signal or power start) Independent ON/OFF time setting One-shot output (ON-delay)	ON-delay
Outputs	Relay	Relay Transistor	Relay Transistor	–
Relay output type	DPST-NO SPDT	DPDT SPDT SPST-NO	SPDT	DPDT





Product (Part 2 of 2)	H3RN/H3RN-B	H3CR	H5CX	H3AM
Total time range	0.1 s to 10 h	0.05 to 12 s 0.05 s to 30 h 0.05 s to 300 h 0.1 s to 600 h 0.5 to 120 s 1.2 s to 12 min 1.2 s to 300 h	0,001 s to 9.999 h (configurable)	0.5 s to 12 h
Supply voltage	24 VAC 12 VDC 24 VDC	24 to 48 VAC 100 to 120 VAC 100 to 240 VAC 200 to 240 VAC 24 VAC/DC 12 VDC 48 VDC 12 to 48 VDC 48 to 125 VDC 100 to 125 VDC	24 VAC 100 to 240 VAC 12 to 24 VDC	100 to 240 VAC
Size	15.5 mm wide	1/16 DIN (48 × 48 mm)	1/16 DIN (48 × 48 mm)	1/4 DIN (96 × 96 mm)

Counters

Product	H7EC	H7ET	H7ER	H7GP
				
Type	Totalising	Totalising	Totalising	Totalising
Size	1/32 DIN (48 × 24 mm)	1/32 DIN (48 × 24 mm)	1/32 DIN (48 × 24 mm)	1/32 DIN (48 × 24 mm)
Counting range	0 to 99999999	0 s to 999 h 59 min 59 s <-> 0.0 min to 9999 h 59.9 min 0.0 h to 999999.9 h <-> 0.0 h to 3999 d 23.9 h	1000 s-1 or 1000 min-1 1000 s-1 or 1000 min-1 <-> 10000 min-1	0.1 to 99999.9 h 1 s to 99 h 59 m 59 s
Control input	AC/DC multi-voltage DC-voltage No-voltage PNP/NPN	AC/DC multi-voltage DC-voltage No-voltage PNP/NPN	No-voltage PNP/NPN	DC-voltage (switchable) No-voltage
Control output	–	–	–	–
Supply voltage	24 VDC	24 VDC	24 VDC	100 to 240 VAC 12 to 24 VDC
Display, number of digits	LCD 8 digit	LCD 7 digit	LCD 4 digit 5 digit	LCD negative transmissive 6 digit
Speed	0 to 30 Hz 0 to 1 kHz	–	1 or 10 kHz	0 to 30 Hz 0 to 5 kHz

Product	H7HP	H7CX	H7BX	H8PS
				
Type	Totalising	Pre-set counter	Pre-set counter	Cam positioner
Size	36 × 72 mm	1/16 DIN (48 × 48 mm)	72 × 72 mm	1/4 DIN (96 × 96 mm)
Counting range	0.1 to 99999.9 h 1 s to 99 h 59 m 59 s	-99999 to 999999 -999 to 9999	-99999 to 999999	-
Control input	DC-voltage (switchable) No-voltage	No-voltage PNP/NPN	No-voltage PNP/NPN	Encoder
Control output	-	1 relay (SPDT) Transistor	Contact output NPN transistor	Cam outputs 8/16/32 NPN or PNP Run out Tachometer
Supply voltage	100 to 240 VAC 12 to 24 VDC	100 to 240 VAC 12 to 24 VDC	24 VAC 100 to 240 VAC 12 to 24 VDC	24 VDC
Display, number of digits	LCD negative transmissive 6 digit	LCD negative transmissive PV - 4 digit, SV - 4 digit PV - 6 digit, SV - 6 digit	LCD negative transmissive PV - 6 digit, SV - 6 digit	LCD 7 digit
Speed	1 to 30 Hz 0 to 5 kHz	0 to 30 Hz 0 to 5 kHz	0 to 30 Hz 0 to 5 kHz	-

