

Industrial Automation Guide 2016



Industrial Products & Systems

Targeted Technologies

Creating maximum output with minimum input

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

industrial.omron.eu/technologies



PROplus Line

If you have a complex application or one where you need to address special needs, then the PROplus Line is the answer. That's because PROplus products are designed to be customisable.

The possibility to modify a PROplus product means that your application is unique. However, this does not mean that the PROplus Line is not a ready-made solution. On the contrary, it is a challenge.

For example, the PROplus 4000 series is designed to be modified to meet your needs. It can be modified to meet your needs in terms of I/O, communication, and more. This makes the PROplus 4000 series a challenge.

EE-NH temperature controller

The new EE-NH series is the most powerful and precise temperature controller. It features a 16-bit ADC and a 16-bit DAC. It also has a 16-bit timer and a 16-bit counter. It is designed to be modified to meet your needs.

The 361° Approach



OMRON

Industrial Automation Europe

Omron IAB partner

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Technologies

Creating maximum output with minimum input

Whatever type of automated machinery you are specialized in, you know that there are many ways to innovate. You are already aware that there are many possible areas for improvement. But where do you start? Where do you focus your efforts? Where can you make the biggest difference with the least amount of effort?

At Omron, we asked ourselves these questions too. And by identifying the answers in specific industries we developed the 'targeted technologies' concept. It's a way of thinking about technology in a prioritized format. Prioritized according to our customers' most pressing needs. The result? A set of solutions that make immediate impact on the core of our customers' businesses. A set of solutions that hit the target every time. Take a look at the examples below.

Technologies

Sysmac: the all-in-one platform

We know that machine builders prefer different product solutions for different challenges. But this can cause hierarchy headaches and communications issues. That's why we developed Sysmac: a single unified platform that is open, scalable, flexible, and totally focused on maximising the speed and flexibility of machines. A platform that integrates robotic, motion and sequential logic control into a single multitasking system.

[Learn more](#)



361°: the perfect match

When it comes to sensors and components, we know that our customers all have different needs. That's why our product development in this area is driven by the 361° Approach. It produces product families that offer a total all-round choice. From quality products suited to standard environments to specialist devices that can handle extremes. A full circle of choice, all with an extra degree of quality and proven reliability.

[Learn more](#)



The 361° portfolio

PROplus
PROplus products are designed for specific applications or customer demands.

[Learn more](#)

PROplus

PROplus products are designed for specific applications or customer demands.

[Learn more](#)

LITE

LITE products are designed for specific applications or customer demands.

[Learn more](#)

Related product news



With new G2B sensors, you only pay for what you need. Optimizing relative proximity sensors in the new G2B range has been specifically designed to offer a cost-effective sensing solution or standard sensing conditions, making it unnecessary to buy more sensors than you actually need.

[Learn more](#)

Related product news



ES1A - Omron's new photo sensors combine simplicity with performance. Drawing on our experience of manufacturing over a million photoelectric sensors a year, we have developed a new generation of photoelectric products that combine simple selection, installation with reliability, versatility, rugged construction and value for money.

[Learn more](#)

Related product news



AS Safety Control: New step towards the full integration of Automation. The new AS Safety Control is a new step towards the full integration of Automation. It is a new step towards the full integration of Automation.



AS Safety Control: New step towards the full integration of Automation. The new AS Safety Control is a new step towards the full integration of Automation. It is a new step towards the full integration of Automation.

Welcome to our world

Our best-in-class devices for your automation system

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

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

Here you will find:

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

Find information fast!

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

Kazuma Tateisi, founder of Omron

Omron at a glance

200.000 products ranging
input, logic and output

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

7%

Investment in Research & Development

Innovation track
record of 80 years

Top 150 global patent assignee

1.200 employees dedicated to R&D

11.000 + issued and pending patents

37.000

Employees worldwide

210

Locations worldwide

22

Countries in EMEA

Working for the
benefit of society



Close to your needs

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

Your needs, our focus

Solutions perfectly matching your needs

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

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

361° in one view



Quality



Line-up



Application



Customization



Global availability



Specs

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

The extra degree of advantage

Three distinct lines of sensors and components

Three distinct lines

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

Optimized reliability

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

Solutions that perfectly match your needs

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

Optimized costs

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

Why an extra 1°?

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



Sysmac: A fully integrated platform

Integration and Functionality

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



Machine Automation Controller

FACTORY
AUTOMATION

MACHINE
CONTROL



Motion



Filling line

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



Safety



Assembly

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

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



Information



Pills blister packing

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

✓ Integrated Automation Control:

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

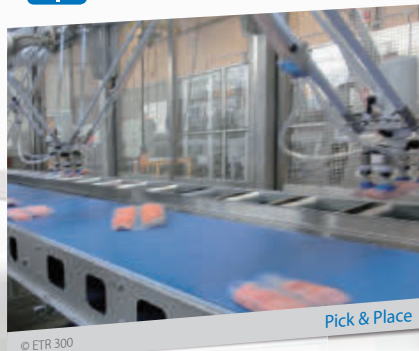
Vision



Quality inspection

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

Robotics



Pick & Place

© ETR 300

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

Sensing



Presence detection of the rubber seal

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

Product selection table

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

Motion & Drives

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Machine controller	
NJ series	16
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Control via interface	
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Control via MECHATROLINK-II	
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Accurax G5	117
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Accurax G5	137
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Frequency inverters	
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MX2 IP54	212
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SX (690 V)	226
SX AFE (Active front end)	229
LX	202

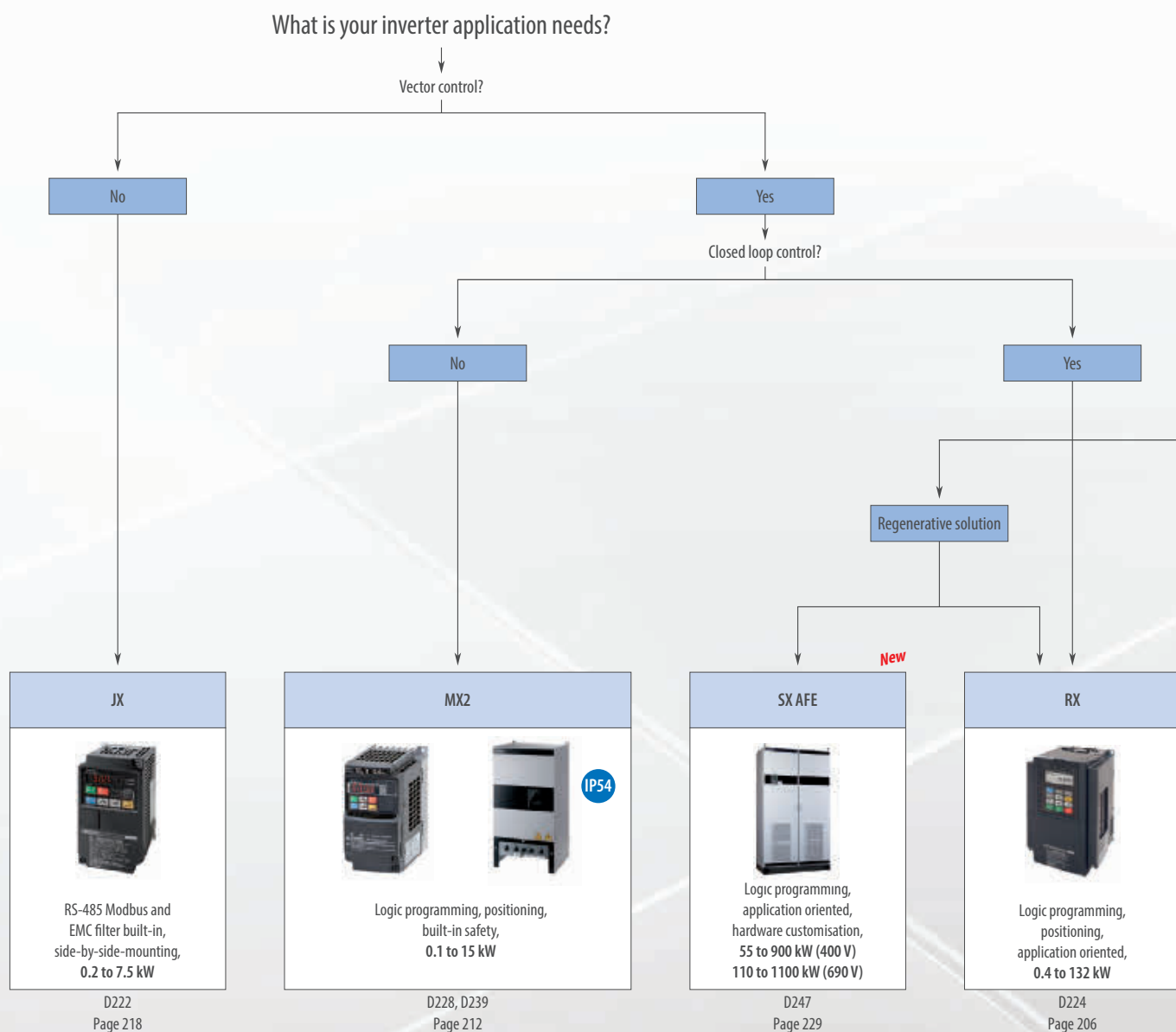
BORN TO DRIVE MACHINES

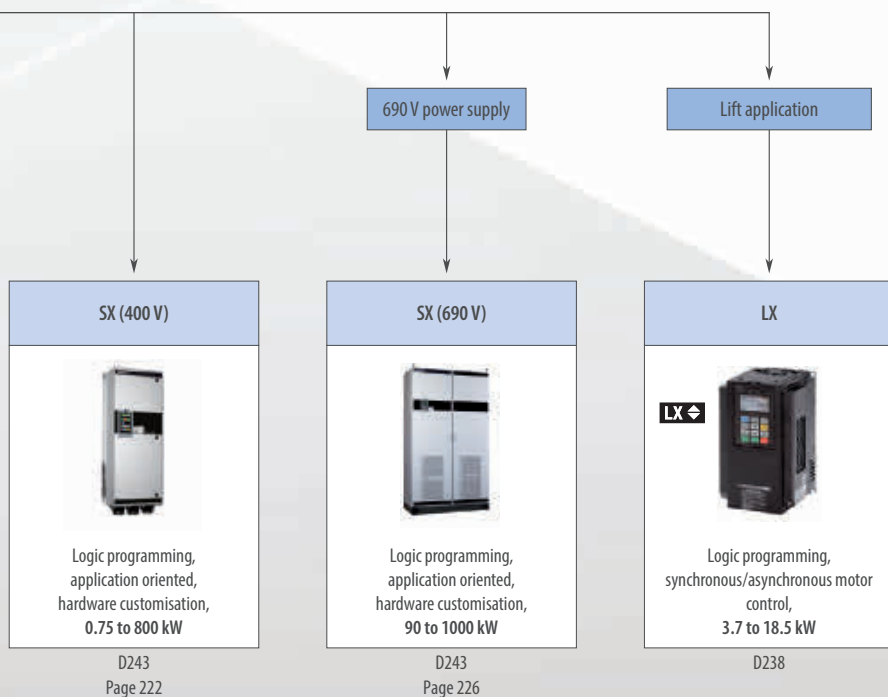
Harmonised motor and machine control

Specifically created for your application, the MX2 was developed to harmonise advanced motor and machine control. Thanks to its advanced design and algorithms the MX2 provides smooth control down to zero speed, plus precise operation for fast cyclic operations and torque control capability in open loop.

The MX2 also gives you comprehensive functionality for machine control such as positioning, speed synchronisation and logic programming. The MX2 is fully integrated within the Omron smart automation platform.

The MX2 is the child of a true leader in machine automation.

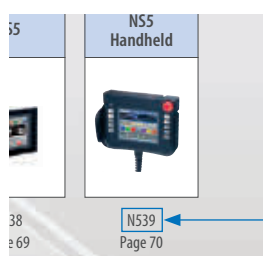




Motion & Drives

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Quick Link

Model	RX	LX
		
	Customised to your machine	Lift applications
400 V three-phase	0.4 kW to 132 kW	3.7 kW to 18.5 kW
200 V three-phase	0.4 kW to 55 kW	–
Application	High performance, built-in know-how functionality	Lift control with asynchronous and synchronous motors
Control method	Open and closed loop for vector and V/F control	Open and closed loop vector control and V/F control
Torque features	200% at 0.0 Hz (CLV) 150% at 0.3 Hz (OLV)	150% at 0.0 Hz (CLV) 200% at 0.3 Hz (OLV)
Connectivity	Modbus, DeviceNet, PROFIBUS, MECHATROLINK-II, EtherCAT, CompoNet	Modbus
Logic programming	Standard firmware	Standard firmware
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Model	MX2	JX
	 	
	Born to drive machines	Compact and complete
400 V three-phase	0.4 kW to 15 kW	0.4 kW to 7.5 kW
200 V three-phase	0.1 kW to 15 kW	0.2 kW to 7.5 kW
200 V single-phase	0.1 kW to 2.2 kW	0.2 kW to 2.2 kW
Application	Harmonized motor and machine control	General purpose built-in communications
Control method	Open loop speed and torque control for vector and speed for V/F control	V/F control
Torque features	200% at 0.5 Hz	150% at 3 Hz
Connectivity	Modbus, DeviceNet, PROFIBUS, MECHATROLINK-II, EtherCAT, CompoNet, EtherNet IP	Modbus
Logic programming	Standard firmware	N/A
Customisation options	IP54 enclosure	N/A
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Model	SX (400 V)	SX (690 V)
		
	High performance vector control	
400 V three-phase	0.75 kW to 800 kW	–
690 V three-phase	–	90 kW to 1,000 kW
Application	High power flux vector and variable torque applications	High power flux vector and variable torque applications
Control method	Flux vector and V/F control	Flux vector and V/F control
Torque features	120% at 0.0 Hz (CLV) 120% at 0.5 Hz (OLV)	120% at 0.0 Hz (CLV) 120% at 0.5 Hz (OLV)
Connectivity	Modbus, DeviceNet, PROFIBUS, EtherCAT, Modbus TCP, CAN	Modbus, DeviceNet, PROFIBUS, EtherCAT, Modbus TCP, CAN
Logic programming	Standard firmware	Standard firmware
Customisation options	Hardware customisation (main switch, liquid cooling, 12-pulse rectifier, ...)	Hardware customisation (main switch, liquid cooling, 12-pulse rectifier, ...)
Protection class	IP54	IP54
Energy saving option	Low harmonic/Regenerative (Page 229/D247)	
Page/Quick Link	222/D243	226/D243

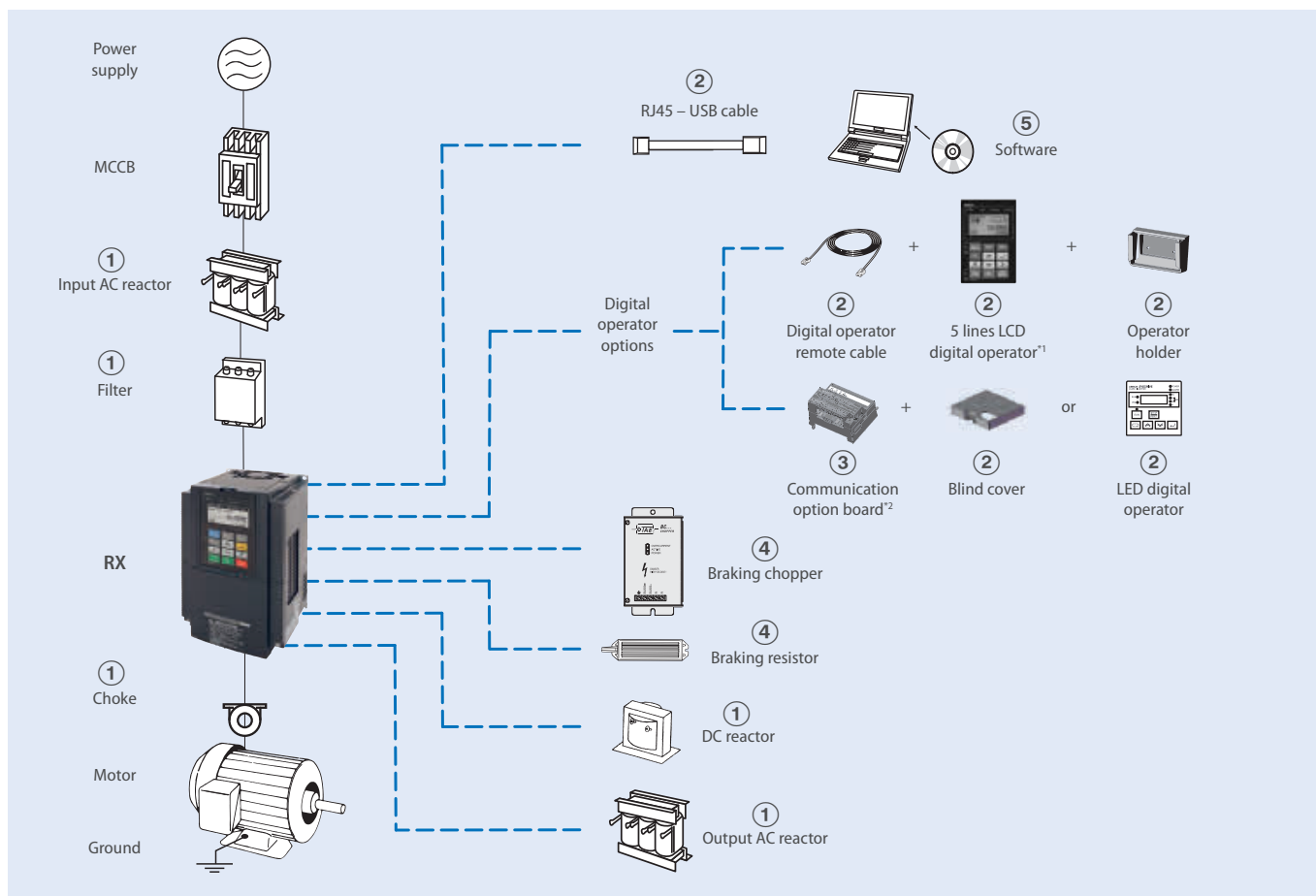


Customised to your machine

Omron realises that you need quality and reliability, plus the ability to easily and quickly customise your inverter to the application in hand. And with the RX, you have the perfect tool for the job. Naturally it combines the same high level of quality and performance for which Omron is renowned. It also has abundant application functionality on board and you can customise it yourself to match your precise requirements.

