

AC Servomotors / Linear Motors / Servo Drives

G5 Series

The Preeminent Servo That Revolutionizes Motion Control



» EtherCAT

» High Speed and High Precision

» International Safety Standards

Higher Throughput and Shorter Tact Time, Plus Improved Machine Safety



High Speed and High Precision

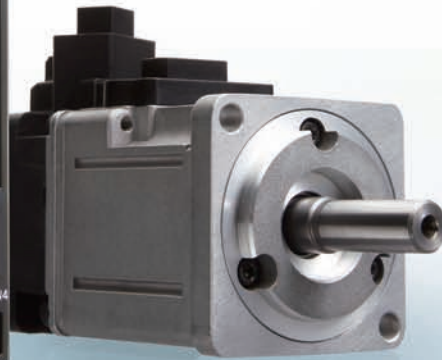
Fastest speed response frequency in industry at 2 kHz

Safety

Conforms to the latest international safety standards

Reduced TCO

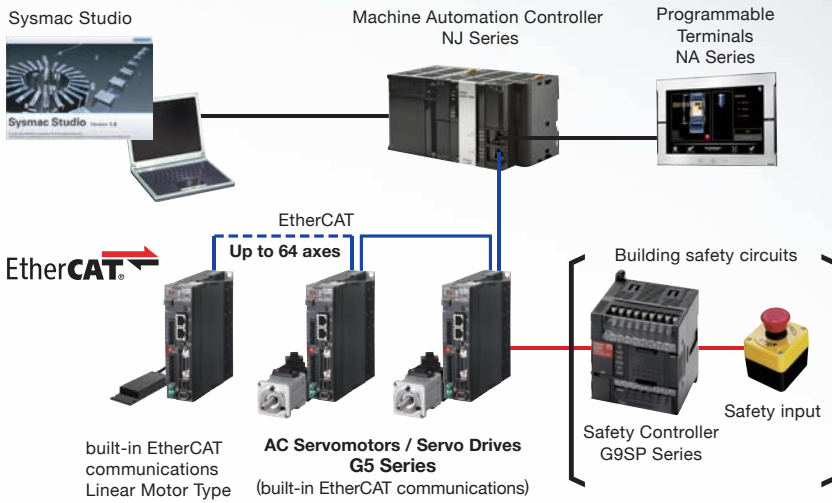
Advanced autotuning



Achieve the fastest position control in the industry by combining the G5 with an OMRON Controller.

System Configuration Example

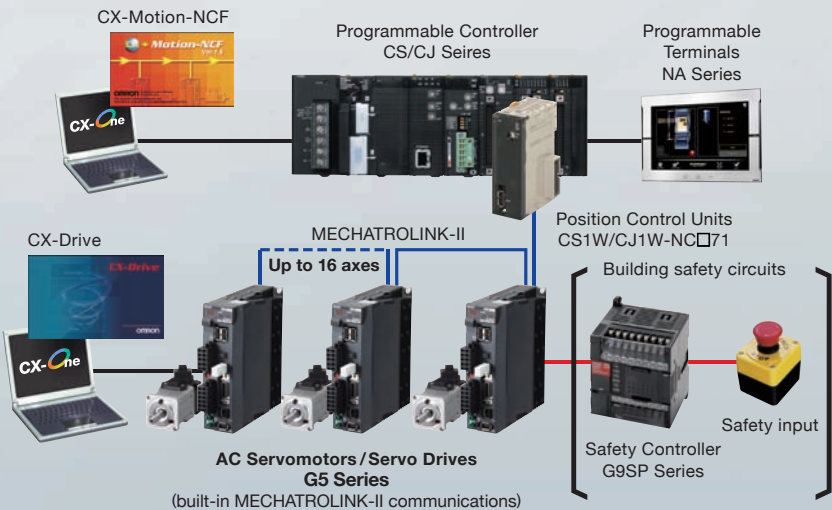
EtherCAT Communications



General-purpose Inputs



MECHATROLINK-II Communications



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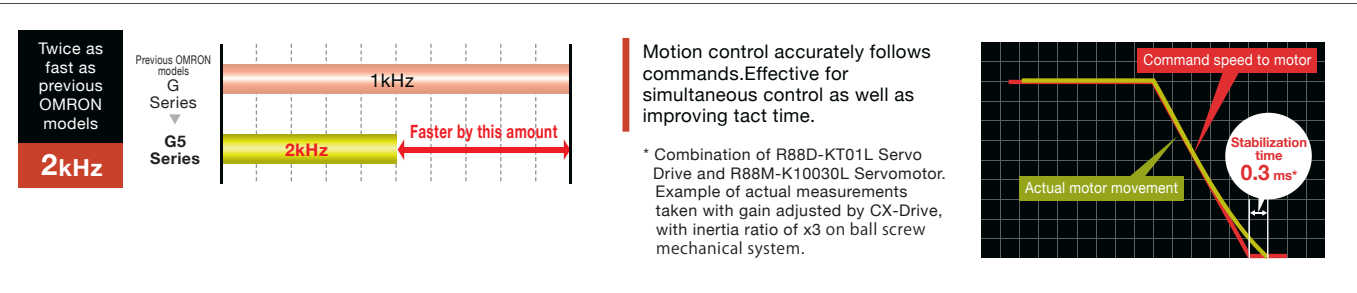
Provide Tact Time Improvement and Hig



Industry Top-class Tracking Performance

Speed Response Frequency of 2 kHz

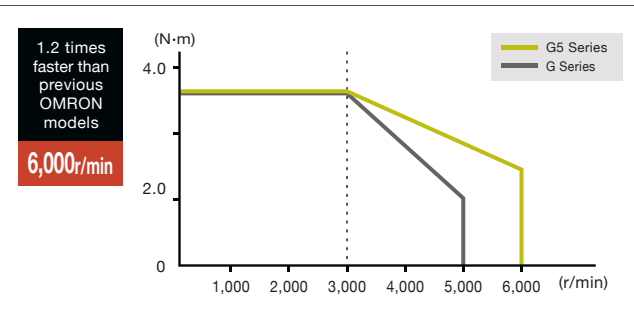
Speed response is representative of servo system characteristics. In the G5, the industry's fastest response has been achieved at 2 kHz. By improving the speed response by twice compared to previous OMRON models, the stabilization time has been shortened and this contributes to tact time reduction.



Reduced Tact Time with Higher Speed

Maximum rotation speed : 6,000 r/min*

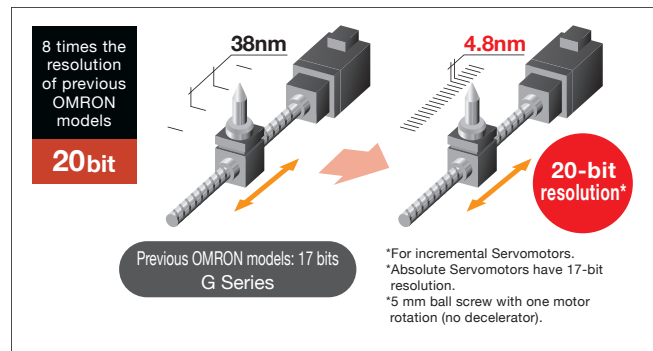
The maximum rotation speed of R88M-series Servomotors has increased to 6,000 r/min, resulting in high-speed positioning that can reduce tact time. *Applicable to 100 V/200 V models with 750 W or less.



Best Positioning Accuracy

Featuring a 20-bit high-resolution incremental encoder

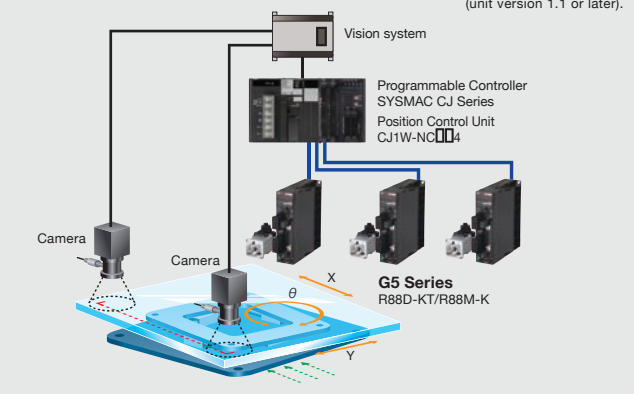
High-precision positioning can be achieved with the built-in encoder, 8 times the resolution of previous OMRON models at 20 bits.



Example of High-speed/High-precision Application

- High-Speed and, High-Precision Position Control Using Camera Compensation
- The pulse output startup time of 0.1 ms enables High-Speed camera compensation.

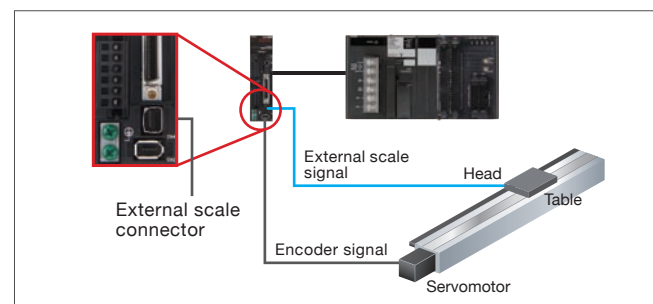
Note: Using a CJ2 CPU Unit (unit version 1.1 or later).



High-precision Positioning

Fully Closed Loop Control Is a Standard Feature

High-precision and high-response positioning can be realized without being affected by temperature changes by determining the position using direct feedback of the control position from the external scale, to enable using fully closed loop control without options. (The external scale connector terminal is a standard feature.)

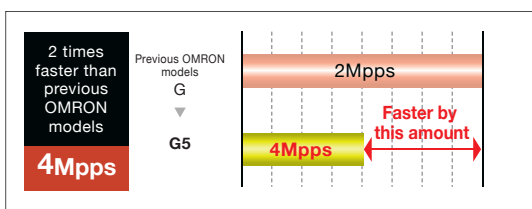


Safety Motion Control That Provides Safety and Reliability

High-speed and High-precision Positioning

Pulse input response frequency: 4 Mpps

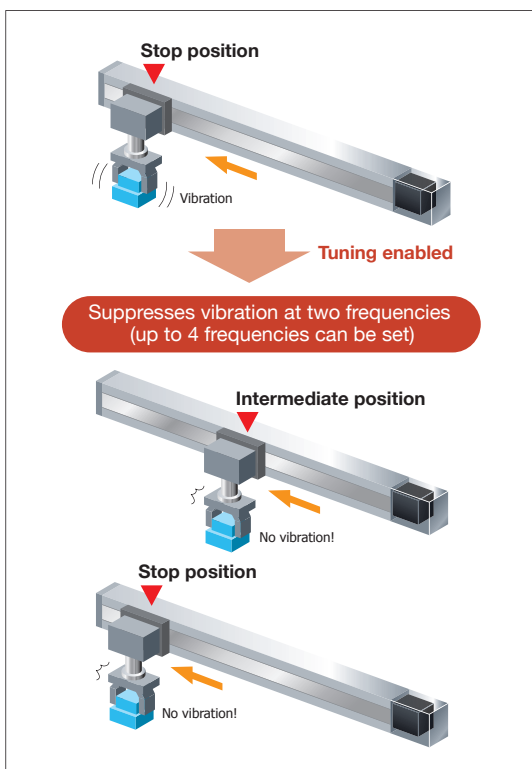
The Servo Drive response to command pulses is 4 Mpps, twice that of previous OMRON models. Response delays are thus reduced enabling high-speed and high-precision positioning.



Ideal for Applications That Require High Accuracy

Improved vibration control function

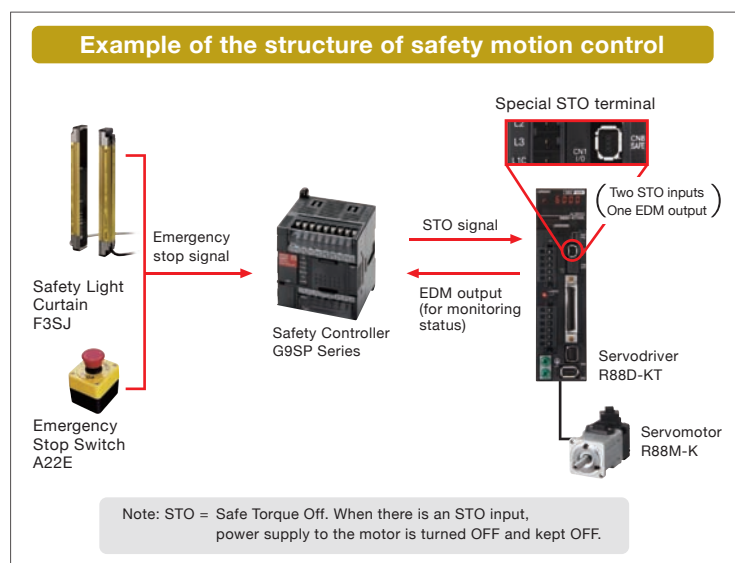
With the vibration control function, if the tip of the device is vibrating, the vibration frequency can be set to remove the vibration. It can also be used to suppress vibration resulting from starting and stopping the device, allowing precise movement.



Conforms to the Latest International Standards

Safety and Productivity

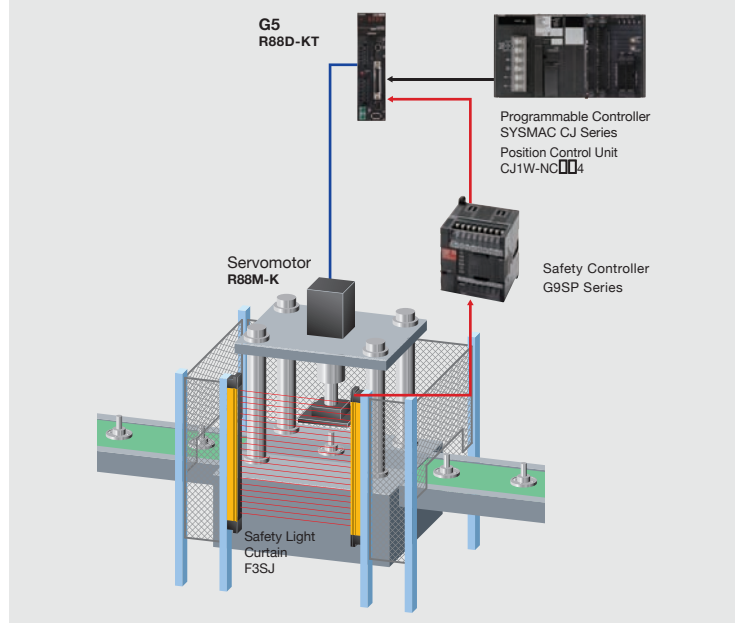
The G5 was the first to acquire international standard IEC 61800-5-2 (STO) for motion control in the industry within Japan. It also conforms to the European Directives ISO 13849-1(PLC,d) * and EN 61508 (SIL2). Safety control circuits can be constructed with the Servo Drive, delivering both safety and productivity.



* Refer to General Specification of Servo Drive for the compliance of international standards.

Safety Motion Application Example

- Safety interlocks can be controlled by combining a Safety Light Curtain and Safety Motion Control.



Easy Adjustment and Reduce works to

Complete Support from Setup to Maintenance

Software

How to Select Required Support Software for Your Controller

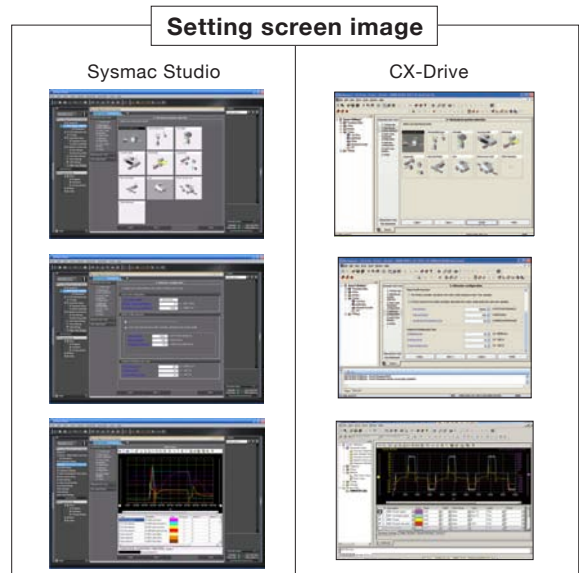
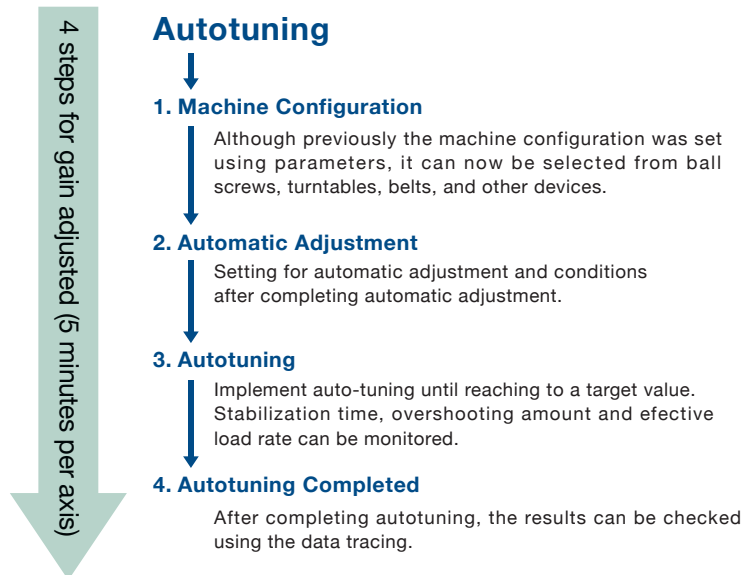
The required Support Software depends on the Controller to connect. Please check the following table when purchasing the Support Software.

Item	Omron Machine Automation Controller System	Omron PLC System
Controller	NJ-series	CS, CJ, CP, and other series
AC Servomotor/Drives	G5-series • EtherCAT Communications (Unit version 2.1 or later recommended) • EtherCAT Communications Linear Motor	G5-series • EtherCAT Communications • EtherCAT Communications Linear Motor • General-purpose input type(PulseTrain or Analog inputs) • MECHATROLINK-II Communications
Software	Automation Software Sysmac Studio The Sysmac Studio provides an integrated development environment to set up, program, debug, and maintain NJ-series Controllers and other Machine Automation Controllers, as well as EtherCAT slaves. Setting, adjustment, monitoring/tracing with the Servo Drive can be done via an EtherCAT network. <Connecting method with the Servo Drive> - Connection via the NJ	FA Integrated Tool Package CX-One The CX-Drive software allows you to set, transfer, and compare Servo Drive parameters, to perform trial operation and adjustments, and to monitor and trace operation. CX-Drive is bundled in CX-One. <Connecting method with the Servo Drive> - Direct connection with the Servo Drive. - Connection via a PLC (possible with the Servo Drive with built-in EtherCAT communications function)

Simple Gain Adjustment

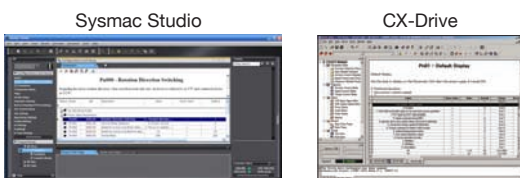
Quickly adjust the gain using a wizard.

The autotuning feature provided with the CX-Drive makes it easy to adjust the Servo Drive gain. You can use a wizard to complete gain adjustment in approximately five minutes or less per axis simply by selecting the machine configuration and entering the target set time.



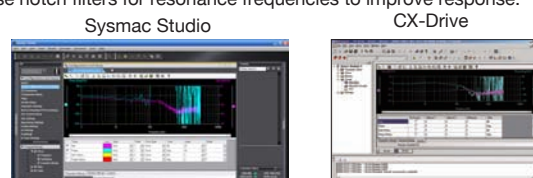
Editing Parameters

- Operation is as easy as with a digital operator.
- Easily set parameters for Inverters and Servo Drives.



Simple FFT

- Device frequency characteristics can be easily measured to analyze resonant frequencies.
- Use notch filters for resonance frequencies to improve response.



System Start-up



Automatic damping control setting

Settings for damping control for the axis at the tip of the machine in a short time

Automatic damping control setting function is useful to execute damping control for Servo Drives. Manual settings will not be necessary. JOG operation, measuring vibration and parameter settings can be made on one screen.

2 steps for damping filter settings (5 minutes per axis).

Starting automatic damping control setting

1. Measuring machine vibration

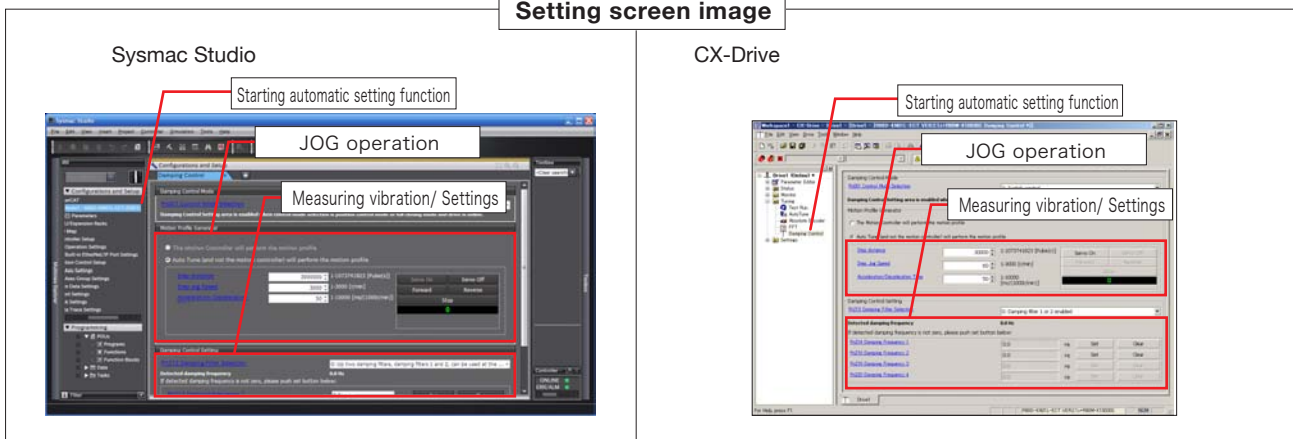
Automatically measures vibration frequency by starting JOG operation from the software or operation executed by the Controller.