Programmable Relays








Product	ZEN-10C	ZEN-20C	ZEN-8E	ZEN-PA
				
Type	CPU unit	CPU unit	Expansion unit	Power supply
Number of I/O points	10	20	8	
Features	LCD Display, buttons, calendar and clock (ZEN-10C1) Only LED indication, no buttons (ZEN-10C2) No expandable I/O (ZEN-10C3) RS-485 communication (ZEN-10C4)	LCD Display, buttons, calendar and clock (ZEN-20C1) Only LED indication, no buttons (ZEN-20C2) No expandable I/O (ZEN-20C3)	–	–
Inputs	6	12	4	–
Outputs	4 relays/transistors	8 relays/transistors	4 relays/transistors	–
Line Voltage	100 to 240 VAC 12 to 24 VDC	100 to 240 VAC 12 to 24 VDC	100 to 240 VAC 12 to 24 VDC	100 to 240 VAC

Digital Panel Indicators

Product	K3GN	K3MA-J	K3MA-L	K3MA-F	K3HB-X	K3HB-H
						
Type	Process/frequency/rate	Standard	Standard	Standard	Advanced	Advanced
Size	48 × 24 mm (1/32 DIN)	96 × 48 mm (1/8 DIN)	96 × 48 mm (1/8 DIN)	96 × 48 mm (1/8 DIN)	96 × 48 mm (1/8 DIN)	96 × 48 mm (1/8 DIN)
Indicator type	Multifunctional digital	Process	Temperature	Frequency/rate	Process	Temperature
Input range	0 to 20 mA 4 to 20 mA 0 to 5 V 1 to 5 V -5 to 5 V -10 to 10 V 0 to 5 kHz 0 to 30 Hz	0 to 20 mA 4 to 20 mA 0 to 5 V 1 to 5 V -5 to 5 V -10 to 10 V	Pt100 JPt100 Thermocouple K, J, T, E, L, U, N, R, S, B, W	0 to 5 kHz 0 to 30 Hz	0.000 to 10.000 A 0.0000 to 19.999 mA -199.99 to 199.99 mA 4.000 to 20.000 mA 0.0 to 400.0 V 0.0000 to 1.999 V -199.99 to 199.99 V 1.0000 to 5.0000 V	Pt100 Thermocouple K, J, T, E, L, U, N, R, S, B, W
Output type	Relay NPN PNP Comms	Relay	Relay	Relay	Relay NPN PNP Linear Comms	Relay NPN PNP Linear Comms
Supply voltage DC	24 VDC	24 VAC/VDC 100 to 240 VAC	24 VAC/VDC 100 to 240 VAC	24 VAC/VDC 100 to 240 VAC	24 VAC/VDC 100 to 240 VAC	24 VAC/VDC 100 to 240 VAC
Accuracy	±0.1% of full scale	±0.1% of full scale	±0.1% of full scale	±0.1% of full scale	±0.1% of full scale (DC voltage & DC current) ±0.5% of full scale (AC voltage & AC current)	±0.2% of full scale (Pt-100) ±0.3% of full scale (thermocouple)
Display	Colour change, 5 digit	Colour change, 5 digit	Colour change, 4 digit	Colour change, 5 digit	Colour change, 5 digit	Colour change, 5 digit
Sample rate	250 ms	250 ms	500 ms	–	20 ms	20 ms

Product	K3HB-V	K3HB-S	K3HB-C	K3HB-P	K3HB-R
					
Type	Advanced	Advanced	Advanced	Advanced	Advanced
Size	96 × 48 mm (1/8 DIN)	96 × 48 mm (1/8 DIN)	96 × 48 mm (1/8 DIN)	96 × 48 mm (1/8 DIN)	96 × 48 mm (1/8 DIN)
Indicator type	Weighing	Linear sensor	Up / down counting	Time interval	Rotary pulse
Input range	0.00 to 199.99 mV 0.000 to 19.999 mV 100.00 mV 199.999 mV	0 to 20 mA 4 to 20 mA 0 to 5 V -5 to 5 V -10 to 10 V	30 Hz (no voltage contact) 50 kHz (voltage pulse) 50 kHz (open collector)	30 Hz (no voltage contact) 50 kHz (voltage pulse) 50 kHz (open collector)	30 Hz (no voltage contact) 50 kHz (voltage pulse) 50 kHz (open collector)
Output type	Relay NPN PNP Linear Comms	Relay NPN PNP Linear Comms	Relay NPN PNP Linear BCD Comms	Relay NPN PNP Linear BCD Comms	Relay NPN PNP Linear BCD Comms
Supply voltage DC	24 VAC/VDC 100 to 240 VAC	24 VAC/VDC 100 to 240 VAC	24 VAC/VDC 100 to 240 VAC	24 VAC/VDC 100 to 240 VAC	24 VAC/VDC 100 to 240 VAC
Accuracy	±0.1% of full scale	±0.1% of full scale (one input) ±0.2% of full scale (two inputs)	-	±0.08% rgd±1 digit	±0.006% rgd±1 digit ±0.02% rgd±1 digit
Display	Colour change, 5 digit	Colour change, 5 digit	Colour change, 5 digit	Colour change, 5 digit	Colour change, 5 digit
Sample rate	20 ms	0.5 ms	-	-	-