- Ratings up to 132 kW
- Full torque at 0 Hz in closed loop
- Sensor-less and vector closed-loop control
- Built-in EMC filter
- Built-in logic programmability
- Built-in application oriented functionality
- Fieldbus communications: Modbus, DeviceNet, PROFIBUS, MECHATROLINK-II, EtherCAT and CompoNet

Ordering information



¹ The 5 lines LCD digital operator is provided with the inverter from factory.

² When a communication option board is mounted, there are two options: mount a blind cover or a LED digital operator.

3G3RX

Specifications					Order code	Specifications					Order code
Voltage class	Constant torque		Variable torque		Standard	Voltage class	Constant torque		Variable torque		Standard
	Max. motor kW	Rated current A	Max. motor kW	Rated current A			Max. motor kW	Rated current A	Max. motor kW	Rated current A	
Three-phase 200 V	0.4	3.0	0.75	3.7	3G3RX-A2004-E1F	Three-phase 400 V	0.4	1.5	0.75	1.9	3G3RX-A4004-E1F
	0.75	5.0	1.5	6.3	3G3RX-A2007-E1F		0.75	2.5	1.5	3.1	3G3RX-A4007-E1F
	1.5	7.5	2.2	9.4	3G3RX-A2015-E1F		1.5	3.8	2.2	4.8	3G3RX-A4015-E1F
	2.2	10.5	4.0	12	3G3RX-A2022-E1F		2.2	5.3	4.0	6.7	3G3RX-A4022-E1F
	4.0	16.5	5.5	19.6	3G3RX-A2037-E1F		4.0	9.0	5.5	11.1	3G3RX-A4040-E1F
	5.5	24	7.5	30	3G3RX-A2055-E1F		5.5	14	7.5	16	3G3RX-A4055-E1F
	7.5	32	11	44	3G3RX-A2075-E1F		7.5	19	11	22	3G3RX-A4075-E1F
	11	46	15	58	3G3RX-A2110-E1F		11	25	15	29	3G3RX-A4110-E1F
	15	64	18.5	73	3G3RX-A2150-E1F		15	32	18.5	37	3G3RX-A4150-E1F
	18.5	76	22	85	3G3RX-A2185-E1F		18.5	38	22	43	3G3RX-A4185-E1F
	22	95	30	113	3G3RX-A2220-E1F		22	48	30	57	3G3RX-A4220-E1F
	30	121	37	140	3G3RX-A2300-E1F		30	58	37	70	3G3RX-A4300-E1F
	37	145	45	169	3G3RX-A2370-E1F		37	75	45	85	3G3RX-A4370-E1F
	45	182	55	210	3G3RX-A2450-E1F		45	91	55	105	3G3RX-A4450-E1F
	55	220	75	270	3G3RX-A2550-E1F		55	112	75	135	3G3RX-A4550-E1F
	-						75	149	90	160	3G3RX-B4750-E1F
							90	176	110	195	3G3RX-B4900-E1F
							110	217	132	230	3G3RX-B411K-E1F
							132	260	160	290	3G3RX-B413K-E1F

① Rasmi line filter

200 V					400 V				
Model 3G3RX-X-	Leakage Nom./Max.	Rated current A	Weight (kg)	Order code	Model 3G3RX-	Leakage Nom./Max.	Rated current A	Weight (kg)	Order code
A2004/A2007/A2015/A2022/A2037	0.7/40 mA	18	2.0	AX-FIR2018-RE	A4004/A4007/A4015/A4022/A4040	0.3/40 mA	10	1.9	AX-FIR3010-RE
A2055/A2075/A2110	0.7/40 mA	53	2.5	AX-FIR2053-RE	A4055/A4075/A4110	0.3/40 mA	30	2.2	AX-FIR3030-RE
A2150/A2185/A2220	1.2/70 mA	110	8.0	AX-FIR2110-RE	A4150/A4185/A4220	0.8/70 mA	53	4.5	AX-FIR3053-RE
A2300	1.2/70 mA	145	8.6	AX-FIR2145-RE	A4300	3/160 mA	64	7.0	AX-FIR3064-RE
A2370/A2450	6/300 mA	250	13.0	AX-FIR3250-RE	A4370	2/130 mA	100	8.0	AX-FIR3100-RE
A2550	6/300 mA	320	13.2	AX-FIR3320-RE	A4450/A4550	2/130 mA	130	8.6	AX-FIR3130-RE
-					A4750/A4900	10/500 mA	250	13.0	AX-FIR3250-RE
					A411K/A413K	10/500 mA	320	13.2	AX-FIR3320-RE

① Input AC reactors

3-phase 200 VAC		3-phase 400 VAC	
Inverter model 3G3RX-	Order code	Inverter model 3G3RX-	Order code
A2004/A2007/A2015	AX-RAI02800100-DE	A4004/A4007/A4015	AX-RAI07700050-DE
A2022/A2037	AX-RAI00880200-DE	A4022/A4040	AX-RAI03500100-DE
A2055/A2075	AX-RAI00350335-DE	A4055/A4075	AX-RAI01300170-DE
A2110/A2150	AX-RAI00180670-DE	A4110/A4150	AX-RAI00740335-DE
A2185/A2220	AX-RAI00091000-DE	A4185/A4220	AX-RAI00360500-DE
A2300/A2370	AX-RAI00071550-DE	A4300/A4370	AX-RAI00290780-DE
A2450/A2550	AX-RAI00042300-DE	A4450/A4550	AX-RAI00191150-DE
		A4750/A4900	AX-RAI00111850-DE
		A411K/A413K	AX-RAI00072700-DE

① DC reactors

3-phase 200 VAC		3-phase 400 VAC	
Inverter model 3G3RX-	Order code	Inverter model 3G3RX-	Order code
A2004	AX-RC10700032-DE	A4004	AX-RC43000020-DE
A2007	AX-RC06750061-DE	A4007	AX-RC27000030-DE
A2015	AX-RC03510093-DE	A4015	AX-RC14000047-DE
A2022	AX-RC02510138-DE	A4022	AX-RC10100069-DE
A2037	AX-RC01600223-DE	A4040	AX-RC06400116-DE
A2055	AX-RC01110309-DE	A4055	AX-RC04410167-DE
A2075	AX-RC00840437-DE	A4075	AX-RC03350219-DE
A2110	AX-RC00590614-DE	A4110	AX-RC02330307-DE
A2150	AX-RC00440859-DE	A4150	AX-RC01750430-DE
A2185/A2220	AX-RC00301275-DE	A4185/A4220	AX-RC01200644-DE
A2300	AX-RC00231662-DE	A4300	AX-RC00920797-DE
A2370	AX-RC00192015-DE	A4370	AX-RC00741042-DE
A2450	AX-RC00162500-DE	A4450	AX-RC00611236-DE
A2550	AX-RC00133057-DE	A4550	AX-RC00501529-DE

3-phase 200 VAC		3-phase 400 VAC	
Inverter model 3G3RX-__	Order code	Inverter model 3G3RX-__	Order code
		A4750	AX-RC00372094-DE
		A4900	AX-RC00312446-DE
		A411K	AX-RC00252981-DE
		A413K	AX-RC00213613-DE

① Chokes






Diameter	Description	Order code
21	For 2.2 kW motors or below	AX-FER2102-RE
25	For 15 kW motors or below	AX-FER2515-RE
50	For 45 kW motors or below	AX-FER5045-RE
60	For 55 kW motors or above	AX-FER6055-RE

① Output AC Reactor

200 V		400 V	
Model 3G3RX-__	Order code	Model 3G3RX-__	Order code
A2004	AX-RAO11500026-DE	A4004/A4007/A4015	AX-RAO16300038-DE
A2007	AX-RAO07600042-DE		
A2015	AX-RAO04100075-DE		
A2022	AX-RAO03000105-DE	A4022	AX-RAO11800053-DE
A2037	AX-RAO01830160-DE	A4040	AX-RAO07300080-DE
A2055	AX-RAO01150220-DE	A4055	AX-RAO04600110-DE
A2075	AX-RAO00950320-DE	A4075	AX-RAO03600160-DE
A2110	AX-RAO00630430-DE	A4110	AX-RAO02500220-DE
A2150	AX-RAO00490640-DE	A4150	AX-RAO02000320-DE
A2185	AX-RAO00390800-DE	A4185	AX-RAO01650400-DE
A2220	AX-RAO00330950-DE	A4220	AX-RAO01300480-DE
A2300	AX-RAO00251210-DE	A4300	AX-RAO01030580-DE
A2370	AX-RAO00191450-DE	A4370	AX-RAO00800750-DE
A2450	AX-RAO00161820-DE	A4450	AX-RAO00680900-DE
A2550	AX-RAO00132200-DE	A4550	AX-RAO00531100-DE
		A4750	AX-RAO00401490-DE
		A4900	AX-RAO00331760-DE
		A411K	AX-RAO00262170-DE
		A413K	AX-RAO00212600-DE

Note: This table corresponds with HD rating. When ND is used, please choose the reactor for the next size inverter.

② Accessories

Types	Appearance	Description	Order code
Remote digital operator		5 line LCD digital operator with copy function ^{*1}	3G3AX-OP05
		Operator holder (for inside cabinet mounting)	3G3AX-OP05-H-E
		LED remote digital operator	3G3AX-OP01
LED digital operator		Mounting kit	4X-KITmini
		To be used in combination with communication option boards	3G3AX-OP03
Blind cover			3G3AX-OP05-B-E
Cables		3 m remote digital operator cable	3G3AX-CAJOP300-EE
	—	RJ45 to USB connection cable	USB-CONVERTERCABLE 3G3AX-PCACN2

^{*1} This digital operator is provided with the RX inverter from factory.

③ Option boards

Types	Description	Functions	Order code
Encoder feedback	PG speed controller option card	Phase A,B and Z pulse (differential pulse) inputs (RS-422) Pulse train position command input (RS-422) Pulse monitor output (RS-422) PG frequency range: 100 kHz max	3G3AX-PG
Communication option board	DeviceNet option card	Used for running or stopping the inverter, setting or referencing parameters, and monitoring output frequency, output current ... through communications with the host controller	3G3AX-RX-DRT
	Profibus option card		3G3AX-RX-PRT
	Ethercat option card		3G3AX-RX-ECT
	CompoNet option card		3G3AX-RX-CRT
	Mechatrolink-II option card		3G3AX-RX-MRT
I/O option	Extra input/output option card	8 digital inputs, 8 digital outputs, 4 analog inputs, 1 analog output	3G3AX-EIO21-ROE

④ Braking unit, braking resistor unit

Inverter					Braking resistor unit					
Voltage	Max. motor kW	Inverter 3G3RX_	Braking unit AX-BCR_	Connectable min. resistance Ω	Inverter mounted type (3% ED, 10 sec max.)		Braking torque %	External resistor 10% ED 10 sec max. for built-in 5 sec max. for braking unit		Braking torque %
		3-phase			Order code	Resist Ω		Order code	Resist Ω	
200 V (single-/three-phase)	0.55	2004	Built-in	50	AX-REM00K1200-IE	200	180	AX-REM00K1200-IE	200	180
	1.1	2007					100	AX-REM00K2070-IE	70	200
	1.5	2015		35	AX-REM00K2070-IE	70	140	AX-REM00K4075-IE	75	130
	2.2	2022					90	AX-REM00K4035-IE	35	180
	4.0	2037			AX-REM00K4075-IE	75	50	AX-REM00K6035-IE	35	100
	5.5	2055		16	AX-REM00K4035-IE	35	75	AX-REM00K9020-IE	20	150
	7.5	2075		10			55	AX-REM01K9017-IE	17	110
	11.0	2110		7.5	AX-REM00K6035-IE	35	40	AX-REM02K1017-IE	17	75
	15.0	2150			AX-REM00K9017-IE	17	55	AX-REM03K5010-IE	10	95
	18.5	2185		5	AX-REM03K5010-IE	10	75	AX-REM19K0008-IE	8	95
	22.0	2220					65			80
	30.0	2300	2035090-TE	4	—			AX-REM19K0006-IE	6	80
	37.0	2370							6	60
	45.0	2450	2070130-TE	2.8				2 x AX-REM19K0006-IE	3	105
	55.0	2550							3	85
400 V (three-phase)	0.55	4004	Built-in	100	AX-REM00K1400-IE	400	200	AX-REM00K1400-IE	400	200
	1.1	4007					200			200
	1.5	4015			AX-REM00K1200-IE	200	190	AX-REM00K2200-IE	200	190
	2.2	4022			AX-REM00K2200-IE	200	130	AX-REM00K5120-IE	120	200
	4.0	4040		70	AX-REM00K2120-IE	120	120	AX-REM00K6100-IE	100	140
	5.5	4055		35	AX-REM00K4075-IE	75	140	AX-REM00K9070-IE	70	150
	7.5	4075					100	AX-REM01K9070-IE	70	110
	11.0	4110			AX-REM00K6100-IE	100	50	AX-REM02K1070-IE	70	75
	15.0	4150		24	AX-REM00K9070-IE	70	55	AX-REM03K5035-IE	35	110
	18.5	4185		20	AX-REM03K5035-IE	35	90	AX-REM19K0030-IE	30	100
	22.0	4220					75			85
	30.0	4300	4015045-TE	16	—			AX-REM19K0020-IE	20	95
	37.0	4370	4017068-TE	11				AX-REM38K0012-IE	15	125
	45.0	4450	4035090-TE	8.5						100
	55.0	4550						2 x AX-REM19K0020-IE	10	100
	75.0	4750	4070130-TE	5.5				3 x AX-REM19K0030-IE	10	75
	90.0	4900						2 x AX-REM38K0012-IE	6	105
	110.0	411K	4090240-TE	3.2				3 x AX-REM38K0012-IE	4	125
	132.0	413K								105

⑤ Computer software

Description	Installation	Order code
Computer software	Configuration and monitoring software tool	CX-Drive
Computer software	Configuration and monitoring software tool	CX-One
Computer software	Software tool for energy saving calculation	€Saver

Specifications

200 V class

Three-phase: 3G3RX-__			A2004	A2007	A2015	A2022	A2037	A2055	A2075	A2110	A2150	A2185	A2220	A2300	A2370	A2450	A2550			
Max. applicable motor 4P kW ^{*1}			at CT	0.4	0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55		
			at VT	0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55	75		
Output characteristics	Inverter capacity kVA	200 V	at CT	1.0	1.7	2.5	3.6	5.7	8.3	11.0	15.9	22.1	26.3	32.9	41.9	50.2	63.0	76.2		
			at VT	1.3	2.1	3.2	4.1	6.7	10.4	15.2	20.0	26.3	29.4	39.1	49.5	59.2	72.7	93.5		
		240 V	at CT	1.2	2.0	3.1	4.3	6.8	9.9	13.3	19.1	26.6	31.5	39.4	50.2	60.2	75.6	91.4		
			at VT	1.5	2.6	3.9	5.0	8.1	12.4	18.2	24.1	31.5	35.3	46.9	59.4	71.0	87.2	112.2		
	Rated output current (A)	at CT	3.0	5.0	7.5	10.5	16.5	24	32	46	64	76	95	121	145	182	220			
		at VT	3.7	6.3	9.4	12	19.6	30	44	58	73	85	113	140	169	210	270			
	Max. output voltage			Proportional to input voltage: 0 to 240 V																
	Max. output frequency			400 Hz																
	Power supply	Rated input voltage and frequency			3-phase 200 to 240 V 50/60 Hz															
		Allowable voltage fluctuation			-15% to 10%															
Allowable frequency fluctuation			5%																	
Braking		Regenerative braking			Internal BRD circuit (external discharge resistor)												External regenerative braking unit			
	Minimum connectable resistance			50	50	35	35	35	16	10	10	7.5	7.5	5						
Protective structure			IP20																	
Cooling method			Forced air cooling																	

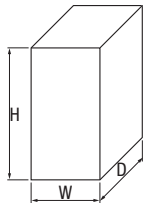
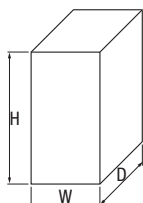
^{*1} Based on a standard 3-phase standard motor.

