# Empowering people through automation

# core products CATALOG

# OMRON

#### Industrial Automation

November, 2023 automation.omron.com



## OMRON SYEARS ANNIVERSARY

Omron Automation is an industrial automation partner that creates, sells, and services complete automation solutions that include sensing, control, safety, vision, motion, robotics and more.

Established in 1933, Omron's 30,000 employees help businesses solve problems with creativity in more than 110 countries. Our flexible, customizable solutions successfully tackle challenges across industries, whether these be a need for high-performance machines in food and beverage packaging or plant-wide traceability in automotive manufacturing.

As a total solutions provider, we carry a rich and diverse portfolio of automation technologies and services. From sensors, barcode readers, and control panel components to vision systems, collaborative and mobile robots, and programmable logic controllers, our offering can be used to solve nearly any application in any industry. We also offer related product services such as training and maintenance support for Omron technologies as well as professional services for when you need industry expertise.

To help you navigate our wide-ranging portfolio and home in on the specific products needed for your application, we have developed this core product guide that presents our most popular technologies and services in a clear and concise format.

#### Learn more >



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Our Mission: To improve lives and contribue to a better society

90+1 350

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Years automation experience

Offices in **117 countries** 

5.9 1 **Billion USD** annual sales



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# E2E Next - Long Range DC 3 Wire Inductive Sensors

- Industry leading sensing distances with up to 4x the sensing range of standard models
- IO-Link is standard with DC 3-wire PNP models Multiple connection Types
- Multiple connection Types (including M8 QD, M12 QD, M12 Pig-tail QD, PVC cable and PVC Robot Cable)
- Harsh condition robustness with IP67, IP69K, and IP67G



Product Page

Product Video

Barrel Size	Sensing Distance	Shielded /Unshielded	Connection Method	PNP Model	NPN Model
	1.5 mm		M8 Connector	E2E-X1R5B1D8-M5	E2E-X1R5C18-M5
	2mm			E2E-X2B1D8-M5	E2E-X2C18-M5
	4mm	Shielded	(3 pins)	E2E-X4B1D8-M5	E2E-X4C18-M5
	1.5 mm	Shielded		E2E-X1R5B1D8-M1TJ 0.3M	E2E-X1R5C18-M1TJ 0.3M
	2mm		M12 Pigtail*	E2E-X2B1D8-M1TJ 0.3M	E2E-X2C18-M1TJ 0.3M
M8	4mm			E2E-X4B1D8-M1TJ 0.3M	E2E-X4C18-M1TJ 0.3M
IVIO	2 mm		M8 Connector	E2E-X2MB1D8-M5	E2E-X2MC18-M5
	4mm			E2E-X4MB1D8-M5	E2E-X4MC18-M5
	8mm	Unshielded	(3 pins)	E2E-X8MB1D8-M5	E2E-X8MC18-M5
	2 mm	Unshielded		E2E-X2MB1D8-M1TJ 0.3M	E2E-X2MC18-M1TJ 0.3M
	4mm		M12 Pigtail*	E2E-X4MB1D8-M1TJ 0.3M	E2E-X4MC18-M1TJ 0.3M
	8mm			E2E-X8MB1D8-M1TJ 0.3M	E2E-X8MC18-M1TJ 0.3M
	2 mm			E2E-X2B1D12-M1	E2E-X2C112-M1
	4mm	4mm Shielded	M8 Connector (3 pins)	E2E-X4B1D12-M1	E2E-X4C112-M1
M12	9mm			E2E-X9B1D12-M1	E2E-X9C112-M1
IVI I Z	5 mm			E2E-X5MB1D12-M1	E2E-X5MC112-M1
	8mm	Unshielded		E2E-X8MB1D12-M1	E2E-X8MC112-M1
	16mm			E2E-X16MB1D12-M1	E2E-X16MC112-M1
	5 mm			E2E-X5B1D18-M1	E2E-X5C118-M1
		Shielded		E2E-X8B1D18-M1	E2E-X8C118-M1
1410	14mm		M12 Connector	E2E-X14B1D18-M1	E2E-X14C118-M1
M18	10 mm		(4 pins)	E2E-X10MB1D18-M1	E2E-X10MC118-M1
	16mm	Unshielded		E2E-X16MB1D18-M1	E2E-X16MC118-M1
	30mm			E2E-X30MB1DL18-M1	E2E-X30MC1L18-M1
	10 mm			E2E-X10B1D30-M1	E2E-X10C130-M1
	15mm	Shielded		E2E-X15B1D30-M1	E2E-X15C130-M1
M30	23mm			E2E-X23B1D30-M1	E2E-X23C130-M1
IVI3U	18 mm			E2E-X18MB1D30-M1	E2E-X18MC130-M1
	30mm	Unshielded		E2E-X30MB1DL30-M1	E2E-X30MC1L30-M1
	50mm			E2E-X50MB1DL30-M1	E2E-X50MC1L30-M1

Note: Models shown are normally open, normally closed options are available.

\* 0.3M pre-wired with 4 pin M12 connector on the end.

#### E2EW -Metal Face Proximity Sensors

- Extended sensing range, models from 1x to 4x standard sensing range
- Factor 1 sensing of ferrous and non-ferrous metals
- Weld field immunity
- IP67 rating for environmental robustness
- Proprietary slag resistance coating
- IO-link configurability and output monitoring



Product Page

Product Video

onnection	Sensing Range	Size	Sensing Distance	PNP	NPN
		M12	7 mm	E2EW-X7B1T12-M1TJ 0.3M	E2EW-X7C112-M1TJ 0.3M
M12 pigtail*		M18	12 mm	E2EW-X12B1T18-M1TJ 0.3M	E2EW-X12C118-M1TJ 0.3M
	- 4X	M30	22 mm	E2EW-X22B1T30-M1TJ 0.3M	E2EW-X22C130-M1TJ 0.3M
	- 4X	M12	7 mm	E2EW-X7B1T12 2M	E2EW-X7C112 2M
2m Cable		M18	12 mm	E2EW-X12B1T18 2M	E2EW-X12C118 2M
		M30	22 mm	E2EW-X22B1T30 2M	E2EW-X22C130 2M
OC 3-Wire Metal Bo	ody with Spatter Resis	tant Coating			
Connection	Sensing Range	Size	Sensing Distance	PNP	NPN
		M12	7 mm	E2EW-QX7B1T12-M1TJ 0.3M	E2EW-QX7C112-M1TJ 0.3M
M12 pigtail*		M18	12 mm	E2EW-QX12B1T18-M1TJ 0.3M	E2EW-QX12C118-M1TJ 0.3M
		M30	22 mm	E2EW-QX22B1T30-M1TJ 0.3M	E2EW-QX22C130-M1TJ 0.3M
	- 4X	M12	7 mm	E2EW-QX7B1T12-M1	E2EW-QX7C112-M1
M12 4pin		M18	12 mm	E2EW-QX12B1T18-M1	E2EW-QX12C118-M1
		M30	22 mm	E2EW-QX22B1T30-M1	E2EW-QX22C130-M1
M12 Pigtail		M12	3 mm	E2EW-QX3D112-M1TGJ 0.3M	_
M12 Pigtail		M18	7 mm	E2EW-QX7D118-M1TGJ 0.3M	_
M12 Pigtail		M30	12 mm	E2EW-QX12D130-M1TGJ 0.3M	_
2m Cable	— 2x	M12	3 mm	E2EW-QX3D112 2M	E2EW-QX3D212 2M
2m Cable		M18	7 mm	E2EW-QX7D118 2M	E2EW-QX7D218 2M
2m Cable		M30	12 mm	E2EW-QX12D130 2M	E2EW-QX12D230 2M
OC 2-Wire Standar	d Metal Body				
Connection	Sensing Range	Size	Sensing Distance	PNP	NPN
M12 Pigtail		M12	3 mm	E2EW-X3D112-M1TGJ 0.3M	_
M12 Pigtail		M18	7 mm	E2EW-X7D118-M1TGJ 0.3M	—
M12 Pigtail	24	M30	12 mm	E2EW-X12D130-M1TGJ 0.3M	_
2m Cable	— 2x	M12	3 mm	E2EW-X3D112 2M	E2EW-X3D212 2M
2m Cable		M18	7 mm	E2EW-X7D118 2M	E2EW-X7D218 2M
2m Cable		M30	12 mm	E2EW-X12D130 2M	E2EW-X12D230 2M

#### E3Z - Compact Photoelectric Sensor

- General purpose photoelectric family with all common sensing modes at long range
- Minimal optical axis deviation for easy alignment
- IP67 for water resistance
- Intensive shielding for highest noise immunity (EMC)
- Multiple molding housing for high mechanical resistance





Sensor Type	Sensor Distance	Connection	PNP Model	NPN Model
		2m Cable	E3Z-T81A	E3Z-T61A
	10m (Red LED)	M8 Connector (4 pins)	E3Z-T86A	E3Z-T66A
Through-beam	1 Ener (Instrument I ED)	2m Cable	E3Z-T81	E3Z-T61
(emitter+receiver)	15m (Infrared LED)	M8 Connector (4 pins)	E3Z-T86	E3Z-T66
	20m (Infrared LED)	2m Cable	E3Z-T82 2M	E3Z-T62 2M
	30m (Infrared LED)	M8 Connector (4 pins)	E3Z-T87	E3Z-T67
Retro-reflective with MSR		2m Cable	E3Z-R81	E3Z-R61
function	0.1 to 4m (Red LED)	M8 Connector (4 pins)	E3Z-R86	E3Z-R66
		2m Cable	E3Z-D82	E3Z-D62
Diffuse-reflective	1m (Infrared LED)	M8 Connector (4 pins)	E3Z-D87	E3Z-D67
De elemente d'anne receitere		2m Cable	E3Z-LS81	E3Z-LS61
Background suppression	20 to 200mm (Red LED)	M8 Connector (4 pins)	E3Z-LS86	E3Z-LS66

Note:

For sensors with IO-Link, refer to the catalog on the website automation.omron.com

Note: Tables include representative part numbers. Please consult the product page for more details.

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#### E3FA - M18 Barrel Photoelectric Sensor

- Simplicity in selection and installation
- Compact size with flush mounting option
- IP67, IP69K for wash down resistance
- Straight or right angle (E3RA) models in cylindrical M18 plastic housing
- Background suppression, Limited Distance and Transparent detection models available





Sensor Type	Sensor Distance	Connection	PNP Model	NPN Model
Through-beam (emitter +	20m (Dad LED)	2m Cable	E3FA-TP11 2M	E3FA-TN11 2M
receiver)*	20m (Red LED)	M12 Connector (4 pins)	E3FA-TP21	E3FA-TN21
Retro-reflective with MSR		2m Cable	E3FA-RP11 2M	E3FA-RN11 2M
function	0.1 to 4m (Red LED)	M12 Connector (4 pins)	E3FA-RP21	E3FA-RN21
		2m Cable	E3FA-DP11 2M	E3FA-DN11 2M
	100mm (Red LED)	M12 Connector (4 pins)	E3FA-DP21	E3FA-DN21
Diffuse-reflective*	300mm (Red LED)	2m Cable	E3FA-DP12 2M	E3FA-DN12 2M
Diffuse-reflective		M12 Connector (4 pins)	E3FA-DP22	E3FA-DN22
		2m Cable	E3FA-DP13 2M	E3FA-DN13 2M
	1m (Red LED)	M12 Connector (4 pins)	E3FA-DP23	E3FA-DN23
		2m Cable	E3FA-LP11 2M	E3FA-LN11 2M
	100mm (Red LED)	M12 Connector (4 pins)	E3FA-LP21	E3FA-LN21
Background suppression		2m Cable	E3FA-LP12 2M	E3FA-LN12 2M
	200mm (Red LED)	M12 Connector (4 pins)	E3FA-LP22	E3FA-LN22

\*Note for these sensing modes Infrared LED models are available.

Note: Tables include representative part numbers. Please consult the product page for more details.



### E3Z-F -

#### M18 Barrel Mount Photoelectric Sensor

- Visible alignment spot simplifies set-up
- Popular M18 nose mounting
- Models with infrared LEDs available
- Offers various types of sensing distances



Product Page

Sensor Type	Sensor Distance	Connection	PNP Model	NPN Model
Through-beam	20 m	2m Cable	E3Z-FTP11 2M	E3Z-FTN11 2M
(emitter+receiver)*	20 m	M12 Connector (4 pins)	E3Z-FTP21	E3Z-FTN21
Retro-reflective with MSR	0.1 to 4m	2m Cable	E3Z-FRP11 2M	E3Z-FRN11 2M
Function	0.1 to 4m	2m Cable     E3Z-FTP11 2M       M12 Connector (4 pins)     E3Z-FTP21	E3Z-FRP21	E3Z-FRN21
	100 mm	2m Cable	E3Z-FDP11 2M	E3Z-FDN11 2M
	100 mm	M12 Connector (4 pins)	E3Z-FDP21	E3Z-FDN21
	300 mm	2m Cable	E3Z-FDP12 2M	E3Z-FDN12 2M
		M12 Connector (4 pins)	E3Z-FDP22	E3Z-FDN22
Diffuse-reflective*	500	2m Cable	E3Z-FDP13 2M	E3Z-FDN13 2M
	500 mm	M12 Connector (4 pins)	E3Z-FDP23	E3Z-FDN23
	1	2m Cable	E3Z-FDP14 2M	E3Z-FDN14 2M
	1 m	M12 Connector (4 pins)	E3Z-FDP24	E3Z-FDN24

Note:

Reflectors for retroreflective models are sold separately under code E39-R1S \*Note for these sensing modes Infrared LED models are available

Note: Tables include representative part numbers. Please consult the product page for more details.

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#### E3AS-HL - Photoelectric Sensor

- Limited effect of color or reflectivity
- Small and complex object detection
- Line and spot beam for 150mm and 500mm sensing distances
- IP69K and IP67G
- Ecolab tested and certified detergent resistance
- Advanced ease-of-use, single teach button, OLED screen
- IO-Link distance output monitoring and configuration



🕀 Product Page



Sensor Type	Sensor Distance	Beam Type	Connection	PNP Model (I/O Link)	NPN Model
	500 mm	Spot		E3AS-HL500MT-M1TJ 0.3M	E3AS-HL500MN-M1TJ 0.3M
	500 mm	Line	Pre-wire M12 Connector	E3AS-HL500LMT-M1TJ 0.3M	E3AS-HL500LMN-M1TJ 0.3M
	150 mm	Spot		E3AS-HL150MT-M1TJ 0.3M	E3AS-HL150MN-M1TJ 0.3M
CMOS laser	150 mm	Line		E3AS-HL150LMT-M1TJ 0.3M	E3AS-HL150LMN-M1TJ 0.3M
CIVIOS laser	500 mm	Spot	M8 4pin	E3AS-HL500MT M3	E3AS-HL500MN M3
	500 mm	Line		E3AS-HL500LMT M3	E3AS-HL500LMN M3
	150 mm	Spot		E3AS-HL150MT M3	E3AS-HL150MN M3
		Line		E3AS-HL150LMT M3	E3AS-HL150LMN M3

#### E3AS-F - Photoelectric Sensor

- Minimal color influence on sensing distance
- 50mm to 1500mm sensing range
- IP69K and IP67G
- Ecolab tested and certified detergent resistance
- Single teach button
- IO-Link distance output monitoring and configuration





Sensor Type	Sensor Distance	Material	Connection	PNP Model (I/O Link)	NPN Model
	50 - 1500 mm	Chaimlean Chaol	Pre-wired M12 Connector	E3AS-F1500IMT-M1TJ 0.3M	E3AS-F1500IMN-M1TJ 0.3M
		Stainless Steel	M8 4pin Connector	E3AS-F1500IMT M3	E3AS-F1500IMN M3
		Plastic	Pre-wired M12 Connector	E3AS-F1500IPT- M1TJ 0.3M	E3AS-F1500IPN-M1TJ 0.3M
Time of Flight			M8 4pin Connector	E3AS-F1500IPT M3	E3AS-F1500IPN M3
with Background Suppression	50 - 1000 mm	Stainless Steel	Pre-wired M12 Connector	E3AS-F1000IMT-M1TJ 0.3M	E3AS-F1000IMN-M1TJ 0.3M
			M8 4pin Connector	E3AS-F1000IMT M3	E3AS-F1000IMN M3
		Plastic	Pre-wired M12 Connector	E3AS-F1000IPT-M1TJ 0.3M	E3AS-F1000IPN-M1TJ 0.3M
			M8 4pin Connector	E3AS-F1000IPT M3	E3AS-F1000IPN M3

#### E3AS-L - Photoelectric Sensor

- Enhanced background suppression-Reduced black/white error and differential travel
- 200mm or 80mm sensing range
- IP69K and IP67G
- Ecolab tested and certified detergent resistance
- Single teach button
- IO-Link configurability





Sensor Type	Sensor Distance	Material	Connection	PNP Model (I/O Link)	NPN Model
	10 - 200 mm	Stainless Steel	Pre-wired MT2	E3AS-L200MT-M1TJ 0.3M	E3AS-L200MN-M1TJ 0.3M
Diffuse with Background	10 - 80 mm			E3AS-L80MT-M1TJ 0.3M	E3AS-L80MN-M1TJ 0.3M
Suppression	10 - 200 mm		M8 4pin Connector	E3AS-L200MT M3	E3AS-L200MN M3
	10 - 80 mm			E3AS-L80MT M3	E3AS-L80MN M3

#### E3S-DC - Color Mark Detection Sensor

- High signal to noise ratio detects subtle color differences.
- High luminance, three-element (RGB) LED light source for greater light intensity.
- Highly efficient optics technology provides high power and enables stable detection even of subtle color differences.



Product Page

Туре	Sensor Distance	Connection	Output	Baud Rate (IO-Link)	Model
Diffuse - reflective (mark detection)	10 ± 3mm	M12 Connector	PNP	COM 3 (230, 4 kbps)	E3S-DCP21-IL3
			NPN		E3S-DCN21

#### E3NX-FA - High Speed Digital Fiber Amplifier

- Easy teaching by Smart tuning within a few seconds
- New N-Smart technology provides significant improvement for sensing distance, minimum object detection and speed
- Easy and transparent information about sensor status by Solution Viewer and Change Finder function
- EtherCAT Communication unit for high-speed field bus connectivity



Setting/Function	Sensor Distance	Inputs/Outputs	Connection	PNP Model	NPN Model
Standard Models	Sensing distance up to 4m depending on	1 output	2 m	E3NX-FA41 2M	E3NX-FA11 2M
Advanced Models			2 m	E3NX-FA51 2M	E3NX-FA21 2M
Analog Output Models	fiber used	2 outputs	2 m	E3NX-FA41AN 2M	E3NX-FA11AN 2M

Note: Infrared standard models are available as well as connector options for standard, advanced, and infrared models.

#### E3X-HD - Advanced Fiber Amplifier

- Simple one-button smart tuning for sensor threshold and light intensity
- Confirm settings and status easily with dual digital display
- Automatic compensation for large objects and low reflectance dark targets



Setting / Function	Range	Connection	PNP Model	NPN Model
Advanced digital amplifier	Lie to Angelen and an en Channes de l	2m Cable	E3X-HD41 2M	E3X-HD11 2M
		M8 Connector	E3X-HD44	E3X-HD14

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#### E3X-NA / SD -Fiber Optic Amplifiers

- Easy adjustment with potentiometer
- Mutual interference prevention
- Enhanced water resistance types





Setting / Function	Distance	Connection	PNP Model	NPN Model
Potentiometer and Bargraph	Depending on the	Jun Cabla	E3X-NA41	E3X-NA11
Teach Button and digital display	fiber optic model	2m Cable	E3X-SD51	E3X-SD21

#### E3NX-CA -Colormark Fiber Amplifier

- High signal to noise ratio makes subtle color difference detection easy
- Able to handle glossy materials
- Stable even when lots change



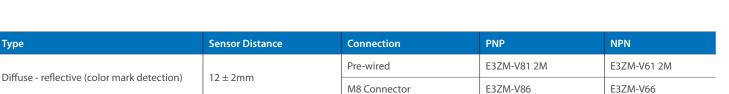
Model	Sensor Distance	Connection	Inputs / Outputs	PNP Model	NPN Model
Standard Model	Sensor distance depends on selected fiber model		1 output	E3NX-CA41 2M	E3NX-CA11 2M
Advanced Model		2m Cable	2 outputs / 1 input	E3NX-CA51 2M	E3NX-CA21 2M

\*For fiber options, or models for special applications, refer to the E32 fibers catalog on the Omron website.

- Compact SUS 316L colormark photoelelctric sensor
- Ideal for high contrast colormark detection in a small package
- IP69K and IP67 rated for environmental robustness
- 50 us response time
- Single teach button

Туре

Notes: Additional model numbers with different cable lengths, connections and options are available.	
Tables include representative part numbers. Please consult the product page for more details.	





#### ZW Confocal Displacement -Measurement Sensors

- Static Resolution of 0.25 μm
- EtherCAT, EtherNet/IP, EtherNet TCP/UDP, and Serial RS-232C Network communications included
- Analog and Discrete I/O for measurement and functions
- Stable measurements for any material including glass and mirror-like surfaces
- Simple programming with Sysmac Studio software
- Compact sensor heads with no electronic parts electrical noise immune and does not generate heat





Measuring Range	Spot Diameter	Cable Length	Controller	Sensor Head
$10 \pm 0.5 \text{ mm}$	4 µm	2 m		ZW-S8010 2M
20 ± 1 mm	7 μm	2 m	ZW-8000T	ZW-S8020 2M
30 ± 2 mm	10 µm	2 m		ZW-S8030 2M
$10 \pm 0.5 \text{ mm}$	50 μm	2 m		ZW-S7010 2M
20 ± 1 mm	70 μm	2 m	ZWL 2000T	ZW-S7020 2M
$30 \pm 2 \text{ mm}$	100 μm	2 m	ZW-7000T	ZW-S7030 2M
40 ± 3 mm	120 μm	2 m		ZW-S7040 2M
10 ± 0.5 mm	9 μm	2 m		ZW-S5010 2M
20 ± 1 mm	13 µm	2 m	ZW-5000T	ZW-S5020 2M
30 ± 2 mm 18 μm		2 m	2 m	
Accessories				
Туре		Cable Length		Sensor Head
Serial RS-232C Cable for persona	al computer	2m		ZW-XRS2

Notes: Pen-shaped straight and right-angle sensor heads are also available. Shorter 0.3 meter sensor cables are available along with Extension Fiber Cables (2, 5, 10, 20, and 30 meters long).

# ZX1 and ZX2 CMOS Laser Measurement Sensors

- Down to 1.5um resolution
- Best in class performance for accuracy and speed
- Increased measurement range
- Stable measurement for objects with any surface
- Simple configuration by one-button, Smart Tuning
- Compact size for quick mounting





ZX1 Sensor Heads with built-in Amplifier					
Range	Resolution	Connection	PNP Model	NPN Model	
50 ± 10 mm	2um		ZX1-LD50A81 2M	ZX1-LD50A61 2M	
100 ± 35 mm	7um	2 m Cable	ZX1-LD100A81 2M	ZX1-LD100A61 2M	
300 ± 150 mm	30um	2 m Cable	ZX1-LD300A81 2M	ZX1-LD300A61 2M	
600 ± 400 mm	80um		ZX1-LD600A81 2M	ZX1-LD600A61 2M	
ZX2 Sensor Heads					
Range	Resolution	Connection	Line-Beam Model	Spot-Beam Model	
50 ± 10 mm	1.5um	Amplifier Unit	ZX2-LD50L	ZX2-LD50	
100 ± 35 mm	5um	Amplifier Unit	ZX2-LD100L	ZX2-LD100	
ZX2 Amplifier Units					
Range	Resolution	Connection	PNP Model	NPN Model	
N/A	N/A	2 m Cable	ZX2-LDA41 2M	ZX2-LDA11 2M	

#### Sensor Cordsets

- Standard PVC or PUR cordsets for a wide variety of applications
- M8 and M12 connector sizes with 3 and 4 pin configurations
- Straight, right angle, and double ended variations available
- 2m, 5m, and 10m cordset lengths are available. Alternative lengths are also available



Material	Connector Size	No. of Pins	Length	Straight Connector	Right Angle Connector
			2 m	XS3F-M8PUR3S2M	XS3F-M8PUR3A2M
		3 Pins	5 m	XS3F-M8PUR3S5M	XS3F-M8PUR3A5M
	M8		10 m	XS3F-M8PUR3S10M	XS3F-M8PUR3A10M
	IVI8		2 m	XS3F-M8PUR4S2M	XS3F-M8PUR4A2M
PUR			5 m	XS3F-M8PUR4S5M	XS3F-M8PUR4A5M
		4 Pins	10 m	XS3F-M8PUR4S10M	XS3F-M8PUR4A10M
		4 Pins	2 m	XS2F-M12PUR4S2M	XS2F-M12PUR4A2M
	M12		5 m	XS2F-M12PUR4S5M	XS2F-M12PUR4A5M
			10 m	XS2F-M12PUR4S10M	XS2F-M12PUR4A10M
			2 m	XS3F-M8PVC3S2M	XS3F-M8PVC3A2M
		3 Pins	5 m	XS3F-M8PVC3S5M	XS3F-M8PVC3A5M
	M8		10 m	XS3F-M8PVC3S10M	XS3F-M8PVC3A10M
	IVI8		2 m	XS3F-M8PVC4S2M	XS3F-M8PVC4A2M
		4 Pins	5 m	XS3F-M8PVC4S5M	XS3F-M8PVC4A5M
PVC			10 m	XS3F-M8PVC4S10M	XS3F-M8PVC4A10M
PVC			2 m	XS2F-M12PVC3S2M	XS2F-M12PVC3A2M
		3 Pins	5 m	XS2F-M12PVC3S5M	XS2F-M12PVC3A5M
	M12		10 m	XS2F-M12PVC3S10M	XS2F-M12PVC3A10M
	17112		2 m	XS2F-M12PVC4S2M	XS2F-M12PVC4A2M
		4 Pins	5 m	XS2F-M12PVC4S5M	XS2F-M12PVC4A5M
			10 m	XS2F-M12PVC4S10M	XS2F-M12PVC4A10M

#### Double-ended cordsets

Material	Connector Size	No. of Pins	Length	Straight Connector	Right Angle (Socket)/Straight (Plug)
			2 m	XS2W-D421-D81-F	XS2W-D424-D81-F
PVC	M12	4	5 m	XS2W-D421-G81-F	XS2W-D424-G81-F
		10 m	XS2W-D421-J81-F	XS2W-D424-J81-F	

#### S8VK - Complete Line Of Power Supplies

- Compact single-phase and three-phase power supplies
- Operating Temperature: -40°C to 70°C (S8VK-G and S8VK-T) and -25°C to 60°C (S8VK-C)
- 5 year warranty
- Power Boost Function: 120% for 10s (S8VK-G/T)





Line	Power	Output Voltage	Output Current	Capacity	Model
			2.5 A	60 W	S8VK-C06024
Economy		24V	5 A	120 W	S8VK-C12024
Single-Phase		240	10 A	240 W	S8VK-C24024
			20 A	480 W	S8VK-C48024
		5V	3 A	15 W	S8VK-G01505
	100 to 240 VAC	12V	2.5 A	30 W	S8VK-G03012
	90 to 350 VDC		1.3 A	30 W	S8VK-G03024
General Purpose			2.5 A	60 W	S8VK-G06024
Single-phase		24V	5 A	120 W	S8VK-G12024
			10 A	240 W	S8VK-G24024
			20 A	480 W	S8VK-G48024
		48V	10 A	480 W	S8VK-G48048
			5 A	120 W	S8VK-T12024
Three-phase	380 to 480 VAC	24V	10 A	240 W	S8VK-T24024
Thee-phase	450 to 600 VDC	240	20 A	480 W	S8VK-T48024
			40 A	960 W	S8VK-T96024
		24VDC	10A	240W	S8VK-WB24024
Environmentally Resistant 3-Phase Power Supply with Reduced Footprint and Predicitve		48VDC	5A	24000	S8VK-WB24048
	380V to 480 VAC	24VDC	20A	480W	S8VK-WB48024
	450 to 600 VDC"	48VDC	10A	40010	S8VK-WB48048
Maintnenace Features		24VDC	60A	960W	S8VK-WB96024
		48VDC	30A	200 10	S8VK-WB96048

Note: Tables include representative part numbers.