Energy monitoring devices

Product	KM1 Series	KM-N2	KM-N3	KM50 Series	D6FZ-FGT Series	D6FZ-FGS Series	ZN Series
							
Measurement	Electricity	Electricity	Electricity	Electricity	Compressed air	Compressed air	Electricity
Usage	In panel applications	In panel applications	On panel applications	On panel applications	Compressed air measured at machine level	Compressed air measured at air lines level	Datalogger
Display	–	Yes	Yes	Yes	Yes	–	Yes
Multi-circuit measurement	Yes	Yes	Yes	–	–	–	–
Mountable to curved pipe	–	–	–	–	Yes	Yes	–
Support for Energy Management Analysis	Yes	Yes	Yes	Yes	–	–	–

Switching Components

Electromechanical Relays

Solid State Relays

Low Voltage Switch Gear

Monitoring Products

Pushbutton Switches







Terminal Blocks








Electromechanical Relays

Product	G2RV	G2R-S	LY	MKS	MY(S)	MKS(X)
						
Usage	Interface	Interface	General purpose	General purpose	General purpose	Special purpose
Poles	1	1 2	1 2 3 4	2 3	2 4	1 2
Terminals	Push-in plus Screw	Push-in plus Screw	Screw	Screw	Push-in plus Screw	Screw
Contact configurations	SPDT	SPDT DPDT	3PDT SPDT DPDT 4PDT DPDT bifurcated	3PDT DPDT	DPDT 4PDT 4PDT bifurcated	SPST-NC SPST-NO
Min. switching current	10 mA to 5 VDC	10 mA to 5 VDC (2 pole) 100 mA to 5 VDC (1 pole)	10 mA to 5 VDC (Bifurcated) 100 mA to 5 VDC (1, 2, 3, 4 pole)	10 mA to 1 VDC	0.1 mA to 1 VDC (Bifurcated) 1 mA to 1 VDC (4 pole) 1 mA to 5 VDC (2 pole)	-
Contact materials	AgSnIn AgSnIn + Au	AgSnIn	AgSnIn	AgSnIn	Ag (2 poles) AgNi + Au (4 poles)	AgSnIn
Features	Diode LED Mechanical flag	Mechanical flag	-	Mechanical flag	Mechanical flag	Resistive load switching
Optional features	Lockable test switch	Diode LED Lockable test button	CR circuit Diode LED	Diode LED Lockable test button Varistor	CR circuit Diode LED Lockable test button	Built-in operation indicators Lockable test button
Mounting	Din rail	Screw Din rail	Din rail	Din rail	Screw Din rail	Din rail






Product	MY4H	MYK	G4Q	G7J	G7L	G7Z
						
Usage	Special purpose	Special purpose	Special purpose	High power	High power	High power
Poles	4	2	2	4	1 2	4
Terminals	Screw	Screw	Screw	Screw PCB terminals Quick-connect	Screw PCB terminals Quick-connect	Screw
Contact configurations	4PDT 4PDT bifurcated	DPDT	DPDT	3PST-NO 4PST-NO DPST-NC DPST-NO SPST-NC	DPST-NO SPST-NO	3PST-NO 4PST-NO DPST-NC DPST-NO SPST-NC
Min. switching current	0.1 mA to 1 VDC (Bifurcated) 1 mA to 1 VDC	1 mA to 1 VDC	0.1 A to 5 VDC (Case type) 1 A to 5 VDC	10 mA to 24 VDC (Bifurcated) 100 mA to 24 VDC	100 mA to 5 VDC	1 mA to 5 VDC (contact block) 2 A to 24 VDC Aux. (relay)
Contact materials	-	-	-	-	-	-
Features	Hermetically Sealed	Mechanical flag	-	-	-	Mirror contact by Aux. contact block
Optional features	Class 1 Division 2	-	-	-	Momentary test- button	-
Mounting	Din rail	Din rail	Din rail	Clip (screw) Flange (screw)	Din rail Clip (screw) Flange (screw) Din rail (adapter)	Screw Din rail