400 V class

Three-phase: 3G3RX-__			A4004	A4007	A4015	A4022	A4040	A4055	A4075	A4110	A4150	A4185	A4220	A4300	A4370	A4450	A4550	B4750	B4900	B411K	B413K			
Max. applicable motor 4P kW*1			at CT	0.4	0.75	1.5	2.2	4.0	5.5	7.5	11	15	18.5	22	30	37	45	55	75	90	110	132		
			at VT	0.75	1.5	2.2	4.0	5.5	7.5	11	15	18.5	22	30	37	45	55	75	90	110	132	160		
Output characteristics	Inverter capacity kVA	400 V	at CT	1.0	1.7	2.5	3.6	6.2	9.7	13.1	17.3	22.1	26.3	33.2	40.1	51.9	63.0	77.6	103.2	121.9	150.3	180.1		
			at VT	1.3	2.1	3.3	4.6	7.7	11.0	15.2	20.9	25.6	30.4	39.4	48.4	58.8	72.7	93.5	110.8	135	159.3	200.9		
		480 V	at CT	1.2	2.0	3.1	4.3	7.4	11.6	15.8	20.7	26.6	31.5	39.9	48.2	62.3	75.6	93.1	123.8	146.3	180.4	216.1		
			at VT	1.5	2.5	4.0	5.5	9.2	13.3	18.2	24.1	30.7	36.5	47.3	58.1	70.6	87.2	112.2	133	162.1	191.2	241.1		
	Rated output current (A)	at CT	1.5	2.5	3.8	5.3	9.0	14	19	25	32	38	48	58	75	91	112	149	176	217	260			
		at VT	1.9	3.1	4.8	6.7	11.1	16	22	29	37	43	57	70	85	105	135	160	195	230	290			
	Max. output voltage			Proportional to input voltage: 0 to 480 V																				
	Max. output frequency			400 Hz																				
Power supply	Rated input voltage and frequency		3-phase 380 to 480 V 50/60 Hz																					
	Allowable voltage fluctuation		-15% to 10%																					
	Allowable frequency fluctuation		5%																					
Braking	Regenerative braking		Internal BRD circuit (external discharge resistor)												External regenerative braking unit									
	Minimum connectable resistance		100	100	100	100	70	70	35	35	24	24	20											
Protective structure			IP20																		IP00			
Cooling method			Forced air cooling																					

^{*1} Based on a standard 3-phase standard motor.

Dimensions

Voltage class	Inverter model	Dimensions in mm				
		H	W	D	Weight (kg)	
Three-phase 200 V	3G3RX-A2004	255	150	140	3.5	
	3G3RX-A2007					
	3G3RX-A2015					
	3G3RX-A2022					
	3G3RX-A2037					
	3G3RX-A2055	260	210	170	6	
	3G3RX-A2075					
	3G3RX-A2110					
	3G3RX-A2150	390	250	190	14	
	3G3RX-A2185					
	3G3RX-A2220					
	3G3RX-A2300	540	310	195	20	
	3G3RX-A2370	550	390	250	30	
	3G3RX-A2450					
	3G3RX-A2550	700	480	250	43	
Three-phase 400 V	3G3RX-A4004	255	150	140	3.5	
	3G3RX-A4007					
	3G3RX-A4015					
	3G3RX-A4022					
	3G3RX-A4040					
	3G3RX-A4055	260	210	170	6	
	3G3RX-A4075					
	3G3RX-A4110					
	3G3RX-A4150	390	250	190	14	
	3G3RX-A4185					
	3G3RX-A4220					
	3G3RX-A4300	540	310	195	22	
	3G3RX-A4370	550	390	250	30	
	3G3RX-A4450					
	3G3RX-A4550					
	3G3RX-B4750	700	390	270	60	
	3G3RX-B4900					
	3G3RX-B411K	740	480	270	80	
	3G3RX-B413K					

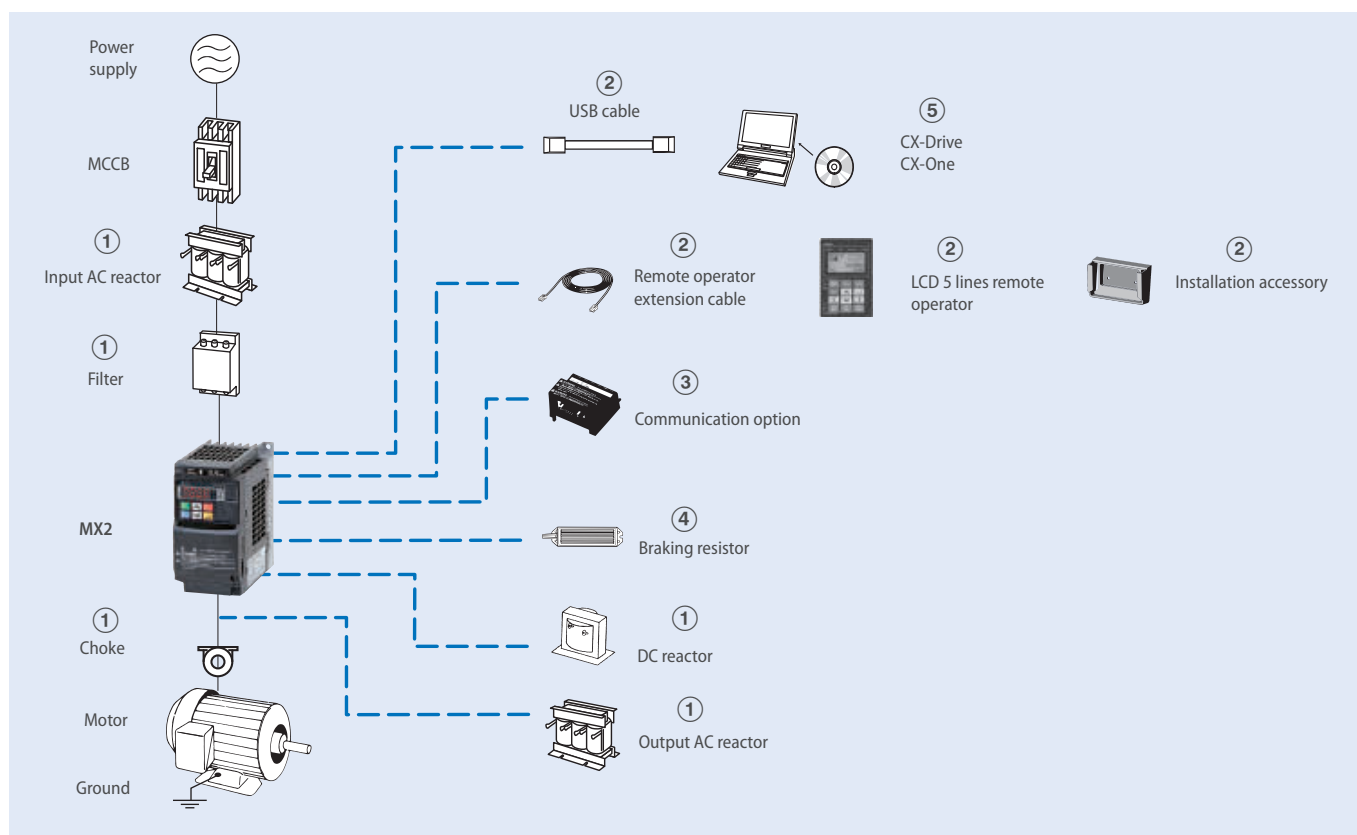


Born to drive machines

MX2 has been developed to harmonise advanced motor and machine control. Thanks to its advanced design algorithms the MX2 provides smooth control down to zero speed, plus precise operation for fast cyclic operations and torque control capability in open loop. The MX2 also gives you comprehensive functionality for machine control such as positioning, speed synchronisation and logic programming.

- Current vector control
- Double rating VT 120%/1 min and CT 150%/1 min
- IM & PM motor control
- Torque control in open loop vector
- Positioning functionality
- Built-in application functionality (i.e. Brake control)
- Fieldbus comms: Modbus, DeviceNet, Profibus, MECHATROLINK-II, EtherCAT, CompoNet and EtherNet/IP

Ordering information



3G3MX2

Specifications					Order code		
Voltage class	Constant torque		Variable torque		Standard (IP20)	Finless	IP54
	Max motor kW	Rated current A	Max motor kW	Rated current A			
Single-phase 200 V	0.1	1.0	0.2	1.2	3G3MX2-AB001-E	3G3MX2-AB001-P-E	3G3MX2-DB001-E/EC
	0.2	1.6	0.4	1.9	3G3MX2-AB002-E	3G3MX2-AB002-P-E	3G3MX2-DB002-E/EC
	0.4	3.0	0.55	3.5	3G3MX2-AB004-E	3G3MX2-AB004-P-E	3G3MX2-DB004-E/EC
	0.75	5.0	1.1	6.0	3G3MX2-AB007-E	3G3MX2-AB007-P-E	3G3MX2-DB007-E/EC
	1.5	8.0	2.2	9.6	3G3MX2-AB015-E	3G3MX2-AB015-P-E	3G3MX2-DB015-E/EC
	2.2	11.0	3.0	12.0	3G3MX2-AB022-E	3G3MX2-AB022-P-E	3G3MX2-DB022-E/EC
Three-phase 200 V	0.1	1.0	0.2	1.2	3G3MX2-A2001-E	3G3MX2-A2001-P-E	3G3MX2-D2001-E/EC
	0.2	1.6	0.4	1.9	3G3MX2-A2002-E	3G3MX2-A2002-P-E	3G3MX2-D2002-E/EC
	0.4	3.0	0.55	3.5	3G3MX2-A2004-E	3G3MX2-A2004-P-E	3G3MX2-D2004-E/EC
	0.75	5.0	1.1	6.0	3G3MX2-A2007-E	3G3MX2-A2007-P-E	3G3MX2-D2007-E/EC
	1.5	8.0	2.2	9.6	3G3MX2-A2015-E	3G3MX2-A2015-P-E	3G3MX2-D2015-E/EC
	2.2	11.0	3.0	12.0	3G3MX2-A2022-E	3G3MX2-A2022-P-E	3G3MX2-D2022-E/EC
	3.7	17.5	5.5	19.6	3G3MX2-A2037-E	3G3MX2-A2037-P-E	3G3MX2-D2037-E/EC
	5.5	25.0	7.5	30.0	3G3MX2-A2055-E	—	3G3MX2-D2055-E/EC
	7.5	33.0	11	40.0	3G3MX2-A2075-E	—	3G3MX2-D2075-E/EC
	11	47.0	15	56.0	3G3MX2-A2110-E	—	3G3MX2-D2110-E/EC
	15	60.0	18.5	69.0	3G3MX2-A2150-E	—	3G3MX2-D2150-E/EC

Specifications					Order code		
Voltage class	Constant torque		Variable torque		Standard (IP20)	Finless	IP54
	Max motor kW	Rated current A	Max motor kW	Rated current A			
Three-phase 400 V	0.4	1.8	0.75	2.1	3G3MX2-A4004-E	3G3MX2-A4004-P-E	3G3MX2-D4004-EC
	0.75	3.4	1.5	4.1	3G3MX2-A4007-E	3G3MX2-A4007-P-E	3G3MX2-D4007-EC
	1.5	4.8	2.2	5.4	3G3MX2-A4015-E	3G3MX2-A4015-P-E	3G3MX2-D4015-EC
	2.2	5.5	3.0	6.9	3G3MX2-A4022-E	3G3MX2-A4022-P-E	3G3MX2-D4022-EC
	3.0	7.2	4.0	8.8	3G3MX2-A4030-E	3G3MX2-A4030-P-E	3G3MX2-D4030-EC
	4.0	9.2	5.5	11.1	3G3MX2-A4040-E	3G3MX2-A4040-P-E	3G3MX2-D4040-EC
	5.5	14.8	7.5	17.5	3G3MX2-A4055-E	–	3G3MX2-D4055-EC
	7.5	18.0	11	23.0	3G3MX2-A4075-E	–	3G3MX2-D4075-EC
	11	24.0	15	31.0	3G3MX2-A4110-E	–	3G3MX2-D4110-EC
	15	31.0	18.5	38.0	3G3MX2-A4150-E	–	3G3MX2-D4150-EC

① Line filters

Inverter		Standard line filter				Low leakage line filter			
		Rasmi		Schaffner		Rasmi		Schaffner	
Voltage	Model 3G3MX2_	Order code AX-FIM	Current (A)	Order code AX-FIM	Current (A)	Order code AX-FIM	Current (A)	Order code AX-FIM	Current (A)
1Phase 200 VAC	AB001 / AB002 / AB004	1010-RE	10	1010-SE-V1	8	1010-RE-LL	10	1010-SE-LL	10
	AB007	1014-RE	14	1014-SE-V1	14	1014-RE-LL	14	1014-SE-LL	14
	AB015 / AB022	1024-RE	24	1024-SE-V1	27	1024-RE-LL	24	1024-SE-LL	24
3Phase 200 VAC	A2001 / A2002 / A2004 / A2007	2010-RE	10	2010-SE-V1	7.8	2010-RE-LL	10	–	–
	A2015 / A2022	2020-RE	20	2020-SE-V1	16	2020-RE-LL	20	2020-SE-LL	20
	A2037	2030-RE	30	2030-SE-V1	25	2030-RE-LL	30	2030-SE-LL	30
	A2055 / A2075	2060-RE	60	2060-SE-V1	50	2060-RE-LL	60	2060-SE-LL	50
	A2110	2080-RE	80	2080-SE-V1	70	2080-RE-LL	80	–	–
	A2150	2100-RE	100	2100-SE-V1	75	2100-RE-LL	100	–	–
3Phase 400 VAC	A4004 / A4007	3005-RE	5	3005-SE-V1	6	3005-RE-LL	5	3005-SE-LL	5
	A4015 / A4022 / A4030	3010-RE	10	3010-SE-V1	12	3010-RE-LL	10	3010-SE-LL	10
	A4040	3014-RE	14	3014-SE-V1	15	3014-RE-LL	14	3014-SE-LL	15
	A4055 / A4075	3030-RE	30	3030-SE-V1	29	3030-RE-LL	30	3030-SE-LL	30
	A4110 / A4150	3050-RE	50	3050-SE-V1	48	3050-RE-LL	50	3050-SE-LL	50