2. Damping filter setting

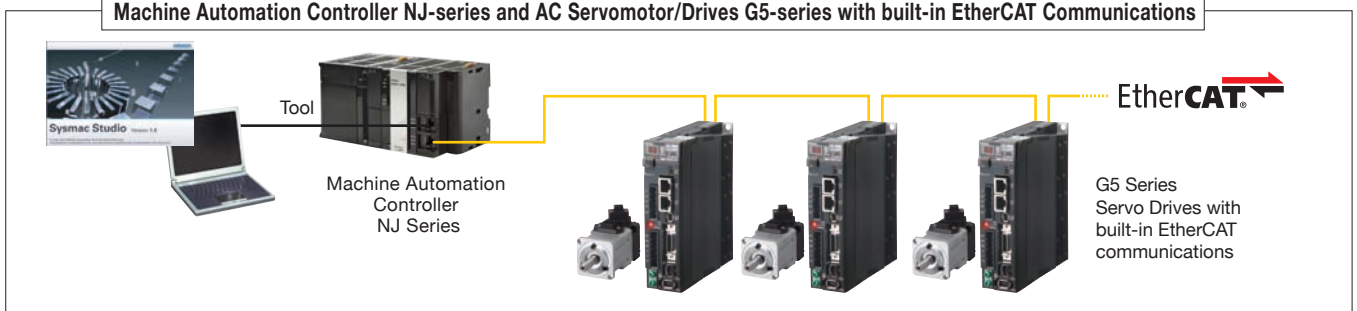
Apply the damping filter 1 to 4 for the measured vibration frequency. Vibration can be suppressed by setting the filters.

Damping control filter setting completed

Setting screen image



Machine Automation Controller NJ-series and AC Servomotor/Drives G5-series with built-in EtherCAT Communications

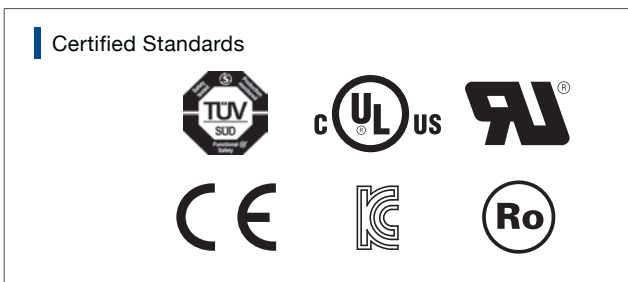
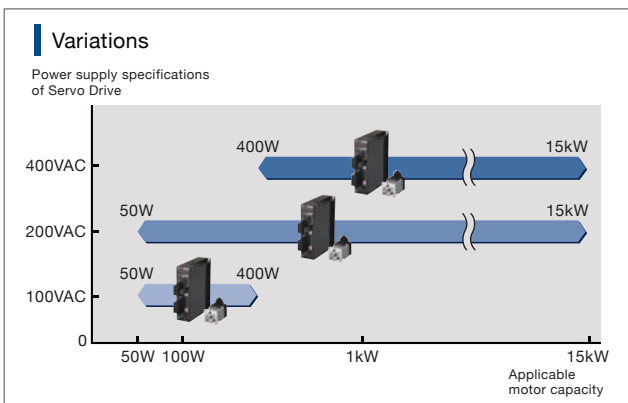


Easy Adjustment and Reduce works to System Start-up

Globalization

Lineup of 400VAC Servomotors

Servomotors are available for 100VAC, 200VAC, and 400VAC. And they conform to international safety standards for easy application anywhere worldwide.



Reduced Work with Increased Monitor Functions

Monitoring for preventive maintenance have been improved.

Example of easier operation with improved monitoring.

Monitoring the Total Run Time When the Main Circuit Is ON

Monitoring the Causes of why the servo motor does not rotate*

A function has been provided that monitors the causes of why the Servo motor does not move even though a rotation command has been sent.

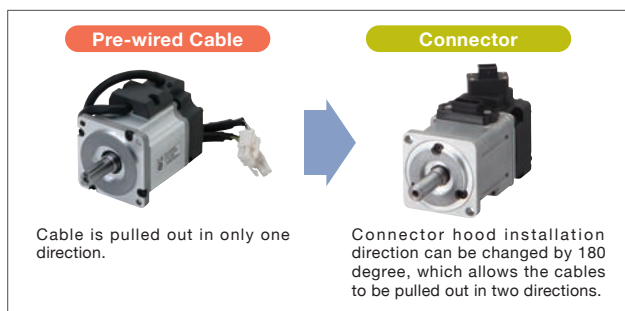
*Supported by the Servo Drive Analog/Pulse train type only.

Flexible cable pull-out direction

Direct connectors for power cable, encoder cable, and brake cable connection.

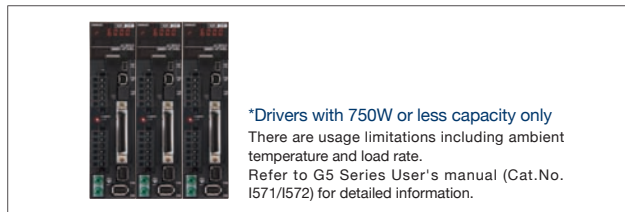
In case that user creates motor cables, cable pull-out direction can be changed by 180 degree. (Refer to G5 Series User's manual (Cat.No. I571/I572) for the information about applicable motor capacity and connection method).

If you use cables provided by Omron, cable pull-out direction is limited to only one direction.



Side by side installation to save space

Possible to install multiple drivers side by side.



Servomotors Conform to IP67

(Excluding through-shaft parts, connector pins of Servomotor Connector and connector pins of Encoder Connector)

The power cable and encoder cable also conform to IP67

*Applicable to 3 to 20m cables of 100V/200V models with 750W or less.

The Servomotor provides IP67 protection, enhancing resistance to the environment.



Reduced Stabilization Time by Suppressing Vibration

60% cogging torque reduction
(compared to previous G models)

Motor torque variation is reduced due to a 60% reduction in the cogging torque, resulting in high-precision positioning. This enables smooth operation at low speeds.

Lineup of Linear Motors to Achieve Higher Speed and Higher Precision

Inherited functions and performance of G5 series with EtherCAT communications

EtherCAT

Linear motors joined the lineup and the following functions of G5 series achieve higher speed and higher precision.

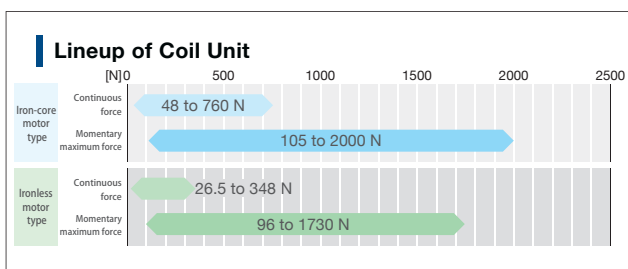
- * High-speed communication via EtherCAT communications at 100 Mbps
- * Autotuning for simple adjustment
- * Useful damping control function to improve device quality
- * Safety function STO (Safe Torque Off)



Selectable motors suitable for device

Iron-core motor type and ironless motor type

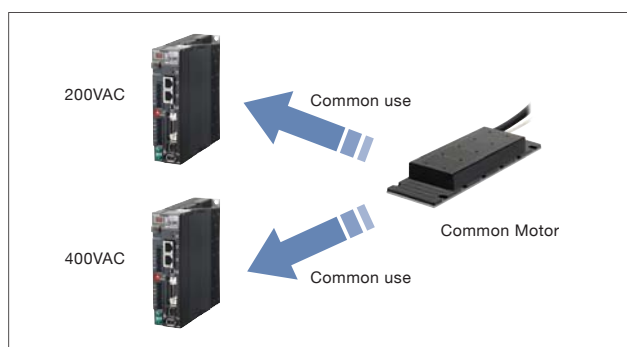
You can choose between compact and high-thrust iron-core motor type and cogging-free ironless motor type with excellent speed stability



Power supply voltage sharing iron-core motor

Using the same Iron-core motor for 200VAC/400VAC

Iron-core motor type The same motor can be used for 200VAC and 400VAC. The same maintenance parts for motors can be used regardless of device and user.



Reduced tact time with higher speed

Higher speed by direct drive

Significantly higher speed than ball screws contributes to make G5 series suitable for faster device application and reduce tact time.

Maximum speed 16 m/s*

* This value is for R88L-EC-GW0309 200VAC motor. It is limited by power supply voltage, model, linear guide, linear scale, and load.

High-precision positioning

Available with various linear scales

High-precision and high-speed positioning Maximum speed at 0.01 μm of scale resolution for serial communications: 4 m/s*

* This value is for Servo Drive. It is limited by the scale specifications.

Available linear scale

Serial communications (incremental/absolute), phase A/B/Z pulse type

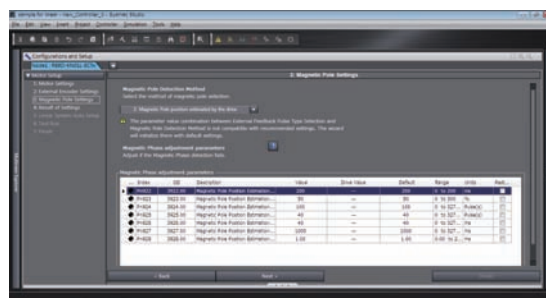
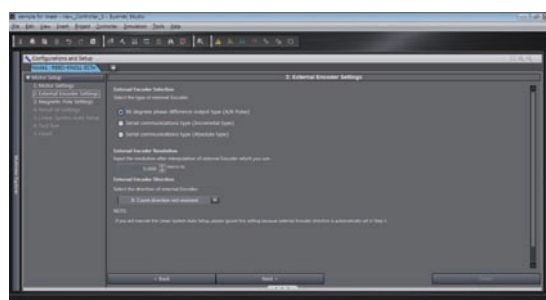
Quick setup

Automatic setup

Automatic setup for motor parameters by selecting the motor.

A wizard helps set the scale direction, magnetic pole, or current gain automatically.

<Sysmac Studio> Setting screen image



The optimum combination can be found from a v model variations to handle various applications.

Servo Drive Variations

		G5 Series			
		EtherCAT Compatible Servo Drives	EtherCAT Compatible Servo Drives Linear Motor Type	Servo Drives Pulse/analog inputs	MECHATROLINK-II Compatible Servo Drives
		R88D-KN□-ECT	R88D-KN□-ECT-L	R88D-KT	R88D-KN□-ML2
Power supply	100VAC	Single-phase	Single-phase	Single-phase	Single-phase
	200VAC	Single/Three-phase	Single/Three-phase	Single/Three-phase	Single/Three-phase
	400VAC	Three-phase	Three-phase	Three-phase	Three-phase
Motor Capacity/Force	100VAC	50 W, 100 W, 200 W, 400 W	26.5 N, 48 N, 53 N, 58 N, 96 N, 117 N, 160 N, 175 N, 232 N	50 W, 100 W, 200 W, 400 W	50 W, 100 W, 200 W, 400 W
	200VAC	Single-phase	26.5 N, 48 N, 53 N	—	—
		Single/Three-phase	50 W, 100 W, 200 W, 400 W, 750 W, 900 W, 1 kW, 1.5 kW	58 N, 80 N, 96 N, 117 N, 160 N, 175 N	50 W, 100 W, 200 W, 400 W, 750 W, 900 W, 1 kW, 1.5 kW
	400VAC	Three-phase	2 kW, 3 kW, 4 kW, 4.5 kW, 5 kW, 6 kW, 7.5 kW, 11 kW, 15 kW	232 N, 240 N, 320 N, 348 N, 608 N, 760 N	2 kW, 3 kW, 4 kW, 4.5 kW, 5 kW, 6 kW, 7.5 kW, 11 kW, 15 kW
Interface	Command type	ECT	ECT	Pulse train, Analog	ML2
Control modes	Control modes	Position control, Speed control, Torque control	Position control, Speed control, Torque control	Position control, Speed control, Torque control	Position control, Speed control, Torque control
	Control mode switching	Mode switching	Mode switching	Mode switching	Mode switching
Tuning functions	Vibration control	Vibration control *1	Vibration control *1	Vibration control *1	Vibration control *1
	Autotuning	AUTO 32	AUTO 32	AUTO 32	AUTO 32
	Realtime autotuning	Adaptive filter *2	Adaptive filter *2	Adaptive filter *2	Adaptive filter *2
Safety	Conforms to international safety standards	Safety	Safety	Safety	Safety
Servo Drive functions	Fully closed	Fully closed	Fully closed	Fully closed	Fully closed
	Torque limits	Torque limit *1	Torque limit *1	Torque limit *1	Torque limit *1
	Encoder output	ABS, INC 20	—	ABS, INC 20	ABS, INC 20
	Internal set speeds	—	—	8 speeds	—

© Refer to Ordering Information for details on combining Drives and Servomotors. *1. Two limits. *2. Two adaptive filters and two notch filters.

Functions

ECT ECT: EtherCAT high-speed Servo communications motion network.	Pulse train Pulse train: The speed and travel distance are input to the Servo as pulse trains.	Analog Analog: The speed and torque are input to the Servo as analog signals.	ML2 ML2: MECHATROLINK-II high-speed Servo communications motion network. (See note).
Position control Position control: Control is applied to move to the target position and then stop at the target position.	Speed control Speed control: Control is applied to change the linear or rotational speed. For example, speed control is used for applications such as turning grindstones, controlling welding speeds, and controlling feeding speeds.	Torque control Torque control: Control is applied to adjust the rotational force. Torque control is suitable for applications such as parts insertion, pressing, and screw tightening.	Mode switching Command control mode switching: Switching is possible between any two of the three control modes: position control, speed control, and torque control.
Vibration control Vibration control function: Vibration is suppressed by automatically setting a filter for the vibration frequency.	AUTO 32 Autotuning: This function automatically sets an appropriate gain based on the rigidity setting of the machine load; 32 levels of rigidity settings are possible.	ABS Absolute output: When the Controller power supply is turned ON, the Controller reads the Servo absolute position data to restore the absolute position.	INC 20 Incremental output: When the controller power supply is turned ON, operation is always started from the origin. A 20-bit resolution is provided on models with incremental outputs.
Adaptive filter Adaptive filter: The machine load inertia is calculated in realtime and the result is used to automatically set the optimum gain.	Safety Safety function: Conforms to IEC 61800-5-2 (STO), EN ISO 13849-1: 2008 (PLC,d), ISO13849-1: 2006(PLC,d) and EN 61508 (SIL2).	Fully closed Fully closed (fully closed loop control): Positioning using direct feedback of the current position from the external scale.	Torque limit Torque limit: Switching is possible between the first torque limit and the second torque limit to limit the Servomotor output torque.
8 speeds Internal set speeds: Speed control according to the internal set speed that is set for the parameter. Up to 8 internal set speeds can be selected.			

variety of functions and

Motor Variations

G5 Series AC Servomotor

Servomotors with EtherCAT Compatible, General-purpose inputs and MECHATROLINK-II Compatible Servomotors

R88M-K



G5 Series Linear Motor

Servomotors with EtherCAT Compatible Linear motor Type

R88L-EC-FW-□

R88L-EC-GW-□



Motor type	Cylinder type		
	1000r/min	2000r/min	3000r/min
50W			ABS INC INC 20
100W			ABS INC INC 20
200W			ABS INC INC 20
400W		ABS INC INC 20	ABS INC INC 20
600W		ABS INC INC 20	
750W			ABS INC INC 20
900W	ABS INC INC 20		
1kW		ABS INC INC 20	ABS INC INC 20
1.5kW		ABS INC INC 20	ABS INC INC 20
2kW	ABS INC INC 20	ABS INC INC 20	ABS INC INC 20
3kW	ABS INC INC 20	ABS INC INC 20	ABS INC INC 20
4kW		ABS INC INC 20	ABS INC INC 20
4.5kW	ABS INC		
5kW		ABS INC INC 20	ABS INC INC 20
6kW	ABS INC		
7.5kW		ABS INC *	
11kW		ABS INC *	
15kW		ABS INC *	

Motor type	Iron-core	Ironless
26.5N		Iron less
48N	Iron core	
53N		Iron less
58N		Iron less
80N		Iron less
96N	Iron core	
117N		Iron less
160N	Iron core	
175N		Iron less
232N		Iron less
240N	Iron core	
320N	Iron core	
348N		Iron less
608N	Iron core	
760N	Iron core	

* The rated speed is 1,500 r/min

Functions



absolute/Incremental output: The Servomotor can be switched between an absolute output and an incremental output. When an absolute output is selected and the Controller power supply is turned ON, the Controller reads the Servo absolute position data to restore the absolute position. A 17-bit resolution is provided on model with an absolute output and an incremental output.



Iron-core: Coil units consist of cores and coils. Compact and high-thrust type.



Incremental output: When the controller power supply is turned ON, operation is always started from the origin. A 20-bit resolution is provided on models with incremental outputs.

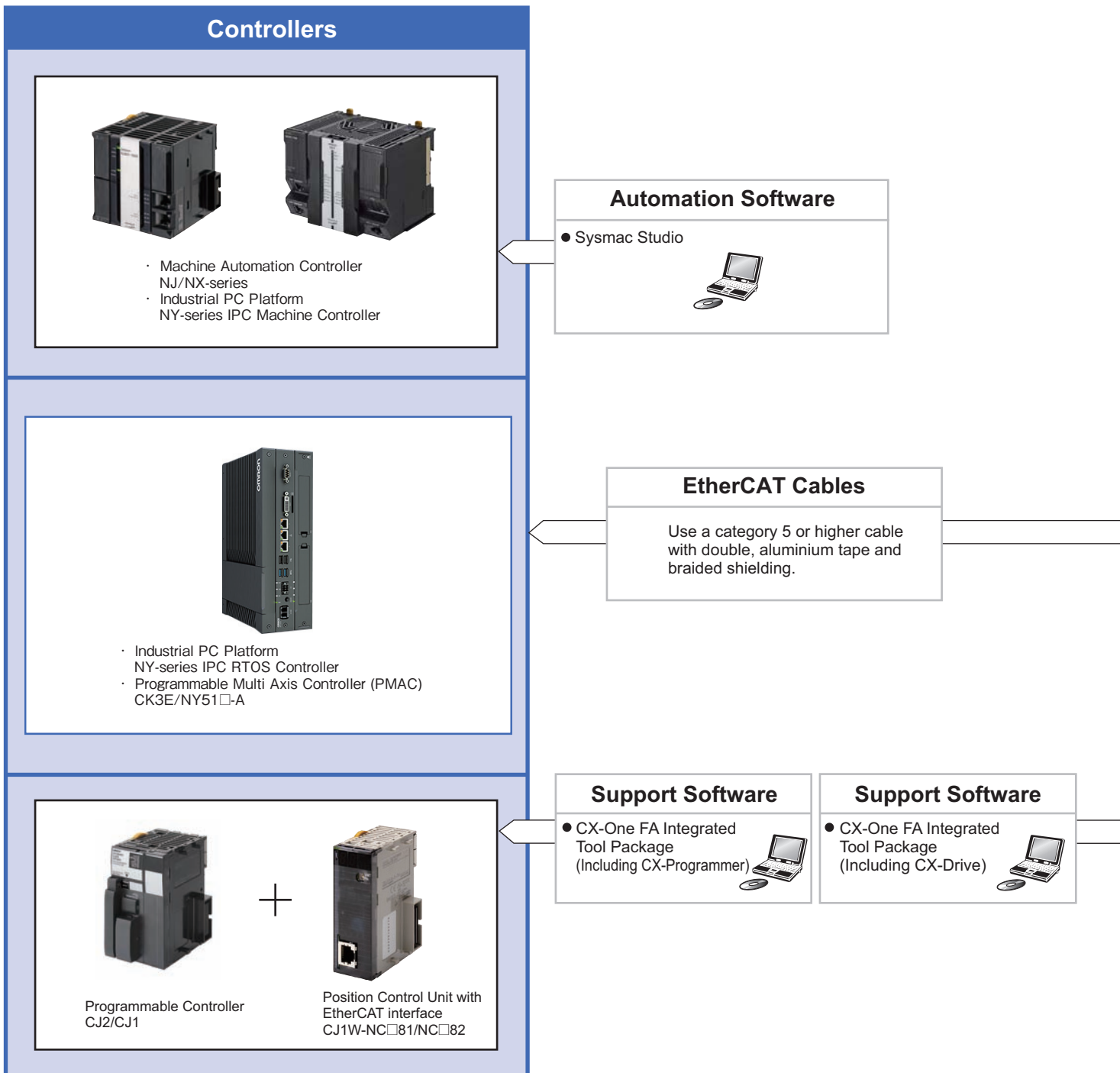


Ironless: Coil units do not include a core. Cogging-free type with excellent speed stability.

G5 Series AC Servomotor/Servo Drives with built-in EtherCAT Communications

R88M-K/R88D-KN□-ECT

System Configuration

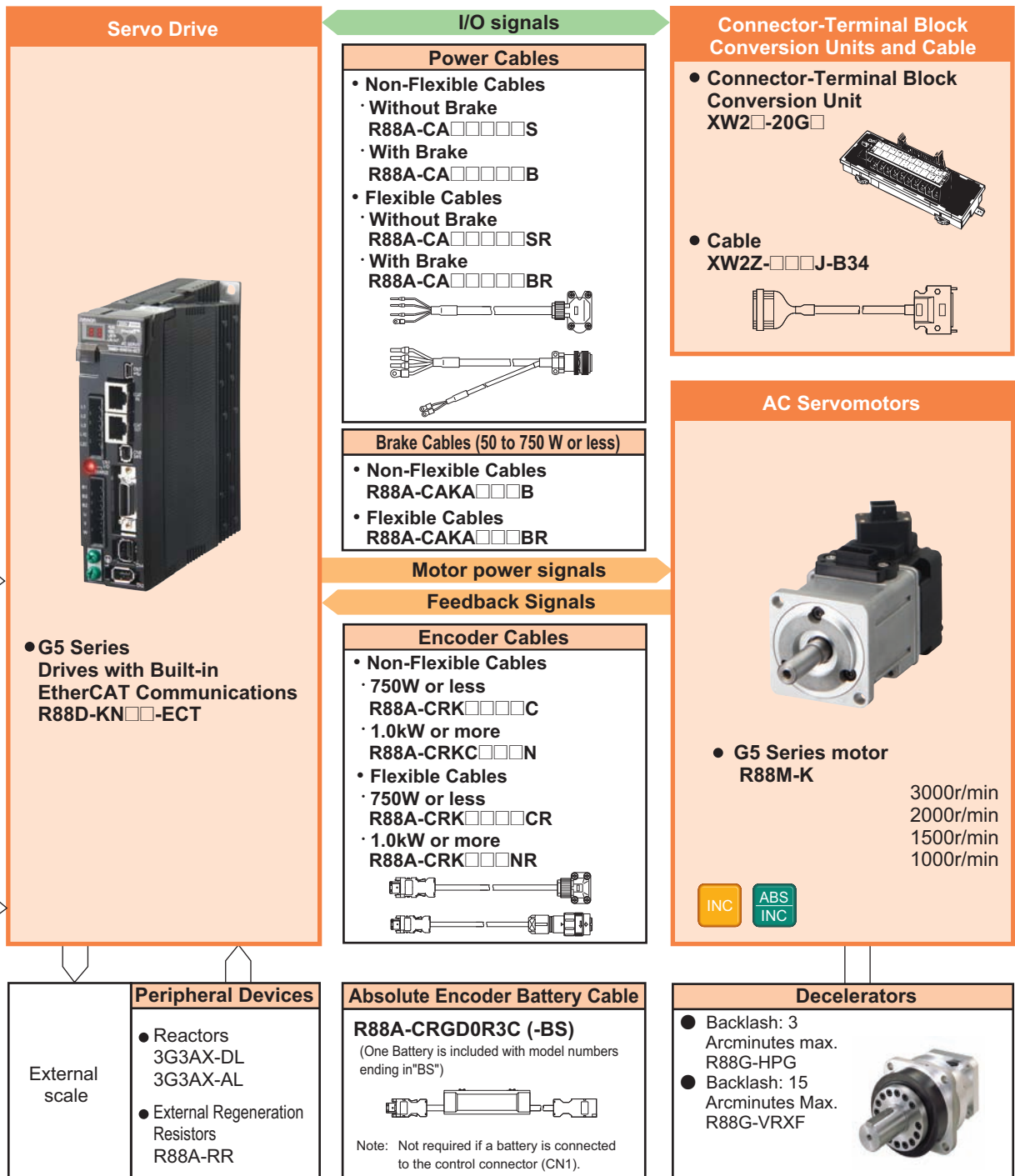


Note: PMAC is an abbreviation for Programmable Multi Axis Controller.