#### S8VK-X - Power Supply With EtherNet / IP

- Product replacement time, output voltage, output current, and more can be monitored remotely on the Ethernet/IP network
- Product status can be checked on-site using the indication monitor
- Remote monitoring with included software tool



Line	Power	Output Voltage	Output Current	Capacity	Model
EtherNet/IP			3.75 A	90 W	S8VK-X09024A-EIP
Communication With Display			5 A	120 W	S8VK-X12024A-EIP
		10 A	240 W	S8VK-X24024A-EIP	
	100 to 240 VAC	24V	2.5 A	60 W	S8VK-X06024-EIP
90 to 350 VDC EtherNet/IP Communication Without Display	90 to 350 VDC		3.75 A	90 W	S8VK-X09024-EIP
			5 A	120 W	S8VK-X12024-EIP
			10 A	240 W	S8VK-X24024-EIP
			20 A	480 W	S8VK-X48024-EIP

#### S8V-CP - Electronic Circuit Protector

- Compact design saves panel space compared to standard circuit breakers
- 3-step LED indicators for easy identification of channel status
- 4 and 8 channel models available with individual output current adjustments for various loads
- Available UL Class-2 output model



Product Page

Power	Output Voltage	Number of Outputs	Maximum Input Current	Adjustment Output Current	Model
24 VDC 24 VDC	4	40A	2 A up to 10 A	S8V-CP0424	
	8	70A	2 A up to 10 A	S8V-CP0824	

Note: Tables include representative part numbers.



#### H5CX-N - Digital Timer

- 15 Different timing settings
- High Precision and Excellent Performance
- Available IP66 rating with optional waterproof cover
- Time parameterization from 0.001s to 9999h



Power	Terminal Type	Output Type	Model
12 - 24V AC/DC	12 - 24V AC/DC Screw	Relay	H5CX-AD-N AC24/DC12-24
		Transistor	H5CX-ASD-N DC12-24/AC24
100 - 240 VAC		Relay	H5CX-A-N AC100-240

Note: Tables include representative part numbers.

Please refer to the <u>Component selection guide</u> for more details.

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#### H5CC - Digital Timer

- The H5CC is the improved version of our digital timer with added visual clarity
- 15 different timing modes
- Replacement time notification function alert the user of potential maintenance needs.
- User-friendly interface in a white LCD screen
- Status indicators integrated into front buttons.



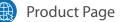
Product Page

Power Supply	Terminal Type	Outputs	Model
	Screw Terminal	Contact Output (time-limit SPDT)	H5CC-A
100-240 VAC	Screw Terminal	Contact Output (SPDT) + Transistor	H5CC-AU
	11-pin Socket	Output (SPST)	H5CC-A11
	Screw Terminal	Contact Output (time-limit SPDT)	H5CC-AD
12-48 VDC / 24 VAC		Contact Output (SPDT) + Transistor Output (SPST)	H5CC-AUD
24-240 VDC / VAC	11-pin Socket	Contact Output (time-limit SPDT)	H5CC-A11F

#### H7CC - Digital Counter & Tachometer

- The H7CC is a new and improved version of our digital counter with an available tachometer function
- Improved LED Display makes the screen easier to read
- LED indicators built into the push buttons for visual feedback
- Preventative maintenance features alert you when the product is nearing the end of it's life
- Simple and easy to use programming interface saves time





Туре	Classification	External Connections	Outputs	Power Supply Voltage	Model	
		11 Pin		100 to 240 VAC	H7CC-A11	
	Preset Counter	_	Contact output (SPDT)	100 to 240 VAC	H7CC-A	
H7CC-A					Contact output (SPDT)	24 VAC / 12 to 48 VDC
		Screw Terminals	Contact output (SPST+SPDT)	100 to 240 VAC	H7CC-AW	
	Preset Counter / Tachometer		Contact output (SPST+SPDT)	24 VAC / 12 to 48 VDC	H7CC-AWD	
H7CC-R	Tachometer	11 Pin	Contact output (SPDT)	100 to 240 VAC	H7CC-R11	

Note: Tables include representative part numbers.

Please refer to the <u>Component selection guide</u> for more details.

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#### G2RV-ST - Slim I/O Relay

- Push-in plus Technology for easy wiring
- Lockable test switch models available for circuit troubleshooting
- LED/mechanical flag available for checking operation
- Slim 6mm width space saving
- Gold plate contact models available for micro loads



Coil Voltage	Contact Rating	Contact Form	Screw Terminal Model	Push-in Terminal Model	Individual Relay for Replacement
24 VDC			G2RV-ST700 DC24	G2RV-ST500 DC24	G2RV-1-S-G DC21
110 VAC	6 A	6 A SPDT	G2RV-ST700 AC110	G2RV-ST500 AC110	G2RV-1-S-G DC48
230VAC			G2RV-ST700 AC230	G2RV-ST500 AC230	G2RV-1-5-G DC48

#### Accessories

Description	Number of Poles	Red	Blue	Yellow
Jumper bar	20	PYDN-6.2T-200R	PYDN-6.2T-2005	PYDN-6.2T-200Y

#### G3NA - Hockey Puck Style Solid State Relay

- Compact Dimensions
- Built-in varistor
- LED operation indictator
- 5-90A output current





Isolation	Zero Cross Function	Indicator	Application Output Load	Rated Voltage Input	Model
Phototriac	Yes	Yes	10A at 24 to 240 VAC	5 to 24 VDC	G3NA-210B-UTU DC5-24
Phototriac	Yes	Yes	20 A at 24 to 240 VAC	5 to 24 VDC	G3NA-220B-UTU DC5-24
Phototriac	Yes	Yes	25 A at 24 to 240 VAC	5 to 24 VDC	G3NA-225B-UTU DC5-24

Note: Tables include representative part numbers.

#### G2R-S - Slim Mechanical Relay

- Lockable test switch models available for circuit troubleshooting
- LED/mechanical flag available for checking operation
- Available DIN-rail mount relay sockets
- Slim 16mm design with socket





Coil Voltage	Contact Rating	Contact Form	Relay Socket Model	Relay Model
12 VDC		SPDT	P2RFZ-05E/P2RF-05-PU	G2R-1-S DC12(S)
24 VDC	- 10 A			G2R-1-S DC24(S)
120 VAC				G2R-1-SN AC120(S)
240 VAC				G2R-1-SN AC240(S)
12 VDC		DPDT		G2R-2-S DC12(S)
24 VDC				G2R-2-S DC24(S)
120 VAC	5 A		P2RFZ-08E/P2RF-08-PU	G2R-2-S AC120(S)
240 VAC				G2R-2-S AC240(S)

#### MY-GS-R - General Purpose Ice Cube Relay

- DPDT type 10 A / 4PDT type 5 A
- Vibration resistance and reduced wiring time with push in plus technology
- Mechanical operation indicator
- Industry standard global certifications UL, CSA, IEC (VDE certification), and CQC
- Lockable test switch models available for circuit troubleshooting
- Low power switching (1 mA at 5 VDC) / Bifurcated 4PDT (0.1 mA at 1 VDC)





Coil Voltage	Contact Rating	Contact Form	Relay Socket Model	Relay Model
24VDC				MY2N-GS-R DC24
120VAC	10A	DPDT	PYFZ-08-E/PYF-08-PU	MY2N-GS-R AC110/120
220VAC				MY2N-GS-R AC220/240
24VDC				MY4N-GS-R DC24
120VAC	6A	4PDT	PYFZ-14-E/PYF-14-PU	MY4N-GS-R AC110/120
220VAC				MY4N-GS-R AC220/240

Note: Tables include representative part numbers.

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#### E5CC/E5DC - General-Purpose Temperature Controllers

- High contrast white PV display
- High-speed sampling at 50ms
- Available auxiliary outputs, event inputs, a transfer output, and a remote SP input
- Short body with a depth of 60mm
- Available IP66 rating with optional waterproof cover
- Additional DIN sizes available 1/4, 1/8, 1/16, 1/32





Dimensions	Type of Input	Power	Type of Output	Auxiliary Output	Standard Model
		100 -240 VAC	Relay		E5CC-RX3A5M-000
			Voltage		E5CC-QX3A5M-000
			Current		E5CC-CX3A5M-000
		24 VAC / VDC	Relay	SDST NO contacts (Bolov)	E5CC-RX3D5M-000
	Thermocouple, PT100,		Voltage	SPST-NO contacts (Relay	E5CC-QX3D5M-000
	Analogical		Current	Output)	E5CC-CX3D5M-000
		100 240 \/AC	Relay		E5DC-RX2ASM-000
22.5mm		100-240 VAC	Current		E5DC-CX2ASM-000
For DIN rail mount			Relay		E5DC-RX2DSM-000
		24VAC / VDC	Voltage		E5DC-QX2DSM-002

#### Limit & Basic Switches

- Limit switches and basic switches are electromechanical switches used to detect and limit motion within industrial environments
- Available in a wide variety of actuator arms, lever arms and plungers
- Multiple switch designs for use in a variety of applications and environments
- Additional limit and basic switch configurations available on Omron website

Туре	Series	Features	Applications	Models
	D4A	Wide temperature range from -40°C to +100°C (standard type) for use in heavy duty applications	Machine tool, material handling, palletizer, injection molding,	D4A-1101-N D4A-2918-N
General	WL-N	Two-circuit switch for reliable switching	packaging equipment, automotive hoist/lift machinery	WLG2-LD WLG2-LD-M1J
Limit Switches	D4C	Slim body and designed for easy side-by-side mounting (Plunger type: 6 switches maximum)	Machine tool, material handling, palletizer, packaging equipment, mobile lift equipment, robotics	D4C-1602 D4C-1601
	ZE	Long service life and high breaking capacity	Conveyor controls, packaging equipment, material handling,printing machinery, waste & recycling compacting machinery	ZE-NJ-2S ZE-N-2S
	Z	A large switching capacity of 15A and high repeat accuracy	Elevators, mobile lift equipment, forklift, injection molding, utility switchgear, controls for doors/gates/valves, foot switches	Z-15GQ-B Z-15GD-B
Basic	Х	Direct current switch that incorporates a permanent magnet in the contact mechanism to deflect arcs and increases switch life	Mobile lift equipment, forklift, injection molding,	X-10GW22-B X-10GW-B
Switches	DZ	Double pole double throw basic switch for two independent circuit control. Ideal for switching the circuits operating on two different voltages, and controlling two circuits.	utility switchgear, controls for doors/gates/valves, foot switches	DZ-10GW22-1B DZ-10GW-1B
	ΤZ	High temperature switch that maintains stable operation at an ambient temperature of 400°C	Industrial boilers, power plant, incinerators, industrial heaters	TZ-1GV TZ-1GV22

Note: Tables include representative part numbers.





#### K6CM - Motor Condition Monitor

- 24/7 remote monitoring of critical 3-phase induction motors
- Can monitor motor vibration, temperature, current, and insulation resistance depending on model
- EtherNet/IP and Modbus TCP communication
- Included monitoring software tool can monitor up to 10 motors at one time



e

Motor failure mode	Description	Power	Controller model	Sensor Model
Bearing Wear	Monitors motor vibration/ temperature with sensor	24 VAC/DC	K6CM-VBMD-EIP	K6CM-VBS1
Overload Condition	Monitors motor current and degradation level using a CT sensor	24 VAC/DC	K6CM-CI2MD-EIP	K6CM-CICB025 K6CM-CICB100 K6CM-CICB200 K6CM-CICB400
Insulation breakdown	Monitors motor insulation and current leakage with sensor	24 VAC/DC	K6CM-ISMD-EIP	K6CM-ISZBI52

#### K7DD - Adv. AC Motor Condition Monitor

- Comprehensive AC Motor Condition analysis with programable alerts
- Reduce or eliminate unplanned downtime through failure prediction
- Automates the measurement and condition analysis of AC motors with status indicators
- Transistor Alarm Outputs, RS-485 communication
- Especially useful for AC motors that change speed or direction often







Unit	Supply Voltage	Model
Controller Unit	100-240 VAC	K7DD- PQMA
Controller Unit	24 VDC	K7DD- PQMD

Rated Primary-Side Current	Model	UL Compliant Models
5 A	K6CM-CICB005	K6CM-CICB005-C
25 A	K6CM-CICB025	K6CM-CICB025-C
100 A	K6CM-CICB100	K6CM-CICB100-C
200 A	K6CM-CICB200	K6CM-CICB200-C
400 A	K6CM-CICB400	K6CM-CICB400-C

Note: Tables include representative part numbers.

#### K6PM - Thermal Condition Monitor

- 24/7 remote thermal monitoring of equipment using infrared thermal image sensors
- Thermal Imaging Sensor that detects temperatures 32-392°F (0-200°C)
- EtherNet/IP and Modbus TCP communication
- Included monitoring software tool can monitor up to 155 sensors at one time



Power	Controller	Thermal image Sensor
24 VAC/DC	K6PM-THMD-EIP	K6PM-THS3232

#### K7TM – Heater Condition Monitor

- Three-phase and single-phase relays for voltage and current monitoring
- Complete line for monitoring sequence and phase drop, asymmetry, under or over control
- Supply voltages: 24 VAC/DC, 100 to 240 VAC, 380-480 VAC
- Special models for monitoring temperature and liquid level

Unit	Supply Voltage	Model		
Controller Unit	100-240 VAC	K7TM-A2MA		
Controller Onit	24 VAC/VDC	K7TM-A2MD		
CT Clamp				
Rated Primary Side Current	Model	UL Compliant Models		
5 A	K6CM-CICB005	K6CM-CICB005-C		
25 A	K6CM-CICB025	K6CM-CICB025-C		
100 A	K6CM-CICB100	K6CM-CICB100-C		
200 A	K6CM-CICB200	K6CM-CICB200-C		
400 A	K6CM-CICB400	K6CM-CICB400-C		
600 A	K6CM-CICB600	-		

Note: Tables include representative part numbers.







#### K8AK / K8DS – Monitoring Relays

- Three-phase and single-phase relays for voltage and current monitoring
- Complete line for monitoring sequence and phase drop, asymmetry, under or over control
- Supply voltages: 24 VAC/DC, 100 to 240 VAC, 380-480 VAC
- Special models for monitoring temperature and liquid level





Phase	Dimensions	Monitoring Type	Input	Output Contact Form	Model
		Over Current	24 VAC/DC or 100 to 240 VAC	SPDT	K8AK-AS2 24VAC/DC
Single-Phase	K8AK - 22.5 x 90 x 100	Overvoltage and Undervoltage	24 VAC/DC or 100 to 240 VAC	SPDT	K8AK-VW2 24VAC/DC
	x 90 x 100 [mm]	Phase Drop and Phase	200-480 VAC	DPDT	K8AK-PH1 200/500VAC
Thurse Diverse	K8DS: 17.5 x	Sequence	200-480 VAC	SPDT	K8DS-PH1 200/480VAC
Inree-Phase	ree-Phase 80 x 69 [mm]	Phase Drop, Phase	200-240 VAC		K8AK-PM1 200/240VAC
		Sequence, Overvoltage and Undervoltage	380-480 VAC	- (2) SPDT	K8AK-PM2 380/480VAC

#### K7GE – Insulation Resistance Monitoring

- Reliable, Safe and Accurate Automatic Insulation Resistance Measurements
- Modular Product units for multiple motor insulation resistance monitoring
- 50 VDC measurement voltage
- Monitor up to 8 motors with additional probes
- Transistor Alarm Outputs, RS-485 communication
- Especially useful for servo/motors operating in harsh environments

Unit	Supply Voltage	Model		
Controller Unit	100-240 VAC	K7GE-MGMA		
Controller Unit	24 VAC/VDC	K7GE-MGMD		
Probe Unit	_	K7GE-MG1		





#### A2W - Wireless Pushbutton

- 8 pushbuttons can be assigned to one receiver unit
- Each receiver has 8 transistor outputs (one-shot operation)
- LED signal strength indicator on each button
- Battery-less pushbutton (uses self-generating power)





Туре	Button type	Frequenc	y (MHz)	Area		Button color	Flan	ge color	Model
	Mushroom					Green Blac		<	A2W-TC-WC1 US1GB
Pushbutton						Red	Black	<	A2W-TC-WC1 US2RB
		922.5		United States or		Green	Black	<	A2W-TC-WC1 US2GB
	Full guard	922.5		Canada		Yellow	Black	<	A2W-TC-WC1 US2YB
							Black	<	A2W-TC-WC1 US2AB
						Black Blac		<	A2W-TC-WC1 US2BB
Туре	Frequency (MH	z)	Area		Output configurat		n	Model	
Receiver	922.5		United States or Canada		PNP			A2W-RCP-	WC1 US

Note: This product is a wireless device that conforms to the radio regulations of United States or Canada. It cannot be used outside of United States or Canada.

Accessories (sold separately)	Model	Remarks
High-sensitivity magnetic-base antenna	A2W-AT2.5-WC1	Frequencies: all frequencies supported, cable length 2.5 m Degree of protection: IP65

Note: Tables include representative part numbers.

Please refer to the Component selection guide for more details.

Note: Tables include representative part numbers.

#### A22N / M22N -Push Buttons And Indicators

- Complete line with Ø 22mm assemblies
- Various colors and models with plastic or metallic bezels
- Color coded contact blocks to prevent assembly
   errors
- Easy installation and IP66 degree of protection





Туре	Bezel material	Color	Contact	LED Voltage	Model
ADDAM Duck Dutters			1 NO		A22NN-RNM-NGA-G100-NN
A22NN - Push Button			1 NO		A22NN-RNM-NBA-G100-NN
		(2) Color B – Red	1 NO	(3) LED Voltage N – No lighting	A22NL-BGM-TGA-G100-GC
A22NL - Lighted Push Button	(1) Bezel Material B – Plastic	G – Green Y – Yellow	1 NO	A – 6 VAC/VDC B – 12 VAC/VDC C – 24VAC/VDC D – 100/120 VAC/VDC E – 200/240 VAC/VDC	A22NL-RPM-TRA-G100-RC
		W – White A – Blue B – Black			M22N-BC-TYA-YC
M22N - Indicators	R – Metallic				M22N-BN-TGA-GC
			2 positions - 1NO		A22NS-2RM-NBA-G100-NN
A22NS - Selector			3 positions - 2NO		A22NS-3RM-NBA-G101-NN
			2 positions - 1NO		A22NK-2RM-01AA-G100
A22NK - Selector with Key			2 positions - 1NO		A22NK-2RL-01BA-G100

Item	Model
Contact block 1NO	A22NZ-S-G1A
Contact block 1NC	A22NZ-S-G1B

# CP1H – MicroPLC for 4 Axis Position Control and High Speed Control

- High-speed counters with differential phases and pulse outputs for 4 axes control. Easily handles multi-axis control with a single unit.
- Up to two Ethernet ports and two serial ports when selecting the appropriate optional communications boards
- Up to 40 Built in I/O points with Analog I/O built in on XA CPU units
- Over 30 different expansion units for I/O, temperature sensing and communications



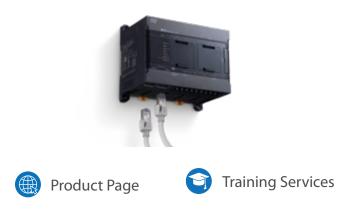
Туре	Input	Output	Expandable	Program	Data Memory	Power Supply	Output Method	Built-In Functions			Model
туре	Points	Points	up to*	Capacity	Capacity	rower suppry	output method	E	I/C	Р	Model
				85 to 264 VAC	Relay output	4	8		CP1H-X40DR-A		
CP1H-X with pulse outputs for 4 axes					20K steps 32K words	20.4 to 26.4 VDC	Transistor output (sink type)	4	8	4	CP1H-X40DT-D
	24	10					Transistor output (source type)	4	8	4	CP1H-X40DT1-D
CP1H-XA with built-in	24	16	320 points	20K steps		85 to 264 VAC	Relay output	4	8		CP1H-XA40DR-A
analog I/O (4 analog inputs/2 analog							Transistor output (sink type)	4	8	4	CP1H-XA40DT-D
outputs; 1/12,000 resolution)						20.4 to 26.4 VDC	Transistor output (source type)	4	8	4	CP1H-XA40DT1-D
CP1H-Y with 1-MHz pulse I/O	12	8	300 points				Transistor output (sink type)	4**	6	4**	CP1H-Y20DT-D

Note: Built-in functions: E = Encoder inputs; I/C = Interrupts/counters; P = Pulse outputs

\*CP1H CPU series can be expanded with CP-series Expansion Units and CJ1 Special I/O Units. \*\* Encoder inputs: 2x 1 MHz + 2x 100 kHz; Pulse outputs: 2x 1 MHz + 2x 100 kHz.

#### CP2E - Micro PLC for Data Collection and Machine-To-Machine Communication

- Up to five communications channels: dual Ethernet and up to three serial ports for data collection, machine-to-machine or IIoT
- Built-in I/O of either 14, 20, 30, 40 or 60 points with up to 180 I/O points when using expansion modules
- Up to four axes of motion control for precise machine movement



		Specifications									
I/O points	Power Supply	Inputs	Outputs	Output Type	Communications	Axis	Option Boards	Expansion Units	Model		
	100 to 240 MAG			Relay					CP2E-N14DR-A		
	100 to 240 VAC			Transistor (sinking)					CP2E-N14DT-A		
14		8	6	Relay	1 Ethernet port Up to 2 serial ports	2	1		CP2E-N14DR-D		
	24 VDC			Transistor (sinking)					CP2E-N14DT-D		
				Transistor (sourcing)					CP2E-N14DT1-D		
	100 to 240 VAC			Relay					CP2E-N20DR-A		
	100 to 240 VAC			Transistor (sinking)					CP2E-N20DT-A		
20		12	8	Relay	<ul> <li>1 Ethernet port</li> <li>Up to 2 serial ports</li> </ul>	2	1		CP2E-N20DR-D		
	24 VDC			Transistor (sinking)					CP2E-N20DT-D		
				Transistor (sourcing)					CP2E-N20DT1-D		
	100 to 240 VAC			Relay	2 Ethernet ports Up to 3 serial ports				CP2E-N30DR-A		
	100 to 240 VAC			Transistor (sinking)					CP2E-N30DT-A		
30		18	12	Relay		4	2	3	CP2E-N30DR-D		
	24 VDC			Transistor (sinking)					CP2E-N30DT-D		
				Transistor (sourcing)					CP2E-N30DT1-D		
	100 to 240 VAC			Relay					CP2E-N40DR-A		
	100 to 240 VAC			Transistor (sinking)					CP2E-N40DT-A		
40		24	16	Relay	2 Ethernet ports Up to 3 serial ports	4	2	3	CP2E-N40DR-D		
	24 VDC			Transistor (sinking)					CP2E-N40DT-D		
				Transistor (sourcing)					CP2E-N40DT1-D		
	100 to 240 VAC			Relay					CP2E-N60DR-A		
	100 10 240 VAC			Transistor (sinking)					CP2E-N60DT-A		
60	60	36	24	Relay	<ul> <li>2 Ethernet ports</li> <li>Up to 3 serial ports</li> </ul>	4	2	3	CP2E-N60DR-D		
	24 VDC			Transistor (sinking)					CP2E-N60DT-D		
				Transistor (sourcing)					CP2E-N60DT1-D		

#### CP2E-N/Network Models

Note: Tables include representative part numbers. Please consult the product page for more details.