① Input AC reactors

Inverter		AC Reactor
Voltage	Model 3G3MX2_	Order code
1-Phase 200 VAC	AB002/AB004	AX-RAI02000070-DE
	AB007	AX-RAI01700140-DE
	AB015	AX-RAI01200200-DE
	AB022	AX-RAI00630240-DE
3-Phase 200 VAC	A2002/A2004/A2007	AX-RAI02800080-DE
	A2015/A2022/A2037	AX-RAI00880200-DE
	A2055/A2075	AX-RAI00350335-DE
	A2110/A2150	AX-RAI00180670-DE

Inverter		AC Reactor
Voltage	Model 3G3MX2_	Order code
3-Phase 400 VAC	A4004/A4007/A4015	AX-RAI07700050-DE
	A4022/A4030/A4040	AX-RAI03500100-DE
	A4055/A4075	AX-RAI01300170-DE
	A4110/A4150	AX-RAI00740335-DE

① DC reactors

200 V single-phase		200 V three-phase		400 V three-phase	
Inverter	Order code	Inverter	Order code	Inverter	Order code
3G3MX2-AB001	AX-RC10700032-DE	3G3MX2-A2001	AX-RC21400016-DE	3G3MX2-A4004	AX-RC43000020-DE
3G3MX2-AB002		3G3MX2-A2002		3G3MX2-A4007	AX-RC27000030-DE
3G3MX2-AB004	AX-RC06750061-DE	3G3MX2-A2004	AX-RC10700032-DE	3G3MX2-A4015	AX-RC14000047-DE
3G3MX2-AB007	AX-RC03510093-DE	3G3MX2-A2007	AX-RC06750061-DE	3G3MX2-A4022	AX-RC10100069-DE
3G3MX2-AB015	AX-RC02510138-DE	3G3MX2-A2015	AX-RC03510093-DE	3G3MX2-A4030	AX-RC08250093-DE
3G3MX2-AB022	AX-RC01600223-DE	3G3MX2-A2022	AX-RC02510138-DE	3G3MX2-A4040	AX-RC06400116-DE
–		3G3MX2-A2037	AX-RC01600223-DE	3G3MX2-A4055	AX-RC04410167-DE
		3G3MX2-A2055	AX-RC01110309-DE	3G3MX2-A4075	AX-RC03350219-DE
		3G3MX2-A2075	AX-RC00840437-DE	3G3MX2-A4011	AX-RC02330307-DE
		3G3MX2-A2011	AX-RC00590614-DE	3G3MX2-A4015	AX-RC01750430-DE
		3G3MX2-A2015	AX-RC00440859-DE	–	

① Chokes

Diameter	Description	Order code
21	For 2.2 KW motors or below	AX-FER2102-RE
25	For 15 KW motors or below	AX-FER2515-RE
50	For 45 KW motors or below	AX-FER5045-RE

① Output AC reactor

Inverter		AC Reactor
Voltage	Model 3G3MX2_—	Order code
200 VAC	AB001/AB002/AB004/A2001/A2002/A2004	AX-RAO11500026-DE
	AB007/A2007	AX-RAO07600042-DE
	AB015/A2015	AX-RAO04100075-DE
	AB022/A2022	AX-RAO03000105-DE
	A2037	AX-RAO01830160-DE
	A2055	AX-RAO01150220-DE
	A2075	AX-RAO00950320-DE
	A2110	AX-RAO00630430-DE
	A2150	AX-RAO00490640-DE

Inverter		AC Reactor
Voltage	Model 3G3MX2_	Order code
400 VAC	A4004/A4007/A4015	AX-RAO16300038-DE
	A4022	AX-RAO11800053-DE
	A4030/A4040	AX-RAO07300080-DE
	A4055	AX-RAO04600110-DE
	A4075	AX-RAO03600160-DE
	A4110	AX-RAO02500220-DE
	A4150	AX-RAO02000320-DE

② Accessories

Types	Description	Functions	Order code
Digital operator	LCD remote operator	5 Line LCD remote operator with copy function, cable length max. 3m.	AX-OP05-E
	Remote operator cable	3 meters cable for connecting remote operator	3G3AX-CAJOP300-EE
	LED remote operator	LED remote operator, cable length max. 3m	3G3AX-OP01
	Mounting kit for LED operator	Mounting kit for LED operator on panel	4X-KITMINI
	Operator holder	Holder to put the AX-OP05-E inside of the cabinet	3G3AX-OP05-H-E
Accessories	PC configuration cable	Mini USB to USB connector cable	AX-CUSBM002-E

③ Communication option boards

Description	Functions	Order code
Profibus option card	Used for running or stopping the inverter, setting or referencing parameters, and monitoring output frequency, output current, or similar items through communications with the host controller.	3G3AX-MX2-PRT
DeviceNet option card		3G3AX-MX2-DRT
EtherCAT option card		3G3AX-MX2-ECT
CompoNet option card		3G3AX-MX2-CRT
MECHATROLINK-II option card		3G3AX-MX2-MRT
EtherNet/IP option card		3G3AX-MX2-EIP
Extra input/output option board	1 analog voltage input, 1 analog current input, 1 analog voltage output, 8 discrete logic inputs, 4 discrete logic outputs	3G3AX-MX2-EIO15-E

④ Braking unit, braking resistor unit

Inverter				Braking resistor unit						
Voltage	Max. motor kW	Inverter 3G3MX2_		Connectable min. resistance Ω	Inverter mounted type (3 %ED, 10 sec max)		Braking torque %	Inverter mounted type (10 %ED, 10 sec max)		Braking torque %
		1-phase	3-phase		Order code	Resist Ω		Order code	Resist Ω	
200 V (Single-/Three-phase)	0.12	B001	2001	100	AX-REM00K1400-IE	400	200	AX-REM00K1400-IE	400	200
	0.25	B002	2002				180			180
	0.55	B004	2004		AX-REM00K1200-IE	200	180	AX-REM00K1200-IE	200	180
	1.1	B007	2007	50			100	AX-REM00K2070-IE	70	200
	1.5	B015	2015		AX-REM00K2070-IE	70	140	AX-REM00K4075-IE	75	130
	2.2	B022	2022	35			90	AX-REM00K4035-IE	35	180
	4.0	—	2040		AX-REM00K4075-IE	75	50	AX-REM00K6035-IE	35	100
	5.5	—	2055	20	AX-REM00K4035-IE	35	75	AX-REM00K9020-IE	20	150
	7.5	—	2075				55	AX-REM01K9017-IE	17	110
	11	—	2110	17	AX-REM00K6035-IE	35	40	AX-REM02K1017-IE	17	75
400 V (Three-phase)	15	—	2150		AX-REM00K9017-IE	17	55	AX-REM03K5010-IE	10	95
	0.55	—	4004	180	AX-REM00K1400-IE	400	200	AX-REM00K1400-IE	400	200
	1.1	—	4007				200			200
	1.5	—	4015		AX-REM00K1200-IE	200	190	AX-REM00K2200-IE	200	190
	2.2	—	4022	100	AX-REM00K2200-IE	200	130	AX-REM00K5120-IE	120	200
	3.0	—	4030		AX-REM00K2120-IE	120	160			160
	4.0	—	4040				120	AX-REM00K6100-IE	100	140
	5.5	—	4055	70	AX-REM00K4075-IE	75	140	AX-REM00K9070-IE	70	150
	7.5	—	4075				100	AX-REM01K9070-IE	70	110
	11	—	4110		AX-REM00K6100-IE	100	50	AX-REM02K1070-IE	70	75
	15	—	4150	35	AX-REM00K9070-IE	70	55	AX-REM03K5035-IE	35	110

⑤ Computer software

Description	Installation	Order code
Computer software	Configuration and monitoring software tool	CX-Drive
Computer software	Configuration and monitoring software tool	CX-One
Computer software	Software tool for Energy Saving calculation	€Saver

Specifications

200 V class

Single-phase: 3G3MX2-__			B001	B002	B004	B007* ¹	B015	B022	—	—	—	—	—
Three-phase: 3G3MX2-__			2001	2002	2004	2007	2015	2022	2037	2055	2075	2110	2150
Motor kW ^{*2}	For VT setting		0.2	0.4	0.55	1.1	2.2	3.0	5.5	7.5	11	15	18.5
	For CT setting		0.1	0.2	0.4	0.75	1.5	2.2	3.7	5.5	7.5	11	15
Output characteristics	Inverter capacity kVA	200 VT	0.4	0.6	1.2	2.0	3.3	4.1	6.7	10.3	13.8	19.3	23.9
		200 CT	0.2	0.5	1.0	1.7	2.7	3.8	6.0	8.6	11.4	16.2	20.7
		240 VT	0.4	0.7	1.4	2.4	3.9	4.9	8.1	12.4	16.6	23.2	28.6
		240 CT	0.3	0.6	1.2	2.0	3.3	4.5	7.2	10.3	13.7	19.5	24.9
		Rated output current (A) at VT		1.2	1.9	3.5	6.0	9.6	12.0	19.6	30.0	40.0	56.0
	Rated output current (A) at CT		1.0	1.6	3.0	5.0	8.0	11.0	17.5	25.0	33.0	47.0	60.0
	Max. output voltage		Proportional to input voltage: 0 ... 240 V										
	Max. output frequency		400 Hz										
Power supply	Rated input voltage and frequency		Single-phase 200... 240 V 50/60 Hz 3-phase 200... 240 V 50/60 Hz										
	Allowable voltage fluctuation		-15% ... +10%										
	Allowable frequency fluctuation		5%										
Braking torque	At short-time deceleration		100%: <50Hz				70%: <50Hz	Approx 20%		—			
	At capacitor feedback		50%: <60Hz				50%: <60Hz						
Cooling method			Self cooling* ³				Forced-air-cooling						

^{*1} Three phase model use forced-air-cooling but single phase model is self cooling.

^{*2} Based on a standard 3-Phase standard motor.

^{*3} Forced air cooling for IP54 models

400 V class

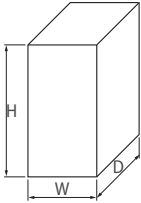
Three-phase: 3G3MX2-__			4004	4007	4015	4022	4030	4040	4055	4075	4110	4150
Motor kW ^{*1}	For VT setting		0.75	1.5	2.2	3.0	4.0	5.5	7.5	11	15	18.5
	For CT setting		0.4	0.75	1.5	2.2	3.0	4.0	5.5	7.5	11	15
Output characteristics	Inverter capacity kVA	380 VT	1.3	2.6	3.5	4.5	5.7	7.3	11.5	15.1	20.4	25.0
		380 CT	1.1	2.2	3.1	3.6	4.7	6.0	9.7	11.8	15.7	20.4
		480 VT	1.7	3.4	4.4	5.7	7.3	9.2	14.5	19.1	25.7	31.5
		480 CT	1.4	2.8	3.9	4.5	5.9	7.6	12.3	14.9	19.9	25.7
	Rated output current (A) at VT		2.1	4.1	5.4	6.9	8.8	11.1	17.5	23.0	31.0	38.0
	Rated output current (A) at CT		1.8	3.4	4.8	5.5	7.2	9.2	14.8	18.0	24.0	31.0
	Max. output voltage		Proportional to input voltage: 0 ... 480 V									
	Max. output frequency		400 Hz									
	Power supply	Rated input voltage and frequency		3-phase 380 ... 480 V 50/60 Hz								
Allowable voltage fluctuation		-15% ... +10%										
Allowable frequency fluctuation		5%										
Braking torque	At short-time deceleration ^{*2}		100%: <50Hz 50%: <60Hz				70%: <50Hz 50%: <60Hz	-				
	At capacitor feedback											
Cooling method			Self cooling ^{*2}			Forced-air-cooling						

^{*1} Based on a standard 3-Phase standard motor.

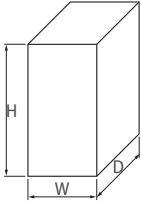
^{*2} Forced air cooling for IP54 models

Dimensions

Standard models (IP20)

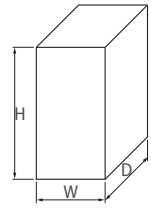
Voltage class	Inverter model	Dimensions in mm			Weight (kg)	
		H	W	D		
Single-phase 200 V	3G3MX2-AB001-E	128	68	109	1.0	
	3G3MX2-AB002-E				1.0	
	3G3MX2-AB004-E			122.5	1.1	
	3G3MX2-AB007-E	128	108	170.5	1.4	
	3G3MX2-AB015-E				1.8	
	3G3MX2-AB022-E				1.8	
Three-phase 200 V	3G3MX2-A2001-E	128	68	109	1.0	
	3G3MX2-A2002-E				1.0	
	3G3MX2-A2004-E			122.5	1.1	
	3G3MX2-A2007-E	128	108	145.5	1.2	
	3G3MX2-A2015-E			170.5	1.6	
	3G3MX2-A2022-E				1.8	
	3G3MX2-A2037-E	128	140	170.5	2.0	
	3G3MX2-A2055-E	260	140	155	3.0	
	3G3MX2-A2075-E				3.4	
	3G3MX2-A2110-E	296	180	175	5.1	
	3G3MX2-A2150-E	350	220	175	7.4	
Three-phase 400 V	3G3MX2-A4004-E	128	108	143.5	1.5	
	3G3MX2-A4007-E			170.5	1.6	
	3G3MX2-A4015-E				1.8	
	3G3MX2-A4022-E				1.9	
	3G3MX2-A4030-E				1.9	
	3G3MX2-A4040-E	128	140	170.5	2.1	
	3G3MX2-A4055-E	260		155	3.5	
	3G3MX2-A4075-E				3.5	
	3G3MX2-A4110-E	296	180	175	4.7	
	3G3MX2-A4150-E				5.2	

Finless models

Voltage class	Inverter model	Dimensions in mm			Weight (kg)	
		H	W	D		
Single-phase 200 V	3G3MX2-AB001-P-E	128	68	103	1.1	
	3G3MX2-AB002-P-E					
	3G3MX2-AB004-P-E					
	3G3MX2-AB007-P-E	128	108	123	1.8	
	3G3MX2-AB015-P-E					
	3G3MX2-AB022-P-E					
Three-phase 200 V	3G3MX2-A2001-P-E	128	68	103	1.1	
	3G3MX2-A2002-P-E					
	3G3MX2-A2004-P-E					
	3G3MX2-A2007-P-E	128	108	123	1.8	
	3G3MX2-A2015-P-E					
	3G3MX2-A2022-P-E					
Three-phase 400 V	3G3MX2-A2037-P-E	128	140	123	2.1	
	3G3MX2-A4004-P-E	128	108	123	1.8	
	3G3MX2-A4007-P-E					
	3G3MX2-A4015-P-E					
	3G3MX2-A4022-P-E					
	3G3MX2-A4030-P-E					
	3G3MX2-A4040-P-E	128	140	123	2.1	

IP54 models

Voltage class	Inverter model	Dimensions in mm			Weight (kg)
		H	W	D	
Single-phase 200 V	3G3MX2-DB001-E	464.74	179.5	292.7	8.0
	3G3MX2-DB001-EC	482.8	309.5	317.7	11.8
	3G3MX2-DB002-E	464.74	179.5	292.7	8.0
	3G3MX2-DB002-EC	482.8	309.5	317.7	11.8
	3G3MX2-DB004-E	464.74	179.5	292.7	8.4
	3G3MX2-DB004-EC	482.8	309.5	317.7	12.1
	3G3MX2-DB007-EC				12.4
	3G3MX2-DB015-EC				16.0
	3G3MX2-DB022-EC				16.0
Three-phase 200 V	3G3MX2-D2001-E	464.74	179.5	292.7	8.0
	3G3MX2-D2001-EC	482.8	309.5	317.7	11.8
	3G3MX2-D2002-E	464.74	179.5	292.7	8.0
	3G3MX2-D2002-EC	482.8	309.5	317.7	11.8
	3G3MX2-D2004-E	464.74	179.5	292.7	8.1
	3G3MX2-D2004-EC	482.8	309.5	317.7	11.9
	3G3MX2-D2007-E	464.74	179.5	292.7	8.2
	3G3MX2-D2007-EC	482.8	309.5	317.7	12.0
	3G3MX2-D2015-EC				15.4
	3G3MX2-D2022-EC				15.6
	3G3MX2-D2037-EC				16.2
	3G3MX2-D2055-EC	627.04	325	299.5	18.8
	3G3MX2-D2075-EC				19.2
	3G3MX2-D2110-EC	710.35	379	329.7	25.3
	3G3MX2-D2150-EC				28.0
Three-phase 400 V	3G3MX2-D4004-EC	482.8	309.5	317.7	12.0
	3G3MX2-D4007-EC				12.5
	3G3MX2-D4015-EC				12.4
	3G3MX2-D4022-EC				12.5
	3G3MX2-D4030-EC				12.5
	3G3MX2-D4040-EC				13.1
	3G3MX2-D4055-EC	627.04	325	299.5	18.7
	3G3MX2-D4075-EC				18.7
	3G3MX2-D4110-EC	710.35	379	329.7	23.8
	3G3MX2-D4150-EC				24.3



For more information, please enter "D228" in the search field on our website industrial.omron.eu.