High-Speed and High-Precision G5 Series EtherCAT Communications with the Controller



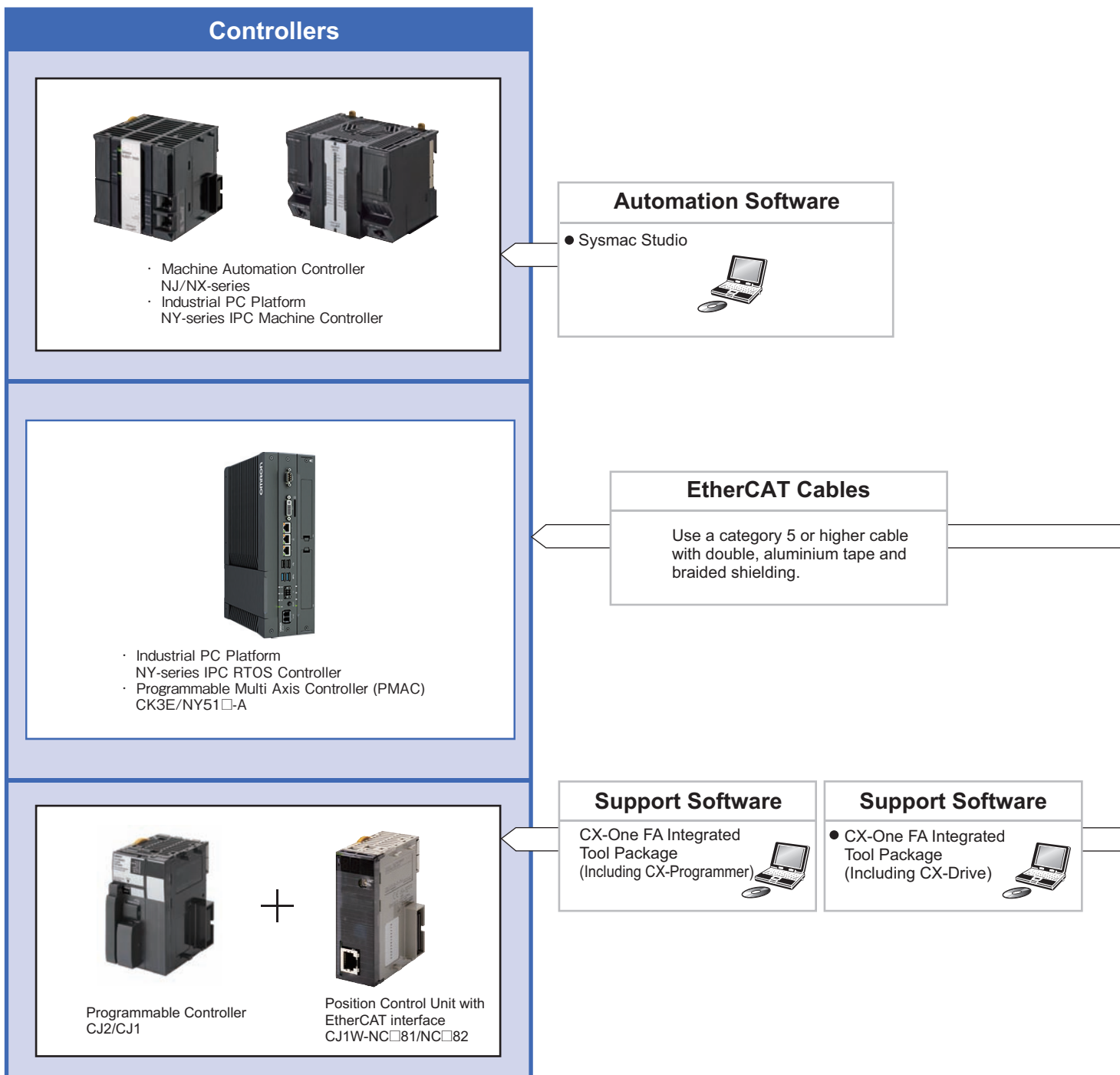
- High-accuracy positioning with fully-closed control.
- Servo Drives for 400VAC globally widens applicable systems and environment, including large-scale equipment.
- Safe design and Safe Torque Off (STO) function.
- Vibration can be suppressed in acceleration/deceleration even in low-rigidity mechanical systems.



G5 Series Linear Motor/Servo Drives with built-in EtherCAT Communications Linear Motor Type

R88L-EC/R88D-KN□-ECT-L

System Configuration

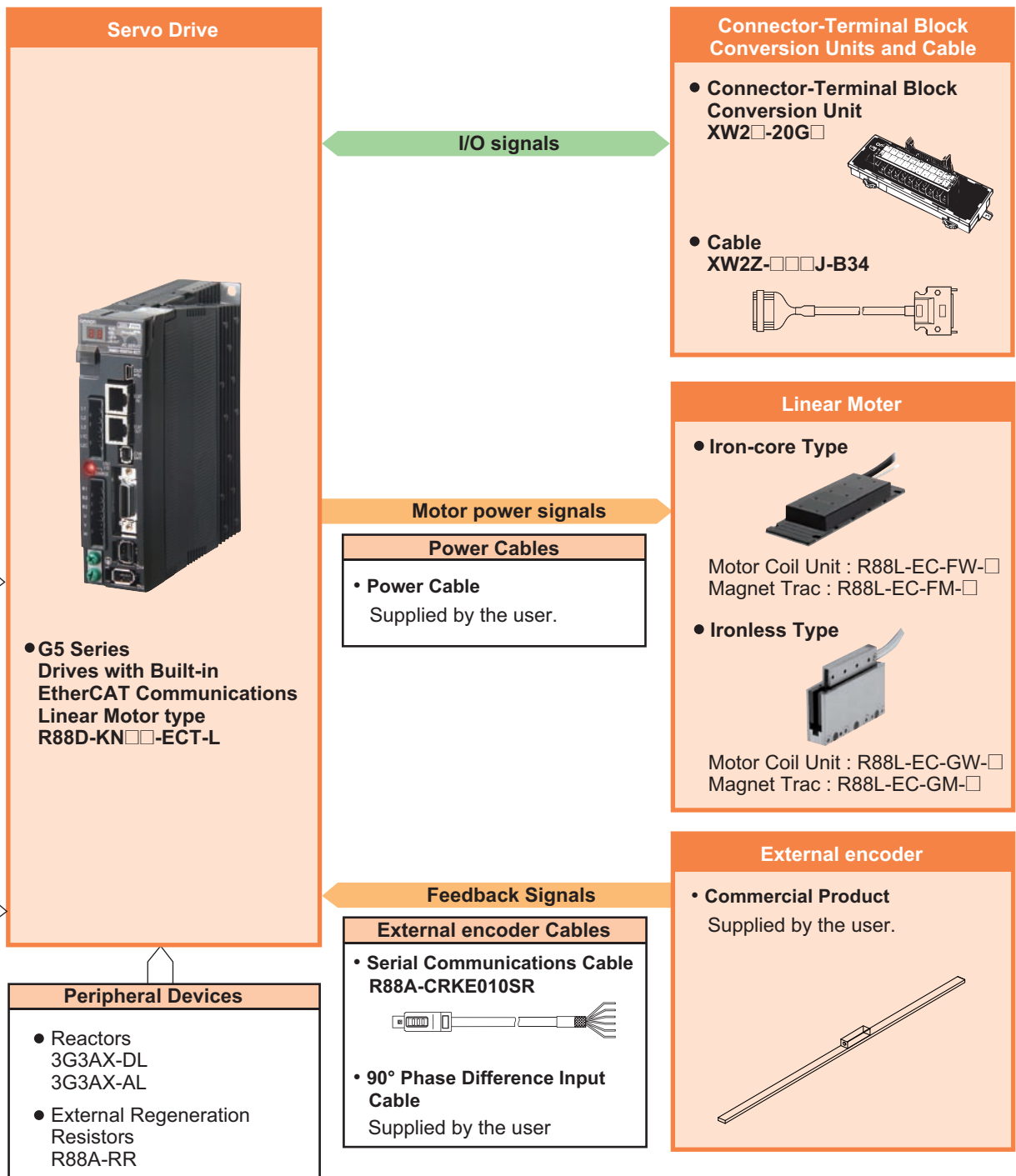
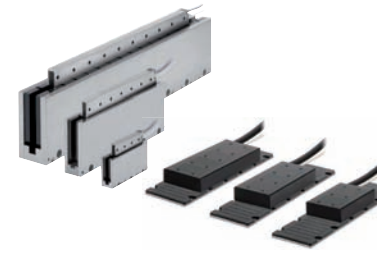


Note: PMAC is an abbreviation for Programmable Multi Axis Controller.

Linear Motor for Higher-speed and Higher-precision



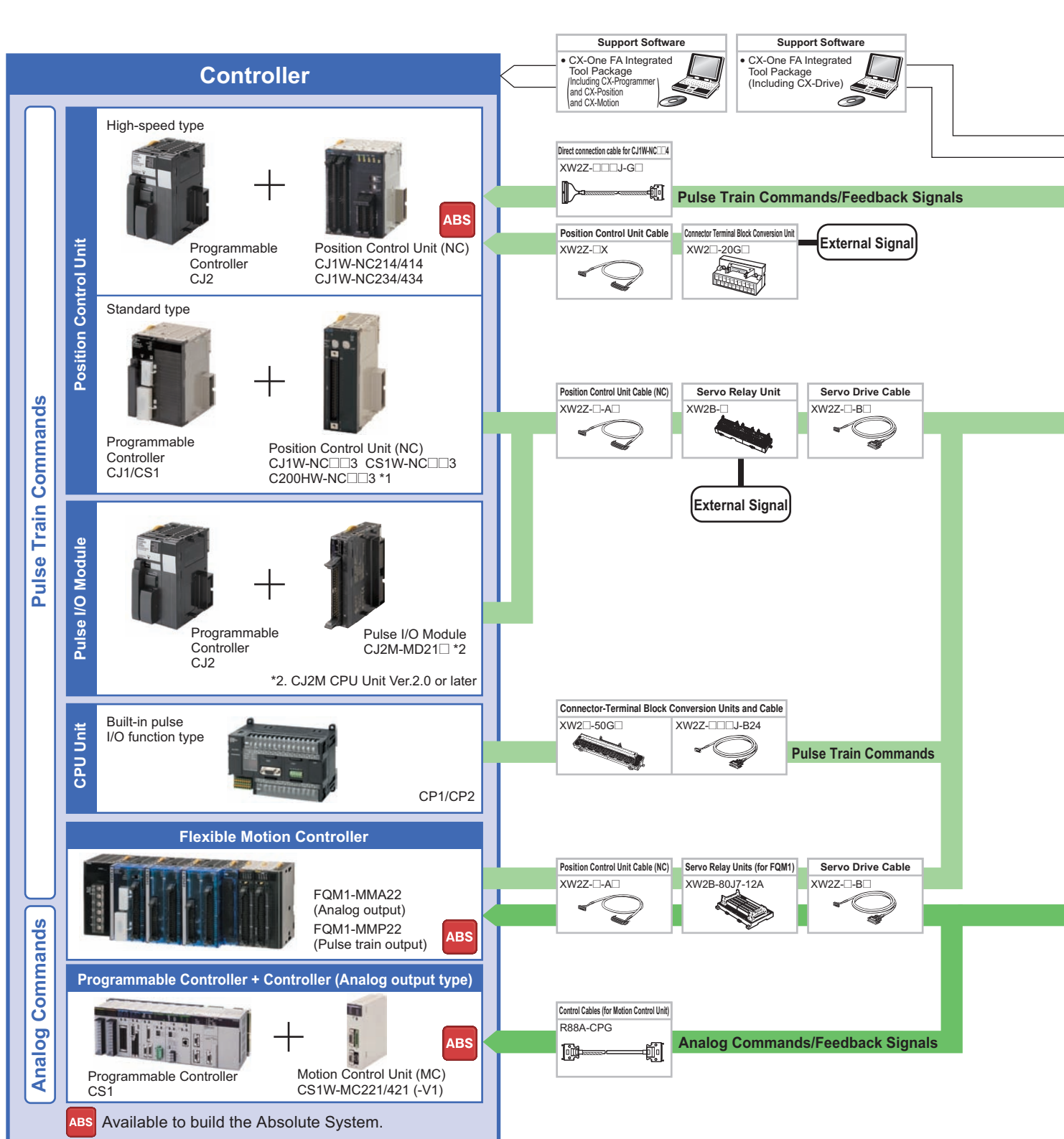
- Inherited functions and performance of G5 series and EtherCAT communications achieve high-speed and high-precision positioning.
- Lineup of compact and high-thrust iron-core motor type and cogging-free ironless motor type with excellent speed stability.
- Same Iron-core motor type for 200V AC and 400V AC.
- Quick setup by automatic setup function.



G5-series AC Servomotors/Servo Drives with General-purpose Pulse Train or Analog Inputs

R88M-K/R88D-KT

System Configuration



*1. C200HW-NC was discontinued.

The Preeminent Servo That Revolutionizes Motion Control



(Ro)

- Industry Top-class Tracking Performance.
Speed Response Frequency of 2 kHz.
- Best Positioning Accuracy*.
Featuring a 20-bit high-resolution incremental encoder.
* 8 times the resolution of previous OMRON models
- High-precision Positioning.
Fully Closed Loop Control Is a Standard Feature.
- Conforms to the Latest International Standards.
Safety and Productivity.
- Globalization. Lineup of 400 VAC Servomotors.

USB communications

Servo Drive



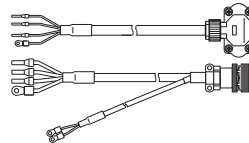
• G5 Series driver
R88D-KT

100 VAC
200 VAC
400 VAC

Motor power signals

Power Cables

- Non-flexible Cables
 - Without Brake
R88A-CA□□□□□S
 - With Brake
R88A-CA□□□□□B
- Flexible Cables
 - Without Brake
R88A-CA□□□□□SR
 - With Brake
R88A-CA□□□□□BR



Brake Cables (50 to 750 W or less)

- Non-flexible Cables
R88A-CAKA□□□□B
- Flexible Cables
R88A-CAKA□□□□BR

Feedback Signals

Encoder Cables

- Non-Flexible Cables
 - 750W or less
R88A-CRK□□□□□C
 - 1.0kW or more
R88A-CRK□□□□□N
- Flexible Cables
 - 750W or less
R88A-CRK□□□□□CR
 - 1.0kW or more
R88A-CRK□□□□□NR



AC Servomotors



• G5 Series motor
R88M-K

3,000 r/min
2,000 r/min
1,500 r/min
1,000 r/min



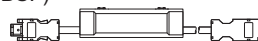
Peripheral Devices

External scale

- Reactors
3G3AX-DL
3G3AX-AL
- External Regeneration Resistors
R88A-RR

Absolute Encoder Battery Cable

R88A-CRGD0R3C (-BS)
(One Battery is included with Servo Drivers with model numbers ending in "BS.")



* Not required if a battery is connected to the control connector (CN1).

Decelerators

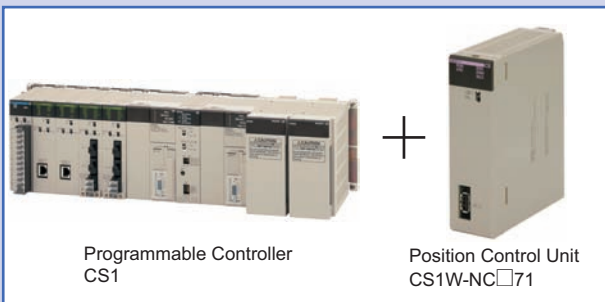
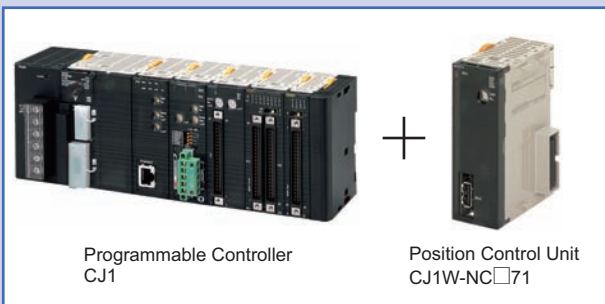
- Backlash: 3 Arcminutes max.
R88G-HPG
- Backlash: 15 Arcminutes Max.
R88G-VRXF



R88M-K/R88D-KN□-ML2

System Configuration

Controllers (MECHATROLINK-II type)



Support Software

- CX-One FA Integrated Tool Package (Including CX-Programmer and CX-Position and CX-Motion)

Support Software

- CX-One FA Integrated Tool Package (Including CX-Drive)

MECHATROLINK-II

MECHATROLINK-II Cables

(With ring core and USB connector on both ends)
FNY-W6003-□□ (OMRON model number)

(Without ring core USB connector on both ends)
FNY-W6002-□□ (OMRON model number)

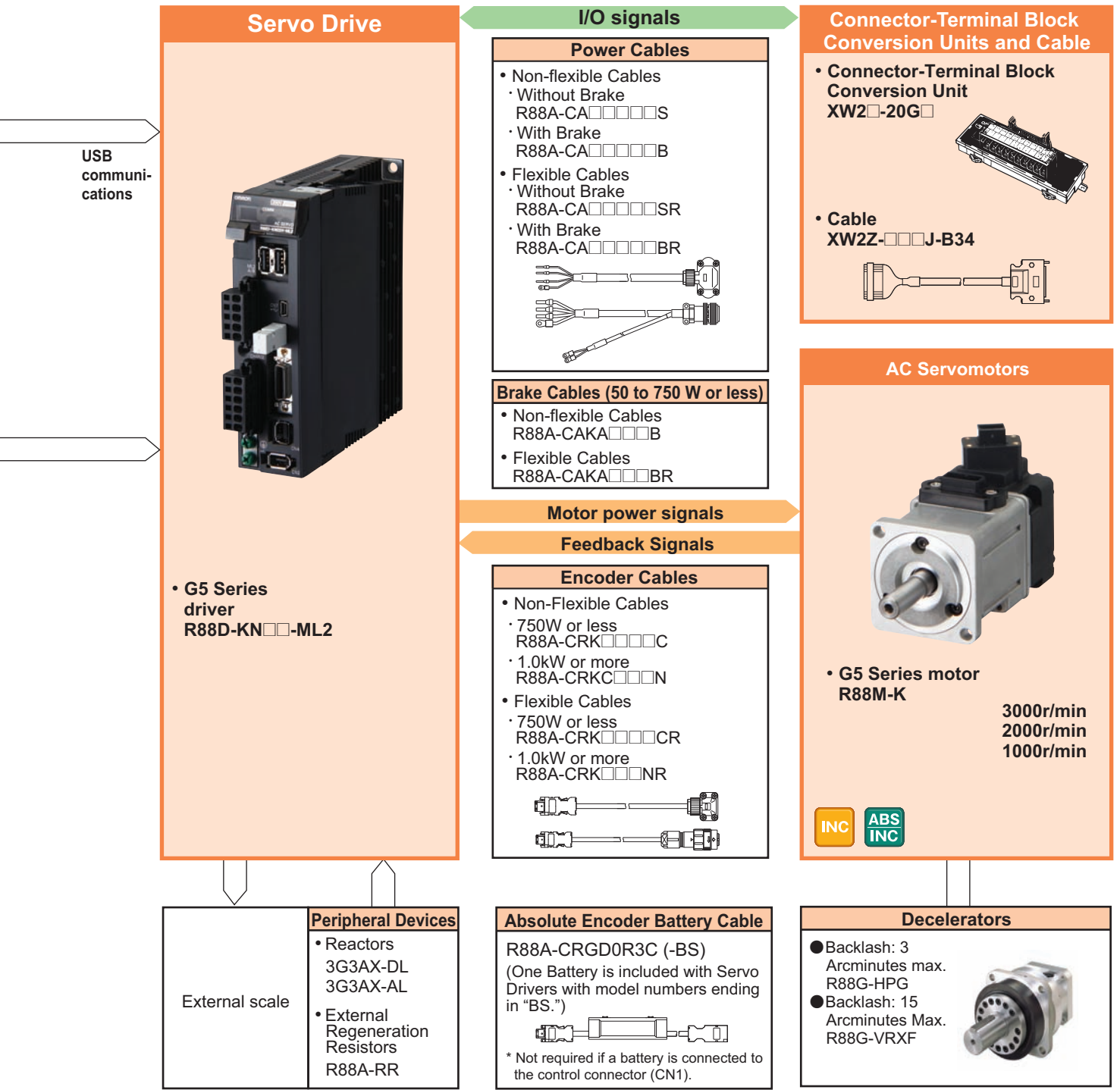
MECHATROLINK-II Repeater

		Maximum transmission distance	
		0 to 30 m	30 to 50 m
Number of connected devices	1 to 15	Repeater not required.	Repeater not required.
	16	Repeater not required.	Repeater required.



High-Speed and High-Precision G5 Series MECHATROLINK-II Communications with the Controller

- Data transfer using MECHATROLINK-II Communications:
All control data that can be interfaced between the Servo Driver and the Controller is transmitted using data communications. This enables maximizing the Servomotor performance without restricting the transmission performance of the control signals.
- Having a communications module built into the Servo Driver significantly saves space in the control panel.



Ordering Information

AC Servomotors / Linear Motors / Servo Drives
Product name **G5-series**

Interpreting Model Numbers..... B-2

- AC Servo Drive Rotary Motor Type Model Numbers
- AC Servo Drive Linear Motor Type Model Numbers
- AC Servomotor Model Numbers
- Linear Motor Model Numbers
- Understanding Decelerator Model Numbers
(Backlash = 3' Max./Backlash = 15' Max.)

Table of AC Servomotor Variations..... B-5

Ordering Information..... B-6

AC Servo Drives B-6

- EtherCAT Communications
- Linear Motor with built-in EtherCAT communications
- General-purpose Inputs
- MECHATROLINK-II Communications

AC Servomotors B-7

Linear Motors B-12

Decelerators (Backlash = 3' Max./Backlash = 15' Max.) B-14

Accessories and Cables..... B-16

- Connection Cables (Power Cables, Brake Cables, Encoder Cables)
(Non-flexible Cables)
(Flexible Cables)
- Cable/Connector
- Control Cables
 - For General-purpose Inputs
- Communication Cables
 - For MECHATROLINK-II Communications
 - For EtherCAT Communications
- Peripheral Devices
(External Regeneration Resistors, Reactors, Mounting Brackets)
- Support Software

Combination table B-25

- AC Servo Drive and Servomotor Combinations
- AC Servomotor and Decelerator Combinations
- Linear Motor and AC Servo Drive Linear Motor Type Combinations
- Controller Combinations
- Cable Combinations

Related Manuals B-37

As a Sysmac Device, the G5-series AC Servomotor/Servo Drive with Built-in EtherCAT Communications is designed to provide optimal functionality and enhanced operability when used in conjunction with a Machine Automation Controller such as NJ series and the automation software Sysmac Studio. Sysmac Device is a generic term for OMRON control devices such as an EtherCAT Slave, designed with unified communications specifications and user interface specifications.