Solid State Relays








Product	G3RV	G3R-I/O	G3F/G3FD	G3H/G3HD	G3B/G3BD	G3NA	G3NE
							
Usage	Interface	Interface	Interface	Interface	Interface	On/off switching	On/off switching
Control	1 phase	1 phase	1 phase	1 phase	1 phase	1 phase	1 phase
Terminals	Push-in plus Screw	Screw	Screw	Screw	Screw	Screw	Screw
Ampere	2 A (240 VAC resistive load) 3 A (24 VDC resistive load)	100 mA 2 A	2 A 3 A	3 A	3 A 5 A	90 A	20 A
Load voltage current (VAC)	100 to 240 VAC (-A(L))	–	100 to 240 VAC (-F)	100 to 240 VAC (-H)	100 to 240 VAC (-B)	24 to 240 VAC 200 to 480 VAC	100 to 240 VAC
Load voltage current (VDC)	5 to 24 VDC (-D)	4 to 48 VDC (-O) 5 to 24 VDC (-I)	4 to 48 VDC (-FD) 5 to 110 VDC (-FD)	4 to 48 VDC (-HD)	5 to 110 VDC (-BD)	5 to 200 VDC	–
Features	LED operation indicator Zero crossing	LED operation indicator Zero crossing	Zero crossing	Zero crossing	Zero crossing	LED operation indicator Protective cover Varistor Zero crossing	Varistor Zero crossing








Product	G3PA	G3PJ	G3PE	G3PH	G3PF	G3PW	G3ZA
							
Usage	On/off switching	Power control	On/off switching	On/off switching	On/off switching	Power control	Power control
Control	1 phase	1 phase	2-3 phase	1 phase	1 phase	1 phase	1 phase
Terminals	Screw	Push-in plus Screw	Screw	Screw	Screw	Screw	Screw
Ampere	60 A	25 A	45 A	150 A	35 A	60 A	Depends on SSRs used
Load voltage current (VAC)	24 to 240 VAC 200 to 480 VAC	100 to 480 VAC	100 to 240 VAC 200 to 480 VAC	100 to 240 VAC 180 to 480 VAC	100 to 240 VAC 200 to 480 VAC	100 to 240 VAC	100 to 240 VAC 400 to 480 VAC
Load voltage current (VDC)	–	–	–	–	–	–	–
Features	LED operation indicator Heat sink Protective cover Replaceable cartridge Varistor Zero crossing	LED operation indicator Heat sink Protective cover Zero crossing	LED operation indicator Heat sink Surge pass circuit Zero crossing	LED operation indicator Heat sink Protective cover Surge pass circuit Zero crossing	LED operation indicator Current transformer Heat sink Protective cover Zero crossing	Heat sink Zero crossing	–








Low Voltage Switch Gear








Product	J7KNA-AR	J7KNA	J7KN	J7KNU (-AR)	J7TKN	J7MN
						
Usage	Control switching	Motor switching	Motor switching	Control switching	Motor protection	Motor protection
Type	Mini contactor relay	Mini motor contactor	Motor contactor	Micro contactor relay Micro motor contactor	Thermal overload relay	Motor protection circuit breaker
Current rating	Low, up to 3 A	Low, up to 12 A/5.5 kW	High, up to 210 A/132 kW	Low, up to 3 A Low, up to 5 A/2.2 kW	Low, up to 0.12 A/800 A	Low, up to 0.10 A/100 A
Maximum power	–	4 to 5.5 kW	4 to 500 kW	2.2 kW	–	0.06 to 45 kW
Type of protection	–	–	–	–	With fuse	Fuseless
Function	Control	Control	Control	Control	Protect	Protect
DIN rail	35	35	35	15 35 (with adaptor)	35	35
Contact configuration	1 NC 2 NO/NC 3 NO 4 NO	1 NC	1 NC 2 NO/NC 1 NO	1 NC 1 NO 2 NO/NC (J7KNU-AR) 3 NO (J7KNU-AR) 4 NO (J7KNU-AR) 1*2 NC	–	–
Number of poles	4 Poles	3 Poles 4 Poles	3 Poles 4 Poles	3 Poles 4 Poles	–	–
AC3 400V rating	–	9 A 12 A	10 A >12 A	5 A	–	–