#### CP2E - Micro PLC (continued)

- Function block library for expedited program development
- Analog, high speed counters, pulse outputs, linear interpolation and PWM output facilitates a wide range of applications



#### **CP2E-S/Standard Models**

					Specifications				
I/O points	Power Supply	Inputs	Outputs	Output Type	Communications	Axis	Option Boards	Expansion Units	Model
	100 to 240 VAC			Relay					CP2E-S30DR-A
30 24 VDC	18	12	Transistor (sinking)	1 x RS-232C port 1 x RS-485 port	2		3	CP2E-S30DT-D	
			Transistor (sourcing)					CP2E-S30DT1-D	
	100 to 240 VAC			Relay	1 x RS-232C port 1 x RS-485 port			3	CP2E-S40DR-A
40	24 VDC	24	24 16	Transistor (sinking)		2			CP2E-S40DT-D
	24 VDC			Transistor (sourcing)					CP2E-S40DT1-D
	100 to 240 VAC			Relay				3	CP2E-S60DR-A
60	24 VDC	36	24	Transistor (sinking)	1 x RS-232C port 1 x RS-485 port	2			CP2E-S60DT-D
	24 VDC			Transistor (sourcing)					CP2E-S60DT1-D

#### **CP2E-E/Essential Models**

I/O points	Specifications											
	Power Supply	Inputs	Outputs	Output Type	Communications	Axis	Option Boards	Expansion Units	Model			
14		8	6	Relay	1 x RS-232C port			3	CP2E-E14DR-A			
20		12	8	Relay	1 x RS-232C port			3	CP2E-E20DR-A			
30	100 to 240 VAC	18	12	Relay	1 x RS-232C port			3	CP2E-E30DR-A			
40		24	16	Relay	1 x RS-232C port			3	CP2E-E40DR-A			
60		36	24	Relay	1 x RS-232C port			3	CP2E-E60DR-A			



#### CP1L - Micro PLC

- Compact PLC for up to 180 I/O points
- Programming via USB port or Ethernet port based on model
- Optional boards for Analog, Serial and Ethernet communication on select models
- Supports up to 4 encoders and 2 pulse train outputs (transistor models only)



🛞 Product Page

Training Services

Family	Power Supply	Amount of I/Os in the CPU							
		Digital		Analog	Expansion Units	Communication Ports	Option Boards	Output Type	Model
		Inputs	Outputs	Inputs	omits		boards		
CP1L-EM	24 VDC	24	16	2 (0-10V)	3	Ethernet FINS	2	Transistor (sourcing)	CP1L-EM40DT1-D
	24 VDC	24	16	2 (0-10V)	3	Ethernet FINS	2	Relay	CP1L-EM40DR-D
	24 VDC	18	12	2 (0-10V)	3	Ethernet FINS	2	Transistor (sourcing)	CP1L-EM30DT1-D
	24 VDC	18	12	2 (0-10V)	3	Ethernet FINS	2	Relay	CP1L-EM30DR-D
CP1L-EL	24 VDC	12	8	2 (0-10V)	1	Ethernet FINS	1	Transistor (sourcing)	CP1L-EL20DT1-D
	24 VDC	12	8	2 (0-10V)	1	Ethernet FINS	1	Relay	CP1L-EL20DR-D
CP1L-M	100 to 240 VAC	24	16	No	3	USB	2	Relay	CP1L-M40DR-A
	24 VDC	24	16	No	3	USB	2	Relay	CP1L-M40DR-D
	24 VDC	24	16	No	3	USB	2	Transistor (sourcing)	CP1L-M40DT1-D
	100 to 240 VAC	18	12	No	3	USB	2	Relay	CP1L-M30DR-A
	24 VDC	18	12	No	3	USB	2	Relay	CP1L-M30DR-D
	24 VDC	18	12	No	3	USB	2	Transistor (sourcing)	CP1L-M30DT1-D
CP1L-L	24 VDC	12	8	No	1	USB	1	Transistor (sourcing)	CP1L-L20DT1-D
	24 VDC	12	8	No	1	USB	1	Transistor (sinking)	CP1L-L20DT-D
	100 to 240 VAC	12	8	No	1	USB	1	Relay	CP1L-L20DR-A
	24 VDC	12	8	No	1	USB	1	Relay	CP1L-L20DR-D
	24 VDC	8	6	No	1	USB	1	Transistor (sinking)	CP1L-L14DT-D
	100 to 240 VAC	8	6	No	1	USB	1	Relay	CP1L-L14DR-A

#### **Expansion Modules and Accessories**

amily	Communication Ports	Model
	8 Inputs	CP1W-8ED
	8 Relay Outputs	CP1W-8ER
Digital Expansions	16 Relay Outputs	CP1W-16ER
	12 Inputs and 8 PNP Transistor Outputs	CP1W-20EDT1
	24 Inputs and 16 Relay Outputs	CP1W-40EDR
	4 Inputs (0 to 5V, 1 to 5V, 0 to 10V, -10 to + 10V, 0 to 20mA and 4 to 20mA)	CP1W-AD042
Analog Expansions	4 Outputs (1 to 5V, 0 to 10V, -10 to + 10V, 0 to 20mA and 4 to 20mA)	CP1W-DA042
Resolution of 12000 points	2 Inputs (0 to 5V, 1 to 5V, 0 to 10V, -10 to + 10V, 0 to 20mA and 4 to 20mA) 1 Output (1 to 5V, 0 to 10V, -10 to + 10V, 0 to 20mA and 4 to 20mA)	CP1W-MAD42
	RS-232C Serial Port (15m Distance)	CP1W-CIF01
Optional Communication Adapters	RS-422A/485 Serial Port (50m Distance)	CP1W-CIF11
	RS-422A/485 Serial Port (500m Distance)	CP1W-CIF12
Software	Programming Software with 1 license	CXONE-AL01D-V4

#### NX1P -

#### Machine Automation Controllers

- Compact entry model with integrated motion and machine control. Connectivity to safety and vision systems
- Up to 4 axes of coordinated motion control plus 4 axes point to point control
- Expandable I/O using up to 8 NX series I/O cards on local bus
- Built in EtherCAT and EtherNet/IP ports
- Connect up to 16 EtherCAT Slaves
- Sysmac Studio IDE for flexible, scalable programming









Built-In Digital I/O Digital			Coordinated		Total Axes	Option Boards	Model
		Specifications					
Inputs	Outputs		axes*	point axes**			
14	10	1.5MB of programming	0	4	4	1 Slot	NX1P2-9024-DT1
24	16	memory, min cycle time	2		6	2 Slots	NX1P2-1040-DT1
24	16	up to 2ms	4		8		NX1P2-1140-DT1

\* Coordinated Axes Include:

- Point to Point Point Positioning
- Synchronized Motion (Gearing/Camming)

Multi-Axes Coordinated Motion (Circular/Linear Interpolation)

Axes grouping

\*\*Point to Point axes Include:

- Only Point to Point Positioning
- No Synchronized Motion
- No Multi-Axes Coordinated Motion
- No Axes Grouping

Note: PNP transistor Output options shown. For NPN options, go toautomation.omron.com

#### **Option Boards**

Туре	Description	Communication Protocol	Model
	1 x RS-232C port Transmission Distance: 15 m Connector type: Spring terminal (9 terminals)		NX1W-CIF01
Serial Communication	1 RS-422A/485 Transmission Distance: 50 m Connector type: Spring terminal (5 terminals)	Host link, Modbus-RTU Master and no-protocol	NX1W-CIF11
	1 RS-422A/485 port (isolated) Transmission Distance: 500 m Connector type: Spring terminal (5 terminals)		NX1W-CIF12
	2 x Analog inputs Voltage input: 0 to 10 V (Resolution Input current: 0 to 20 mA (1/2 Connector type: Spring terminal (5	NX1W-ADB21	
Analog Inputs and Outputs	2 x Analog inputs / 2 x Analog o Voltage input: 0 to 10 V (Resolution Input current: 0 to 20 mA (1/2, Voltage output: 0 to 10 V (Resolution Connector Type: Spring terminal (8	i: 1/4,000) 000) n: 1/4,000)	NX1W-MAB221

Note: The expansion cards of the NX1P machine controller line are the same as the NX Series I/O cards. For information on virtual axes, refer to the catalog on the website automation.com

#### Software and Switches

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Туре	Description	Model
Software	Sysmac Studio IDE Lite Version 1 License	SYSMAC-SE201L
	Hub EitherCAT with 3 Ports	GX-JC03
Hub	Hub EitherCAT with 3 Ports	GX-JC06
Tub	Hub EitherNet/IP with 3 Ports	W451-03B
	Hub EitherNet/IP with 5 Ports	W451-05B

## NX102 - Machine Automation Controller

- Compact controller integrates production line, safety systems, and IT systems
- EtherCAT (1 port) and EtherNet/IP (2 ports) communication on the same CPU
- OPC UA server functionality
- Up to 8 axes of coordinated motion plus 4 axes of point-to-point control
- Embedded SQL Client Option
- Connect up to 64 EtherCAT slaves
- Expandable IO using up to 32 NX Series I/O cards on local bus
- Sysmac Studio IDE for flexible, scalable programming



Family	Specifications	Number of Coordinated axes *	Number of point- to-point axes **	Total Axes	SQL	Model
	5 MB of programming memory, Min. cycle up	0			No	NX102-9000
			- 4	4	Yes	NX102-9020
		2		-	No	NX102-1000
				6	Yes	NX102-1020
NX102	to 1ms	4			No	NX102-1100
				8	Yes	NX102-1120
				12	No	NX102-1200
		8		12	Yes	NX102-1220

Note: The NX-END02 terminal cover is included with the NX102. The HMC-SD291 memory card is supplied with the NX102-\_\_20. The battery is not mounted when the product is shipped. Refer to the datasheet for details.

For information on virtual axes, refer to the catalog on Omron website automation.omron.com

\* Coordinated Axes Include:

- Point to Point Point Positioning
- Synchronized Motion (Gearing/Camming)
- Multi-Axes Coordinated Motion (Circular/Linear Interpolation)
   Axes grouping

\*\*Point to Point axes Include:

- Only Point to Point Positioning
- No Synchronized Motion
- No Multi-Axes Coordinated Motion
- No Axes Grouping

#### Software and Switches

Туре	Description	Model
Software         Sysmac Studio IDE Lite Version 1 License         S		SYSMAC-SE201L
	Hub EitherCAT with 3 Ports	GX-JC03
Hub	Hub EitherCAT with 3 Ports	GX-JC06
Нир	Hub EitherNet/IP with 3 Ports	W451-03B
	Hub EitherNet/IP with 5 Ports	W451-05B

Note: Tables include representative part numbers. Please consult the product page for more details.

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#### NX502 - Machine Automation Controller

- EtherCAT<sup>®</sup> 250µs EtherCAT<sup>®</sup> Refresh Speed
- Up To 254 CIP Safety Connections with: NX-SL5700 and four NX-EIP201 units
- 256 EtherCAT® Nodes
- 512 tag sets per EIP Unit
- OPC UA and SQL as standard while also leveraging Sysmac Studio MQTT function blocks
- Up to 64 axis of motion control
- 80 MB of program capacity
- Plug and Play Compatible with:
  - Omron's complete line of NX I/O
  - Omron's integrated software environment Sysmac Studio
  - Omron Vision, Motion, Robotics, and Safety Components
- Leverage the strength of multiple industrial protocols including: EtherCAT<sup>®</sup>, IO Link, EtherNET I/P, CIP Safety

Product Page	Product Video
Training Services	Fieldbus Communication Configuration

Family	Specifications	I/O Capacity	Coordinated Axes <sup>1</sup>	Total Axes	OPC UA	SQL	Model
			16	16	Yes	Yes	NX502-1300
NX502	5 MB of programming memory, Min. cycle up to 0.25ms	1024 Points local	32	32	Yes	Yes	NX502-1400
			64	64	Yes	Yes	NX502-1500

Note: The NX-END02 terminal cover is included with the NX502.

The battery is not mounted when the product is shipped. Refer to the datasheet for details.

For information on virtual axes, refer to the catalog on Omron website automation.omron.com

- 1. Coordinated Axes Include:
  - Point to Point Point Positioning
  - Synchronized Motion (Gearing/Camming)
  - Multi-Axes Coordinated Motion (Circular/Linear Interpolation)
  - Axes grouping

#### Software and Network Card

Туре	Description	Model
Software	Software Sysmac Studio Standard Edition, One Seat	
Network Card	NX502 Ethernet I/P Module	NX-EIP201

# NJ -

# Machine Automation Controllers

- One integrated controller designed to meet extreme requirements in terms of logic sequence, motion control speed, accuracy, and system size
- EtherCAT and Ethernet IP communication on the same CPU
- Ability to manage logic, motion, safety and vision tasks
- Embedded SQL Client Option
- Expandable I/O Using up to 10 CJ Expansion cards
- Sysmac Studio IDE for flexible, scalable programming



Product Page







Fieldbus Communication Configuration

Family	Specifications	Number of axes	OPC UA	SQL	Model
				No	NJ101-9000
NJ1 64 EtherCAT slaves, 3 MB of programming me	64 Ether AT slaves 2 MP of programming memory Min systems 1ms	0	No	Yes	NJ101-9020
	64 EtherCAT slaves, 5 Mb of programming memory, win. Cycle time: This	2	No	No	NJ101-1000
			No	Yes	NJ101-1020
NUD		4	No	No	NJ301-1100
NJ3	192 EtherCAT slaves, 5 MB of programming memory, Min. cycle time: 1ms	8	No	No	NJ301-1200
NUE	102 Ethor AT clause 20 MR of programming moment. Min. cucle times 0.5 mc	16	Yes	No	NJ501-1300
NJ5	192 EtherCAT slaves, 20 MB of programming memory, Min. cycle time: 0.5 ms	16	No	Yes	NJ501-1320

Note: For information on virtual axes, refer to the catalog on the website automation.omron.com

#### **Power Supplies**

Power Supplies	Capacity	RUN Indicator	Model
100 to 240VAC	2014/	NO Delay	NJ-PA3001
24 VDC	30W	NO Relay	NJ-PD3001

#### Software and Switches

Туре	Description	Model
Software	Sysmac Studio IDE 1 License	SYSMAC-SE201L
	Hub EtherCAT with 3 Ports	GX-JC03
11.4	Hub EtherCAT with 6 Ports	GX-JC06
Hub	Hub EtherNet/IP with 3 Ports	W4S1-03B
	Hub EtherNet/IP with 5 Ports	W4S1-05B

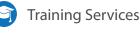
# NX7 -

# Machine Automation Controllers

- Highest performance Sysmac CPU, designed to address the most demanding industrial control and motion applications, laying the infrastructure for Big Data support
- EtherCAT (1 port) and EtherNet/IP (2 ports) communication on the same CPU
- Dual-core Motion
- 128 or 256 Axes of Motion
- Embedded SQL Client Option
- Sysmac Studio IDE for flexible, scalable programming



Product Page



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Fieldbus Communication Configuration

Family	Specification	Number of Coordinated Axes	SQL	Model Number		
NX7	80 MB of programming memory, minimum cycle time 0.125 ms	128	YES	NX701-1620		
Power Supplies	Capacity	Capacity RUN Indicator		Model		
100 to 240VAC	90W	NO Palau	NX-PA9001			
24 VDC	70W	70W NO Relay		NX-PD7001		
Software and Switches	Description	Description				
Software	Sysmac Studio IDE Lite Version 1 Licens	se	SYSMAC-SE201L			
	Hub EitherCAT with 3 Ports		GX-JC03			
	Hub EitherCAT with 3 Ports		GX-JC06			
Hub	Hub EitherNet/IP with 3 Ports		W451-03B			
	Hub EitherNet/IP with 5 Ports					

# NX-TC -Multi-Loop Temperature Controller

- 2 or 4 loop models
- PID control
- Ethernet/IP&EtherCAT with PLC/Coupler
- Voltage out and Current Out models
- Ability to specify variable to output
- Heater Burnout detection





Training Services

Product Name	Number of channels	Input Type	Output	Output Capacity	CT Input Capacity	Control Type	Conversion Time	I/O Refreshing Method	Model
Temperature Control Unit 2Ch 2 Ch			2 points	2 points	Standard Control			NX-TC2405	
Туре	Unit 2Ch 2 Ch	Multi-input (Thermocouple	Voltage	4 points	None	Heating & Cooling Control	-	Free-Run	NX-TC2407
	& Resistance	(for SSR control)	4 points	4 points	Standard Control	50 m sec	refreshing	NX-TC3405	
Temperature Control Unity 4 Ch 4Ch Type	4 Ch	Thermometer)	r)	4 points	None	Standard Control	_		NX-TC3406
	4 (11			8 points	None	Heating & Cooling Control			NX-TC3407

Note: Tables include representative part numbers. Please consult the product page for more details.



OMRON Industrial Automation Core Products Catalog | Autumn 2023

# NX -Remote I/O

- Wide variety of high density remote I/O Modules
- Ideal match with Sysmac Machine automation controllers
- EtherCAT and EtherNet/IP coupler options
- Platform Agnostic. Easy connectivity to 3rd party systems
- Removable wiring terminals for easy system assembly and testing

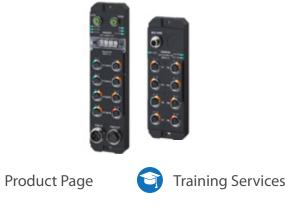


	Description	Model
	8 Digital Inputs (NPN)	NX-ID4342
	8 Digital Inputs (PNP)	NX-ID4442
	16 Digital Inputs (NPN)	NX-ID5342
	16 Digital Inputs (PNP)	NX-ID5442
	32 Digital Input (NPN)	NX-ID6342
Disital 1/0	32 Digital Input (PNP)	NX-ID6442
Digital I/O	8 Relay NO Outputs	NX-OC4633
	8 Digital Outputs (NPN)	NX-OD4121
	8 Digital Outputs (PNP)	NX-OD4256
	16 digital outputs (NPN)	NX-OD5121
	16 digital outputs (PNP)	NX-OD5256
	32 Digital Output (PNP)	NX-OD6121
	4 4-20 mA Analog Inputs	NX-AD3203
Analog I/O	4 4-20mA Analog Outputs	NX-DA3203
Analog I/O	4 Analog Inputs -10 to +10 V	NX-AD3603
	4 Analog Outputs -10 to +10 V	NX-DA3603
Tenere englished an english	4 Thermocouple Inputs	NX-TS3101
Temperature control	4 RTD Inputs	NX-TS3201
Weighing	1 Input for Load Cell	NX-RS1201
Position control	1 Line-Driver Pulsed Output	NX-PG0122
Position control	1 Incremental Encoder Input	NX-EC0122
Serial Communication	1 RS232C Interface	NX-CIF101
Senal Communication	1 RS485/422A Interface	NX-CIF105
lloT	IO-Link Master Interface for 4 IO-Link Devices	NX-ILM400
	Additional Supply for I/Os (4A)	NX-PF0630
Accessories	Additional Supply for I/Os (10A)	NX-PF0730
	Additional Source for Communication Bus	NX-PD1000

COUPLERS Network	Communications Cycle	Current Consumption	Maximim I/O power supply current	Model
	250 to 4,000 μs	1.45 W or lower	4A	NX-ECC201
EtherCAT	250 το 4,000 μs	1.45 W 01 10Wei		NX-ECC202
	125 to 10,000 μs	1.25 W or lower	10A	NX-ECC203
EtherNet/IP	-	1.50W or lower		NX-EIC202
SLAVE UNIT Network	IO Data Update	Refresh Mode	Model	
EtherCAT	1.5 ms	Free Run	NX-ECT101	

# NXR -IP67 EthernetIP Remote IO-Link Master

- Fully configurable ports with up to 8 IO-Link connections, or 2 digital I/O per port (16 Total)
- 2 A max output load current per I/O point
- Rotary Switches for IP address setting
- LED status and output indication
- Connect up to 8 IO-Link hubs per master, totalling 128
   digital I/O per EthernetIP Connection
- Autoconfigure IO-Link devices by 1 click in the software, or by 1 message from the controller



Unit	IO Capacity	Max Output Load Curent	Model
IO-Link Master	8 IO-Link ports (or up to 16 Digital I/O)	2 A per point	NXR-ILM08C-EIT
	16 Digital Inputs	N/A	NXR-ID166C-IL2
IO-Link Hub	16 Digital Inputs/Outputs	0.5 A per point	NXR-CD166C-IL2

#### Accessories<sup>1</sup>

Unit	Description	Model
Y Cable Splitter	For connecting two devices to one port	XS5R-D426-1

1. Refer to the datasheet for recommended power and communication cables

# NX-HTC -Multi-Loop Temperature Controller

- 4 loop and 8 loop models
- 40% Footprint Reduction vs. NX-TC
- .01 °C Temperature Resolution when used with K-type, PT100 thermocouple
- Waveform Digitialization Function Monitors 16 different process features
- Disturbance Suppression Technology
- For use with PLC or IPC

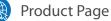


Model	Number of Channels	Input type	Output	Output Capacity	CT Input Capacity	Control type	Safety Standard
NX-HTC4505	8ch	- Full Multi-input	Voltage output (for driving SSR)	8 points	8 points	Standard control	
	4-1-	(Thermocouple, resistance	Heating output: Voltage output (for driving SSR)	4	ts 4 points	Heating and Cooling control	UC1, CE, RCM, KC, EAC
NX-HTC3510 4ch	401		Cooling output: Linear current output	4 points			

## NX-V680C - RFID Units

- Data reads/writes are easily performed by simply setting parameters in the machine automation controller memory area
- Simple device configuration, compared to serial communication, coupled with high-speed data processing
- Communication programs can be easily built using the ladder program function blocks "Sysmac Library RFID Communications Library (SYSMAC-XR019)"





**Training Services** 

Model	Number of Antennas/Amplifiers	Antenna/Amplifier	Operating Frequency	RFID Standard
NX-V680C1	1		12 5C MIL	150 15600
NX-V680C2	2	V680 Series	13.56 MHz	ISO 15693

# Sysmac Studio-Integrated Design Environment

- Configuration, programming, monitoring in a single interface
- Logic, motion and drives, safety, visualization, sensing, IoT in one project
- Built in Simulator
- One time license fee



Product Page



icense Type	Part Number	# of Users
	SYSMAC-SE201L	1
	SYSMAC-SE203L	3
Courses a Chardle Chard and Edition	SYSMAC-SE210L	10
Sysmac Studio Standard Edition	SYSMAC-SE230L	30
	SYSMAC-SE250L	50
	SYSMAC-SE2XXL	Site
	SYSMAC-LE201L	1
Sysmac Studio LIte Edition	SYSMAC-LE203L	3
	SYSMAC-LE210L	10
	SYSMAC-LU501L	1
Upgrade from Lite to Standard	SYSMAC-LE203L	3
	SYSMAC-LE210L	10
Sysmac Studio Vision Edition	SYSMAC-VE001L	1
Sysmac Studio Measurement Edit	SYSMAC-ME001L	1
Sysmac Studio NX/I-O Edition	SYSMAC-NE001L	1
Sysmac Studio Drive Edition	SYSMAC-DE001L	1
Sysmac Studio Safety Edition	SYSMAC-FE001L	1

OS	СРИ		RAM	Display
Windows 7 (32-bit)	Minimum <sup>1</sup>	IBM AT or compatible with Intel® Celeron® processor 540 (1.8 Ghz)	2 GB	XGA 1,024 x 768, 16 million colors
Windows 8 (32-bit) Windows 8.1 (32-bit) Windows 10 (32-bit or 64-bit edition)	Recommended <sup>2,3</sup>	IBM AT or compatible with Intel® Core™ i5 M520 processor (2.4 GHz) or equivalent	4 GB min.	WXGA 1,280 x 800x 16 million colors

1. If you create a user program with a memory size that exceeds 20 MB, use the 64-bit edition of the operating system and 8 GB or more of RAM.

2. If the user program is large, we recommend that you use a 64-bit IBM AT or compatible with an Intel® Core™ i7 processor or better and 8 GB or more of RAM.

3. If you use the Robot Additional Option and execute Vision and Robot integrated simulations, use a 64-bit IBM AT or compatible with an Intel<sup>®</sup> Core<sup>™</sup> i5 processor or better and 8 GB or more of RAM.