When connecting a Servo Drive to the NJ5 series Machine Automation Controller, it is recommended that you use the Servo Drive with Built-in EtherCAT Communications, R88D-KN□□□-ECT, with unit version 2.1 or later.

AC Servomotor/Drive G5-series

Interpreting Model Numbers

AC Servo Drive Rotary Motor Type Model Numbers

R88D-K N 01 H -ECT

(1) (2) (3) (4) (5)

No	Item	Symbol	Specifications
(1)	G5-series Servo Drive		
(2)	Drive Type	T	Analog input/Pulse train input type
		N	Communication type
(3)	Maximum Applicable Servomotor Capacity	A5	50 W
		01	100 W
		02	200 W
		04	400 W
		06	600 W
		08	750 W
		10	1 kW
		15	1.5 kW
		20	2 kW
		30	3 kW
		40	4 kW
		50	5 kW
		75	7.5 kW
150	15 kW		
(4)	Power Supply Voltage	L	100 VAC
		H	200 VAC
		F	400 VAC
(5)	Network type	Blank	General-purpose Inputs
		-ML2	MECHATROLINK-II Communications
		-ECT	EtherCAT Communications

AC Servo Drive Linear Motor Type Model Numbers

R88D-K N 01 H -ECT -L

(1) (2) (3) (4) (5) (6)

No	Item	Symbol	Specifications
(1)	G5-series Servo Drive		
(2)	Drive Type	N	Communication type
(3)	Maximum Applicable Linear Motor Capacity	01	100 W
		02	200 W
		04	400 W
		06	600 W
		08	750 W
		10	1 kW
		15	1.5 kW
		20	2 kW
		30	3 kW
(4)	Power Supply Voltage	L	100 VAC
		H	200 VAC
		F	400 VAC
(5)	Network type	-ECT	EtherCAT Communications
(6)	Motor type	-L	Linear Motor

AC Servomotor Model Numbers

R88M-K □ 750 30 H -BO S2

(1) (2) (3) (4) (5) (6)

No	Item	Symbol	Specifications
(1)	G5-series Servomotor		
(2)	Motor Type	Blank	Cylinder type
(3)	Servomotor Capacity	050	50 W
		100	100 W
		200	200 W
		400	400 W
		600	600 W
		750	750 W
		900	900 W
		1K0	1 kW
		1K5	1.5 kW
		2K0	2 kW
		3K0	3 kW
		4K0	4 kW
		4K5	4.5 kW
		5K0	5 kW
		6K0	6 kW
7K5	7.5 kW		
11K0	11 kW		
15K0	15 kW		
(4)	Rated Rotation Speed	10	1,000 r/min
		15	1,500 r/min
		20	2,000 r/min
		30	3,000 r/min
(5)	Applied Voltage	F	400 VAC (with incremental encoder specifications) INC
		H	200 VAC (with incremental encoder specifications) INC
		L	100 VAC (with incremental encoder specifications) INC
		C	400 VAC (with absolute encoder specifications) ABS/INC
		T	200VAC (with absolute encoder specifications) ABS/INC
(6)	Option	S	100 VAC (with absolute encoder specifications) ABS/INC
		Blank	Straight shaft
		B	With brake
		O	With oil seal
		S2	With key and tap

Note: **INC** incremental encoder: 20bit

ABS/INC incremental encoder: 17bit, absolute encoder: 17bit

Linear Motor

●Iron-core linear motor

Motor Coil Unit

R88L-EC -FW -03 03 -A NP C

(1) (2) (3) (4) (5) (6) (7)

No	Item	Symbol	Specifications
(1)	G5-series Linear Motor		
(2)	Part Type	FW	Iron-core type Motor Coil Unit
(3)	Effective Magnet Width	03	30mm
		06	60mm
		11	110mm
(4)	Coil Model	03	3-coil
		06	6-coil
		09	9-coil
		12	12-coil
		15	15-coil
(5)	Version	A	Ver.A
(6)	Connector	NP	Not Provided
(7)	Type	C	Compact type

●Ironless linear motor

Motor Coil Unit

R88L-EC -GW -03 03 -A NP S

(1) (2) (3) (4) (5) (6) (7)

No	Item	Symbol	Specifications
(1)	G5-series Linear Motor		
(2)	Part Type	GW	Ironless type Motor Coil Unit
(3)	Effective Magnet Width	03	30mm
		05	50mm
		07	70mm
(4)	Coil Model	03	3-coil
		06	6-coil
		09	9-coil
(5)	Version	A	Ver.A
(6)	Connector	NP	Not Provided
(7)	Type	S	Standard type

Magnet Trac

R88L-EC -FM -03 096 -A

(1) (2) (3) (4) (5)

No	Item	Symbol	Specifications
(1)	G5-series Linear Motor		
(2)	Part Type	FM	Iron-core type Magnet Trac
(3)	Effective Magnet Width	03	30mm
		06	60mm
		11	110mm
(4)	Magnet Trac Unit Length	096	96mm
		144	144mm
		192	192mm
		288	288mm
		384	384mm
(5)	Version	A	Ver.A

Magnet Trac

R88L-EC -GM -03 090 -A

(1) (2) (3) (4) (5)

No	Item	Symbol	Specifications
(1)	G5-series Linear Motor		
(2)	Part Type	GM	Ironless type Magnet Trac
(3)	Effective Magnet Width	03	30mm
		05	50mm
		07	70mm
(4)	Magnet Trac Unit Length	090	90mm
		114	114mm
		120	120mm
		126	126mm
		168	168mm
		171	171mm
		210	210mm
		390	390mm
		456	456mm
546	546mm		
(5)	Version	A	Ver.A

AC Servomotor/Drive G5-series

Understanding Decelerator Model Numbers (Backlash = 3' Max./Backlash = 15' Max.)

Refer to the *Decelerators* in *Ordering Information* for motor capacity and decelerator combinations.

Backlash = 3' Max.

R88G-HPG 14A 05 100 S B J

(1) (2) (3) (4) (5) (6) (7)

No	Item	Symbol	Specifications
(1)	Decelerator for Servomotors Backlash = 3' Max.		
(2)	Flange Size Number	11B	□40
		14A	□60
		20A	□90
		32A	□120
		50A	□170
		65A	□230
(3)	Gear Ratio	05	1/5
		09	1/9
		11	1/11
		20	1/20
		21	1/21
		25	1/25
		33	1/33
		45	1/45
(4)	Applicable Servomotor Capacity	050	50 W
		100	100 W
		200	200 W
		400	400 W
		750	750 W
		900	900 W
		1K0	1 kW
		1K5	1.5 kW
		2K0	2 kW
		3K0	3 kW
		4K0	4 kW
		4K5	4.5 kW
5K0	5 kW		
(5)	Motor Type	Blank	3,000-r/min cylindrical servomotors
		S	2,000-r/min cylindrical servomotors
		T	1,000-r/min cylindrical servomotors
(6)	Backlash	B	Backlash = 3' Max
(7)	Option	Blank	Straight shaft
		J	With key and tap

Backlash = 15' Max.

R88G-VRXF 09 B 100 C J

(1) (2) (3) (4) (5) (6) (7)

No	Item	Symbol	Specifications
(1)	Decelerator for Servomotor Backlash: 15 Arcminutes max.		
(2)	Gear Ratio	05	1/5
		09	1/9
		15	1/15
		25	1/25
(3)	Flange Size Number	B	□52
		C	□78
		D	□98
(4)	Applicable Servomotor Capacity	100	50 W, 100 W
		200	200 W
		400	400 W
		750	750 W
(5)	Backlash	C	Backlash = 15' Max
(6)	Option	J	With key and tap

Table of AC Servomotor Variations

R88M-K□□□□□□□-□□□□
(3) (4) (5) (6) (7) (8) (9)

(3) Type	(4) Applicable Servomotor Capacity	(5) Rotation speed	Model	(6) Applied Voltage						(7) With brake / Without brake		(8) Models with oil seals		(9) Shaft type		
				INC	INC	INC	ABS	ABS	ABS	-	B	Blank	O	Blank	S2	
				400	200	100	400	200	100							
				F	H	L	C	T	S	Blank	With brake					
Cylinder	50 W	3,000 r/min	R88M-K05030 *1		√			√			√	√	√	√		
	100 W		R88M-K10030		√	√		√	√		√	√	√	√		
	200 W		R88M-K20030		√	√		√	√		√	√	√	√		
	400 W		R88M-K40030		√	√		√	√		√	√	√	√		
	750 W		R88M-K75030	√	√		√	√		√	√	√	√	√		
	1 kW		R88M-K1K030	√	√		√	√		√	√	√	√	√		
	1.5 kW		R88M-K1K530	√	√		√	√		√	√	√	√	√		
	2 kW		R88M-K2K030	√	√		√	√		√	√	√	√	√		
	3 kW		R88M-K3K030	√	√		√	√		√	√	√	√	√		
	4 kW		R88M-K4K030	√	√		√	√		√	√	√	√	√		
	5 kW		R88M-K5K030	√	√		√	√		√	√	√	√	√		
	400 W		R88M-K40020	√			√			√	√	√	√	√		
	600 W	R88M-K60020	√			√			√	√	√	√	√			
	1 kW	R88M-K1K020	√	√		√	√		√	√	√	√	√			
	1.5 kW	R88M-K1K520	√	√		√	√		√	√	√	√	√			
	2 kW	R88M-K2K020	√	√		√	√		√	√	√	√	√			
	3 kW	R88M-K3K020	√	√		√	√		√	√	√	√	√			
	4 kW	R88M-K4K020	√	√		√	√		√	√	√	√	√			
	5 kW	R88M-K5K020	√	√		√	√		√	√	√	√	√			
	7.5 kW	R88M-K7K515 *2				√	√		√	√	√	√	√			
	11 kW	R88M-K11K015 *2				√	√		√	√	√	√	√			
	15 kW	R88M-K15K015 *2				√	√		√	√	√	√	√			
	900 W	R88M-K90010	√	√		√	√		√	√	√	√	√			
	2 kW	R88M-K2K010	√	√		√	√		√	√	√	√	√			
	3 kW	R88M-K3K010	√	√		√	√		√	√	√	√	√			
	4.5 kW	R88M-K4K510				√	√		√	√	√	√	√			
	6 kW	R88M-K6K010				√	√		√	√	√	√	√			
	Blank: Cylinder type	example 030: 30 W 100: 100 W 1K0: 1 kW	10: 1,000 r/min 20: 2,000 r/min 30: 3,000 r/min		F: 400 VAC (with incremental encoder) INC H: 200 VAC (with incremental encoder) INC L: 100 VAC (with incremental encoder) INC C: 400 VAC (with absolute encoder) ABS/INC T: 200 VAC (with absolute encoder) ABS/INC S: 100 VAC (with absolute encoder) ABS/INC						Blank: Without brake B: 24 VDC With brake		Blank: Without oil seals O: With oil seals		Blank: Straight shaft S2: With key and tap	

*1. R88M-K05030H-□, R88M-K05030T-□, can be used for Power Supply Voltage of 100/200VAC.

*2. The rated speed is 1,500 r/min.

Ordering Information

AC Servo Drives

EtherCAT Communications

Specifications		Model
Power Model Supply Voltage	Applicable Servomotor Capacity	
Single-phase 100 VAC	50 W	R88D-KNA5L-ECT
	100 W	R88D-KN01L-ECT
	200 W	R88D-KN02L-ECT
	400 W	R88D-KN04L-ECT
Single-phase/three-phase 200 VAC	100 W	R88D-KN01H-ECT
	200 W	R88D-KN02H-ECT
	400 W	R88D-KN04H-ECT
	750 W	R88D-KN08H-ECT
	1 kW	R88D-KN10H-ECT
	1.5 kW	R88D-KN15H-ECT
Three-phase 200 VAC	2 kW	R88D-KN20H-ECT
	3 kW	R88D-KN30H-ECT
	5 kW	R88D-KN50H-ECT
	7.5 kW	R88D-KN75H-ECT
	15 kW	R88D-KN150H-ECT
Three-phase 400 VAC	600 W	R88D-KN06F-ECT
	1 kW	R88D-KN10F-ECT
	1.5 kW	R88D-KN15F-ECT
	2 kW	R88D-KN20F-ECT
	3 kW	R88D-KN30F-ECT
	5 kW	R88D-KN50F-ECT
	7.5 kW	R88D-KN75F-ECT
	15 kW	R88D-KN150F-ECT

Note: When connecting a Servo Drive to the NJ5 series Machine Automation Controller, it is recommended that you use the Servo Drive with Built-in EtherCAT Communications, R88D-KN□□□-ECT, with unit version 2.1 or later.

General-purpose Inputs (Analog input/Pulse train input type)

Specifications		Model
Power Supply Voltage	Applicable Servomotor Capacity	
Single-phase 100 VAC	50 W	R88D-KTA5L
	100 W	R88D-KT01L
	200 W	R88D-KT02L
	400 W	R88D-KT04L
Single-phase/three-phase 200 VAC	100 W	R88D-KT01H
	200 W	R88D-KT02H
	400 W	R88D-KT04H
	750 W	R88D-KT08H
	1 kW	R88D-KT10H
	1.5 kW	R88D-KT15H
Three-phase 200 VAC	2 kW	R88D-KT20H
	3 kW	R88D-KT30H
	5 kW	R88D-KT50H
	7.5 kW	R88D-KT75H
	15 kW	R88D-KT150H
Three-phase 400 VAC	600 W	R88D-KT06F
	1 kW	R88D-KT10F
	1.5 kW	R88D-KT15F
	2 kW	R88D-KT20F
	3 kW	R88D-KT30F
	5 kW	R88D-KT50F
	7.5 kW	R88D-KT75F
	15 kW	R88D-KT150F

Linear Motor with built-in EtherCAT communications

Specifications		Model
Power Supply Voltage	Applicable Servomotor Capacity	
Single-phase 100 VAC	100 W	R88D-KN01L-ECT-L
	200 W	R88D-KN02L-ECT-L
	400 W	R88D-KN04L-ECT-L
	100 W	R88D-KN01H-ECT-L
Single-phase/three-phase 200 VAC	200 W	R88D-KN02H-ECT-L
	400 W	R88D-KN04H-ECT-L
	750 W	R88D-KN08H-ECT-L
	1 kW	R88D-KN10H-ECT-L
	1.5 kW	R88D-KN15H-ECT-L
Three-phase 400 VAC	600 W	R88D-KN06F-ECT-L
	1 kW	R88D-KN10F-ECT-L
	1.5 kW	R88D-KN15F-ECT-L
	2 kW	R88D-KN20F-ECT-L
	3 kW	R88D-KN30F-ECT-L

MECHATROLINK-II Communications

Specifications		Model
Power Supply Voltage	Applicable Servomotor Capacity	
Single-phase 100 VAC	50 W	R88D-KNA5L-ML2
	100 W	R88D-KN01L-ML2
	200 W	R88D-KN02L-ML2
	400 W	R88D-KN04L-ML2
Single-phase/three-phase 200 VAC	100 W	R88D-KN01H-ML2
	200 W	R88D-KN02H-ML2
	400 W	R88D-KN04H-ML2
	750 W	R88D-KN08H-ML2
	1 kW	R88D-KN10H-ML2
	1.5 kW	R88D-KN15H-ML2
Three-phase 200 VAC	2 kW	R88D-KN20H-ML2
	3 kW	R88D-KN30H-ML2
	5 kW	R88D-KN50H-ML2
Three-phase 400 VAC	600 W	R88D-KN06F-ML2
	1 kW	R88D-KN10F-ML2
	1.5 kW	R88D-KN15F-ML2
	2 kW	R88D-KN20F-ML2
	3 kW	R88D-KN30F-ML2
	5 kW	R88D-KN50F-ML2

AC Servomotors

<Cylinder Type> 3,000-r/min servomotors

Rotation speed	Encoder	Option
3,000 r/min	INC	Without key
	ABS/INC	With key

Specifications			Model	
			With incremental encoder	Straight shaft with key and tap
Voltage	Rated output	Without oil seals		
		Without brake	100 V	50 W
100 W	R88M-K10030L-S2			
200 W	R88M-K20030L-S2			
400 W	R88M-K40030L-S2			
200 V	50 W		R88M-K05030H-S2	
	100 W		R88M-K10030H-S2	
	200 W		R88M-K20030H-S2	
	400 W		R88M-K40030H-S2	
	750 W		R88M-K75030H-S2	
	1 kW		R88M-K1K030H-S2	
	1.5 kW		R88M-K1K530H-S2	
	2 kW		R88M-K2K030H-S2	
400 V	3 kW	R88M-K3K030H-S2		
	4 kW	R88M-K4K030H-S2		
	5 kW	R88M-K5K030H-S2		
	750 W	R88M-K75030F-S2		
	1 kW	R88M-K1K030F-S2		
With brake	100 V	1.5 kW	R88M-K1K530F-S2	
		2 kW	R88M-K2K030F-S2	
		3 kW	R88M-K3K030F-S2	
		4 kW	R88M-K4K030F-S2	
	200 V	5 kW	R88M-K5K030F-S2	
		50 W	R88M-K05030H-BS2	
		100 W	R88M-K10030L-BS2	
		200 W	R88M-K20030L-BS2	
		400 W	R88M-K40030L-BS2	
		50 W	R88M-K05030H-BS2	
100 W		R88M-K10030H-BS2		
200 W		R88M-K20030H-BS2		
400 V	400 W	R88M-K40030H-BS2		
	750 W	R88M-K75030H-BS2		
	1 kW	R88M-K1K030H-BS2		
	1.5 kW	R88M-K1K530H-BS2		
	2 kW	R88M-K2K030H-BS2		
	3 kW	R88M-K3K030H-BS2		
	4 kW	R88M-K4K030H-BS2		
	5 kW	R88M-K5K030H-BS2		
	750 W	R88M-K75030F-BS2		
	1 kW	R88M-K1K030F-BS2		

Note: Models with oil seals are also available.

Rotation speed	Encoder	Option
3,000 r/min	INC	Without key
	ABS/INC	With key

Specifications			Model	
			With incremental encoder	Straight shaft without key
Voltage	Rated output	Without oil seals		
		Without brake	100 V	50 W
100 W	R88M-K10030L			
200 W	R88M-K20030L			
400 W	R88M-K40030L			
200 V	50 W		R88M-K05030H	
	100 W		R88M-K10030H	
	200 W		R88M-K20030H	
	400 W		R88M-K40030H	
	750 W		R88M-K75030H	
	1 kW		R88M-K1K030H	
	1.5 kW		R88M-K1K530H	
	2 kW		R88M-K2K030H	
400 V	3 kW	R88M-K3K030H		
	4 kW	R88M-K4K030H		
	5 kW	R88M-K5K030H		
	750 W	R88M-K75030F		
	1 kW	R88M-K1K030F		
With brake	100 V	1.5 kW	R88M-K1K530F	
		2 kW	R88M-K2K030F	
		3 kW	R88M-K3K030F	
		4 kW	R88M-K4K030F	
	200 V	5 kW	R88M-K5K030F	
		50 W	R88M-K05030H-B	
		100 W	R88M-K10030L-B	
		200 W	R88M-K20030L-B	
		400 W	R88M-K40030L-B	
		50 W	R88M-K05030H-B	
100 W		R88M-K10030H-B		
200 W		R88M-K20030H-B		
400 V	400 W	R88M-K40030H-B		
	750 W	R88M-K75030H-B		
	1 kW	R88M-K1K030H-B		
	1.5 kW	R88M-K1K530H-B		
	2 kW	R88M-K2K030H-B		
	3 kW	R88M-K3K030H-B		
	4 kW	R88M-K4K030H-B		
	5 kW	R88M-K5K030H-B		
	750 W	R88M-K75030F-B		
	1 kW	R88M-K1K030F-B		

Note: Models with oil seals are also available.

AC Servomotor/Drive G5-series

Rotation speed	Encoder	Option
3,000 r/min	INC	Without key
	ABS/INC	With key

Rotation speed	Encoder	Option
3,000 r/min	INC	Without key
	ABS/INC	With key

Specifications			Model	
			With absolute encoder	
			Straight shaft withkey and tap	
Voltage	Rated output	Without oil seals		
100 V	50 W	R88M-K05030T-S2		
	100 W	R88M-K10030S-S2		
	200 W	R88M-K20030S-S2		
	400 W	R88M-K40030S-S2		
200 V	50 W	R88M-K05030T-S2		
	100 W	R88M-K10030T-S2		
	200 W	R88M-K20030T-S2		
	400 W	R88M-K40030T-S2		
	750 W	R88M-K75030T-S2		
	1 kW	R88M-K1K030T-S2		
	1.5 kW	R88M-K1K530T-S2		
	2 kW	R88M-K2K030T-S2		
	3 kW	R88M-K3K030T-S2		
400 V	4 kW	R88M-K4K030T-S2		
	5 kW	R88M-K5K030T-S2		
	750 W	R88M-K75030C-S2		
	1 kW	R88M-K1K030C-S2		
	1.5 kW	R88M-K1K530C-S2		
	2 kW	R88M-K2K030C-S2		
100 V	3 kW	R88M-K3K030C-S2		
	4 kW	R88M-K4K030C-S2		
	5 kW	R88M-K5K030C-S2		
	200 V	50 W	R88M-K05030T-BS2	
		100 W	R88M-K10030S-BS2	
		200 W	R88M-K20030S-BS2	
		400 W	R88M-K40030S-BS2	
		50 W	R88M-K05030T-BS2	
		100 W	R88M-K10030T-BS2	
200 W		R88M-K20030T-BS2		
400 W		R88M-K40030T-BS2		
750 W		R88M-K75030T-BS2		
400 V	1 kW	R88M-K1K030T-BS2		
	1.5 kW	R88M-K1K530T-BS2		
	2 kW	R88M-K2K030T-BS2		
	3 kW	R88M-K3K030T-BS2		
	4 kW	R88M-K4K030T-BS2		
	5 kW	R88M-K5K030T-BS2		
	750 W	R88M-K75030C-BS2		
	1 kW	R88M-K1K030C-BS2		
	1.5 kW	R88M-K1K530C-BS2		
2 kW	R88M-K2K030C-BS2			
400 V	3 kW	R88M-K3K030C-BS2		
	4 kW	R88M-K4K030C-BS2		
	5 kW	R88M-K5K030C-BS2		

Note: Models with oil seals are also available.