Monitoring Products

Product	K6CM-CIM	K6CM-ISM	K6CM-VBM	K8DT-AS	K8DT-AW	K8AK-AS	K8AK-AW
							
Monitoring type	Motor Condition	Motor Condition	Motor Condition	Single phase	Single phase	Single phase	Single phase
Function	Current	Insulation resistance	Vibration & Temperature	Current	Over/under current	Over/under current	Over/under current
Terminals	Push-in plus	Push-in plus	Push-in plus	Push-in plus	Push-in plus	Screw	Screw
Sensing range	–	–	–	2 to 500 mA AC/DC 0.1 to 5 A AC/DC 10 to 200 A AC/DC by CT	2 to 500 mA AC/DC 0.1 to 5 A AC/DC 10 to 200 A AC/DC by CT	20 mA to 8 A 100 or 200 A with current transformation	20 mA to 8 A 100 or 200 A with current transformation
Supply voltage AC	24 VAC 100 to 240 VAC	24 VAC 100 to 240 VAC	24 VAC 100 to 240 VAC	24 VAC 100 to 240 VAC	24 VAC 100 to 240 VAC	24 VAC 100 to 240 VAC	24 VAC 100 to 240 VAC
Supply voltage DC	24 VDC	24 VDC	24 VDC	24 VDC	24 VDC	24 VDC	24 VDC
Control output	Transistor (open collector)	Transistor (open collector)	Transistor (open collector)	Relay (1 SPDT) Transistor (open collector)	Relay (1 SPDT) Transistor (open collector)	Relay (1 SPDT)	Relay (2 SPDT)
Features	Additional software tool Alarm output Ethernet IP LCD display LED operation indicator Preventive maintenance	Additional software tool Alarm output Ethernet IP LCD display LED operation indicator Preventive maintenance	Additional software tool Alarm output Ethernet IP LCD display LED operation indicator Preventive maintenance	LED operation indicator	LED operation indicator	LED operation indicator	LED operation indicator

Product	K8DT-VS	K8DT-VW	K8AK-VS	K8AK-VW	K8DT-PH	K8AK-PH	K8DS-PH
							
Monitoring type	Single phase	Single phase	Single phase	Single phase	Three phase	Three phase	Three phase
Function	Voltage	Over/under voltage	Over/under voltage	Over/under voltage	Phase-loss Phase-sequence	Phase-loss Phase-sequence	Phase-loss Phase-sequence
Terminals	Push-in plus	Push-in plus	Screw	Screw	Push-in plus	Screw	Screw
Sensing range	1 to 150 VAC/DC 20 to 600 VAC/DC	1 to 150 VAC/DC 20 to 600 VAC/DC	1 to 600 V	1 to 600 V	Same as supply voltage	Same as supply voltage	Same as supply voltage
Supply voltage AC	24 VAC 100 to 240 VAC	24 VAC 100 to 240 VAC	24 VAC 100 to 240 VAC	24 VAC 100 to 240 VAC	200 to 480 VAC	200 to 480 VAC	200 to 480 VAC
Supply voltage DC	24 VDC	24 VDC	24 VDC	24 VDC	–	–	–
Control output	Relay (1 SPDT) Transistor (open collector)	Relay (1 SPDT) Transistor (open collector)	Relay (1 SPDT)	Relay (2 SPDT)	Relay (1 SPDT) Transistor (open collector)	Relay (1 DPDT)	Relay (1 SPDT)
Features	LED operation indicator	LED operation indicator	LED operation indicator	LED operation indicator	LED operation indicator	LED operation indicator	LED operation indicator