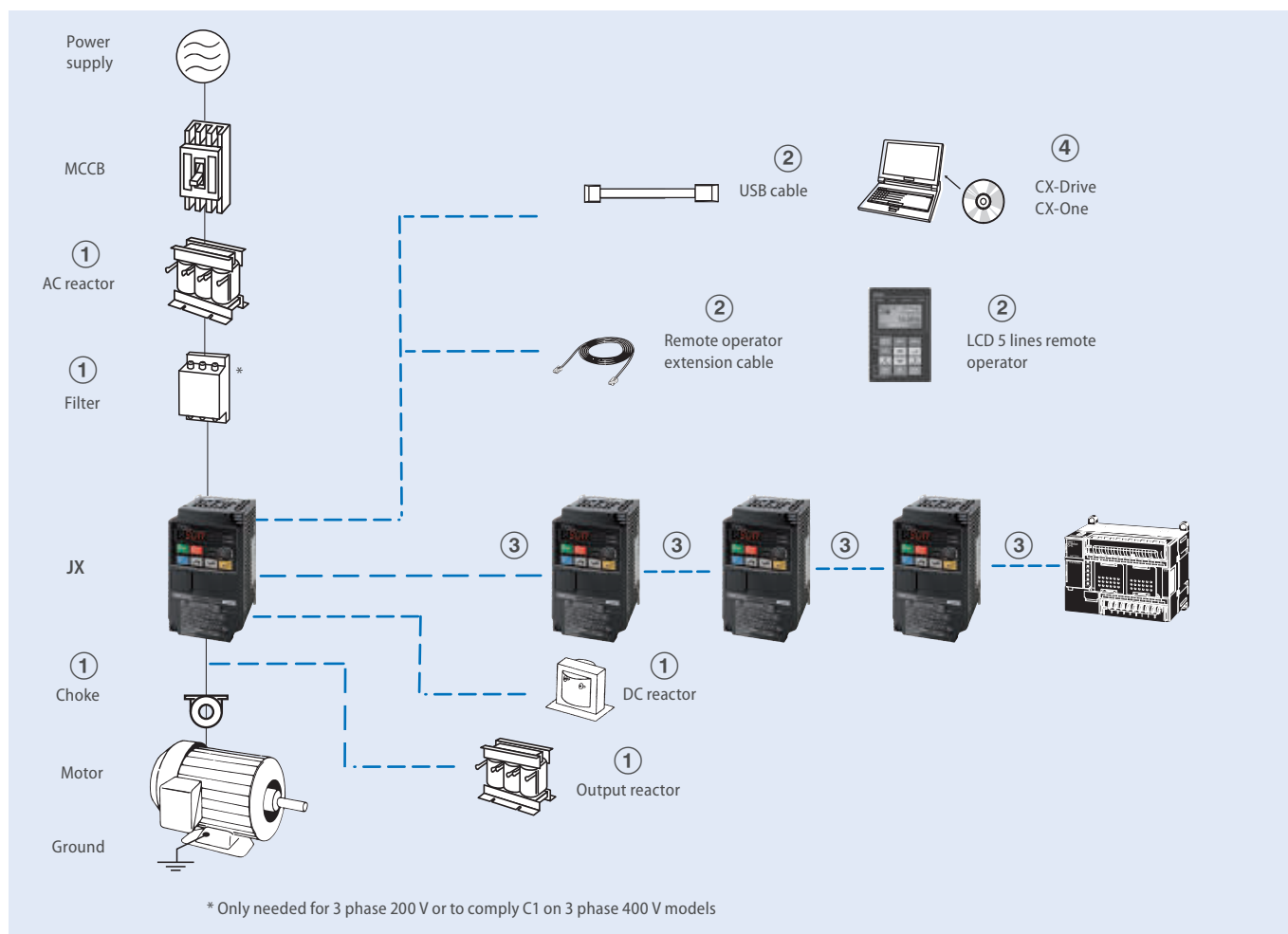


Compact and complete

With the RFI filter built-in, and the communications integrated as standard, the JX provides a compact and complete solution to a whole range of simple applications, such as conveyor control. The RS485 Modbus is built into the RJ45 port of the inverter front, making it very easy to add inverters into the network without any extra option boards. Therefore, saving costs and space.

- V/f controlled inverter
- Side by side mounting
- EMC filter built-in
- RS485 Modbus built-in
- Overload detection function (150% during 60 s)
- PID
- Micro-surge voltage suppression
- Automatic energy saving

Ordering information



3G3JX

Specifications			Order code
Voltage class	Max. applicable motor output kW	Rated output current (A)	Standard
Single-phase 200 V	0.2	1.4	3G3JX-AB002-EF
	0.4	2.6	3G3JX-AB004-EF
	0.75	4	3G3JX-AB007-EF
	1.5	7.1	3G3JX-AB015-EF
	2.2	10	3G3JX-AB022-EF
Three-phase 200 V	0.2	1.4	3G3JX-A2002-E
	0.4	2.6	3G3JX-A2004-E
	0.75	4	3G3JX-A2007-E
	1.5	7.1	3G3JX-A2015-E
	2.2	10	3G3JX-A2022-E
	3.7	15.9	3G3JX-A2037-E
	5.5	24	3G3JX-A2055-E
	7.5	32	3G3JX-A2075-E
Three-phase 400 V	0.4	1.5	3G3JX-A4004-EF
	0.75	2.5	3G3JX-A4007-EF
	1.5	3.8	3G3JX-A4015-EF
	2.2	5.5	3G3JX-A4022-EF
	4.0	8.6	3G3JX-A4040-EF
	5.5	13	3G3JXA4055-EF
	7.5	16	3G3JXA4075-EF

① Line filters

Inverter		Line filter Rasmi		
Voltage	Model 3G3JX- _	Rated current (A)	Weight (kg)	Order code
1-Phase 200 VAC	AB002/AB004	6	0.5	AX-FIJ1006-RE
	AB007	10	0.6	AX-FIJ1010-RE
	AB015/AB022	26	0.8	AX-FIJ1023-RE
3-Phase 200 VAC	A2002/A2004/A2007	6	1.0	AX-FIJ2006-RE
	A2015/A2022/A2037	20	1.3	AX-FIJ2020-RE
	A2055/A2075	40	2.3	AX-FIJ2040-RE
3-Phase 400 VAC	A4004/A4007 /A4015	5	0.9	AX-FIJ3005-RE
	A4022 /A4040	11	1.1	AX-FIJ3011-RE
	A4055/A4075	20	1.7	AX-FIJ3020-RE

① Input AC Reactors

Inverter		AC Reactor
Voltage	Model 3G3JX- _	Order code
3-Phase 200 VAC	A2002/A2004/A2007	AX-RAI02800080-DE
	A2015/A2022/A2037	AX-RAI00880175-DE
	A2055/A2075	AX-RAI00350335-DE
1-Phase 200 VAC	AB002/AB004	Under development
	AB007	
	AB015/AB022	
3-Phase 400 VAC	A4004/A4007/A4015	AX-RAI07700042-DE
	A4022/A4040	AX-RAI03500090-DE
	A4055/A4075	AX-RAI01300170-DE

① DC Reactors

200 V single-phase		200 V three-phase		400 V three-phase	
Inverter	Order code	Inverter	Order code	Inverter	Order code
3G3JX-AB002	AX-RC10700032-DE	3G3JX-A2002	AX-RC21400016-DE	—	
3G3JX-AB004	AX-RC06750061-DE	3G3JX-A2004	AX-RC10700032-DE	3G3JX-A4004	AX-RC43000020-DE
3G3JX-AB007	AX-RC03510093-DE	3G3JX-A2007	AX-RC06750061-DE	3G3JX-A4007	AX-RC27000030-DE
3G3JX-AB015	AX-RC02510138-DE	3G3JX-A2015	AX-RC03510093-DE	3G3JX-A4015	AX-RC14000047-DE
3G3JX-AB022	AX-RC01600223-DE	3G3JX-A2022	AX-RC02510138-DE	3G3JX-A4022	AX-RC10100069-DE
—		3G3JX-A2037	AX-RC01600223-DE	3G3JX-A4040	AX-RC06400116-DE
		3G3JX-A2055	AX-RC01110309-DE	3G3JX-A4055	AX-RC04410167-DE
		3G3JX-A2075	AX-RC00840437-DE	3G3JX-A4075	AX-RC03350219-DE

① Chokes

Diameter	Description	Order code
21	For 2.2 KW motors or below	AX-FER2102-RE
25	For 7.5 KW motors or below	AX-FER2515-RE

① Output AC Reactors

Inverter	Model 3G3JX-□	AC Reactor
Voltage		Order code
200 VAC	A2001/A2002/A2004 AB001/AB002/AB004	AX-RAO11500026-DE
	A2007/AB007	AX-RAO07600042-DE
	A2015/AB015	AX-RAO04100075-DE
	A2022/AB022	AX-RAO03000105-DE
	A2037	AX-RAO01830160-DE
	A2055	AX-RAO01150220-DE
	A2075	AX-RAO00950320-DE
400 VAC	A4004/A4007/A4015	AX-RAO16300038-DE
	A4022	AX-RAO11800053-DE
	A4040	AX-RAO07300080-DE
	A4055	AX-RAO04600110-DE
	A4075	AX-RAO03600160-DE

② Accessories

Types	Description	Functions	Order code
Digital operator	LCD remote operator	5 Line LCD remote operator with copy function, cable length max. 3 m.*1	AX-OP05-E
	Remote operator cable	3 meters cable for connecting remote operator	3G3AX-CAJOP300-EE
	LED remote operator	LED remote operator, cable length max. 3 m	3G3AX-OP01
	Mounting kit for LED operator	Mounting kit for LED operator on panel	4X-KITMINI
Accessories	USB converter / USB cable	RJ45 to USB connection cable	3G3AX-PCACN2 USB-convertercable
	RJ45 T-Branch cable	T cable for RS-422 connection	3G3AX-CTB020-EE
	RJ45 Terminator resistor	Terminator resistor for RS-422 connection	3G3AX-CTR150-EE

*1 Please note, for 3G3JX inverters models, the operator will only display 2 lines of text.

④ Computer software

Description	Installation	Order code
Computer software	Configuration and monitoring software tool	CX-Drive
Computer software	Configuration and monitoring software tool	CX-One
Computer software	Software tool for Energy Saving calculation	€Saver

Specifications

200 V class

Single-phase: 3G3JX_			AB002	AB004	AB007	AB015	AB022	-	-	-
Three-phase: 3G3JX_			A2002	A2004	A2007	A2015	A2022	A2037	A2055	A2075
Motor kW ^{*1}	Applicable motor capacity		0.2	0.4	0.75	1.5	2.2	3.7	5.5	7.5
Output characteristics	Inverter capacity kVA	200 V	0.4	0.9	1.3	2.4	3.4	5.5	8.3	11.0
		240 V	0.5	1.0	1.6	2.9	4.1	6.6	9.9	13.3
	Rated output current (A)		1.4	2.6	4.0	7.1	10.0	15.9	24.0	32.0
	Max. output voltage		Proportional to input voltage: 0 to 240 V							
	Max. output frequency		400 Hz							
Power supply	Rated input voltageand frequency		Single-phase 200 to 240 V 50/60 Hz Three-phase 200 to 240 V 50/60 Hz							
	Rated input current (A) Three-phase 200 V		1.8	3.4	5.2	9.3	13.0	20.0	30.0	40.0
	Rated input current (A) Single-phase 200 V		3.1	5.8	9.0	16.0	22.5	—	—	—
	Allowable voltage fluctuation		−15% to 10%							
	Allowable frequency fluctuation		5%							
Built-in filter			EMC filter (C1 single phase)							
Braking torque	At short-time deceleration		Approx. 50%			50% for 3-phase	Approx 20% to 40%		Approx 20%	
	At capacitor feedback					20% to 40% for 1-phase				
Cooling method			Self cooling			Forced-air-cooling				

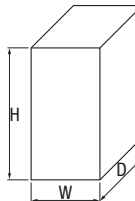
*1 Based on a standard 3-Phase standard motor.

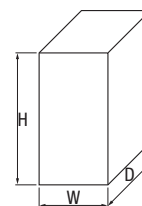
400 V class

Three-phase: 3G3JX_			A4004	A4007	A4015	A4022	A4040	A4055	A4075
Motor kW ^{*1}	Applicable motor capacity		0.4	0.75	1.5	2.2	4.0	5.5	7.5
Output characteristics	Inverter capacity kVA	380 V	0.9	1.6	2.5	3.6	5.6	8.5	10.5
		480 V	1.2	2.0	3.1	4.5	7.1	10.8	13.3
	Rated output current (A)		1.5	2.5	3.8	5.5	8.6	13.0	16.0
	Max. output voltage		Proportional to input voltage: 0 to 480 V						
	Max. output frequency		400 Hz						
Power supply	Rated input voltage and frequency		3-phase 380 to 480 V 50/60 Hz						
	Rated input current (A)		2.0	3.3	5.0	7.0	11.0	16.5	20.0
	Allowable voltage fluctuation		-15% to 10%						
	Allowable frequency fluctuation		5%						
Built-in filter			EMC filter C2 class						
Braking torque	At short-time deceleration		Approx. 50%			Approx. 20% to 40%		Approx. 20%	
	At capacitor feedback								
Cooling method			Self cooling		Forced-air-cooling				

*1 Based on a standard 3-Phase standard motor.

