

TURNING IDEAS INTO MACHINES THAT WORK...

This section will enable you to select the ideal motion controller, servo drive and inverter solution for your application. Especially created towards customer needs, our products are developed to help you build machines faster, with more flexibility and with total reliability. Because when we say it works, IT WORKS!

For more information on Omron automation solutions, please visit the Scalable Machine Automation mini-site at



www.scalablemachine.info



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trajexia TOTAL FREEDOM IN MOTION CONTROL

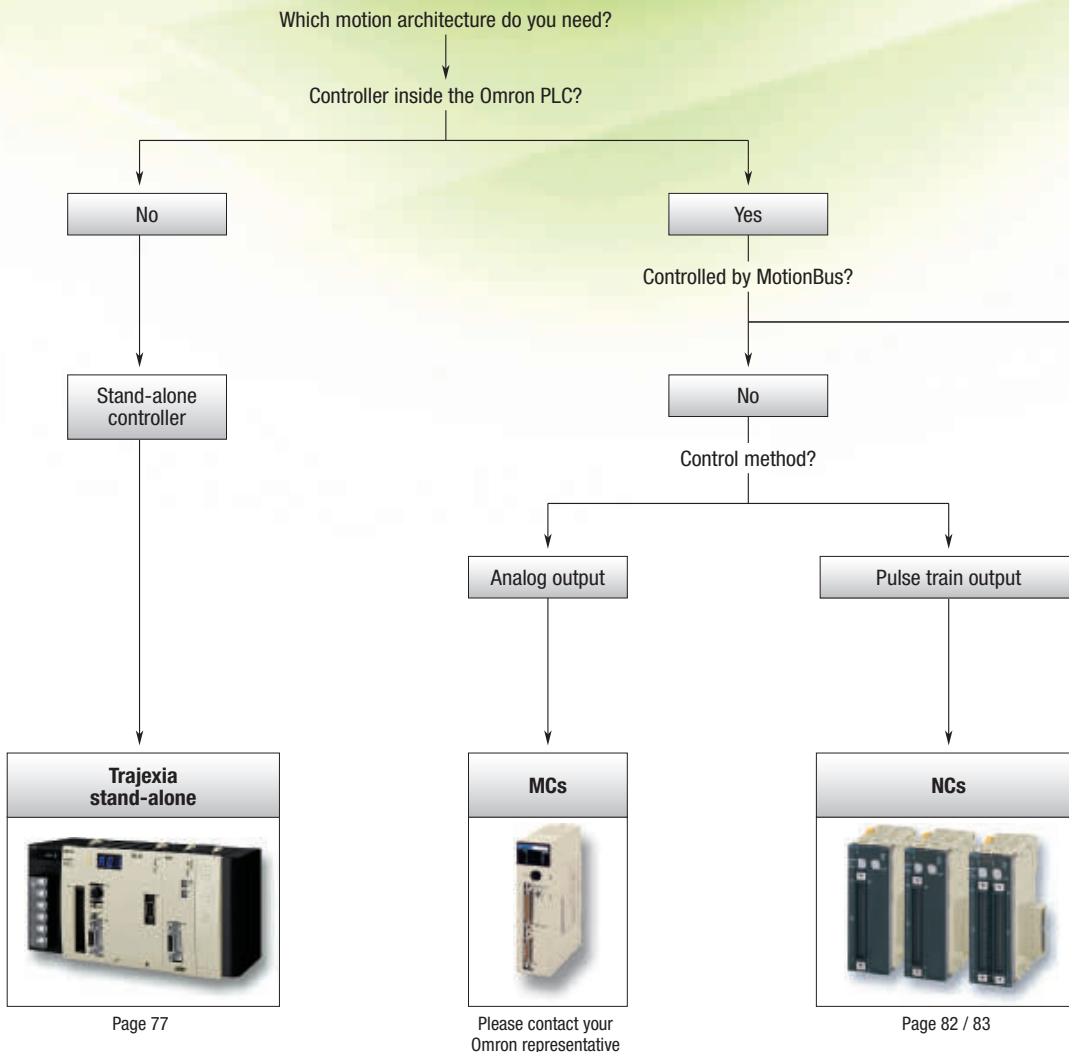
The advanced motion controller that puts you in control!

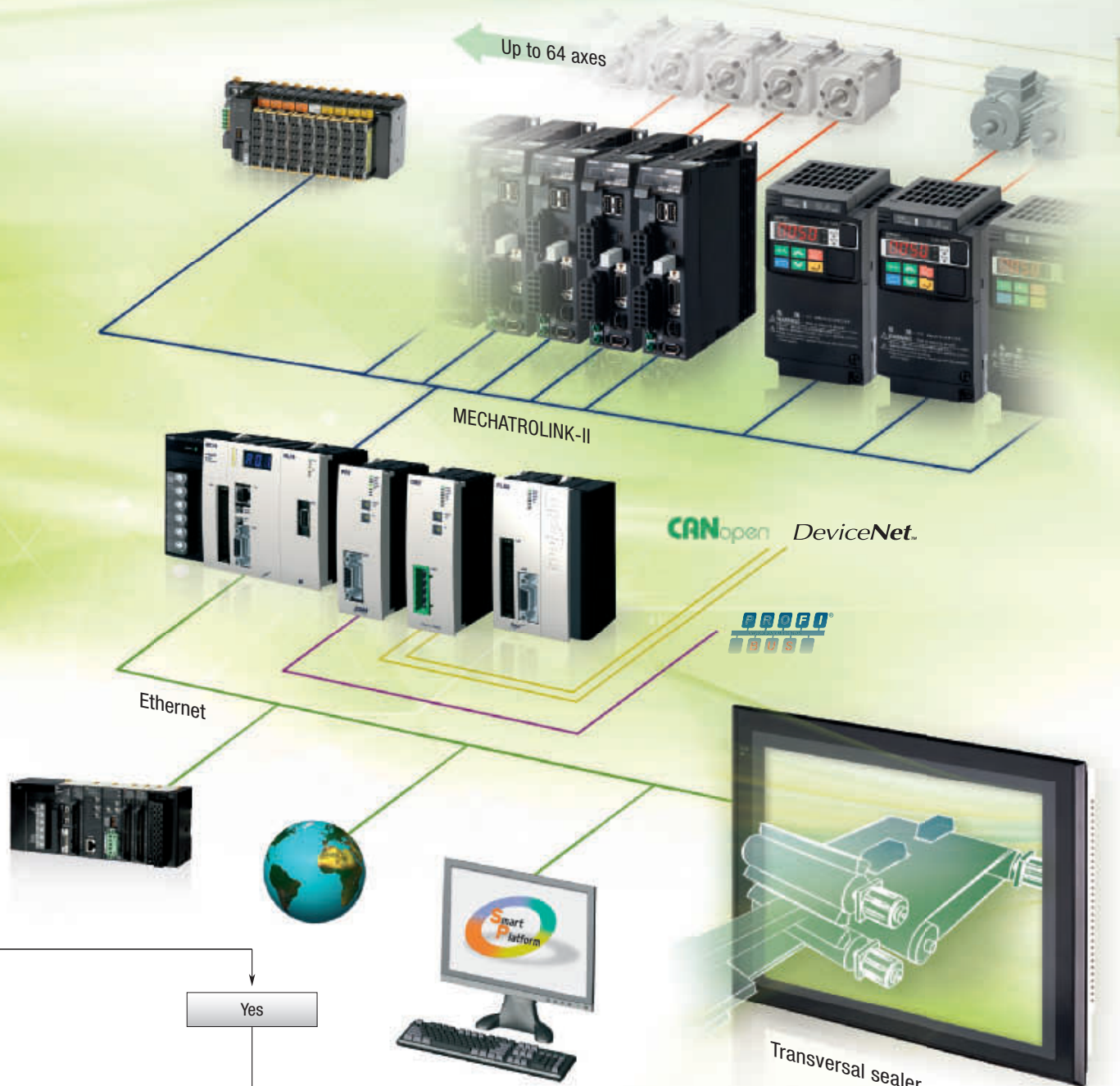
Trajexia motion platform puts you in control to create the best machines today and... tomorrow.

Trajexia stand-alone is a modular and dedicated motion controller over a motion bus and open communication.

The Trajexia-PLC motion controller unit has all the flexibility and modularity of Omron PLCs, plus the outstanding motion-control features of the Trajexia platform.

- Control of up to 64 axes over a robust and fast motion bus
- Advanced motion control such as CAM control, registration control, interpolation and axes synchronization
- Control of servos, inverters and I/Os over a single motion network
- Multi-tasking controller capable of running up to 22 tasks simultaneously





Yes

Single to multi-axes PTP applications

Advanced motion, e-cam, multi-axis synchronization




NC_71



Trajexia MC_72



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Motion controllers			
			
Model	Trajexia stand-alone	Trajexia-PLC MC_72	CJ1W-NC_71
	The advanced motion controller that puts you in control	Advanced multi-axes motion controller	16-axis point-to-point positioning controller
Axes control method	MECHATROLINK-II motion bus, analogue output and pulse-train output	MECHATROLINK-II motion bus	MECHATROLINK-II motion bus
Number of axes	4, 16, 64	4, 30	2, 4, 16
Applicable servo drive	Accurax G5 and G-Series	Accurax G5 and G-Series	Accurax G5 and G-Series
Application	Advanced motion, e-cam, ELS, Phase shift, Registration	Advanced motion, e-cam, ELS, Phase shift, Registration	From simple PTP to multi axis PTP coordinated systems.
Servo control mode	Position, speed and torque	Position, speed and torque	Position, speed and torque
PLC series	Stand-alone motion controller: Serial, Ethernet, PROFIBUS, DeviceNet, CANopen, MECHATROLINK-II and HostLink connectivity	CJ	CJ
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Motion controllers		
		
Model	CJ1W-NC_3	CJ1W-NC_4
	4-axis point-to-point positioning controller	4-axis point-to-point positioning controller with synchronization
Axes control method	Pulse train output	Pulse train output
Number of axes	1, 2, 4	2, 4
Applicable servo drive	SmartStep 2 and Accurax G5	SmartStep 2 and Accurax G5
Application	Point to point applications	Point-to-point with complex interpolations
Servo control mode	Open loop position with linear interpolation	Open loop position with linear and circular interpolation
PLC series	CJ	CJ
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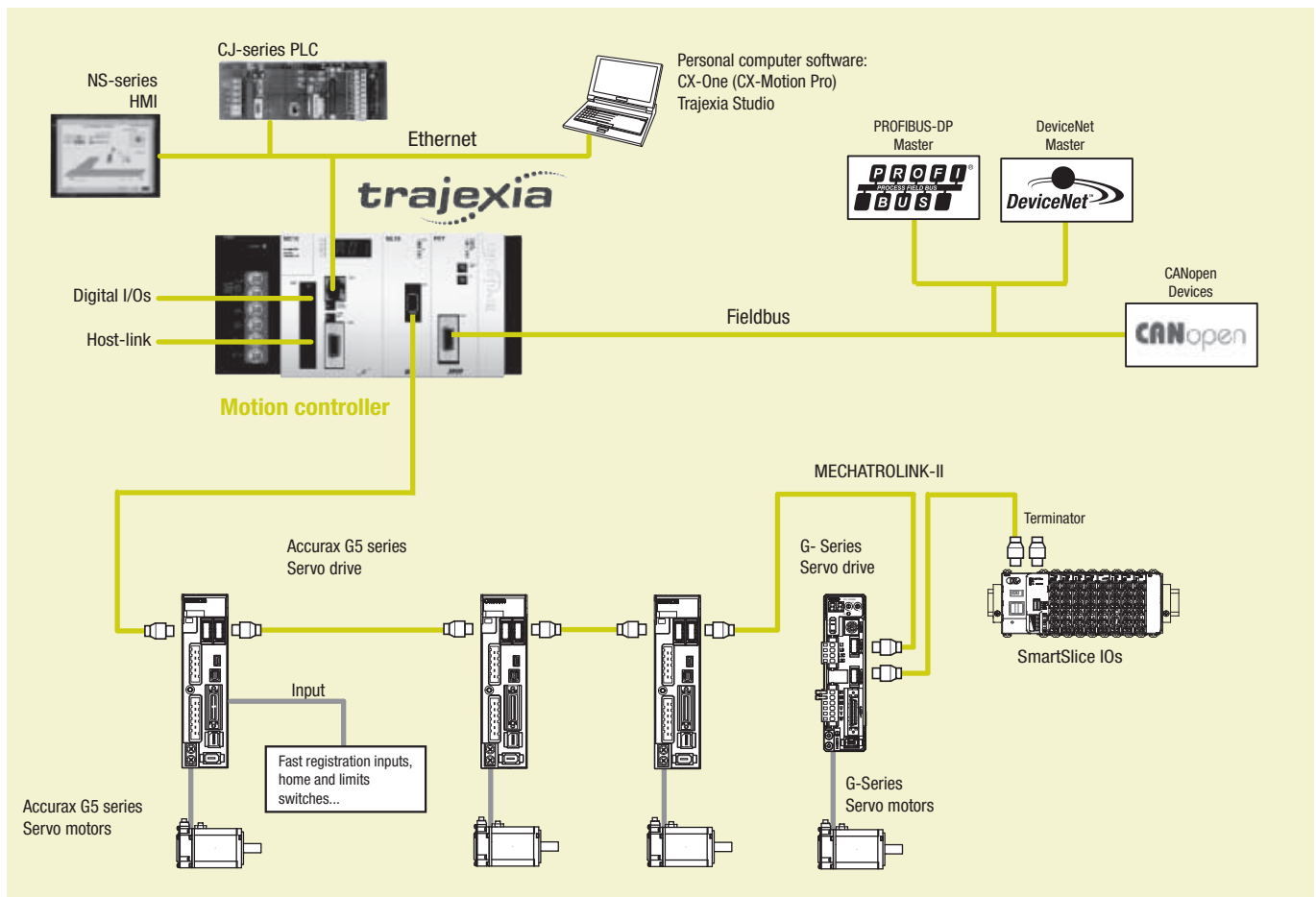


The advanced motion controller that puts you in control

Trajexia is Omron's new motion platform that offers you the performance of a dedicated motion system, the ease of use you get from an automation specialist and the peace of mind you have from a global player. Trajexia puts you in full control to create the best machines today and... tomorrow.

- Control of up to 64 axes over a robust and fast motion bus
- Advanced motion control such as CAM control, registration control, interpolation and axes synchronization via simple motion commands
- Control of servos, inverters and I/Os over a single motion network
- Multi-tasking controller capable of running up to 22 tasks simultaneously
- Open communication: serial, Ethernet built-in, PROFIBUS-DP, DeviceNet and CANopen

Ordering information



Trajexia motion controller

Name	Model
Trajexia motion controller unit, up to 4 axes. (Trajexia end cover unit TJ1-TER is included)	TJ1-MC04
Trajexia motion controller unit, up to 16 axes. (Trajexia end cover unit TJ1-TER is included)	TJ1-MC16
Trajexia motion controller unit, up to 64 axes. (Trajexia end cover unit TJ1-TER is included)	TJ2-MC64
Power supply for Trajexia system, 100-240 VAC	CJ1W-PA202
Power supply for Trajexia system, 24 VDC	CJ1W-PD022

Trajexia - axes control modules

Name	Model
Trajexia MECHATROLINK-II master unit (up to 4 stations)	TJ1-ML04
Trajexia MECHATROLINK-II master unit (up to 16 stations)	TJ1-ML16
Trajexia flexible axis unit (for 2 axes)	TJ1-FL02

Note: The TJ1-ML04 and TJ1-ML16 supported by the TJ2-MC64 motion controller are V2 (Version 2) and lot number equal or above Lot No.091019 (YYMMDD).

Trajexia - communication modules

Name	Model
Trajexia DeviceNet slave unit	TJ1-DRT
Trajexia PROFIBUS-DP slave unit	TJ1-PRT
Trajexia CANopen unit	TJ1-CORT

MECHATROLINK-II - related devices

Servo system

Name	Model
Accurax G5 servo drive ML-II built-in	R88D-KN___-ML2
G-Series servo drive ML-II built-in	R88D-GN__H-ML2

Note: Refer to servo systems section for detailed specs and ordering information

SmartSlice I/Os system

Function	Specification	Model
SmartSlice Interface unit	SmartSlice MECHATROLINK-II interface unit	GRT1-ML2
End plate, one unit required per bus interface		GRT1-END
4 NPN inputs	24 VDC, 6 mA, 3-wire connection	GRT1-ID4
4 PNP inputs	24 VDC, 6 mA, 3-wire connection	GRT1-ID4-1
8 NPN inputs	24 VDC, 4 mA, 1-wire connection + 4xG	GRT1-ID8
8 PNP inputs	24 VDC, 4 mA, 1-wire connection + 4xV	GRT1-ID8-1
4 NPN outputs	24 VDC, 500 mA, 2-wire connection	GRT1-OD4
4 PNP outputs	24 VDC, 500 mA, 2-wire connection	GRT1-OD4-1
4 PNP outputs with short-circuit protection	24 VDC, 500 mA, 3-wire connection	GRT1-OD4G-1
8 NPN outputs	24 VDC, 500 mA, 1-wire connection + 4xV	GRT1-OD8
8 PNP outputs	24 VDC, 500 mA, 1-wire connection + 4xG	GRT1-OD8-1
8 PNP outputs with short-circuit protection	24 VDC, 500 mA, 1-wire connection + 4xG	GRT1-OD8G-1
2 relay outputs	240 VAC, 2 A, normally-open contacts	GRT1-ROS2
2 analogue inputs, current/voltage	±10 V, 0-10 V, 0-5 V, 1-5 V, 0-20 mA, 4-20 mA	GRT1-AD2
2 analogue outputs, voltage	± 10 V, 0-10 V, 0-5 V, 1-5 V	GRT1-DA2V
2 analogue outputs, current	0-20 mA, 4-20 mA	GRT1-DA2C

Note: Refer to Remote I/O section for detailed specs and ordering information

MECHATROLINK-II cables

Name	Remarks	Model
MECHATROLINK-II cables	0.5 meter	JEPMC-W6003-A5
	1 meter	JEPMC-W6003-01
	3 meters	JEPMC-W6003-03
	5 meters	JEPMC-W6003-05
	10 meters	JEPMC-W6003-10
	20 meters	JEPMC-W6003-20
	30 meters	JEPMC-W6003-30
MECHATROLINK-II terminator	Terminating resistor	JEPMC-W6022
MECHATROLINK-II repeater	Network repeater	JEPMC-REP2000

Computer software

Specifications	Model
CX-Motion Pro V1.22 or higher	CX-One
Trajexia Studio ^{*1} V1.22 or higher	TJ1-Studio

^{*1} When the Trajexia Studio software is included in CX-One, then it is called CX-Motion Pro.

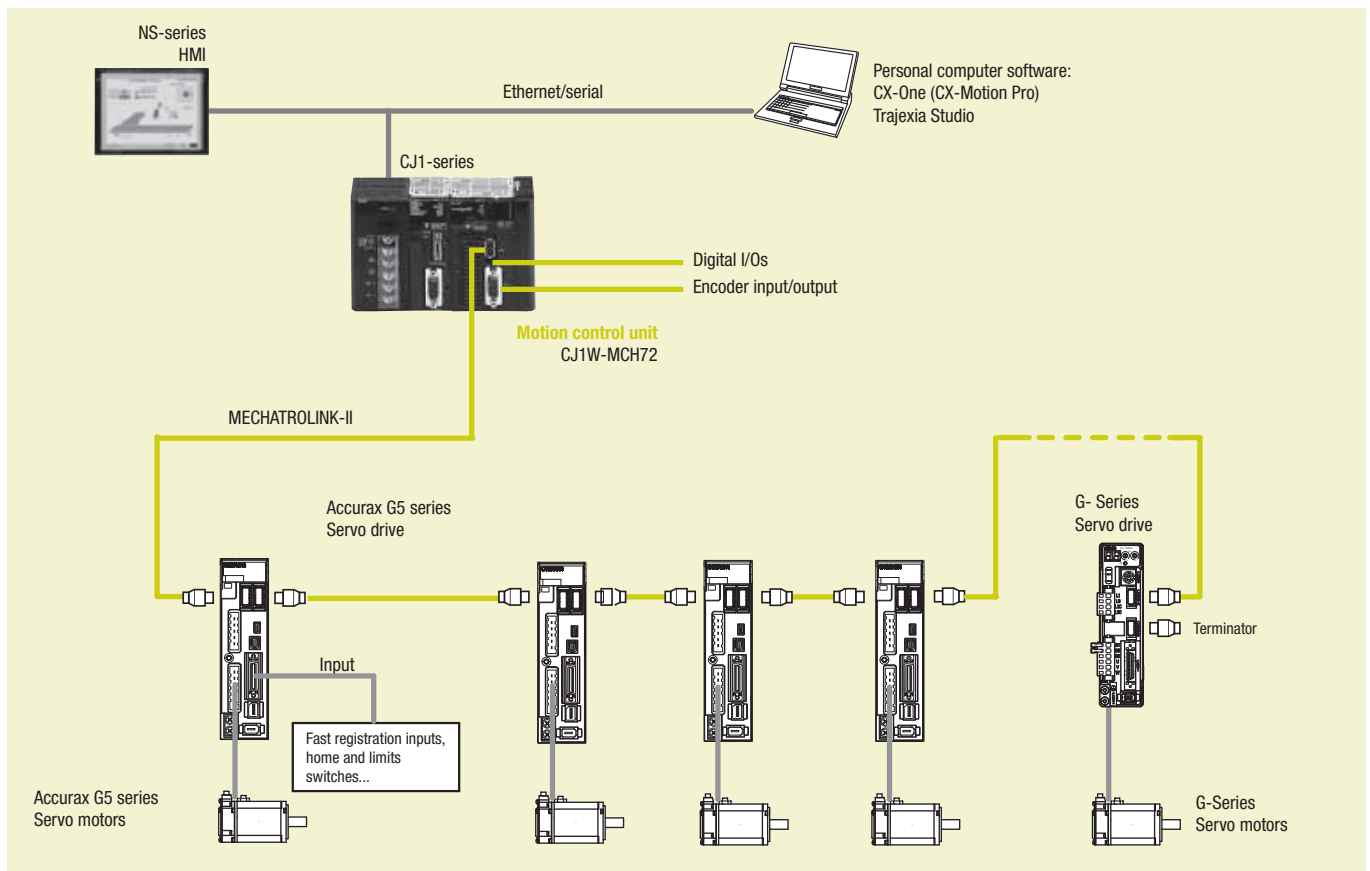


Trajexia motion controller integrated with your PLC

Trajexia, the family of advanced motion controllers that put you in control, now has a compact and integrated version. Meet Trajexia-PLC, the motion controller that has all the flexibility and modularity of Omron PLCs, plus the outstanding motion-control features of the Trajexia platform.

- Control of up to 30 physical axes
- Control of servos and inverters over a single motion network
- Advanced motion control such as CAM control, registration control, interpolation and axes synchronization via simple motion commands
- Serial port for external encoder
- Embedded digital I/Os
- I/O data exchange with the PLC CPU

Ordering information



Motion controller

Name	Model
Trajexia-PLC motion controller, 30 axes	CJ1W-MCH72
Trajexia-PLC motion controller, 4 axes	CJ1W-MC472

MECHATROLINK-II - related devices

Servo system

Name	Model
Accurax G5 servo drive ML-II built-in	R88D-KN___-ML2
G-Series servo drive ML-II built-in	R88D-GN__H-ML2

Note: Refer to servo systems section for detailed specs and ordering information

MECHATROLINK-II cables

Name	Remarks	Model
MECHATROLINK-II cables	0.5 meter	JEPMC-W6003-A5
	1 meter	JEPMC-W6003-01
	3 meters	JEPMC-W6003-03
	5 meters	JEPMC-W6003-05
	10 meters	JEPMC-W6003-10
	20 meters	JEPMC-W6003-20
	30 meters	JEPMC-W6003-30
MECHATROLINK-II terminator	Terminating resistor	JEPMC-W6022
MECHATROLINK-II repeater	Network repeater	JEPMC-REP2000

Computer software

Specifications	Model
CX-Motion Pro V1.3 or higher	CX-One
Trajexia Studio ^{*1} V1.3 or higher	TJ1-Studio

^{*1} When the Trajexia Studio software is included in CX-One, then it is called CX-Motion Pro.

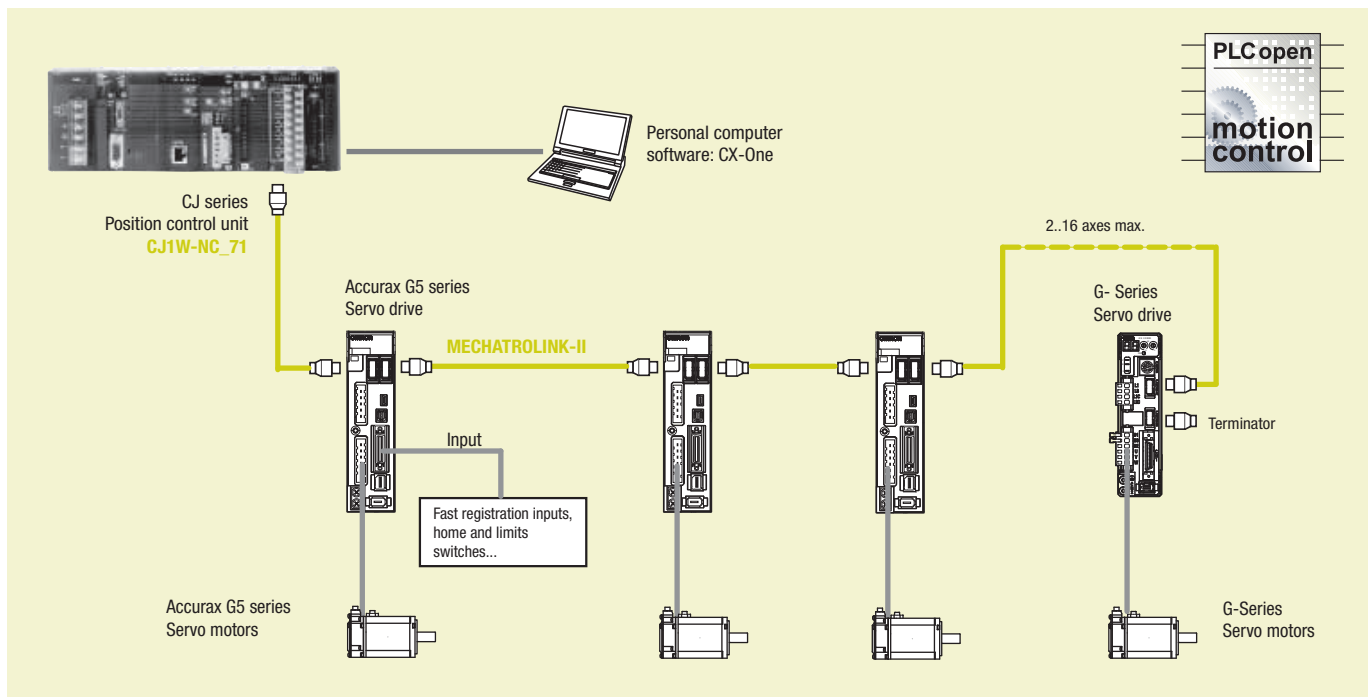


2, 4 and 16-axis point-to-point positioning controller over MECHATROLINK-II

NC_71 is a powerful controller for point-to-point applications. It is based on MECHATROLINK-II motion bus, which reduces programming and development and maintenance costs. Supports PLC open function blocks.

- Supports position, speed and torque control.
- Programming languages: ladder, function blocks. Supports PLC Open Function Blocks.
- Smart active parts for Omron HMI terminals reduce engineering time.
- Access to the complete system from one point. Network setup, servo drives configuring and monitoring, and PLC programming.