# Sysmac Studio-Integrated Design Environment

- Configuration, programming, monitoring in a single interface
- Logic, motion and drives, safety, visualization, sensing, IoT in one project
- Built in Simulator
- One time license fee



Product Page



		Sysmac Studio Standard	Sysmac Studio Lite	Sysmac Studio Vision	Sysmac Studio Measurement	Symac Studio Drive	Sysmac Studio Safety	Sysmac Studio NX
	NX1P2	٠	•					
	NX102	٠	•					
	NJ1	٠	•					
Logic	NJ3	٠						
	NJ5	٠						
	NX7	٠						
НМІ	NA5	٠	•					
1/0	NX I/O EtherCAT Coupler	•	•					
I/O	NX I/O EtherNet/ IP Coupler	•	•					•
	FH	•	•	•				
Vision	FHV7	۰	•	•				
	FQM	۰	•	•				
	NX-SL3	۰	•				٠	•
Safety	NX-SL5/CSG	۰	•				۰	
	15	۰	•			•		
Motion	G5	۰	•			•		
Measurement	ZW	•	•		٠			



# NB - Basic Graphic HMI

- 65K Color TFT display with LED backlight
- Data Logging/Trending, Recipes, Alarms, Remote web viewing
- Graphics Library and Animation
- Free NB Designer programming software
- Preferred for Omron CP controllers



Circ	Description	Model	
Size	Communication Port	Resolution	Model
3.5"	RS232C/RS422		NB3Q-TW00B-V1
5.6"	RS232C/RS422, Ethernet	320 × 234	NB5Q-TW01B-V1
5.6″	RS232C/RS422		NB5Q-TW00B-V1
7"	RS232C/RS422, Ethernet		NB7W-TW01B-V1
7″	RS232C/RS422	800 x 480	NB7W-TW00B-V1
10"	RS232C/RS422, Ethernet		NB10W-TW01B-V1

Note: For more information, refer to the catalog on the website automation.omron.com

# NA - Advanced High Resolution Graphic Display

- Wide screen high resolution display with 16M colors
- Multimedia including video, Word, Excel and PDF viewers
- Sysmac Studio provides the integrated development
   environment
- Preferred for NJ/NX controllers

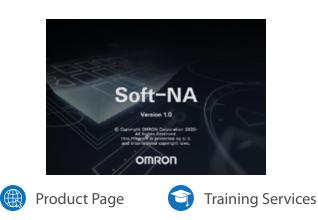


<b>6</b> :	Description		
Size	Communication Port	Resolution	Model
7"	2 Ethernet, USB, RS232	000 - 400	NA5-7W001B-V1
9"		800 x 480	NA5-9W001B-V1
12.1"		1200 000	NA5-12W101B-V1
15.4"		1280 x 800	NA5-15W101B-V1

Note: Part numbers are for black bezel. Silver bezel available.

# Soft NA - Software to Emulate the NA Advanced Graphic Display on an Industrial PC

- Sysmac Studio provides the integrated development environment.
- Design or Re -Use applications from the NA Graphic display on your choice of Industrial PC. Omron NY Series of IPC preferred.
- Run Soft-NA and other applications such as Enterprise Resource Planning or others, on an IPC.
- Windows 10 OS based and preferred for NJ/NX controllers.
- Preferred for NJ/NX controllers



Product Name	Specifications	Number of licenses	Media	Model
	The Soft-NA is software that displays information on FA manufacturing	- (Media only)	DVD	NA-RTSM
Soft-NA	sites while providing safety, reliability, and maintainability as an industrial display on which operations can be preformed as necessary. The Soft-NA runs on the following OS: Windows 10 Pro Version 1903 or later 64 bit	1 license	USB dongle	NA-RTLD01
		3 licenses		NA-RTLD03
		10 licenses		NA-RTLD10

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• Box and Panel mount versions

# NY - Industrial PC

- No internal cables eliminates faults, maximizes uptime
- Unique simplified thermal design cuts downtime
- Powerful Intel<sup>®</sup> CoreTM technology for optimum performance
- Options for models with no moving parts increasing reliability





Family	Operational System	СРИ	RAM Memory	Storage	Туре	Model
		Intel Xeon E3-1515M v5				NYB1E-313K1
		Intel Core i7-7820EQ	_			NYB27-314K1
NIVD		Intel Core i5-7300U		128GB SSD	Day DC	NYB35-313K1
NYB		Intel Core i5-7300U	8GB		Box PC	NYB35-313K1
	Windows 10 IoT	Intel Celeron 2980U				NYB2C-313K1
	Enterprise LTSB 64bit	Intel Core ATOM E3940		64GB SSD		NYB2A-30450
		Intel Core i7-7820EQ		128GB SSD		NYP27-314K1-15WC1000
		Intel Core i5-7300U	-			NYP35-30350-19WC1000
NYP		Intel Core i5-7300U	-	64GB SSD	Monitor Panel 12", 15", 19"	NYP35-31391-15WC1000
		Intel Celeron 2980U		10000 000		NYP2C-313K2-15WC1000
		Intel Core ATOM E3940		128GB SSD		NYP2A-30460-19WC1000

Note: The NYB family does not come with an industrial monitor.

#### NYM - Industrial Monitor

- Multitouch projected capacitive touchscreen
- False touch detection (palm, water)
- Operator can wear gloves
- Optional NY Monitor Link interface for connectivity up to 100m
- Custom logo option





Item	Size	Resolution	Interface	Model
	18.5″	1,280 x 800		NYM19W-C1000
	15.4"		DVI-D	NYM15W-C1000
Industrial Monitor	12.1"			NYM12W-C1000
moustrial monitor	18.5″			NYM19W-C1060
	15.4"		NY Monitor Link	NYM15W-C1060
	12.1"			NYM12W-C1060

Note: Tables include representative part numbers. Please consult the product page for more details.

Omron Automation | 800.556.6766 | automation.omron.com



# NY5 - IPC Machine Controller

- Models available with AI function and with NC function
- Real Time Operating System runs independently of the Windows OS
- Program the machine control with Sysmac Studio using ladder, ST, SFC.
- Machine control program portable to modular NJ controller
- Available in box and panel versions



**Product Page** 

Training Services

Operational System	CPU	Number of axes	RAM Memory	Storage	Туре	Model
Windows Embedded Standard 7 64 bit	Intel Core i7 4700EQ	64	8 GB	64GB SSD	15.4″ Monitor Panel	NY532-1500- 112213910
		32				NY532-1400- 112213910
		16				NY532-1300- 112213910

Note: For models with NC function or with Artificial Intelligence function, refer to the catalog on the website automation.omron.com

# Omron AVEVA Edge

- Omron AVEVA<sup>™</sup> Edge offers an Integrated Development Environment (IDE) with the Omron driver set that allows you to design once and deploy anywhere for most Omron control platforms.
- Omron AVEVA<sup>™</sup> Edge SCADA The full Windows based runtime offers all the tools you need for advanced SCADA applications
- Omron AVEVA<sup>™</sup> Edge HMI AVEVA Edge for embedded systems such as Windows Embedded operating systems. The small footprint makes AVEVA Edge HMI ideal for embedded and edge machines



Product Page

Development or Development and Runtime	Runtime
Omron Aveva Edge Unlimited Tags	
Omron Aveva Edge 512K Tags	Omron Aveva Edge 512K Tags
Omron Aveva Edge 64K Tags	Omron Aveva Edge 64K Tags
Omron Aveva Edge 32K Tags	Omron Aveva Edge 32K Tags
Omron Aveva Edge 16K Tags	Omron Aveva Edge 16K Tags
Omron Aveva Edge 4K Tags	Omron Aveva Edge 4K Tags
Omron Aveva Edge 1.5K Tags	Omron Aveva Edge 1.5K Tags
Omron Aveva Edge 300 Tags	Omron Aveva Edge 300 Tags
Omron Aveva Edge 150 Tags	Omron Aveva Edge 150 Tags

# MicroHAWK V320-F/V330-F/V420-F/V430-F Barcode Reader

- Ultracompact readers, with several model options and setting possibilities
- High performance in reading 1D and 2D codes on any surface, including Direct Part Marks
- Extremely simple setting via browser WebLink, without the need for software installation
- Autofocus with liquid lens (V420-F and V430-F)



Line	Acquisition	Sensor	Focus	Communication	Lighting	IP	Power	Model	
52 fps	0.34 MP Mono	5. 1400	RS-232C, USB/HID, or	Built-in White			V320-F102W03M-NNX		
V320-F	40 fps		10.40	5VDC	V320-F102W12M-NNX				
1/220 5	60 fps	0.34 MP Mono	5. 1400	5.1 × TCD //D	Built-in White	Built-in White	36 to 57 VDC	V330-F102W03M-NNX	
V330-F	42 fps	1.2 MP Mono	Fixed 102mm	Ethernet TCP/IP	& Red		(PoE, IEEE 802.3af)	V330-F102W12M-NNX	
	60 fps	0.34 MP Mono	A + 6 50 200				5VDC	V420-F000W03M-SRX	
V420-F 42 fps	42 fps	1.2 MP Mono	Autofocus 50-300mm	RS-232C, USB/HID, or Ethernet via USB		IP54		V420-F000W12M-SRX	
	42 fps	1.2 MP Mono Autofocus 75-1200mm	Built-in White & Red +			V420-F000L12M-SRX			
	60 fps	0.34 MP Mono	Auto (a auto 50, 200 auto		External Red (8 LEDs) IP65,			V430-F000W03M-SRX	
	42 fps	1.2 MP Mono	Autofocus 50-300mm	RS-232C, Ethernet					V430-F000W12M-SRX
V430-F 42 fps 42 fps	42 fps	1.2 MP Mono	Autofocus 75-1200mm			IP65/67	5 to 30 VDC	V430-F000L12M-SRX	
	1.2 MP Mono	Autofocus 50-300mm	PROFINE 1/0	External Red (24 LEDs)			V430-F000M12M-RRX		

#### **Cables And Accessories**

Product	Туре	Description	Model
	Power, I/O, Serial and USB	Cable with RJ50 connector, 3m	V320-W8-3M
V320-F	RJ50/DB-15 Converter	RJ50 Cable for DB-15, 1m	V320-WR-1M
	Programming	DB-15 cable for USB, 1m	V420-WUB-1M
V330-F	Standard Ethernet Cable	RJ45 Cable for RJ45	XS6W-5PURBSS_00CM-G
V420-F	Programming	DB-15 cable for USB, 1m	V420-WUB-1M
VF430-F	Power, I/O and Serial	Cable with 12-pin M12 connector	V430-W8M
	Ethernet	Cable with 8-pin M12 connector for RJ45	V430-WEM

Note: Tables include representative part numbers. Please consult the product page for more details.

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#### V410H - Handheld Barcode Reader

- Labels or Direct Part Mark barcode reading
- High resolution 1280 x 800 pixels
- Read ranges from contact to 28 inches
- Intuitive and insightful WebLink PC utility and run time with image storage, statistics, reader discovery, troubleshooting and extensive tool tips



Name	Decoding Algorithms	Read Range (10 mil DataMatrix)	Communication	IP Rating	Application	Model	
V410-H XD	1D/2D, X-Mode	0 - 12 cm / 0 - 4.6 in			Direct Part Mark and Labels	V410-HDS4608XD	
V410-H SR	10/20	2.5 – 29 cm / 1 –11.5 in RS-232 / USB IP	RS-232 / USB IP52	RS-232 / USB IP52	IP52	Labels only	V410-HDS4608SR
V410-H HC	10/20	D/2D 0.5 – 24 cm / 0.2 – 9.5 in			Healthcare / Disinfectant resistant	V410-HDS4608HC	

#### **Cables And Accessories**

Product	Туре	Description	Model
	Cable (Required)	CABLE ASSY, UNIVERSAL STYLE 3 USB, 2m, SHIELDED MOD PLUG-V410-H	V410-WUB-2M
	Cable	CBL ASSY, RS232, DB9F, 2m, for connection to communication module or PLC	V410-WR-2M
V410-H	Power Supply	Power Supply required for V410-WR-2M RS-232 Cable	V410-AC0-1
	Intelligent Stand	Stand/holder for using in Hands-free mode	V410-AS0
	Communication Module	Serial to Ethernet TCP and EIP DIN rail mounted converter	OEI-EA3600-R1CP-11
	Cable	2m Serial Cable for OEI-EA3600	OEI-CBA-RF2-CO9ZAR

#### V450-H - Handheld Barcode Reader

- Versatile, powerful decode performance for any application
- Simple Application Configuration via WebLinkPC
- Point-and-shoot decode performance
- Withstands multiple drops from 8' and 5,000 tumbles
- IP 67 Rated
- Industry-Leading DPM Decoding Performance with Omron's X-Mode Imaging Technology
- Wired or Wireless Models

Description	Part Number
V450-H, Handheld Reader DPM, Wired	V450-HDS3608-0001
V450-H, Handheld Reader DPM, Wireless	V450-HDS3678-0001
V450-H, Cradle, Charger	12-9000937-01

#### **Cables And Accessories**

Description	Model
Battery, Spare, V450-H / HS-360X	98-9000224-01
Power Supply, Cradle, V450-H / HS-360X	98-9000181-01
Power Supply, 4-Slot Battery Charger, V450-H / HS-360X	98-9000182-01
4-Slot Battery Charger, V450-H / HS-360X	98-9000185-01
Stand, Intelligent, V450-H / HS-360X	98-9000186-01
AC Power Cable, 1.8M, Japan, C13 Connector	12-9001046-01
AC Power Cable, 1.8M, UK, C13 Connector	12-9000961-01
AC Power Cable, 1.8M, EU, C13 Connector	12-9000960-01
AC Power Cable, 1.8M, U.S., C13 Connector	12-9000959-01
AC Power Cable, 1.8M, China, C13 Connector	12-9000962-01
Cable, RS232, DB9, Female, 2M, Straight, V450-H / HS-360X	12-9000953-01
Cable, USB, Shielded, 2M, Ext 12V, V450-H / HS-360X	12-9000942-01
Cable, USB, Shielded, 4.6M, Ext 12V, V450-H / HS-360X	12-9000943-01
Cable, USB, Shielded, 2M, V450-H / HS-360X	12-9000946-01
Cable, USB, Shielded, 4.6M, V450-H / HS-360X	12-9000946-01
Cable, Adapter, Omron CS/CJ/NJ PLC	V430-WPLC-2M



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#### V406H - Handheld Barcode Reader

- All in one rugged industrial handheld barcode reader
- Superior out-of-box performance
- Predictive Auto-focus and Intelligent Lighting
- Hands Free Intelligent Presentation Mode
- Built in PoE with Fieldbus Communications
- Simple PLC integraton with pre-built function blocks
- Rugged design drop-and-tumble rated



Description	Part Number
V460-H Handheld DPM Reader, PoE Wired, with X-Mode	V460-H0PX

#### **Cables And Accessories**

Туре	Length	Part Number
	1 Meter	V430-WE-1M
Ethernet Communication Cables – Straight Connectors M12 Plug on Reader to RJ45 Connector	3 Meters	V430-WE-3M
	5 Meters	V430-WE-5M
	1 Meter	XS6W-5PUR8SS100CM-G
Chan dowd Fith are at Cables in Cables at Use	3 Meters	XS6W-5PUR8SS300CM-G
Standard Ethernet Cables, In-Cabinet Use Standard RJ45 Connectors on Both Ends	5 Meters	XS6W-5PUR8SS500CM-G
Green	10 Meters	XS6W-5PUR8SS1000CM-G
	15 Meters	XS6W-5PUR8SS1500CM-G

#### V680S - RFID Reader/Writer

- All in one controller, amplifier, antenna
- Reads and writes to any ISO 18000-3 compliant RFID Tag
- Diagnostic function for easy setup and troubleshoooting
- Ethernet, EtherNet/IP and PROFINET connectivity



Product Page

Dimensions (mm)	Network	Model
	EtherNet/IP	V680S-HMD63-EIP
50 x 50 x 30	PROFINET	V680S-HMD63-PNT
	Modbus TCP (TCP/IP)	V680S-HMD63-ETN
	EtherNet/IP	V680S-HMD64-EIP
75 x 75 x 40	PROFINET	V680S-HMD64-PNT
	Modbus TCP (TCP/IP)	V680S-HMD64-ETN
	EtherNet/IP	V680S-HMD66-EIP
120 x 120 x 40	PROFINET	V680S-HMD66-PNT
	Modbus TCP (TCP/IP)	V680S-HMD66-ETN

#### Tags

Туре	Memory	Dimensions (mm)	Installation	Model
		40 40 5	For assembly on non-metallic faceted surface	V680S-D2KF67
	2.1/	40 x 40 x 5	For assembly on metallic faceted surface	V680S-D2KF67M
	2 K 86 x 54 x	06 - 54 - 10	For assembly on non-metallic faceted surface	V680S-D2KF68
N. Detter		86 x 54 x 10	For assembly on metallic faceted surface	V680S-D2KF68M
No Battery		10 10 5	For assembly on non-metallic faceted surface	V680S-D8KF67
		40 x 40 x 5	For assembly on metallic faceted surface	V680S-D8KF67M
	8 K	86 x 54 x 10	For assembly on non-metallic faceted surface	V680S-D8KF68
			For assembly on metallic faceted surface	V680S-D8KF68M

Note: For tags in other formats, or labels, refer to the Omron website.

Note: Tables include representative part numbers. Please consult the product page for more details.

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## V780 - UHF Long Range RFID Reader/Writer

- All-in-one antenna/amplifier/controller with up to 6m of read/write range
- Ability to network up to 7 slave antennas with a master for increased tag reading area
- Web browser based setup and configuration with advanced diagnostics
- Ethernet (Modbus TCP, EtherNet/IP™) as a standard feature



Rroduct Page



Dimensions (mm)	Network	Applicable countries	Model
	Modbus/TCP base	United States and Canada	V780-HMD68-ETN-US
	(TCP/IP)	Mexico	V780-HMD68-ETN-MX
	EthoryNet/ID	United States and Canada	V780-HMD68-EIP-US
$250 \times 250 \times 70$	EtherNet/IP	Mexico	V780-HMD68-EIP-MX
	(Slave Reader/Writer for Multi-	United States and Canada	V780-HMD68-ETN-US-S
	Peader/Mriter function)	Mexico	V780-HMD68-ETN-MX-S

#### Cables for V680S and V780

Type of Communication	Length	Power cable	Communication cable		
	2 Meters	V680S-A41 2M*			
V680S Modbus TCP (TCP/IP)	5 Meters	V680S-A41 5M*			
	10 Meters	V680S-A41 10M*			
V780 EtherNet/IP and PROFINET	1 Meter	XS5F-D421-C80-F	XS5W-T421-CME-K		
	2 Meters	XS5F-D421-D80-F	XS5W-T421-DMC-K		
V680S EtherNet/IP and PROFINET	5 Meters	XS5F-D421-G80-F	XS5W-T421-GMC-K		
	10 Meters	XS5F-D421-J80-F	XS5W-T421-JMC-K		

Note: \* Interface Cable with V680S Special Connector to Flying Leads for Power and RJ45 for Communications

## LVS-95XX - Offline Verifier

- Verify 1D, 2D and direct part marks
- Software automatically selects best lighting performance from integrated red or white dome and 30° angle lighting
- Validates printed barcodes to ISO/IEC, ANSI, GS1, and UDI print quality standards



Type Field of View		Codes	X-Dimension (min)		Lighting	Power	Communication	Model
Type Field of View	Codes	1 D	2 D	Lighting	rowei	Communication	Model	
LVS-9510 Desktop	113mm x 85mm	1D & 2D	7.0 mils	9.8 mils	Red (filtered)	12VDC (Supply)		9510-5-45
	76mm x 57mm			5.9 mils	Red (filtered)	USB Powered	USB 2.0	9580-C-3
LVS-9580 DPM/ LVS-9585 DPM	45mm x 45mm	1D, 2D &	5.0 mils	5.9 mils				9580-DPM
	45mm x 45mm	DPM		5.9 mils	Red, White & 30° angle			9585-DPM

# V275 - Inline Verifier and Print Quality Inspection

- Inspect 100% of labels for print quality.
- Verify 1D and 2D codes to ISO standards.
- Ensure compliance with regulations and quality requirements.
- Check for cosmetic blemishes and errors in printed data.
- Avoid costly chargebacks, recalls, and supply chain disruption.





Distan	Print	Print Speed	Label Width	X-Dimension (min)		Font Size	C	Model		
Printer	Resolution	(max)	(max)	1 D	2 D	(point)	point) Communication	Model		
Zebra ZT610	300 dpi	304mm (12")/seg	104mm (4.1")				5 pt	V275-P46Z61030-CC		
Zebra ZT610	600 dpi	152mm (6")/seg	104mm (4.1") 6.6 mi	6.6 mils	6.6 mils	6.6 mils	10.0 mils	5 point	Ethernet	V275-P46Z61060-CC
Zebra ZT620	300 dpi	203mm (8")/seg	167mm (6.6")				(via PC)	V275-P86Z62030-CC		

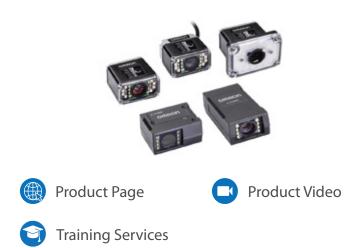
Note: 10.0 mils if Code 1D is vertically printed (ladder orientation)

Note: Tables include representative part numbers. Please consult the product page for more details.

**Product Page** 

# MicroHAWK F430/330 -Smart Camera

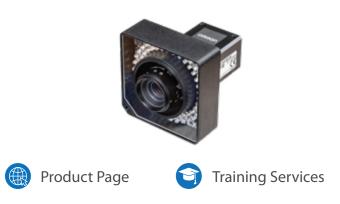
- Ultracompact Smart Cameras
- Various model options and configuration possibilities
- Two programming software options: AutoVISION (Simplified) or Visionscape (Complete)
- Autofocus with liquid lens (F420-F and F430-F)
- Degree of protection up to IP67



Family	Sensor Color	Sensor Resolution	Shutter Type	Lens Type/ Mount	Focus Distance	Software or License	Model		
	Monochrome	0.34 MP	Global				F320-F102W03M-NNV		
F320	Monochrome	1.2 MP	GIODAI	Integrated - fixed focus			F320-F102W12M-NNV		
	Color	5 MP	Rolling		100		F320-F102W50C-NNV		
	Monochrome	0.34 MP			102 mm	AutoVISION + Verification + Visionscape	F330-F102W03M-NNV		
F330	Monochrome	1.2 MP	Global				F330-F102W12M-NNV		
	Color	5 MP	Rolling				F330-F102W50C-NNV		
	Monochrome	1.2 MP	Global		75 to 1200 mm		F420-F000L12M-SRV		
	Color	5 MP	Rolling		50 to 300 mm	AutoVISION Sensor	F420-F000M50C-SWS		
F420	Monochrome	0.34 MP				AutoVISION + Verification + Visionscape	F420-F000W03M-SRV		
	Monochrome	1.2 MP	— Global				F420-F000W12M-SRV		
	Color	5 MP	Rolling				F420-F000W50C-SWV		
	Monochrome	1.2 MP			75 to 1200 mm		F430-F000L12M-SRV		
	Monochrome	1.2 MP			5	5			F430-F000M12M-RRV
	Monochrome	1.2 MP	_			AutoVISION + Verification	F430-F000M12M-SRA		
	Monochrome	1.2 MP	Global			AutoVISION + Verification + Visionscape	F430-F000M12M-SRV		
F430	Monochrome	1.2 MP				AutoVISION + Verification	F430-F000M12M-SWA		
	Monochrome	0.34 MP			50 to 300 mm	AutoVISION + Verification + Visionscape	F430-F000W03M-SRV		
	Monochrome	1.2 MP				AutoVISION + Verification + Visionscape	F430-F000W12M-SRV		
	Color	5 MP	0.111	1		AutoVISION Sensor	F430-F000W50C-SWS		
	Color	5 MP	Rolling			AutoVISION + Verification + Visionscape	F430-F000W50C-SWV		

# V440-F C-Mount Code Reader

- 5MP global shutter sensor @ 36FPS
- C-Mount lens compatible
- Designed for use with NERLITE Smart Series ring lights
- Power over Ethernet (PoE) or direct 24VDC
- Gigabit Ethernet with locking RJ45 port
- Weblink 3.0 with Enhanced functionality including Matrix Mode and Configuration Database
- IP40-rated



Part Number	Sensor	Optics	Communications	IP Rating	Decode Algorithms
V440-FXXXY50M-NNP	5 MP, Global Shutter, Monochrome	C-Mount	RS232C, Ethernet, EtherNet/IP, PROFINET	IP 40	1D/2D Plus Mode
V440-FXXXY50M-NNX	5 MP, Global Shutter, Monochrome	C-Mount	RS232C, Ethernet, EtherNet/IP, PROFINET	IP 40	1D/2D X-Mode

#### elected separately, based on the individual application. Please refer to the V440-F data sheet for all available options.

#### **Mounting Options**

Part Number	Description
V440-AM0	1/4-20 Mounting Block for V440-F Reader

#### **NERLITE Smart Series Ring Lights**

Part Number	Description
NER-011660900G	R-70, 70mm, Smart Series Ring Light
V440-AM1	R-70 Smart Series Ring Light Mounting Kit
NER-011661100G	R-100, 100mm, Smart Series Ring Light
V440-AM2	R-100 Smart Series Ring Light Mounting Kit

**Industrial GigE Ethernet Cable** 

Part Number	Description	Length
98-000133-01	RJ45 to RJ45, Industrial High Flex GigE Ethernet Cable with Jack Screws	2 Meters
98-000134-01	RJ45 to RJ45, Industrial High Flex GigE Ethernet Cable with Jack Screws	5 Meters
98-000134-02	RJ45 to RJ45, Industrial High Flex GigE Ethernet Cable with Jack Screws	7 Meters

#### Power & I/O Cable

Part Number	Description	Length
V430-W8-3M	Power & I/O Cable, M12 to Flying Leads Cable, Straight	3 Meters
V430-W8-5M	Power & I/O Cable, M12 to Flying Leads Cable, Straight	5 Meters
61-9000135-01	Y Cable, Reader & Smart Light Power (Continuous On)	1 Meter
61-9000137-01	Y Cable, Reader & Smart Light Power (Strobe Control)	1 Meter

#### F440 Smart Camera

- 5 MP monochrome global shutter sensor
- Up to 35 FPS image acquisition
- Standard C-Mount lens compatible lens
- Optics & Lighting flexibility to solve complex vision
   applications
- AutoVISION offers twelve easy to use tools that allow users to setup and star jobs within 3 steps





Product Page



Appearance	Description	Part Number
and a state	F440-F, No Optics, 5 MP, Mono, No Light, AutoVISION Sensor	F440-FXXXY50M-NNS
	F440-F, No Optics, 5 MP, Mono, No Light, AutoVISION + Verification	F440-FXXXY50M-NNA
	F440-F, No Optics, 5 MP, Mono, No Light, AutoVISION + Verification + Visionscape	F440-FXXXY50M-NNV

Note 1: F440-F cameras are sold without lenses, lights, cables, or mounting. All of these items can be found in later sections of this datasheet. Note 2: The F440-F uses all the same cables and interconnect accessories as the V440-F. The F440-F uses standard Ethernet cables. High-Flex TPE cables and Robot Ethernet cables are shown later in this datasheet.