Product	K8DT-PM	K8AK-PM	K8DS-PM	K8AK-PA	K8DS-PA	K8DT-PZ	K8DS-PZ
							
Monitoring type	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase
Function	Over/under voltage Phase-loss Phase-sequence	Over/under voltage Phase-loss Phase-sequence	Over/under voltage Phase-loss Phase-sequence	Asymmetry Phase-loss Phase-sequence	Asymmetry Phase-loss Phase-sequence	Asymmetry Phase-loss Phase-sequence	Asymmetry Over/under voltage Phase-loss Phase-sequence
Terminals	Push-in plus	Screw	Screw	Screw	Screw	Push-in plus	Screw
Sensing range	Same as supply voltage	Same as supply voltage	Same as supply voltage	Same as supply voltage	Same as supply voltage	Same as supply voltage	Same as supply voltage
Supply voltage AC	200 to 240 VAC 3-wire 380 to 480 VAC 3-wire	200 to 240 VAC 3-wire 220 to 277 VAC 4-wire 380 to 480 VAC 3-wire	200 to 240 VAC 3-wire 380 to 480 VAC 3-wire	115 to 138 VAC 4-wire 200 to 240 VAC 3-wire 220 to 277 VAC 4-wire 380 to 480 VAC 3-wire	200 to 240 VAC 3-wire 380 to 480 VAC 3-wire	200 to 240 VAC 3-wire 380 to 480 VAC 3-wire	200 to 240 VAC 3-wire 380 to 480 VAC 3-wire
Supply voltage DC	–	–	–	–	–	–	–
Control output	Relay (1 SPDT) Transistor (open collector)	Relay (2 SPDT)	Relay (1 SPDT)	Relay (1 SPDT)	Relay (1 SPDT)	Relay (1 SPDT) Transistor (open collector)	Relay (1 SPDT)
Features	LED operation indicator	LED operation indicator	LED operation indicator	LED operation indicator	LED operation indicator	LED operation indicator	LED operation indicator

Product	K8DS-PU	K8AK-PW	K8AK-TS/PT	K8DT-TH	61F-GP-N8	61F-GPN-BT/-BC	K8DT-LS
							
Monitoring type	Three phase	Three phase	Temperature	Temperature	Level control	Level control	Level control
Function	Over/under voltage Phase-loss Phase-sequence	Over/under voltage	Phase-loss Phase-sequence Thermistor		Conductive level controller	Conductive level controller	Conductive level controller
Terminals	Screw	Screw	Screw	Push-in plus	Screw	Screw	Push-in plus
Sensing range	Same as supply voltage	Same as supply voltage	100 to 240 VAC 24 VAC/DC	100 to 240 VAC 24 VAC/DC	4 to 50 kΩ	0 to 100 MΩ (-BT) 1 to 100 kΩ (-BC)	10 to 100 kΩ
Supply voltage AC	200 to 240 VAC 3-wire 380 to 480 VAC 3-wire	115 to 138 VAC 4-wire 200 to 240 VAC 3-wire 220 to 277 VAC 4-wire 380 to 480 VAC 3-wire	24 VAC 100 to 240 VAC	24 VAC 100 to 240 VAC	–	–	24 VAC 100 to 240 VAC
Supply voltage DC	–	–	24 VDC	24 VDC	–	24 VDC	24 VDC
Control output	Relay (1 SPDT)	Relay (2 SPDT)	Relay (1 SPDT)	Relay (1 SPDT) Transistor (open collector)	Relay	Relay Transistor NPN (-BC)	Relay (1 SPDT) Transistor (open collector)
Features	LED operation indicator	LED operation indicator	LED operation indicator	LED operation indicator	Electrode holder PS- _S , PS-31, BF-1 and BS-1 LED operation indicator	Adjustable sensitivity LED operation indicator	LED operation indicator



Product	K8AK-LS	K7L	K2CU
			
Monitoring type	Level control	Level control	Level control
Function	Conductive level controller	Liquid leakage sensor amplifier	Heater burned out
Terminals	Screw	Push-in plus	Screw
Sensing range	10 to 100 kΩ	0 to 50 MΩ (-AT50) 1 to 50 MΩ (-AT50D)	0.25 to 4 A (-P) 4 to 80 A (-F)
Supply voltage AC	100 to 240 VAC	–	100 VAC (-F) 100 to 200 VAC (-P) 110 VAC (-F) 110 to 220 VAC (-P) 200 VAC (-F) 220 VAC (-F)
Supply voltage DC	24 VDC	12 to 24 VDC	–
Control output	Relay (1 SPDT)	Transistor PNP Transistor NPN	Relay
Features	LED operation indicator	Adjustable sensitivity LED operation indicator Liquid leakage sensor band F03-16PE	–