Ordering information



Position controller unit

Name	Model
MECHATROLINK-II position controller unit - 16 axes	CJ1W-NCF71
MECHATROLINK-II position controller unit - 4 axes	CJ1W-NC471
MECHATROLINK-II position controller unit - 2 axes	CJ1W-NC271

Computer software

Specifications	Model
CX-One version 2.0 (CX-Motion NCF 1.70 or higher)	CX-One
CX-One version 3.0 (CX-Motion NCF 1.90 or higher)	
CX-One version 4.0 or higher	

MECHATROLINK-II related devices

Servo system

Name	Model
Accurax G5 servo drive ML-II built-in	R88D-KN___-ML2
G-Series servo drive ML-II built-in	R88D-GN___H-ML2

Note: Refer to servo systems section for detailed specs and ordering information

MECHATROLINK-II cables

Name	Remarks	Model
MECHATROLINK-II terminator	Terminating resistor	JEPMC-W6022
MECHATROLINK-II cables	0.5 meter	JEPMC-W6003-A5
	1 meter	JEPMC-W6003-01
	3 meters	JEPMC-W6003-03
	5 meters	JEPMC-W6003-05
	10 meters	JEPMC-W6003-10
	20 meters	JEPMC-W6003-20
	30 meters	JEPMC-W6003-30

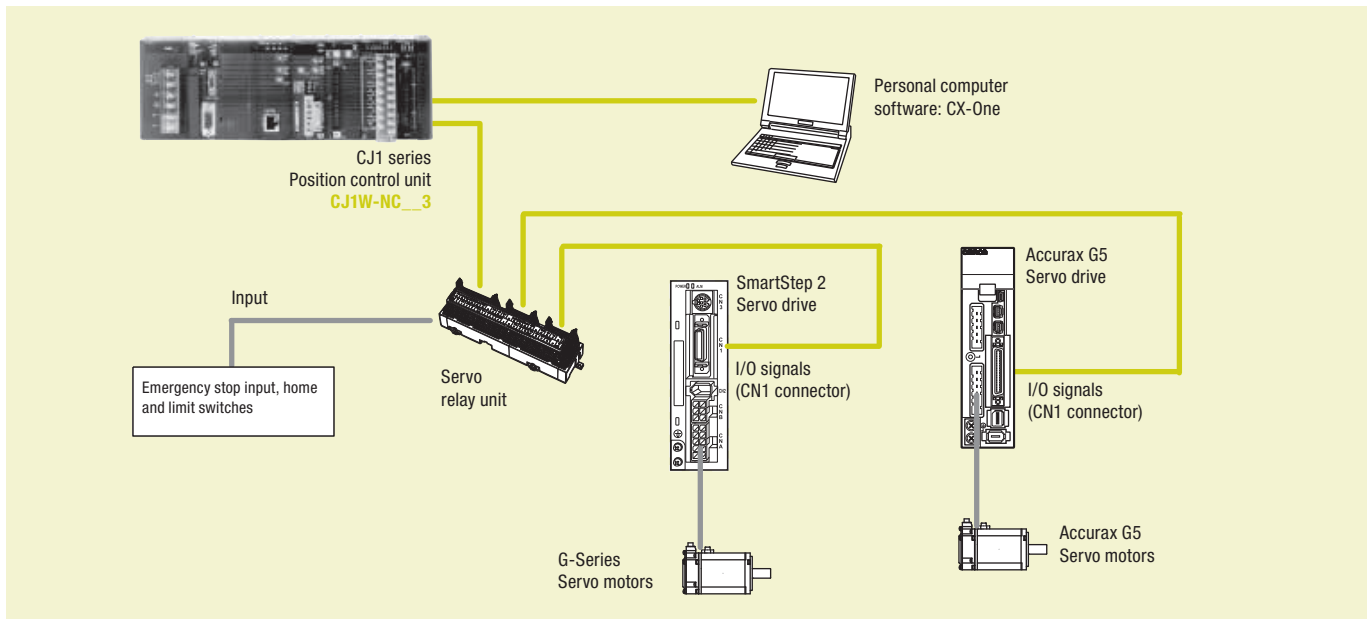


1, 2 or 4-axis point-to-point positioning controller with pulse train output

The NC motion controllers support positioning control via pulse-train outputs. Positioning is performed using trapezoidal or S-curve acceleration and deceleration. Ideal for controlling simple positioning in stepper motors and servos with pulse-train input.

- Positioning can be done by direct ladder commands
- Position and speed control
- Linear interpolation
- Interrupt feeding function
- Positioning of 100 points done from memory
- Positioning data is saved in internal flash memory, eliminating the need to maintain a backup battery.

Ordering information



Position control unit

Name	Model
1 axis position control unit. Open-collector output.	CJ1W-NC113
2 axes position control unit. Open-collector output.	CJ1W-NC213
4 axes position control unit. Open-collector output.	CJ1W-NC413
1 axis position control unit. Line-driver output.	CJ1W-NC133
2 axes position control unit. Line-driver output.	CJ1W-NC233
4 axes position control unit. Line-driver output.	CJ1W-NC433

Servo drive cables

Note: Refer the selected servo systems section for cable and servo relay units information.

Computer software

Specifications	Model
CX-One	CX-One

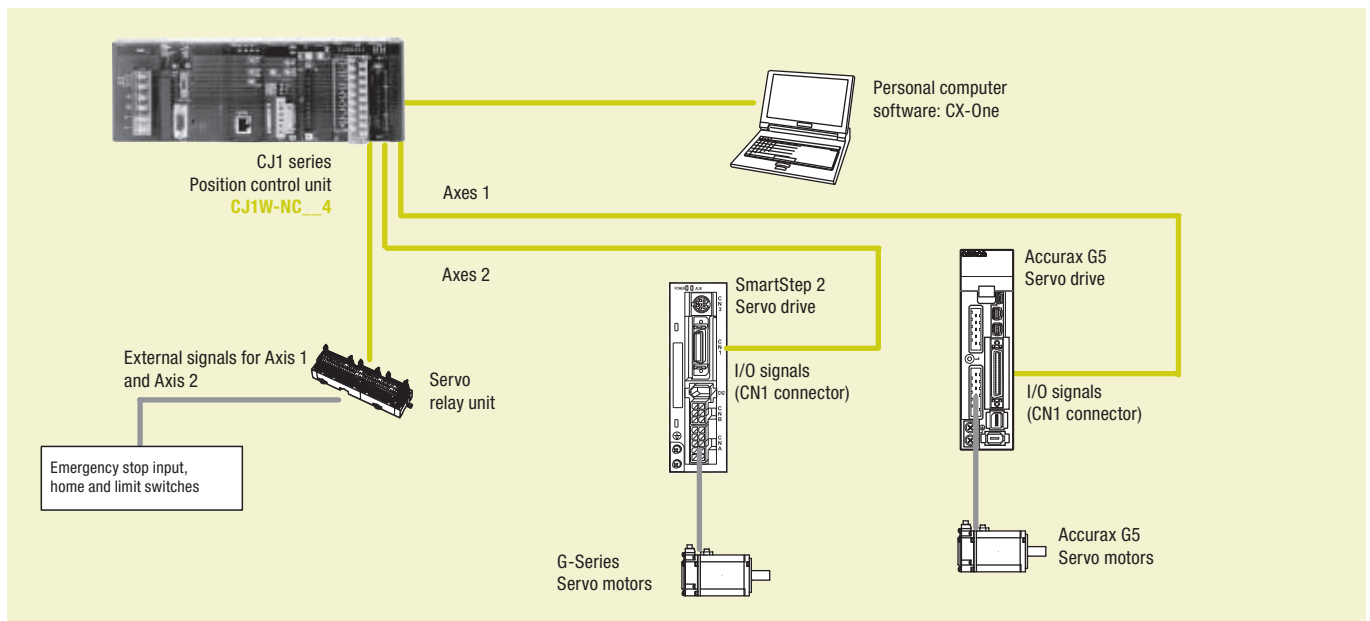


2 or 4-axis point-to-point positioning controller with pulse train output and motion control unit functionality

The NC motion controllers support positioning control via pulse-train outputs. Positioning is performed using trapezoidal or S-curve acceleration and deceleration. Ideal for controlling simple positioning in stepper motors and servos with pulse-train input. When the CJ1W-NC_4 unit is used in a CJ2 CPU, it can perform also synchronous operation by use of electronic CAMs and other function blocks.

- Position and speed control
- Linear interpolation and feeder control function
- Electronic CAM profiles and axes synchronization
- Positioning of 500 points done from memory
- Programming languages: ladder, function blocks.

Ordering information



Position control unit

Name	Model
2 axes position control unit. Open-collector output.	CJ1W-NC214
4 axes position control unit. Open-collector output.	CJ1W-NC414
2 axes position control unit. Line-driver output.	CJ1W-NC234
4 axes position control unit. Line-driver output.	CJ1W-NC434

Servo drive cables

Note: Refer to selected servo systems section for cable and servo relay units information.

Computer software

Specifications	Model
CX-One	CX-One

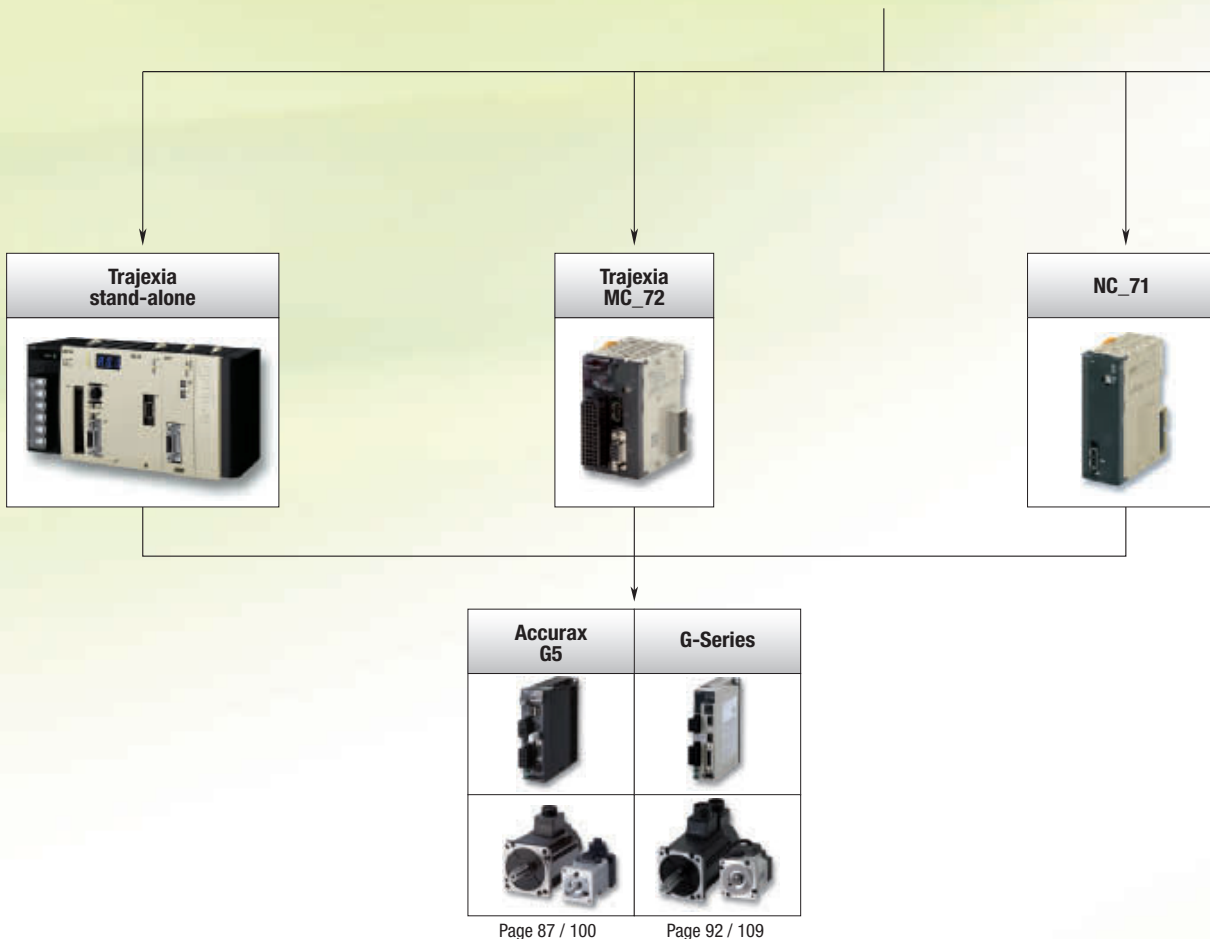
EXTREME MECHATRONICS MEETS X-STREAM AUTOMATION

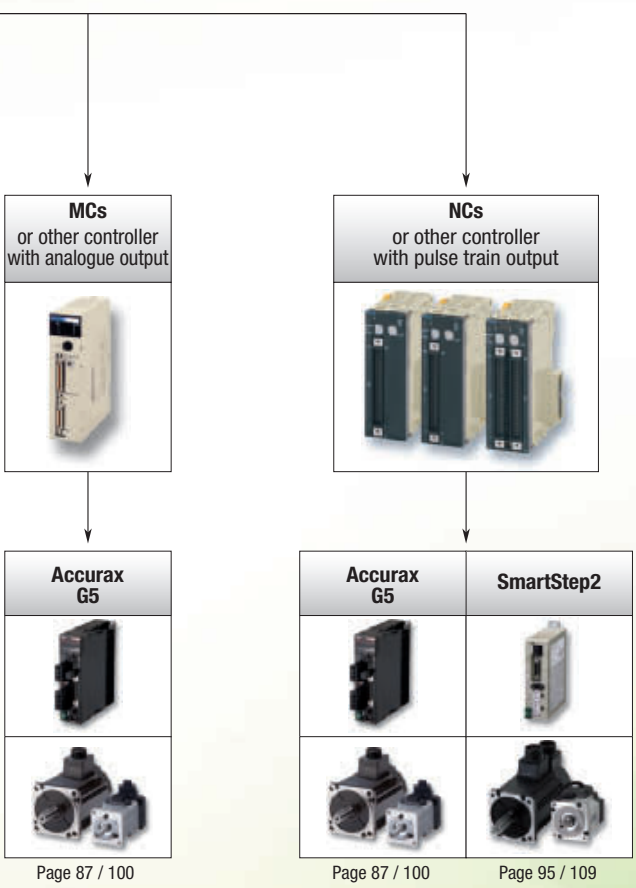
At the heart of every great machine

Great machines are born from a perfect match between control and mechanics. Accurax G5 gives you the extra edge to build more accurate, faster, smaller and safer machines. You will benefit from an almost 25% reduction in motor weight, and gain 50% cabinet space. You will achieve sub micron precision and ms settling time. Some might call it perfection, we just call it tireless innovation to help you build great machines.

- Motion bus built-in and analogue/pulse models
- High response frequency of 2 kHz
- Safety built-in conforming ISO13849-1 PL-d
- High accuracy provided by 20 bit encoder



Which motion controller is used?








Selection table

Servo drives			
			
	Accurax G5	G-Series	SmartStep 2
	Extreme mechatronics meets X-Stream Automation	Compact in size big in features	The right step forward
Ratings 230 V single-phase	100 W to 1,500 W	100 W to 1,500 W	100 W to 750 W
Ratings 400 V three-phase	600 W to 5 kW	N/A	N/A
Applicable servomotor	Accurax G5 and G-Series motors	G-Series motors	G-Series motors
Position control	Pulse train input or via MECHATROLINK-II	MECHATROLINK-II	Pulse train input
Speed control	Analogue ± 10 V or via MECHATROLINK-II	MECHATROLINK-II	N/A
Torque control	Analogue ± 10 V or via MECHATROLINK-II	MECHATROLINK-II	N/A
Safety approvals	ISO13849-1:2008 (PL d), EN 954-1:1996 (Cat-3)	N/A	N/A
Full closed loop	Built-in	N/A	N/A
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Accurax G5 servo motors			
			
	3000 r/min motor	2000 r/min motor	1000 r/min motor
Rated speed	3,000 rpm	2,000 rpm	1,000 rpm
Maximum speed	4,500 to 6,000 rpm	3,000 rpm	2,000 rpm
Rated torque	0.16 Nm to 15.9 Nm	1.91 Nm to 23.9 Nm	8.59 Nm to 28.7 Nm
Sizes	50 W to 5 kW	400 W to 5 kW	900 W to 3 kW
Applicable servo drive	Accurax G5 servo drive	Accurax G5 servo drive	Accurax G5 servo drive
Encoder resolution	20-bit incremental/ 17-bit absolute	20-bit incremental/ 17-bit absolute	20-bit incremental/ 17-bit absolute
IP rating	IP67	IP67	IP67
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G-Series servo motors -Cylindrical type-			G-Series servo motors -Flat type-
			
	3000 r/min motor	2000 r/min motor	1000 r/min motor
Rated speed	3,000 rpm	2,000 rpm	1,000 rpm
Maximum speed	4,500 to 5,000 rpm	3,000 rpm	2,000 rpm
Rated torque	0.16 Nm to 4.77 Nm	4.8 Nm to 7.15 Nm	8.62 Nm
Sizes	50 to 1,500 W	1 to 1.5 kW	900 W
Applicable servo drive	SmartStep 2, G-Series and Accurax G5 servo drives	SmartStep 2, G-Series and Accurax G5 servo drives	SmartStep 2, G-Series and Accurax G5 servo drives
Encoder resolution	10,000 pulses/revolution or 17-bit absolute/incremental	10,000 pulses/revolution or 17-bit absolute/incremental	10,000 pulses/revolution or 17-bit absolute/incremental
IP rating	IP65	IP65	IP65
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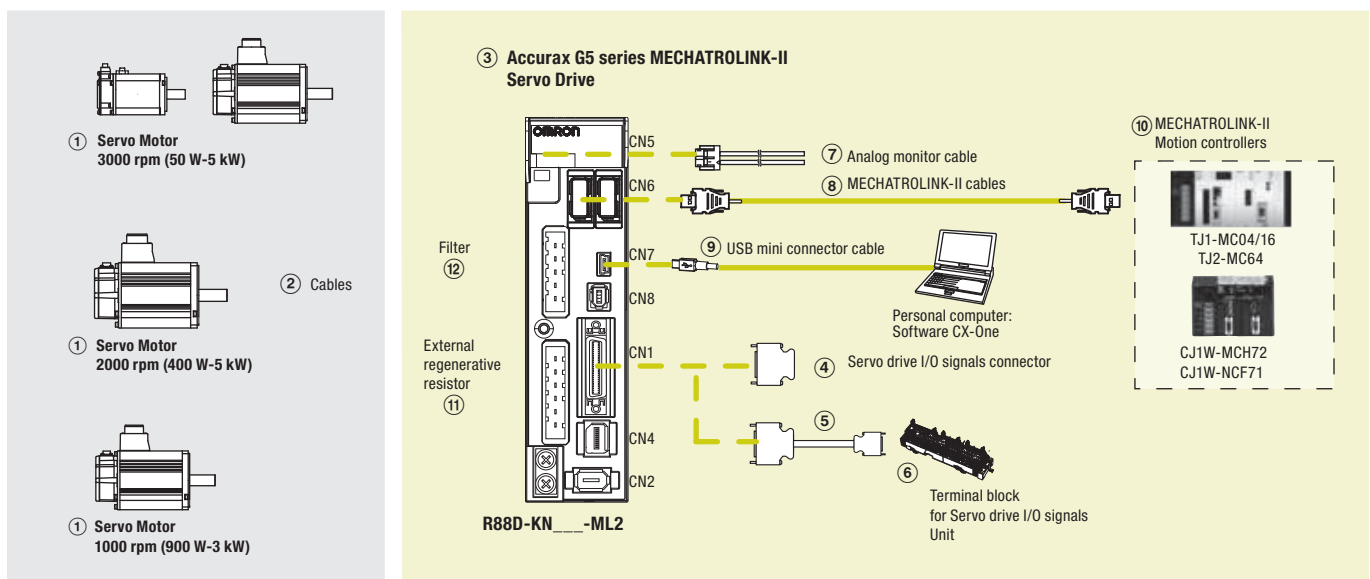
Accurate, fast and safe motion control in compact size

Accurax G5 gives you the extra edge to build accurate, faster, smaller and safer machines. You will benefit from an almost 25% reduction in motor weight, and gain 50% cabinet space. You will achieve sub micron precision and ms settling time.

- MECHATROLINK-II and Analogue/Pulse servo drive models
- Safety conforming ISO13849-1 Performance Level D
- High response frequency of 2 kHz
- High resolution serial encoder for greater accuracy provided by 20 bits encoder
- External encoder input for full close loop
- Real time auto-tuning
- Advanced tuning algorithms

Ordering information

Accurax G5 series MECHATROLINK-II reference configuration



Servo motors, power & encoder cables

Note: ①② Refer to the Accurax G5 servo motor section for servomotor, motor cables or connectors selection

Servo drives

Symbol	Specifications		Servo drive model	① Compatible G5 series rotary servo motors
③	1 phase 230 VAC	100 W	R88D-KN01H-ML2	R88M-K05030(H/T)-_ R88M-K10030(H/T)-_
		200 W	R88D-KN02H-ML2	R88M-K20030(H/T)-_
		400 W	R88D-KN04H-ML2	R88M-K40030(H/T)-_
		750 W	R88D-KN08H-ML2	R88M-K75030(H/T)-_
		1.0 kW	R88D-KN10H-ML2	R88M-K1K020(H/T)-_
		1.5 kW	R88D-KN15H-ML2	R88M-K1K030(H/T)-_ R88M-K1K530(H/T)-_ R88M-K1K520(H/T)-_ R88M-K90010(H/T)-_

Symbol	Specifications	Servo drive model	① Compatible G5 series rotary servo motors
③	3 phase 400 VAC	600 W	R88D-KN06F-ML2
		1.0 kW	R88D-KN10F-ML2
		1.5 kW	R88D-KN15F-ML2
		2.0 kW	R88D-KN20F-ML2
		3.0 kW	R88D-KN30F-ML2
		5.0 kW	R88D-KN50F-ML2
			R88M-K40020(F/C)-_
			R88M-K60020(F/C)-_
			R88M-K75030(F/C)-_
			R88M-K1K020(F/C)-_
			R88M-K1K030(F/C)-_
			R88M-K1K530(F/C)-_
			R88M-K1K520(F/C)-_
			R88M-K90010(F/C)-_
			R88M-K2K030(F/C)-_
			R88M-K2K020(F/C)-_
			R88M-K3K030(F/C)-_
			R88M-K3K020(F/C)-_
			R88M-K2K010(F/C)-_
			R88M-K4K030(F/C)-_
			R88M-K5K030(F/C)-_
			R88M-K4K020(F/C)-_
			R88M-K5K020(F/C)-_
			R88M-K3K010(F/C)-_

Control cables (for CN1)

Symbol	Description	Connect to	Length	Model
④	I/O connector kit (26 pins)	For I/O general purpose	-	R88A-CNW01C
⑤	Terminal block cable		1 m	XW2Z-100J-B34
			2 m	XW2Z-200J-B34
⑥	Terminal block (M3 screw and for pin terminals)		-	XW2B-20G4
	Terminal block (M3.5 screw and for fork/round terminals)		-	XW2B-20G5
	Terminal block (M3 screw and for fork/round terminals)		-	XW2D-20G6

Analogue monitor (for CN5)

Symbol	Name	Length	Model
⑦	Analogue monitor cable	1m	R88A-CMK001S

MECHATROLINK-II cables (for CN6)

Symbol	Specifications	Length	Model
⑧	MECHATROLINK-II Terminator resistor	-	JEPMC-W6022-E
	MECHATROLINK-II cables	0.5 m	JEPMC-W6003-A5-E
		1 m	JEPMC-W6003-01-E
		3 m	JEPMC-W6003-03-E
		5 m	JEPMC-W6003-05-E
		10 m	JEPMC-W6003-10-E
		20 m	JEPMC-W6003-20-E
30 m	JEPMC-W6003-30-E		

USB personal computer cable (for CN7)

Symbol	Name	Length	Model
⑨	USB mini-connector cable	2m	AX-CUSBM002-E

MECHATROLINK-II Motion controllers

Symbol	Name	Model
⑩	Trajexia stand-alone motion controller	TJ1-MC04 (4 axes)
		TJ1-MC16 (16 axes)
		TJ2-MC64 (64 axes)
	Trajexia-PLC motion controller, 30 axes	CJ1W-MCH72
		CJ1W-MC472
	Position Controller Unit for CJ1 PLC	CJ1W-NCF71 (16 axes)
		CJ1W-NC471 (4 axes)
		CJ1W-NC271 (2 axes)
		CS1W-NCF71 (16 axes)
	Position Controller Unit for CS1 PLC	CS1W-NC471 (4 axes)
		CS1W-NC271 (2 axes)
CS1W-NC271 (2 axes)		

External regenerative resistor

Symbol	Specifications	Model
⑪	50 Ω, 80 W	R88A-RR08050S
	100 Ω, 80 W	R88A-RR080100S
	47 Ω, 220 W	R88A-RR22047S
	20 Ω, 500 W	R88A-RR50020S

Filters

Symbol	Applicable servodrive	Rated current	Leakage current	Rated voltage	Model
⑫	R88D-KN01H-ML2, R88D-KN02H-ML2	2.4 A	3.5 mA	250 VAC single-phase	R88A-FIK102-RE
	R88D-KN04H-ML2	4.1 A	3.5 mA		R88A-FIK104-RE
	R88D-KN08H-ML2	6.6 A	3.5 mA		R88A-FIK107-RE
	R88D-KN10H-ML2, R88D-KN15H-ML2	14.2 A	3.5 mA	400 VAC three-phase	R88A-FIK114-RE
	R88D-KN06F-ML2, R88D-KN10F-ML2, R88D-KN15F-ML2	4 A	0.3 mA / 32 mA ^{*1}		R88A-FIK304-RE
	R88D-KN20F-ML2	6 A	0.3 mA / 32 mA ^{*1}		R88A-FIK306-RE
	R88D-KN30F-ML2, R88D-KN50F-ML2	12.1 A	0.3 mA / 32 mA ^{*1}		R88A-FIK312-RE

*1 Momentary peak leakage current for the filter at switch-on/off.