Software License	Vision Toolset
F440-FXXXY50M-NNS: AutoVISION Sensor	Locate Tool, Presence/Absence Tool, Count Tool, Measure Tool, Logic Tool
F440-FXXXY50M-NNA: AutoVISION + Verification	All of the Above + Decode Tool, OCR Tool, Match Strings Tool, String Format Tool, OCV Tool, Symbol Quality Verification Tool
F440-FXXXY50M-NNV: AutoVISION + Verification + Visionscape	All of the Above + Visionscape Extensive Machine Vision Tool Set

## FHV7 - Smart Camera

- Several model options and setting possibilities (from 0.4MP to 12MP)
- Dual-Core CPU providing up to 430 fps (0.4MP) acquisition
- Multicolor lighting module (red, green, blue, and infrared, with individual control)
- Degree of protection up to IP67

# Product Page Training Services

Family	Sensor Color	Sensor Resolution	Shutter Type	Lens Type/Mount	Software or License	Model
		0.4 MP				FHV7X-M004-C
	Monochrome	1.6 MP		C Mount with option for autofocus accessory		FHV7X-M016-C
	wonochrome	3.2 MP				FHV7X-M032-C
		5 MP	Clabal	C Mount		FHV7X-M050-C
		0.4 MP	Global	C Mount with option for autofocus accessory	FHV Software or Sysmac Studio Software with License	FHV7X-C004-C
		1.6 MP				FHV7X-C016-C
FHV7		3.2 MP				FHV7X-C032-C
	Color	5 MP		C Mount		FHV7X-C050-C
		6.3 MP		C Mount with option for autofocus accessory		FHV7X-C063R-C
		12 MP	1	C Mount		FHV7X-C120R-C
	Manaahuanaa	6.3 MP	Rolling	C Mount with option for autofocus accessory	]	FHV7X-M063R-C
	Monochrome	12 MP		C Mount	]	FHV7X-M120R-C

Lenses

Focal Distance	C-Mount	Autofocus (Standard)	Autofocus (High-speed)	
6mm	—	FHV-LEM-S06	FHV-LEM-H06	
8mm	SV-0814H	—	—	
9mm	—	FHV-LEM-S09	—	
12mm	SV-1214H	FHV-LEM-S12	—	
16mm	SV-1614H	FHV-LEM-S16	_	
19mm	—	—	FHV-LEM-H19	
25mm	SV-2514H	FHV-LEM-S25	—	

Note: For C-Mount lenses, please refer to Vision Accessory Catalog for complete lens setup. Autofocus lenses and Lighting modules will fit on 0.4MP, 1.6MP, 3.2MP and 6.3MP cameras. You can also refer to the FHV7 configurator on the product page.

Lighting Modul		Turne	Cor	Connector		
Lighting Modules		Туре	Straight	<b>Right-angle</b>		
Light Color	Model	Ethernet Cable	FHV-VNB2 _M <sup>1</sup>	FHV-VNLB2 _M <sup>1</sup>		
Multicolor	FHV-LTM-MC	I/O Cable	FHV-VDB2 M <sup>1</sup>	FHV-VDLB2 M1		
Red	FHV-LTM-R	Data Unit Cable	FHV-VUB2 M <sup>1</sup>	FHV-VULB2 M <sup>1</sup>		
White	FHV-LTM-W	I/O Cable for Parallel Interface Data Un				
IR	FHV-LTM-IR					

#### Smart Camera Data Unit

Туре	Inputs / Outputs	EtherCAT Communication	Model
Parallel Interface	12 Inputs / 24 Outputs	No	FHV-SDU10
EtherCAT Interface	1 Input / 2 Outputs	Yes (Slave)	FHV-SDU30

1. Replace underscore with cable length in Meters (2, 3, 5, 10, 20). Only lengths 2 and 5 are available for the Parallel Interface Data Unit. Note: Tables include representative part numbers. Please consult the product page for more details.

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#### FH - Vision System

High-speed and standard models include:

- High performance Vision System with AI and more than 100 program tools
- Connection for 2, 4 or 8 cameras on the same controller with independent triggers
- High resolution cameras up to 20 MP
- Real image processing (16 million colors)



#### Controllers

ltem	CPU and Processing	Communication	EtherCAT	No. of cameras	Model
				2	FH-5051
	High-Speed Controller (4 core)	EtherNet/IP, EtherCAT, EtherNet	Yes	4	FH-5051-10
				8	FH-5051-20
	Standard Controller (2 core)	TCP/UDP, PROFINET, Serial,		2	FH-2051
Box type controller		Parallel I/O		4	FH-2051-10
				8	FH-2051-20
	Lite Controller (2 core)	EtherNet/IP, EtherNet TCP/UDP,	N	2	FH-L551
	Lite Controller (2 core)	PROFINET, Serial, Parallel I/O	No	4	FH-L551-10

#### Cameras

literes	Description	Мо	del
ltem	Description	Color	Monochrome
CMOS Camera	5MP, 71.7ms image acquisition time	FH-SC05R	FH-SM05R
(Rolling Shutter)	20.4MP, 42.6ms image acquisition time	FH-SC21R	FH-SM21R
	12MP, 24.9ms image acquisition time <sup>1</sup>	FH-SCX12	FH-SMX12
Never bish as a CMOS Care as	5MP, 10.3ms image acquisition time <sup>1</sup>	FH-SCX05	FH-SMX05
Newer high speed CMOS Camera (Global Shutter)	3.2MP, 6.6ms image acquisition time <sup>1</sup>	FH-SCX03	FH-SMX03
(Global Shutter)	1.6MP, 6.5ms image acquisition time	FH-SCX01	FH-SMX01
	0.4MP, 1.9ms image acquisition time	FH-SCX	FH-SMX
	M42 Mount 12MP, 25.7ms image acq time <sup>1</sup>	FH-SC12	FH-SM12
High speed CMOS Camera (Global Shutter)	4MP, 8.5ms image acquisition time <sup>1</sup>	FH-SC04	FH-SM04
(Global Shutter)	2MP, 4.6ms image acquisition time <sup>1</sup>	FH-SC02	FH-SM02
Integrated CMOS Camera (Global Shutter)	0.3MP, 16.7ms image acquisition time	FZ-SQ100N	—

1. Frame rate in high speed mode when the camera is connected using two camera cables.

Туре	Description	Model	Type of Camera	Focal Distance	Model
	2m Length	FZ-VS3 2M	FH-S X01	6mm	SV-0614H
Cable for camera	5m Length	FZ-VS3 5M	FH-S_X03	8mm	SV-0814H
Cable for Califiera	JIILEIIgtii	FZ-V33 31V1	- FH-S_X05	12mm	SV-1214H
	10m Length	FZ-VS3 10M	FH-S_05R	16mm	SV-1614H
	2m Length	XW2Z-S013-2	(1.6MP to 5MP)	25mm	SV-2514H
Parallel cable for I/Os	First Longeth	VW27 6012 F	-	6mm	SV-0614V
	5m Length	XW2Z-S013-5	-	8mm	SV-0813V
			FH-S_X (0.4MP)	12mm	SV-1214V
			(0.4101P)	16mm	SV-1614V
lote: Tables include representative part numbers. Please consult the				25mm	SV-2514V

product page for more details. Note: Please refer to Vision Accessory Catalog for complete lens setup.

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Industrial Automation Core Products Catalog Autumn 2023

# M Series GigE Vision Cameras

- Power over Ethernet capable
- High Resolution, High Speed, CMOS Sensors.
- Small Form Factor: 29 x 29mm & 30 x 40mm versions.
- IEEE1588 Certified with GigE Vision 2.1
- Compatible with Omron AutoVISION & VisionScape



Product Page

Training Services

Monochrome/Color	Resolution	Frame Rate	Effective Pixels ( $H \times V$ )	Sensor Size	Cell Size (µm)	Sensor	Lens Mount	Model	
Monochrome	0.414	202.0 fm	720	1/2.0	6060	144207	С	STC-MBS43POE	
Color	0.4M	282.8 fps	720 × 540	1/2.9	6.9 × 6.9	IMX287		STC-MCS43POE	
Monochrome	0.514	1665600	016 2 6 2 4	1/17	9×9	IMX433	6	STC-MBS52POE	
Color	0.5M	166.5 fps	816 × 624	1/1.7	9 × 9	11117433	С	STC-MCS52POE	
Monochrome	1 214	(1) (1)	1200 × 1024	1/1.8	F 2 V F 2	EV76C560	6	STC-MBE132POE	
Color	1.3M	61 fps	1280×1024	1/1.8	5.3 × 5.3	EV/6C560	С	STC-MCE132POE	
Monochrome	1.6M	70.7 fps	1440 × 1088	1/2.9	3.45 × 3.45	IMX273	С	STC-MBS163POE	
Color		70.7 Tps	1440 X 1066	1/2.9	3.45 X 3.45	1111/2/3	C	STC-MCS163POE	
Monochrome	2M	54.6 fps	1624 × 1240	1/1.7	4.5 × 4.5 IMX	IMX430	С	STC-MBS202POE	
Color		54.0 Ips	1024 X 1240	1/1./	4.5 × 4.5	11/1/430		STC-MCS202POE	
Monochrome	2.214	2.3M	41.6 fps	1920 × 1200	1/1.2	$5.86 \times 5.86$	IMX249	С	STC-MBS231POE
Color	2.5101	41.0 lps	1920 X 1200	1/1.2	5.00 × 5.00	IIVIX249	C	STC-MCS231POE	
Monochrome	3.2M	34.9 fps	2048 × 2048	2/2	2 45 2 45	INAVOCE	6	STC-MBS312POE	
Color	5.2111	54.9 Ips	2040 X 2040	2/3	3.45 × 3.45	IMX265	C	STC-MCS312POE	
Monochrome		21.0 free	2440 × 2040	2/2	2 45 2 45		6	STC-MBS500POE	
Color	5M	21.9 fps	2448 × 2048	2/3	3.45 × 3.45	IMX264	С	STC-MCS500POE	
Monochrome	0.014	124600	4006	1	2.45 × 2.45		C	STC-MBS881POE	
Color	8.9M	8.9M 12.4 fps	4096 × 2160		3.45 × 3.45	IMX267	С	STC-MCS881POE	
Monochrome	12.214	0.0.6	4006 14 2000	1 1	2 45 2 45	INAVOEE	6	STC-MBS122BPO	
Color	→ 12.3M 8.9 fps 4096 × 3000 1.1 3.45 >	3.45 × 3.45	IMX255	C	STC-MCS122BPOI				

#### Global shutter models

#### M Series GigE Vision Cameras (continued)

- Power over Ethernet capable
- High Resolution, High Speed, CMOS Sensors.
- Small Form Factor: 29 x 29mm & 30 x 40mm versions.
- IEEE1588 Certified with GigE Vision 2.1
- Compatible with Omron AutoVISION & VisionScape



#### **Rolling shutter models**

Monochrome/Color	Resolution	Frame Rate	Effective Pixels ( $H \times V$ )	Sensor Size	Cell Size (µm)	Sensor	Lens Mount	Model
Monochrome	5M	14600	2592 × 1944	1/25	22222	MT9P031	C	STC-MBA503POE
Color	5101	14 fps	2592 × 1944	1/2.5	2.2 × 2.2	IVI19P031	C	STC-MCA503POE
Monochrome	6.4M	4M 17.4 fps 3072 × 2048 1/1.8 2.4 × 2	24.24	IMX178	6	STC-MBS642POE		
Color			3072 × 2048	1/1.8	2.4 × 2.4	1111/170	C	STC-MCS642POE
Monochrome	10M	10.3 fps	3856 × 2764	1/2.3	1.67 × 1.67	MT9J003	С	STC-MBA1002POE
Monochrome	1214	9.2 fps	4000 × 3000	1/1.7	1.85 × 1.85	IMX226	С	STC-MBS1242POE
Color	12M							STC-MCS1242POE
Monochrome		4M 5.5 fps	5472 × 3648	1	2.4 × 2.4	IMX183	С	STC-MBS2041POE
Color	20.4M							STC-MCS2041POE

#### Screw-Fastened GigE Cables

Length	Model
3 m	FJ-VSG 3M
5 m	FJ-VSG 5M
10 m	FJ-VSG 10M
20 m	FJ-VSG 20M
40 m	FJ-VSG 40M

#### Power Supply and I/O Cables

Length	Model
3 m	FJ-VSP2 3M
5 m	FJ-VSP2 5M
10 m	FJ-VSP2 10M

Note. Please connect the cables according to the external connector specifications prescribed in your camera's specification documents, for faulty wiring can cause failure.

# FS Series GigE Vision Line Scan Cameras

- Power over Ethernet capable
- Compact case designed for easy mounting
- Offered in 2K, 4K, or 8K
- Available in Single & Dual Line Monochrome and Dual Line Color Models.
- Action Command Triggering: Trigger multiple cameras simultaneously with one command.



Product Page

Training Services

Monochrome/Color	Resolution	Line Rate	Pixel size	Sensor	Sensor Type	Lens Mount	Model
						С	FS-B2KU7GES-C
Monochrome	2048 × 1	51 kHz	7 µm	DR-2K-7	Single	F	FS-B2KU7GES-F
						M42	FS-B2KU7GES-M42
Man a shuran a	4006 1	26141-	7		Circula	F	FS-B4KU7GES-F
Monochrome	4096 × 1	26 kHz	7 μm	DR-4K-7	Single	M42	FS-B4KU7GES-M42
						С	FS-B4KU35GES-C
Monochrome	4096 × 1	26 kHz	3.5 μm	DR-4K-3.5	Single	F	FS-B4KU35GES-F
						M42	FS-B4KU35GES-M42
Monochrome	01021	12 141-	2.5			F	FS-B8KU35GES-F
Monochrome	8192 × 1	13 kHz	3.5 μm	DR-8K-3.5	Single	M42	FS-B8KU35GES-M42
						С	FS-B2KU7DGES-C
Monochrome	2048x1	26kHz	7 μm	DR-2X2K-7-inver	Dual	F	FS-B2KU7DGES-F
						M42	FS-B2KU7DGES-M42
Maria alemana a	1000-2	12141-	7		Dual	F	FS-B4KU7DGES-F
Monochrome	4096x2	13kHz	7 μm	DR-2X4K-7-inver	Dual	M42	FS-B4KU7DGES-M42
						С	FS-C2KU7DGES-C
Color	2048x1	26kHz	7 µm	DR-2X2K-7-inver-RGB	Dual	F	FS-C2KU7DGES-F
						M42	FS-C2KU7DGES-M42
Calar	1000-2	12141-	7		Dual	F	FS-C4KU7DGES-F
Color	4096x2	13kHz	7 μm	DR-2X4K-7-inver-RGB		M42	FS-C4KU7DGES-M42

#### Screw-Fastened GigE Cables

#### Power Supply and I/O Cables

Length	Model
3 m	FJ-VSG 3M
5 m	FJ-VSG 5M
10 m	FJ-VSG 10M
20 m	FJ-VSG 20M
40 m	FJ-VSG 40M

Length	Model
3 m	FJ-VSP2 3M
5 m	FJ-VSP2 5M
10 m	FJ-VSP2 10M

Note. Please connect the cables according to the external connector specifications prescribed in your camera's specification documents, for faulty wiring can cause failure.

Note: Tables include representative part numbers. Please consult the product page for more details.

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# 1080p HD Output

- True HD 1080p Resolution at 60 FPS
- Easily programmable user profiles
- Optional Wired Remote Control for on-the-fly changes



🕀 Product Page

Training Services

Model	Monochrome/Color	Resolution	Frame Rate	Effective Pixels (HxV)	Sensor Size	Cell Size (µm)	Sensor	Lens Mount	General Specifications
STC-HD213DV	Color	1080P/1080i	60 fps	1920x080	1/2.9	2.9x2.9	IMX291	С	With Momory
STC-HD213DV-CS	Color	1080P/10801	60 ips	1920x080	1/2.9	2.9x2.9	11117291	CS	With Memory
STC-HD213DVN								С	
STC-HD213DVN-B	Color	1080P/1080i	60 fps	1920x1080	1/2.9	2.9x2.9		С	No Memory
STC-HD213DVN-CS								CS	
STC-HD213SDI	Calar	10000/1000:	( ) from	1020-000	1/2.0	2.0.2.0		С	
STC-HD213SDI-CS	Color	1080P/1080i	60 fps	1920x080	1/2.9	2.9x2.9	2.9x2.9 IMX291	CS	With Memory
STC-HD213SDIN								С	
STC-HD213SDIN-B	Color	1080P/1080i	60 fps	1920x1080	1/2.9	2.9x2.9		С	No Memory
STC-HD213SDIN-CS								CS	

Туре	Model	Applicable Model	General Specifications			
Mount Conversion Adapter	CS-C-R	CS Mount Series	—			
Remote Control Unit	JIG-HD133-R	HDMI/DVI/SDI	Ø3.5 stereo pin jack			
Туре	Model	Description				
	CAB-HDMI-015	4K HDMI Cable; 1.5m				
	CAB-HDMI-02	4K HDMI Cable; 2m				
	CAB-HDMI-03	4K HDMI Cable; 3m				
	CAB-HDMI-05	4K HDMI Cable; 5m				
Cables	CAB-HDMI-100-OPT	4K HDMI Cable; 100m; Power				
Cables	CAB-HDMI-10-OPT	4K HDMI Cable; 10m; Power				
	CAB-HDMI-20-OPT	4K HDMI Cable; 20m; Power				
	CAB-HDMI-30-OPT	4K HDMI Cable; 30m; P	ower			
	CAB-HDMI-50-OPT	4K HDMI Cable; 50m; Power				
	CAB-HDMI-70-OPT	4K HDMI Cable; 70m; Power				
Power	PWR-DC12-500R-A	Int/Dom Version of DC12				

## M Series USB3 Vision Cameras

- USB3.0 Compact CMOS Camera
- Offered in resolutions ranging from 0.4M to 20.4M
- Plug and Play functionality
- Compatible with Omron AutoVISION & VisionScape.





Training Services

#### Monochrome/Color Resolution Frame Rate Effective Pixels $(H \times V)$ Sensor Size Cell Size (µm) Sensor Lens Mount Model Monochrome STC-MBS43U3V 0.4M 527.1 fps 720 × 540 1/2.9 6.9 × 6.9 IMX287 С Color STC-MCS43U3V STC-MBE132U3V Monochrome 1.3M 60 fps $1280 \times 1024$ 1/1.8 $5.3 \times 5.3$ EV76C560 CS Color STC-MCE132U3V Monochrome STC-MBS163U3V 1.6M 238 fps $1440 \times 1080$ 1/2.9 $3.45 \times 3.45$ IMX273 С Color STC-MCS163U3V Monochrome STC-MBCM200U3V С 2M 167 fps $2048 \times 1088$ 2/3 $5.5 \times 5.5$ CMV2000 Monochrome NIR STC-MBCM200U3V-NIR Monochrome STC-MBS231U3V 1/1.2 IMX249 С 2.3M 41.6 fps $1920 \times 1200$ $5.86 \times 5.86$ Color STC-MCS231U3V Monochrome STC-MBS241U3V 2.3M 163 fps $1920 \times 1200$ 1/1.2 $5.86 \times 5.86$ IMX174 С Color STC-MCS241U3V Monochrome STC-MBS312U3V 3.2M 56 fps $2048 \times 1536$ 1/1.8 $3.45 \times 3.45$ IMX265 С STC-MCS312U3V Color Monochrome STC-MBS322U3V 3.2M 121 fps $2048 \times 1536$ 1/1.8 $3.45 \times 3.45$ IMX252 С Color STC-MCS322U3V STC-MBCM401U3V Monochrome Color 4M 89 fps $2048 \times 2048$ $5.5 \times 5.5$ CMV4000 С STC-MCCM401U3V 1 Monochrome NIR STC-MBCM401U3V-NIR Monochrome STC-MBS500U3V С 5M 35.8 fps $2448 \times 2048$ 2/3 $3.45 \times 3.45$ IMX264 Color STC-MCS500U3V Monochrome STC-MBS510U3V 5M 75.7 fps $2448 \times 2048$ 2/3 $3.45 \times 3.45$ IMX250 С Color STC-MCS510U3V Monochrome STC-MBS70BU3V 7.1M 51.2 fps 3216 × 2208 1.1 $4.5 \times 4.5$ IMX428 С Color STC-MCS70BU3V STC-MBS881U3V Monochrome 8.9M 32.5 fps 4096×2160 $3.45 \times 3.45$ IMX267 С 1 Color STC-MCS881U3V STC-MBS891U3V Monochrome С 8.9M 41.9 fps 4096 × 2160 1 $3.45 \times 3.45$ IMX255 Color STC-MCS891U3V Monochrome STC-MBS122BU3V 12.3M 23.5 fps 1.1 IMX304 С 4096 × 3000 $3.45 \times 3.45$ Color STC-MCS122BU3V STC-MBS123BU3V Monochrome С 12.3M 30.4 fps 4096 × 3000 1.1 $3.45 \times 3.45$ IMX253 Color STC-MCS123BU3V

Note. We recommend that you use an external power supply for 8.9M and 12M cameras, for depending on PC performance, power supplied via USB bus connection alone may not be sufficient for these cameras.

Note. Models with "-SE" have been additionally equipped with the Short Exposure Mode feature.

#### **Rolling shutter models**

Monochrome/Color	Resolution	Frame Rate	Effective Pixels (H × V)	Sensor Size	Cell Size (µm)	Sensor	Lens Mount	Model	
Monochrome	1214	1214	21.26	4000 × 3000	1/17	1.05 × 1.05	NE 1.05 INAV226	C	STC-MBS1242U3V
Color	12M	31.2 fps	4000 × 3000	1/1.7	1.85 × 1.85	IMX226	C	STC-MCS1242U3V	
Monochrome	20.414	18.5 fps	5472 × 3648	1	24224	IMV102	C	STC-MBS2041U3V	
Color	20.4M	18.5 TPS	54/2 × 3048	1	2.4 × 2.4	IMX183	C	STC-MCS2041U3V	

#### Non-USB3 Vision Compliant Models (with Rolling Shutters)

Monochrome/Color	Resolution	Frame Rate	Effective Pixels (H × V)	Sensor Size	Cell Size (µm)	Sensor	Lens Mount	Model
Monochrome	- 5M 14 fps	146	2502 × 1044	1/25	22×22	MTODO21	66	STC-MBA5MUSB3
Color		14 rps	2592×1944	1/2.5	2.2 × 2.2	MT9P031	CS	STC-MCA5MUSB3

#### Global shutter models

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# Short Wave Infrared Industrial Camera Series

- Top of the line, high-end sensors
- Unique Interfaces for Customizability
- One-of-a-kind Heat dissipation technology
- Removes environmental dependency and variability
- SWIR technology allows inspection throughout the full manufacturing process, even under plastic wrap or silicon coating.



Product Page

Training Services

Part Number	Interface	Resolution	Frame Rate	Sensor Size
STC-LBS34POE-SWIR	GigE Vision	0.3 MP	242 FPS	1/4"
STC-LBS132POE-SWIR	GigEVision	1.3 MP	84 FPS	1/2"
STC-LBS34U3V-SWIR	USB3 Vision	0.3 MP	260 FPS	1/4"
STC-LBS132U3V-SWIR	USB3 Vision	1.3 MP	134 FPS	1/2"
STC-LBS34CL-SWIR	Camera Link	0.3 MP	258 FPS	1/4"
STC-LBS132CL-SWIR	Camera Link	1.3 MP	125 FPS	1/2"

Note: Tables include representative part numbers. Bold models: Preferred Availability. Please consult the product page for more details.

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#### Factory Drive Recorder

The Omron Factory Drive Recorder offers users the ability to optimize their machine troubleshooting and minimize the time it takes to solve problems in the field through the combination of Omron Industrial Cameras and the easiest to use Event Capture Software on the market.

- Record the Moment
  - Record up to 5 minutes of video before an event trigger and 5 minutes of video after an even trigger
- 4 Trigger Options
  - Master Image Comparison
  - Motion Trigger
  - Time Trigger
  - Trigger Signal (via Hardware Trigger)



- Live Monitoring & Manual Viewing
- Connect up to 8 Omron Industrial Cameras to the Software allowing for multiple camera recordings.
- High Speed & High Quality Recording
  - Omron Industrial Cameras feature Frame Rates up to 527 FPS & Resolutions up to 20 MP

Part Number	Description
STC-FDRSW-01	Omron's New Event Capture Software; Factory Drive Recorder

#### **Related Products**

Model No.	Product Family	Description	
	M Series GigE Vision Cameras	GigE Vision Industrial Cameras – Area Scan Cased	
	M Series USB3 Vision Cameras	USB3 Vision Industrial Cameras – Area Scan Cased	
Industrial Camera	B Series GigE Vision Cameras	GigE Vision Industrial Cameras – Area Scan Board	
	UVC Cameras	UVC Industrial Cameras – Multiple Configurations	
	R Series USB3 Vision Remote Head	USB3 Vision Remote Head	

Note: Tables include representative part numbers. Bold models: Preferred Availability. Please consult the product page for more details.