Specifications			Model	
			With absolute encoder	
			Straight shaft without key	
Voltage	Rated output	Without oil seals		
100 V	50 W	R88M-K05030T		
	100 W	R88M-K10030S		
	200 W	R88M-K20030S		
	400 W	R88M-K40030S		
200 V	50 W	R88M-K05030T		
	100 W	R88M-K10030T		
	200 W	R88M-K20030T		
	400 W	R88M-K40030T		
	750 W	R88M-K75030T		
	1 kW	R88M-K1K030T		
	1.5 kW	R88M-K1K530T		
	2 kW	R88M-K2K030T		
	3 kW	R88M-K3K030T		
400 V	4 kW	R88M-K4K030T		
	5 kW	R88M-K5K030T		
	750 W	R88M-K75030C		
	1 kW	R88M-K1K030C		
	1.5 kW	R88M-K1K530C		
	2 kW	R88M-K2K030C		
100 V	3 kW	R88M-K3K030C		
	4 kW	R88M-K4K030C		
	5 kW	R88M-K5K030C		
	200 V	50 W	R88M-K05030T-B	
		100 W	R88M-K10030S-B	
		200 W	R88M-K20030S-B	
		400 W	R88M-K40030S-B	
		50 W	R88M-K05030T-B	
		100 W	R88M-K10030T-B	
200 W		R88M-K20030T-B		
400 W		R88M-K40030T-B		
750 W		R88M-K75030T-B		
400 V	1 kW	R88M-K1K030T-B		
	1.5 kW	R88M-K1K530T-B		
	2 kW	R88M-K2K030T-B		
	3 kW	R88M-K3K030T-B		
	4 kW	R88M-K4K030T-B		
	5 kW	R88M-K5K030T-B		
	750 W	R88M-K75030C-B		
	1 kW	R88M-K1K030C-B		
	1.5 kW	R88M-K1K530C-B		
2 kW	R88M-K2K030C-B			
400 V	3 kW	R88M-K3K030C-B		
	4 kW	R88M-K4K030C-B		
	5 kW	R88M-K5K030C-B		

Note: Models with oil seals are also available.

2,000-r/min servomotors

Rotation speed	Encoder	Option
2,000 r/min	INC	Without key
	ABS/INC	With key

Specifications			Model	
			With incremental encoder	
			Straight shaft with key and tap	
	Voltage	Rated output	Without oil seals	
			Without brake	200 V
1.5 kW	R88M-K1K520H-S2			
2 kW	R88M-K2K020H-S2			
3 kW	R88M-K3K020H-S2			
4 kW	R88M-K4K020H-S2			
5 kW	R88M-K5K020H-S2			
400 V	400 W	R88M-K40020F-S2		
	600 W	R88M-K60020F-S2		
	1 kW	R88M-K1K020F-S2		
	1.5 kW	R88M-K1K520F-S2		
	2 kW	R88M-K2K020F-S2		
With brake	200 V	1 kW	R88M-K1K020H-BS2	
		1.5 kW	R88M-K1K520H-BS2	
		2 kW	R88M-K2K020H-BS2	
		3 kW	R88M-K3K020H-BS2	
		4 kW	R88M-K4K020H-BS2	
	5 kW	R88M-K5K020H-BS2		
	400 V	400 W	R88M-K40020F-BS2	
		600 W	R88M-K60020F-BS2	
		1 kW	R88M-K1K020F-BS2	
		1.5 kW	R88M-K1K520F-BS2	
2 kW		R88M-K2K020F-BS2		
	400 V	3 kW	R88M-K3K020F-BS2	
		4 kW	R88M-K4K020F-BS2	
		5 kW	R88M-K5K020F-BS2	

Note: Models with oil seals are also available.

Rotation speed	Encoder	Option
2,000 r/min	INC	Without key
	ABS/INC	With key

Specifications			Model	
			With incremental encoder	
			Straight shaft without key	
	Voltage	Rated output	Without oil seals	
			Without brake	200 V
1.5 kW	R88M-K1K520H			
2 kW	R88M-K2K020H			
3 kW	R88M-K3K020H			
4 kW	R88M-K4K020H			
5 kW	R88M-K5K020H			
400 V	400 W	R88M-K40020F		
	600 W	R88M-K60020F		
	1 kW	R88M-K1K020F		
	1.5 kW	R88M-K1K520F		
	2 kW	R88M-K2K020F		
With brake	200 V	1 kW	R88M-K1K020H-B	
		1.5 kW	R88M-K1K520H-B	
		2 kW	R88M-K2K020H-B	
		3 kW	R88M-K3K020H-B	
		4 kW	R88M-K4K020H-B	
	5 kW	R88M-K5K020H-B		
	400 V	400 W	R88M-K40020F-B	
		600 W	R88M-K60020F-B	
		1 kW	R88M-K1K020F-B	
		1.5 kW	R88M-K1K520F-B	
2 kW		R88M-K2K020F-B		
	400 V	3 kW	R88M-K3K020F-B	
		4 kW	R88M-K4K020F-B	
		5 kW	R88M-K5K020F-B	

Note: Models with oil seals are also available.

AC Servomotor/Drive G5-series

Rotation speed	Encoder	Option
2,000 r/min	INC	Without key
	ABS/INC	With key

Specifications			Model	
			With absolute encoder	
Voltage			Straight shaft with key and tap	
			Without oil seals	
Without brake	200 V	1 kW	R88M-K1K020T-S2	
		1.5 kW	R88M-K1K520T-S2	
		2 kW	R88M-K2K020T-S2	
		3 kW	R88M-K3K020T-S2	
		4 kW	R88M-K4K020T-S2	
		5 kW	R88M-K5K020T-S2	
		7.5 kW	R88M-K7K515T-S2 *	
		11 kW	R88M-K11K015T-S2 *	
	15 kW	R88M-K15K015T-S2 *		
	400 V	400 W	R88M-K40020C-S2	
		600 W	R88M-K60020C-S2	
		1 kW	R88M-K1K020C-S2	
		1.5 kW	R88M-K1K520C-S2	
		2 kW	R88M-K2K020C-S2	
		3 kW	R88M-K3K020C-S2	
		4 kW	R88M-K4K020C-S2	
5 kW		R88M-K5K020C-S2		
7.5 kW	R88M-K7K515C-S2 *			
11 kW	R88M-K11K015C-S2 *			
15 kW	R88M-K15K015C-S2 *			
With brake	200 V	1 kW	R88M-K1K020T-BS2	
		1.5 kW	R88M-K1K520T-BS2	
		2 kW	R88M-K2K020T-BS2	
		3 kW	R88M-K3K020T-BS2	
		4 kW	R88M-K4K020T-BS2	
		5 kW	R88M-K5K020T-BS2	
		7.5 kW	R88M-K7K515T-BS2 *	
		11 kW	R88M-K11K015T-BS2 *	
	15 kW	R88M-K15K015T-BS2 *		
	400 V	400 W	R88M-K40020C-BS2	
		600 W	R88M-K60020C-BS2	
		1 kW	R88M-K1K020C-BS2	
		1.5 kW	R88M-K1K520C-BS2	
		2 kW	R88M-K2K020C-BS2	
		3 kW	R88M-K3K020C-BS2	
		4 kW	R88M-K4K020C-BS2	
5 kW		R88M-K5K020C-BS2		
7.5 kW	R88M-K7K515C-BS2 *			
11 kW	R88M-K11K015C-BS2 *			
15 kW	R88M-K15K015C-BS2 *			

Note: Models with oil seals are also available.
* The rated speed is 1,500 r/min.

Rotation speed	Encoder	Option
2,000 r/min	INC	Without key
	ABS/INC	With key

Specifications			Model	
			With absolute encoder	
Voltage			Straight shaft without key	
			Without oil seals	
Without brake	200 V	1 kW	R88M-K1K020T	
		1.5 kW	R88M-K1K520T	
		2 kW	R88M-K2K020T	
		3 kW	R88M-K3K020T	
		4 kW	R88M-K4K020T	
		5 kW	R88M-K5K020T	
		7.5 kW	R88M-K7K515T *	
		11 kW	R88M-K11K015T *	
	15 kW	R88M-K15K015T *		
	400 V	400 W	R88M-K40020C	
		600 W	R88M-K60020C	
		1 kW	R88M-K1K020C	
		1.5 kW	R88M-K1K520C	
		2 kW	R88M-K2K020C	
		3 kW	R88M-K3K020C	
		4 kW	R88M-K4K020C	
5 kW		R88M-K5K020C		
7.5 kW	R88M-K7K515C *			
11 kW	R88M-K11K015C *			
15 kW	R88M-K15K015C *			
With brake	200 V	1 kW	R88M-K1K020T-B	
		1.5 kW	R88M-K1K520T-B	
		2 kW	R88M-K2K020T-B	
		3 kW	R88M-K3K020T-B	
		4 kW	R88M-K4K020T-B	
		5 kW	R88M-K5K020T-B	
		7.5 kW	R88M-K7K515T-B *	
		11 kW	R88M-K11K015T-B *	
	15 kW	R88M-K15K015T-B *		
	400 V	400 W	R88M-K40020C-B	
		600 W	R88M-K60020C-B	
		1 kW	R88M-K1K020C-B	
		1.5 kW	R88M-K1K520C-B	
		2 kW	R88M-K2K020C-B	
		3 kW	R88M-K3K020C-B	
		4 kW	R88M-K4K020C-B	
5 kW		R88M-K5K020C-B		
7.5 kW	R88M-K7K515C-B *			
11 kW	R88M-K11K015C-B *			
15 kW	R88M-K15K015C-B *			

Note: Models with oil seals are also available.
* The rated speed is 1,500 r/min.

1,000-r/min servomotors

Rotation speed	Encoder	Option
1,000 r/min	INC	Without key
	ABS/INC	With key

Specifications			Model	
			With incremental encoder	
			Straight shaft with key and tap	
		Voltage	Rated output	Without oil seals
Without brake	200 V	900 W	R88M-K90010H-S2	
		2 kW	R88M-K2K010H-S2	
		3 kW	R88M-K3K010H-S2	
	400 V	900 W	R88M-K90010F-S2	
		2 kW	R88M-K2K010F-S2	
		3 kW	R88M-K3K010F-S2	
With brake	200 V	900 W	R88M-K90010H-BS2	
		2 kW	R88M-K2K010H-BS2	
		3 kW	R88M-K3K010H-BS2	
	400 V	900 W	R88M-K90010F-BS2	
		2 kW	R88M-K2K010F-BS2	
		3 kW	R88M-K3K010F-BS2	

Note: Models with oil seals are also available.

Rotation speed	Encoder	Option
1,000 r/min	INC	Without key
	ABS/INC	With key

Specifications			Model	
			With incremental encoder	
			Straight shaft without key	
		Voltage	Rated output	Without oil seals
Without brake	200 V	900 W	R88M-K90010H	
		2 kW	R88M-K2K010H	
		3 kW	R88M-K3K010H	
	400 V	900 W	R88M-K90010F	
		2 kW	R88M-K2K010F	
		3 kW	R88M-K3K010F	
With brake	200 V	900 W	R88M-K90010H-B	
		2 kW	R88M-K2K010H-B	
		3 kW	R88M-K3K010H-B	
	400 V	900 W	R88M-K90010F-B	
		2 kW	R88M-K2K010F-B	
		3 kW	R88M-K3K010F-B	

Note: Models with oil seals are also available.

Rotation speed	Encoder	Option
1,000 r/min	INC	Without key
	ABS/INC	With key

Specifications			Model	
			With absolute encoder	
			Straight shaft with key and tap	
		Voltage	Rated output	Without oil seals
Without brake	200 V	900 W	R88M-K90010T-S2	
		2 kW	R88M-K2K010T-S2	
		3 kW	R88M-K3K010T-S2	
		4.5 kW	R88M-K4K510T-S2	
		6 kW	R88M-K6K010T-S2	
	400 V	900 W	R88M-K90010C-S2	
		2 kW	R88M-K2K010C-S2	
		3 kW	R88M-K3K010C-S2	
		4.5 kW	R88M-K4K510C-S2	
		6 kW	R88M-K6K010C-S2	
With brake	200 V	900 W	R88M-K90010T-BS2	
		2 kW	R88M-K2K010T-BS2	
		3 kW	R88M-K3K010T-BS2	
		4.5 kW	R88M-K4K510T-BS2	
		6 kW	R88M-K6K010T-BS2	
	400 V	900 W	R88M-K90010C-BS2	
		2 kW	R88M-K2K010C-BS2	
		3 kW	R88M-K3K010C-BS2	
		4.5 kW	R88M-K4K510C-BS2	
		6 kW	R88M-K6K010C-BS2	

Note: Models with oil seals are also available.

Rotation speed	Encoder	Option
1,000 r/min	INC	Without key
	ABS/INC	With key

Specifications			Model	
			With absolute encoder	
			Straight shaft without key	
		Voltage	Rated output	Without oil seals
Without brake	200 V	900 W	R88M-K90010T	
		2 kW	R88M-K2K010T	
		3 kW	R88M-K3K010T	
		4.5 kW	R88M-K4K510T	
		6 kW	R88M-K6K010T	
	400 V	900 W	R88M-K90010C	
		2 kW	R88M-K2K010C	
		3 kW	R88M-K3K010C	
		4.5 kW	R88M-K4K510C	
		6 kW	R88M-K6K010C	
With brake	200 V	900 W	R88M-K90010T-B	
		2 kW	R88M-K2K010T-B	
		3 kW	R88M-K3K010T-B	
		4.5 kW	R88M-K4K510T-B	
		6 kW	R88M-K6K010T-B	
	400 V	900 W	R88M-K90010C-B	
		2 kW	R88M-K2K010C-B	
		3 kW	R88M-K3K010C-B	
		4.5 kW	R88M-K4K510C-B	
		6 kW	R88M-K6K010C-B	

Note: Models with oil seals are also available.

Linear Motors

<Iron-core motor type>

Motor Coil Unit

Motor Coil Unit model	Continuous force [N]	Momentary maximum force [N]
R88L-EC-FW-0303-ANPC	48	105
R88L-EC-FW-0306-ANPC	96	210
R88L-EC-FW-0606-ANPC	160	400
R88L-EC-FW-0609-ANPC	240	600
R88L-EC-FW-0612-ANPC	320	800
R88L-EC-FW-1112-ANPC	608	1600
R88L-EC-FW-1115-ANPC	760	2000

Magnet Trac

Magnet Trac model	Magnet Trac Unit Length (mm)
R88L-EC-FM-03096-A	96
R88L-EC-FM-03144-A	144
R88L-EC-FM-03384-A	384
R88L-EC-FM-06192-A	192
R88L-EC-FM-06288-A	288
R88L-EC-FM-11192-A	192
R88L-EC-FM-11288-A	288

<Ironless motor type>

Motor Coil Unit

Motor Coil Unit model	Continuous force [N]	Momentary maximum force [N]
R88L-EC-GW-0303-ANPS	26.5	96
R88L-EC-GW-0306-ANPS	53	200
R88L-EC-GW-0309-ANPS	80	300
R88L-EC-GW-0503-ANPS	58	240
R88L-EC-GW-0506-ANPS	117	480
R88L-EC-GW-0509-ANPS	175	720
R88L-EC-GW-0703-ANPS	117	552
R88L-EC-GW-0706-ANPS	232	1110
R88L-EC-GW-0709-ANPS	348	1730

Magnet Trac

Magnet Trac model	Magnet Trac Unit Length (mm)
R88L-EC-GM-03090-A	90
R88L-EC-GM-03120-A	120
R88L-EC-GM-03390-A	390
R88L-EC-GM-05126-A	126
R88L-EC-GM-05168-A	168
R88L-EC-GM-05210-A	210
R88L-EC-GM-05546-A	546
R88L-EC-GM-07114-A	114
R88L-EC-GM-07171-A	171
R88L-EC-GM-07456-A	456

Combination table

Motor Coil Unit and Magnet Trac Combinations

Iron-core motor type

Motor Coil Unit model	Magnet Trac model
R88L-EC-FW-0303-ANPC R88L-EC-FW-0306-ANPC	R88L-EC-FM-03096-A R88L-EC-FM-03144-A R88L-EC-FM-03384-A
R88L-EC-FW-0606-ANPC R88L-EC-FW-0609-ANPC R88L-EC-FW-0612-ANPC	R88L-EC-FM-06192-A R88L-EC-FM-06288-A
R88L-EC-FW-1112-ANPC R88L-EC-FW-1115-ANPC	R88L-EC-FM-11192-A R88L-EC-FM-11288-A

Ironless motor type

Motor Coil Unit model	Magnet Trac model
R88L-EC-GW-0303-ANPS R88L-EC-GW-0306-ANPS R88L-EC-GW-0309-ANPS	R88L-EC-GM-03090-A R88L-EC-GM-03120-A R88L-EC-GM-03390-A
R88L-EC-GW-0503-ANPS R88L-EC-GW-0506-ANPS R88L-EC-GW-0509-ANPS	R88L-EC-GM-05126-A R88L-EC-GM-05168-A R88L-EC-GM-05210-A R88L-EC-GM-05546-A
R88L-EC-GW-0703-ANPS R88L-EC-GW-0706-ANPS R88L-EC-GW-0709-ANPS	R88L-EC-GM-07114-A R88L-EC-GM-07171-A R88L-EC-GM-07456-A

Decelerators (Backlash = 3' Max./Backlash = 15' Max.)

Backlash = 3' Max
<Cylinder Type>

●3,000-r/min servomotors

Straight shaft without key

Motor capacity	Gear Ratio	Model (Straight shaft)
50 W	1/5	R88G-HPG11B05100B
	1/9	R88G-HPG11B09050B
	1/21	R88G-HPG14A21100B
	1/33	R88G-HPG14A33050B
	1/45	R88G-HPG14A45050B
100 W	1/5	R88G-HPG11B05100B
	1/11	R88G-HPG14A11100B
	1/21	R88G-HPG14A21100B
	1/33	R88G-HPG20A33100B
	1/45	R88G-HPG20A45100B
200 W	1/5	R88G-HPG14A05200B
	1/11	R88G-HPG14A11200B
	1/21	R88G-HPG20A21200B
	1/33	R88G-HPG20A33200B
	1/45	R88G-HPG20A45200B
400 W	1/5	R88G-HPG14A05400B
	1/11	R88G-HPG20A11400B
	1/21	R88G-HPG20A21400B
	1/33	R88G-HPG32A33400B
	1/45	R88G-HPG32A45400B
750 W (200 V)	1/5	R88G-HPG20A05750B
	1/11	R88G-HPG20A11750B
	1/21	R88G-HPG32A21750B
	1/33	R88G-HPG32A33750B
	1/45	R88G-HPG32A45750B
750W (400 V)	1/5	R88G-HPG32A052K0B
	1/11	R88G-HPG32A112K0B
	1/21	R88G-HPG32A211K5B
	1/33	R88G-HPG32A33600SB
	1/45	R88G-HPG50A451K5B
1kW	1/5	R88G-HPG32A052K0B
	1/11	R88G-HPG32A112K0B
	1/21	R88G-HPG32A211K5B
	1/33	R88G-HPG50A332K0B
	1/45	R88G-HPG50A451K5B
1.5kW	1/5	R88G-HPG32A052K0B
	1/11	R88G-HPG32A112K0B
	1/21	R88G-HPG32A211K5B
	1/33	R88G-HPG50A332K0B
	1/45	R88G-HPG50A451K5B
2kW	1/5	R88G-HPG32A052K0B
	1/11	R88G-HPG32A112K0B
	1/21	R88G-HPG50A212K0B
	1/33	R88G-HPG50A332K0B
3kW	1/5	R88G-HPG32A053K0B
	1/11	R88G-HPG50A113K0B
	1/21	R88G-HPG50A213K0B
4kW	1/5	R88G-HPG32A054K0B
	1/11	R88G-HPG50A115K0B
5kW	1/5	R88G-HPG50A055K0B
	1/11	R88G-HPG50A115K0B

Note: 1. The standard models have a straight shaft.

2. To order a Servomotor with a straight shaft with key, add "J" to the end of the model number, in the place indicated by the box.

●2,000-r/min servomotors

Straight shaft without key

Motor capacity	Gear Ratio	Model (Straight shaft)
400 W	1/5	R88G-HPG32A052K0B
	1/11	R88G-HPG32A112K0B
	1/21	R88G-HPG32A211K5B
	1/33	R88G-HPG32A33600SB
	1/45	R88G-HPG32A45400SB
600 W	1/5	R88G-HPG32A052K0B
	1/11	R88G-HPG32A112K0B
	1/21	R88G-HPG32A211K5B
	1/33	R88G-HPG32A33600SB
	1/45	R88G-HPG50A451K5B
1 kW	1/5	R88G-HPG32A053K0B
	1/11	R88G-HPG32A112K0SB
	1/21	R88G-HPG32A211K0SB
	1/33	R88G-HPG50A332K0SB
	1/45	R88G-HPG50A451K0SB
1.5 kW	1/5	R88G-HPG32A053K0B
	1/11	R88G-HPG32A112K0SB
	1/21	R88G-HPG50A213K0B
	1/33	R88G-HPG50A332K0SB
2 kW	1/5	R88G-HPG32A053K0B
	1/11	R88G-HPG32A112K0SB
	1/21	R88G-HPG50A213K0B
	1/33	R88G-HPG50A332K0SB
3 kW	1/5	R88G-HPG32A054K0B
	1/11	R88G-HPG50A115K0B
	1/21	R88G-HPG50A213K0SB
4 kW	1/5	R88G-HPG50A055K0SB
	1/11	R88G-HPG50A115K0SB
	1/20	R88G-HPG65A205K0SB
5 kW	1/5	R88G-HPG65A255K0SB
	1/11	R88G-HPG50A055K0SB
	1/11	R88G-HPG50A115K0SB
	1/20	R88G-HPG65A205K0SB
	1/25	R88G-HPG65A255K0SB

Note: 1. The standard models have a straight shaft.

2. To order a Servomotor with a straight shaft with key, add "J" to the end of the model number, in the place indicated by the box.

● 1,000-r/min servomotors

Straight shaft without key

Motor capacity	Gear Ratio	Model (Straight shaft)
900 W	1/5	R88G-HPG32A05900TB
	1/11	R88G-HPG32A11900TB
	1/21	R88G-HPG50A21900TB
	1/33	R88G-HPG50A33900TB
2 kW	1/5	R88G-HPG32A052K0TB
	1/11	R88G-HPG50A112K0TB
	1/21	R88G-HPG50A212K0TB
	1/25	R88G-HPG65A255K0SB
3 kW	1/5	R88G-HPG50A055K0SB
	1/11	R88G-HPG50A115K0SB
	1/20	R88G-HPG65A205K0SB
	1/25	R88G-HPG65A255K0SB

- Note: 1.** The standard models have a straight shaft.
2. To order a Servomotor with a straight shaft with key, add "J" to the end of the model number, in the place indicated by the box.