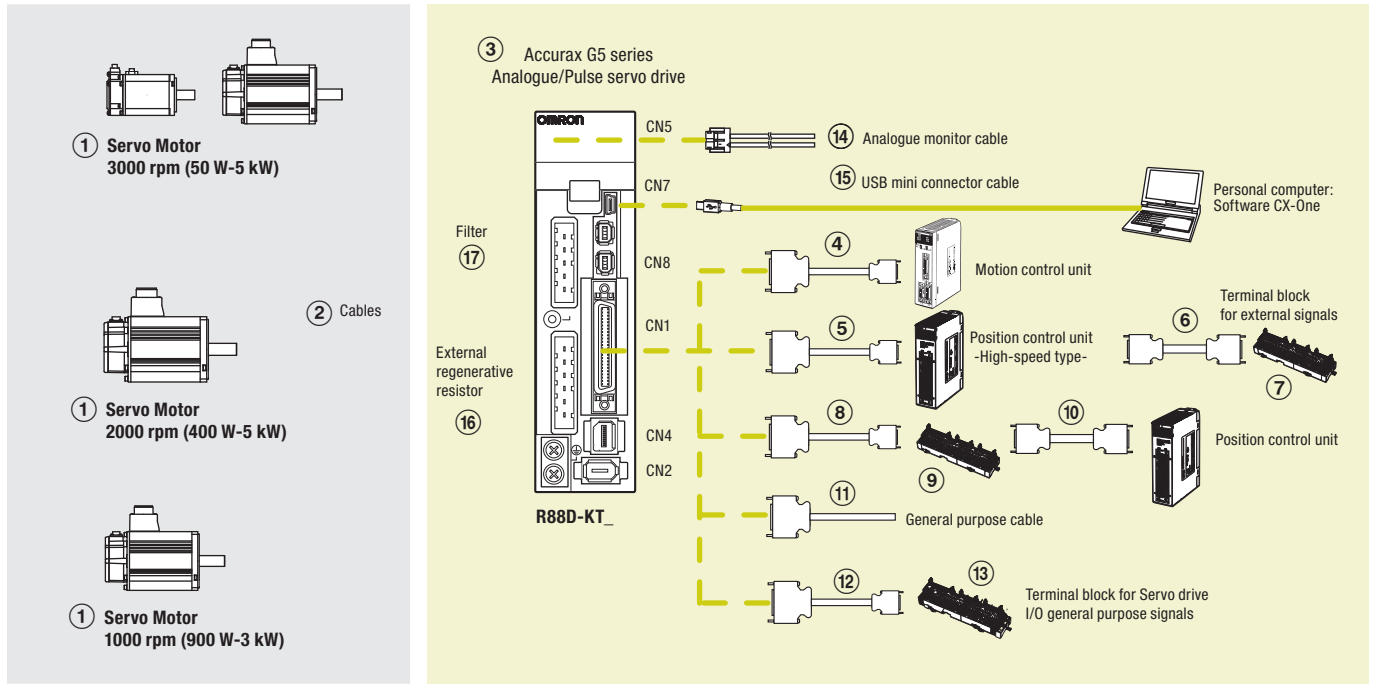
Connectors

Specifications	Model
External encoder connector (for CN4)	R88A-CNK41L
Safety I/O signal connector (for CN8)	R88A-CNK81S

Computer software

Specifications	Model
Configuration and monitoring software tool for servo drives and inverters. (CX-drive version 1.91 or higher)	CX-drive

Accurax G5 series Analogue/pulse Reference configuration



Servo motors, power & encoder cables

Note: ①② Refer to the Accurax G5 servo motor section for servomotor, motor cables or connectors selection

Servo drives

Symbol	Specifications		Servo drive model	① Compatible Accurax G5 series rotary servo motors
③	1 phase 230 VAC	100 W	R88D-KT01H	R88M-K05030(H/T)- R88M-K10030(H/T)-
		200 W	R88D-KT02H	R88M-K20030(H/T)-
		400 W	R88D-KT04H	R88M-K40030(H/T)-
		750 W	R88D-KT08H	R88M-K75030(H/T)-
		1.0 kW	R88D-KT10H	R88M-K1K020(H/T)-
		1.5 kW	R88D-KT15H	R88M-K1K030(H/T)- R88M-K1K530(H/T)- R88M-K1K520(H/T)- R88M-K90010(H/T)-
			600 W	R88D-KT06F
	3 phase 400 VAC	1.0 kW	R88D-KT10F	R88M-K75030(F/C)- R88M-K1K020(F/C)-
		1.5 kW	R88D-KT15F	R88M-K1K030(F/C)- R88M-K1K530(F/C)- R88M-K1K520(F/C)- R88M-K90010(F/C)-
			2.0 kW	R88D-KT20F
		3.0 kW	R88D-KT30F	R88M-K3K030(F/C)- R88M-K3K020(F/C)- R88M-K2K010(F/C)-
		5.0 kW	R88D-KT50F	R88M-K4K030(F/C)- R88M-K5K030(F/C)- R88M-K4K020(F/C)- R88M-K5K020(F/C)- R88M-K3K010(F/C)-

Control cables (for CN1)

Symbol	Description	Connect to	Length	Model
④	Control cable (1 axis)	Motion control units CS1W-MC221 CS1W-MC421	1 m	R88A-CPG001M1
			2 m	R88A-CPG002M1
			3 m	R88A-CPG003M1
			5 m	R88A-CPG005M1
			Control cable (2 axis)	Motion control units CS1W-MC221 CS1W-MC421
2 m	R88A-CPG002M2			
3 m	R88A-CPG003M2			
5 m	R88A-CPG005M2			

Symbol	Description	Connect to	Length	Model
⑤	Control cable (line-driver output for 1 axis)	Position control units CJ1W-NC234 CJ1W-NC434	1 m	XW2Z-100J-G9
			5 m	XW2Z-500J-G9
			10 m	XW2Z-10MJ-G9
	Control cable (open-collector output for 1 axis)	Position control units CJ1W-NC214 CJ1W-NC414	1 m	XW2Z-100J-G13
			3 m	XW2Z-300J-G13
	Control cable (line-driver output for 2 axis)	Position control units CJ1W-NC234 CJ1W-NC434	1 m	XW2Z-100J-G1
			5 m	XW2Z-500J-G1
			10 m	XW2Z-10MJ-G1
	Control cable (open-collector output for 2 axis)	Position control units CJ1W-NC214 CJ1W-NC414	1 m	XW2Z-100J-G5
			3 m	XW2Z-300J-G5
⑥	Terminal block cable for external signals (for input common, forward/reverse run prohibited inputs, emergency stop input, origin proximity input and interrupt input)	Position control units CJ1W-NC234 CJ1W-NC434 CJ1W-NC214 CJ1W-NC414	0.5 m	XW2Z-C50X
			1 m	XW2Z-100X
			2 m	XW2Z-200X
			3 m	XW2Z-300X
			5 m	XW2Z-500X
			10 m	XW2Z-010X
⑦	Terminal block for external signals (M3 screw, pin terminals)		-	XW2B-20G4
	Terminal block for ext. signals (M3.5 screw, fork/round terminals)		-	XW2B-20G5
	Terminal block for ext. signals (M3 screw, fork/round terminals)		-	XW2D-20G6
⑧	Cable from servo relay unit to servo drive	CS1W-NC1_3, CJ1W-NC1_3, C200HW-NC113, CS1W-NC2_3/4_3, CJ1W-NC2_3/4_3, C200HW-NC213/413, CQM1H-PLB21 or CQM1-CPU43	1 m	XW2Z-100J-B25
			2 m	XW2Z-200J-B25
		CJ1M-CPU21/22/23	1 m	XW2Z-100J-B31
			2 m	XW2Z-200J-B31
⑨	Servo relay unit	Position control units CS1W-NC1_3, CJ1W-NC1_3 or C200HW-NC113	-	XW2B-20J6-1B (1 axis)
		Position control units CS1W-NC2_3/4_3, CJ1W-NC2_3/4_3 or C200HW-NC213/413	-	XW2B-40J6-2B (2 axes)
		CQM1H-PLB21 or CQM1-CPU43	-	XW2B-20J6-3B (1 axis)
		CJ1M-CPU21/22/23	-	XW2B-20J6-8A (1 axis) XW2B-40J6-9A (2 axes)
⑩	Position control unit connecting cable	CQM1H-PLB21	0.5 m	XW2Z-050J-A3
			1 m	XW2Z-100J-A3
		CS1W-NC113 or C200HW-NC113	0.5 m	XW2Z-050J-A6
			1 m	XW2Z-100J-A6
		CS1W-NC213/413 or C200HW-NC213/413	0.5 m	XW2Z-050J-A7
			1 m	XW2Z-100J-A7
		CS1W-NC133	0.5 m	XW2Z-050J-A10
			1 m	XW2Z-100J-A10
		CS1W-NC233/433	0.5 m	XW2Z-050J-A11
			1 m	XW2Z-100J-A11
		CJ1W-NC113	0.5 m	XW2Z-050J-A14
			1 m	XW2Z-100J-A14
		CJ1W-NC213/413	0.5 m	XW2Z-050J-A15
			1 m	XW2Z-100J-A15
		CJ1W-NC133	0.5 m	XW2Z-050J-A18
			1 m	XW2Z-100J-A18
CJ1W-NC233/433	0.5 m	XW2Z-050J-A19		
	1 m	XW2Z-100J-A19		
⑪	General purpose cable	For general purpose controllers	1 m	R88A-CPG001S
			2 m	R88A-CPG002S
⑫	Terminal block cable	For general purpose controllers	1 m	XW2Z-100J-B24
			2 m	XW2Z-200J-B24
⑬	Terminal block (M3 screw and for pin terminals)		-	XW2B-50G4
	Terminal block (M3.5 screw and for fork/round terminals)		-	XW2B-50G5
	Terminal block (M3 screw and for fork/round terminals)		-	XW2D-50G6

Analogue monitor (for CN5)

Symbol	Name	Length	Model
⑭	Analogue monitor cable	1 m	R88A-CMK001S

USB personal computer cable (for CN7)

Symbol	Name	Length	Model
⑮	USB mini-connector cable	2 m	AX-CUSBM002-E

External regenerative resistor

Symbol	Specifications	Model
⑯	50 Ω, 80 W	R88A-RR08050S
	100 Ω, 80 W	R88A-RR080100S
	47 Ω, 220 W	R88A-RR22047S
	20 Ω, 500 W	R88A-RR50020S

Filters

Symbol	Applicable servodrive	Rated current	Leakage current	Rated voltage	Filter model
⑦	R88D-KT01H, R88D-KT02H	2.4 A	3.5 mA	250 VAC single-phase	R88A-FIK102-RE
	R88D-KT04H	4.1 A	3.5 mA		R88A-FIK104-RE
	R88D-KT08H	6.6 A	3.5 mA		R88A-FIK107-RE
	R88D-KT10H, R88D-KT15H	14.2 A	3.5 mA	400 VAC three-phase	R88A-FIK114-RE
	R88D-KT06F, R88D-KT10F, R88D-KT15F	4 A	0.3 mA / 32 mA ^{*1}		R88A-FIK304-RE
	R88D-KT20F	6 A	0.3 mA / 32 mA ^{*1}		R88A-FIK306-RE
	R88D-KT30F, R88D-KT50F	12.1 A	0.3 mA / 32 mA ^{*1}		R88A-FIK312-RE

*1 Momentary peak leakage current for the filter at switch-on/off.

Connectors

Specifications	Model
I/O connector kit -50 pins-(for CN1)	R88A-CNU11C
External encoder connector (for CN4)	R88A-CNK41L
Safety I/O signal connector (for CN8)	R88A-CNK81S

Computer software

Specifications	Model
Configuration and monitoring software tool for servo drives and inverters. (CX-drive version 1.90 or higher)	CX-drive

Specifications

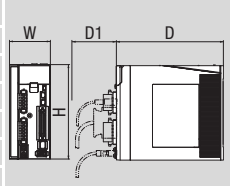
Single-phase, 230 V

Servo drive type	R88D-K_	01H_	02H_	04H_	08H_	10H_	15H_	
Applicable servo motor	R88M-K_	05030(H/T)_	20030(H/T)_	40030(H/T)_	75030(H/T)_	1K020(H/T)_	1K030(H/T)_	
		10030(H/T)_	-	-	-	-	1K530(H/T)_	
		-	-	-	-	-	1K520(H/T)_	
		-	-	-	-	-	90010(H/T)_	
Max. applicable motor capacity		W	100	200	400	750	1000	1500
Continuous output current		Arms	1.2	1.6	2.6	4.1	5.9	9.4
Input power	Main circuit	Single-phase/3-phase, 200 to 240 VAC + 10 to -15% (50/60 Hz)						
Supply	Control circuit	Single-phase, 200 to 240 VAC + 10 to -15% (50/60 Hz)						
Control method		IGBT-driven PWM method, sinusoidal drive						
Feedback		Serial encoder (incremental/absolute value)						
Conditions	Usage/storage temperature		0 to +55°C / -20 to 65°C					
	Usage/storage humidity		90% RH or less (non-condensing)					
	Altitude		1000m or less above sea level					
	Vibration/shock resistance (max.)		5.88 m/s ² 10-60 Hz (Continuous operation at resonance point is not allowed) / 19.6 m/s ²					
Configuration		Base mounted						
Approx. weight		Kg	0.8		1.1	1.6	1.8	

Three-phase, 400 V

Servo drive type	R88D-K_	06F_	10F_	15F_	20F_	30F_	50F_	
Applicable servo motor	R88M-K_	40020(F/C)_	75030(F/C)_	1K030(F/C)_	2K030(F/C)_	3K030(F/C)_	4K030(F/C)_	
		60020(F/C)_	1K020(F/C)_	1K530(F/C)_	2K020(F/C)_	3K020(F/C)_	5K030(F/C)_	
		-	-	1K520(F/C)_	-	2K010(F/C)_	4K020(F/C)_	
		-	-	90010(F/C)_	-	-	5K020(F/C)_	
Max. applicable motor capacity		W	0.6	1.0	1.5	2.0	3.0	5.0
Continuous output current		Arms	2.9		4.7	6.7	9.4	16.5
Input power	Main circuit	3-phase, 380 to 480 VAC + 10 to -15% (50/60Hz)						
Supply	Control circuit	24 VDC ±15%						
Control method		IGBT-driven PWM method, sinusoidal drive						
Feedback		Serial encoder (incremental/absolute value)						
Conditions	Usage/storage temperature		0 to +55°C / -20 to +65°C					
	Usage/storage humidity		90% RH or less (non-condensing)					
	Altitude		1000 m or less above sea level					
	Vibration/shock resistance		5.88 m/s ² 10-60 Hz (Continuous operation at resonance point is not allowed) / 19.6 m/s ²					
Configuration		Base mounted						
Approx. weight		kg	1.9		2.7	4.7		

Dimensions

Drive model	Specification	Analogue/pulse model				ML2 model				
		H	W	D	D1	H	W	D	D1	
R88D-KT01/02H, R88D-KN01/02H-ML2	230 V	100-200 W	150	40	130	70	150	40	132	70
R88D-KT04H, R88D-KN04H-ML2		400 W	150	55	130	70	150	55	132	70
R88D-KT08H, R88D-KN08H-ML2		750 W	150	65	170	70	150	65	172	70
R88D-KT10/15H, R88D-KN10/15H-ML2	400 V	1-1.5 kW	150	85	170	70	150	86	172	70
R88D-KT06/10/15F, R88D-KN06/10/15F-ML2		600 W-1.5 kW	150	91	170	70	150	92	172	70
R88D-KT20F, R88D-KN20F-ML2		2 kW	198	94	193.5	70	198	94	195	70
R88D-KT30/50F, R88D-KN30/50F-ML2		3-5 kW	250	130	212	70	250	130	213	70

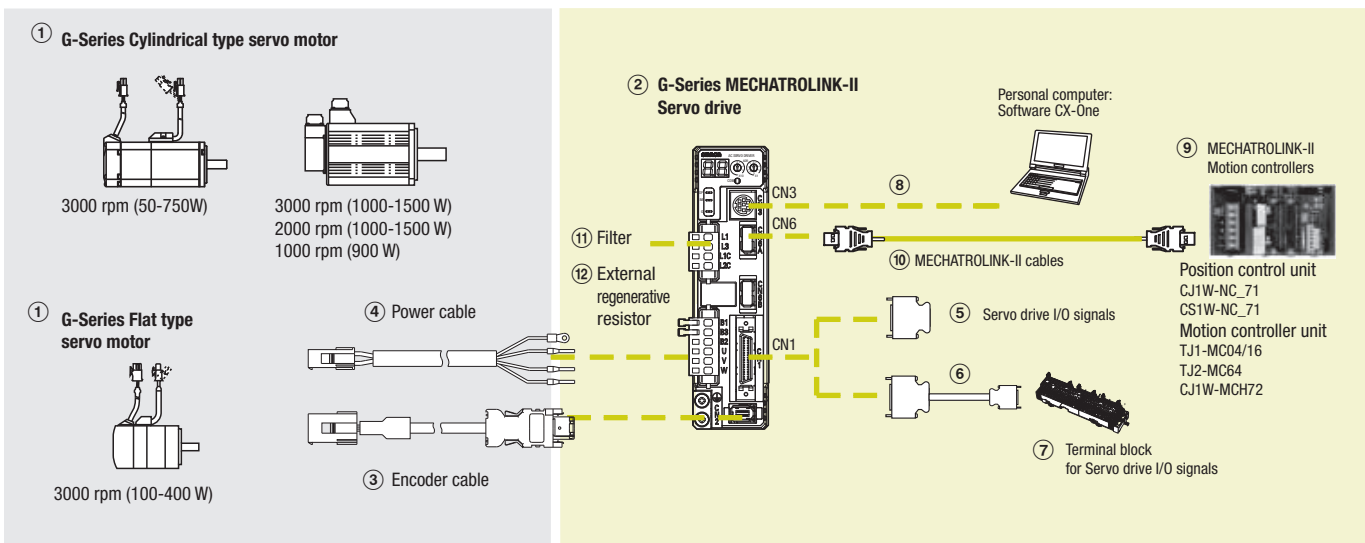


Compact in size, big in features. Save space, save wiring, save time

The G-series servo drive with built-in MECHATROLINK-II significantly reduces wiring and set-up time, while saving up to 30% of cabinet space. So you not only save on space, wiring and installation time, but also significantly reduce the chance of connection errors.

- High response frequency of 1 kHz
- Auto-tuning for easy and quick start-up
- Vibration suppression and adaptive resonance suppression filter
- Positioning, speed and torque control modes
- Fast and accurate positioning
- Separated supply for main power and control power
- Incremental and absolute encoder available

Ordering information



Servo motors, power & encoder cables

Note: ①③④ Refer to the G-Series servo motor section for servomotor, motor cables or connectors selection

Servo drives

Symbol	Specifications	① Compatible rotary servo motors		Order code
		Cylindrical type	Flat type	
②	1 phase 200 VAC	100 W	R88M-G05030_	R88D-GN01H-ML2
		200 W	R88M-G10030_	R88D-GN02H-ML2
		400 W	R88M-G20030_	R88D-GN04H-ML2
		750 W	R88M-G40030_	R88D-GN08H-ML2
		1.0 kW	R88M-G75030_	R88D-GN10H-ML2
		1.5 kW	R88M-G90010T_	R88D-GN15H-ML2
				R88M-G1K030T_
		R88M-G1K520T_	-	
		R88M-G1K530T_	-	

Control cables (for CN1)

Symbol	Name	Connect to	Length	Model
⑤	I/O connector kit	Servo drive I/O signals	-	R88A-CNU01C
⑥	Terminal block cable		1 m	XW2Z-100J-B33
			2 m	XW2Z-200J-B33
⑦	Terminal block		-	XW2B-20G4
				XW2B-20G5
				XW2D-20G6

Computer cable (for CN3)

Symbol	Name	Length	Model
⑧	Computer cable RS232	2 m	R88A-CCG002P2

MECHATROLINK-II Motion controllers

Symbol	Name	Model
⑨	Trajexia stand-alone motion controller	TJ1-MC04 (4 axes)
		TJ1-MC16 (16 axes)
		TJ2-MC64 (64 axes)
	Trajexia-PLC motion controller, 30 axes	CJ1W-MCH72
		CJ1W-MC472
	Position Controller Unit for CJ1 PLC	CJ1W-NCF71 (16 axes)
		CJ1W-NC471 (4 axes)
	Position Controller Unit for CS1 PLC	CJ1W-NC271 (2 axes)
		CS1W-NCF71 (16 axes)
		CS1W-NC471 (4 axes)
		CS1W-NC271 (2 axes)

Computer software

Specifications	Order code
Configuration and monitoring software tool for servo drives and inverters. (CX-drive version 1.70 or higher)	CX-drive
Complete Omron software package including CX-drive. (CX-One version 3.10 or higher)	CX-One

MECHATROLINK-II cables (for CN6)

Symbol	Specifications	Length	Order code
⑩	MECHATROLINK-II Terminator resistor	-	JEPMC-W6022-E
	MECHATROLINK-II cables	0.5 m	JEPMC-W6003-A5-E
		1 m	JEPMC-W6003-01-E
		3 m	JEPMC-W6003-03-E
		5 m	JEPMC-W6003-05-E
		10 m	JEPMC-W6003-10-E
		20 m	JEPMC-W6003-20-E
30 m	JEPMC-W6003-30-E		

Filters

Symbol	Applicable servodrive	Rated current	Leakage current	Rated voltage	Order code
⑪	R88D-GN01H_	2.4 A	3.5 mA	250 VAC single-phase	R88A-FIK102-RE
	R88D-GN02H_				R88A-FIK104-RE
	R88D-GN04H_	4.1 A	3.5 mA		R88A-FIK107-RE
	R88D-GN08H_	6.6 A	3.5 mA		R88A-FIK114-RE
	R88D-GN10H_	14.2 A	3.5 mA		
	R88D-GN15H_				

External regenerative resistor

Symbol	Specifications	Order code
⑫	50 Ω, 80 W	R88A-RR08050S
	100 Ω, 80 W	R88A-RR080100S
	47 Ω, 220 W	R88A-RR22047S
	20 Ω, 500 W	R88A-RR50020S

Specifications

Servo drive type	R88D-GN_	01H-ML2	02H-ML2	04H-ML2	08H-ML2	10H-ML2	15H-ML2			
Applicable servomotor	R88M-G_	05030_/10030_	20030_	40030_	75030_	G1K020T_	90010T_/1K030T_/1K5_0T_			
	R88M-GP_	10030_	20030_	40030_	-	-	-			
Basic specifications	Max. applicable motor capacity	W	100	200	400	750	1000	1500		
	Continuous output current	Arms	1.16	1.6	2.7	4.0	5.9	9.8		
	Max. output current	Arms	3.5	5.3	7.1	14.1	21.2	28.3		
	Input power	Main circuit	For single-phase, 200 to 240 VAC +10 to -15% (50/60 Hz)				For single-phase/ three-phase, 200 to 240 VAC +10 to -15% (50/60 Hz)			
	Supply	Control circuit	For single-phase, 200 to 240 VAC + 10 to -15% (50/60 Hz)							
	Control method	IGBT-driven PWM method								
	Feedback	Serial encoder (incremental/absolute)								
	Conditions	Usage/storage temperature	0 to +55 °C / -20 to 65 °C							
		Usage/storage humidity	90% RH or less (non-condensing)							
		Altitude	1000m or less above sea level							
		Vibration/shock resistance	5.88 m/s ² / 19.6 m/s ²							
	Configuration	Base mounted								
	Approx. weight	kg	0.8		1.1	1.5	1.7			
Position/Speed/torque control mode	Performance	Speed control range	1:5000							
		Speed variance	Load variance	During 0 to 100% load ±0.01 max. (at rated speed)						
			Voltage variance	0% at ±10% of rated voltage (at rated speed)						
	Command Input	Temperature variance	0 to 50°C ±0.1% max. (at rated speed)							
		Frequency characteristics	1 kHz							
		Torque control accuracy (reproducibility)	±3% (at 20% to 100% of rated torque)							
I/O signal	Soft start time setting	0 to 10 s (acceleration time and deceleration time can be set)								
	MECHATROLINK Communication	MECHATROLINK-II commands (for sequence, motion, data setting/reference, monitor, adjustment and other commands)								
I/O signal	Sequence input signal	Emergency stop, 3 external latch signals, forward/reverse torque limit, forward/reverse run prohibit, origin proximity, 3 general-purpose inputs								
	Sequence output signal	It is possible to output three types of signals: positioning completed, speed coincidence, rotation speed detection, servo ready, current limit, speed limit, brake release and warning signal								

Servo drive type		R88D-GN_	01H-ML2	02H-ML2	04H-ML2	08H-ML2	10H-ML2	15H-ML2
Applicable servomotor		R88M-G_	05030_/10030_	20030_	40030_	75030_	G1K020T_	90010T_/1K030T_/1K5_0T_
		R88M-GP_	10030_	20030_	40030_	-	-	-
Integrated functions	Communications	RS-232 communications	Interface	Personal computer				
			Transmission rate	From 2400 to 57600 bps				
			Functions	Parameter setting, status display, alarm display (monitor, clear, history), servo drive data tracing function, test run/auto-tuning operations, real time trace, absolute encoder setting, default values function				
		MECHATROLINK communications	Communications protocol	MECHATROLINK-II				
	Transmission rate		10 Mbps					
		Functions	Parameter setting, status display, alarm display (monitor, clear, history), default values function					
		Automatic load inertia detection	Horizontal and vertical axis mode. One parameter rigidity setting.					
		Dynamic brake (DB)	Operates when main power OFF, servo alarm, overtravel or servo OFF					
		Regenerative processing	Built-in regeneration resistor in models from 750 W to 1.5 kW. External regeneration resistor optionally.					
		Overtravel (OT) prevention function	Dynamic brake, disables torque or emergency stop torque during POT and NOT operation					
		Emergency stop (STOP)	Emergency stop input					
		Encoder divider function	Optional division pulses possible					
		Electronic gearing	0,01<Numerator/Denominator<100					
		Internal speed setting function	8 internal speeds					
	Protective functions	Overvoltage, undervoltage, overcurrent, overload, regeneration overload, servo drive overheat						
	Analogue monitor Output	The actual servomotor speed, command speed, torque and number of accumulated pulses can be measured using an oscilloscope or other device.						
	Panel operator	Display functions	A 2-digit 7-segment LED display shows the servo drive status, alarm codes, parameters, etc. MECHATROLINK-II communications status LED indicator (COM)					
		Switches	Rotary switch for setting the MECHATROLINK-II node address					

Dimensions

Drive model	Specification		H	W	D	D1	
R88D-GN01H-ML2	200 V	100-200 W	150 mm	40 mm	132 mm	70 mm	
R88D-GN02H-ML2			150 mm	55 mm	132 mm	70 mm	
R88D-GN04H-ML2		400 W	150 mm	55 mm	132 mm	70 mm	
R88D-GN08H-ML2		750 W	150 mm	65 mm	172 mm	70 mm	
R88D-GN10H-ML2		1 kW-1.5 kW	150 mm	85 mm	172 mm	70 mm	
R88D-GN15H-ML2			150 mm	85 mm	172 mm	70 mm	



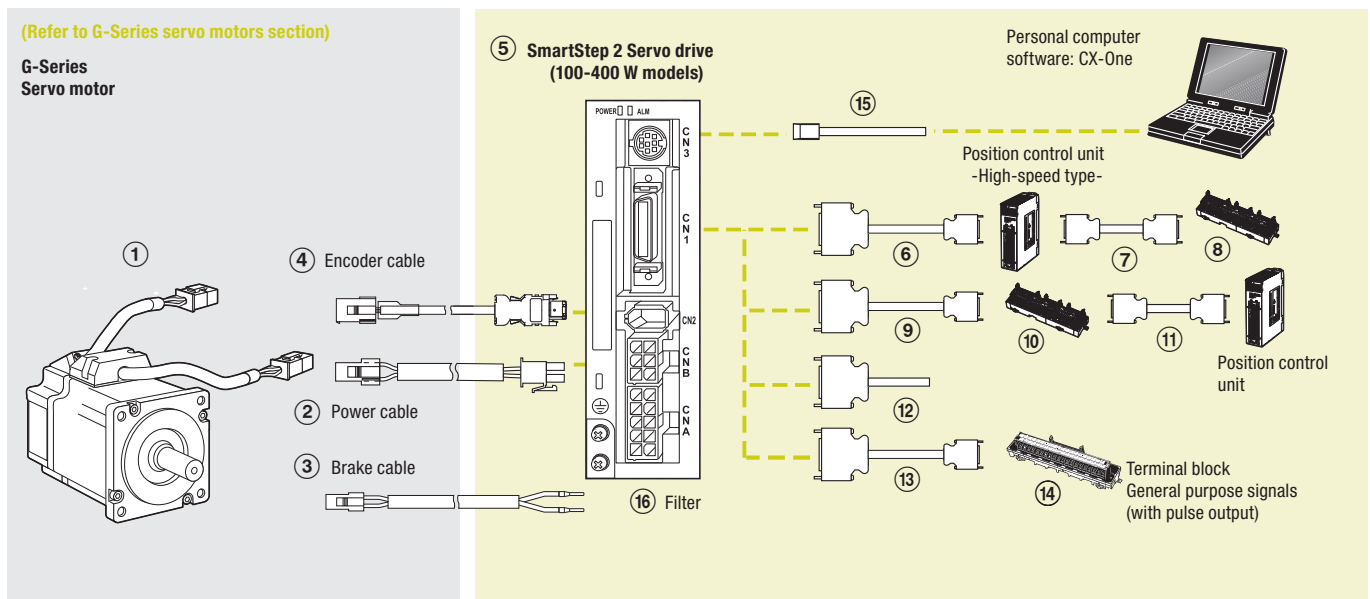
Another step forward in drive simplicity

The new SmartStep offers an ideal solution for point-to-point motion applications where simplicity is essential. SmartStep 2 keeps things simple whilst combining high performance and advanced features in a cost effective solution.

- On-line Auto-tuning and Easy set up
- Ultra-compact size. The footprint is only 48% compared to the previous SmartStep
- Two torque limits
- Electronic gear, four internal speed settings and wide range of pulse settings
- Adaptive resonance suppression filter
- Position control via pulse input 500 kpps
- Configuration and commissioning using CX Drive-software

Ordering information

SmartStep2 Servo Drive Configuration (100-400 W)



Servo motor

Note: ①②③④ refer to G-Series motor section for detailed motor specifications and selection.