Dimensions

Voltage class	Max. applicable motor output kW	Inverter model	Dimensions in mm				
			H	W	D	Weight (kg)	
Single-phase 200 V	0.2	3G3JX-AB002	155	80	95.5	0.8	
	0.4	3G3JX-AB004			109.5	0.9	
	0.75	3G3JX-AB007	189	110	130.5	1.5	
	1.5	3G3JX-AB015			157.5	2.3	
	2.2	3G3JX-AB022				2.4	
Three-phase 200 V	0.2	3G3JX-A2002	155	80	95.5	0.8	
	0.4	3G3JX-A2004			109.5	0.9	
	0.75	3G3JX-A2007			132.5	1.1	
	1.5	3G3JX-A2015	189	110	157.5	2.2	
	2.2	3G3JX-A2022				2.4	
	3.7	3G3JX-A2037					
	5.5	3G3JX-A2055	250	180	167.5	4.2	
	7.5	3G3JX-A2075					
Three-phase 400 V	0.4	3G3JX-A4004	189	110	130.5	1.5	
	0.75	3G3JX-A4007			157.5	2.3	
	1.5	3G3JX-A4015				2.4	
	2.2	3G3JX-A4022					
	4.0	3G3JX-A4040					
	5.5	3G3JX-A4055	250	180	167.5	4.2	
	7.5	3G3JX-A4075					

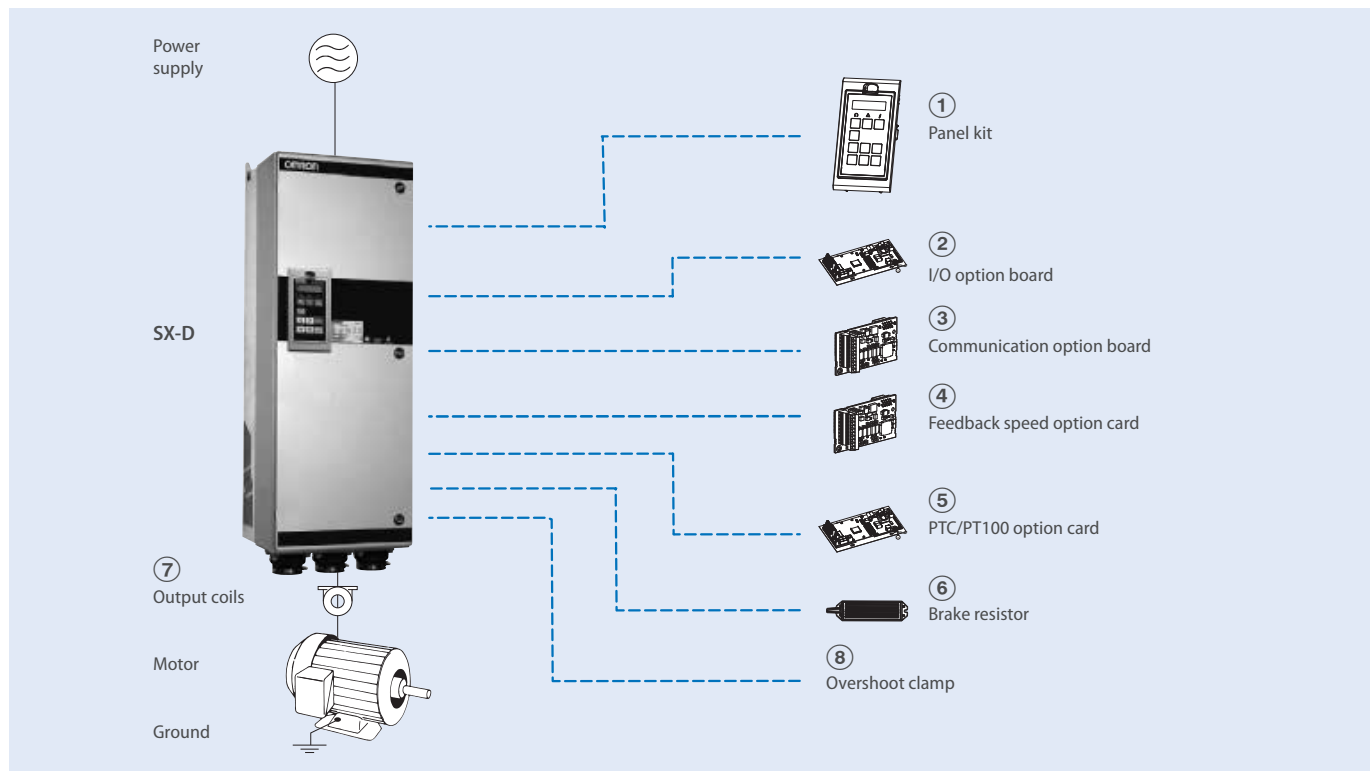




High performance vector control

- 400 V class three-phase 0.75 to 800 kW
- IP54 full range
- Compact design and robustness
- Built-in EMC filter for complete family and fuses from 200 kW
- Safety according EN13849-1 and EN62061 standards
- Logic programmability
- Communication options (EtherCAT, PROFINET, Modbus, DeviceNet, PROFIBUS, Modbus TCP)

Ordering information



SX

Specifications					Order code			
Voltage	Heavy duty		Normal duty		IP54 model		IP20 model	
					Direct torque control	V/F	Direct torque control	V/F
400 V	0.55 kW	2.0 A	0.75 kW	2.5 A	SX-D40P7-EF	SX-D40P7-EV	–	–
	1.1 kW	3.2 A	1.5 kW	4.0 A	SX-D41P5-EF	SX-D41P5-EV		
	1.5 kW	4.8 A	2.2 kW	6.0 A	SX-D42P2-EF	SX-D42P2-EV		
	2.2 kW	6.0 A	3 kW	7.5 A	SX-D43P0-EF	SX-D43P0-EV		
	3 kW	7.6 A	4 kW	9.5 A	SX-D44P0-EF	SX-D44P0-EV		
	4 kW	10.4 A	5.5 kW	13 A	SX-D45P5-EF	SX-D45P5-EV		
	5.5 kW	14.4 A	7.5 kW	18 A	SX-D47P5-EF	SX-D47P5-EV		
	7.5 kW	21 A	11 kW	26 A	SX-D4011-EF	SX-D4011-EV		
	11 kW	25 A	15 kW	31 A	SX-D4015-EF	SX-D4015-EV		
	15 kW	29.6 A	18.5 kW	37 A	SX-D4018-EF	SX-D4018-EV		
	18.5 kW	37 A	22 kW	46 A	SX-D4022-EF	SX-D4022-EV		
	22 kW	49 A	30 kW	61 A	SX-D4030-EF	SX-D4030-EV		
	30 kW	59 A	37 kW	74 A	SX-D4037-EF	SX-D4037-EV		
	37 kW	72 A	45 kW	90 A	SX-D4045-EF	SX-D4045-EV		
	45 kW	87 A	55 kW	109 A	SX-D4055-EF	SX-D4055-EV		
	55 kW	117 A	75 kW	146 A	SX-D4075-EF	SX-D4075-EV		
	75 kW	140 A	90 kW	175 A	SX-D4090-EF	SX-D4090-EV		
	90 kW	168 A	110 kW	210 A	SX-D4110-EF	SX-D4110-EV		
	110 kW	200 A	132 kW	250 A	SX-D4132-EF	SX-D4132-EV		
	132 kW	240 A	160 kW	300 A	SX-D4160-E1F	SX-D4160-E1V	SX-A4160-EF	SX-A4160-EV
	160 kW	300 A	200 kW	375 A	SX-D4200-E1F	SX-D4200-E1V	SX-A4200-EF	SX-A4200-EV
	200 kW	344 A	220 kW	430 A	SX-D4220-E1F	SX-D4220-E1V	SX-A4220-EF	SX-A4220-EV
	220 kW	400 A	250 kW	500 A	SX-D4250-E1F	SX-D4250-E1V	SX-A4250-EF	SX-A4250-EV
	250 kW	480 A	315 kW	600 A	SX-D4315-E1F	SX-D4315-E1V	SX-A4315-EF	SX-A4315-EV
	315 kW	520 A	355 kW	650 A	SX-D4355-E1F	SX-D4355-E1V	SX-A4355-EF	SX-A4355-EV
	355 kW	600 A	400 kW	750 A	SX-D4400-E1F	SX-D4400-E1V	SX-A4400-EF	SX-A4400-EV
	400 kW	688 A	450 kW	860 A	SX-D4450-E1F	SX-D4450-E1V	SX-A4450-EF	SX-A4450-EV
	450 kW	800 A	500 kW	1,000 A	SX-D4500-E1F	SX-D4500-E1V	SX-A4500-EF	SX-A4500-EV
	500 kW	960 A	630 kW	1,200 A	SX-D4630-E1F	SX-D4630-E1V	SX-A4630-EF	SX-A4630-EV
	630 kW	1,200 A	800 kW	1,500 A	SX-D4800-E1F	SX-D4800-E1V	SX-A4800-EF	SX-A4800-EV

① Panel kit

Type	Description	Function	Order code
Panel kit	Panel kit	Complete panel kit including operator	SX-OP02-00-E
	Blank panel kit	Complete panel kit including a blank operator	SX-OP02-01-E
Operator	External control panel	External control panel (SX-D40P7 to SX-D47P5)	SX-OP02-71-E
	External blank panel	External blank panel (SX-D4011 to SX-D4022)	SX-OP02-81-E
	Handheld control panel	Complete handheld control panel	SX-OPHH-00-E
	Digital operator	Inverter digital operator	SX-OP01-00-E
	Blank operator	Blank operator	SX-OP01-11-E

② I/O option board

Description	Function	Order code
Additional I/O option	Provides 3 extra relay outputs and 3 additional digital inputs	01-3876-01
Crane option	Dedicated option board for crane application, including additional I/O and functions	01-3876-07

③ Communication option board

Description	Function	Order code
RS232/485	MODBUS RTU serial communication by RS232 or RS485 interface with galvanic isolation	01-3876-04
PROFIBUS-DP	Used for operating the inverter through PROFIBUS-DP communication with the host controller	01-3876-05
DeviceNet	Used for operating the inverter through DeviceNet communication with the host controller	01-3876-06
Modbus/TCP, Ethernet	Used for operating the inverter through Modbus/TCP communication with the host controller	01-3876-09
EtherCAT	Used for operating the inverter through EtherCAT communication with the host controller	01-3876-10
PROFINET (1-port)	Used for operating the inverter through PROFINET communication with the host controller	01-3876-11
PROFINET (2-ports)		01-3876-12

④ Encoder feedback option card

Description	Function	Order code
Encoder option	Used for connection of the actual motor speed via encoder. Up to 100 kHz with TTL and HTL incremental encoders with 5/24 V power supply	01-3876-03

⑤ PTC/PT100 option card

Description	Function	Order code
Thermal protection	Allows to connect a motor thermistor to the inverter	01-3876-08

⑥ Braking chopper and braking resistor

All inverter sizes could be fitted with an optional built-in brake chopper from factory but is not possible to install it later. The choice of the resistor depends on the application switch-on duration and duty-cycle. Following tables describes the activation level of the built-in braking chopper and the minimum resistor that could be used depending on the input voltage.

R for different input voltage (Ω)			Order code	R for different input voltage (Ω)			Order code
220–240 VAC	380–415 VAC	440–480 VAC		220–240 VAC	380–415 VAC	440–480 VAC	
43	43	50	SX-40P7	3.8	3.8	4.4	SX-4075
43	43	50	SX-41P5	3.8	3.8	4.4	SX-4090
43	43	50	SX-42P2	2.7	2.7	3.1	SX-4110
43	43	50	SX-43P0	2.7	2.7	3.1	SX-4132
43	43	50	SX-44P0	2 × 3.8	2 × 3.8	2 × 4.4	SX-4160
43	43	50	SX-45P5	2 × 3.8	2 × 3.8	2 × 4.4	SX-4200
43	43	50	SX-47P5	2 × 2.7	2 × 2.7	2 × 3.1	SX-4220
26	26	30	SX-4011	2 × 2.7	2 × 2.7	2 × 3.1	SX-4250
26	26	30	SX-4015	3 × 2.7	3 × 2.7	3 × 3.1	SX-4315
17	17	20	SX-4018	3 × 2.7	3 × 2.7	3 × 3.1	SX-4355
17	17	20	SX-4022	3 × 2.7	3 × 2.7	3 × 3.1	SX-4400
9.7	9.7	N/A	SX-4030	4 × 2.7	4 × 2.7	4 × 3.1	SX-4450
9.7	9.7	N/A	SX-4037	4 × 2.7	4 × 2.7	4 × 3.1	SX-4500
3.8	3.8	4.4	SX-4045	6 × 2.7	6 × 2.7	6 × 3.1	SX-4630
3.8	3.8	4.4	SX-4055	–			

Supply voltage (VAC)	Built-in brake chopper trigger level (VDC)
220–240	380
380–415	660
440–480	780

⑦ Output coils

Output coils above SX-D4132-E should be order from factory as they should be installed inside of the cabinet

Voltage	Inverter model	Rated current	Inductance	Rated voltage	Max. carrier	Max. output frequency	Max. temp	Order code
400 V	SX-40P7-E	2.8 A	1.5 mH	800 V	10 KHz	200 Hz	40°C	473160 00
	SX-41P5-E	4.4 A	1.0 mH					473161 00
	SX-42P2-E	6.6 A	0.65 mH					473162 00
	SX-43P0-E	11.0 A	0.4 mH					473163 00
	SX-44P0-E							
	SX-45P5-E	14.3 A	0.3 mH					473164 00
	SX-47P5-E	18.2 A	0.25 mH					473165 00
	SX-4011-E	26.4 A	0.175 mH		6 KHz			473166 00
	SX-4015-E	32 A	0.15 mH					473167 00
	SX-4018-E	65 A	0.1 mH					473168 00
	SX-4022-E							
	SX-4030-E							
	SX-4037-E	90 A	0.1 mH					473169 00
	SX-4045-E							
	SX-4055-E	146 A	0.05 mH					473170 00
	SX-4075-E							
	SX-4090-E	175 A	0.05 mH					473171 00
	SX-4110-E	275 A	0.032 mH		1.5 KHz	100 Hz		473172 00
	SX-4132-E							

⑧ Overshoot clamp

Note: Only two types of overshoot clamps could be order for after mounting

Inverter	Function	Order code
SX-40P7 to SX-4132	Together with the output coils, the overshoot clamp restricts the voltage and the dV/dt on the motor winding. Inverters must be ordered including the option DC+/DC– connectors.	52163
SX-4160 to SX-4800	Together with the output coils, the overshoot clamp restricts the voltage and the dV/dt on the motor winding. Doesn't require the "DC+/DC–" option.	52220

Computer software

Installation	Order code
Configuration and monitoring software tool	CX-Drive
Configuration and monitoring software tool	CX-One
Software tool for energy saving calculation	€Saver

Specifications

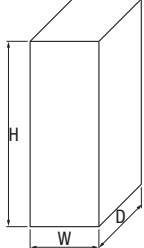
Three-phase: SX- 4 _ _ _ -E_		0P7	1P5	2P2	3P0	4P0	5P5	7P5	011	015	018	022	030	037	045	055
Motor kW ^{*1}	For HD setting	0.55	1.1	1.5	2.2	3	4	5.5	7.5	11	15	18.5	22	30	37	45
	For ND setting	0.75	1.5	2.2	3	4	5.5	7.5	11	15	18.5	22	30	37	45	55
Output characteristics	Max output current (A) _-EF	3.8	6.0	9.0	11.3	14.3	19.5	27.0	39.0	46.0	55.0	69.0	92.0	111	108	131
	Max output current (A) _-EV	3.0	4.8	7.2	9.0	11.4	15.6	21.6	31.0	37.0	44.0	55.0	73.0	89.0	108	131
	Rated output current (A) at HD	2.0	3.2	4.8	6.0	7.6	10.4	14.4	21.0	25.0	29.6	37.0	49.0	59.0	72.0	87.0
	Rated output current (A) at ND	2.5	4.0	6.0	7.5	9.5	13.0	18.0	26.0	31.0	37.0	46.0	61.0	74.0	90.0	109
	Output voltage	0 to Mains supply voltage														
Power supply	Max. output frequency	400 Hz														
	Rated input voltage and frequency	3-phase 230 to 480 V 50/60 Hz														
	Allowable voltage fluctuation	10% to -15% (-10% at 230V)														
Power supply	Allowable frequency fluctuation	45 to 65 Hz														

^{*1} Based on a standard 4-pole motor for maximum applicable motor output

Three-phase: SX- 4 _ _ _ -E_		075	090	110	132	160	200	220	250	315	355	400	450	500	630	800
Motor kW ^{*1}	For HD setting	55	75	90	110	132	160	200	220	250	315	355	400	450	500	630
	For ND setting	75	90	110	132	160	200	220	250	315	355	400	450	500	630	800
Output characteristics	Max output current (A) _-EF	175	210	252	300	360	450	516	600	720	780	900	1,032	1,200	1,440	1,800
	Max output current (A) _-EV	175	210	252	300	360	450	516	600	720	780	900	1,032	1,200	1,440	1,800
	Rated output current (A) at HD	117	140	168	200	240	300	344	400	480	520	600	688	800	960	1,200
	Rated output current (A) at ND	146	175	210	250	300	375	430	500	600	650	750	860	1,000	1,200	1,500
	Output voltage	0 to Mains supply voltage														
Power supply	Max. output frequency	400 Hz														
	Rated input voltage and frequency	3-phase 230 to 480 V 50/60 Hz														
	Allowable voltage fluctuation	10% to -15% (-10% at 230V)														
Power supply	Allowable frequency fluctuation	45 to 65 Hz														