# G9SP - Safety Controller

- The standalone safety controller for small and mid-sized applications.
- Communication with standard PLC via Ethernet or Serial
- Direct communication with HMI NB Series via Serial
- Four types of standard expansion







Product	Inputs	Test outputs	Safety outputs	Common outputs	Model
	10	4	Transistar Outputs 4	4	G9SP-N10S
G9SP Series	10	6	Transistor Output: 4	-	G9SP-N10D
	20	6	Transistor Output: 8	-	G9SP-N20S

#### **Expansion Modules and Accessories**

Description	No. of Outputs	No. of Inputs	Model
	8 (NPN)	12 (NPN)	CP1W-20EDT
European Madulas	8 (PNP)	12 (PNP)	CP1W-20EDT1
Expansion Modules	32 (NPN)		CP1W-32ET
	32 (PNP)		CP1W-32ET1
Connection Cable	80cm (for connectin	CP1W-CN811	
	RS-232 S	erial	CP1W-CIF01
Communication Modules	EtherNet/	CP1W-CIF41	
	EtherNe	t/IP	CM-EIP-1
Programming software	1 licen	WS02-G9SP01-V1	
Cassette Memory			CP1W-ME05M

## NX-SL5 - Safety Controller

- A versatile safety controller, with EtherCAT and EtherNet/IP capabilities, for integrated or stand-alone solutions, making machine safety design, installation, and maintenance easier
- Enable flexible manufacture by supporting different safety networks, CIP Safety and FSoE. Enable a hybrid system, when combining the NX-SL5 with the NX-102.
- Sysmac Studio offers a set of unique functions to make functional safety management easier as Safety Signature Check and Online Function Verification. In addition, reduce the design cycle with automatic programming and simple automatic test.



Product	Product Description N	
NX-SL5 Safety Controller Units	Safety PLC, up to 1024 safety I/O and 128 safety connections	NX-SL5500
	Safety PLC, up to 2032 safety I/O and 254 safety connections	NX-SL5700

Product	Туре	Protocol	Am. of Ports	Number of Networks	Safety Inputs	Safety Outputs	Test Outputs	Model
Communication & Remote Safety I/O Units	Network Coupler	EtherNet/IP	3	2				NX-CSG320
	Remote Module of safety I/Os	EtherNet/IP	2	1	12	4	12	GI-SMD1624
					12	-	12	GI-SID1224

Product	Type No		Description	Model
Safety Input & Output Units	Input	4	4 safety input points (PNP) with 2 test outputs	NX-SIH400 Ver 1.1
		8	8 safety input points (PNP) with 2 test outputs	NX-SID800
	Output	2	2 safety outputs (PNP)	NX-SOH200
		4	4 safety outputs (PNP)	NX-SOD400

Note: Tables include representative part numbers. Please consult the product page for more details.

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#### NX-SL3 - Safety Controller

- Effortless integration into the most common PLC's platforms in the market, providing reliable safety solutions while supporting different configurations.
- Offer a direct connection to any PLC using an EtherNet/ IP coupler, and build a stand-alone system. For larger projects, with a higher number of safety devices distributed over a larger area, using an EtherCAT coupler supports EtherCAT and FSoE.
- Sysmac Studio offers a set of unique functions to make functional safety management easier as Safety Signature Check and Online Function Verification. In addition, reduce the design cycle with automatic programming and simple automatic test.



Product	Туре	Model
NV CL2 Coloris Constanting Units	Safety PLC, up to 256 safety I/O and 32 safety connections *	NX-SL3300 Ver 1.1
NX-SL3 Safety Controller Units	Safety PLC, up 1024 safety I/O and 128 safety connections *	NX-SL3500 Ver 1.1

\* Only FSoE master connections supported

Product	Type No. of Points		Description	Model
Safety Input & Output Units	Input	4	4 safety input points (PNP) with 2 test outputs	NX-SIH400 Ver 1.1
		8	8 safety input points (PNP) with 2 test outputs	NX-SID800
	Output	2	2 safety outputs (PNP)	NX-SOH200
		4	4 safety outputs (PNP)	NX-SOD400

Product	Communication Cycle	Protocol	Maximum number of NX I/O modules	Maximum Current I/O	Model
Network Couplers	250 to 4,000 us	EtherCAT Slave	63	4A	NX-ECC201
				10A	NX-ECC202
	125 to 10,000 us				NX-ECC203
	4 to 1,000 us	EtherNet/IP Slave			NX-EIC202

## F3SG-SR - Machine Guard Safety Light Curtain

- Three-color Area Beam Indicators (ABIs) enable easy alignment and quick troubleshooting
- Up to 30m protection range (25mm resolution and up)
- IO-Link communication capability helps improve preventive maintenance programs
- Advanced programming features (muting, blanking, prereset, warning zone, etc.) are available on all models.
- IP67G rating is standard, with IP69K option available (F3SG-SRB only)

Product Page



ion	Protective Height (mm)	Area Beam Indicators	Part Number
	160		F3SG-4SRB0160-14
	320		F3SG-4SRB0320-14
	400		F3SG-4SRB0400-14
14	480		F3SG-4SRB0480-14
14 mm	560		F3SG-4SRB0560-14
	640	-	F3SG-4SRB0640-14
	720		F3SG-4SRB0720-14-F
	1200		F3SG-4SRB1200-14
	360		F3SG-4SRB0360-25-F
	440		F3SG-4SRB0440-25-F
	600	No	F3SG-4SRB0600-25-F
	680		F3SG-4SRB0680-25-F
	760		F3SG-4SRB0760-25-F
	840		F3SG-4SRB0840-25-F
25 mm	920		F3SG-4SRB0920-25-F
	1000		F3SG-4SRB1000-25-F
	1200		F3SG-4SRB1200-25
	1440		F3SG-4SRB1440-25
	1520		F3SG-4SRB1520-25
-	1600		F3SG-4SRB1600-25
	1840		F3SG-4SRB1840-25
	400		F3SG-4SRA0400-14
	560		F3SG-4SRA0560-14
14 mm	720		F3SG-4SRA0720-14-F
	880		F3SG-4SRA0880-14-F
	1200		F3SG-4SRA1200-14
	280		F3SG-4SRA0280-25-F
	440	Yes	F3SG-4SRA0440-25-F
	600		F3SG-4SRA0600-25-F
	760		F3SG-4SRA0760-25-F
25 mm	920		F3SG-4SRA0920-25-F
	1200		F3SG-4SRA1200-25
	1600		F3SG-4SRA1600-25
les include representat	tive part numbers. Please consult the prod	uct page for more details.	F3SG-4SRA1760-25

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## F3SG-PG - Perimeter Guard Safety Light Curtain

- Three-color Area Beam Indicators (ABIs) enable easy alignment and quick troubleshooting.
- Protection distance up to 110m
- Robust design for harsh environments (rated IP67G)
- IO-Link communication for remote monitoring



Number of Beams	Beam Gap (mm)	Product Length (mm)	Protection Range (m)	Туре	Part Number
	500	670	up to 30m	Emitter/Receiver	F3SG-4PGA0670-2A
2	500	670	up to 8m	Transceiver	F3SG-4PGA0670-2C
	500	670	up to 110m	Emitter/Receiver	F3SG-4PGA0670-2L
2	400	970	up to 30m	Emitter/Receiver	F3SG-4PGA0970-3A
3	400	970	up to 110m	Emitter/Receiver	F3SG-4PGA0970-3L
	300	1070	up to 30m	Emitter/Receiver	F3SG-4PGA1070-4A
	300	1070	up to 8m	Transceiver	F3SG-4PGA1070-4C
4	300	1070	up to 110m	Emitter/Receiver	F3SG-4PGA1070-4L
4	400	1370	up to 30m	Emitter/Receiver	F3SG-4PGA1370-4A
	400	1370	up to 8m	Transceiver	F3SG-4PGA1370-4C
	400	1370	up to 110m	Emitter/Receiver	F3SG-4PGA1370-4L

# Safety Light Curtain Accessories and Cables

#### F3SG-SR/PG Brackets

Description	Part Number
Standard Bracket (non-adjustable)	F39-LSGF
Adjustable Side-Mount Bracket	F39-LSGA
Adjustable Top/Bottom Bracket (F3SJ, F3SN Adaptor)	F39-LSGTB-SJ
Adjustable Top/Bottom Bracket (F3SG-RA/RE Adaptor)	F39-LSGTB-RE
Adjustable Top/Bottom Bracket (MS4800, F3SR Adaptor)	F39-LSGTB-MS

#### F3SG-SR/PG Root Cables (plug into light curtain)

Description	Length	Emitter Part Number	Receiver Part Number
Root Cable to M12 connector (Standard)	0.3 m	F39-JGR3K-L	F39-JGR3K-D
Root Cable to Flying Leads	3m	F39-JG3C-L	F39-JG3C-D
Root Cable to Flying Leads	7m	F39-JG7C-L	F39-JG7C-D
Root Cable to Flying Leads	10m	F39-JG10C-L	F39-JG10C-D
Root Cable to M12 Connector (F3SJ-B/A, F3SR, or F3SN Conversion)	0.3 m	F39-JGR3K-SJ-L	F39-JGR3K-SJ-D
Root Cable to M12 Connector (F3SG-RE Conversion)	0.3 m	F39-JGR3K-RE-L	F39-JGR3K-RE-D
Root Cable to M12 Connector (MS4800 Conversion)	0.3 m	F39-JGR3K-MS-L	F39-JGR3K-MS-D

#### F3SG-SR/PG Extension Cables (plug into M12 Root Cable)

Description	Length	Emitter Part Number	Receiver Part Number
M12 to Flying Lead Extension Cable	3 m	F39-JG3A-L	F39-JG3A-D
M12 to Flying Lead Extension Cable	10 m	F39-JG10A-L	F39-JG10A-D
M12 to M12 Extension Cable	3 m	F39-JG3B-L	F39-JG3B-D
M12 to M12 Extension Cable	10 m	F39-JG10B-L	F39-JG10B-D
M12 to M12 Extension Cable	20 m	F39-JG20B-L	F39-JG20B-D

Note: Tables include representative part numbers. Please consult the product page for more details.

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# Safety Light Curtain Accessories and Cables

#### F3SG-SR Cascade Cables

Description	Length	Part Number
Side-by-Side Cascading Cable (2 cables per part number)	0.12 m	F39-JGR12L
Extension Cable for Cascading (2 cables per part number)	0.3 m	F39-JGR3W

#### F3SG-SR/PG IO-Link Cables

Description	Length	Part Number
NX-ILM400 IO-Link Cable	2 m	XS5F-D521-DJ0-IL
GX-ILM08C IO-Link Cable	3 m	F39-JG3B-L
GX-ILM08C IO-Link Cable	10 m	F39-JG10B-L
GX-ILM08C IO-Link Cable	20 m	F39-JG20B-L

#### F3SG-SR/PG Wiring Reduction and Reset Cables

Description	Length	Part Number
Y-Joint Plug/Socket Connector	0.5 m	F39-GCNY2
Reset Switch Connector	0.5 m	F39-GCNY3
Reset Switch Connector to Reset Switch Cable	1 m	X5SF-D421-C80-F
Reset Switch Connector to Reset Switch Cable	2 m	X5SF-D421-D80-F
Reset Switch Connector to Reset Switch Cable	3 m	X5SF-D421-E80-F
Reset Switch Connector to Reset Switch Cable	5 m	X5SF-D421-G80-F
Reset Switch Connector to Reset Switch Cable	10 m	X5SF-D421-J80-F
Reset Switch Connector to Reset Switch Cable	20 m	X5SF-D421-L80-F

# F3SG-SR/PG Accessories

### F3SG-SR, F3SG-PG, and F3SG-R[] Floor Mount Columns

Applicable F3SG-SR/F3SG-R[] Light Curtain	Applicable F3SG-PG Light Curtain	Column Height	Part Number
Protective Height up to 880 mm	F3SG-4PGA0670-2[]	990 mm	F39-ST0990
Protective Height up to 1280 mm	F3SG-4PGA0970-3A/3L F3SG-4PGA1070-4[]	1310 mm	F39-ST1310
Protective Height up to 1520 mm	F3SG-4PGA1370-4[]	1630 mm	F39-ST1630
Protective Height up to 1840 mm		1950 mm	F39-ST1950
Protective Height up to 2080 mm		2270 mm	F39-ST2270

## F3SG-SR, F3SG-PG, and F3SG-R[] Mirror Columns

Applicable F3SG-SR/F3SG-R[] Light Curtain	Applicable F3SG-PG Light Curtain	Column Height	Part Number
Protective Height up to 880 mm	F3SG-4PGA0670-2[]	990 mm	F39-SML0990
Protective Height up to 1200 mm	F3SG-4PGA0970-3A/3L F3SG-4PGA1070-4[]	1310 mm	F39-SML1310
Protective Height up to 1520 mm	F3SG-4PGA1370-4[]	1630 mm	F39-SML1630
Protective Height up to 1840 mm		1950 mm	F39-SML1950
	F3SG-4PGA0670-2A/2L	990 mm	F39-PML0990-2
	F3SG-4PGA0970-3A/3L	1310 mm	F39-PML1310-3
	F3SG-4PGA1070-4A/4L	1310 mm	F39-PML1310-4
	F3SG-4PGA1370-4A/4L	1950 mm	F39-PML1630-4

#### Stand and Mirror Base Accessory

Description		Part Number
	Adjustable and Rotatable Column Base	F39-STB

#### F3SG-SR and F3SG-PG Muting Accessories

Description	Length	Part Number
Through Beam Muting Sensor Mounting Arm	150 mm	F39-FMA150T
Through Beam Muting Sensor Mounting Arm	400 mm	F39-FMA400T
Retro-Reflective Muting Sensor Mounting Arm	150 mm	F39-FMA150R
Retro-Reflective Muting Sensor Mounting Arm	400 mm	F39-FMA400R
Muting Arm Bracket for F3SG-SR/PG Mounting	n/a	F39-LMAF1
Muting Sensor Connection Box	n/a	F39-GCN5

Note: Tables include representative part numbers. Please consult the product page for more details.

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# F3SG-RE - Economic Model

- Simple on/off functionality with easy wiring
- 5ms response time
- IP67 Rated
- Resolutions of 14 and 30mm







Resolution	Protective Height (mm)	Part Number
	160	F3SG-4RE0160P14
	240	F3SG-4RE0240P14
	320	F3SG-4RE0320P14
14 mm	560	F3SG-4RE0560P14
	640	F3SG-4RE0640P14
	960	F3SG-4RE0960P14
	1200	F3SG-4RE1200P14
	350	F3SG-4RE0350P30
	430	F3SG-4RE0430P30
	590	F3SG-4RE0590P30
20 mm	750	F3SG-4RE0750P30
30 mm	910	F3SG-4RE0910P30
	1070	F3SG-4RE1070P30
	1230	F3SG-4RE1230P30
	1550	F3SG-4RE1550P30

## Cables

Material	Length	Model
	2m	XS2F-M12PVC4S2M
PVC Cable	5m	XS2F-M12PVC4S5M
	10m	XS2F-M12PVC4S10M
	2m	XS2F-M12PUR4S2M
PUR Cable	5m	XS2F-M12PUR4S5M
	10m	XS2F-M12PUR4S10M
Connection cable in 'Y" between Sender and Receiver	0.5m	F39-GCNY1

## Accessories (for Advanced and Economic models)

Туре	Description	Model
Fixed Mounting Bracket	Side fraction (2 supports per code)	F39-LGF
(Already included)	Side fixation (2 supports per code)	F39-LGA
Adjustable Mounting Bracket	Ton Evention (4 evene extension and a)	F39-LGTB
(Optional)	Top fixation (4 supports per code)	F39-LGTB-1

# OS32C - Safety Laser Scanner

- 4m maximum safety zone and 15m warning zone
- Up to 70 different detection zones configurations
- Distance measurement capabilities up to 50m
- 5W power consumption



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Cable Outlet	Safety Range	Ethernet/IP Data	Part Number
	3m	No	OS32C-BP
	4m	No	OS32C-BP-4M
Back	3m	Yes	OS32C-BP-DM
	4m	Yes	OS32C-BP-DM-4M
Side	3m	No	OS32C-SP1
	4m	No	OS32C-SP1-4M
	3m	Yes	OS32C-SP1-DM
	4m	Yes	OS32C-SP1-DM-4M

#### OS32C Safety Laser Scanner Cables

Description	Length	Part Number
	3 m	OS32C-CBL-03M
During Calify	10 m	OS32C-CBL-10M
Power Cable	20 m	OS32C-CBL-20M
	30 m	OS32C-CBL-30M
	2 m	OS32C-ECBL-02M
Ethernet Cable	5 m	OS32C-ECBL-05M
	15 m	OS32C-ECBL-15M

#### OS32C Safety Laser Scanner Brackets

### OS32C Spare/Replacement Parts

Description	Part Number
Bottom/Side Mounting Bracket	OS32C-BKT1
XY Axis Rotation Mouting Bracket	OS32C-BKT2
Simple Mounting Bracket	OS32C-BKT3
Protective Cover for Window	OS32C-BKT4
Mounting Stand	OS32C-MT
Hardware kit for Mounting Stand	OS32C-HDT

Description	Part Number
Scan Window	OS32C-WIN-KT
Sensor block without I/O 3m Range	OS32C-SN
Sensor block without I/O 4m Range	OS32C-SN-4M
Sensor block without I/O 3m Range, Ethernet/IP	OS32C-SN-DM
Sensor block without I/O 4m Range, Ethernet/IP	OS32C-SN-DM-4M
I/O Block with Back Cable Access	OS32C-CBBP
I/O Block with Side Cable Access	OS32C-CBSP1

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## G9SE - Safety Relays

- A compact safety relay for simple safety applications, with screwless terminals and increased diagnostic capabilities for fast troubleshooting and easy wiring
- Modules with two or four safety contacts and OFF-delay timing options
- Compact units, 17.5 or 22.5 mm wide
- Front side wiring using screw less terminals and led indicators for fast diagnostic



Safety Outputs	Auxiliary Output	OFF-delay Max. time	Power	Model
2	- 1	-	24VDC	G9SE-201
4		-		G9SE-401
2		5 s		G9SE-221-T05
2		30 s		G9SE-221-T30

## G9SA - Expandable Safety Relay

- All-purpose expandable safety relays series ideal for high demand applications.
- Ideal for high demand applications.
- Expandable outputs options only, up to 8: instantaneous or time-delay
- Simple expansion connection available





Safety Services

Safety Outputs	ety Outputs Auxiliary Outputs F		Model
3	1		G9SA-301 AC/DC24
5	1	241/06	G9SA-501 AC/DC24
3	1	24VDC	G9SA-EX301
3	1		G9SA-TH301 AC/DC24*

\* Two hand controller (type III C, EN 574)



## G9SX - Safety Modules

- A versatile safety relay series, ideal for scalable safety solution, support logical "AND" functions for expansion and offer special modules for dedicated safety functions
- G9SX-family modules can be connected by a logical "AND" function to implement partial/global stopping of a machine
- Solid-state outputs, detailed LED diagnosis and clever feedback signals help to keep maintenance easy
- Expansion units with safe timing functions complete the line-up



Terminal Block Type	Safety Output Instantaneous	Safety Output – Off-Delayed	Safety Standstill detection output	Safety slow-speed/ stopping detection output	Auxiliary Outputs	Power	Model
Screw Terminal	2	0	0	0	2		G9SX-BC202-RT DC24
Spring-cage terminals	3	2	0	0	2		G9SX-AD322-T15-RC DC24*
Screw Terminals	0	0	3	0	2	24//DC	G9SX-SM032-RT
Screw Terminals	2	0	0	2	4	24VDC	G9SX-LM224-F10-RT **
Screw Terminals	2	0	0	0	2		G9SX-NS202-RT DC24 ***
Screw Terminals	2	2	0	0	2		G9SX-NSA222-T03-RT DC24

\*Off-Delay:

T15: 0/0.2/0.3/0.4/0.5/0.6/0.7/1/1.5/2/3/4/5/7/10/15 s

T03: 0/0.2/0.3/0.4/0.5/0.6/0.7/0.8/0.9/1.0/1.2/1.4/1.8/2.0/2.5/3.0 s

\*\* Safe Standstill monitoring unit based on Back EMF operation for two and three phase systems.

\*\*\* Limited speed monitoring unit

## D41D - High-Coded Non-Contact Safety Door Switch

- Type 4 High-coded door switch, RFID
- Easy and quick automatic paring with Individual coding, single or multiple teaching type
- Three sizes of actuator, including flat and miniature to fit in narrow spaces or inside corners
- Symmetrical design for left and right mounting
- Approach direction can be either from the front or side
- Extensive diagnostic via a three-color LED indicators and diagnostic output
- Up to 31 safety door switches from D41 Series can be connected



Sensor	Part Number	Coding Level	Connector
Carrow	D41D-1CD-N1	High, Individual coding	M8 connector
Sensor	D41D-2CD-025N2	High, Individual coding with no limitation	M12 with 250 mm cable
	Part Number	Туре	Dimensions
	D41D-A1	Standard	W x D x H= 39 x 29.5 x 18 (mm)
Actuator <sup>1</sup>	D41D-A2	Flat	W x D x H= 60 x 16 x 6.8 (mm)
	D41D-A3	Miniature	W x D x H= 22 x 9 x 7 (mm)
1. Actuators sold separately			

### Accessories

	Part Number	Description
	D41D-8P5-CFM8-702M	Cable, 2m, M8 connector, IP67
	D41D-8P5-CFM8-705M	Cable, 5m, M8 connector , IP67
Cables	D41D-8P5-CFM8-710M	Cable, 10m, M8 connector , IP67
	D41L-8P5-CFM12-905M	Cable, 5m, M12 connector, IP69
	D41L-8P5-CFM12-910M	Cable, 10m, M8 connector, IP69
Sealing Kits	D41D-SK	Seal mounting holes. Contains: 4 flat plugs and 4 plugs with rim for high screw head
Mounting Kits	D41D-MS	Contains: 2 mounting plates and 4 ferrule plugs

## D41L - Type 4 High-Coded Guard Lock Switch

- Type 4 High-coded door switch, RFID
- Easy and quick automatic paring with Individual coding, single or multiple teaching type
- Improved hygiene: resistant to wide range of cleaning agents, easy to clean
- Protection class IP66, IP67 and IP69 and ECOLAB certified
- Large actuator tolerances and easy latching force adjustment
- Power to lock or power to unlock versions with optional emergency exit
- 3 actuating directions with identical mounting for left and right hinged doors



- 3 LED indicators for smart diagnostics
- Star handle instead of key hole to prevent water and foreign material to collect
- Device can be used as an end stop for sliding door applications
- Up to 31 devices connected in series

	Part Number	Lock and Release	Teaching	OSSD Configuration	<b>Connection Method</b>	
	D41L-1YDG-N2	Power to lock	Individual coding, single teaching	Guard monitoring and lock monitoring	No	
	D41L-2YDG-N2	(solenoid lock)	Individual coding,			
	D41L-2ZDGE-N2		multiple teaching	Only guard monitoring	Yes	
	D41L-1ZDA-N2	Power to unlock	Individual coding, single teaching		No	
	D41L-2YDA-N2	(mechanical release)	Individual coding,	Guard monitoring		
	D41L-2YDAE-N2		multiple teaching	and lock monitoring	Yes	
	Part Number	Description				
<b>Actuator</b> <sup>1</sup>	D41L-A1	Compatible with D41L mo	Compatible with D41L models			
Actuators sold ser	aratoly					

1. Actuators sold separately

### Accessories

	Part Number	Description
Cables	D41L-8P5-CFM12-905M	Cable, 5m, M12 connector, IP69
Cables	D41L-8P5-CFM12-910M	Cable, 10m, M8 connector, IP69
Mounting Plate	D41L-MP	Mounting plate for sensor only
Mounting Set	D41L-MS	Mounting set for actuator only

## D41G - Type 4 High-Coded Guard Lock Switch

- Type 4 High-coded door switch, RFID
- Easy and quick automatic pairing with individual coding, single or multiple teaching type
- Power to lock and power to unlock versions available
- OSSD configuration for guard monitoring only or guard and lock monitoring
- Extensive diagnostic via a three-color LED indicators and diagnostic output
- Easily mounted to standard aluminum profile systems
- Up to 31 devices connected in series



	Part Number	Lock and Release	Teaching	OSSD Configuration	Connection Method
Sensor <sup>1</sup>	D41G-1YDA-N2	Power to unlock	Individual coding, single teaching		
	D41G-2YDA-N2	Power to unlock	Individual coding, multiple teaching	5.	M12 connector
	D41G-2YDG-N2	Power to lock			
	D41G-2YDG-N2	Power to lock			
	D41G-2YDG-T1	Power to lock			Community of
	D41G-2ZDA-T1	Power to unlock		Only guard monitoring	- Screw Terminal

1. Actuators sold separately

#### Accessories

	Part Number	Description
Cables	D41L-8P5-CFM12-905M	Cable, 5m, M12 connector, IP69
	D41L-8P5-CFM12-910M	Cable, 10m, M8 connector, IP69

Note: Tables include representative part numbers. Bold models: Preferred Availability. Please consult the product page for more details.