Servo drives

Symbol	Specifications	Compatible servo motors ①		Order code	
		Cylindrical type	Flat type	SmartStep 2 drive model	
⑤	200 VAC	100 W	R88M-G05030H- R88M-G10030H- R88M-G20030H- R88M-G40030H-	- R88M-GP10030H- R88M-GP20030H- R88M-GP40030H-	R7D-BP01H R7D-BP02HH R7D-BP04H
		200 W			
		400 W			

Power Supply cables (for CNA)

Symbol	Specifications	Appearance	Order code
⑤	Power Supply Input Cable for Single-Phase Power (connectors attached)		R7A-CLB002S2

Control cables (for CN1)

Symbol	Description	Connect to	Length	Order code
⑥	Control cable (line-driver output for 1 axis)	Position control unit CJ1W-NC234	1 m	XW2Z-100J-G12
		Position control unit CJ1W-NC434	5 m	XW2Z-500J-G12
		Position control unit CJ1W-NC434	10 m	XW2Z-10MJ-G12
	Control cable (open-collector output for 1 axis)	Position control unit CJ1W-NC214	1 m	XW2Z-100J-G16
Position control unit CJ1W-NC414		3 m	XW2Z-300J-G16	
Control cable (line-driver output for 2 axis)	Position control unit CJ1W-NC234	Position control unit CJ1W-NC434	1 m	XW2Z-100J-G4
		Position control unit CJ1W-NC434	5 m	XW2Z-500J-G4
		Position control unit CJ1W-NC434	10 m	XW2Z-10MJ-G4
	Control cable (open-collector output for 2 axis)	Position control unit CJ1W-NC214	1 m	XW2Z-100J-G8
Position control unit CJ1W-NC414		3 m	XW2Z-300J-G8	

Symbol	Description	Connect to	Length	Order code
⑦	Terminal block cable for external signals (for input common, forward/reverse run prohibited inputs, emergency stop input, origin proximity input and interrupt input)	Position control units CJ1W-NC234 CJ1W-NC434 CJ1W-NC214 CJ1W-NC414	0.5 m	XW2Z-C50X
			1 m	XW2Z-100X
			2 m	XW2Z-200X
			3 m	XW2Z-300X
			5 m	XW2Z-500X
			10 m	XW2Z-010X
⑧	Terminal block for external signals (with M3 screw and for pin terminals)		-	XW2B-20G4
	Terminal block ext. signals (with M3.5 screw and for fork/round terminals)		-	XW2B-20G5
	Terminal block ext. signals (with M3 screw and fork/round pin terminals)		-	XW2D-20G6
⑨	Cable from servo relay unit to servo drive	CS1W-NC1_3, CJ1W-NC1_3, C200HW-NC113, CS1W-NC2_3/4_3, CJ1W-NC2_3/4_3, C200HW-NC213/413, CQM1H-PLB21 or CQM1-CPU43-V1 CJ1M-CPU21/22/23	1 m	XW2Z-100J-B29
			2 m	XW2Z-200J-B29
			1 m	XW2Z-100J-B32
			2 m	XW2Z-200J-B32
⑩	Servo relay unit	CS1W-NC1_3, CJ1W-NC1_3 or C200HW-NC113 position control unit CS1W-NC2_3/4_3, CJ1W-NC2_3/4_3 or C200HW-NC213/413 position control unit CQM1H-PLB21 or CQM1-CPU43-V1 CJ1M-CPU21/22/23	-	XW2B-20J6-1B (1 axis)
			-	XW2B-40J6-2B (2 axes)
			-	XW2B-20J6-3B (1 axis)
			-	XW2B-20J6-8A (1 axis)
			-	XW2B-40J6-9A (2 axes)
⑪	Position control unit connecting cable	CJ1W-NC133 CJ1W-NC233/433 CS1W-NC133 CS1W-NC233/433 CJ1W-NC113 CJ1W-NC213/413 CS1W-NC113 C200HW-NC113 CS1W-NC213/413 C200HW-NC213/413 CJ1M-CPU21/22/23 CQM1H-PLB21 CQM1-CPU43-V1	0.5 m	XW2Z-050J-A18
			1 m	XW2Z-100J-A18
			0.5 m	XW2Z-050J-A19
			1 m	XW2Z-100J-A19
			0.5 m	XW2Z-050J-A10
			1 m	XW2Z-100J-A10
			0.5 m	XW2Z-050J-A11
			1 m	XW2Z-100J-A11
			0.5 m	XW2Z-050J-A14
			1 m	XW2Z-100J-A14
			0.5 m	XW2Z-050J-A15
			1 m	XW2Z-100J-A15
			0.5 m	XW2Z-050J-A6
			1 m	XW2Z-100J-A6
			0.5 m	XW2Z-050J-A7
			1 m	XW2Z-100J-A7
			0.5 m	XW2Z-050J-A33
			1 m	XW2Z-100J-A33
			0.5 m	XW2Z-050J-A3
			1 m	XW2Z-100J-A3
⑫	General purpose cable	For general purpose controllers	1 m	R7A-CPB001S
			2 m	R7A-CPB002S
⑬	Terminal block cable	For general purpose controllers	1 m	XW2Z-100J-B28
			2 m	XW2Z-200J-B28
⑭	Terminal block (with M3 screw and for pin terminals)		-	XW2B-34G4
	Terminal block (with M3.5 screw and for fork/round terminals)		-	XW2B-34G5
	Terminal block (with M3 screw and fork/round pin terminals)		-	XW2D-34G6

Cable for CN3

Symbol	Name	Length	Order code
⑮	Personal Computer Monitor Cable	2 m	R88A-CCG002P2

Filters

Symbol	Applicable servo drive	Rated current	Rated voltage	Order code
⑯	R7D-BP01H/ 02HH/ 04H	4 A	1 pH, 230 V	R7A-FIB104-RE

Connectors

Specifications	Order code
Main Circuit Connector (CNA)	R7A-CNB01P
Servomotor Connector (CNB)	R7A-CNB01A
Control I/O Connector (CN1)	R88A-CNW01C
Encoder Input Connector (CN2)	R88A-CNW01R
Servomotor Connector for Encoder Cable	R88A-CNG02R
Servomotor Connector for Servomotor Power Cable	R88A-CNG01A
Brake Cable Connector	R88A-CNG01B

External regeneration resistor

Specification	Order code
80 W, 50 Ω	R88A-RR08050S
80 W, 100 Ω	R88A-RR080100S
220 W, 47 Ω	R88A-RR22047S

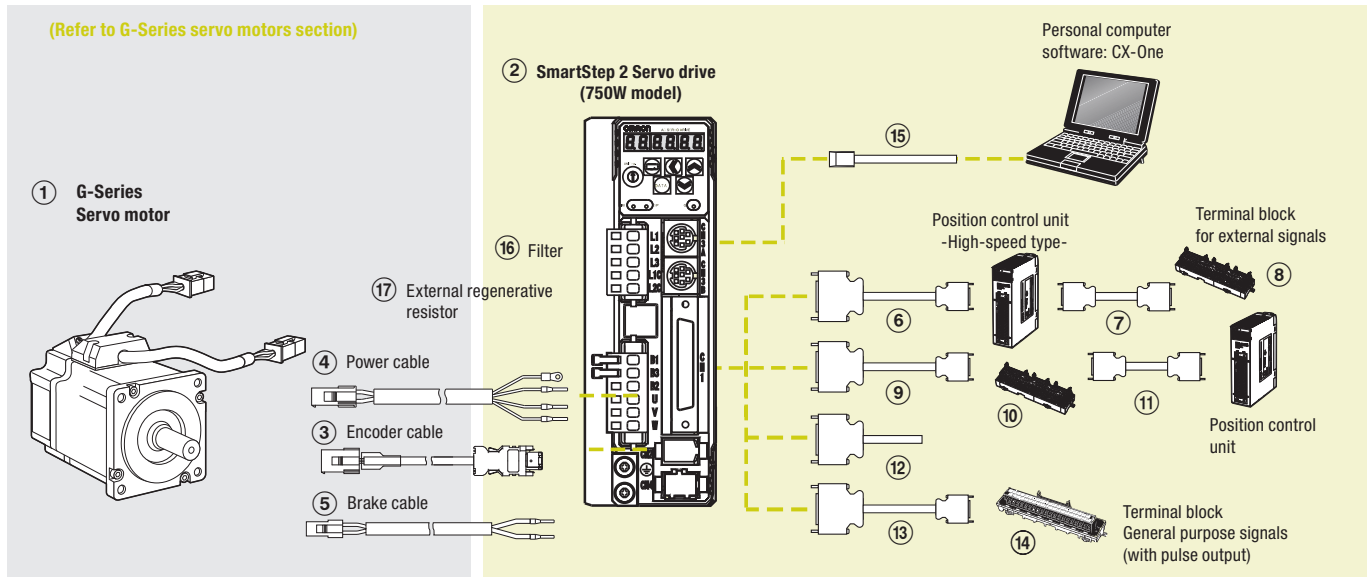
External regeneration resistor cable

Specifications	Order code
External Regenerative Resistor Connection Cable, 2 meters	R7A-CLB002RG

Parameter unit & computer software

Specifications	Order code
Parameter copy unit (with cable)	R88A-PR02G
Configuration and monitoring software tool for servo drives and inverters. (CX-drive version 1.8 or higher)	CX-drive

SmartStep2 Servo Drive Configuration (750 W)



Servo motor

Note: ①③④⑤ refer to G-Series motor section for detailed motor specifications and selection.

Servo drives

Symbol	Specifications	① Compatible rotary servo motors	Order code
		Cylindrical type	Servo drive model
②	1 phase 200 VAC 750 W	R88M-G75030H-__	R88D-GP08H

Control cables (for CN1)

Symbol	Description	Connect to	Length	Order code
⑥	Control cable (line-driver output for 1 axis)	Position control units (high-speed type) CJ1W-NC234 CJ1W-NC434	1 m 5 m 10 m	XW2Z-100J-G9 XW2Z-500J-G9 XW2Z-10MJ-G9
	Control cable (open-collector output for 1 axis)	Position control units (high-speed type) CJ1W-NC214 CJ1W-NC414	1 m 3 m	XW2Z-100J-G13 XW2Z-300J-G13
	Control cable (line-driver output for 2 axis)	Position control units (high-speed type) CJ1W-NC234 CJ1W-NC434	1 m 5 m 10 m	XW2Z-100J-G1 XW2Z-500J-G1 XW2Z-10MJ-G1
	Control cable (open-collector output for 2 axis)	Position control units (high-speed type) CJ1W-NC214 CJ1W-NC414	1 m 3 m	XW2Z-100J-G5 XW2Z-300J-G5
⑦	Terminal block cable for external signals (for input common, forward/reverse run prohibited inputs, emergency stop input, origin proximity input and interrupt input)	Position control units (high-speed type) CJ1W-NC234 CJ1W-NC434 CJ1W-NC214 CJ1W-NC414	0.5 m	XW2Z-C50X
			1 m	XW2Z-100X
			2 m	XW2Z-200X
			3 m	XW2Z-300X
			5 m	XW2Z-500X
⑧	Terminal block for external signals (M3 screw, pin terminals) Terminal block ext. signals (M3.5 screw, fork/round terminals) Terminal block ext. signals (M3 screw, fork/round terminals)		-	XW2B-20G4
			-	XW2B-20G5
			-	XW2D-20G6
⑨	Cable from servo relay unit to servo drive	CS1W-NC1_3, CJ1W-NC1_3, C200HW-NC113/213/413, CS1W-NC2_3/4_3, CJ1W-NC2_3/4_3 or CQM1H-PLB21	1 m	XW2Z-100J-B25
			2 m	XW2Z-200J-B25
		CJ1M-CPU21/22/23	1 m	XW2Z-100J-B31
			2 m	XW2Z-200J-B31
⑩	Servo relay unit	CS1W-NC1_3, CJ1W-NC1_3 or C200HW-NC113 position control unit	-	XW2B-20J6-1B (1 axis)
			-	XW2B-40J6-2B (2 axes)
		CS1W-NC2_3/4_3, CJ1W-NC2_3/4_3 or C200HW-NC213/413 position control unit	-	XW2B-20J6-3B (1 axis)
			-	XW2B-20J6-8A (1 axis)
		CQM1H-PLB21	-	XW2B-40J6-9A (2 axes)

Symbol	Description	Connect to	Length	Order code
⑪	Position control unit connecting cable	CQM1H-PLB21	0.5 m	XW2Z-050J-A3
			1 m	XW2Z-100J-A3
		CS1W-NC113 or C200HW-NC113	0.5 m	XW2Z-050J-A6
			1 m	XW2Z-100J-A6
		CS1W-NC213/413 or C200HW-NC213/413	0.5 m	XW2Z-050J-A7
			1 m	XW2Z-100J-A7
		CS1W-NC133	0.5 m	XW2Z-050J-A10
			1 m	XW2Z-100J-A10
		CS1W-NC233/433	0.5 m	XW2Z-050J-A11
			1 m	XW2Z-100J-A11
		CJ1W-NC113	0.5 m	XW2Z-050J-A14
			1 m	XW2Z-100J-A14
		CJ1W-NC213/413	0.5 m	XW2Z-050J-A15
			1 m	XW2Z-100J-A15
CJ1W-NC133	0.5 m	XW2Z-050J-A18		
	1 m	XW2Z-100J-A18		
CJ1W-NC233/433	0.5 m	XW2Z-050J-A19		
	1 m	XW2Z-100J-A19		
CJ1M-CPU21/22/23	0.5 m	XW2Z-050J-A33		
	1 m	XW2Z-100J-A33		
⑫	General purpose cable	For general purpose controllers	1 m	R88A-CPG001S
			2 m	R88A-CPG002S
⑬	Terminal block cable	For general purpose controllers	1 m	XW2Z-100J-B24
			2 m	XW2Z-200J-B24
⑭	Terminal block (M3 screw and for pin terminals)	-	XW2B-50G4	
	Terminal block (M3.5 screw and for fork/round terminals)	-	XW2B-50G5	
	Terminal block (M3 screw and for fork/round terminals)	-	XW2D-50G6	

Computer cable (for CN3)

Symbol	Name	Length	Order code
⑮	Computer cable RS232	2 m	R88A-CCG002P2

Filter

Symbol	Rated current	Leakage current	Rated voltage	Applicable servodrive	Order code
⑯	6.6 A	3.5 mA	250 VAC single-phase	R88D-GP08H	R88A-FIK107-RE

External regenerative resistor

Symbol	Specifications	Order code
⑰	50 Ω, 80 W	R88A-RR08050S
	100 Ω, 80 W	R88A-RR080100S
	47 Ω, 220 W	R88A-RR22047S
	20 Ω, 500 W	R88A-RR50020S

Connectors

Specifications	Order code
I/O connector kit -50 pins- (for CN1)	R88A-CNU11C
Power cable connector (motor side)	R88A-CNG01A
Encoder connector (Servo drive side CN2)	R88A-CNW01R
Incremental encoder cable connector (motor side)	R88A-CNG02R

Computer software

Specifications	Order code
Configuration and monitoring software tool for servo drives and inverters (CX-drive version 1.91 or higher).	CX-Drive

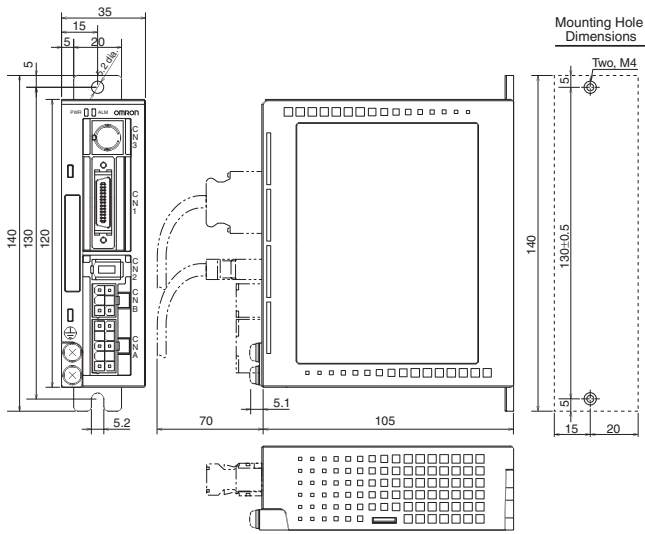
Specifications

Performance specifications

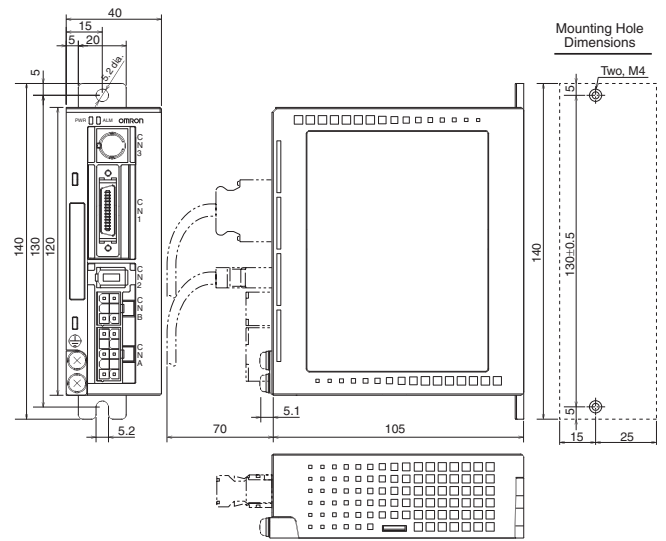
Item	200 VAC input type			
	100 W	200 W	400 W	750 W
	R7D-BP01H	R7D-BP02HH	R7D-BP04H	R88D-GP08H
Continuous output current (rms)	1.0 A	1.6 A	2.5 A	4 A
Momentary maximum output current (rms)	3.3 A	4.9 A	7.8 A	14.1 A
Main-circuit power supply	Single-phase 200 to 240 VAC (170 to 264 V), 50/60 Hz			Single-phase/three-phase 200 to 240 VAC (170 to 264 V), 50/60 Hz
Control circuit input power	-			Single-phase 200 to 240 VAC (170 to 264 V)
Control method	All-digital method			
Feedback	10,000 pulses/revolution incremental encoder			
Inverter method	PWM method based on IGBT			
PWM frequency	12 kHz		6 kHz	
Weight	0.35 kg	0.42 kg	0.42 kg	1.5 kg
Compatible motor voltage	200 V			
Command pulse response	Line drive: 500 kpps			
Compatible motor capacity	50 W 100 W	200 W	400 W	750 W
Applicable servo motor (R88M-)	G05030H G10030H GP10030H	G020030H GP20030H	G40030H GP40030H	G75030H

Dimensions

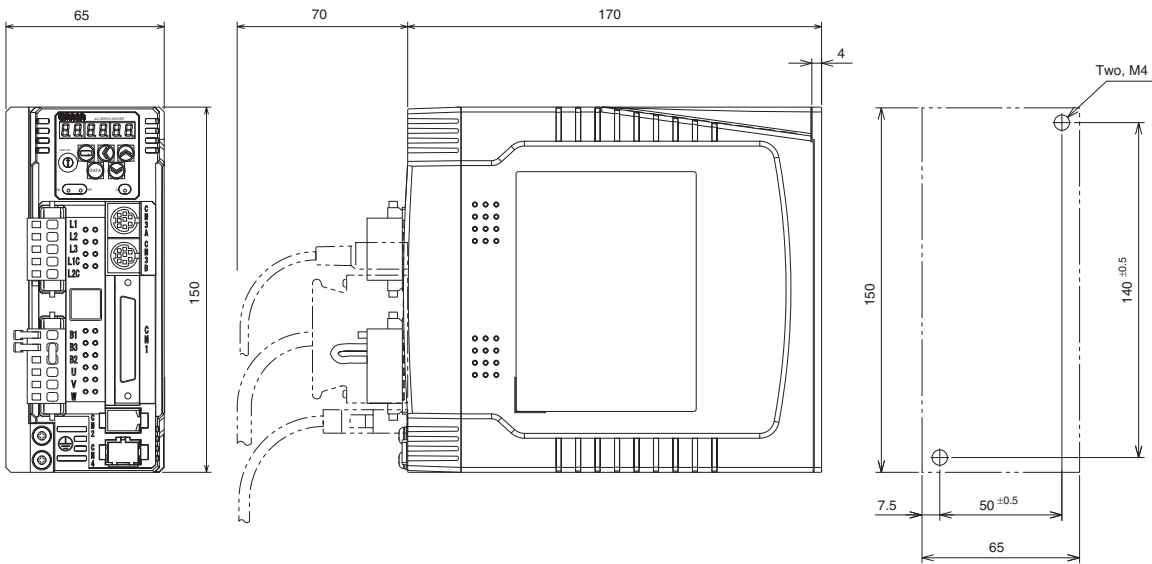
R7D-BP01H (230 V, 100 W)



R7D-BP02HH/04H (230 V, 200-400 W)



R88D-GP08H (230 V, 750 W)



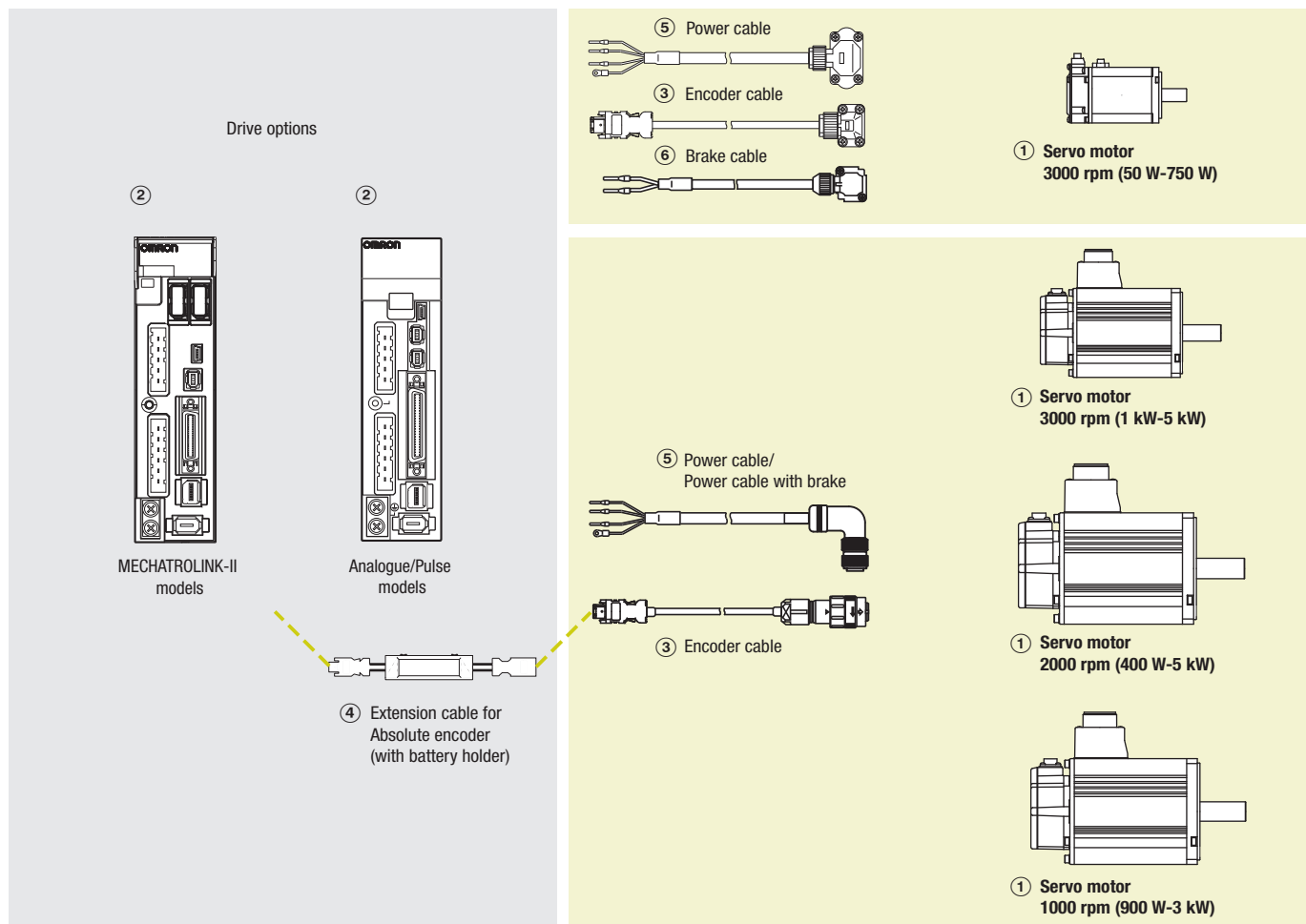


Servo motor family for accurate motion control.

Accurax G5 servo motors include IP67 protection and connectors on the motor body. Use of 10 pole motors and 20 bit encoder results in 40% reduction in motor cogging. The servomotors are 25% lighter and 15% smaller due to patented new stator design PACK&CLAMP technology, 40% iron loss reduction and 15% smaller encoder.

- Peak torque 300% of rated torque during 3 seconds or more depending on model
- High accuracy provided by a 20 bit resolution encoder, ABS encoder as an option
- IP67 protection in all models
- Ultra-light and compact size motor
- Low speed ripple and low torque ripple due to low torque cogging
- Various shaft, brake and seal options



Ordering information




Servo drive

② Refer to Accurax G5 servo drive section for detailed drive specifications and selection of drive accessories.


Servo motors 3000 r/min (50 - 5000 W)

Symbol	Specifications				Compatible servo drives ②		Order code	
	Voltage	Encoder and design		Rated torque	Capacity	G5 MECHATROLINK-II		G5 Analogue/Pulse
 230 V (50 - 750 W)	230 V	Incremental encoder (20 bit) Straight shaft with key and tap	Without brake	0.16 Nm	50 W	R88D-KN01H-ML2	R88D-KT01H	R88M-K05030H-S2
				0.32 Nm	100 W	R88D-KN01H-ML2	R88D-KT01H	R88M-K10030H-S2
0.64 Nm				200 W	R88D-KN02H-ML2	R88D-KT02H	R88M-K20030H-S2	
1.3 Nm				400 W	R88D-KN04H-ML2	R88D-KT04H	R88M-K40030H-S2	
2.4 Nm				750 W	R88D-KN08H-ML2	R88D-KT08H	R88M-K75030H-S2	
3.18 Nm				1000 W	R88D-KN15H-ML2	R88D-KT15H	R88M-K1K030H-S2	
4.77 Nm				1500 W	R88D-KN15H-ML2	R88D-KT15H	R88M-K1K530H-S2	
Absolute encoder (17 bit) Straight shaft with key and tap		Without brake	0.16 Nm	50 W	R88D-KN01H-ML2	R88D-KT01H	R88M-K05030T-S2	
			0.32 Nm	100 W	R88D-KN01H-ML2	R88D-KT01H	R88M-K10030T-S2	
			0.64 Nm	200 W	R88D-KN02H-ML2	R88D-KT02H	R88M-K20030T-S2	
			1.3 Nm	400 W	R88D-KN04H-ML2	R88D-KT04H	R88M-K40030T-S2	
			2.4 Nm	750 W	R88D-KN08H-ML2	R88D-KT08H	R88M-K75030T-S2	
			3.18 Nm	1000 W	R88D-KN15H-ML2	R88D-KT15H	R88M-K1K030T-S2	
			4.77 Nm	1500 W	R88D-KN15H-ML2	R88D-KT15H	R88M-K1K530T-S2	
 230 V (1000 - 1500 W) 400 V (750 - 5000 W)	400 V	Incremental encoder (20 bit) Straight shaft with key and tap	Without brake	2.39 Nm	750 W	R88D-KN10F-ML2	R88D-KT10F	R88M-K75030F-S2
				3.18 Nm	1000 W	R88D-KN15F-ML2	R88D-KT15F	R88M-K1K030F-S2
				4.77 Nm	1500 W	R88D-KN15F-ML2	R88D-KT15F	R88M-K1K530F-S2
				6.37 Nm	2000 W	R88D-KN20F-ML2	R88D-KT20F	R88M-K2K030F-S2
				9.55 Nm	3000 W	R88D-KN30F-ML2	R88D-KT30F	R88M-K3K030F-S2
				12.7 Nm	4000 W	R88D-KN50F-ML2	R88D-KT50F	R88M-K4K030F-S2
				15.9 Nm	5000 W	R88D-KN50F-ML2	R88D-KT50F	R88M-K5K030F-S2
		Absolute encoder (17 bit) Straight shaft with key and tap	Without brake	2.39 Nm	750 W	R88D-KN10F-ML2	R88D-KT10F	R88M-K75030C-S2
				3.18 Nm	1000 W	R88D-KN15F-ML2	R88D-KT15F	R88M-K1K030C-S2
				4.77 Nm	1500 W	R88D-KN15F-ML2	R88D-KT15F	R88M-K1K530C-S2
				6.37 Nm	2000 W	R88D-KN20F-ML2	R88D-KT20F	R88M-K2K030C-S2
				9.55 Nm	3000 W	R88D-KN30F-ML2	R88D-KT30F	R88M-K3K030C-S2
				12.7 Nm	4000 W	R88D-KN50F-ML2	R88D-KT50F	R88M-K4K030C-S2
				15.9 Nm	5000 W	R88D-KN50F-ML2	R88D-KT50F	R88M-K5K030C-S2
With brake	Without brake	2.39 Nm	750 W	R88D-KN10F-ML2	R88D-KT10F	R88M-K75030F-BS2		
		3.18 Nm	1000 W	R88D-KN15F-ML2	R88D-KT15F	R88M-K1K030F-BS2		
		4.77 Nm	1500 W	R88D-KN15F-ML2	R88D-KT15F	R88M-K1K530F-BS2		
		6.37 Nm	2000 W	R88D-KN20F-ML2	R88D-KT20F	R88M-K2K030F-BS2		
		9.55 Nm	3000 W	R88D-KN30F-ML2	R88D-KT30F	R88M-K3K030F-BS2		
		12.7 Nm	4000 W	R88D-KN50F-ML2	R88D-KT50F	R88M-K4K030F-BS2		
		15.9 Nm	5000 W	R88D-KN50F-ML2	R88D-KT50F	R88M-K5K030F-BS2		
With brake	With brake	2.39 Nm	750 W	R88D-KN10F-ML2	R88D-KT10F	R88M-K75030C-BS2		
		3.18 Nm	1000 W	R88D-KN15F-ML2	R88D-KT15F	R88M-K1K030C-BS2		
		4.77 Nm	1500 W	R88D-KN15F-ML2	R88D-KT15F	R88M-K1K530C-BS2		
		6.37 Nm	2000 W	R88D-KN20F-ML2	R88D-KT20F	R88M-K2K030C-BS2		
		9.55 Nm	3000 W	R88D-KN30F-ML2	R88D-KT30F	R88M-K3K030C-BS2		
		12.7 Nm	4000 W	R88D-KN50F-ML2	R88D-KT50F	R88M-K4K030C-BS2		
		15.9 Nm	5000 W	R88D-KN50F-ML2	R88D-KT50F	R88M-K5K030C-BS2		


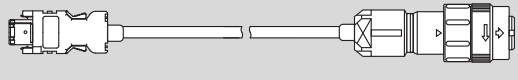
Servo motors 2000 r/min (1 - 5 kW)