Pushbutton Switches

Product	A22N	A22NK	A22NS/W	M22N	A16
					
Application	Pushbutton switches	Selector switches	Selector switches	Indicators	Pushbutton switches
Size	22 mm	22 mm	22 mm	22 mm	16 mm
Operation	Momentary or ON/OFF	–	Momentary or ON/OFF	–	Momentary or ON/OFF
Mounting	Nut-mounting	Nut-mounting	Nut-mounting	Nut-mounting	Nut-mounting
Number of contacts	Up to 6, configurable	2 notches 3 notches Up to 6, configurable	Up to 6, configurable	–	1 or 2
Rated load	6 A, 240 VAC 8 A, 24 VDC 10 A, 120 VAC 10 A, 24 VAC	–	100, 110, 120 VAC (LED) 200, 220, 230, 240 VAC (LED) 6 VAC/VDC (LED) 12 VAC/VDC (LED) 24 VAC/VDC (LED)	100, 110, 120 VAC (LED) 200, 220, 230, 240 VAC (LED) 6 VAC/VDC (LED) 12 VAC/VDC (LED) 24 VAC/VDC (LED)	3 A, 250 VAC 3 A, 30 VDC 5 A, 125 VAC

Product	A16_-P	A3U	A165K	A165S/W	M16
					
Application	Pushbutton switches	Pushbutton switches	Selector switches	Selector switches	Indicators
Size	16 mm	22 mm	16 mm	16 mm	16 mm
Operation	Momentary or ON/OFF	Momentary or ON/OFF	–	Momentary or ON/OFF	–
Mounting	Panel- or PCB-mounting	Nut-mounting	Nut-mounting	Nut-mounting	Nut-mounting
Number of contacts	1 or 2	–	2 notches	2 notches 3 notches	–
Rated load	5, 12, 24 VAC/VDC (Incandescent) 5, 12, 24 VDC (LED)	0.1 A, 30 VDC	–	5, 12, 24 VDC (LED)	5, 12, 24 VAC/VDC (Incandescent) 5, 12, 24 VDC (LED)

Terminal Blocks

Product	XW5_-S	XW5_-P
		
Technology	Screw	Push-in plus
Type	Feed through Ground Special	Feed through Ground
Nominal cross section (mm²)	2,5 4 6 10 16 35 70 150	1 2,5 4
Colour	Black Blue Gray Green/Yellow	Blue Gray Green/Yellow
Category	Fuse Knife edge disconnect Multi conductor Multi tier Standard	Multi conductor Multi tier Standard

Software

Software

Software

Product	CX-One	Sysmac Studio	CX-Configurator FDT	CX-Drive	CX-Thermo	Trajexia Studio
Type	Configuration Programming	Configuration Programming	Configuration	Configuration	Configuration	Programming
Target devices	CS/CP/CJ CompoNet Profibus Profinet Smart Slice couplers Omron Yaskawa servos Omron Yaskawa inverters ZS ZX CelciuX ^o E* Third party devices with DTMs	Sysmac Controllers - NJ/ NX/NY Series NX Safety HMI Networks Servos & Drives Vision Sensors	Smart Slice couplers Third party devices with DTMs	Omron servos Omron inverters	CelciuX ^o E5_C E5AN E5AN-H E5AR(-T) E5CN E5CN-H E5EN E5EN-H E5ER(-T) E5GN E5ZN	Trajexia MC04 Trajexia MC16 Trajexia MCH72

Product	CX-Supervisor	CX-Server LITE	CX-Server OPC	CX-Compolet/ SYSMAC Gateway	NS Runtime PC	Kepware OPC Server
Type Target devices	 Visualisation Sysmac Controllers – NJ/NX/NY Series CS/CP/CJ NJ/NX/NY Series IPC Trajexia MC04 Trajexia MC16 Trajexia MCH72 ZS ZX CelciuX° E*	 Visualisation Sysmac Controllers – NJ/NX/NY Series CS/CP/CJ NJ/NX/NY Series IPC	 Visualisation Sysmac Controllers – NJ/NX/NY Series CS/CP/CJ NJ/NX/NY Series IPC	 Visualisation Sysmac Controllers – NJ/NX/NY Series CS/CP/CJ NJ/NX/NY Series IPC	 Visualisation CS/CP/CJ IPC	 Visualisation NJ/NX/NY Series

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