# D41G Actuators

- Actuators for right and left hinged doors with door handle and optional emergency exit and lock-out tag as well as options available for sliding doors
- Actuators for right and left sliding doors



Actuator Type <sup>1</sup>	Part Number	Handle Position	Emergency Exit Unit	Lock-out option
With door handle	D41G-A2L-E1	Loft	Yes	-
	D41G-A2L-E1T	- Left	Yes	Yes
	D41G-A2R-E1	Dialat	Yes	-
	D41G-A2R-E1T	Right	Yes	Yes
Non door handle	D41G-A1L	Left	-	-
	D41G-A1R	Right	-	-

1. Actuators sold separately

## D40Z - Compact Non-Contact Door Switch

- Up 30 Switches can be connected to one Safety Controller while maintaining PLe/safety category 4
- Can be connected to G9SP or G9SX-NS[] Safety Controllers
- LED indication for easy troubleshooting
- Compact Non-contact Door Switch can be mounted from both sides

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Cable length	Auxiliary Outputs	Model
2 m	1	D40Z-1C2
5 m	I	D40Z-1C5

Note: Tables include representative part numbers. Bold models: Preferred Availability. Please consult the product page for more details.

## D40P - Non-Contact Safety Switches

- Hall effect technology provides solid state outputs
   for increased longevity
- LED indicates operation state
- Operates with all OMRON safety controllers and safety relays
- Connect up to 20 switches in series, up to PLd acc. EN ISO 13849-1







Body Size	Housing	Contacts	Cable Connection	Model
Elongated			M12, 8 pin, fitted with 250 mm cable	D40P-LPC-21-M12
Small	Polyester Housing	2NC / 1NO	M12, 8 pin, fitted with 250 mm cable	D40P-SPC-21-M12
Barrel			5 m pre-wired	D40P-BPC-21-05
Small	Stainless Steel		5 m pre-wired	D40P-SMC-21-05
Small	Hygienic	2NC / 1NO	M12, 8 pin, fitted with 250 mm cable	D40P-SHC-21-M12

#### Accessories

Туре	Description	Model
Cables, M12 female - 8 pin to flying leads	5m	D40ML-CBL-M12-5M
Cables, M12 female - 8 pin to flying leads	10m	D40ML-CBL-M12-10M
T-Connector Connection Cable	T-Connector for M12 cable	D40P-8PTC-M12

## D40ML - RFID Magnetic Locking Safety Switch

- Magnetic latching combines with RFID technology to deliver high holding force and tamper resistance
- Residual magnetism acts as light door latch after unlocking and it provides multiple holding forces
- Clean/Sanitize in Place stainless steel versions are rated IP69K
- For use on machines with no rundown time if power is lost



Actuator Type	Case Material	Holding Force	Cable Connection	Model
Basic	Diecast Metal (IP67)	1500N		D40ML-M1-B-M12
Basic	Plastic (IP67)	1500N	Pigtail w/ M12 Connector	D40ML-P1-B-M12
Basic	316 Stainless Steel (IP69K)	950N		D40ML-SS1-B-M12
Unique	316 Stainless Steel (IP69K)	600N	5m Cable	D40ML-SS2-U-5M

#### Accessories

Туре	Description	Model
Cables, M12 female - 8 pin to flying leads	5m	D40ML-CBL-M12-5M
Cables, M12 female - 8 pin to flying leads	10m	D40ML-CBL-M12-10M

# D4SL-N - Guard Lock Safety Door Switch

- A wide variety of built-in switches can be used for various devices (4-, 5-, and 6-contact models are available)
- Removable terminal block for easy wiring and quick
  maintenance
- Key holding force of 1,300N
- Slide key available to prevent workers from becoming trapped inside the hazardous area
- Can be easily mounted on 40 × 40 mm aluminum frames



Туре	Conduit Size	Contact Model	Head Material	Door Lock and Release	Indicator	Model
	1/2-14NPT *	2NC/1NO + 2NC/1NO	Metal	Mechanical lock/24VDC solenoid release	Yes	D4SL-N3NDA-D
DAGEN	1/2-14NPT *	2NC/1NO + 2NC/1NO	Metal	24VDC solenoid lock/mechanical release	Yes	D4SL-N3NDG-D
D4SL-N	M20	3NC + 1NC/1NO	Resin	Mechanical lock/24VDC solenoid release	Yes	D4SL-N4GFA-D
	G1/2	2NC/1NO + 2NC/1NO	Resin	Mechanical lock/24VDC solenoid release	Yes	D4SL-N2NFA-D4

\* M20, includes M20-to-1/2-14NPT conversion adapter.

## Slides Key for D4SL

- Lockout Key to prevent workers from becoming trapped inside the hazardous area
- The plastic material makes the Slide Key suitable for lightweight doors







Description	Model	
Slide Key Kit	D4SL-NSK10-LK	
Slide Key with inner lever	D4SL-NSK10-LKH	

#### **Operation Keys for D4SL**

Mounting Orientation	Special Function	Model
Horizontal	-	D4SL-NK1
Horizontal	Rubber cushions	D4SL-NK1G
Vertical	-	D4SL-NK2
Horizontal	Adjustable	D4SL-NK3



# PMAC Motion Controllers CK3 Series CK3E - EtherCAT Based Controllers

- 32, 16 or 8 axes motion control
- Up to 250 µs cycle time
- Compatible with standard G-Code functions
- Save space & wiring thanks to compact design
- CAD/CAM for easy motion control
- EtherCAT for flexible configuration



Number of Axis	Memory capacity	Programming language	Model
8			CK3E-1210
16	1G	G-Code/ANSI C/original programming language	CK3E-1310
32			CK3E-1410

By combining global leading Delta Tau Data Systems' Motion Control technologies, Omron can open up new applications and solutions. The CK3E is a controller designed for precise multi-axis control. You can build a system capable of controlling up to 32 axes of motion and incorporate customized control algorithms into the system. The CK3E allows you to program in C language and reuse existing software assets. The compact design saves space in machines and control panels. EtherCAT<sup>®</sup> connects servo drives, I/O, and other devices to the CK3E, reducing the number of cables.

## CK3M - Modular Controllers

- · Local axes for nanoscale precision
- Ultra high-speed synchronous control (50µs/5 axes)
- Custom servo regulation algorithms
- Flexibility on using multi-vendor actuators and encoders
- Flexibility on programming on G-code, ANSI C or original programming language







Product Type	Memory capacity	EtherCAT <sup>®</sup> port	EtherCAT Axes	Expansion	Model
		-	-	One expansion rack can be connected using the expansion master unit and expansion slave unit	CK3M-CPU101
	RAM: 1 GB Built-In flash memory: 1 GB	EtherCATEtherCAT®: 1 port (DC sync)	4		CK3M-CPU111
CPU Units			8		CK3M-CPU121
	RAM: 2 GB Built-in flash	EtherCATEtherCAT®:	16		CK5M-CPU131
	memory: 4 GB	1 port (DC sync)	32		CK5M-CPU141

Maximize your machine's performance: Performing precise linear motor drive control and nanoscale positioning, the PMAC (Programmable Multi Axis Controller) has been appreciated by manufacturers of semiconductor manufacturing equipment and other leading-edge equipment. Omron now offers a next generation motion controller CK3M that packs PMAC's superior motion control capability, multi-vendor connectivity, and flexible development capability into its compact design. The CK3M removes constraints and barriers and maximizes your machine's capabilities.



Amplifier interface	Encoder in	terface	Output	type l	Model	
DirectPWM output				(	CK3W-AX1313N	
DA output (Filtered PWM)	Digital quadrature enco	der/serial encoder		(	CK3W-AX1414N	
DA output (True DAC)		мем туре	(	CK3W-AX1515N		
DirectPWM output	Sinusoidal encoder/Serial encoder			(	CK3W-AX2323N	
DirectPWM output				(	CK3W-AX1313P	
DA output (Filtered PWM)	Digital quadrature enco	der/serial encoder	DND turno	(	CK3W-AX1414P	
DA output (True DAC)			гиг туре	(	CK3W-AX1515P	
DirectPWM output	Sinusoidal encoder/Seri	al encoder		(	CK3W-AX2323P	
Feedback interface	Output	type	TCR Ou	tput l	Model	
XX2 100				(	CK3W-GC1100	
XY2-100			TCR Output		CK3W-GC1200	
CI 2 100	PWM output				CK3W-GC2100	
SL2-100			TCR Output C		CK3W-GC2200	
Feedback interface	Feedback	type	Number of channels		Model	
Serial Encoder	BiSS-C, Endat2.2, and 1S	Motor	4		CK3W-ECS300	
	Description		Model			
Rated output voltage:	5 VDC / 24 VDC		CK3W-PD048			
Number of inputs	Number of outputs	l/O type		Model		
		NPN			MD7110	
16 points	16 points	PNP			MD7120	
Input Range	Number of inpu	uts	Model			
	4 points		CK3W-AD2100			
Analog Input Units Unit -10 to 10 V		8 points		D3100		
Product Name	·	Function	·		Model	
Expansion Master Unit	Expansion Master Unit	connects to the rig	ht side of the Cl	PU Unit	CK3W-EXM01	
Let the second second		side of the Power Supply Unit				
Expansion Slave Unit	Expansion Slave Unit c	connects to the right	t side of the Pov	ver Supply U	nit CK3W-EXS02	
	DirectPWM output DA output (Filtered PWM) DA output (True DAC) DirectPWM output DA output (Filtered PWM) DA output (True DAC) DirectPWM output <b>Feedback interface</b> St2-100 <b>Feedback interface</b> Serial Encoder Serial Encoder <b>Number of inputs</b> 16 points <b>Input Range</b> Unit -10 to 10 V	DirectPWM outputDigital quadrature encodeDA output (Filtered PWM)Digital encoder/SerialDirectPWM outputSinusoidal encoder/SerialDirectPWM outputDigital quadrature encodeDA output (Filtered PWM)Digital encoder/SerialDA output (True DAC)Digital encoder/SerialDirectPWM outputSinusoidal encoder/SerialDirectPWM outputSinusoidal encoder/SerialDirectPWM outputSinusoidal encoder/SerialSiluzolaOutput (True DAC)DirectPWM outputSinusoidal encoder/SerialSiluzolaPWM outputSiluzolaPWM outputSiluzolaSinusoidal encoder/SerialSiluzolaPWM outputSiluzolaSinusoidal encoder/SerialSiluzolaPWM outputSiluzolaPWM outputSiluzolaSinusoidal encoder/SerialSiluzolaPWM outputSiluzolaSinusoidal 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EncoderBiSS-C, Endat2.2, and 1S MotorSerial EncoderBiSS-C, Endat2.2, and 1S MotorStreedback interfacePescriptionRated output voltage: 5 VDC / 24 VDCNPN16 points16 points16 pointsNumber of outputs10 points4 points10 points8 pointsEncoderNumber of inputsProduct NameFeedback typePuter second s</td> <td>DirectPWM output     Digital quadrature encoder/serial encoder     NPN type       Da output (Filtered PWM)     Digital quadrature encoder/serial encoder     NPN type       DirectPWM output     Sinusoidal encoder/Serial encoder     PNP type       Da output (Filtered PWM)     Digital quadrature encoder/serial encoder     PNP type       Da output (Filtered PWM)     Digital quadrature encoder/serial encoder     PNP type       Da output (Filtered PWM)     Digital encoder/Serial encoder     TCR Output       DirectPWM output     Sinusoidal encoder/Serial encoder     TCR Output       DirectPWM output     Sinusoidal encoder/Serial encoder     TCR Output       Sinusoidal encoder/Serial encoder     TCR Output     TCR Output       Xy2-100     PWM output     TCR Output     TCR Output       Sl2-100     BiSS-C, Endat2.2, and 1S Motor     4     TCR Output       Serial Encoder     BiSS-C, Endat2.2, and 1S Motor     4     Model       Serial Encoder     BiSS-C, Endat2.2, and 1S Motor     Kodel     Kodel       16 points     Number of outputs     NPN     NPN       16 points     Nember of inputs     Model       10 nut_1 to 10 V     4 points     CK3W-A       10 points     Apoints     CK3W-A       10 points     Apoints     CK3W-A</td> <td>DirectPWM output DirectPWM output (Filtered PWM) Da output (Filtered PWM) Digital quadrature encoder/serial encoder DirectPWM output DA output (Filtered PWM) DA output (True DAC) DirectPWM output Sinusoidal encoder/Serial encoder Feedback interface CCR Output Support Sinusoidal encoder/Serial encoder PMP type Feedback interface CCR Output Support Sinusoidal encoder/Serial encoder TCR Output Sinusoidal encoder/Serial encoder TCR Output TCR Output TCR</td>	Direct PWM outputDigital quadrature encoder/serial encoderDA output (Filtered PWM)Digital quadrature encoder/serial encoderDirect PWM outputSinusoidal encoder/Serial encoderDirect PWM outputDigital quadrature encoder/serial encoderDA output (Filtered PWM)Digital quadrature encoder/serial encoderDA output (True DAC)Direct PWM outputDirect PWM outputSinusoidal encoder/Serial encoderDirect PWM outputSinusoidal encoder/Serial encoderDirect PWM outputSinusoidal encoder/Serial encoderDirect PWM outputSinusoidal encoder/Serial encoderStreedback interfaceOutput typeStreedback interfaceFeedback typeSerial EncoderBiSS-C, Endat2.2, and 1S MotorSerial EncoderBiSS-C, Endat2.2, and 1S MotorStreedback interfacePescriptionRated output voltage: 5 VDC / 24 VDCNPN16 points16 points16 pointsNumber of outputs10 points4 points10 points8 pointsEncoderNumber of inputsProduct NameFeedback typePuter second s	DirectPWM output     Digital quadrature encoder/serial encoder     NPN type       Da output (Filtered PWM)     Digital quadrature encoder/serial encoder     NPN type       DirectPWM output     Sinusoidal encoder/Serial encoder     PNP type       Da output (Filtered PWM)     Digital quadrature encoder/serial encoder     PNP type       Da output (Filtered PWM)     Digital quadrature encoder/serial encoder     PNP type       Da output (Filtered PWM)     Digital encoder/Serial encoder     TCR Output       DirectPWM output     Sinusoidal encoder/Serial encoder     TCR Output       DirectPWM output     Sinusoidal encoder/Serial encoder     TCR Output       Sinusoidal encoder/Serial encoder     TCR Output     TCR Output       Xy2-100     PWM output     TCR Output     TCR Output       Sl2-100     BiSS-C, Endat2.2, and 1S Motor     4     TCR Output       Serial Encoder     BiSS-C, Endat2.2, and 1S Motor     4     Model       Serial Encoder     BiSS-C, Endat2.2, and 1S Motor     Kodel     Kodel       16 points     Number of outputs     NPN     NPN       16 points     Nember of inputs     Model       10 nut_1 to 10 V     4 points     CK3W-A       10 points     Apoints     CK3W-A       10 points     Apoints     CK3W-A	DirectPWM output DirectPWM output (Filtered PWM) Da output (Filtered PWM) Digital quadrature encoder/serial encoder DirectPWM output DA output (Filtered PWM) DA output (True DAC) DirectPWM output Sinusoidal encoder/Serial encoder Feedback interface CCR Output Support Sinusoidal encoder/Serial encoder PMP type Feedback interface CCR Output Support Sinusoidal encoder/Serial encoder TCR Output Sinusoidal encoder/Serial encoder TCR Output TCR	

# CK3C -Compact PMAC Controller

- ARM Dual Core 1GHz Processor
- Memory: 1GB RAM, 1GB Flash
- Local/direct amplifier interface as well as EtherCAT
- Multiple encoder interfaces available with ACC modules
- On Borad IO available with ACC modules
- EtherCAT for flexible configuration



Product Page

Training Services

Model	Analog I/O	Ethernet Port(s)	EtherCAT License	Extended Pin
CK3C-AX1100	No	1	No	No
CK3C-AX1100E	No	1	No	Yes
CK3C-AX1201	"4x 16-bit Al 1x Filtered PWM AO "	2	No	No
CK3C-AX1201E	"4x 16-bit Al 1x Filtered PWM AO "	2	No	Yes
CK3C-AX1211	"4x 16-bit Al 1x Filtered PWM AO "	2	I/O Only	No
CK3C-AX1211E	"4x 16-bit Al 1x Filtered PWM AO "	2	I/O Only	Yes
CK3C-AX1231	"4x 16-bit Al 1x Filtered PWM AO "	2	8 Servo	No
CK3C-AX1231E	"4x 16-bit Al 1x Filtered PWM AO "	2	8 Servo	Yes

Model		Analog I/O
ACC-2453	3-4050000-000-000000	4-Channel expansion
ACC-2453	3-4050000-000-010000	4-Channel expansion with 4 analog inputs & 1 Filtered PWM output
100 510	3-3674-0-0002-000000	2 channel 4096x interpolator board for sinusoidal encoders
ACC-51S	3-3674-0-0012-000000	4 channel 4096x interpolator board for sinusoidal encoders
	3-3936-0-0002-000000	4-Channel SSI serial encoder protocol
	3-3936-0-0003-000000	4-Channel ENDAT serial encoder protocol
	3-3936-0-0006-000000	4-Channel Yaskawa Sigma II & III serial encoder protocol
	3-3936-0-0008-000000	4-Channel Panasonic serial encoder protocol
ACC-84S	3-3936-0-000D-000000	4-Channel Mitsubishi serial encoder protocol
	3-3936-0-000E-000000	4-Channel 1S serial encoder protocol
	3-3936-0-0TBC-000000	4-Channel table based compare protocol
	3-3936-0-0XY2-000000	XY2-100 serial link for 2-axis and 3-axis laser scan heads and galvanometers
ACC-8AS	3A0-603673-10X	4-Channel dual 16-bit DAC analog board
ACC-8FS	3F0-603673-10X	4-Channel direct PWM breakout board
Breakout Board	CBB4-00-000-000-1000	CK3C breakout board with separate connectors for each encoder, each flag set, and servo amplifier output

# Power PMAC IDE (Integrated Development Environment)

- Based on Microsoft® Visual Studio®
- ANSI C or original programming language
- Easy tuning
- Simple setting
- Troubleshooting
- Debugger



Product Page



## 1S Series - Servomotor

- Advanced design allows easy installation and wiring
- EtherCAT communications up to 125µsec
- Safety over the EtherCAT network
- Motor has 23-bit battery less absolute encoder
- 350% momentary torque (200 V, 750 W max.)



-	<i>c</i>	_	Motor	Drive	Motor	Drive
PM	Capacity	Torque	100V	VAC	480V VAC	
	0.05 kW	0.159 Nm	R88M-1M05030S-(1)S2	R88D-1SN01L-ECT		
	0.1 kW	0.318 Nm	R88M-1M10030S-(1)S2	R88D-1SN01L-ECT		
	0.2 kW	0.637 Nm	R88M-1M20030S-(1)S2	R88D-1SN02L-ECT		
	0.4 kW	1.27 Nm	R88M-1M40030S-(1)S2	R88D-1SN04L-ECT		
			200V	/AC		
	0.05 kW	0.159 Nm	R88M-1M05030T-(1)S2	R88D-1SN01H-ECT		
	0.1 kW	0.318 Nm	R88M-1M10030T-(1)S2	R88D-1SN01H-ECT		
	0.2 kW	0.637 Nm	R88M-1M20030T-(1)S2	R88D-1SN02H-ECT		
3000 RPM	0.4 kW	1.27 Nm	R88M-1M40030T-(1)S2	R88D-1SN04H-ECT		
	0.75 kW	2.39 Nm	R88M-1M75030T-(1)S2	R88D-1SN08H-ECT	R88M-1L75030C-(1)S2	R88D-1SN10F-ECT
	1.0 kW	3.18 Nm	R88M-1L1K030T-(1)S2	R88D-1SN10H-ECT	R88M-1L1K030C-(1)S2	R88D-1SN10F-ECT
	1.5 kW	4.77 Nm	R88M-1L1K530T-(1)S2	R88D-1SN15H-ECT	R88M-1L1K530C-(1)S2	R88D-1SN15F-ECT
	2.0 kW	6.37 Nm	R88M-1L2K030T-(1)S2	R88D-1SN20H-ECT	R88M-1L2K030C-(1)S2	R88D-1SN20F-ECT
	3.0 kW	9.55 Nm	R88M-1L3K030T-(1)S2	R88D-1SN30H-ECT	R88M-1L3K030C-(1)S2	R88D-1SN30F-ECT
	4.0 kW	12.7 Nm	R88M-1L4K030T-(1)S2	R88D-1SN55H-ECT	R88M-1L4K030C-(1)S2	R88D-1SN55F-ECT
	4.7 kW	15.0 Nm	R88M-1L4K730T-(1)S2	R88D-1SN55H-ECT		
	5.0 kW	15.9 Nm			R88M-1L5K030C-(1)S2	R88D-1SN55F-ECT
	0.4 kW	1.91 Nm			R88M-1M40020C-(1)S2	R88D-1SN06F-ECT
	0.6 kW	2.86 Nm			R88M-1M60020C-(1)S2	R88D-1SN06F-ECT
2000 0014	1.0 kW	4.77 Nm	R88M-1M1K020T-(1)S2	R88D-1SN10H-ECT	R88M-1M1K020C-(1)S2	R88D-1SN10F-ECT
2000 RPM	1.5 kW	7.16 Nm	R88M-1M1K520T-(1)S2	R88D-1SN15H-ECT	R88M-1M1K520C-(1)S2	R88D-1SN15F-ECT
	2.0 kW	9.55 Nm	R88M-1M2K020T-(1)S2	R88D-1SN20H-ECT	R88M-1M2K020C-(1)S2	R88D-1SN20F-ECT
	3.0 kW	14.3 Nm	R88M-1M3K020T-(1)S2	R88D-1SN30H-ECT	R88M-1M3K020C-(1)S2	R88D-1SN30F-ECT
	4 kW	25.5 Nm	R88M-1M4K015T-(1)S2	R88D-1SN55H-ECT	R88M-1M4K015C-(1)S2	R88D-1SN55F-ECT
	5.0 kW	31.8 Nm	R88M-1M5K015T-(1)S2	R88D-1SN55H-ECT		
1500 0004	5.5 kW	35 Nm			R88M-1M5K515C-(1)S2	R88D-1SN55F-ECT
1500 RPM	7.5kW	47.8 Nm	R88M-1M7K515T-(1)S2	R88D-1SN75H-ECT	R88M-1M7K515C-(1)S2	R88D-1SN75F-ECT
	11 kW	70 Nm	R88M-1M11K015T-(1)S2	R88D-1SN150H-ECT	R88M-1M11K015C-(1)S2	R88D-1SN150F-ECT
	15 kW	95.5 Nm	R88M-1M15K015T-(1)S2	R88D-1SN150H-ECT	R88M-1M15K015C-(1)S2	R88D-1SN150F-ECT
1000 RPM	0.9 kW	8.59 Nm	R88M-1M90010T-(1)S2	R88D-1SN10H-ECT	R88M-1M90010C-(1)S2	R88D-1SN10F-ECT
	2.0 kW	19.1 Nm	R88M-1M2K010T-(1)S2	R88D-1SN20H-ECT	R88M-1M2K010C-(1)S2	R88D-1SN20F-ECT
	3.0 kW	28.7 Nm	R88M-1M3K010T-(1)S2	R88D-1SN30H-ECT	R88M-1M3K010C-(1)S2	R88D-1SN30F-ECT

Note: (1) B - Motor with brake WHITE - Without brake

## 1SA Series - Servomotor & Drive

- PLe/SIL3 safety functions
- STO, SS1, SS2, SOS, SLS, SLP, SDI, & SBC
- Drive with EtherCAT Communication
- Single cable design
- Right angle, rotatable, connector on motor
- Absolute encoder without the need for battery

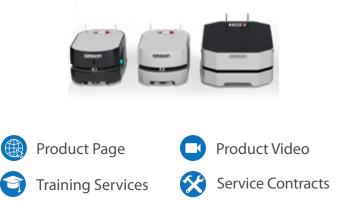


0044	Constitut		Motor	Drive	Motor	Drive
RPM	Capacity	Torque	200V	/AC	400V V	/AC
	0.2 kW	0.637 Nm	R88M-1AM20030T-(1)S2	R88D-1SAN02H-ECT		
	0.4 kW	1.27 Nm	R88M-1AM40030T-(1)S2	R88D-1SAN04H-ECT		
	0.75 kW	2.39 Nm	R88M-1AM75030T-(1)S2	R88D-1SAN08H-ECT	R88M-1AL75030C-(1)S2	R88D-1SAN10F-ECT
2000 0014	1.0 kW	3.18 Nm	R88M-1AL1K030T-(1)S2	R88D-1SAN10H-ECT	R88M-1AL1K030C-(1)S2	R88D-1SAN10F-ECT
3000 RPM	1.5 kW	4.77 Nm	R88M-1AL1K530T-(1)S2	R88D-1SAN15H-ECT	R88M-1AL1K530C-(1)S2	R88D-1SAN15F-ECT
	2.0 kW	6.37 Nm	R88M-1AL2K030T-(1)S2	R88D-1SAN20H-ECT	R88M-1AL2K030C-(1)S2	R88D-1SAN20F-ECT
	2.6 kW	8.28 Nm	R88M-1AL2K630T-(1)S2	R88D-1SAN30H-ECT		
	3.0 kW	9.55 Nm			R88M-1AL3K030C-(1)S2	R88D-1SAN30F-ECT
	1.5 kW	9.55 Nm	R88M-1AM1K515T-(1)S2	R88D-1SAN15H-ECT	R88M-1AM1K515C-(1)S2	R88D-1SAN15F-ECT
1500 RPM	2.7 kW	17.2 Nm	R88M-1AM2K715T-(1)S2	R88D-1SAN30H-ECT		
	3.0 kW	19.1 Nm			R88M-1AM3K015C-(1)S2	R88D-1SAN30F-ECT