Symbol	Specifications				Compatible servo drives ②		Order code			
	Voltage	Encoder and design	Rated torque	Capacity	G5 MECHATROLINK-II	G5 Analogue/Pulse				
	230 V	Incremental encoder (20 bit) Straight shaft with key and tap	Without brake	4.77 Nm	1000 W	R88D-KN10H-ML2	R88D-KT10H	R88M-K1K020H-S2		
			With brake	7.16 Nm	1500 W	R88D-KN15H-ML2	R88D-KT15H	R88M-K1K520H-S2		
			Absolute encoder (17 bit) Straight shaft with key and tap	Without brake	4.77 Nm	1000 W	R88D-KN10H-ML2	R88D-KT10H	R88M-K1K020H-BS2	
				With brake	7.16 Nm	1500 W	R88D-KN15H-ML2	R88D-KT15H	R88M-K1K520H-BS2	
			400 V	Incremental encoder (20 bit) Straight shaft with key and tap	Without brake	1.91 Nm	400 W	R88D-KN06F-ML2	R88D-KT06F	R88M-K40020F-S2
						2.86 Nm	600 W	R88D-KN06F-ML2	R88D-KT06F	R88M-K60020F-S2
		4.77 Nm				1000 W	R88D-KN10F-ML2	R88D-KT10F	R88M-K1K020F-S2	
		7.16 Nm				1500 W	R88D-KN15F-ML2	R88D-KT15F	R88M-K1K520F-S2	
		9.55 Nm				2000 W	R88D-KN20F-ML2	R88D-KT20F	R88M-K2K020F-S2	
		14.3 Nm				3000 W	R88D-KN30F-ML2	R88D-KT30F	R88M-K3K020F-S2	
		With brake			19.1 Nm	4000 W	R88D-KN50F-ML2	R88D-KT50F	R88M-K4K020F-S2	
					23.9 Nm	5000 W	R88D-KN50F-ML2	R88D-KT50F	R88M-K5K020F-S2	
		Absolute encoder (17 bit) Straight shaft with key and tap	Without brake		1.91 Nm	400 W	R88D-KN06F-ML2	R88D-KT06F	R88M-K40020C-S2	
					2.86 Nm	600 W	R88D-KN06F-ML2	R88D-KT06F	R88M-K60020C-S2	
	4.77 Nm				1000 W	R88D-KN10F-ML2	R88D-KT10F	R88M-K1K020C-S2		
	7.16 Nm				1500 W	R88D-KN15F-ML2	R88D-KT15F	R88M-K1K520C-S2		
	9.55 Nm				2000 W	R88D-KN20F-ML2	R88D-KT20F	R88M-K2K020C-S2		
	14.3 Nm				3000 W	R88D-KN30F-ML2	R88D-KT30F	R88M-K3K020C-S2		
	With brake		19.1 Nm	4000 W	R88D-KN50F-ML2	R88D-KT50F	R88M-K4K020C-S2			
			23.9 Nm	5000 W	R88D-KN50F-ML2	R88D-KT50F	R88M-K5K020C-S2			

Servo motors 1000 r/min (900 - 3000 W)

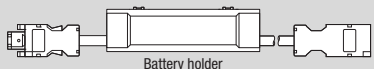
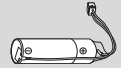
Symbol	Specifications				Compatible servo drives ②		Order code		
	Voltage	Encoder and design	Rated torque	Capacity	G5 MECHATROLINK-II	G5 Analogue/Pulse			
	230 V	Incremental encoder (20 bit) Straight shaft with key and tap	Without brake	8.59 Nm	900 W	R88D-KN15H-ML2	R88D-KT15H	R88M-K90010H-S2	
			With brake	8.59 Nm	900 W	R88D-KN15H-ML2	R88D-KT15H	R88M-K90010H-BS2	
		Absolute encoder (17 bit) Straight shaft with key and tap	Without brake	8.59 Nm	900 W	R88D-KN15H-ML2	R88D-KT15H	R88M-K90010T-S2	
			With brake	8.59 Nm	900 W	R88D-KN15H-ML2	R88D-KT15H	R88M-K90010T-BS2	
		400 V	Incremental encoder (20 bit) Straight shaft with key and tap	Without brake	8.59 Nm	900 W	R88D-KN15F-ML2	R88D-KT15F	R88M-K90010F-S2
					19.1 Nm	2000 W	R88D-KN30F-ML2	R88D-KT30F	R88M-K2K010F-S2
	28.7 Nm				3000 W	R88D-KN50F-ML2	R88D-KT50F	R88M-K3K010F-S2	
	With brake			8.59 Nm	900 W	R88D-KN15F-ML2	R88D-KT15F	R88M-K90010F-BS2	
				19.1 Nm	2000 W	R88D-KN30F-ML2	R88D-KT30F	R88M-K2K010F-BS2	
				28.7 Nm	3000 W	R88D-KN50F-ML2	R88D-KT50F	R88M-K3K010F-BS2	
	Absolute encoder (17 bit) Straight shaft with key and tap		Without brake	8.59 Nm	900 W	R88D-KN15F-ML2	R88D-KT15F	R88M-K90010C-S2	
				19.1 Nm	2000 W	R88D-KN30F-ML2	R88D-KT30F	R88M-K2K010C-S2	
	28.7 Nm	3000 W		R88D-KN50F-ML2	R88D-KT50F	R88M-K3K010C-S2			
	With brake	8.59 Nm	900 W	R88D-KN15F-ML2	R88D-KT15F	R88M-K90010C-BS2			
19.1 Nm		2000 W	R88D-KN30F-ML2	R88D-KT30F	R88M-K2K010C-BS2				
28.7 Nm	3000 W	R88D-KN50F-ML2	R88D-KT50F	R88M-K3K010C-BS2					

Encoder cables for absolute and incremental encoders

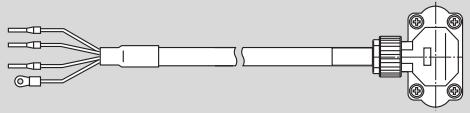
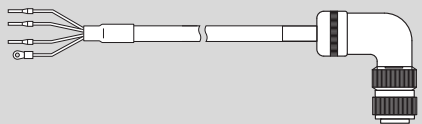
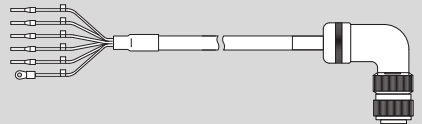
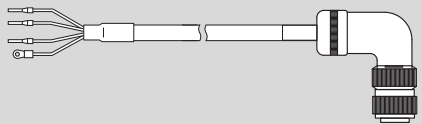
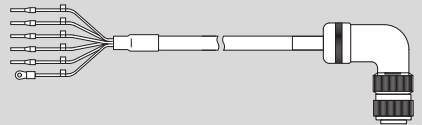
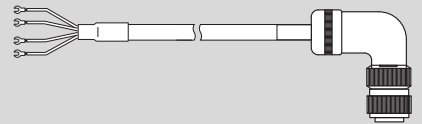
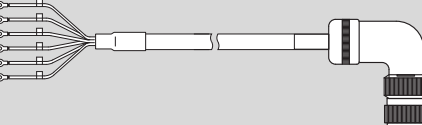
Symbol	Appearance	Specifications	Order code	
③		Encoder cable for servomotors R88M-K(050/100/200/400/750)30(H/T)_	1.5 m	R88A-CRKA001-5CR-E
			3 m	R88A-CRKA003CR-E
			5 m	R88A-CRKA005CR-E
			10 m	R88A-CRKA010CR-E
			15 m	R88A-CRKA015CR-E
		Encoder cable for servomotors R88M-K(1K0/1K5)30(H/T)_ R88M-K(750/1K0/1K5/2K0/3K0/4K0/5K0)30(F/C)_ R88M-K(400/600/1K0/1K5/2K0/3K0/4K0/5K0)20_ R88M-K(900/2K0/3K0)10_	1.5 m	R88A-CRKC001-5NR-E
			3 m	R88A-CRKC003NR-E
			5 m	R88A-CRKC005NR-E
			10 m	R88A-CRKC010NR-E
			15 m	R88A-CRKC015NR-E
20 m	R88A-CRKC020NR-E			

Note: For servomotors fitted with an absolute encoder you have to add the extension battery cable R88A-CRGD0R3C_ (see below) or connect a backup battery in the CN1 I/O connector.


Absolute encoder battery cable (encoder extension cable only)

Symbol	Appearance	Specifications	Order code		
④		Absolute encoder battery cable	Battery not included	0.3 m	R88A-CRGD0R3C
			Battery included (R88A-BAT01G)	0.3 m	R88A-CRGD0R3C-BS
		Absolute encoder backup battery	2,000 mA.h 3.6V	-	R88A-BAT01G

Power cables

Symbol	Appearance	Specifications	Order code			
⑤		For 200 V servomotors R88M-K(050/100/200/400/750)30(H/T)_ Note: for servomotors with brake R88M-K(050/100/200/400/750)30(H/T)-BS2, the separate brake cable R88A-CAKA___BR-E is needed	Power cable only (without brake)	1.5 m	R88A-CAKA001-5SR-E	
				3 m	R88A-CAKA003SR-E	
				5 m	R88A-CAKA005SR-E	
				10 m	R88A-CAKA010SR-E	
				15 m	R88A-CAKA015SR-E	
				20 m	R88A-CAKA020SR-E	
		For 200 V servomotors R88M-K(1K0/1K5)30(H/T)_ R88M-K(1K0/1K5)20(H/T)_ R88M-K90010(H/T)_	without brake _S2		1.5 m	R88A-CAGB001-5SR-E
					3 m	R88A-CAGB003SR-E
					5 m	R88A-CAGB005SR-E
					10 m	R88A-CAGB010SR-E
					15 m	R88A-CAGB015SR-E
					20 m	R88A-CAGB020SR-E
		For 200 V servomotors R88M-K(1K0/1K5)30(H/T)_ R88M-K(1K0/1K5)20(H/T)_ R88M-K90010(H/T)_	with brake _BS2		1.5 m	R88A-CAGB001-5BR-E
					3 m	R88A-CAGB003BR-E
					5 m	R88A-CAGB005BR-E
					10 m	R88A-CAGB010BR-E
					15 m	R88A-CAGB015BR-E
					20 m	R88A-CAGB020BR-E
		For 400 V servomotors R88M-K(750/1K0/1K5/2K)30(F/C)_ R88M-K(400/600/1K0/1K5/2K0)20(F/C)_ R88M-K90010(F/C)_	without brake _S2		1.5 m	R88A-CAGB001-5SR-E
					3 m	R88A-CAGB003SR-E
					5 m	R88A-CAGB005SR-E
					10 m	R88A-CAGB010SR-E
					15 m	R88A-CAGB015SR-E
					20 m	R88A-CAGB020SR-E
	For 400 V servomotors R88M-K(750/1K0/1K5/2K)30(F/C)_ R88M-K(400/600/1K0/1K5/2K0)20(F/C)_ R88M-K90010(F/C)_	with brake _BS2		1.5 m	R88A-CAKF001-5BR-E	
				3 m	R88A-CAKF003BR-E	
				5 m	R88A-CAKF005BR-E	
				10 m	R88A-CAKF010BR-E	
				15 m	R88A-CAKF015BR-E	
				20 m	R88A-CAKF020BR-E	
	For 400 V servomotors R88M-K(3K0/4K0/5K0)30(F/C)_ R88M-K(3K0/4K0/5K0)20(F/C)_ R88M-K(2K0/3K0)10(F/C)_	without brake _S2		1.5 m	R88A-CAGD001-5SR-E	
				3 m	R88A-CAGD003SR-E	
				5 m	R88A-CAGD005SR-E	
				10 m	R88A-CAGD010SR-E	
				15 m	R88A-CAGD015SR-E	
				20 m	R88A-CAGD020SR-E	
	For 400 V servomotors R88M-K(3K0/4K0/5K0)30(F/C)_ R88M-K(3K0/4K0/5K0)20(F/C)_ R88M-K(2K0/3K0)10(F/C)_	with brake _BS2		1.5 m	R88A-CAGD001-5BR-E	
				3 m	R88A-CAGD003BR-E	
				5 m	R88A-CAGD005BR-E	
				10 m	R88A-CAGD010BR-E	
				15 m	R88A-CAGD015BR-E	
				20 m	R88A-CAGD020BR-E	

Brake cable (for 3000 r/min 50-750 W Motors)

Symbol	Appearance	Specifications	Order code	
⑥		Brake cable only. For 200 V servo motors with brake R88M-K(050/100/200/400/750)30(H/T)-BS2	1.5 m	R88A-CAKA001-5BR-E
			3 m	R88A-CAKA003BR-E
			5 m	R88A-CAKA005BR-E
			10 m	R88A-CAKA010BR-E
			15 m	R88A-CAKA015BR-E
			20 m	R88A-CAKA020BR-E

Connectors for encoder, power and brake cables

Specifications	Applicable Servomotor	Order code	
Connectors for making encoder cables	Drive side (CN2)	All models	R88A-CNW01R
	Motor side	R88M-K(050/100/200/400/750)30(H/T)_	R88A-CNK02R
	Motor side	R88M-K(1K0/1K5)30(H/T)_ R88M-K(750/1K0/1K5/2K0/3K0/4K0/5K0)30(F/C)_ R88M-K(400/600/1K0/1K5/2K0/3K0/4K0/5K0)20_ R88M-K(900/2K0/3K0)10_	R88A-CNK04R
Connectors for making power cables	Motor side	R88M-K(050/100/200/400/750)30(H/T)_	R88A-CNK11A
	Motor side	R88M-K(1K0/1K5)30(H/T)-S2 R88M-K(1K0/1K5)20(H/T)-S2 R88M-K90010(H/T)-S2 R88M-K(750/1K0/1K5/2K0)30(F/C)-S2, R88M-K(400/600/1K0/1K5/2K0)20(F/C)-S2 R88M-K90010(F/C)-S2	MS3108E20-4S
	Motor side	R88M-K(1K0/1K5)30(H/T)-BS2 R88M-K(1K0/1K5)20(H/T)-BS2 R88M-K90010(H/T)-BS2	MS3108E20-18S
	Motor side	R88M-K(750/1K0/1K5/2K0/3K0/4K0/5K0)30(F/C)-BS2 R88M-K(400/600/1K0/1K5/2K0/3K0/4K0/5K0)20(F/C)-BS2 R88M-K(900/2K0/3K0)10(F/C)-BS2	MS3108E24-11S
	Motor side	R88M-K(3K0/4K0/5K0)30(F/C)-S2 R88M-K(3K0/4K0/5K0)20(F/C)-S2 R88M-K(2K0/3K0)10(F/C)-S2	MS3108E22-22S
Connector for brake cable	Motor side	R88M-K(050/100/200/400/750)30(H/T)-BS2	R88A-CNK11B

Note: 1. All cables listed are flexible and shielded (except the R88A-CAKA___-BR-E which is only a flexible cable).

2. All connectors and cables listed have IP67 class (except R88A-CNW01R connector and R88A-CRGD0R3C cable).

Specifications

Servo motors 3000 r/min, 230 V

Voltage		230 V							
Servo motor model R88M-K_	20-bit incremental encoder	05030H-__	10030H-__	20030H-__	40030H-__	75030H-__	1K030H-__	1K530H-__	
	17-bit absolute encoder	05030T-__	10030T-__	20030T-__	40030T-__	75030T-__	1K030T-__	1K530T-__	
Rated output	W	50	100	200	400	750	1000	1500	
Rated torque	N·m	0.16	0.32	0.64	1.3	2.4	3.18	4.77	
Instantaneous peak torque	N·m	0.48	0.95	1.91	3.8	7.1	9.55	14.3	
Rated current	A (rms)	1.2	1.1	1.5	2.4	4.1	6.6	8.2	
Instantaneous max. current	A (rms)	5.1	4.7	6.5	10.2	17.4	28	35	
Rated speed	min ⁻¹	3000							
Max. speed	min ⁻¹	6000						5000	
Torque constant	N·m/A (rms)	0.11±10%	0.21±10%	0.31±10%	0.39±10%	0.42±10%	0.37	0.45	
Rotor moment of inertia (JM)	kg·m ² ×10 ⁻⁴ (without brake)	0.025	0.051	0.14	0.26	0.87	2.03	2.84	
	kg·m ² ×10 ⁻⁴ (with brake)	0.027	0.054	0.16	0.28	0.97	2.35	3.17	
Allowable load moment of inertia (JL)	Multiple of (JM)	30					20	15	
Rated power rate	kW/s (without brake)	10.1	19.9	29.0	62.4	65.6	49.8	80.1	
	kW/s (with brake)	9.4	18.8	25.4	58	58.8	43	71.8	
Allowable radial load	N	68		245		490			
Allowable thrust load	N	58			98		196		
Approx. mass	Kg (without brake)	0.32	0.47	0.82	1.2	2.3	3.5	4.4	
	Kg (with brake)	0.53	0.68	1.3	1.7	3.1	4.5	5.4	
Brake specifications	Rated voltage	24VDC ±10%							
	Holding brake moment of inertia J	kg·m ² ×10 ⁻⁴	0.002		0.0018		0.33		
	Power consumption (at 20°C)	W	7		9		17		
	Current consumption (at 20°C)	A	0.3		0.36		0.70±10%		0.81±10%
	Static friction torque	N·m (minimum)	0.29		1.27		2.5		
	Rise time for holding torque	ms (max.)	35		50		7.8		
	Release time	ms (max)	20		15				

Voltage		230 V						
Servo motor model R88M-K_	20-bit incremental encoder	05030H_-	10030H_-	20030H_-	40030H_-	75030H_-	1K030H_-	1K530H_-
	17-bit absolute encoder	05030T_-	10030T_-	20030T_-	40030T_-	75030T_-	1K030T_-	1K530T_-
Basic specifications	Time Rating	Continuous						
	Insulation class	Type B						Type F
	Ambient operating/ storage temperature	0 to +40°C/ -20 to 65°C						
	Ambient operating/ storage humidity	20 to 80% (non-condensing)						20 to 85% (non-condensing)
	Vibration class	V-15						
	Insulation resistance	20 MΩ min. at 500 VDC between the power terminals and FG terminal						
	Enclosure	Totally-enclosed, self-cooling, IP67 (excluding shaft opening)						
	Vibration resistance	Vibration acceleration 49 m/s ²						
	Mounting	Flange-mounted						

Servo motors 3000 r/min, 400 V

Voltage		400 V							
Servo motor model R88M-K_	20-bit incremental encoder	75030F_-	1K030F_-	1K530F_-	2K030F_-	3K030F_-	4K030F_-	5K030F_-	
	17-bit absolute encoder	75030C_-	1K030C_-	1K530C_-	2K030C_-	3K030C_-	4K030C_-	5K030C_-	
Rated output	W	750	1000	1500	2000	3000	4000	5000	
Rated torque	N·m	2.39	3.18	4.77	6.37	9.55	12.7	15.9	
Instantaneous peak torque	N·m	7.16	9.55	14.3	19.1	28.6	38.2	47.7	
Rated current	A (rms)	2.4	3.3	4.2	5.7	9.2	9.9	12	
Instantaneous max. current	A (rms)	10	14	18	24	39	42	51	
Rated speed	min ⁻¹	3000							
Max. speed	min ⁻¹	5000						4500	
Torque constant	N·m/A (rms)	0.78	0.75	0.89	0.87	0.81	0.98		
Rotor moment of inertia (JM)	kg·m ² ×10 ⁻⁴ (without brake)	1.61	2.03	2.84	3.68	6.5	12.9	17.4	
	kg·m ² ×10 ⁻⁴ (with brake)	1.93	2.35	3.17	4.01	7.85	14.2	18.6	
Allowable load moment of inertia (JL)	Multiple of (JM)	30							
Rated power rate	kW/s (without brake)	35.5	49.8	80.1	110	140	126	146	
	kW/s (with brake)	29.6	43	71.8	101	116	114	136	
Allowable radial load	N	490						784	
Allowable thrust load	N	196						343	
Approx. mass	Kg (without brake)	3.1	3.5	4.4	5.3	8.3	11	14	
	Kg (with brake)	4.1	4.5	5.4	6.3	9.4	12.6	16	
Brake specifications	Rated voltage	24VDC±10%							
	Holding brake moment of inertia J	kg·m ² ×10 ⁻⁴	0.33						1.35
	Power consumption (at 20°C)	W	17	19					22
	Current consumption (at 20°C)	A	0.70±10%	0.81±10%				0.90±10%	
	Static friction torque	N·m (minimum)	2.5	7.8				11.8	16.1
	Rise time for holding torque	ms (max.)	50						110
Release time	ms (max)	15						50	
Basic specifications	Time Rating	Continuous							
	Insulation class	Type F							
	Ambient operating/ storage temperature	0 to +40°C/ -20 to 65°C							
	Ambient operating/ storage humidity	20% to 85% (non-condensing)							
	Vibration class	V-15							
	Insulation resistance	20 MΩ min. at 500 VDC between the power terminals and FG terminal							
	Enclosure	Totally-enclosed, self-cooling, IP67(excluding shaft opening)							
	Vibration resistance	Vibration acceleration 49 m/s ²							
Mounting	Flange-mounted								

Servo motors 2000 r/min, 230V/ 400 V

Voltage		230 V				400 V					
Servo motor model R88M-K_	20-bit incremental encoder	1K020H_-	1K520H_-	40020F_-	60020F_-	1K020F_-	1K520F_-	2K020F_-	3K020F_-	4K020F_-	5K020F_-
	17-bit absolute encoder	1K020T_-	1K520T_-	40020C_-	60020C_-	1K020C_-	1K520C_-	2K020C_-	3K020C_-	4K020C_-	5K020C_-
Rated output	W	1000	1500	400	600	1000	1500	2000	3000	4000	5000
Rated torque	N·m	4.77	7.16	1.91	2.86	4.77	7.16	9.55	14.3	19.1	23.9
Instantaneous peak torque	N·m	14.3	21.5	5.73	8.59	14.3	21.5	28.7	43	57.3	71.6
Rated current	A (rms)	5.7	9.4	1.2	1.5	2.8	4.7	5.9	8.7	10.6	13
Instantaneous max. current	A (rms)	24	40	4.9	6.5	12	20	25	37	45	55
Rated speed	min ⁻¹	2000									
Max. speed	min ⁻¹	3000									
Torque constant	N·m/A (rms)	0.63	0.58	1.27	1.38	1.27	1.16	1.27	1.18	1.40	1.46
Rotor moment of inertia (JM)	kg·m ² ×10 ⁻⁴ (without brake)	4.60	6.70	1.61	2.03	4.60	6.70	8.72	12.9	37.6	48
	kg·m ² ×10 ⁻⁴ (with brake)	5.90	7.99	1.90	2.35	5.90	7.99	10	14.2	38.6	48.8
Max. load moment of inertia (JL)	Multiple of (JM)	10									
Rated power rate	kW/s (without brake)	49.5	76.5	22.7	40.3	49.5	76.5	105	159	97.1	119
	kW/s (with brake)	38.6	64.2	19.2	34.8	38.6	64.2	91.2	144	94.5	117
Allowable radial load	N	490								784	
Allowable thrust load	N	196								343	

Voltage		230 V			400 V						
Servo motor model R88M-K_	20-bit incremental encoder	1K020H_-	1K520H_-	40020F_-	60020F_-	1K020F_-	1K520F_-	2K020F_-	3K020F_-	4K020F_-	5K020F_-
	17-bit absolute encoder	1K020T_-	1K520T_-	40020C_-	60020C_-	1K020C_-	1K520C_-	2K020C_-	3K020C_-	4K020C_-	5K020C_-
Approx. mass	kg (without brake)	5.2	6.7	3.1	3.5	5.2	6.7	8	11	15.5	18.6
	kg (with brake)	6.7	8.2	4.1	4.5	6.7	8.2	9.5	12.6	18.7	21.8
Brake specifications	Rated voltage	24VDC ±10%									
	Holding brake moment inertia (J) kg·m ² ×10 ⁻⁴	1.35									4.7
	Power consumption (20°C) W	14	19	17		14	19		22	31	
	Current consumption (20°C) A	0.59±10%	0.79±10%	0.70 ±10%		0.59±10%	0.79 ±10%		0.90±10%	1.3±10%	1.3 ±-10%
	Static friction torque N.m (minimum)	4.9	13.7	2.5		4.9	13.7		16.2	24.5	
	Rise time for holding torque ms (max.)	80	100	50		80	100		110	80	
Release time ms (max)	70	50	15		70	50			25		
Basic specifications	Time Rating	Continuous									
	Insulation class	Type F									
	Ambient operating/ storage temperature	0 to +40 °C/ -20 to 85°C									
	Ambient operating/ storage humidity	20% to 85% (non-condensing)									
	Vibration class	V-15									
	Insulation resistance	20 MΩ min. at 500 VDC between the power terminals and FG terminal									
	Enclosure	Totally-enclosed, self-cooling, IP67 (excluding shaft opening)									
	Vibration resistance	Vibration acceleration 49 m/s ²									
Mounting	Flange-mounted										

Servo motors 1000 r/min, 230 V/400 V

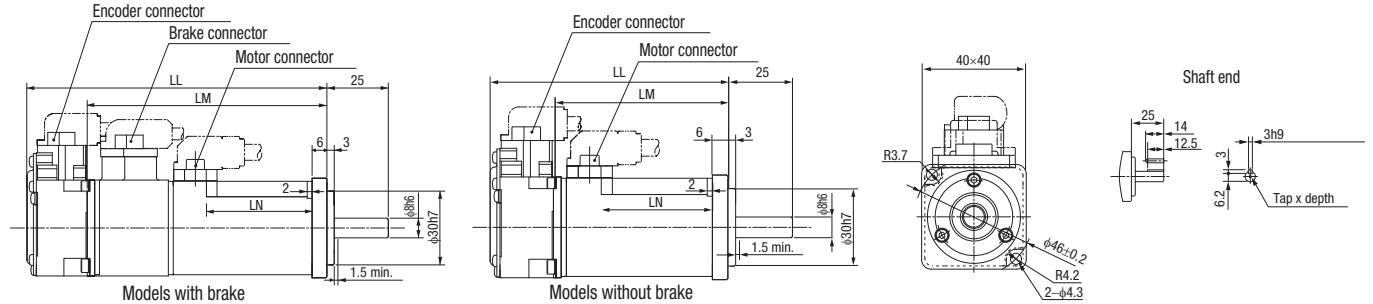
Applied voltage		230 V			400 V		
Servo motor model R88M-K_	20-bit incremental encoder	90010H_-		90010F_-		2K010F_-	3K010F_-
	17-bit absolute encoder	90010T_-		90010C_-		2K010C_-	3K010C_-
Rated output	W	900		900		2000	3000
Rated torque	N·m	8.59				19.1	28.7
Instantaneous peak torque	N·m	19.3				47.7	71.7
Rated current	A (rms)	7.6		3.8		8.5	11.3
Instantaneous max. current	A (rms)	24		12		30	40
Rated speed	min ⁻¹	1000					
Max. speed	min ⁻¹	2000					
Torque constant	N·m/A (rms)	0.86		1.72		1.76	1.92
Rotor moment of inertia (JM)	kg·m ² ×10 ⁻⁴ (without brake)	6.70				30.3	48.4
	kg·m ² ×10 ⁻⁴ (with brake)	7.99				31.4	49.2
Allowable load moment of inertia (JL)	Multiple of (JM)	10					
Rated power rate	kW/s (without brake)	110				120	170
	kW/s (with brake)	92.4				116	167
Allowable radial load	N	686				1176	1470
Allowable thrust load	N	196				490	
Approx. mass	kg (without brake)	6.7				14	20
	kg (with brake)	8.2				17.5	23.5
Brake specifications	Rated voltage	24VDC ±10%					
	Holding brake moment of inertia J	kg·m ² ×10 ⁻⁴				4.7	
	Power consumption (at 20°C) W	19				31	34
	Current consumption (at 20°C) A	0.79±10%				1.3±10%	1.4±10%
	Static friction torque	N.m (minimum)		13.7		24.5	58.8
	Rise time for holding torque	ms (max.)		100		80	150
Release time	ms (max)		50		25	50	
Basic specifications	Time Rating	Continuous					
	Insulation class	Type F					
	Ambient operating/ storage temperature	0 to +40 °C/ -20 to 65°C					
	Ambient operating/ storage humidity	20% to 85% RH (non-condensing)					
	Vibration class	V-15					
	Insulation resistance	20 MΩ min. at 500 VDC between the power terminals and FG terminal					
	Enclosure	Totally-enclosed, self-cooling, IP67 (excluding shaft opening)					
Vibration resistance	Vibration acceleration 49 m/s ²						
Mounting	Flange-mounted						