Backlash = 15' Max
<Cylinder Type>

● 3,000-r/min servomotors

Straight shaft with key

Motor capacity	Gear Ratio	Model (Straight shaft)
50 W	1/5	R88G-VRXF05B100CJ
	1/9	R88G-VRXF09B100CJ
	1/15	R88G-VRXF15B100CJ
	1/25	R88G-VRXF25B100CJ
	1/5	R88G-VRXF05B100CJ
100 W	1/9	R88G-VRXF09B100CJ
	1/15	R88G-VRXF15B100CJ
	1/25	R88G-VRXF25B100CJ
	1/5	R88G-VRXF05B200CJ
200 W	1/9	R88G-VRXF09C200CJ
	1/15	R88G-VRXF15C200CJ
	1/25	R88G-VRXF25C200CJ
400 W	1/5	R88G-VRXF05C400CJ
	1/9	R88G-VRXF09C400CJ
	1/15	R88G-VRXF15C400CJ
	1/25	R88G-VRXF25C400CJ
750 W (200 V)	1/5	R88G-VRXF05C750CJ
	1/9	R88G-VRXF09D750CJ
	1/15	R88G-VRXF15D750CJ
	1/25	R88G-VRXF25D750CJ

Note: Decelerators (Backlash = 15' Max.)
 The new R88G-VRXF Series of the Decelerators (Backlash = 15' Max.) was released in October 2017.
 The old R88G-VRSF Series will be discontinued at the end of March 2019.

Accessories and Cables

■ Connection Cables (Power Cables, Brake Cables, Encoder Cables)

<Non-flexible Cables>

Power cable

Specifications		Without brake	With brake
		Model	Model
[100 V/200 V] 3,000-r/min Servomotors of 50 to 750 W	3 m	R88A-CAKA003S	
	5 m	R88A-CAKA005S	
	10 m	R88A-CAKA010S	
	15 m	R88A-CAKA015S	
	20 m	R88A-CAKA020S	
	30 m	R88A-CAKA030S	
	40 m	R88A-CAKA040S	
	50 m	R88A-CAKA050S	
[200 V] 3,000-r/min Servomotors of 1 to 2 kW 2,000-r/min Servomotors of 1 to 2 kW 1,000-r/min Servomotors of 900 W	3 m	R88A-CAGB003S	R88A-CAGB003B
	5 m	R88A-CAGB005S	R88A-CAGB005B
	10 m	R88A-CAGB010S	R88A-CAGB010B
	15 m	R88A-CAGB015S	R88A-CAGB015B
	20 m	R88A-CAGB020S	R88A-CAGB020B
	30 m	R88A-CAGB030S	R88A-CAGB030B
	40 m	R88A-CAGB040S	R88A-CAGB040B
	50 m	R88A-CAGB050S	R88A-CAGB050B
[400 V] 3,000-r/min Servomotors of 750 W to 2 kW 2,000-r/min Servomotors of 400 W to 2 kW 1,000-r/min Servomotors of 900 W	3 m	R88A-CAGB003S	R88A-CAKF003B
	5 m	R88A-CAGB005S	R88A-CAKF005B
	10 m	R88A-CAGB010S	R88A-CAKF010B
	15 m	R88A-CAGB015S	R88A-CAKF015B
	20 m	R88A-CAGB020S	R88A-CAKF020B
	30 m	R88A-CAGB030S	R88A-CAKF030B
	40 m	R88A-CAGB040S	R88A-CAKF040B
	50 m	R88A-CAGB050S	R88A-CAKF050B
[200 V] [400 V] 3,000-r/min Servomotors of 3 to 5 kW 2,000-r/min Servomotors of 3 to 5 kW 1,000-r/min Servomotors of 2 to 4.5 kW	3 m	R88A-CAGD003S	R88A-CAGD003B
	5 m	R88A-CAGD005S	R88A-CAGD005B
	10 m	R88A-CAGD010S	R88A-CAGD010B
	15 m	R88A-CAGD015S	R88A-CAGD015B
	20 m	R88A-CAGD020S	R88A-CAGD020B
	30 m	R88A-CAGD030S	R88A-CAGD030B
	40 m	R88A-CAGD040S	R88A-CAGD040B
	50 m	R88A-CAGD050S	R88A-CAGD050B
[200 V] [400 V] 1,500-r/min Servomotors of 7.5 kW 1,000-r/min Servomotors of 6 kW	3 m	R88A-CAGE003S	
	5 m	R88A-CAGE005S	
	10 m	R88A-CAGE010S	
	15 m	R88A-CAGE015S	
	20 m	R88A-CAGE020S	
	30 m	R88A-CAGE030S	
	40 m	R88A-CAGE040S	
	50 m	R88A-CAGE050S	

Note: 1. Different connectors are used for the motor power and the brake on 100-V and 200-V, 3,000-r/min Servomotors of 50 to 750 W and Servomotors of 6 to 15 kW. When using a Servomotor with a brake, two cables are required: a Power Cable without Brake and a Brake Cable.

2. For non-flexible power cables for Servomotors of 11 or 15 kW, refer to the G5 series USER'S MANUAL and make your own cable. Confirm the Manual No. that is listed in Related Manuals.

Brake Cable

Specifications		Non-flexible Cables	
		Model	
[100 V][200 V] 3,000-r/min Servomotors of 50 to 750 W	3 m	R88A-CAKA003B	
	5 m	R88A-CAKA005B	
	10 m	R88A-CAKA010B	
	15 m	R88A-CAKA015B	
	20 m	R88A-CAKA020B	
	30 m	R88A-CAKA030B	
	40 m	R88A-CAKA040B	
	50 m	R88A-CAKA050B	
[200 V][400 V] 1,500-r/min Servomotors of 7.5 to 15 kW 1,000-r/min Servomotors of 6 kW	3 m	R88A-CAGE003B	
	5 m	R88A-CAGE005B	
	10 m	R88A-CAGE010B	
	15 m	R88A-CAGE015B	
	20 m	R88A-CAGE020B	
	30 m	R88A-CAGE030B	
	40 m	R88A-CAGE040B	
	50 m	R88A-CAGE050B	

Encoder Cable

Specifications		Non-flexible Cables	
		Model	
[100 V/200 V] 3,000-r/min Servomotors of 50 to 750 W	3 m	R88A-CRKA003C	
	5 m	R88A-CRKA005C	
	10 m	R88A-CRKA010C	
	15 m	R88A-CRKA015C	
	20 m	R88A-CRKA020C	
	30 m	R88A-CRKA030C	
	40 m	R88A-CRKA040C	
	50 m	R88A-CRKA050C	
[100 V and 200 V] 3,000-r/min Servomotors of 1.0 kW or more 2,000-r/min Servomotors 1,500-r/min Servomotors 1,000-r/min Servomotors [400 V] 3,000-r/min Servomotors 2,000-r/min Servomotors 1,500-r/min Servomotors 1,000-r/min Servomotors	3 m	R88A-CRKC003N	
	5 m	R88A-CRKC005N	
	10 m	R88A-CRKC010N	
	15 m	R88A-CRKC015N	
	20 m	R88A-CRKC020N	
	30 m	R88A-CRKC030N	
	40 m	R88A-CRKC040N	
	50 m	R88A-CRKC050N	

AC Servomotor/Drive G5-series

<Flexible Cables>

Power cable

Specifications		Without brake		With brake	
		Model		Model	
[100 V/200 V] 3,000-r/min Servomotors of 50 to 750 W	3 m	R88A-CAKA003SR		Note: There are separate connectors for power and brakes for 3,000-r/min Servomotors of 50 to 750W. When a Servomotor with a brake is used, it is necessary to use both a PowerCable for Servomotors without brakes and Power cable.	
	5 m	R88A-CAKA005SR			
	10 m	R88A-CAKA010SR			
	15 m	R88A-CAKA015SR			
	20 m	R88A-CAKA020SR			
	30 m	R88A-CAKA030SR			
	40 m	R88A-CAKA040SR			
[200 V] 3,000-r/min Servomotors of 1 to 2 kW 2,000-r/min Servomotors of 1 to 2 kW 1,000-r/min Servomotors of 900 W	3 m	R88A-CAGB003SR		R88A-CAGB003BR	
	5 m	R88A-CAGB005SR		R88A-CAGB005BR	
	10 m	R88A-CAGB010SR		R88A-CAGB010BR	
	15 m	R88A-CAGB015SR		R88A-CAGB015BR	
	20 m	R88A-CAGB020SR		R88A-CAGB020BR	
	30 m	R88A-CAGB030SR		R88A-CAGB030BR	
	40 m	R88A-CAGB040SR		R88A-CAGB040BR	
[400 V] 3,000-r/min Servomotors of 750 W to 2 kW 2,000-r/min Servomotors of 400 W to 2 kW 1,000-r/min Servomotors of 900 W	3 m	R88A-CAGB003SR		R88A-CAKF003BR	
	5 m	R88A-CAGB005SR		R88A-CAKF005BR	
	10 m	R88A-CAGB010SR		R88A-CAKF010BR	
	15 m	R88A-CAGB015SR		R88A-CAKF015BR	
	20 m	R88A-CAGB020SR		R88A-CAKF020BR	
	30 m	R88A-CAGB030SR		R88A-CAKF030BR	
	40 m	R88A-CAGB040SR		R88A-CAKF040BR	
[200 V] [400 V] 3,000-r/min Servomotors of 3 to 5 kW 2,000-r/min Servomotors of 3 to 5 kW 1,000-r/min Servomotors of 4.5 kW	3 m	R88A-CAGD003SR		R88A-CAGD003BR	
	5 m	R88A-CAGD005SR		R88A-CAGD005BR	
	10 m	R88A-CAGD010SR		R88A-CAGD010BR	
	15 m	R88A-CAGD015SR		R88A-CAGD015BR	
	20 m	R88A-CAGD020SR		R88A-CAGD020BR	
	30 m	R88A-CAGD030SR		R88A-CAGD030BR	
	40 m	R88A-CAGD040SR		R88A-CAGD040BR	
50 m	R88A-CAGD050SR		R88A-CAGD050BR		

Note: 1. Different connectors are used for the motor power and the brake on 100-V and 200-V, 3,000-r/min Servomotors of 50 to 750 W and Servomotors of 6 to 15 kW. When using a Servomotor with a brake, two cables are required: a Power Cable without Brake and a Brake Cable.

Note: 2. For flexible power cables for Servomotors of 11 to 15 kW, refer to the G5 series USER'S MANUAL and make your own cable.

For flexible power cables for Servomotors of 6 to 7.5 kW, refer to the G5 series USER'S MANUAL and make your own power cable.

Brake Cable

Specifications		Flexible Cables	
		Model	
[100 V] [200 V] 3,000-r/min Servomotors of 50 to 750 W	3 m	R88A-CAKA003BR	
	5 m	R88A-CAKA005BR	
	10 m	R88A-CAKA010BR	
	15 m	R88A-CAKA015BR	
	20 m	R88A-CAKA020BR	
	30 m	R88A-CAKA030BR	
	40 m	R88A-CAKA040BR	
50 m	R88A-CAKA050BR		

Note: For flexible brake cables for Servomotors of 6 to 15 kW, refer to the G5 series USER'S MANUAL and make your own brake cable. Confirm the Manual No. that is listed in Related Manuals.

Encoder Cable

Specifications		Flexible Cables	
		Model	
[100 V/200 V] 3,000-r/min Servomotors of 50 to 750 W (for both absolute encoders and incremental encoders)	3 m	R88A-CRKA003CR	
	5 m	R88A-CRKA005CR	
	10 m	R88A-CRKA010CR	
	15 m	R88A-CRKA015CR	
	20 m	R88A-CRKA020CR	
	30 m	R88A-CRKA030CR	
	40 m	R88A-CRKA040CR	
[100 V and 200 V] 3,000-r/min Servomotors of 1.0 kW or more 2,000-r/min Servomotors 1,500-r/min Servomotors 1,000-r/min Servomotors [400 V] 3,000-r/min Servomotors 2,000-r/min Servomotors 1,500-r/min Servomotors 1,000-r/min Servomotors	50 m	R88A-CRKA050CR	
	3 m	R88A-CRKC003NR	
	5 m	R88A-CRKC005NR	
	10 m	R88A-CRKC010NR	
	15 m	R88A-CRKC015NR	
	20 m	R88A-CRKC020NR	
	30 m	R88A-CRKC030NR	
40 m	R88A-CRKC040NR		
50 m	R88A-CRKC050NR		

■ Cable/Connector

Absolute Encoder Battery Cable

Name	Length	model
Absolute Encoder Battery Cable (Battery not included)	0.3 m	R88A-CRGD0R3C
Absolute Encoder Battery Cable (One R88A-BAT01G Battery included)	0.3 m	R88A-CRGD0R3C-BS

Absolute Encoder Backup Battery

Specifications	Model
2,000 mA · h 3.6 V	R88A-BAT01G

Analog Monitor Cable

Name	Length	Model
Analog Monitor Cable	1 m	R88A-CMK001S

Servo Drive Connectors (common)

Name	Connects to	Model
Encoder Connector	CN2	R88A-CNW01R
External Scale Connector	CN4	R88A-CNK41L
safety bypass connector	CN8	R88A-CNK81S

Servo Drive Connectors

Name	Connects to	Drive type	Model
Control I/O Connector	CN1	General-purpose Input	R88A-CNU11C
		MECHATROLINK-II Communications EtherCAT Communications EtherCAT Communications Linear motor	R88A-CNW01C

Servomotor Connector

Name	Applicable Servomotor Capacity		Model
Servomotor Connector for Encoder Cable	[100 V/200 V] 3,000 r/min (50 to 750 W)		R88A-CNK02R
	[100 V/200 V] 3,000 r/min (1 to 5 kW) 2,000r/min, 1,000r/min [400 V] 3,000 r/min, 2,000 r/min, 1,000 r/min		R88A-CNK04R
Power Cable Connector	(750 W max.)		R88A-CNK11A
Brake Cable Connector	(750 W max.)		R88A-CNK11B

External Encoder Cable

Name	Lengths	Model
Serial Communications Cable	10 m	R88A-CRKE010SR

■ Control Cables

Control Cables (for Connector Terminal Block/CN1)

Name	Specifications		Model
Connector Terminal Block Cables	General-purpose Input	Length 1.0 m	XW2Z-100J-B24
		Length 2.0 m	XW2Z-200J-B24
	MECHATROLINK-II Communications EtherCAT Communications	Length 1.0 m	XW2Z-100J-B34
		Length 2.0 m	XW2Z-200J-B34
Connector Terminal Block Conversion Unit	General-purpose Input	Conversion Unit for General-purpose Controllers (M3 screws)	Slim type XW2D-50G6
	MECHATROLINK-II Communications EtherCAT Communications	Conversion Unit for General-purpose Controllers (M3 screws)	Slim type XW2D-20G6

● General-purpose Inputs (Analog input/Pulse train input type)

Connection Cables (for CN1)

Name	Specifications	The number of axes	Length	Model		
Position Control Unit (High-speed type) for Line-driver output	CJ1W-NC234/434	for 1 axis	1 m	XW2Z-100J-G9		
			5 m	XW2Z-500J-G9		
			10 m	XW2Z-10MJ-G9		
		for 2 axis	1 m	XW2Z-100J-G1		
			5 m	XW2Z-500J-G1		
			10 m	XW2Z-10MJ-G1		
Position Control Unit (High-speed type) for Open collector output	CJ1W-NC214/NC414	for 1 axis	1 m	XW2Z-100J-G13		
			3 m	XW2Z-300J-G13		
		for 2 axis	1 m	XW2Z-100J-G5		
			3 m	XW2Z-300J-G5		
		Control Cables for Motion Control Unit	CS1W-MC221 (-V1) CS1W-MC421 (-V1)	for 1 axis	1 m	R88A-CPG001M1
					2 m	R88A-CPG002M1
3 m	R88A-CPG003M1					
5 m	R88A-CPG005M1					
for 2 axis	1 m			R88A-CPG001M2		
	2 m			R88A-CPG002M2		
	3 m			R88A-CPG003M2		
	5 m			R88A-CPG005M2		
General-purpose Control Cables with Connector on One End	Cables for General-purpose Controllers	-	1 m	R88A-CPG001S		
			2 m	R88A-CPG002S		

Device for External Signal Connection / Connecting Cables (for CJ1W-NC□□4)

Name	Specifications		Model	
Connector Terminal Block Cables	Connection Cables	Normal wiring	Length 0.5 m	XW2Z-C50X
			Length 1.0 m	XW2Z-100X
			Length 2.0 m	XW2Z-200X
			Length 3.0 m	XW2Z-300X
			Length 5.0 m	XW2Z-500X
			Length 10.0 m	XW2Z-010X
	Connector Terminal Block Conversion Unit	20 pin M3 screw Terminal Block type	Slim type	XW2D-20G6

Servo Relay Units (for CN1)

Specifications	The number of axes	Model
Position Control Unit: For CJ1W-NC113/NC133 For CS1W-NC113/NC133 For C200HW-NC113 *	for 1 axis	XW2B-20J6-1B
Position Control Unit: For CJ1W-NC213/NC233/NC413/NC433 For CS1W-NC213/NC233/NC413/NC433 For C200HW-NC213/NC413 *	for 2 axis	XW2B-40J6-2B
For CJ2M-CPU31/CPU32/CPU33/CPU34/CPU35 For CJ2M-CPU11/CPU12/CPU13/CPU14/CPU15	for 1 axis	XW2B-20J6-8A
	for 2 axis	XW2B-40J6-9A
For FQM1-MMA22 (Analog output) For FQM1-MMP22 (Pulse train output)	for 2 axis	XW2B-80J7-12A

* C200HW-NC was discontinued.

Servo Relay Unit cable (for Servo Drive/CN1)

Specifications	Length	Model
Position Control Unit: For CJ1W-NC□□3□ For CS1W/C200HW-NC□□□□ *	1 m	XW2Z-100J-B25
	2 m	XW2Z-200J-B25
For CJ2M-CPU31/CPU32/CPU33/CPU34/CPU35 For CJ2M-CPU11/CPU12/CPU13/CPU14/CPU15 (XW2B-20J6-8A, XW2B-40J6-9A)	1 m	XW2Z-100J-B31
	2 m	XW2Z-200J-B31
For FQM1-MMA22 (Analog output) (XW2B-80J7-12A)	1 m	XW2Z-100J-B27
	2 m	XW2Z-200J-B27
For FQM1-MMP22 (Pulse train output) (XW2B-80J7-12A)	1 m	XW2Z-100J-B26
	2 m	XW2Z-200J-B26

* C200HW-NC was discontinued.

Note: You cannot use a Servo Relay Unit Cable for line-receiver inputs (+CWLD: CN1 pin 44, -CWLD: CN1 pin 45, +CCWLD: CN1 pin 46, -CCWLD: CN1 pin 47).

Use a General-purpose Control Cable and wire the connector to match the controller.

Servo Relay Unit cable (Position Control Unit)

Specifications	The number of axes	Length	Model
CJ1W line-driver output type For CJ1W-NC133 (XW2B-20J6-1B)	for 1 axis	0.5 m	XW2Z-050J-A18
		1 m	XW2Z-100J-A18
CJ1W line-driver output type For CJ1W-NC233/NC433 (XW2B-40J6-2B)	for 2 axis	0.5 m	XW2Z-050J-A19
		1 m	XW2Z-100J-A19
CS1W line-driver output type For CS1W-NC133 (XW2B-20J6-1B)	for 1 axis	0.5 m	XW2Z-050J-A10
		1 m	XW2Z-100J-A10
CS1W line-driver output type For CS1W-NC233/NC433 (XW2B-40J6-2B)	for 2 axis	0.5 m	XW2Z-050J-A11
		1 m	XW2Z-100J-A11
CJ1W open collector output type For CJ1W-NC113 (XW2B-20J6-1B)	for 1 axis	0.5 m	XW2Z-050J-A14
		1 m	XW2Z-100J-A14
CJ1W open collector output type For CJ1W-NC213/NC413 (XW2B-40J6-2B)	for 2 axis	0.5 m	XW2Z-050J-A15
		1 m	XW2Z-100J-A15
CS1W/C200HW open collector output type For CS1W-NC113 For C200HW-NC113 * (XW2B-20J6-1B)	for 1 axis	0.5 m	XW2Z-050J-A6
		1 m	XW2Z-100J-A6
CS1W/C200HW open collector output type For CS1W-NC213/NC413 For C200HW-NC213/NC413 * (XW2B-40J6-2B)	for 2 axis	0.5 m	XW2Z-050J-A7
		1 m	XW2Z-100J-A7
CJ1M open collector output type For CJ2M-CPU31/CPU32/CPU33/CPU34/CPU35 For CJ2M-CPU11/CPU12/CPU13/CPU14/CPU15 (XW2B-20J6-8A, XW2B-40J6-9A)	for 1 axis	0.5 m	XW2Z-050J-A33
		1 m	XW2Z-100J-A33
For FQM1-MMA22 (Analog output) (XW2B-80J7-12A)	General-purpose I/O (26 pin)	0.5 m	XW2Z-050J-A28
		1 m	XW2Z-100J-A28
		2 m	XW2Z-200J-A28
	Special I/O (40 pin)	0.5 m	XW2Z-050J-A31
		1 m	XW2Z-100J-A31
		2 m	XW2Z-200J-A31
For FQM1-MMP22 (Pulse train output) (XW2B-80J7-12A)	General-purpose I/O (26 pin)	0.5 m	XW2Z-050J-A28
		1 m	XW2Z-100J-A28
		2 m	XW2Z-200J-A28
	Special I/O (40 pin)	0.5 m	XW2Z-050J-A30
		1 m	XW2Z-100J-A30
		2 m	XW2Z-200J-A30

* C200HW-NC was discontinued.

■ Communication Cables

● MECHATROLINK-II Communications

MECHATROLINK-related Devices and Cables (Manufactured by Yaskawa Corporation)


Name	Length	Model	Yaskawa model number
		(OMRON model number)	
MECHATROLINK-II Cables (without ring core and USB connector on both ends) * Can be connected to R88D-GN and R88D-KN only.	0.5 m	FNY-W6002-A5	JEPMC-W6002-A5-E
	1.0 m	FNY-W6002-01	JEPMC-W6002-01-E
	3.0 m	FNY-W6002-03	JEPMC-W6002-03-E
	5.0 m	FNY-W6002-05	JEPMC-W6002-05-E
	0.5 m	FNY-W6003-A5	JEPMC-W6003-A5
MECHATROLINK-II Cables (with ring core and USB connector on both ends)	1.0 m	FNY-W6003-01	JEPMC-W6003-01
	3.0 m	FNY-W6003-03	JEPMC-W6003-03
	5.0 m	FNY-W6003-05	JEPMC-W6003-05
	10.0 m	FNY-W6003-10	JEPMC-W6003-10
	20.0 m	FNY-W6003-20	JEPMC-W6003-20
	30.0 m	FNY-W6003-30	JEPMC-W6003-30
MECHATROLINK-II Terminating Resistor	Terminating resistance	FNY-W6022	JEPMC-W6022
MECHATROLINK-II Repeater	Communications Repeater	—	JEPMC-REP2000-E

- MECHATROLINK-related Devices and Cables are manufactured by Yaskawa Corporation, but they can be ordered directly from OMRON using the OMRON model numbers. (Yaskawa-brand products will be delivered even when they are ordered from OMRON.)

● Recommended EtherCAT Communications Cables

Use Straight STP (shielded twisted-pair) cable of category 5 or higher with double shielding (braiding and aluminum foil tape) for EtherCAT.