^{*1} Based on a standard 4-pole motor for maximum applicable motor output

Dimensions

Degree of protection	Drive model	H	W	D	
IP20	SX-A4160 to SX-A4200	1,036	500	390	
	SX-A4220 to SX-A4250	1,036	500	450	
	SX-A4315 to SX-A4400	1,036	730	450	
	SX-A4450 to SX-A4500	1,036	1,100	450	
	SX-A4630 to SX-A4800	1,036	1,560	450	
IP54	SX-D40P7 to SX-D47P5	416	202.6	200	
	SX-D4011 to SX-D4022	512	178	292.1	
	SX-D4030 to SX-D4037	590	220	295	
	SX-D4045 to SX-D4090	950	284.5	314	
	SX-D4110 to SX-D4132	950	344.5	314	
	SX-D4160 to SX-D4250	2,250	600	600	
	SX-D4315 to SX-D4400	2,250	900	600	
	SX-D4450 to SX-D4500	2,250	1,200	600	
	SX-D4630 to SX-D4800	2,250	1,800	600	

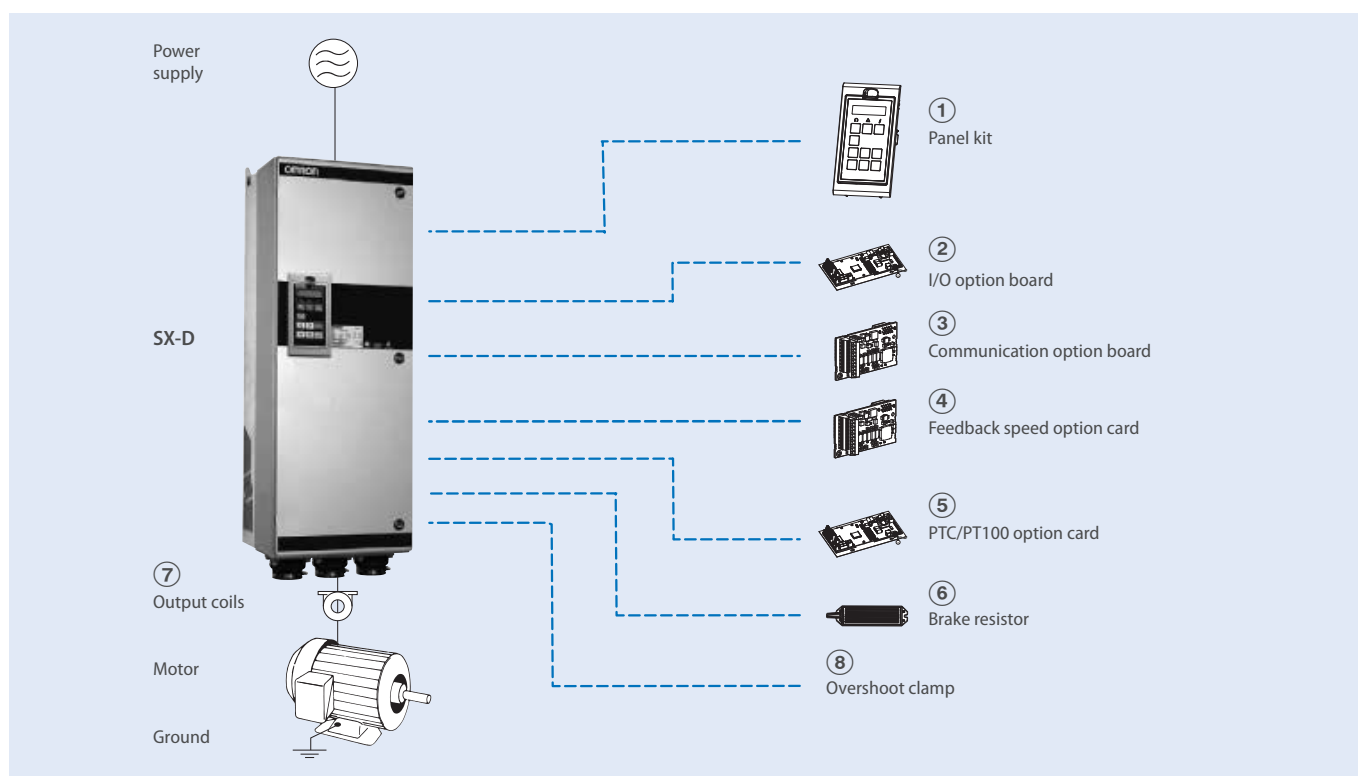


Force and flow in harmony

Designed to drive any high power application from 90 kW up to 1 MW, the new SX series of compact inverters features embedded application dedicated functionality plus logic programming and customizable LCD information to give you all the control flexibility required for applications ranging from high torque to smooth flow and pressure control.

- 500 V to 690 V power supply from 90 kW up to 1 MW
- IP54 full range
- Compact design and robustness
- Built-in EMC filter for complete family and fuses from 200 kW
- Safety according EN13849-1 and EN62061 standards
- Logic programmability
- Hardware customization
- Communication options (EtherCAT, PROFINET, Modbus, DeviceNet, PROFIBUS, Modbus TCP)

Ordering information



SX

Specifications					Order code			
Voltage	Heavy duty		Normal duty		IP54 model		IP20 model	
					Direct torque control	V/F	Direct torque control	V/F
690 V	75 kW	72 A	90 kW	90 A	SX-D6090-EF	SX-D6090-EV	—	—
	90 kW	87 A	110 kW	109 A	SX-D6110-EF	SX-D6110-EV		
	110 kW	117 A	132 kW	146 A	SX-D6132-EF	SX-D6132-EV		
	132 kW	140 A	160 kW	175 A	SX-D6160-EF	SX-D6160-EV		
	160 kW	168 A	200 kW	210 A	SX-D6200-E1F	SX-D6200-E1V		
	200 kW	200 A	250 kW	250 A	SX-D6250-E1F	SX-D6250-E1V	SX-A6250-EF	SX-A6250-EV
	250 kW	240 A	315 kW	300 A	SX-D6315-E1F	SX-D6315-E1V	SX-A6315-EF	SX-A6315-EV
	315 kW	300 A	355 kW	375 A	SX-D6355-E1F	SX-D6355-E1V	SX-A6355-EF	SX-A6355-EV
	315 kW	344 A	450 kW	430 A	SX-D6450-E1F	SX-D6450-E1V	SX-A6450-EF	SX-A6450-EV
	355 kW	400 A	500 kW	500 A	SX-D6500-E1F	SX-D6500-E1V	SX-A6500-EF	SX-A6500-EV
	450 kW	480 A	600 kW	600 A	SX-D6600-E1F	SX-D6600-E1V	SX-A6600-EF	SX-A6600-EV
	500 kW	520 A	630 kW	650 A	SX-D6630-E1F	SX-D6630-E1V	SX-A6630-EF	SX-A6630-EV
	600 kW	600 A	710 kW	750 A	SX-D6710-E1F	SX-D6710-E1V	SX-A6710-EF	SX-A6710-EV
	650 kW	688 A	800 kW	860 A	SX-D6800-E1F	SX-D6800-E1V	SX-A6800-EF	SX-A6800-EV
	710 kW	720 A	900 kW	900 A	SX-D6900-E1F	SX-D6900-E1V	SX-A6900-EF	SX-A6900-EV
	800 kW	800 A	1,000 kW	1,000 A	SX-D61K0-E1F	SX-D61K0-E1V	SX-A61K0-EF	SX-A61K0-EV

A Panel kit

Type	Description	Function	Order code
Panel kit	Panel kit	Complete panel kit including operator	SX-OP02-00-E
	Blank panel kit	Complete panel kit including a blank operator	SX-OP02-01-E
Operator	Handheld control panel	Complete handheld control panel	SX-OPHH-00-E
	Digital operator	Inverter digital operator	SX-OP01-00-E
	Blank operator	Blank operator	SX-OP01-11-E

② I/O option board

Description	Function	Order code
Additional I/O option	Provides 3 extra relay outputs and 3 additional digital inputs	01-3876-01
Crane option	Dedicated option board for crane application, including additional I/O and functions	01-3876-07

③ Communication option board

Description	Function	Order code
RS232/485	MODBUS RTU serial communication by RS232 or RS485 interface with galvanic isolation	01-3876-04
PROFIBUS-DP	Used for operating the inverter through PROFIBUS-DP communication with the host controller	01-3876-05
DeviceNet	Used for operating the inverter through DeviceNet communication with the host controller	01-3876-06
Modbus/TCP, Ethernet	Used for operating the inverter through Modbus/TCP communication with the host controller	01-3876-09
EtherCAT	Used for operating the inverter through EtherCAT communication with the host controller	01-3876-10
PROFINET (1-port)	Used for operating the inverter through PROFINET communication with the host controller	01-3876-11
PROFINET (2-ports)		01-3876-12

④ Encoder feedback option card

Description	Function	Order code
Encoder option	Used for connection of the actual motor speed via encoder. Up to 100 kHz with TTL and HTL incremental encoders with 5/24 V power supply	01-3876-03

⑤ PTC/PT100 option card

Description	Function	Order code
Thermal protection	Allows to connect a motor thermistor to the inverter	01-3876-08

⑥ Braking chopper and braking resistor

All inverter sizes could be fitted with an optional built-in brake chopper from factory but is not possible to install it later. The choice of the resistor depends on the application switch-on duration and duty-cycle. Following tables describes the activation level of the built-in braking chopper and the minimum resistor that could be used depending on the input voltage.

Rmin for different input voltage (Ω)			Order code
500–525 VAC	550–600 VAC	660–690 VAC	
4.9	5.7	6.5	SX-D6090-EF
4.9	5.7	6.5	SX-D6110-EF
4.9	5.7	6.5	SX-D6132-EF
4.9	5.7	6.5	SX-D6160-EF
2 × 4.9	2 × 5.7	2 × 6.5	SX-D6200-EF
2 × 4.9	2 × 5.7	2 × 6.5	SX-D6250-EF
2 × 4.9	2 × 5.7	2 × 6.5	SX-D6315-EF
2 × 4.9	2 × 5.7	2 × 6.5	SX-D6355-EF
3 × 4.9	3 × 5.7	3 × 6.5	SX-D6450-EF
3 × 4.9	3 × 5.7	3 × 6.5	SX-D6500-EF
4 × 4.9	4 × 5.7	4 × 6.5	SX-D6600-EF
4 × 4.9	4 × 5.7	4 × 6.5	SX-D6630-EF
6 × 4.9	6 × 5.7	6 × 6.5	SX-D6710-EF
6 × 4.9	6 × 5.7	6 × 6.5	SX-D6800-EF
6 × 4.9	6 × 5.7	6 × 6.5	SX-D6900-EF
6 × 4.9	6 × 5.7	6 × 6.5	SX-D61K0-EF

Supply voltage (VAC)	Built-in brake chopper trigger level (VDC)
500–525	860
550–600	1,000
660–690	1,150

⑦ Output coils

Output coils above SX-D4132-E should be order from factory as they should be installed inside of the cabinet

Voltage	Inverter model	Rated current	Inductance	Rated voltage	Max carrier	Max. output frequency	Max. temp	Order code
690 V	SX-D6090-EF	90 A	0.1 mH	800 V	6 kHz	200 Hz	40°C	473169 00
	SX-D6110-EF	146 A	0.05 mH		6 kHz	200 Hz		473170 00
	SX-D6132-EF							
	SX-D6160-EF	175 A	0.05 mH		6 kHz	200 Hz		473171 00

⑧ Overshoot clamp

Note: Only two types of overshoot clamps could be order for after mounting

Inverter	Function	Order code
SX-6090 to SX-6160	Together with the output coils, the overshoot clamp restricts the voltage and the dV/dt on the motor winding. Inverters must be ordered including the option DC+/DC– connectors.	52163
SX-6200 to SX-61K0	Together with the output coils, the overshoot clamp restricts the voltage and the dV/dt on the motor winding. Doesn't require the "DC+/DC–" option.	52220

Computer software

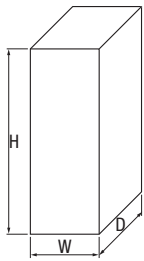
Installation	Order code
Configuration and monitoring software tool	CX-Drive
Configuration and monitoring software tool	CX-One
Software tool for energy saving calculation	€Saver

Specifications

Three-phase: SX- 6__-E_		90	110	132	160	200	250	315	355	450	500	600	630	710	800	900	1K0
Motor kW ^{*1}	For HD setting	75	90	110	132	160	200	250	315	315	355	450	500	600	650	710	800
	For ND setting	90	110	132	160	200	250	315	355	450	500	600	630	710	800	900	1,000
Output characteristics	Max output current (A)	108	131	175	210	252	300	360	450	516	600	720	780	900	1,032	1,080	1,200
	Rated output current (A) at HD	72	87	117	140	168	200	240	300	344	400	480	520	600	688	720	800
	Rated output current (A) at ND	90	109	146	175	210	250	300	375	430	500	600	650	750	860	900	1,000
	Output voltage	0 to Mains supply voltage															
Power supply	Max. output frequency	400 Hz															
	Rated input voltage and frequency	3-phase 500 to 690 V, 50/60 Hz															
	Allowable voltage fluctuation	10% to -15%															
	Allowable frequency fluctuation	45 to 65 Hz															

^{*1} Based on a standard 4-pole motor for maximum applicable motor output

Dimensions

Degree of protection	Drive model	H	W	D	
IP20	SX-A6200 to SX-A6375	1,176	500	450	
	SX-A6450 to SX-A6500	1,176	730	450	
	SX-A6600 to SX-A6630	1,176	1,100	450	
	SX-A6710 to SX-A61K0	1,176	1,560	450	
IP54	SX-D6090 to SX-D6160	952.5	344.5	314	
	SX-D6200 to SX-D6355	2,250	600	600	
	SX-D6450 to SX-D6500	2,250	900	600	
	SX-D6600 to SX-D6630	2,250	1,200	600	
	SX-D6710 to SX-D61K0	2,250	1,800	600	



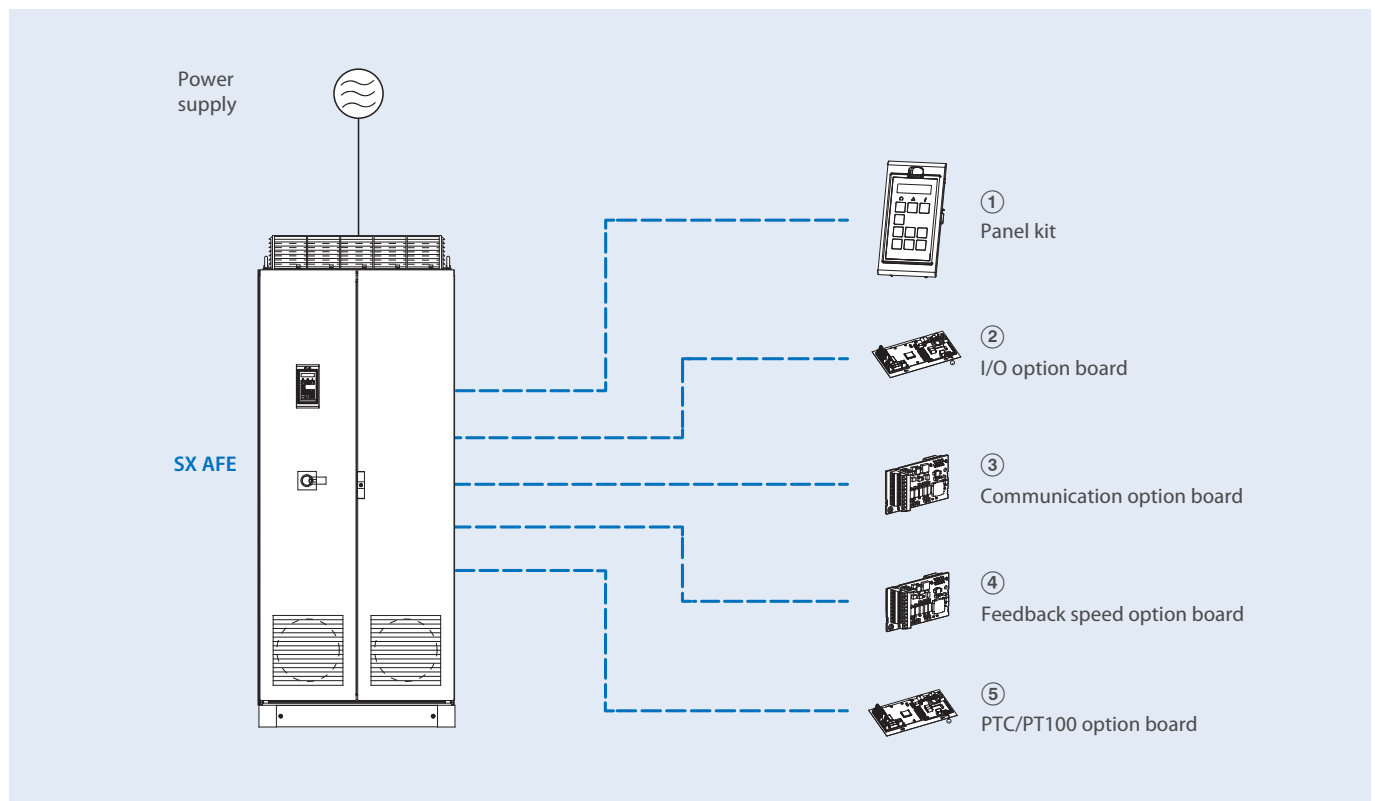
High performance Vector Control

- Low harmonic or regenerative drive
- IP54 full range
- Compact and robust design
- Built-in filter (according to C3 class)
- Built-in fuses (from 200 kW)
- Safety according EN 13849-1 and EN 62061 standards
- Flexibility options: I/O's, Fieldbus, PTC/PT100
- Communication options: EtherCAT, PROFINET, Modbus, DeviceNet, PROFIBUS, Modbus TCP
- CE, UL, RoHS