Dimensions

Servo motors

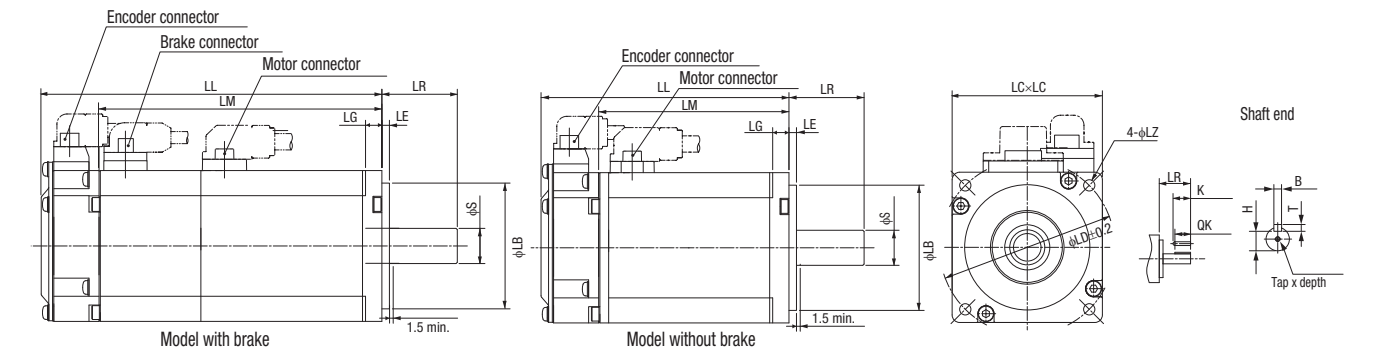
Type 3000 r/min motors (230 V, 50 - 100 W)

Dimensions (mm)	Without brake		With brake		LN	Shaft End Dimensions	Approx. Mass (Kg)	
	LL	LM	LL	LM			Without brake	With brake
R88M-K05030(H/T)-_S2	72	48	102	78	23	M3 x 6L	0.32	0.53
R88M-K10030(H/T)-_S2	92	68	122	98	43		0.47	0.68



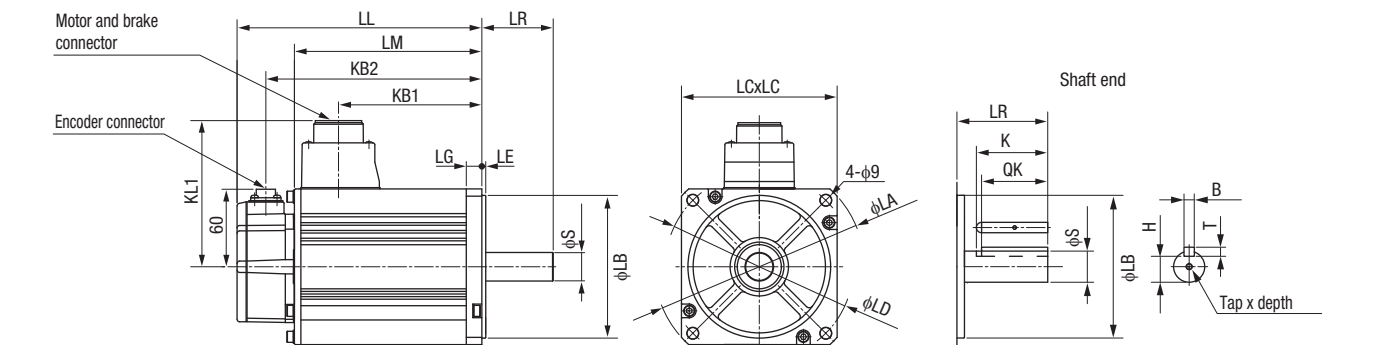
Type 3000 r/min motors (230 V, 200 - 750 W)

Dimensions (mm)	Without brake		With brake		LR	Flange surface						Shaft End Dimensions						Approx. Mass Kg		
	LL	LM	LL	LM		LB	LC	LD	LE	LG	LZ	S	K	QK	H	B	T	Tap × Depth	Without brake	With brake
R88M-K20030(H/T)-_S2	79.5	56.5	116	93	30	50 ^{h7}	60	70	3	6.5	4.5	11 ^{h6}	20	18	8.5	4 ^{h9}	4	M4x8L	0.82	1.3
R88M-K40030(H/T)-_S2	99	76	135.5	112.5								14 ^{h6}	25	22.5	11	5 ^{h9}	5	M5x10L	1.2	1.7
R88M-K75030(H/T)-_S2	112.2	86.2	148.2	122.2	35	70 ^{h7}	80	90		8	6	19 ^{h6}		22	15.5	6 ^{h9}	6		2.3	3.1



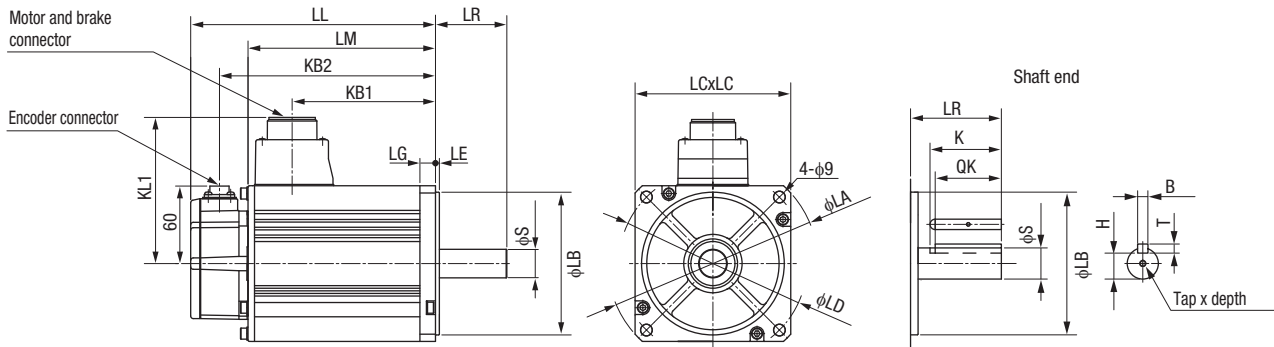
Type 3000 r/min motors (230 V, 1 - 1.5 kW/ 400V, 750 W - 5 kW)

Voltage	Model	Without brake					With brake					LR	Flange surface						Shaft End Dimensions						Approx. Mass (Kg)		
		LL	LM	KB1	KB2	KL1	LL	LM	KB1	KB2	KL1		LA	LB	LC	LD	LE	LG	S	Tap × Depth	K	QK	H	B	T	Without brake	With brake
230	1K030(H/T)-_S2	141	97	66	119	101	168	124	66	146	101	55	135	95 ^{h7}	100	115	3	10	19 ^{h6}	M5x 12L	45	42	15.5	6 ^{h9}	6	3.5	4.5
	1K530(H/T)-_S2	159.5	115.5	84.5	137.5		186.5	142.5	84.5	164.5															4.4	5.4	
400	75030(F/C)-_S2	131.5	87.5	56.5	109.5		158.5	114.5	53.5	136.5	103														3.1	4.1	
	1K030(F/C)-_S2	141	97	66	119		168	124	63	146															3.5	4.5	
	1K530(F/C)-_S2	159.5	115.5	84.5	137.5		186.5	142.5	81.5	164.5															4.4	5.4	
	2K030(F/C)-_S2	178.5	134.5	103.5	156.5		205.5	161.5	100.5	183.5															5.3	6.3	
	3K030(F/C)-_S2	190	146	112	168	113	215	171	112	193	113	162	110 ^{h7}	120	145		12	22 ^{h6}			41	18	8 ^{h9}	7	8.3	9.4	
	4K030(F/C)-_S2	208	164	127	186	118	233	189	127	211	118	65	165	130	6		24 ^{h6}	M8x 20L	55	51	20				11	12.6	
	5K030(F/C)-_S2	243	199	162	221		268	224	162	246															14	16	



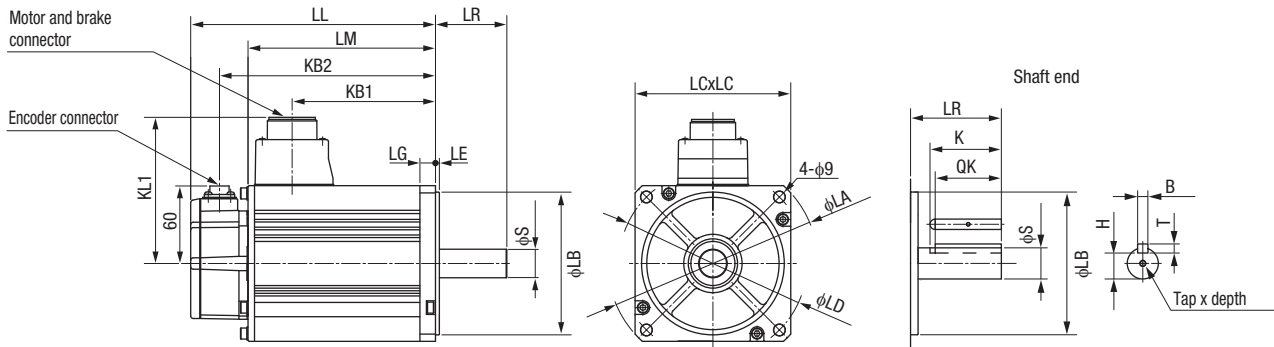
Type 2000 r/min motors (230 V, 1-1.5 kW/400 V, 400 W-5 kW)

Dimensions (mm)		Without brake					With brake					LR	Flange surface							Shaft End Dimensions						Approx. Mass (Kg)																		
Voltage	Model	LL	LM	KB1	KB2	KL1	LL	LM	KB1	KB2	KL1		LA	LB	LC	LD	LE	LG	LZ	S	Tap × Depth	K	QK	H	B	T	Without brake	With brake																
230	1K020(H/T)-_S2	138	94	60	116	116	163	119	60	141	116	55	165	110 ^{h7}	130	145	6	12	9	22 ^{h6}	M5x12L	45	41	18	8 ^{h9}	7	5.2	6.7																
	1K520(H/T)-_S2	155.5	111.5	77.5	133.5		180.5	136.5	77.5	158.5																																6.7	8.2	
400	40020(F/C)-_S2	131.5	87.5	56.5	109.5	101	158.5	114.5	53.5	136.5		65	135	95 ^{h7}	100	115	3	10		19 ^{h6}		42	15.5	6 ^{h9}	6	3.1	4.1																	
	60020(F/C)-_S2	141	97	66	119		168	124	63	146																																3.5	4.5	
	1K020(F/C)-_S2	138	94	60	116	116	163	119	57	141	118																165	110 ^{h7}	130	145	6	12		22 ^{h6}		41	18	8 ^{h9}	7	5.2	6.7			
	1K520(F/C)-_S2	155.5	111.5	77.5	133.5		180.5	136.5	74.5	158.5																																		
	2K020(F/C)-_S2	173	129	95	151		198	154	92	176																																	8	9.5
	3K020(F/C)-_S2	208	164	127	186	118	233	189	127	211																									24 ^{h6}	M8x20L	55	51	20				11	12.6
	4K020(F/C)-_S2	177	133	96	155	140	202	158	96	180	140															70	233	114.3 ^{h7}	176	200	3.2	18	13.5	35 ^{h6}	M12x25L		50	30	10 ^{h9}	8	15.5	18.7		
5K020(F/C)-_S2	196	152	115	174		221	177	115	199																			18.6	21.8															



Type 1000 r/min motors (230 V, 900W / 400 V, 900W - 3 kW)

Dimensions (mm)		Without brake					With brake					LR	Flange surface							Shaft End Dimensions						Approx. Mass (Kg)			
Voltage	Model	LL	LM	KB1	KB2	KL1	LL	LM	KB1	KB2	KL1		LA	LB	LC	LD	LE	LG	LZ	S	Tap × Depth	K	QK	H	B	T	Without brake	With brake	
230	90010(H/T)-_S2	155.5	111.5	77.5	133.5	116	180.5	136.5	77.5	158.5	116	70	165	110 ^{h7}	130	145	6	12	9	22 ^{h6}	M5x12L	45	41	18	8 ^{h9}	7	6.7	8.2	
400	90010(F/C)-_S2								74.5	118																			
	2K010(F/C)-_S2	163.5	119.5	82.5	141.5	140	188.5	144.5	82.5	166.5	140	80	233	114.3 ^{h7}	176	200	3.2	18	13.5	35 ^{h6}	M12x25L	55	50	30	10 ^{h9}	8	14	17.5	
	3K010(F/C)-_S2	209.5	165.5	128.5	187.5		234.5	190.5	128.5	212.5																		20	23.5





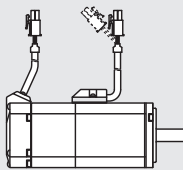
Compact in size, big in features

A wide range of compact servo motors to meet all application needs. When used with a SmartStep 2 drive, the G-series servo motors offer the simplicity and cost-effectiveness of a stepper with the added advantages of a servo system.

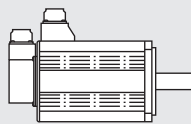
- Peak torque 300% of continuous torque during 3 seconds or more depending on model
- Servo motors supported by SmartStep2, G-Series and Accurax G5 servo drives
- Cylindrical and Flat servo motors types are available
- Encoder accuracy of 10,000 step/rev as standard and 17-bit INC/ABS encoder as optional
- IP65 as standard and shaft oil seal available
- Motors with brake as option

Ordering information

① **G-Series Cylindrical type Servo motor**

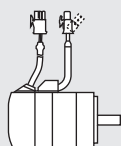


3000 rpm (50-750W)




3000 rpm (1000-1500 W)
2000 rpm (1000-1500 W)
1000 rpm (900 W)

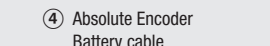
① **G-Series Flat type Servo motor**




3000 rpm (100-400 W)



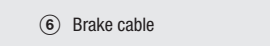
③ Encoder cable



④ Absolute Encoder Battery cable

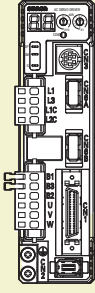


⑤ Power cable

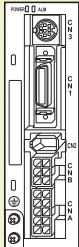


⑥ Brake cable

② **G-Series Servo drive**





② **SmartStep 2 Servo drive**
Servo Drive controlled by pulses




Servo drive

② Refer to G-Series and SmartStep2 servo drive section for detailed drive specifications and selection of drive accessories.


Cylindrical servo motors 3000/2000/1000 r/min (50 - 1.5 kW)

Symbol	Specifications					Compatible servo drives ②		Order code	
	Voltage	Encoder and design	Speed	Design	Rated torque	Capacity	SmartStep2		G-Series
 (50-750 W)	230 V	Incremental encoder (10000 pulses) Straight shaft with key & tap	3000 min ⁻¹	Without brake	0.16 Nm	50 W	R7D-BP01H	R88D-GN01H-ML2	R88M-G05030H-S2
					0.32 Nm	100 W	R7D-BP01H	R88D-GN01H-ML2	R88M-G10030H-S2
					0.64 Nm	200 W	R7D-BP02HH	R88D-GN02H-ML2	R88M-G20030H-S2
					1.3 Nm	400 W	R7D-BP04H	R88D-GN04H-ML2	R88M-G40030H-S2
					2.4 Nm	750 W	R88D-GP08H	R88D-GN08H-ML2	R88M-G75030H-S2
					0.16 Nm	50 W	R7D-BP01H	R88D-GN01H-ML2	R88M-G05030H-BS2
			0.32 Nm	100 W	R7D-BP01H	R88D-GN01H-ML2	R88M-G10030H-BS2		
			0.64 Nm	200 W	R7D-BP02HH	R88D-GN02H-ML2	R88M-G20030H-BS2		
			1.3 Nm	400 W	R7D-BP04H	R88D-GN04H-ML2	R88M-G40030H-BS2		
			2.4 Nm	750 W	R88D-GP08H	R88D-GN08H-ML2	R88M-G75030H-BS2		
			0.16 Nm	50 W	-	R88D-GN01H-ML2	R88M-G05030T-S2		
			0.32 Nm	100 W	-	R88D-GN01H-ML2	R88M-G10030T-S2		
		0.64 Nm	200 W	-	R88D-GN02H-ML2	R88M-G20030T-S2			
		1.3 Nm	400 W	-	R88D-GN04H-ML2	R88M-G40030T-S2			
		2.4 Nm	750 W	-	R88D-GN08H-ML2	R88M-G75030T-S2			
		3.18 Nm	1 kW	-	R88D-GN15H-ML2	R88M-G1K030T-S2			
		4.77 Nm	1.5 kW	-	R88D-GN15H-ML2	R88M-G1K530T-S2			
		0.16 Nm	50 W	-	R88D-GN01H-ML2	R88M-G05030T-BS2			
		0.32 Nm	100 W	-	R88D-GN01H-ML2	R88M-G10030T-BS2			
		0.64 Nm	200 W	-	R88D-GN02H-ML2	R88M-G20030T-BS2			
		1.3 Nm	400 W	-	R88D-GN04H-ML2	R88M-G40030T-BS2			
		2.4 Nm	750 W	-	R88D-GN08H-ML2	R88M-G75030T-BS2			
		3.18 Nm	1 kW	-	R88D-GN15H-ML2	R88M-G1K030T-BS2			
		4.77 Nm	1.5 kW	-	R88D-GN15H-ML2	R88M-G1K530T-BS2			
 (900-1500 W)	Absolute/ incremental encoder (17 bits) Straight shaft with key & tap	2000 min ⁻¹	Without brake	4.8 Nm	1 kW	-	R88D-GN10H-ML2	R88M-G1K020T-S2	
				7.15 Nm	1.5 kW	-	R88D-GN15H-ML2	R88M-G1K520T-S2	
				4.8 Nm	1 kW	-	R88D-GN10H-ML2	R88M-G1K020T-BS2	
		1000 min ⁻¹	Without brake	7.15 Nm	1.5 kW	-	R88D-GN15H-ML2	R88M-G1K520T-BS2	
				8.62 Nm	900 W	-	R88D-GN15H-ML2	R88M-G90010T-S2	
				-	-	-	R88D-GN15H-ML2	R88M-G90010T-BS2	

Flat type servo motors 3000 r/min (100 - 400 W)

Symbol	Specifications				Compatible servo drives ②		Order code	
	Voltage	Encoder and design	Rated torque	Capacity	SmartStep2	G-Series		
	230 V	Incremental encoder (10000 pulses) Straight shaft with key & tap	Without brake	0.32 Nm	100 W	R7D-BP01H	R88D-GN01H-ML2	R88M-GP10030H-S2
				0.64 Nm	200 W	R7D-BP02HH	R88D-GN02H-ML2	R88M-GP20030H-S2
				1.3 Nm	400 W	R7D-BP04H	R88D-GN04H-ML2	R88M-GP40030H-S2
			With brake	0.32 Nm	100 W	R7D-BP01H	R88D-GN01H-ML2	R88M-GP10030H-BS2
				0.64 Nm	200 W	R7D-BP02HH	R88D-GN02H-ML2	R88M-GP20030H-BS2
				1.3 Nm	400 W	R7D-BP04H	R88D-GN04H-ML2	R88M-GP40030H-BS2
		Absolute/ incremental encoder (17 bits) Straight shaft with key & tap	Without brake	0.32 Nm	100 W	-	R88D-GN01H-ML2	R88M-GP10030T-S2
				0.64 Nm	200 W	-	R88D-GN02H-ML2	R88M-GP20030T-S2
				1.3 Nm	400 W	-	R88D-GN04H-ML2	R88M-GP40030T-S2
			With brake	0.32 Nm	100 W	-	R88D-GN01H-ML2	R88M-GP10030T-BS2
				0.64 Nm	200 W	-	R88D-GN02H-ML2	R88M-GP20030T-BS2
				1.3 Nm	400 W	-	R88D-GN04H-ML2	R88M-GP40030T-BS2

Brake cable (for 50-750 W servo motors)

Symbol	Appearance	Specifications	Order code
⑥		Brake cable only. For servomotors from 50 to 750W with brake R88M-G(050/100/200/400/750)30_-BS2, R88M-GP(100/200/400)30_-BS2	1.5 m R88A-CAGA001-5BR-E 3 m R88A-CAGA003BR-E 5 m R88A-CAGA005BR-E 10 m R88A-CAGA010BR-E 15 m R88A-CAGA015BR-E 20 m R88A-CAGA020BR-E

Connectors for power, encoder and brake cables

Specifications	Applicable Servomotor	Order code	
Connectors for power cables	Drive side (CNB)	R88M-G(050/100/200/400)30H_-, R88M-GP(100/200/400)30H_ (SmartStep2 Servo drives only)	R7A-CNB01A
	Motor side	R88M-G(050/100/200/400/750)30_-, R88M-GP(100/200/400)30_	R88A-CNG01A
	Motor side	R88M-G(1K0/1K5)30_-S2, R88M-G(1K0/1K5)20_-S2, R88M-G90010_-S2 (without brake)	MS3108E20-4S
	Motor side	R88M-G(1K0/1K5)30_-BS2, R88M-G(1K0/1K5)20_-BS2, R88M-G90010_-BS2 (with brake)	MS3108E20-18S
Connectors for encoder cables	Drive side (CN2)	-	R88A-CNW01R
	Motor side	R88M-G(050/100/200/400/750)30T_-, R88M-GP(100/200/400)30T_ (Absolute encoder)	R88A-CNG01R
	Motor side	R88M-G(050/100/200/400/750)30H_-, R88M-GP(100/200/400)30H_ (Incremental encoder)	R88A-CNG02R
	Motor side	R88M-G(1K0/1K5)30T_-, R88M-G(1K0/1K5)20T_-, R88M-G90010T_	MS3108E20-29S
Connector for brake cable	Motor side	R88M-G(050/100/200/400/750)30_-BS2, R88M-GP(100/200/400)30_-BS2	R88A-CNG01B

Note: 1. All cables listed are flexible and shielded (except the R88A-CAGA___BR-E which is only a flexible cable)
2. The R88A-CRGC___NR-E, R88A-CAGB___SR-E and R88A-CAGB___BR-E cables have IP67 class (including connector)

Specifications

Cylindrical servo motors 3000/2000/1000 r/min

Applied voltage		230 V									
Servo motor model R88M-__		G05030_	G10030_	G20030_	G40030_	G75030_	G1K030T	G1K530T	G1K020T	G1K520T	G90010T
Rated output	W	50	100	200	400	750	1000	1500	1000	1500	900
Rated torque	N·m	0.16	0.32	0.64	1.3	2.4	3.18	4.77	4.8	7.15	8.62
Instantaneous peak torque	N·m	0.45	0.90	1.78	3.67	7.05	9.1	12.8	13.5	19.6	18.4
Rated current	A (rms)	1.1		1.6	2.6	4	7.2	9.4	5.6	9.4	7.6
Instantaneous max. current	A (rms)	3.4		4.9	7.9	12.1	21.4	28.5	17.1	28.5	17.1
Rated speed	min ⁻¹	3000						2000		1000	
Max. speed	min ⁻¹	5000				4500	5000	3000		2000	
Torque constant	N·m/A (rms)	0.14	0.19	0.41	0.51	0.64	0.44	0.51	0.88	0.76	1.13
Rotor moment of inertia (JM)	kg·m ² ×10 ⁻⁴	0.025	0.051	0.14	0.26	0.87	1.69	2.59	6.17	11.2	
Allowable load moment of inertia (JL)	Multiple of (JM)	30					20	15	10		
Rated power rate	kW/s	10.4	20.1	30.3	62.5	66	60	88	37.3	45.8	66.3
Applicable Encoder		Incremental encoder (10000 pulses)					-				
		Incremental /Absolute encoder(17 bits)									
Allowable radial load	N	68		245		392		490		686	
Allowable thrust load	N	58			98		147		196		
Approx. mass	kg (without brake)	0.3	0.5	0.8	1.2	2.3	4.5	5.1	6.8	8.5	
	kg (with brake)	0.5	0.7	1.3	1.7	3.1	5.1	6.5	8.7	10.1	10
Brake specifications	Rated voltage	24 VDC +/-5%					24 VDC +/-10%				
	Holding brake moment of inertia J	kg·m ² ×10 ⁻⁴		0.002	0.018	0.075	0.25	0.33	1.35		
	Power consumption (at 20°C)	W	7		9		10	18	19	19	
	Current consumption (at 20°C)	A	0.3		0.36		0.42	0.74	0.81	0.59	
	Static friction torque	N·m (minimum)	0.29		1.27		2.45	4.9	7.8	4.9	
	Rise time for holding torque	ms (max.)	35		50		70	50	80	100	
Release time	ms (max)	20		15		20	15	70	50		
Basic specifications	Rating	Continuous									
	Insulation grade	Type B					Type F				
	Ambient operating/ storage temperature	0 to +40°C/ -20 to 65°C					0 to +40°C/ -20 to 80°C				
	Ambient operating/ storage humidity	85% RH max. (non-condensing)									
	Vibration class	V-15									
	Insulation resistance	20 MΩ min. at 500 VDC between the power terminals and FG terminal									
	Enclosure	Totally-enclosed, self-cooling, IP65 (excluding shaft opening and lead wire ends)									
	Vibration resistance	Vibration acceleration 49 m/s ²					Vibration acceleration 24.5 m/s ²				
Mounting	Flange-mounted										

Flat servo motors 3000 r/min

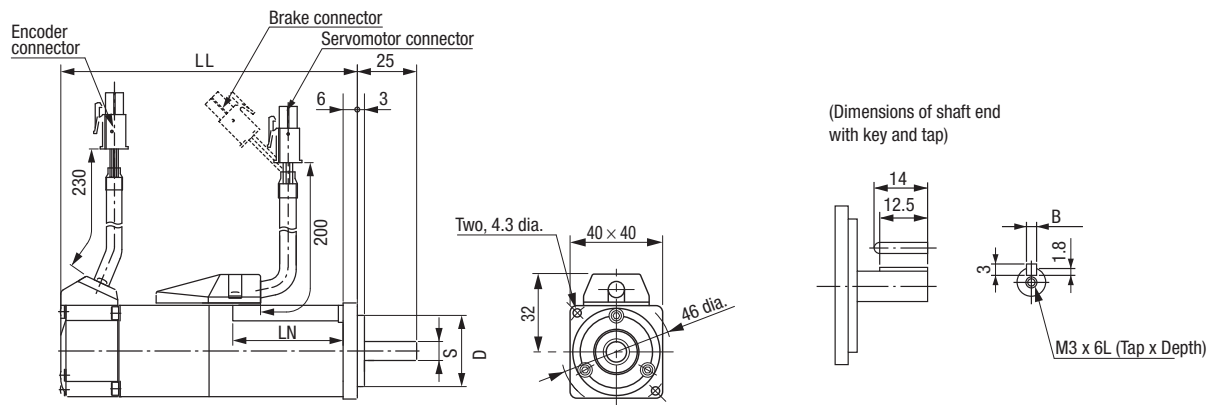
Applied voltage		230 V		
Servo motor model R88M-__		GP10030_	GP20030_	GP40030_
Rated output	W	100	200	400
Rated torque	N·m	0.32	0.64	1.3
Instantaneous peak torque	N·m	0.86	1.8	3.65
Rated current	A (rms)	1	1.6	2.5
Instantaneous max. current	A (rms)	3.1	4.9	7.5
Rated speed	min ⁻¹	3000		

Applied voltage		230 V		
Servo motor model R88M-__		GP10030_	GP20030_	GP40030_
Max. speed	min ⁻¹	5000		
Torque constant	N·m/A (rms)	0.34	0.42	0.54
Rotor moment of inertia (JM)	kg·m ² ×10 ⁻⁴	0.1	0.35	0.64
Allowable load moment of inertia (JL)	Multiple of (JM)	20		
Rated power rate	kW/s	10.2	11.5	25.5
Applicable encoder		Incremental (10000 pulses) Incremental /Absolute encoder(17 bits)		
Allowable radial load	N	68	245	
Allowable thrust load	N	58	98	
Approx. mass		kg (without brake)	0.7	1.3
		kg (with brake)	0.9	2
Brake specifications	Rated voltage	24VDC +/-10%		
	Holding brake moment of inertia J	kg·m ² ×10 ⁻⁴	0.03	0.09
	Power consumption (at 20°C)	W	7	10
	Current consumption (at 20°C)	A	0.29	0.41
	Static friction torque	N·m (minimum)	0.29	1.27
	Rise time for holding torque	ms (max.)	50	60
	Release time	ms (max)	15	
Basic specifications	Rating	Continuous		
	Insulation grade	Type B		
	Ambient operating/ storage temperature	0 to +40 °C/ -20 to 80°C		
	Ambient operating/ storage humidity	85% RH max. (non-condensing)		
	Vibration class	V-15		
	Insulation resistance	20 MΩ min. at 500 VDC between the power terminals and FG terminal		
	Enclosure	Totally-enclosed, self-cooling, IP65 (excluding shaft opening and lead wire ends)		
	Vibration resistance	Vibration acceleration 49 m/s ²		
	Mounting	Flange-mounted		