Note: (1) B - Motor with brake WHITE - Without brake

# LD Series – Autonomous Mobile Robots

- Simplified programming and navigation using digital mapping
- In compliance with safety standards ISO 12100, ISO 14121-2 and ISO 13849-1
- Rechargeable battery with autonomy of 12 to 15 hours and self-management for recharging
- Connectivity with factory management software (MES/WMS)
- Cleanroom and ESD options available



#### Part Number Configurator



No.	Item		Specification	Symbol
1	DebetTure	LD 60/LD 90		0
I	Robot Type	LD 250		2
		0.9m/s (Excludes LD 250)	90Kg (LD90)	6
2		1.2m/s (LD 250 Only)	250Kg	2
2	Speed & Payload	1.3m/s (Excludes LD 250)	90Kg (LD90)	4
		1.8 m/s/ (LD 60 Only)	60Kg	3
			Robot	00000
		Standard LD60 / LD 90 / LD 250	Robot, Dock	00002
	Configuration		Robot, Dock, Joystick, Top Plate	10004
3	Configuration		Robot	20000
		ESD	Robot, Dock	20002
			Robot, Dock, Joystick, Top Plate	20004

## Accessories<sup>1</sup>

Item	Description	Model
Battery <sup>2</sup>	Power battery	20452000
	Primary Fleet Manager	20271-900
Fleet Manager	Secondary Fleet Manager (Backup Unit)	20271-901
Fleet Simulator	Simulation of up to 10 AMRs	20271-903
FLOW iQ	Analytics and visualization of fleet operations (5yr)	20271-705
Cell Alignment Positioning System (CAPS)	Improved positioning of AMRs for high accuracy applications (Sold per AMR)	20271-805

1. Additional accessories available, contact your Omron Sales Representative for additional details

2. The battery 20452000 must be purchased separately

Service Contracts

# HD-1500 – Autonomous Mobile Robot

- Natural feature navigation: Automatically plans efficient routes and prevents collisions
- Fleet management: Operates in coordination with a fleet of up to 100 mobile robots
- Easy deployment: Installs quickly, without facility modifications
- 1500 Kg large capacity payload
- Dynamic intelligent 360° safety
- Integrated automation controller

Part Number Configurator



🕤 Training Services 🛛 🛠

No.	ltem		Specification	Symbol
1	Robot Type	HD-1500		4
2	Speed & Payload	1.8 m/s	1500 Kg	8
3	Laser Version	Omron (HD)		0
			Robot	00000
			Robot, Dock	00002
			Robot, Side Lasers	00010
		Standard	Robot, Single HAPS	00100
			Robot, Single HAPS, Side Lasers	00110
			Robot, Double HAPS	00200
4	Configuration	HD-1500	Robot, Double HAPS, Side Lasers	00210
			Robot, Dock, Joystick/Pendant, Top Plate	10004
			Robot, Dock, Single HAPS, Joystick/Pendant, Top Plate	10104
			Robot, Dock, Single HAPS, Joystick/Pendant, Top Plate, Side Lasers	10114
			Robot, Dock, Double HAPS, Joystick/Pendant, Top Plate	10204
			Robot, Dock, Single HAPS, Joystick/Pendant, Top Plate, Side Lasers	10214

(1) (2) (3) (4)

#### Accessories<sup>1</sup>

Item	Description	Model
Battery <sup>2</sup>	Power battery	68330000
Flast Management	Primary Fleet Manager	20271-900
Fleet Management	Secondary Fleet Manager (Backup Unit)	20271-901
Fleet Simulator	Simulation of up to 10 AMRs	20271-903
FLOW iQ	Analytics and visualization of fleet operations (5yr)	20271-705
Cell Alignment Positioning System (CAPS)	Improved positioning of AMRs for high accuracy applications (Sold per AMR)	20271-805

1. Additional accessories available, contact your Omron Sales Representative for additional details

2. Vehicle Battery (68330000) must be purchased separately from the robot and is shipped separate from the HD Vehicle.

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**Product Video** 

Service Contracts

# Omron TM -Collaborative Robots

- Designed to promote a safe and harmonious workplace between humans and machines.
- Easy-to-use graphical programming environment for quick startup and operation.
- Built-in vision-based robot control enables visual servoing, inspection, and measurement operations.
- TMvision and landmark allows truly flexible, fast changeover.

#### Part Number Configurator



No.	ltem	Specifications	Symbol
(1)		Omron TM Collaborative Robots	
		TM5	0
		TM12	1
(2)	Model Type	TM14	2
		TM16	3
		TM20	4
(2)	Devuer Guerelu	AC	0
(3)	Power Supply	DC	1
(4)	Vision System	Integrated Camera	0
(4)		No Camera (X Model)	1
	Arm Length	700	70
		900	90
(5)(6)		1100	11
		1300	13
		Standard	0
		Semi S2 Certification	1
(7)	Configuration	Standard with Ethernet/IP and PROFINET (Fieldbus)	2
		Food Grade Grease	3″
		Food Grade Grease with Ethernet/IP and PROFINET (Fieldbus)	4″
(0)	Cohlo Longth	Standard Length (3m/1.5m)*	1
(8)	Cable Length	Extended Length (12m)*	2

Product Page

Training Services

Note: 1.5m cable is only standard on DC models. 12m cable is not available on DC models.

#### Accessories<sup>1</sup>

Туре	Notes	Model
Landmark	3D position referencing label (2 units included in the robot code)	RT6-A000021
Mobile Station	Compatible with OMRON TM5 only	RT6-A000010
Portable Pedestal	Compatible only with OMRON TM5/Adjustable Height	RT6-A000009
SSD Card with cable	128 GB of memory with SATA cable	RT6-A000012
Calibration kit	Required for TCP calibration and manual vision	RT6-A000002
Pneumatic Box	Recommended to attach to the robot pedestal	RT6-A000015
Polarizer Light Module	Not compatible with OMRON TM S Series	RT6-A000022

1. Additional accessories available, contact your Omron Sales Representative for additional details

# Omron TMS -Collaborative Robots

- Advanced hardware options and expanded safety features
- 31 safety functions, all ISO 13849-1, Cat.3, PLd, certified
- Easy-to-use programming interface (Flowchart and Script programming language available)
- Anti cutting oil corrosion joint covers
- Include all the built-in vision and landmark capabilities of standard Omron TM Cobots



#### Part Number Configurator



No.	ltem	Symbol	
(1)		Omron TM Collaborative Robots	
		TM5S	0
(2)	MadalTura	TM7S	6
(2)	Model Type	TM12S	1
		TM14S	2
(3)	Dower Supply	AC	0
(3)	Power Supply	DC	1
(4)	Vicion System	Integrated Camera	0
(4)	Vision System	No Camera (X Model) <sup>1</sup>	1
	Arm Length	700	70
(E)(c)		900	90
(5)(6)		1100	11
		1300	13
		Standard	0
(7)	Configuration	Semi S2 Certification <sup>2</sup>	1
(7)	Configuration	Standard with Ethernet/IP and PROFINET (Fieldbus)	2
		Semi S2 Certification with EtherNet/IP and PROFINET (Fieldbus)	5
(8)	Cable Length	Standard Length (3m/1.5m) <sup>3</sup>	4
(0)		Extended Length (12m) <sup>3</sup>	5

1. Not available for DC versions.

2. Available for TM12S and TM14S only.

3. 1.5m cable is only standard on DC models. 12m cable is not available on DC models.

#### Accessories<sup>4</sup>

Туре	Notes	Model
Landmark	3D position referencing label (2 units included in the robot code)	RT6-A000021
Mobile Station	Compatible with OMRON TM5S, TM7S, TM5-700, and TM5-900	RT6-A000010
Portable Pedestal	Compatible only with OMRON TM5/Adjustable Height	RT6-A000009
SSD Card with cable	128 GB of memory with SATA cable	RT6-A000012
Calibration kit	Required for TCP calibration and manual vision	RT6-A000002
Polarizer Light Module	Not compatible with OMRON TM S Series	RT6-A000022

4. Additional accessories available, contact your Omron Sales Representative for additional details

Note: Tables include representative part numbers. Please consult the product page for more details.

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# TMFlow - Omron TM Collaborative Robot Software

- Intuitive, graphical programming enables users to create complex robot solutions without requiring extensive training or programming experience
- Built-in vision-based robot tasks including barcode scanning, pattern matching, and fiducial mark matching are simple to integrate into a project
- Landmarks can be used as reference points for the robot, allowing the robot to be flexibly relocated between workstations while minimizing changeover times
- The Plug & Play ecosystem of tools and peripherals can quickly and easily be configured within TMFlow



## Part Numbers

Product Name	Add-On Product Names	Remarks	Part Number	Add-On Part Numbers
USB Dongle	_	Required for all extra software licenses.	RT6-A000004	_
TMFlow	—	Software required to control the cobot. Free download.		_
	TM Identify & Measure	License, add-on to TMFlow. Includes: Identification of pose variation, specific color area size, subtract reference image, line/circle burr, counting and gauge.	_	RT6-S100000
	TM External Vision	License, add-on to TMFlow. Required when using eye-to- hand cameras.		RT6-S100002
	TM OCR	License, add-on to TMFlow. Includes: Text OCR and Number OCR		RT6-S100003
TMFlow Editor	_	License, provides a convenient way to open and edit project offline.	RT6-S200001	_
TMFlow editor - Offlin AOI		License, add-on to TMFlow Editor. Enables TMFlow Editor to offline edit a TMFlow project that includes AOI vision.		RT6-S100005

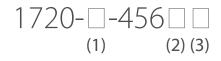
# Hornet 565 - Parallel Robots (Standalone)

- High-speed operation tracks up to a conveyor speed of 1.4 m/s
- Designed with a high payload to support multi-hand (multi-picking)
- Supports fast Pick & Place on a fast conveyor
- Maximum working diameter 1,130 mm
- Maximum payload 8 kg
- Programmable through ACE software and eV+ language, or through the familiar IEC 61131-3 when using ePLC Connect



				Working volume		
Item	Number of Axes	IP	Maximum Payload	X,Y axis (stroke)	Z axis (stroke)	theta axis (rotation angle)
Hornet 565	3 axes	Standard	- 8 kg			
		IP65/67			425 mm	-
		Standard	- 3 kg	1130 mm		. 2008
	4 axes	IP65/67				±360°

Note: Additional accessories available, contact your Omron Sales Representative for additional details



Part Number Configurator

No.	ltem	Speci	fication	Symbol
			eV+	0
		Without Smart Controller EX	ePLC	1
1	Bundle Type		Add-On	3
		With Smart Controller EX	eV+	2
			PLC	4
2	IP Rating		IP20/IP65/IP67	0
2	(Topside/Underside/Platform & Arms)		IP65/IP65/IP67	1
2	Number of Aussian Orders Declared		3 Axis / 8kg	0
3	Number of Axes & Max Payload		4 Axis / 3kg	4

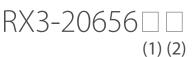
# iX3-565 Parallel Robots (Integrated Controller)

- High-speed operation tracks up to a conveyor speed of 1.4 m/s
- Designed with a high payload to support multi-hand (multi-picking)
- Supports fast Pick & Place on a fast conveyor
- Maximum working diameter 1,130 mm
- Maximum payload 8 kg
- EtherCAT connectivity to the Omron NJ501-R Integrated Controller and programming through familiar IEC 61131-3 programming language or scripting (eV+)



				Working volume		
ltem	Number of Axes	IP	Maximum Payload	X,Y axis (stroke)	Z axis (stroke)	theta axis (rotation angle)
iX3-565	3 axes	Standard	- 8 kg		425 mm	
		IP65/67		1130 mm		-
	4	Standard	- 3 kg			1200
	4 axes	IP65/67				±360°

Note: Additional accessories available, contact your Omron Sales Representative for additional details



### Part Number Configurator

No. Item		Specification	Symbol
1	Drotostion Dating	IP20Topside/IP65 Underside/IP67 Platform & Arms	0
I	Protection Rating	IP65 Topside & Underside/IP67 Platform & Arms	1
2	Number of Aug	3 Axes	0
2	Number of Axes	4 Axes	4

# Quattro Parallel Robots (Standalone)

- Four-axis arm evenly distributes the load on the robot to achieve fast, high-precision motion
- Designed with a high payload to support multi-hand (multi-picking)
- Supports high-speed Pick & Place operations on fast moving conveyors
- Maximum working diameter of 1,300mm & 1,600mm
- Maximum payloads of 10kg & 15kg
- Programmable through ACE software and eV+ language, or through the familiar IEC 61131-3 when using ePLC Connect
- USDA compliant versions available



				Working volume			
ltem	Number of Axes	lyne	IP	Maximum Payload	X,Y axis (stroke)	Z axis (stroke)	theta axis (rotation angle)
		н	Standard	6 kg (P30: 15 kg)		– 500 mm	0° (fixed) (P30) ±46.25° (P31) ±92.5° (P32) ±185° (P34)
Quattro 650H/HS			IP65/67		1300 mm 1600 mm		
		HS	Standard	3 kg (P30: 12 kg)			
	4		Standard	4 km (D20-10 km)			
Quattro 800H/HS		Н	IP65/67	4 kg (P30:10 kg)			
	HS Standard 1 kg (P30: 7 kg)						

(2)(3)(4)

1721--26

(1)

Note: Additional accessories available, contact your Omron Sales Representative for additional details

## Part Number Configurator



# iX4 – Parallel Robots (Integrated Controller)

- Four-axis arm evenly distributes the load on the robot to achieve fast, high-precision motion
- Designed with a high payload to support multi-hand (multi-picking)
- Supports high-speed Pick & Place operations on fast moving conveyors
- Maximum working diameter of 1,300mm & 1,600mm
- Maximum payloads of 10kg & 15kg
- EtherCAT connectivity to the Omron NJ501-R Integrated Controller and programming through familiar IEC 61131-3 programming language or scripting (eV+)
- USDA compliant versions available

Part Number Configurator



						Working volume		
ltem	Number of Axes	Туре	IP	Maximum Payload	X,Y axis (stroke)	Z axis (stroke)	theta axis (rotation angle)	
		н	Standard	6 kg (P30: 15 kg)			0° (fixed) (P30) ±46.25° (P31) ±92.5° (P32) ±185° (P34)	
iX4-650H/HS			IP65/67	0 kg (1 50. 15 kg)	1300 mm			
	4	HS	Standard	3 kg (P30: 12 kg)		500 mm		
	4		Standard	1 km (B20-10 km)	1600 mm	— 500 mm		
iX4-800H/HS		H	IP65/67	4 kg (P30:10 kg)				
		HS	Standard	1 kg (P30: 7 kg)			( - /	

Note: Additional accessories available, contact your Omron Sales Representative for additional details

# RX4-2166

No.	ltem	Specification	Туре	Symbol
1	Peach	650mm		0
	Reach	800mm		3
		IP20 Topside/IP65 Underside/IP67 Platform & Arms		0
2	2 Protection Rating	IP65 Topside & Underside/IP67 Platform & Arms		1
		IP66 Topside & Underside/IP67 Platform & Arms	HS	2
		No Rotation / H: 15kg HS: 12kg (650mm Reach)H: 10kg HS: 7kg (800mm Reach)		0
2	Z Rotation / Max	± 46.25° / H: 6kg HS: 3kg (650mm Reach)H: 4kg HS: 1kg (800mm Reach)		1
3	Payload	± 92.5° / H: 6kg HS: 3kg (650mm Reach)H: 4kg HS: 1kg (800mm Reach)		2
		± 185° / H: 6kg HS:3kg (650mm Reach)H: 4kg HS: 1kg (800mm Reach)		4

## i4L – SCARA Robots

- 5kg payload, high inertia and high duty ratings enable the i4L to tackle more challenging processes with ease
- Compact built-in internal controller, out-of-the-box table or wall mounting and options for rear or bottom cabling reduces the physical area required and enables a customized installation
- High visibility, customizable, multi-colored LED dome light provides an intuitive visual indication of status
- Available in 350mm, 450mm, and 550mm reaches to accommodate a wide range of applications
- Easily integrates with the full line of Omron Automation products as well as 3rd party automation platforms



### Part Number Configurator



No.	ltem	Specification	Symbol
1	Control Type	Standard Control	5
		Integrated Control	6
2	Reach	350mm	3
		450mm	4
		550mm	5
3		Rear Panel	0
	Cabling	Bottom Panel	1
4		180mm	2
	Quill Length	350mm (550mm Reach Only) 4	

Note: Additional accessories available, contact your Omron Sales Representative for additional details

Note: Tables include representative part numbers. Please consult the product page for more details.

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## i4H – SCARA Robots

- 15kg payload, high inertia and high duty ratings enable the i4H to tackle applications that require high performance
- Compact built-in internal controller, and choice of standard or inverted configurations reduces the physical area required and enables a customized installation
- High visibility, customizable, multi-colored LED ring light and LCD screen provides an intuitive visual indication of status
- Available in 650mm, 750mm, and 850mm reaches to accommodate a wide range of applications



# Part Number Configurator RS4-20 (1) (2) (3) (4) (5)

No.	ltem	Specification	Symbol
1	Control Type	Standard Control	5
		Integrated Control	6
	Reach	650 mm	6
2		750 mm	7
		850 mm	8
3	Mount Configuration	Standard	5
3		Inverted	7
	Protection Rating / Feature	IP20 with standard lubrication	0
4		IP20 with Food Grade lubrication	5
4		IP65 with Food Grade lubrication	4
		Cleanroom / ESD with Standard lubrication	1
5	Z-axis Quill Stroke Length	210 mm w/standard lubrication (IP20 and Clean Room only)	2
		210 mm w/Food Grade lubrication (IP20 and IP65 only)	3
		410 mm w/standard lubrication (IP20 and Clean Room only)	4
		410 mm w/Food Grade lubrication (IP20 and IP65 only)	5

Note: Additional accessories available, contact your Omron Sales Representative for additional details

Note: Tables include representative part numbers. Please consult the product page for more details.

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# Automation Control Environment (ACE) – Fixed Robot Software

- Provides an easy-to-use interface for setting up, programming, troubleshooting and operating Omron fixed industrial robots
- Fast emulation and 3D visualization of robot applications for quick proof of concept tasks
- Wizard-based user-friendly interface to calibrate and teach the robots
- Simplification of application development tasks, by means of the Application Manager modules
- Recipe Manager simplifies management of manufacturing processes and handles a range of product variations, ideal for flexible automation to reduce changeover time
- Robot Vision Manager provides algorithms and tools for easily integrating vision systems into robotic applications
- Robot Vision Manager also includes vision inspection tools to improve quality assurance and traceability

**ACE License Configuration** 



• Pack Manager can manage scalable packaging lines from integration to deployment without complex scripting via step-by-step setup wizards that configure process specific items, such as controllers, robots, and conveyor belts

Product Name	Add-On Product Names	Remarks
Ace PackManager (for ACE 4.x)	20409-000	Enables full functionality of the ACE PackManager software.
Robot Vision Manager (for ACE 4.x)	20410-000	Enables the Robot Vision Manager functionality and inspection tools library.
Dual (PackManager plus Vision)	20433-000	Enables functionality of both PackManager and Robot Vision Manager

Note: When you create robot programs without using PackManager wizards and vision system, the ACE license is not required

## IPC Application Controller – Robot Process Manager and Vision System

- Built-in vision processor with 128GB SSD, optimized to process high resolution, high frame rate images
- Supports Omron "Manager" software packages (ie: Robot Vision Manager, PackManager, RecipeManager, 3D PickManager)
- Easy setup with ACE or Sysmac Studio
- Unique simplified thermal design to maximize uptime
- GigE PoE and USB 3.0 ports for increased connectivity and fast data transmission
- Supports up to 8 cameras simultaneously
- Compact design minimizes panel space and allows 2 mounting orientations
- Compatible with Omron S8BA Series UPS



Product Page

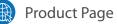
Item		Specifications
Part Number		AC1-152000
	CPU	Intel® Core™ i5-7440EQ
Main System	Main Memory	8 GB DDR4
	Graphics Controller	Intel <sup>®</sup> HD Graphics
Operating System		Windows 10 Io T Enterprise LTSB - 64 bit
Storage Devices	Hard Drive	128 GB SSD Additional 3.5″ hard drive slot available Additional SD memory card slot available, up to 32 GB capacity
Power Supply		20.4 to 28.8VDC
	Power Connector	24 VDC
	I/O Connector	2 inputs (UPS signal and power OFF control) and 1 output (industrial Box PC power state)
Communications Port	Ethernet Connector	Gigabit Ethernet x 3, Gigabit Ethernet with POE x 4 3W max power consumption per port
Port	USB	USB 3.0 x 4 (3m max cable length), USB 2.0 x 2 (5m max cable length)
	Display	DVI-Connector x 1 (up to 1,920 x 1,200 @60Hz)
	RS-232C	Standard DSUB9 connector (Non-isolated)

#### Specifications

# NJ501-R – Integrated Robot Controller

- Integration of Robotics, Logic, and Motion in one CPU
- Programming with variables allows users to create complex programs efficiently
- Offers speed without compromising on reliability and robustness expected from PLCs
- Conforms to IEC 61131-3 (JIS B 3503) standard programming and PLCopen function blocks for motion control and traditional V+ scripting for robot and motion control
- Complete RAS Functions: Transmission frame error check, Timeout, Bus diagnosis, Watchdog (WDT), Memory check, and Topology check, etc.
- Fast and accurate control by synchronizing all EtherCAT devices, such as vision, servos, robots, and IO with a single controller





Item		Product Description	
Product Name		NJ50-R[][][]	
Description		Machine controller with sequence, motion and robitics functionality	
Software		Sysmac Studio	
Programming		IEC 61131-3 (Ladder, Structured Text, Function Blocks) eV + Scripting	
Program Capacity		20 MB	
Memory Card		SD/SDHC memory card	
	No retain attribute	4 MB	
Variable Capacity	Retain attribute	2 MB	
Built-in Ports		EtherCAT, Ethernet/IP, USB 2.0	
Number of EtherCAT slaves		192	
Max Number of robots		8	
Max Numbers of Axes		64, 32, 16	

#### Part Numbers

Туре	Part Number
Integrated Controller (16 Axis, NO Database)	NJ501-R300
Integrated Controller (32 Axis, NO Database)	NJ501-R400
Integrated Controller (64 Axis, NO Database)	NJ501-R500
Integrated Controller (16 Axis, WITH Database)	NJ501-R320
Integrated Controller (32 Axis, WITH Database)	NJ501-R420
Integrated Controller (64 Axis, WITH Database)	NJ501-R520

Note: Tables include representative part numbers. Please consult the product page for more details.

#### **Specifications**

# **Training Services**

- Comprehensive coverage of Omron's technologies enable users to configure and maintain equipment effectively
- Industry specific curricula available for professional development within manufacturing
- Balance of theory and hands on training optimized for the best learning outcome
- Varied offering with multiple training paths for beginners
   and experienced professionals
- Flexible scheduling with courses available In person, Virtual Live, or On Demand



Services Page

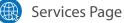
	Training Type	Subject	Audience
	Product Programming Training	Sysmac Robotics Vision Systems Advanced Motion	For engineers, programmers and engineers responsible for setup and configuration
Omron Technologies	Product Maintenance Training Sysmac Robotics		For maintenance and other personnel responsible for maintaining and servicing equipment
	Specialized Advance Training <sup>1</sup> 1. Contact your local representative for more information	Application or feature specific training	For engineers who want customized training on specific applications or features
Inductory Curvicula	Skill Builders	Machine Safety Traceability 4.0	For personnel who want to learn introductory manufacturing concepts
Industry Curricula	Certification Training	TÜV Functional Safety of Machinery	For technicians and engineers as well as EHS personnel who want to become certified in functional safety

# **Robotics Complete Care Service Contracts**

- Comprehensive program which provides support and parts needed for robot maintenance
- Eliminates budget uncertainty while prolonging the robot lifespan with proper inspection and maintenance at a fixed cost
- Maximizes productivity by identifying potential problems before they result in unscheduled downtime
- Includes below coverage for 2 years with option to renew each year thereafter:
  - Annual Wellness Visit for preventative maintenance
  - 100% coverage for all service labor and parts for repairs
  - Priority dispatch for Field Service Support
  - Premium Technical Support (24/7 access with priority status)
  - No travel costs for any on-site visit
  - Discounts on additional training for your team

	Coverage	Standard Warranty	Registered Robot	Complete Care
	Parts	٠	٠	•
	Labor	٠	٠	•
Year 1	Travel			•
	Annual Wellness Visit			•
	Priority Status	•	•	•
	Parts		٠	•
	Labor		•	•
Year 2	Travel			•
	Annual Wellness Visit			•
	Priority Status		٠	•





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## Safety Services

• Omron provides turn-key safety services from risk assessments to design and installation to address machine safety hazards. Be confident that your machines are properly safeguarded by partnering with a global safety expert.



- 1. Risk Assessment
- 2. Engineering Design
- 3. Implementation
- 4. Validation
- Protect your employees from unnecessary risks
- Maintain compliance with safety standards
- Avoid incident-related costs such as regulatory fines, downtime, legal fees and increased OSHA inspections
- Harness advanced safety technologies to preserve your productivity
- Partner with a global safety provider for consistent, world class support







# OMRON

## Industrial Automation

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