Ratings

- 400 V class three-phase: 55 to 900 kW
- 690 V class three-phase: 110 to 1100 kW

Ordering information



SX-AFE inverter

Specifications					IP54 model		
					Low harmonic drive		Regenerative + low harmonic drive
Voltage	Heavy duty		Normal duty		Direct torque control	V/F control	Direct torque control
400 V	45 kW	87 A	55 kW	109 A	SX-D4055-E1FL	SX-D4055-E1VL	SX-D4055-E1FR
	55 kW	117 A	75 kW	146 A	SX-D4075-E1FL	SX-D4075-E1VL	SX-D4075-E1FR
	75 kW	140 A	90 kW	175 A	SX-D4090-E1FL	SX-D4090-E1VL	SX-D4090-E1FR
	90 kW	168 A	110 kW	210 A	SX-D4110-E1FL	SX-D4110-E1VL	SX-D4110-E1FR
	110 kW	200 A	132 kW	250 A	SX-D4132-E1FL	SX-D4132-E1VL	SX-D4132-E1FR
	132 kW	240 A	160 kW	300 A	SX-D4160-E1FL	SX-D4160-E1VL	SX-D4160-E1FR
	160 kW	300 A	200 kW	375 A	SX-D4200-E1FL	SX-D4200-E1VL	SX-D4200-E1FR
	200 kW	344 A	220 kW	430 A	SX-D4220-E1FL	SX-D4220-E1VL	SX-D4220-E1FR
	220 kW	400 A	250 kW	500 A	SX-D4250-E1FL	SX-D4250-E1VL	SX-D4250-E1FR
	250 kW	480 A	315 kW	600 A	SX-D4315-E1FL	SX-D4315-E1VL	SX-D4315-E1FR
	315 kW	520 A	355 kW	650 A	SX-D4355-E1FL	SX-D4355-E1VL	SX-D4355-E1FR
	355 kW	600 A	400 kW	750 A	SX-D4400-E1FL	SX-D4400-E1VL	SX-D4400-E1FR
	400 kW	688 A	450 kW	860 A	SX-D4450-E1FL	SX-D4450-E1VL	SX-D4450-E1FR
	450 kW	750 A	500 kW	900 A	SX-D4500-E1FL	SX-D4500-E1VL	SX-D4500-E1FR
	450 kW	800 A	560 kW	1,000 A	SX-D4560-E1FL	SX-D4560-E1VL	SX-D4560-E1FR
	500 kW	960 A	630 kW	1,200 A	SX-D4630-E1FL	SX-D4630-E1VL	SX-D4630-E1FR
	630 kW	1,200 A	800 kW	1,500 A	SX-D4800-E1FL	SX-D4800-E1VL	SX-D4800-E1FR
	800 kW	1,400 A	900 kW	1,750 A	SX-D4900-E1FL	SX-D4900-E1VL	SX-D4900-E1FR

Specifications					IP54 model		
					Low harmonic drive		Regenerative + low harmonic drive
Voltage	Heavy duty		Normal duty		Direct torque control	V/F control	Direct torque control
690 V	90 kW	87 A	110 kW	109 A	SX-D6110-E1FL	SX-D6110-E1VL	SX-D6110-E1FR
	110 kW	117 A	132 kW	146 A	SX-D6132-E1FL	SX-D6132-E1VL	SX-D6132-E1FR
	132 kW	148 A	160 kW	185 A	SX-D6160-E1FL	SX-D6160-E1VL	SX-D6160-E1FR
	200 kW	200 A	250 kW	250 A	SX-D6250-E1FL	SX-D6250-E1VL	SX-D6250-E1FR
	250 kW	240 A	315 kW	300 A	SX-D6315-E1FL	SX-D6315-E1VL	SX-D6315-E1FR
	315 kW	300 A	355 kW	375 A	SX-D6355-E1FL	SX-D6355-E1VL	SX-D6355-E1FR
	355 kW	344 A	450 kW	430 A	SX-D6450-E1FL	SX-D6450-E1VL	SX-D6450-E1FR
	450 kW	448 A	560 kW	560 A	SX-D6560-E1FL	SX-D6560-E1VL	SX-D6560-E1FR
	600 kW	600 A	710 kW	750 A	SX-D6710-E1FL	SX-D6710-E1VL	SX-D6710-E1FR
	800 kW	800 A	1,000 kW	1,000 A	SX-D61K0-E1FL	SX-D61K0-E1VL	SX-D61K0-E1FR
	900 kW	896 A	1,100 kW	1,120 A	SX-D61K1-E1FL	SX-D61K1-E1VL	SX-D61K1-E1FR

SX-AFR DC bus

Specifications			Order code
Voltage	Normal duty		
400 V	115 kW	175 A	SX-D4115-E1AR
	165 kW	250 A	SX-D4165-E1AR
	250 kW	375 A	SX-D4250-E1AR
	330 kW	500 A	SX-D4330-E1AR
	500 kW	750 A	SX-D4500-E1AR
	660 kW	1,000 A	SX-D4660-E1AR
	1,000 kW	1,500 A	SX-D41K0-E1AR
690 V	200 kW	175 A	SX-D6200-E1AR
	400 kW	350 A	SX-D6400-E1AR
	600 kW	525 A	SX-D6600-E1AR
	800 kW	700 A	SX-D6800-E1AR
	1,200 kW	1,050 A	SX-D61K2-E1AR

① Panel kit

Description		Function	Order code
Panel kit	Panel kit	Complete panel kit including operator	SX-OP02-00-E
	Blank panel kit	Complete panel kit including a blank operator	SX-OP02-01-E
Operator	Handheld control panel	Complete handheld control panel	SX-OPHH-00-E
	Digital operator	Inverter digital operator	SX-OP01-00-E
	Blank operator	Inverter blank operator	SX-OP01-11-E

② I/O option board

Description	Function	Order code
Additional I/O option	Provides 3 extra relay outputs and 3 additional digital inputs	01-3876-01
Crane option	Dedicated option board for crane application, including additional I/O and functions	01-3876-07

③ Communication option board

Description	Function	Order code
RS232/485	MODBUS RTU serial communication by RS232 or RS485 interface with galvanic isolation	01-3876-04
PROFIBUS-DP	Used for operating the inverter through PROFIBUS-DP communication with the host controller	01-3876-05
DeviceNet	Used for operating the inverter through DeviceNet communication with the host controller	01-3876-06
Modbus/TCP, Ethernet	Used for operating the inverter through Modbus/TCP communication with the host controller	01-3876-09
EtherCAT	Used for operating the inverter through EtherCAT communication with the host controller	01-3876-10
PROFINET (1-port)	Used for operating the inverter through PROFINET communication with the host controller	01-3876-11
PROFINET (2-ports)		01-3876-12

④ Encoder feedback option board

Description	Function	Order code
Encoder option	Used for connection of the actual motor speed via encoder Up to 100 kHz with TTL and HTL incremental encoders with 5/24 V power supply	01-3876-03

⑤ PTC/PT100 option board

Description	Function	Order code
Thermal protection	Allows to connect a motor thermistor to the inverter	01-3876-08

Specifications

Common specifications

Model number: SX_			Specifications
General specifications	Mains voltage	400 V models	380 to 460 V, +10%/–15%
		690 V models	480 to 690 V, +10%/–15%
	Frequency		48 to 52 Hz and 58 to 62 Hz
	Input total power factor		1.0
	Output AC voltage	Inverter	(0-1.2) * mains supply voltage
	Output DC voltage	AFR	(1.0-1.2) * $\sqrt{2}$ * mains supply voltage
	Output frequency	Inverter	0 to 400 Hz
	Switching frequency	Inverter	3 kHz (adjustable 1.5 to 6 kHz, SX-VL only)
		AFR	3 kHz (adjustable 3 to 6 kHz)
	Efficiency at nominal load	Inverter	97%
Ambient conditions		AFR	98%
	Harmonics to supply, THDI		< 5%
	Ambient temperature		0 to 40°C, up to 45°C with derating
	Ambient humidity		90% RH or less (without condensation)
	Storage temperature		–20 to 60°C
	Altitude		Up to 1,000 meters
	Vibration / shock		According to IEC 600068-2-6, sinusoidal vibrations: 10<f<57 Hz, 0.075 mm, 57<f<150 Hz, 1 g
	Contamination, according to IEC 60721-3-3		No electrically conductive dust allowed. Cooling air must be clean and free from corrosive materials. Chemical gases, class 3C2 (coated boards 3C3). Solid particles, class 3S2
	Protection design		IP54 enclosure according to the EN 60529

SX-AFE inverter 400 V specifications

Three-phase: SX-D4_			055	075	090	110	132	160	200	220	250	315	355	400	450	500	560	630	800	900
Output power	For HD setting	kW	45	55	75	90	110	132	160	200	220	250	315	355	400	450	450	500	630	800
	For ND setting	kW	55	75	90	110	132	160	200	220	250	315	355	400	450	500	560	630	800	900
Output characteristics	Max. output current	A	131	175	210	252	300	360	450	516	600	720	780	900	1,032	1,080	1,200	1,440	1,800	2,100
	Rated output current at HD	A	87	117	140	168	200	240	300	344	400	480	520	600	688	750	800	960	1,200	1,400
	Rated output current at ND	A	109	146	175	210	250	300	375	430	500	600	650	750	860	900	1,000	1,200	1,500	1,750
	Output voltage	V	0 to Mains supply voltage																	
	Max. output frequency	Hz	400 Hz																	
Power supply	Rated input voltage and frequency		3-phase 380 to 460 V, 50/60 Hz																	
	Allowable voltage fluctuation		10% to –15%																	
Weight		kg	380	400	480	500	500	700	750	830	880	1,040	1,210	1,210	1,370	1,370	1,600	1,700	2,250	On request

Note: Assembled in IP54 cabinet including main switch, main contactor and output choke.

SX-AFE inverter 690 V specifications

Three-phase: SX-D6_			110	132	160	250	315	355	450	560	710	1K0	1K1
Output power	For HD setting	kW	90	110	132	200	250	315	355	450	600	800	900
	For ND setting	kW	110	132	160	250	315	355	450	560	710	1,000	1,100
Output characteristics	Max. output current	A	131	175	222	300	360	450	516	672	900	1,200	1,344
	Rated output current at HD	A	87	117	148	200	240	300	344	448	600	800	896
	Rated output current at ND	A	109	146	185	250	300	375	430	560	750	1,000	1,120
	Output voltage	V	0 to Mains supply voltage										
	Max. output frequency	Hz	400 Hz										
Power supply	Rated input voltage and frequency		3-phase 480 to 690 V, 50/60 Hz										
	Allowable voltage fluctuation		10% to –15%										
Weight			kg	410	430	540	870	870	910	1,350	1,390	On request	

Note: Assembled in IP54 cabinet including main switch, main contactor or motor driven circuit breaker and output choke.

SX-AFR DC bus 400 V specifications

Three-phase: SX-D4_-E1AR			115	165	250	330	500	660	1K0
DC power	For ND setting	kW	115	165	250	330	500	660	1,000
	Max. input current	A	210	300	450	600	900	1,200	1,800
In/Out characteristics	Rated input current at ND	A	175	250	375	500	750	1,000	1,500
	Output voltage	V	0 to Mains supply voltage						
	Max. output frequency	Hz	400 Hz						
Power supply	Rated input voltage and frequency	3-phase 380 to 460 V, 50/60 Hz							
	Allowable voltage fluctuation	10% to −15%							
Weight		kg	290	400	560	660	830	1,100	1,600

Note: Assembled in IP54 cabinet including main switch and main contactor.

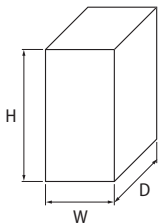
SX-AFR DC bus 690 V specifications

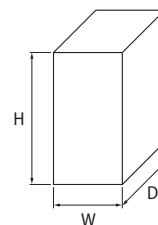
Three-phase: SX-D6_-E1AR			200	400	600	800	1K2
DC power	For ND setting	kW	200	400	600	800	1,200
	Max. input current	A	210	420	630	840	1,260
In/Out characteristics	Rated input current at ND	A	175	350	525	700	1,050
	Output voltage	V	0 to Mains supply voltage				
Power supply	Max. output frequency	Hz	400 Hz				
	Rated input voltage and frequency		3-phase 480 to 690 V, 50/60 Hz				
	Allowable voltage fluctuation		10% to -15%				
Weight			kg	320	590	860	On request

Note: Assembled in IP54 cabinet including main switch and main contactor or motor driven circuit breaker.

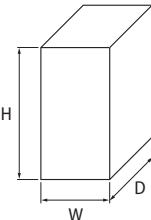
Dimensions

SX-AFE inverter dimensions

Voltage class	Inverter model	Dimensions in mm				
		H	W	D	Weight (kg)	
400 V	SX-D4055-E1_	2,250	800	600	380	
	SX-D4075-E1_				400	
	SX-D4090-E1_		900		480	
	SX-D4110-E1_				500	
	SX-D4132-E1_					
	SX-D4160-E1_		1,300		700	
	SX-D4200-E1_		1,500		750	
	SX-D4220-E1_				830	
	SX-D4250-E1_				880	
	SX-D4315-E1_		1,900		1,040	
	SX-D4355-E1_		2,200		1,210	
	SX-D4400-E1_					
	SX-D4450-E1_		2,500		1,370	
	SX-D4500-E1_					
	SX-D4560-E1_		3,000		1,600	
	SX-D4630-E1_		3,300		1,700	
	SX-D4800-E1_		4,500		2,250	
	SX-D4900-E1_		On request			
690 V	SX-D6110-E1_	2,250	800	600	410	
	SX-D6132-E1_				430	
	SX-D6160-E1_		900		540	
	SX-D6250-E1_		1,800		870	
	SX-D6315-E1_					
	SX-D6355-E1_				910	
	SX-D6450-E1_		2,800		1,350	
	SX-D6560-E1_				1,390	
	SX-D6710-E1_	On request				
	SX-D61K0-E1_					
SX-D61K1-E1						



SX-AFR DC bus dimensions

Voltage class	AFR model	Dimensions in mm				
		H	W	D	Weight (kg)	
400 V	SX-D4115-E1AR	2,250	600	600	290	
	SX-D4165-E1AR		800		400	
	SX-D4250-E1AR		1,000		560	
	SX-D4330-E1AR		1,200		660	
	SX-D4500-E1AR		1,500		830	
	SX-D4660-E1AR		1,800		1,100	
	SX-D41K0-E1AR		2,700		1,600	
690 V	SX-D6200-E1AR	2,250	800	600	320	
	SX-D6400-E1AR		1,200		590	
	SX-D6600-E1AR		1,700		860	
	SX-D6800-E1AR	On request				
	SX-D61K2-E1AR	On request				