Dimensions

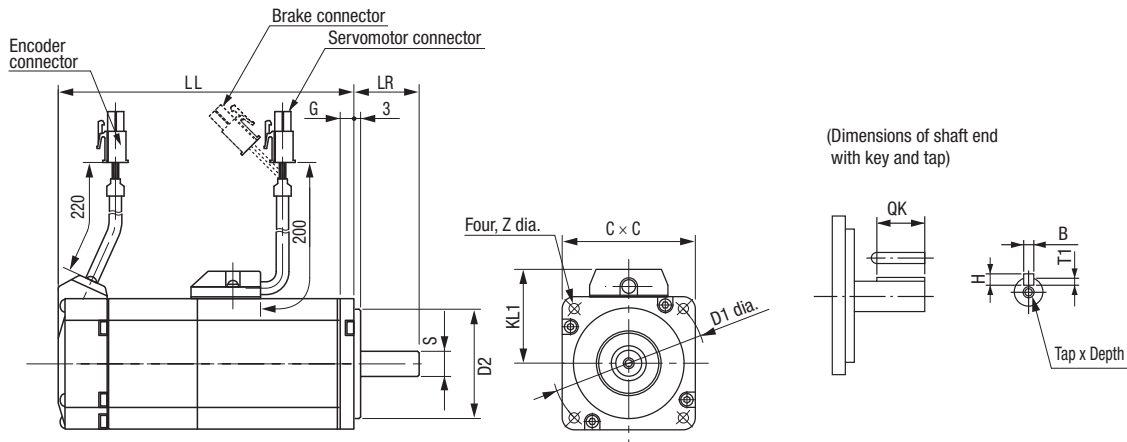
Cylindrical type 3000 r/min (230 V, 50-100 W)

Dimensions (mm)	Without brake	With brake	LN	Flange surface	Shaft end		Approx. mass (kg)	
Model	LL	LL		D	S	B	Without brake	With brake
R88M-G05030_-S2	72	102	26.5	30 ^{h7}	8 ^{h6}	3 ^{h9}	0.3	0.5
R88M-G10030_-S2	92	122	46.5				0.5	0.7



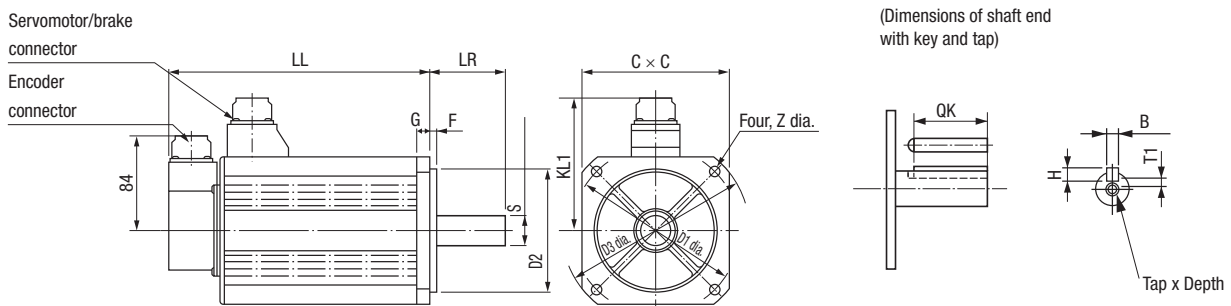
Cylindrical type 3000 r/min (230 V, 200-750 W)

Dimensions (mm)	Without brake		With brake		Flange surface					Shaft end					Approx. mass (kg)		
	LL	LL	LR	KL1	D1	D2	C	G	Z	S	QK	B	H	T1	Tap x depth	Without brake	With brake
R88M-G20030_-S2	79.5	116	30	43	70	50 ^{h7}	60	6.5	4.5	11 ^{h6}	18	4 ^{h9}	4	2.5	M4x8L	0.8	1.3
R88M-G40030_-S2	99	135.5								14 ^{h6}	22.5	5 ^{h9}	5	3	M5x10L	1.2	1.7
R88M-G75030_-S2	112.2	149.2	35	53	90	70 ^{h7}	80	8	6	19 ^{h6}	22	6 ^{h9}	6	3.5		2.3	3.1



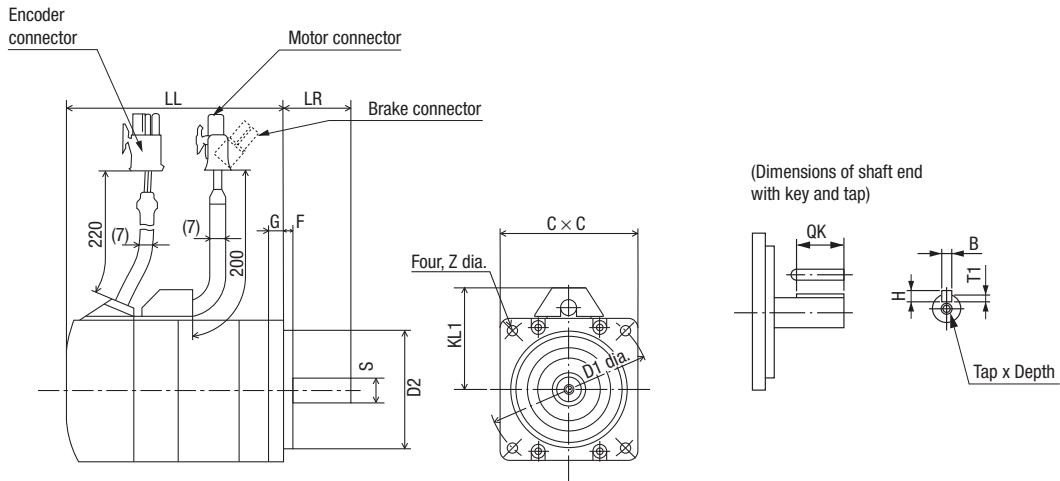
Cylindrical type 3000, 2000 and 1000 r/min (230 V, 900 kW - 1.5 kW)

Dimensions (mm)	Without brake		With brake		Flange surface							Shaft end					Approx. mass (kg)		
	LL	LL	LR	KL1	D1	D2	D3	C	G	F	Z	S	QK	B	H	T1	Tap x depth	Without brake	With brake
R88M-G1K030T_-S2	175	200	55	98	100	80 ^{h7}	120	90	7	3	6.6	19 ^{h6}	42	6 ^{h9}	6	3.5	M5x12L	4.5	5.1
R88M-G1K530T_-S2	180	205			103	115	95 ^{h7}	135	100	10	9							5.1	6.5
R88M-G1K020T_-S2	150	175			118	145	110 ^{h7}	165	130	12	6	22 ^{h6}	41	8 ^{h9}	7	4		6.8	8.7
R88M-G1K520T_-S2	175	200																8.5	10.1
R88M-G90010T_-S2	175	200	70																10



Flat type 3000 r/min (230 V, 100 W - 400 W)

Dimensions (mm)	Without brake		LR	KL1	Flange surface							Shaft end					Approx. mass (kg)	
	LL	LL			D1	D2	C	F	G	Z	S	QK	B	H	T1	Tap x depth	Without brake	With brake
R88M-GP10030H- S2	60.5	84.5	25	43	70	50 ^{h7}	60	3	7	4.5	8 ^{h6}	12.5	3 ^{h9}	3	1.8	M3x6L	0.7	0.9
R88M-GP10030T- S2	87.5	111.5																
R88M-GP20030H- S2	67.5	100	30	53	90	70 ^{h7}	80	5	8	5.5	11 ^{h6}	18	4 ^{h9}	4	2.5	M4x8L	1.3	2
R88M-GP20030T- S2	94.5	127																
R88M-GP40030H- S2	82.5	115									14 ^{h6}	22.5	5 ^{h9}	5	3.0	M5x10L	1.8	2.5
R88M-GP40030T- S2	109.5	142																



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.

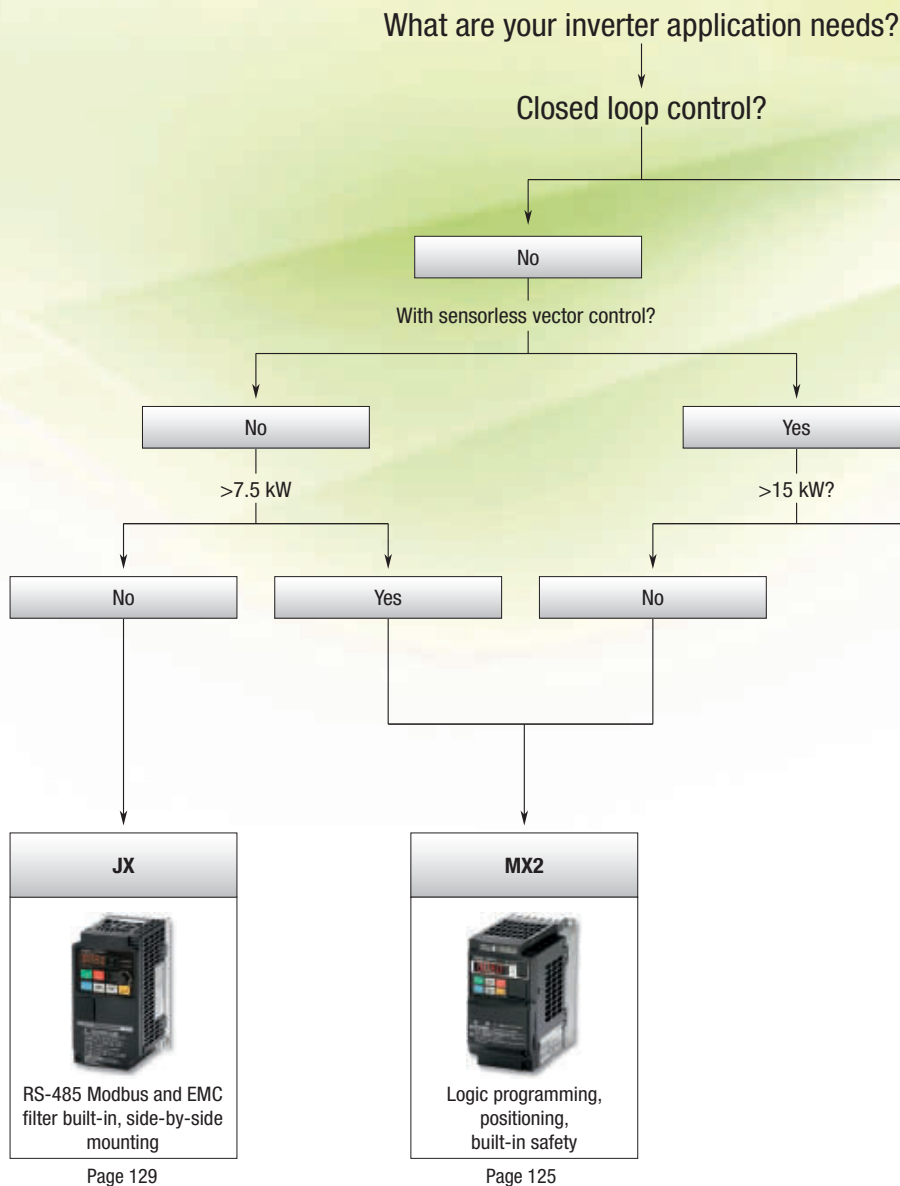
The MX2 is the child of a true leader in machine automation.

200% starting torque

Torque control in open loop

Special motors

One parameter auto-tuning



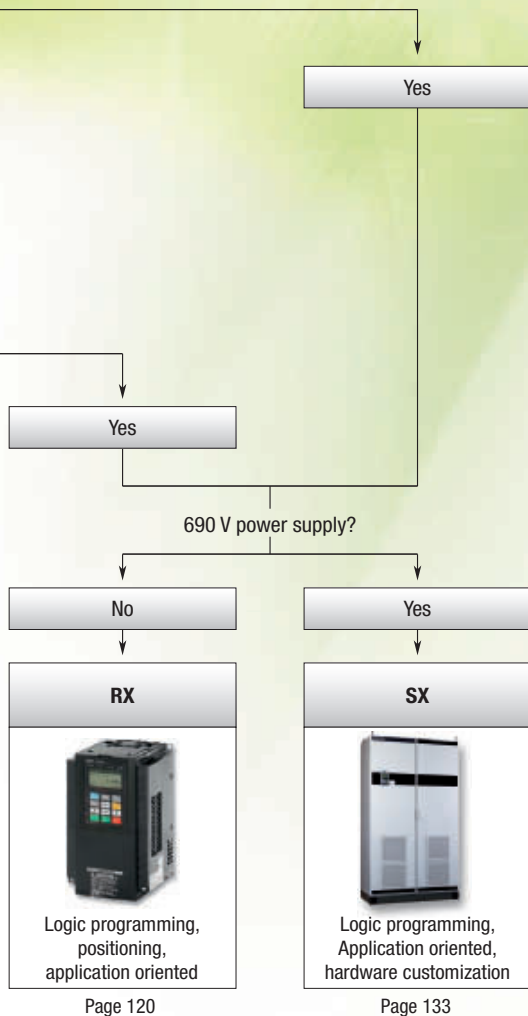
MOTOR CONTROL



- Near stand-still operation (0.5 Hz)
- Smooth control of high inertia loads
- Control of fast cyclic loads
- Ideal for low to medium torque applications
- Can replace a flux vector or servo drive in suitable systems
- Permanent magnet motors
- High speed motors up to 1000 Hz
- Just by entering the kW rating of the motor the MX2 gives you smooth and safe operation




MACHINE CONTROL

- Safety inside**
 - Conforms to safety norm ISO-13849
 - CAT3 performance level PLD
 - 2 Safety inputs
 - External device monitoring (EDM)
- Logic programming**
 - Flow chart programming
 - Intuitive – up to 5 tasks in parallel
- Positioning**
 - Up to 8 pre-set positions with “Homing”
 - Speed synchronisation
- Integrated in the Omron Smart Automation**
 - CX-Drive programming tool connected via integrated USB port on MX2.
 - Modbus RS485 built-in
 - Option units for EtherCAT, Profibus, DeviceNet, ML-II and more...



Model	RX	MX2	JX
			
	Customised to your machine	Born to drive machines	Compact and complete
400 V three-phase	0.4 kW to 132 kW	0.4 kW to 15 kW	0.4 kW to 7.5 kW
200 V three-phase	0.4 kW to 55 kW	0.1 kW to 15 kW	0.2 kW to 7.5 kW
200 V single-phase	N/A	0.1 kW to 2.2 kW	0.2 kW to 2.2 kW
Application	High Performance, built-in know-how functionality	Harmonized motor and machine control	General purpose built-in communications
Control method	Open and Closed loop for Vector and V/F control	Open loop speed and torque control for vector and speed for V/F control	V/F control
Torque features	200% at 0.0 Hz (CLV) 150% at 0.3 Hz (OLV)	200% at 0.5 Hz	150% at 3 Hz
Connectivity	Modbus, DeviceNet, PROFIBUS	Modbus, DeviceNet, PROFIBUS, MECHATROLINK-II EtherCAT, CompoNet	Modbus
Logic Programming	Standard Firmware	Standard Firmware	N/A
Page	120	125	129

Model	SX
	
	High Performance Vector Control
400 V three-phase	90 kW to 800 kW
690 V three-phase	90 kW to 1,000 kW
Application	High Power Flux vector and variable torque applications
Control method	Flux vector and V/F control
Torque features	120% at 0,0 Hz (CLV) 120% at 0,5 Hz (OLV)
Connectivity	Modbus, DeviceNet, PROFIBUS
Logic Programming	Standard Firmware
Customisation options	Hardware customisation (Main switch, Liquid cooling, 12-pulse rectifier, ...)
Page	133

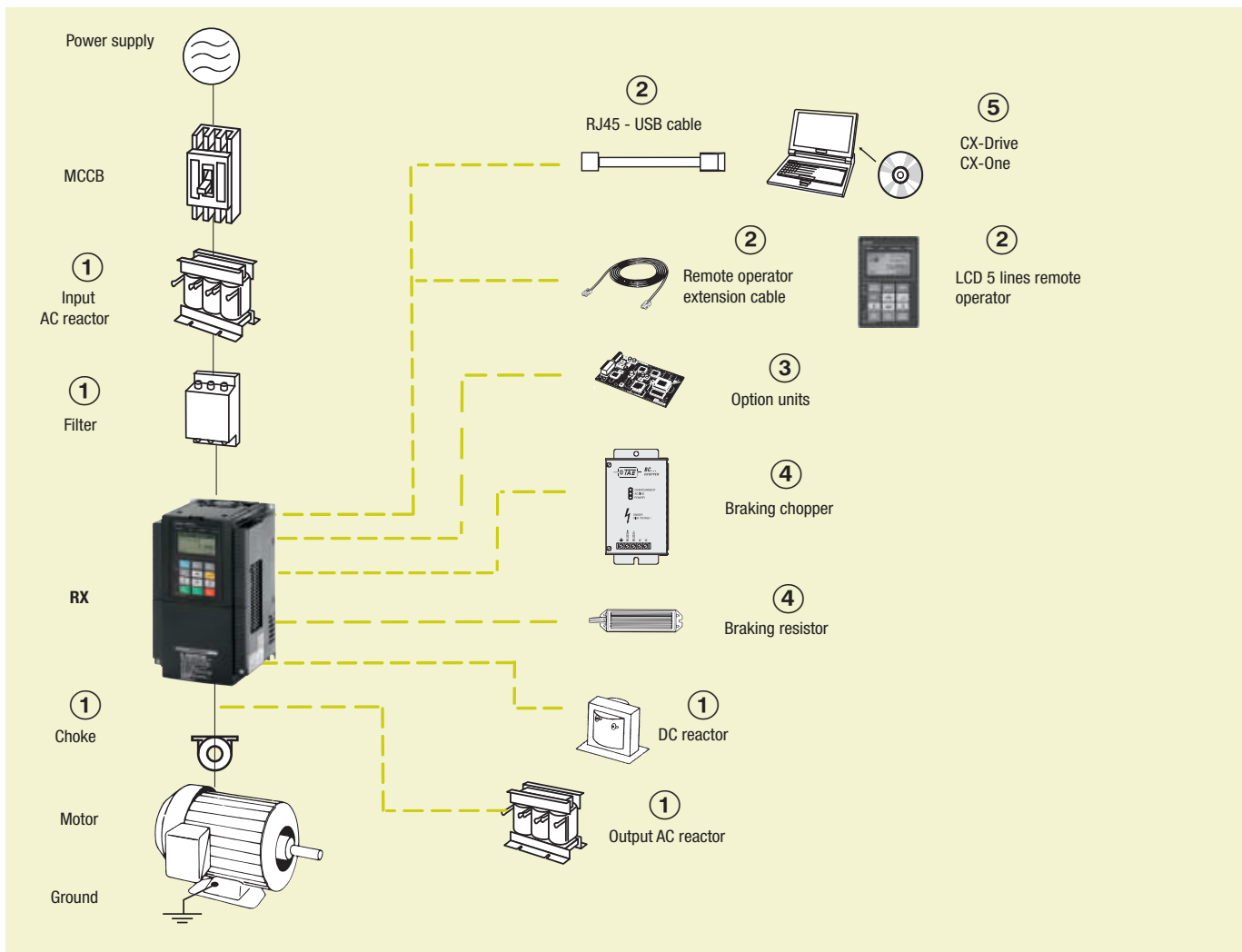


Customised to your machine

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
- Sensor-less vector control at 0 Hz domain
- Sensor-less and vector closed-loop control
- Built-in EMC filter
- Built-in logic programmability
- Built-in application oriented functionality
- Positioning functionality
- Fieldbus communications: Modbus, DeviceNet and PROFIBUS

Ordering information



RX

Specifications				Order code	Specifications				Order code
Voltage class	Max motor kW	Rated current A	Standard		Voltage class	Max motor kW	Rated current A	Standard	
Three-phase 200 V	0.4	3.0	3G3RX-A2004-E1F		Three-phase 400 V	0.4	1.5	3G3RX-A4004-E1F	
	0.75	5.0	3G3RX-A2007-E1F			0.75	2.5	3G3RX-A4007-E1F	
	1.5	7.5	3G3RX-A2015-E1F			1.5	3.8	3G3RX-A4015-E1F	
	2.2	10.5	3G3RX-A2022-E1F			2.2	5.3	3G3RX-A4022-E1F	
	4.0	16.5	3G3RX-A2037-E1F			4.0	9.0	3G3RX-A4040-E1F	
	5.5	24	3G3RX-A2055-E1F			5.5	14	3G3RX-A4055-E1F	
	7.5	32	3G3RX-A2075-E1F			7.5	19	3G3RX-A4075-E1F	
	11	46	3G3RX-A2110-E1F			11	25	3G3RX-A4110-E1F	
	15	64	3G3RX-A2150-E1F			15	32	3G3RX-A4150-E1F	
	18.5	76	3G3RX-A2185-E1F			18.5	38	3G3RX-A4185-E1F	
	22	95	3G3RX-A2220-E1F			22	48	3G3RX-A4220-E1F	
	30	121	3G3RX-A2300-E1F			30	58	3G3RX-A4300-E1F	
	37	145	3G3RX-A2370-E1F			37	75	3G3RX-A4370-E1F	
	45	182	3G3RX-A2450-E1F			45	91	3G3RX-A4450-E1F	
	55	220	3G3RX-A2550-E1F			55	112	3G3RX-A4550-E1F	
	-	-	-			75	149	3G3RX-B4750-E1F	
-	-	-		90	176	3G3RX-B4900-E1F			
-	-	-		110	217	3G3RX-B411K-E1F			
-	-	-		132	260	3G3RX-B413K-E1F			

① Rasmi line filters

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

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

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-RA011500026-DE	A4004 / A4007 / A4015	AX-RA016300038-DE
A2007	AX-RA007600042-DE		
A2015	AX-RA004100075-DE		
A2022	AX-RA003000105-DE	A4022	AX-RA011800053-DE
A2037	AX-RA001830160-DE	A4040	AX-RA007300080-DE
A2055	AX-RA001150220-DE	A4055	AX-RA004600110-DE
A2075	AX-RA000950320-DE	A4075	AX-RA003600160-DE
A2110	AX-RA000630430-DE	A4110	AX-RA002500220-DE
A2150	AX-RA000490640-DE	A4150	AX-RA002000320-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	USB-CONVERTERCABLE

*1 Please note, models with firmware 4287 and 4288, the operator will only display 2 lines of text.

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)	3G3AX-PG
		Pulse train position command input (RS-422)	
		Pulse monitor output (RS-422)	
		PG frequency range: 100 kHz max	
Communication option board	DeviceNet option card	Used for running or stopping the inverter or give frequency reference through DeviceNet	SJ-DN
	PROFIBUS option card	Used for running or stopping the inverter or give frequency reference through PROFIBUS	SJ-PB
Digital input	Digital input option card	Allows to set frequency reference from a digital selection	SJ-DG

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 %			
					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					140	AX-REM00K4075-IE	75	130			
	2.2	2022					90	AX-REM00K4035-IE	35	180			
	4.0	2037					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					40	AX-REM02K1017-IE	17	75			
	15.0	2150				7.5	AX-REM00K9017-IE	17	55	AX-REM03K5010-IE	10	95	
	18.5	2185					75	AX-REM03K5010-IE	10	75	AX-REM19K0008-IE	8	95
	22.0	2220				5		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					190	AX-REM00K2200-IE	200	190			
	2.2	4022					130	AX-REM00K5120-IE	120	200			
	4.0	4040				70	AX-REM00K2120-IE	120	120	AX-REM00K6100-IE	100	140	
	5.5	4055					140	AX-REM00K9070-IE	70	150			
	7.5	4075				35	AX-REM01K9070-IE	100	100	AX-REM01K9070-IE	70	110	
	11.0	4110					50	AX-REM02K1070-IE	70	75			
	15.0	4150				24	AX-REM00K9070-IE	70	55	AX-REM03K5035-IE	35	110	
	18.5	4185					90	AX-REM03K5035-IE	35	90	AX-REM19K0030-IE	30	100
	22.0	4220				20		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										100	
	55.0	4550	4035090-TE	8.5				2 x AX-REM19K0020-IE	10	100			
75.0	4750						3 x AX-REM19K0030-IE	10	75				
90.0	4900	4070130-TE	5.5				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

Specifications

200 V class

Three-phase: 3G3RX-		A2004	A2007	A2015	A2022	A2037	A2055	A2075	A2110	A2150	A2185	A2220	A2300	A2370	A2450	A2550	
Motor kW ^{*1}		0.4	0.75	1.5	2.2	4.0	5.5	7.5	11	15	18.5	22	30	37	45	55	
Output characteristics	Inverter capacity kVA	200 V	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
		240 V	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
	Rated output current (A)		3.0	5.0	7.5	10.5	16.5	24	32	46	64	76	95	121	145	182	220
	Max. output voltage		Proportional to input voltage: 0..240 V														
Max. output frequency		400 Hz															
Power supply	Rated input voltage and frequency		3-phase 200..240 V 50/60 Hz														
	Allowable voltage fluctuation		-15%..+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.

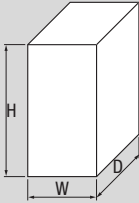
400 V class

Three-phase: 3G3RX-		A4004	A4007	A4015	A4022	A4040	A4055	A4075	A4110	A4150	A4185	A4220	A4300	A4370	A4450	A4550	B4750	B4900	B411K	B413K		
Motor kW ^{*1}		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		
Output characteristics	Inverter capacity kVA	400 V	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	
		480 V	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	
	Rated output current (A)		1.5	2.5	3.8	5.3	9.0	14	19	25	32	38	48	58	75	91	112	149	176	217	260	
	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	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				Weight (KG)
		H	W	D		
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					
	3G3RX-A2185	390	250	190	14	
	3G3RX-A2220					
	3G3RX-A2300					
	3G3RX-A2370	540	310	195	20	
	3G3RX-A2450					
3G3RX-A2550	550	390	250	30		
	700	480	250	43		

Voltage class	Inverter model	Dimensions in mm			Weight (KG)	
		H	W	D		
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					
	3G3RX-A4370	550	390	250	30	
	3G3RX-A4450					
	3G3RX-A4550					
	3G3RX-B4750	700	390	268	60	
	3G3RX-B4900					
	3G3RX-B411K	740	480	270	80	
3G3RX-B413K						

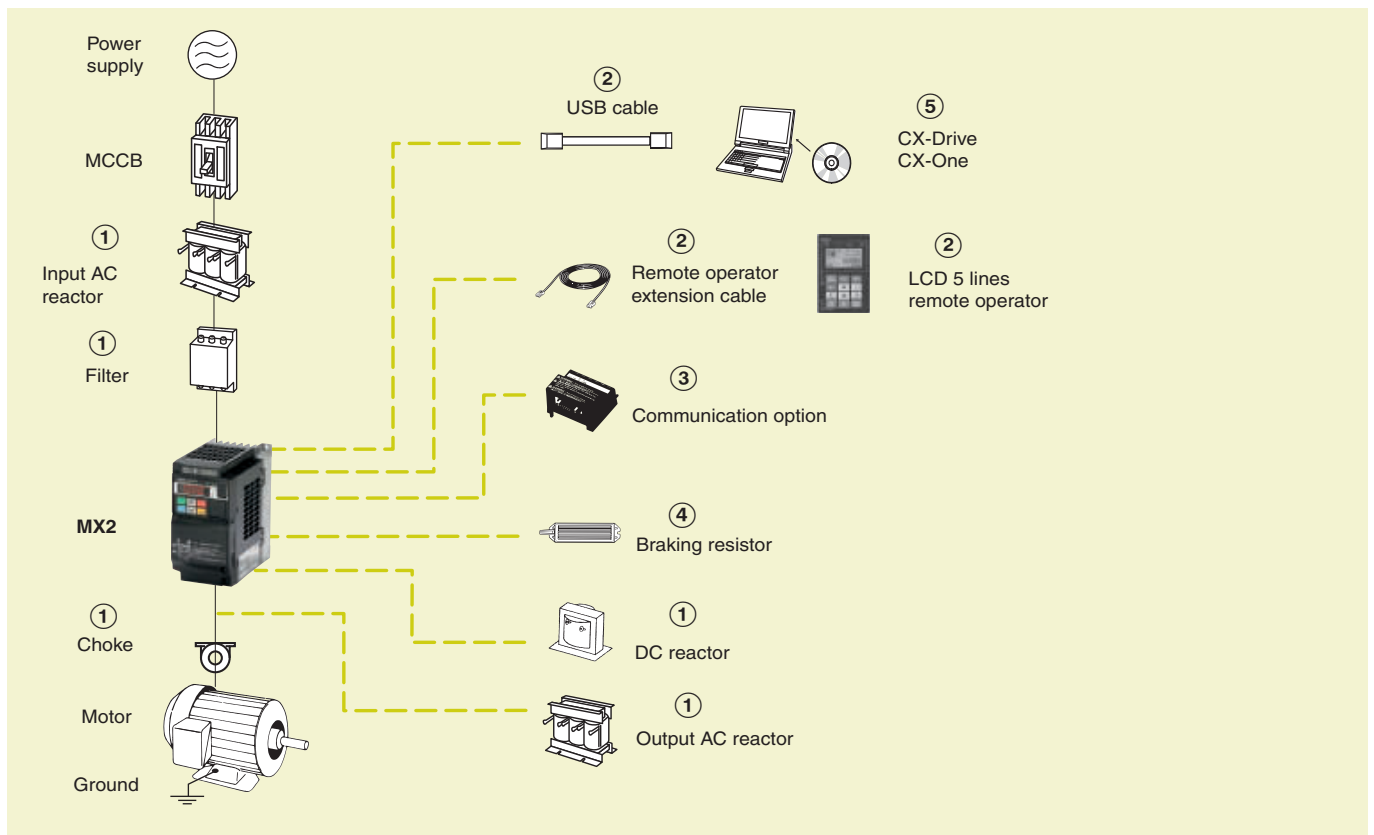


Born to drive machines

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
- High speed motors up to 1000 Hz and 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