Cabel with Connectors

Item	Appearance	Recommended manufacturer	Cable length(m)	Model
Cable with Connectors on Both Ends (RJ45/RJ45) Standard RJ45 plugs type *1 Wire Gauge and Number of Pairs: AWG26, 4-pair cable Cable Sheath material: PUR Cable color: Yellow *2		OMRON	0.3	XS6W-6PUR8SS30CM-YF
			0.5	XS6W-6PUR8SS50CM-YF
			1	XS6W-6PUR8SS100CM-YF
			2	XS6W-6PUR8SS200CM-YF
			3	XS6W-6PUR8SS300CM-YF
			5	XS6W-6PUR8SS500CM-YF

*1. Standard type cables length 0.2, 0.3, 0.5, 1, 1.5, 2, 3, 5, 7.5, 10, 15 and 20 m are available.

Rugged type cables length 0.3, 0.5, 1, 2, 3, 5, 10 and 15 m are available.

For details, refer to Cat.No.G019.

*2. Cables colors are available in blue, yellow, or Green.

Cables / Connectors

Wire Gauge and Number of Pairs: AWG24, 4-pair Cable

Item	Appearance	Recommended manufacturer	Model
Cables	–	Kuramo Electric Co.	KETH-SB *
RJ45 Connectors	–	Panduit Corporation	MPS588-C *

* We recommend you to use above cable and connector together.

■ Peripheral Devices (External Regeneration Resistors, Reactors, Mounting Brackets)

External Regeneration Resistors

Specifications	Model
80 W 50 Ω	R88A-RR08050S
80 W 100 Ω	R88A-RR080100S
220 W 47 Ω	R88A-RR22047S1
500 W 20 Ω	R88A-RR50020S

Reactors

Specifications				Model
General-purpose Inputs	MECHATROLINK-II Communications	EtherCAT Communications	Linear Motor with built-in EtherCAT communications	
R88D-KTA5L/-KT01H (For single-phase input)	R88D-KNA5L-ML2/-KN01H-ML2 (For single-phase input)	R88D-KNA5L-ECT/-KN01H-ECT (For single-phase input)	R88D-KN01H-ECT-L (For single-phase input)	3G3AX-DL2002
R88D-KT01L/-KT02H (For single-phase input)	R88D-KN01L-ML2/-KN02H-ML2 (For single-phase input)	R88D-KN01L-ECT/-KN02H-ECT (For single-phase input)	R88D-KN01L-ECT-L/-KN02H-ECT-L (For single-phase input)	3G3AX-DL2004
R88D-KT02L/-KT04H (For single-phase input)	R88D-KN02L-ML2/-KN04H-ML2 (For single-phase input)	R88D-KN02L-ECT/-KN04H-ECT (For single-phase input)	R88D-KN02L-ECT-L/-KN04H-ECT-L (For single-phase input)	3G3AX-DL2007
R88D-KT04L/-KT08H/ -KT10H (For single-phase input)	R88D-KN04L-ML2/-KN08H-ML2/ -KN10H-ML2 (For single-phase input)	R88D-KN04L-ECT/-KN08H-ECT/ -KN10H-ECT (For single-phase input)	R88D-KN04L-ECT-L/-KN08H-ECT-L/ -KN10H-ECT-L (For single-phase input)	3G3AX-DL2015
R88D-KT15H (For single-phase input)	R88D-KN15H-ML2 (For single-phase input)	R88D-KN15H-ECT (For single-phase input)	R88D-KN15H-ECT-L (For single-phase input)	3G3AX-DL2022
R88D-KT01H/-KT02H/ -KT04H/-KT08H/ -KT10H/-KT15H (For three-phase input)	R88D-KN01H-ML2/-KN02H-ML2/ -KN04H-ML2/-KN08H-ML2/ -KN10H-ML2/-KN15H-ML2 (For three-phase input)	R88D-KN01H-ECT/-KN02H-ECT/ -KN04H-ECT/-KN08H-ECT/ -KN10H-ECT/-KN15H-ECT (For three-phase input)	R88D-KN01H-ECT-L/-KN02H-ECT-L/ -KN04H-ECT-L/-KN08H-ECT-L/ -KN10H-ECT-L/-KN15H-ECT-L (For three-phase input)	3G3AX-AL2025
R88D-KT20H/-KT30H	R88D-KN20H-ML2/-KN30H-ML2	R88D-KN20H-ECT/-KN30H-ECT	–	3G3AX-AL2055
R88D-KT50H	R88D-KN50H-ML2	R88D-KN50H-ECT	–	3G3AX-AL2110
R88D-KT06F/-KT10F/-KT15F	R88D-KN06F-ML2/-KN10F-ML2/ -KN15F-ML2	R88D-KN06F-ECT/-KN10F-ECT/ -KN15F-ECT	R88D-KN06F-ECT-L/-KN10F-ECT-L/ -KN15F-ECT-L	3G3AX-AL4025
R88D-KT20F/-KT30F	R88D-KN20F-ML2/-KN30F-ML2	R88D-KN20F-ECT/-KN30F-ECT	R88D-KN20F-ECT-L/-KN30F-ECT-L	3G3AX-AL4055
R88D-KT50F	R88D-KN50F-ML2	R88D-KN50F-ECT	–	3G3AX-AL4110
R88D-KT75H/-KT150F	–	R88D-KT75H-ECT/-KT150F-ECT	–	3G3AX-AL4220

Mounting Brackets (L Brackets for Rack Mounting)

Specifications				Model
General-purpose Inputs	MECHATROLINK-II Communications	EtherCAT Communications	Linear Motor with built-in EtherCAT communications	
R88D-KTA5L/-KT01L/ -KT01H/-KT02H	R88D-KNA5L-ML2/-KN01L-ML2/ -KN01H-ML2/-KN02H-ML2	R88D-KNA5L-ECT/-KN01L-ECT/ -KN01H-ECT/-KN02H-ECT	R88D-KN01L-ECT-L/-KN01H-ECT-L/ -KN02H-ECT-L	R88A-TK01K
R88D-KT02L/-KT04H	R88D-KN02L-ML2/-KN04H-ML2	R88D-KN02L-ECT/-KN04H-ECT	R88D-KN02L-ECT-L/-KN04H-ECT-L	R88A-TK02K
R88D-KT04L/-KT08H	R88D-KN04L-ML2/-KN08H-ML2	R88D-KN04L-ECT/-KN08H-ECT	R88D-KN04L-ECT-L/-KN08H-ECT-L	R88A-TK03K
R88D-KT10H/KT15H/ -KT06F/-KT10F/-KT15F	R88D-KN10H-ML2/-KN15H-ML2/ -KN06F-ML2/-KN10F-ML2/ -KN15F-ML2	R88D-KN10H-ECT/-KN15H-ECT/ -KN06F-ECT/-KN10F-ECT/ -KN15F-ECT	R88D-KN10H-ECT-L/-KN15H-ECT-L/ -KN06F-ECT-L/-KN10F-ECT-L/ -KN15F-ECT-L	R88A-TK04K

Note: Mounting brackets are provided with Servo Drives of 2 to 15 kW.

AC Servomotor/Drive G5-series

■ Software

How to Select Required Support Software for Your Controller

The required Support Software depends on the Controller to connect. Please check the following table when purchasing the Support Software.

Item	Omron PLC System	Omron Machine Automation Controller System
Controller	CS, CJ, CP, and other series	NJ/NX-series
AC Servomotor/Drivers	G5-series <ul style="list-style-type: none"> • EtherCAT Communications • EtherCAT Communications Linear Motor • General-purpose input type(PulseTrain or Analog inputs) • MECHATROLINK-II Communications 	G5-series <ul style="list-style-type: none"> • EtherCAT Communications (Unit version 2.1 or later recommended) • EtherCAT Communications Linear Motor
Software	FA Intergrated Tool Package CX-One	Automation Software Sysmac Studio

■ FA Integrated Tool Package CX-One

Product name	Specifications			Model	Standards
		Number of licenses	Media		
FA Integrated Tool Package CX-One Ver. 4.□	The CX-One is a comprehensive software package that integrates Support Software for OMRON PLCs and components. CX-One Version.4.□ includes CX-Drive Ver.3.□.	1 license *	DVD	CXONE-AL01D-V4	-

* Multi licenses (3, 10, 30, or 50 licenses) and DVD media without licenses are also available for the CX-One.

Note: For details, refer to the CX-One Catalog (Cat. No. R134), visit your local OMRON website.

■ Automation Software Sysmac Studio

The Sysmac Studio is the software that provides an integrated environment for setting, programming, debugging and maintenance of machine automation controllers including the NJ/NX-series CPU Units, NY-series Industrial PC, EtherCAT Slave, and the HMI.

For details, refer to your local OMRON website and Sysmac Studio Catalog (Cat. No. P138).

Combination table

AC Servo Drive and Servomotor Combinations (3,000 r/min, 2,000 r/min, 1,500r/min, 1,000 r/min)

<Cylinder Type>

● 3,000-r/min servomotors

Power Supply Voltage	Servo Drive Model Numbers			Servomotor Model Numbers		
	General-purpose Inputs	MECHATROLINK-II	EtherCAT	Output	With incremental encoder	With absolute encoder
Single-phase 100 to 120 VAC	R88D-KTA5L	R88D-KNA5L-ML2	R88D-KNA5L-ECT	50 W	R88M-K05030H-□	R88M-K05030T-□
	R88D-KT01L	R88D-KN01L-ML2	R88D-KN01L-ECT	100 W	R88M-K10030L-□	R88M-K10030S-□
	R88D-KT02L	R88D-KN02L-ML2	R88D-KN02L-ECT	200 W	R88M-K20030L-□	R88M-K20030S-□
	R88D-KT04L	R88D-KN04L-ML2	R88D-KN04L-ECT	400 W	R88M-K40030L-□	R88M-K40030S-□
Single-phase/ three-phase 200 to 240 VAC	R88D-KT01H *	R88D-KN01H-ML2 *	R88D-KN01H-ECT *	50 W	R88M-K05030H-□ *	R88M-K05030T-□ *
	R88D-KT01H	R88D-KN01H-ML2	R88D-KN01H-ECT	100 W	R88M-K10030H-□	R88M-K10030T-□
	R88D-KT02H	R88D-KN02H-ML2	R88D-KN02H-ECT	200 W	R88M-K20030H-□	R88M-K20030T-□
	R88D-KT04H	R88D-KN04H-ML2	R88D-KN04H-ECT	400 W	R88M-K40030H-□	R88M-K40030T-□
	R88D-KT08H	R88D-KN08H-ML2	R88D-KN08H-ECT	750 W	R88M-K75030H-□	R88M-K75030T-□
	R88D-KT15H *	R88D-KN15H-ML2 *	R88D-KN15H-ECT *	1 kW	R88M-K1K030H-□ *	R88M-K1K030T-□ *
	R88D-KT15H	R88D-KN15H-ML2	R88D-KN15H-ECT	1.5 kW	R88M-K1K530H-□	R88M-K1K530T-□
Three-phase 200 to 240 VAC	R88D-KT20H	R88D-KN20H-ML2	R88D-KN20H-ECT	2 kW	R88M-K2K030H-□	R88M-K2K030T-□
	R88D-KT30H	R88D-KN30H-ML2	R88D-KN30H-ECT	3 kW	R88M-K3K030H-□	R88M-K3K030T-□
	R88D-KT50H	R88D-KN50H-ML2	R88D-KN50H-ECT *	4 kW	R88M-K4K030H-□	R88M-K4K030T-□
	R88D-KT50H	R88D-KN50H-ML2	R88D-KN50H-ECT	5 kW	R88M-K5K030H-□	R88M-K5K030T-□
Three-phase 400 to 480 VAC	R88D-KT10F	R88D-KN10F-ML2	R88D-KN10F-ECT *	750 W	R88M-K75030F-□	R88M-K75030C-□
	R88D-KT15F *	R88D-KN15F-ML2 *	R88D-KN15F-ECT *	1 kW	R88M-K1K030F-□ *	R88M-K1K030C-□ *
	R88D-KT15F	R88D-KN15F-ML2	R88D-KN15F-ECT	1.5 kW	R88M-K1K530F-□	R88M-K1K530C-□
	R88D-KT20F	R88D-KN20F-ML2	R88D-KN20F-ECT	2 kW	R88M-K2K030F-□	R88M-K2K030C-□
	R88D-KT30F	R88D-KN30F-ML2	R88D-KN30F-ECT	3 kW	R88M-K3K030F-□	R88M-K3K030C-□
	R88D-KT50F	R88D-KN50F-ML2	R88D-KN50F-ECT *	4 kW	R88M-K4K030F-□	R88M-K4K030C-□
	R88D-KT50F	R88D-KN50F-ML2	R88D-KN50F-ECT	5 kW	R88M-K5K030F-□	R88M-K5K030C-□

● 1,500r/min, 2,000-r/min servomotors

Power Supply Voltage	Servo Drive Model Numbers			Servomotor Model Numbers		
	General-purpose Inputs	MECHATROLINK-II	EtherCAT	Output	With incremental encoder	With absolute encoder
Single-phase/ three-phase 200 to 240 VAC	R88D-KT10H	R88D-KN10H-ML2	R88D-KN10H-ECT	1 kW	R88M-K1K020H-□	R88M-K1K020T-□
	R88D-KT15H	R88D-KN15H-ML2	R88D-KN15H-ECT	1.5 kW	R88M-K1K520H-□	R88M-K1K520T-□
Three-phase 200 to 240 VAC	R88D-KT20H	R88D-KN20H-ML2	R88D-KN20H-ECT	2 kW	R88M-K2K020H-□	R88M-K2K020T-□
	R88D-KT30H	R88D-KN30H-ML2	R88D-KN30H-ECT	3 kW	R88M-K3K020H-□	R88M-K3K020T-□
	R88D-KT50H *	R88D-KN50H-ML2 *	R88D-KN50H-ECT *	4 kW	R88M-K4K020H-□ *	R88M-K4K020T-□ *
	R88D-KT50H	R88D-KN50H-ML2	R88D-KN50H-ECT	5 kW	R88M-K5K020H-□	R88M-K5K020T-□
	R88D-KT75H	–	R88D-KN75H-ECT	7.5 kW	–	R88M-K7K515T-□
	R88D-KT150H *	–	R88D-KN150H-ECT *	11 kW	–	R88M-K11K015T-□ *
	R88D-KT150H	–	R88D-KN150H-ECT	15 kW	–	R88M-K15K015T-□
Three-phase 400 to 480 VAC	R88D-KT06F	R88D-KN06F-ML2	R88D-KN06F-ECT*	400 W	R88M-K40020F-□	R88M-K40020C-□
	R88D-KT06F	R88D-KN06F-ML2	R88D-KN06F-ECT	600 W	R88M-K60020F-□	R88M-K60020C-□
	R88D-KT10F	R88D-KN10F-ML2	R88D-KN10F-ECT	1 kW	R88M-K1K020F-□	R88M-K1K020C-□
	R88D-KT15F	R88D-KN15F-ML2	R88D-KN15F-ECT	1.5 kW	R88M-K1K520F-□	R88M-K1K520C-□
	R88D-KT20F	R88D-KN20F-ML2	R88D-KN20F-ECT	2 kW	R88M-K2K020F-□	R88M-K2K020C-□
	R88D-KT30F	R88D-KN30F-ML2	R88D-KN30F-ECT	3 kW	R88M-K3K020F-□	R88M-K3K020C-□
	R88D-KT50F *	R88D-KN50F-ML2 *	R88D-KN50F-ECT *	4 kW	R88M-K4K020F-□ *	R88M-K4K020C-□ *
	R88D-KT50F	R88D-KN50F-ML2	R88D-KN50F-ECT	5 kW	R88M-K5K020F-□	R88M-K5K020C-□
	R88D-KT75F	–	R88D-KN75F-ECT	7.5 kW	–	RR88M-K7K515C-□
	R88D-KT150F *	–	R88D-KN150F-ECT *	11 kW	–	R88M-K11K015C-□ *
	R88D-KT150F	–	R88D-KN150F-ECT	15 kW	–	R88M-K15K015C-□

* Please use the Servo Drive and Servomotor in this combination although their capacity is not same.

AC Servomotor/Drive G5-series

● 1,000-r/min servomotors

Power Supply Voltage	Servo Drive Model Numbers			Servomotor Model Numbers		
	General-purpose Inputs	MECHATROLINK-II	EtherCAT	Output	With incremental encoder	With absolute encoder
Single-phase/ three-phase 200 to 240 VAC	R88D-KT15H *	R88D-KN15H-ML2 *	R88D-KN15H-ECT *	900 W	R88M-K90010H-□ *	R88M-K90010T-□ *
Three-phase 200 to 240 VAC	R88D-KT30H *	R88D-KN30H-ML2 *	R88D-KN30H-ECT *	2 kW	R88M-K2K010H-□ *	R88M-K2K010T-□ *
	R88D-KT50H *	R88D-KN50H-ML2 *	R88D-KN50H-ECT *	3 kW	R88M-K3K010H-□ *	R88M-K3K010T-□ *
	R88D-KT50H *	–	R88D-KN50H-ECT *	4.5 kW	–	R88M-K4K510T-□ *
	R88D-KT75H *	–	R88D-KN75H-ECT *	6 kW	–	R88M-K6K010T-□ *
Three-phase 400 to 480 VAC	R88D-KT15F *	R88D-KN15F-ML2 *	R88D-KN15F-ECT *	900 W	R88M-K90010F-□ *	R88M-K90010C-□ *
	R88D-KT30F *	R88D-KN30F-ML2 *	R88D-KN30F-ECT *	2 kW	R88M-K2K010F-□ *	R88M-K2K010C-□ *
	R88D-KT50F *	R88D-KN50F-ML2 *	R88D-KN50F-ECT *	3 kW	R88M-K3K010F-□ *	R88M-K3K010C-□ *
	R88D-KT50F *	–	R88D-KN50F-ECT *	4.5 kW	–	R88M-K4K510C-□ *
	R88D-KT75F *	–	R88D-KN75F-ECT *	6 kW	–	R88M-K6K010C-□ *

* Please use the Servo Drive and Servomotor in this combination although their capacity is not same.

AC Servomotor and Decelerator Combinations (3,000 r/min, 2,000 r/min, 1,000 r/min)

<Cylinder Type>

● 3,000-r/min servomotors

Motor model	1/5	1/11 (1/9 for flange size No.11)	1/21	1/33	1/45
R88M-K05030□	R88G-HPG11B05100B□	R88G-HPG11B09050B□ (Gear ratio 1/9)	R88G-HPG14A21100B□	R88G-HPG14A33050B□	R88G-HPG14A45050B□
R88M-K10030□		R88G-HPG14A11100B□		R88G-HPG20A33100B□	R88G-HPG20A45100B□
R88M-K20030□	R88G-HPG14A05200B□	R88G-HPG14A11200B□	R88G-HPG20A21200B□	R88G-HPG20A33200B□	R88G-HPG20A45200B□
R88M-K40030□	R88G-HPG14A05400B□	R88G-HPG20A11400B□	R88G-HPG20A21400B□	R88G-HPG32A33400B□	R88G-HPG32A45400B□
R88M-K75030H/T (200 V)	R88G-HPG20A05750B□	R88G-HPG20A11750B□	R88G-HPG32A21750B□	R88G-HPG32A33750B□	R88G-HPG32A45750B□
R88M-K75030F/C (400 V)	R88G-HPG32A052K0B□	R88G-HPG32A112K0B□	R88G-HPG32A211K5B□	R88G-HPG32A33600SB□ (Also used with R88M-K60020□)	R88G-HPG50A451K5B□
R88M-K1K030□				R88G-HPG50A332K0B□	
R88M-K1K530□					
R88M-K2K030□					
R88M-K3K030□	R88G-HPG32A053K0B□	R88G-HPG50A113K0B□	R88G-HPG50A213K0B□	-	-
R88M-K4K030□	R88G-HPG32A054K0B□	R88G-HPG50A115K0B□	-	-	-
R88M-K5K030□	R88G-HPG50A055K0B□		-	-	-

● 2,000-r/min servomotors

Motor model	1/5	1/11	1/21 (1/20 for flange size No.65)	1/33 (1/25 for flange size No.65)	1/45
R88M-K40020□ (Only 400 V)	R88G-HPG32A052K0B□ (Also used with R88M-K2K030□)	R88G-HPG32A112K0B□ (Also used with R88M-K2K030□)	R88G-HPG32A211K5B□ (Also used with R88M-K1K5030□)	R88G-HPG32A33600SB□	R88G-HPG32A45400SB□
R88M-K60020□ (Only 400 V)					R88G-HPG50A451K5B□ (R88M-K1K530□)
R88M-K1K020□	R88G-HPG32A053K0B□ (Also used with R88M-K3K030□)	R88G-HPG32A112K0SB□	R88G-HPG32A211K0SB□	R88G-HPG50A332K0SB□	R88G-HPG50A451K0SB□
R88M-K1K520□			R88G-HPG50A213K0B□ (Also used with R88M-K3K030□)		-
R88M-K2K020□			-		
R88M-K3K020□	R88G-HPG32A054K0B□ (Also used with R88M-K4K030□)	R88G-HPG50A115K0B□ (Also used with R88M-K5K030□)	R88G-HPG50A213K0SB□	R88G-HPG65A253K0SB□	-
R88M-K4K020□	R88G-HPG50A055K0SB□	R88G-HPG50A115K0SB□	R88G-HPG65A205K0SB□	R88G-HPG65A255K0SB□	-
R88M-K5K020□					-

● 1,000-r/min servomotors

Motor model	1/5	1/11	1/21 (1/20 for flange size No.65)	1/33 (1/25 for flange size No.65)
R88M-K90010□	R88G-HPG32A05900TB□	R88G-HPG32A11900TB□	R88G-HPG50A21900TB□	R88G-HPG50A33900TB□
R88M-K2K010□	R88G-HPG32A052K0TB□	R88G-HPG50A112K0TB□	R88G-HPG50A212K0TB□	R88G-HPG65A255K0SB□ (Also used with R88M-K5K020□)
R88M-K3K010□	R88G-HPG50A055K0SB□ (Also used with R88M-K5K020□)	R88G-HPG50A115K0SB□ (Also used with R88M-K5K020□)	R88G-HPG65A205K0SB□ (Also used with R88M-K5K020□)	

Linear Motor and AC Servo Drive Linear Motor Type Combinations

●Iron-core Linear Motor type

Linear Motor Model Numbers	Power Supply Voltage (V)	Servo Drive Model Numbers	Maximum speed (m/s)
R88L-EC-FW-0303-ANPC	100	R88D-KN01L-ECT-L	2.5
	200	R88D-KN02H-ECT-L	5
	400	R88D-KN06F-ECT-L	10
R88L-EC-FW-0306-ANPC	100	R88D-KN02L-ECT-L	2.5
	200	R88D-KN04H-ECT-L	5
	400	R88D-KN10F-ECT-L	10
R88L-EC-FW-0606-ANPC	100	R88D-KN04L-ECT-L	2
	200	R88D-KN08H-ECT-L	4
	400	R88D-KN15F-ECT-L	8
R88L-EC-FW-0609-ANPC	200	R88D-KN10H-ECT-L	4
	400	R88D-KN20F-ECT-L	8
R88L-EC-FW-0612-ANPC	200	R88D-KN15H-ECT-L	4
	400	R88D-KN30F-ECT-L	8
R88L-EC-FW-1112-ANPC	200	R88D-KN15H-ECT-L	2
	400	R88D-KN30F-ECT-L	4
R88L-EC-FW-1115-ANPC	200	R88D-KN15H-ECT-L	2
	400	R88D-KN30F-ECT-L	4

●Ironless Linear Motor type

Linear Motor Model Numbers	Power Supply Voltage (V)	Servo Drive Model Numbers	Maximum speed (m/s)
R88L-EC-GW-0303-ANPS	100	R88D-KN01L-ECT-L	8
	200	R88D-KN02H-ECT-L	16
R88L-EC-GW-0306-ANPS	100	R88D-KN04L-ECT-L	8
	200	R88D-KN08H-ECT-L	16
R88L-EC-GW-0309-ANPS	200	R88D-KN10H-ECT-L	16
R88L-EC-GW-0503-ANPS	100	R88D-KN01L-ECT-L	2.2
	200	R88D-KN01H-ECT-L	4.4
R88L-EC-GW-0506-ANPS	100	R88D-KN02L-ECT-L	2.2
	200	R88D-KN04H-ECT-L	4.4
R88L-EC-GW-0509-ANPS	100	R88D-KN04L-ECT-L	2.2
	200	R88D-KN08H-ECT-L	4.4
R88L-EC-GW-0703-ANPS	100	R88D-KN02L-ECT-L	1.2
	200	R88D-KN04H-ECT-L	2.4
R88L-EC-GW-0706-ANPS	100	R88D-KN04L-ECT-L	1.2
	200	R88D-KN08H-ECT-L	2.4
R88L-EC-GW-0709-ANPS	200	R88D-KN10H-ECT-L	2.4

Note: The maximum operation speed is limited by considering the guide mechanism, encoder, and other aspects. If it is 5 m/s or higher, please consult with your OMRON representative.