Ordering information



MX2

Voltage class	Constant torque		Variable torque		Order code
	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
	0.2	1.6	0.4	1.9	3G3MX2-AB002-E
	0.4	3.0	0.55	3.5	3G3MX2-AB004-E
	0.75	5.0	1.1	6.0	3G3MX2-AB007-E
	1.5	8.0	2.2	9.6	3G3MX2-AB015-E
	2.2	11.0	3.0	12.0	3G3MX2-AB022-E
Three-phase 200 V	0.1	1.0	0.2	1.2	3G3MX2-A2001-E
	0.2	1.6	0.4	1.9	3G3MX2-A2002-E
	0.4	3.0	0.55	3.5	3G3MX2-A2004-E
	0.75	5.0	1.1	6.0	3G3MX2-A2007-E
	1.5	8.0	2.2	9.6	3G3MX2-A2015-E
	2.2	11.0	3.0	12.0	3G3MX2-A2022-E
	3.7	17.5	5.5	19.6	3G3MX2-A2037-E
	5.5	25.0	7.5	30.0	3G3MX2-A2055-E
	7.5	33.0	11	40.0	3G3MX2-A2075-E
11	47.0	15	56.0	3G3MX2-A2110-E	
15	60.0	18.5	69.0	3G3MX2-A2150-E	

Voltage class	Constant torque		Variable torque		Order code
	Max motor kW	Rated current A	Max motor kW	Rated current A	Standard
Three-phase 400 V	0.4	1.8	0.75	2.1	3G3MX2-A4004-E
	0.75	3.4	1.5	4.1	3G3MX2-A4007-E
	1.5	4.8	2.2	5.4	3G3MX2-A4015-E
	2.2	5.5	3.0	6.9	3G3MX2-A4022-E
	3.0	7.2	4.0	8.8	3G3MX2-A4030-E
	4.0	9.2	5.5	11.1	3G3MX2-A4040-E
	5.5	14.8	7.5	17.5	3G3MX2-A4055-E
	7.5	18.0	11	23.0	3G3MX2-A4075-E
	11	24.0	15	31.0	3G3MX2-A4110-E
	15	31.0	18.5	38.0	3G3MX2-A4150-E

① Line filters

Inverter		Line filter Rasmi	
Voltage	Model 3G3MX2-__	Rated current (A)	Reference
1-Phase 200 VAC	AB001/AB002/AB004	10	AX-FIM1010-RE
	AB007	14	AX-FIM1014-RE
	AB015/AB022	24	AX-FIM1024-RE
3-Phase 200 VAC	A2001/A2002/A2004/A2007	10	AX-FIM2010-RE
	A2015/A2022	20	AX-FIM2020-RE
	A2037	30	AX-FIM2030-RE
	A2055/A2075	60	AX-FIM2060-RE
	A2110	80	AX-FIM2080-RE
	A2150	100	AX-FIM2100-RE
3-Phase 400 VAC	A4004/A4007	5	AX-FIM3005-RE
	A4015/A4022/A4030	10	AX-FIM3010-RE
	A4040	14	AX-FIM3014-RE
	A4055/A4075	23	AX-FIM3030-RE
	A4110/A4150	50	AX-FIM3050-RE

① Input AC reactors

Inverter		AC Reactor
Voltage	Model 3G3MX2-__	Order code
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
		Under development
1-Phase 200 VAC	AB002/AB004 AB007 AB015/AB022	
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

200V single phase		200V 3-phase		400V 3-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	Model
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	A2001/A2002/A2004/ AB001/AB002/AB004	AX-RA011500026-DE
	A2007/AB007	AX-RA007600042-DE
	A2015/AB015	AX-RA004100075-DE
	A2022/AB022	AX-RA003000105-DE
	A2037	AX-RA001830160-DE
	A2055	AX-RA001150220-DE
	A2075	AX-RA000950320-DE
400 VAC	A4004/A4007/A4015	AX-RA016300038-DE
	A4022	AX-RA011800053-DE
	A4030/A4040	AX-RA007300080-DE
	A4055	AX-RA004600110-DE
	A4075	AX-RA003600160-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	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	PC configuration cable	Mini USB to USB connector cable	AX-CUSBM002-E

③ Communication option boards

Description	Functions	Model
PROFIBUS option card	Used for running or stopping the inverter, setting or referencing parameters, and monitoring output frequency, output current, or similar items through PROFIBUS communications with the host controller.	3G3AX-MX2-PRT
DeviceNet option card	Used for running or stopping the inverter, setting or referencing parameters, and monitoring output frequency, output current, or similar items through DeviceNet communications with the host controller.	3G3AX-MX2-DRT
Ethercat option card	Used for running or stopping the inverter, setting or referencing parameters, and monitoring output frequency, output current, or similar items through EtherCAT communications with the host controller.	3G3AX-MX2-ECT
CompoNet option card	Used for running or stopping the inverter, setting or referencing parameters, and monitoring output frequency, output current, or similar items through CompoNet communications with the host controller.	3G3AX-MX2-CRT
Mechatrolink II option card	Used for running or stopping the inverter, setting or referencing parameters, and monitoring output frequency, output current, or similar items through MECHATROLINK-II communications with the host controller.	3G3AX-MX2-ML2
CanOpen option card	Under development	3G3AX-MX2-CORT

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 %			
		3-phase	1-phase		Type AX-	Resist Ω		Type AX-	Resist Ω				
											Type AX-	Resist Ω	
200 V (single-/three-phase)	0.12	2001	B001	100	AX-REM00K1400-IE	400	200	AX-REM00K1400-IE	400	200			
	0.25	2002	B002					180			180		
	0.55	2004	B004			AX-REM00K1200-IE	200	180	AX-REM00K1200-IE	200	180		
	1.1	2007	B007	50			100	AX-REM00K2070-IE	70	200			
	1.5	2015	B015			AX-REM00K2070-IE		70	140	AX-REM00K4075-IE	75	130	
	2.2	2022	B022	35			90	AX-REM00K4035-IE	35	180			
	4.0	2040	-			AX-REM00K4075-IE		75	50	AX-REM00K6035-IE	35	100	
	5.5	2055	-	20			35	AX-REM00K4035-IE	35	75	AX-REM00K9020-IE	20	150
	7.5	2075	-					55	AX-REM01K9017-IE	17	110		
	11	2110	-	10			35	AX-REM00K6035-IE	35	40	AX-REM02K1017-IE	17	75
15	2150	-			AX-REM00K9017-IE	17		55	AX-REM03K5010-IE	10	95		
					AX-REM00K1400-IE	400		200	AX-REM00K1400-IE	400	200		
400 V (three-phase)	0.55	4004	-	180			200			200			
	1.1	4007	-					200			200		
	1.5	4015	-			AX-REM00K1200-IE	200	190	AX-REM00K2200-IE	200	190		
	2.2	4022	-	100			200	AX-REM00K2200-IE	200	130	AX-REM00K5120-IE	120	200
	3.0	4030	-			AX-REM00K2120-IE		120	160			160	
	4.0	4040	-	70			120			100	140		
	5.5	4055	-			AX-REM00K4075-IE		75	140	AX-REM00K9070-IE	70	150	
	7.5	4075	-					100	100	AX-REM01K9070-IE	70	110	
	11	4110	-	35			100			70	75		
						AX-REM00K6100-IE		100	50	AX-REM02K1070-IE	70	75	
15	4150	-			AX-REM00K9070-IE	70		55	AX-REM03K5035-IE	35	110		

⑤ Computer software

Description	Installation	Model
Computer software	Configuration and monitoring software tool	CX-drive
Computer software	Configuration and monitoring software tool	CX-One

Specifications

200 V class

Single-phase: 3G3MX2- _{__}		AB001	AB002	AB004	AB007 ^{*1}	AB015	AB022	-	-	-	-	-	
Three-phase: 3G3MX2- _{__}		A2001	A2002	A2004	A2007	A2015	A2022	A2037	A2055	A2075	A2110	A2150	
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	69.0	
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	1000 Hz ^{*3}											
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%: <50 Hz				70%: <50 Hz		Approx 20%		-			
	At capacitor feedback	50%: <60 Hz				50%: <60 Hz							
Cooling method		Self cooling				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 Above 400 Hz with some function limitation.

400 V class

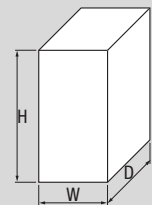
Three-phase: 3G3MX2_		A4004	A4007	A4015	A4022	A4030	A4040	A4055	A4075	A4110	A4150	
Motor kW ^{*1}	For VT setting	0.75	1.5	2.2	3.0	4.0	5.5	7.5	11	15	18.5	
	For CT setting	0.4	0.75	1.5	2.2	3.0	4.0	5.5	7.5	11	15	
Output characteristics	Inverter capacity kVA	380 VT	1.3	2.6	3.5	4.5	5.7	7.3	11.5	15.1	20.4	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		1000 Hz ^{*2}										
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	100%: <50Hz				70%: <50Hz		-				
	At capacitor feedback	50%: <60Hz				50%: <60Hz						
Cooling method		Self cooling			Forced-air-cooling							

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

*2 Above 400 Hz with some function limitation.

Dimensions

Voltage class	Inverter model	Dimensions in mm				Weight (KG)	
		H	W	D			
Single-phase 200 V	3G3MX2-AB001	128	68	109	1.0		
	3G3MX2-AB002				1.0		
	3G3MX2-AB004			123	1.1		
	3G3MX2-AB007	108	170.5	146	1.4		
	3G3MX2-AB015				1.8		
	3G3MX2-AB022				1.8		
Three-phase 200 V	3G3MX2-A2001	128	68	109	1.0		
	3G3MX2-A2002				1.0		
	3G3MX2-A2004			113	1.1		
	3G3MX2-A2007	108	170.5	146	1.2		
	3G3MX2-A2015				1.6		
	3G3MX2-A2022				1.8		
	3G3MX2-A2037	128	140	170.5	2.0		
	3G3MX2-A2055	260	140	155	3.0		
	3G3MX2-A2075				3.4		
	3G3MX2-A2110				5.1		
	3G3MX2-A2150	350	220	175	7.4		
	Three-phase 400 V	3G3MX2-A4004	128	108	144	1.5	
3G3MX2-A4007					1.6		
3G3MX2-A4015					1.8		
3G3MX2-A4022					1.9		
3G3MX2-A4030					1.9		
3G3MX2-A4040		140	171	171	2.1		
3G3MX2-A4055					3.5		
3G3MX2-A4075					3.5		
3G3MX2-A4110				296	180	175	4.7
3G3MX2-A4150					5.2		



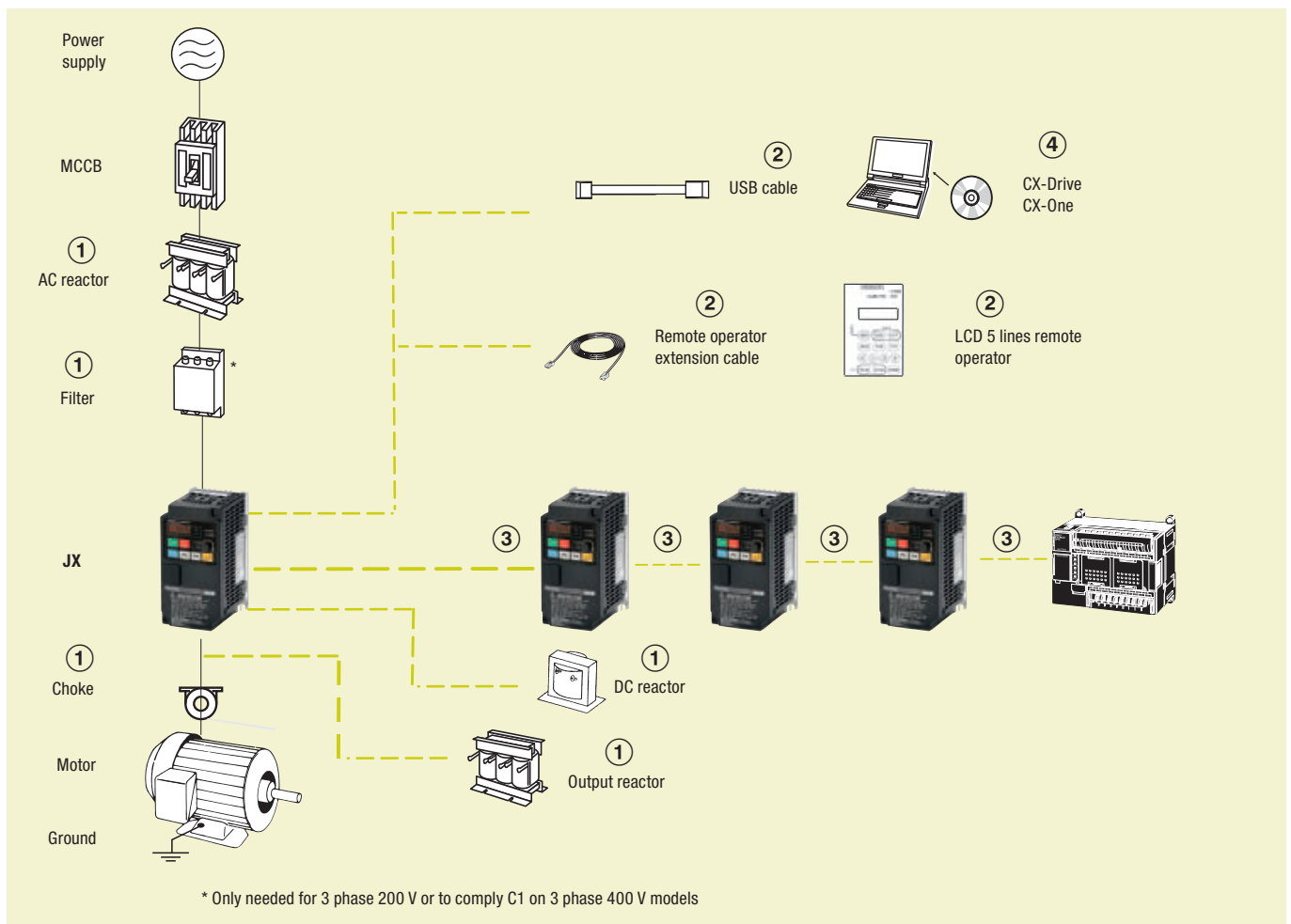


Compact and complete

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



JX

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
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	3G3JX-A4055-EF
	7.5	16	3G3JX-A4075-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 3-phase		400 V 3-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		AC Reactor
Voltage	Model 3G3JX-__	Order code
200 VAC	A2001/A2002/A2004/AB001/AB002/AB004	AX-RA011500026-DE
	A2007/AB007	AX-RA007600042-DE
	A2015/AB015	AX-RA004100075-DE
	A2022/AB022	AX-RA003000105-DE
	A2037	AX-RA001830160-DE
	A2055	AX-RA001150220-DE
	A2075	AX-RA000950320-DE
400 VAC	A4004/A4007/A4015	AX-RA016300038-DE
	A4022	AX-RA011800053-DE
	A4040	AX-RA007300080-DE
	A4055	AX-RA004600110-DE
	A4075	AX-RA003600160-DE

② Accessories

Types	Description	Functions	Order code
Digital operator	LCD remote operator	5 Line LCD ^{*1} remote operator with copy function, cable length max. 3 m	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
	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 JX 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

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...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								
	Rated input current (A)	Single-phase 200 V	3.1	5.8	9.0	16.0	22.5	—	—	—
		Three-phase 200 V	1.8	3.4	5.2	9.3	13.0	20.0	30.0	40.0
	Allowable voltage fluctuation	-15%...+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 20 to 40% for 1-phase		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.

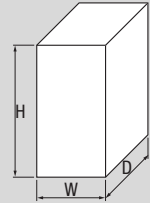
400 V class

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...480 V						
	Max. output frequency	400 Hz							
Power supply	Rated input voltage and frequency	3-phase 380...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%...+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 3G3JX_	Dimensions in mm			
			H	W	D	Weight
Single-phase 200 V	0.2	AB002	155	80	95.5	0.8
	0.4	AB004			109.5	0.9
	0.75	AB007	189	110	130.5	1.5
	1.5	AB015			157.5	2.3
	2.2	AB022			157.5	2.4
Three-phase 200 V	0.2	A2002	155	80	95.5	0.8
	0.4	A2004			109.5	0.9
	0.75	A2007	189	110	132.5	1.1
	1.5	A2015			157.5	2.2
	2.2	A2022			157.5	2.4
	3.7	A2037	250	180	167.5	4.2
	5.5	A2055				
	7.5	A2075				
Three-phase 400 V	0.4	A4004	189	110	130.5	1.5
	0.75	A4007			157.5	2.3
	1.5	A4015	250	180	167.5	4.2
	2.2	A4022				
	4.0	A4040				
	5.5	A4055				
7.5	A4075					



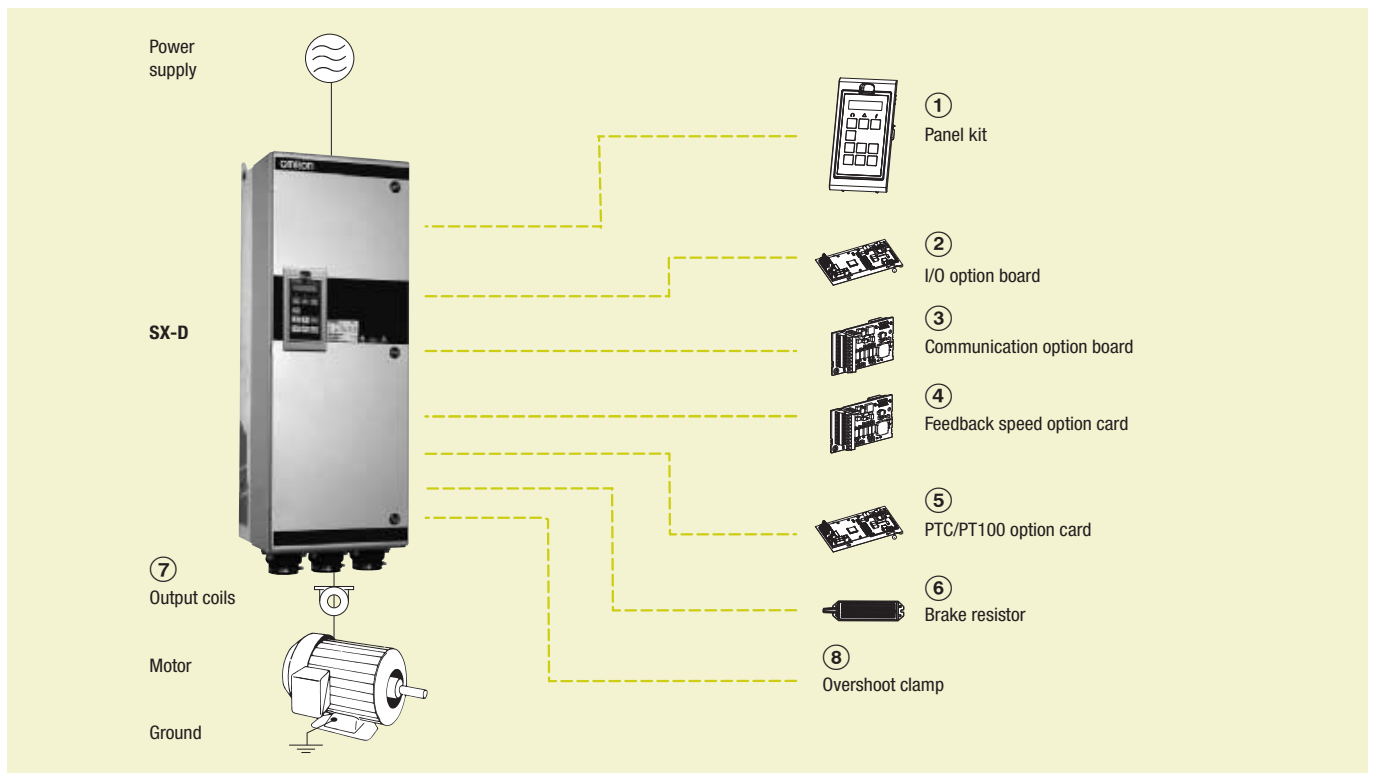


Force & flow in harmony

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-690 V power supply from 90 kW up to 1 MW
- IP54 full range.
- Compact design & Robustness
- Built-in EMC filter for complete family and fuses from 200 kW
- Safety according EN13849-1 and EN62061 standards
- Logic programmability
- Hardware customization
- Fieldbus communications: Modbus, DeviceNet and PROFIBUS

Ordering information



SX-D

Specifications				Order code		
Voltage	Heavy Duty		Normal Duty		Direct torque control	V/F
400 V	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-EF	SX-D4160-EV
	160 kW	300 A	200 kW	375 A	SX-D4200-EF	SX-D4200-EV
	200 kW	344 A	220 kW	430 A	SX-D4220-EF	SX-D4220-EV
	220 kW	400 A	250 kW	500 A	SX-D4250-EF	SX-D4250-EV
	250 kW	480 A	315 kW	600 A	SX-D4315-EF	SX-D4315-EV
	315 kW	520 A	355 kW	650 A	SX-D4355-EF	SX-D4355-EV
	355 kW	600 A	400 kW	750 A	SX-D4400-EF	SX-D4400-EV
	400 kW	688 A	450 kW	680 A	SX-D4450-EF	SX-D4450-EV
	450 kW	800 A	500 kW	1000 A	SX-D4500-EF	SX-D4500-EV
	500 kW	960 A	630 kW	1200 A	SX-D4630-EF	SX-D4630-EV
	630 kW	1200 A	800 kW	1500 A	SX-D4800-EF	SX-D4800-EV

Specifications					Order code	
Voltage	Heavy Duty		Normal Duty		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-EF	SX-D6200-EV
	200 kW	200 A	250 kW	250 A	SX-D6250-EF	SX-D6250-EV
	250 kW	240 A	315 kW	300 A	SX-D6315-EF	SX-D6315-EV
	315 kW	300 A	355 kW	375 A	SX-D6355-EF	SX-D6355-EV
	315 kW	344 A	450 kW	430 A	SX-D6450-EF	SX-D6450-EV
	355 kW	400 A	500 kW	500 A	SX-D6500-EF	SX-D6500-EV
	450 kW	480 A	600 kW	600 A	SX-D6600-EF	SX-D6600-EV
	500 kW	520 A	630 kW	650 A	SX-D6630-EF	SX-D6630-EV
	600 kW	600 A	710 kW	750 A	SX-D6710-EF	SX-D6710-EV
	650 kW	688 A	800 kW	860 A	SX-D6800-EF	SX-D6800-EV
	710 kW	720 A	900 kW	900 A	SX-D6900-EF	SX-D6900-EV
800 kW	800 A	1000 kW	1000 A	SX-D61K0-EF	SX-D61K0-EV	

① Panel Kit

Description	Function	Order code
Panel kit	Panel kit complete including panel	01-3957-00
Blank panel kit	Panel kit complete including blank panel	01-3957-01

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 option card	Used for operating the inverter through PROFIBUS-DP communication with the host controller.	01-3876-05
DeviceNet option card	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

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.

400 V				600 V			
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		500-525 VAC	550-600 VAC	660-690 VAC	
3.8	3.8	4.4	SX-D4090-EF	4.9	5.7	6.5	SX-D6090-EF
2.7	2.7	3.1	SX-D4110-EF	4.9	5.7	6.5	SX-D6110-EF
2.7	2.7	3.1	SX-D4132-EF	4.9	5.7	6.5	SX-D6132-EF
2 x 3.8	2 x 3.8	2 x 4.4	SX-D4160-EF	4.9	5.7	6.5	SX-D6160-EF
2 x 3.8	2 x 3.8	2 x 4.4	SX-D4200-EF	2 x 4.9	2 x 5.7	2 x 6.5	SX-D6200-EF
2 x 2.7	2 x 2.7	2 x 3.1	SX-D4220-EF	2 x 4.9	2 x 5.7	2 x 6.5	SX-D6250-EF
2 x 2.7	2 x 2.7	2 x 3.1	SX-D4250-EF	2 x 4.9	2 x 5.7	2 x 6.5	SX-D6315-EF
3 x 2.7	3 x 2.7	3 x 3.1	SX-D4315-EF	2 x 4.9	2 x 5.7	2 x 6.5	SX-D6355-EF
3 x 2.7	3 x 2.7	3 x 3.1	SX-D4355-EF	3 x 4.9	3 x 5.7	3 x 5.7	SX-D6450-EF
3 x 2.7	3 x 2.7	3 x 3.1	SX-D4400-EF	3 x 4.9	3 x 5.7	3 x 5.7	SX-D6500-EF
4 x 2.7	4 x 2.7	4 x 3.1	SX-D4450-EF	4 x 4.9	4 x 5.7	4 x 5.7	SX-D6600-EF
4 x 2.7	4 x 2.7	4 x 3.1	SX-D4500-EF	4 x 4.9	4 x 5.7	4 x 5.7	SX-D6630-EF
6 x 2.7	6 x 2.7	6 x 3.1	SX-D4630-EF	6 x 4.9	6 x 5.7	6 x 5.7	SX-D6710-EF
6 x 2.7	6 x 2.7	6 x 3.1	SX-D4800-EF	6 x 4.9	6 x 5.7	6 x 5.7	SX-D6800-EF
				6 x 4.9	6 x 5.7	6 x 5.7	SX-D6900-EF
				6 x 4.9	6 x 5.7	6 x 5.7	SX-D61K0-EF

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

Supply voltage (VAC)	Built-in brake chopper trigger level (VDC)
500-525	860
550-600	1000
660-690	1150

⑦ Output coils

Output coils above SX-D4132-EF for the 400V and SX-D6160-EF 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
400V	SX-D4090-EF	175A	0.05 mH	800V	6 KHz	200 Hz	40°C	473171 00
	SX-D4110-EF	275A	0.032 mH		1.5 kHz	100 Hz		473172 00
	SX-D4132-EF							
690V	SX-D6090-EF	90A	0.1 mH		6 kHz	200 Hz		473169 00
	SX-D6110-EF	146A	0.05 mH		6 kHz	200 Hz		473170 00
	SX-D6132-EF							
	SX-D6160-EF	175A	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-D4090 to SX-D4132 SX-D6090 to SX-D6160	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-D4160 to SX-D4800 SX-D6200 to SX-D61K0	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

Specifications

400 V class

Three-phase: SX-D4____-EF		090	110	132	160	200	220	250	315	355	400	450	500	630	800	
Motor kW ^{*1}	For HD setting	75	90	110	132	160	200	220	250	315	355	400	450	500	630	
	For ND setting	90	110	132	160	200	220	250	315	355	400	450	500	630	800	
Output characteristics	Max output current (A)	210	252	300	360	450	516	600	720	780	900	1032	1200	1440	1800	
	Rated output current (A) at HD	140	168	200	240	300	344	400	480	520	600	688	800	960	1200	
	Rated output current (A) at ND	175	210	250	300	375	430	500	600	650	750	860	1000	1200	1500	
	Output voltage	0 to Mains supply voltage														
	Max. output frequency	400 Hz														
Power supply	Rated input voltage and frequency	3-phase 230..480 V 50/60 Hz														
	Allowable voltage fluctuation	+10%..-15% (-10% at 230V)														
	Allowable frequency fluctuation	45 to 65 Hz														

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

600 V class

Three-phase: SX-D6____-EF		090	110	132	160	200	250	315	355	450	500	600	630	710	800	900	1K0	
Motor kW	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	1000	
Output characteristics	Max output current (A)	108	131	175	210	252	300	360	450	516	600	720	780	900	1032	1080	1200	
	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	1000	
	Output voltage	0 to Mains supply voltage																
	Max. output frequency	400 Hz																
Power supply	Rated input voltage and frequency	3-phase 500..690V, 50/60 Hz																
	Allowable voltage fluctuation	+10%..-15%																
	Allowable frequency fluctuation	45 to 65 Hz																

Dimensions (IP54)

Voltage	Drive model	H	W	D
400 V	SX-D4090-EF	952.50	285	314
	SX-D4110-EF to SX-D4132-EF	952.50	345	314
	SX-D4160-EF to SX-D4250-EF	2330	600	600
	SX-D4315-EF to SX-D4400-EF	2330	1000	600
	SX-D4450-EF to SX-D4500-EF	2330	1200	600
	SX-D4630-EF to SX-D4800-EF	2330	2000	600
600 V	SX-D6090-EF to SX-D6160-EF	952.50	344.50	314
	SX-D6200-EF to SX-D6355-EF	2330	600	600
	SX-D6450-EF to SX-D6500-EF	2330	1000	600
	SX-D6600-EF to SX-D6630-EF	2330	1200	600
	SX-D6710-EF to SX-D61K0-EF	2330	2000	600