Controller Combinations

● Position Control unit , Servo Relay Units and Cables

Select the Servo Relay Unit and Cable according to the model number of the Position Control Unit being used.

Position Control Unit	Position Control Unit Cable		Servo Relay Unit		Servo Drive Cable	
CS1W-NC113	XW2Z-□□□J-A6		XW2B-20J6-1B		XW2Z-□□□J-B25	
C200HW-NC113 *						
CS1W-NC213	XW2Z-□□□J-A7		XW2B-40J6-2B			
CS1W-NC413						
C200HW-NC213 *						
C200HW-NC413 *						
CS1W-NC133	XW2Z-□□□J-A10		XW2B-20J6-1B			
CS1W-NC233	XW2Z-□□□J-A11		XW2B-40J6-2B			
CS1W-NC433						
CJ1W-NC113	XW2Z-□□□J-A14		XW2B-20J6-1B			
CJ1W-NC213	XW2Z-□□□J-A15		XW2B-40J6-2B			
CJ1W-NC413						
CJ1W-NC133	XW2Z-□□□J-A18		XW2B-20J6-1B			
CJ1W-NC233	XW2Z-□□□J-A19		XW2B-40J6-2B			
CJ1W-NC433						
CJ2M-CPU31 CJ2M-CPU32 CJ2M-CPU33 CJ2M-CPU34 CJ2M-CPU35 CJ2M-CPU11 CJ2M-CPU12 CJ2M-CPU13 CJ2M-CPU14 CJ2M-CPU15	XW2Z-□□□J-A33		For 1 axis	XW2B-20J6-8A	XW2Z-□□□J-B31	
			For 2 axis	XW2B-40J6-9A		
FQM1-MMP22	General-purpose I/O	XW2Z-□□□J-A28	XW2B-80J7-12A		XW2Z-□□□J-B26	
	Special I/O	XW2Z-□□□J-A30				
FQM1-MMA22	General-purpose I/O	XW2Z-□□□J-A28			XW2Z-□□□J-B27	
	Special I/O	XW2Z-□□□J-A31				

* C200HW-NC was discontinued.

Note: 1. Insert the cable length into the boxes in the model number (□□□). Position Control Unit cables come in two lengths: 0.5 m and 1 m (some are also available in lengths of 2 m). Servo Driver Cables also come in two lengths: 1 m and 2 m.

2. Two Servo Driver Cables are required if 2-axis control is performed using one Position Control Unit.

3. Direct cable is available for CJ1W-NC□□4 Position Control Unit (High-Speed type).

Specifications	The number of axes	Model
For CJ1W-NC214/-NC414 (open collector output type)	1 axis	XW2Z-□□□J-G13
For CJ1W-NC214/-NC414 (open collector output type)	2 axis	XW2Z-□□□J-G5
For CJ1W-NC234/-NC434 (line-driver output type)	1 axis	XW2Z-□□□J-G9
For CJ1W-NC234/-NC434 (line-driver output type)	2 axis	XW2Z-□□□J-G1

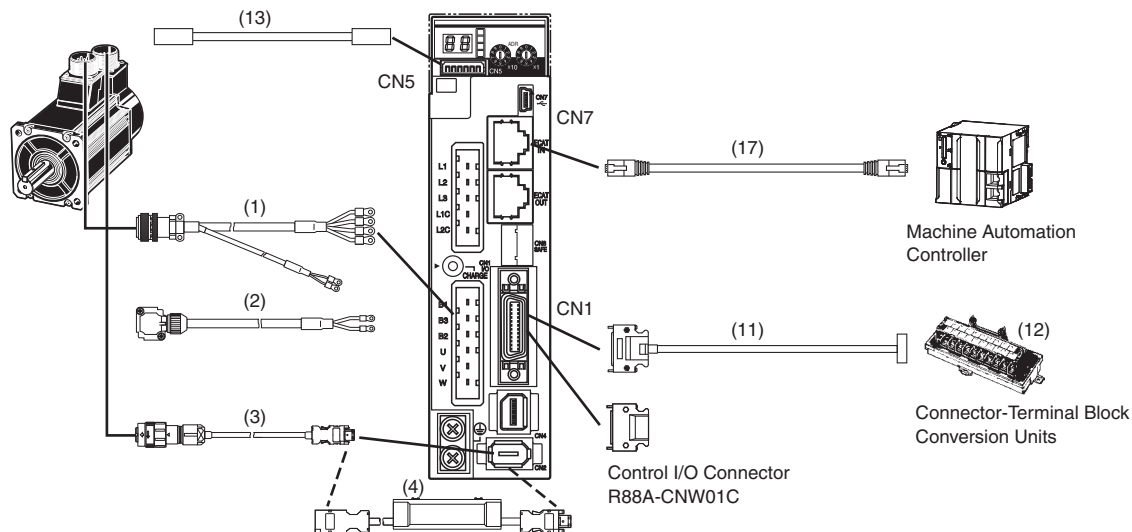
● Motion Control Unit Cables

There are special cables for 1-axis and 2-axis Motion Control Unit operation. Select the appropriate cable for the number of axes to be connected.

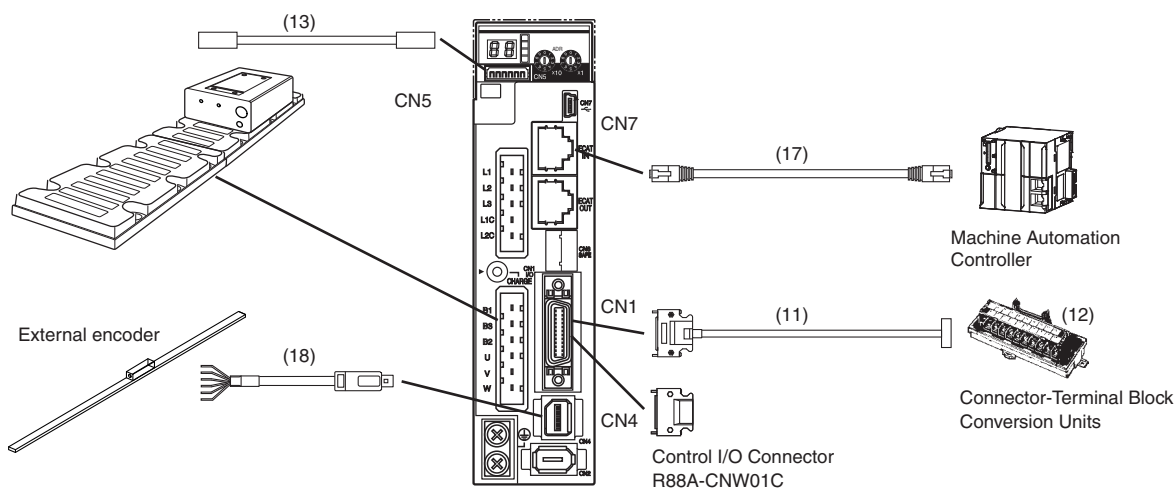
Motion Control Unit	Cable		Remarks
CS1W-MC221-V1 CS1W-MC421-V1	For 1 axis	R88A-CPG□□□M1	The □□□ digits in the model number indicate the cable length. Motion Control Unit Cables come in four lengths: 1 m, 2 m, 3 m, and 5 m. Example model number for 2-m 1-axis cable: R88A-CPG002M1
	For 2 axis	R88A-CPG□□□M2	

Cable Combinations

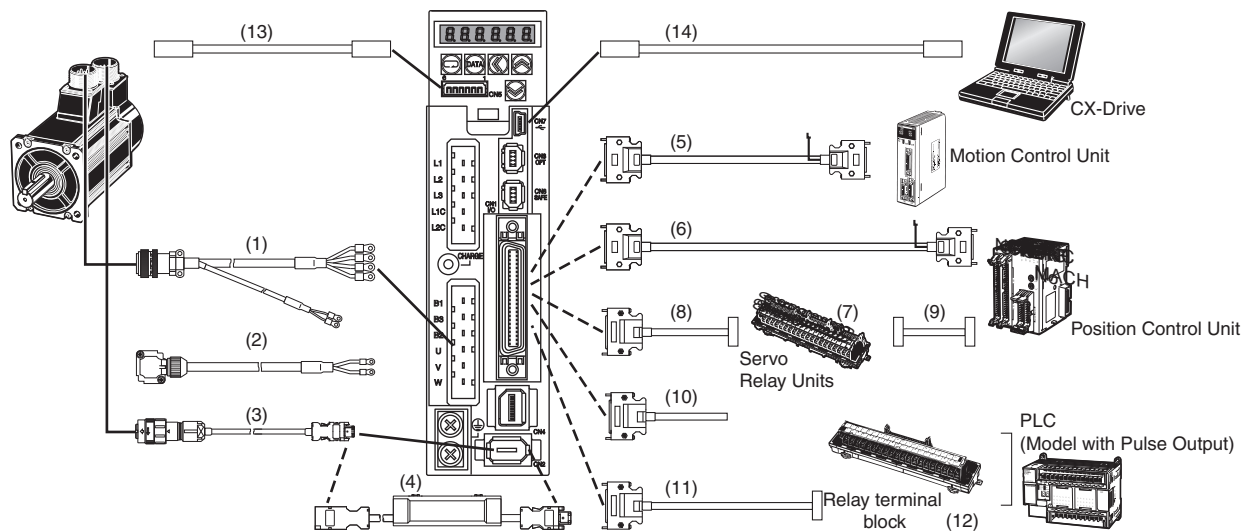
●EtherCAT Communications



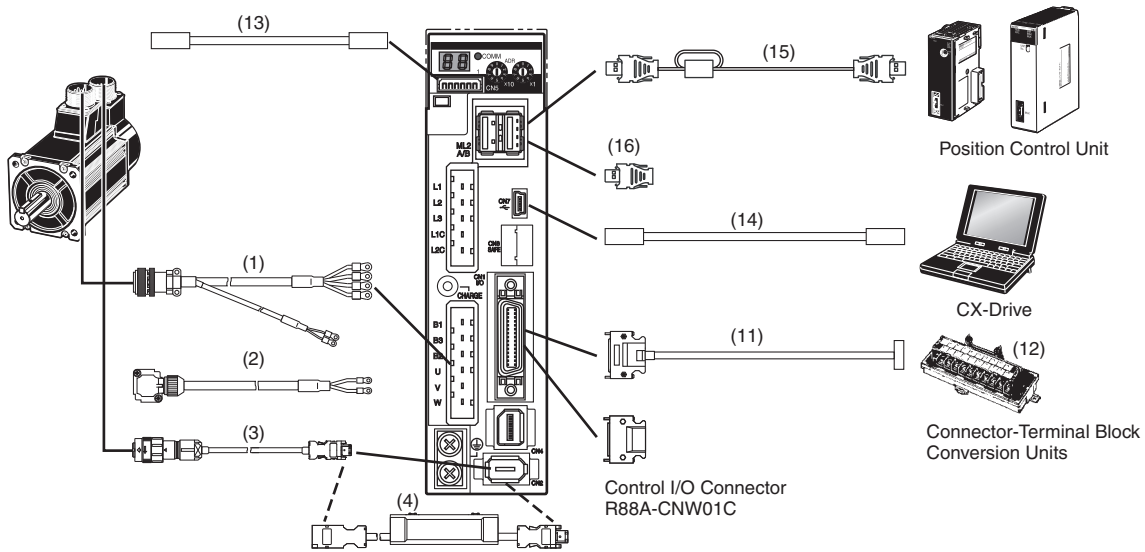
●EtherCAT Communications Linear Motor Type



●General-purpose Input

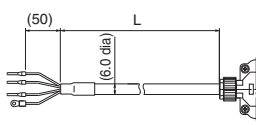
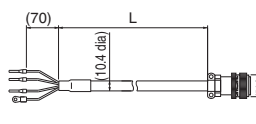
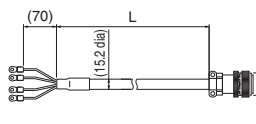
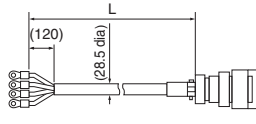
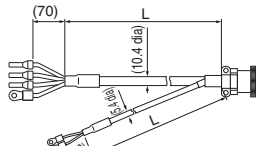
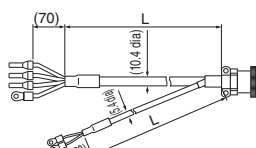
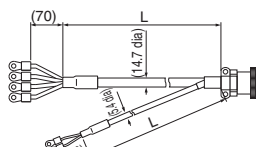


● MECHATROLINK-II Communications

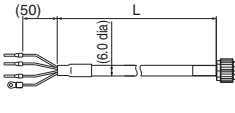
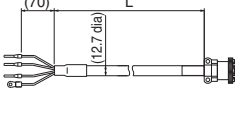
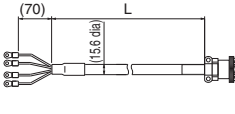
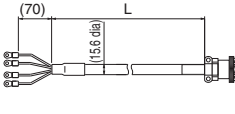
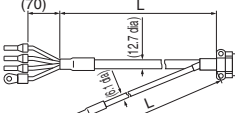
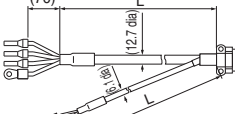
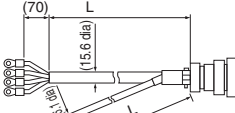


AC Servomotor/Drive G5-series

Servomotor Power Cables (For CNB)

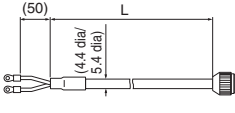
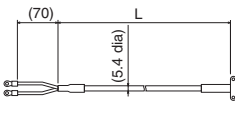
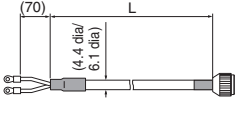
Symbol	Name	Connected to	Model	Description
(1)	Without Brakes Standard Servomotor Power Cables for Servomotors without Brakes	[100 V] [200 V] Cylindrical Servomotors, 3,000 r/min, 50 to 750 W	R88A-CAKA□□□S The empty boxes in the model number are for the cable length. The cable can be 3, 5, 10, 15, 20, 30, 40, or 50 m long.	 [Servomotor Connector] Angle plug: JN8FT04SJ1 (Japan Aviation Electronics Industry, Ltd.) Contact pins: ST-TMH-S-C1B-3500-A534G (Japan Aviation Electronics Industry, Ltd.)
		[200 V] Cylindrical Servomotors, 3,000 r/min, 1 to 2 kW Cylindrical Servomotors, 2,000 r/min, 1 to 2 kW Cylindrical Servomotors, 1,000 r/min, 900 W	R88A-CAGB□□□S The empty boxes in the model number are for the cable length. The cable can be 3, 5, 10, 15, 20, 30, 40, or 50 m long.	 [Servomotor Connector] Straight plug: N/MS3106B20-4S (Japan Aviation Electronics Industry, Ltd.) Cable clamp: N/MS3057-12A (Japan Aviation Electronics Industry, Ltd.)
		[400 V] Cylindrical Servomotors, 3,000 r/min, 750 W to 2 kW Cylindrical Servomotors, 2,000 r/min, 400 W to 2 kW Cylindrical Servomotors, 1,000 r/min, 900 W	R88A-CAGD□□□S The empty boxes in the model number are for the cable length. The cable can be 3, 5, 10, 15, 20, 30, 40, or 50 m long.	 [Servomotor Connector] Straight plug: N/MS3106B22-22S (Japan Aviation Electronics Industry, Ltd.) Cable clamp: N/MS3057-12A (Japan Aviation Electronics Industry, Ltd.)
		[200 V] [400 V] Cylindrical Servomotors, 3,000 r/min, 3 to 5 kW Cylindrical Servomotors, 2,000 r/min, 3 to 5 kW Cylindrical Servomotors, 1,000 r/min, 2 to 4.5 kW	R88A-CAGE□□□S The empty boxes in the model number are for the cable length. The cable can be 3, 5, 10, 15, 20, 30, 40, or 50 m long.	 [Servomotor Connector] Straight plug: N/MS3106B32-17S (Japan Aviation Electronics Industry, Ltd.) Cable clamp: N/MS3057-20A (Japan Aviation Electronics Industry, Ltd.)
		Note: Different connectors are used for the motor power and the brake on 100-V and 200-V, 3,000-r/min Servomotors of 50 to 750 W and Servomotors of 6 to 15 kW. When using a Servomotor with a brake, two cables are required: a Power Cable without Brake and a Brake Cable.		
	With Brakes Standard Servomotor Power Cables for Servomotors with Brakes	[200 V] Cylindrical Servomotors, 3,000 r/min, 1 to 2 kW Cylindrical Servomotors, 2,000 r/min, 1 to 2 kW Cylindrical Servomotors, 1,000 r/min, 900 W	R88A-CAGB□□□B The empty boxes in the model number are for the cable length. The cable can be 3, 5, 10, 15, 20, 30, 40, or 50 m long.	 [Servomotor Connector] Straight plug: N/MS3106B20-18S (Japan Aviation Electronics Industry, Ltd.) Cable clamp: N/MS3057-12A (Japan Aviation Electronics Industry, Ltd.)
		[400 V] Cylindrical Servomotors, 3,000 r/min, 750W to 2 kW Cylindrical Servomotors, 2,000 r/min, 400 W to 2 kW Cylindrical Servomotors, 1,000 r/min, 900 W	R88A-CAKF□□□B The empty boxes in the model number are for the cable length. The cable can be 3, 5, 10, 15, 20, 30, 40, or 50 m long.	 [Servomotor Connector] Straight plug: N/MS3106B24-11S (Japan Aviation Electronics Industry, Ltd.) Cable clamp: N/MS3057-16A (Japan Aviation Electronics Industry, Ltd.)
		[200 V] [400 V] Cylindrical Servomotors, 3,000 r/min, 3 to 5 kW Cylindrical Servomotors, 2,000 r/min, 3 to 5 kW Cylindrical Servomotors, 1,000 r/min, 2 to 3 kW	R88A-CAGD□□□B The empty boxes in the model number are for the cable length. The cable can be 3, 5, 10, 15, 20, 30, 40, or 50 m long.	 [Servomotor Connector] Straight plug: N/MS3106B24-11S (Japan Aviation Electronics Industry, Ltd.) Cable clamp: N/MS3057-16A (Japan Aviation Electronics Industry, Ltd.)

Note: Insert the cable length into the boxes in the model number of cables. (3 m: 003, 5 m: 005, 10 m: 010)

Symbol	Name	Connected to	Model	Description	
(1)	Without Brakes Robot Servomotor Power Cables for Servomotors without Brakes	[100 V] [200 V] Cylindrical Servomotors, 3,000 r/min, 50 to 750 W	R88A-CAKA□□□SR The empty boxes in the model number are for the cable length. The cable can be 3, 5, 10, 15, 20, 30, 40, or 50 m long.	 [Servomotor Connector] Angle plug: JN8FT04SJ1 (Japan Aviation Electronics Industry, Ltd.) Connector pins: ST-TMH-S-C1B-3500-A534G (Japan Aviation Electronics Industry, Ltd.)	
		[200 V] Cylindrical Servomotors, 3,000 r/min, 1 to 2 kW Cylindrical Servomotors, 2,000 r/min, 1 to 2 kW Cylindrical Servomotors, 1,000 r/min, 900 W	R88A-CAGB□□□SR The empty boxes in the model number are for the cable length. The cable can be 3, 5, 10, 15, 20, 30, 40, or 50 m long.	 [Servomotor Connector] Straight plug: N/MS3106B20-4S (Japan Aviation Electronics Industry, Ltd.) Cable clamp: N/MS3057-12A (Japan Aviation Electronics Industry, Ltd.)	
		[400 V] Cylindrical Servomotors, 3,000 r/min, 750 W to 2 kW Cylindrical Servomotors, 2,000 r/min, 400 W to 2 kW Cylindrical Servomotors, 1,000 r/min, 900 W	R88A-CAGD□□□SR The empty boxes in the model number are for the cable length. The cable can be 3, 5, 10, 15, 20, 30, 40, or 50 m long.	 [Servomotor Connector] Straight plug: N/MS3106B22-22S (Japan Aviation Electronics Industry, Ltd.) Cable clamp: N/MS3057-12A (Japan Aviation Electronics Industry, Ltd.)	
		[200 V] [400 V] Cylindrical Servomotors, 3,000 r/min, 3 to 5 kW Cylindrical Servomotors, 2,000 r/min, 3 to 5 kW Cylindrical Servomotors, 1,000 r/min, 2 to 4.5 kW	R88A-CAGD□□□SR The empty boxes in the model number are for the cable length. The cable can be 3, 5, 10, 15, 20, 30, 40, or 50 m long.	 [Servomotor Connector] Straight plug: N/MS3106B22-22S (Japan Aviation Electronics Industry, Ltd.) Cable clamp: N/MS3057-12A (Japan Aviation Electronics Industry, Ltd.)	
	With Brakes Robot Servomotor Power Cables for Servomotors with Brakes	Note: Different connectors are used for the motor power and the brake on 100-V and 200-V, 3,000-r/min Servomotors of 50 to 750 W and Servomotors of 6 to 15 kW. When using a Servomotor with a brake, two cables are required: a Power Cable without Brake and a Brake Cable.			
		[200 V] Cylindrical Servomotors, 3,000 r/min, 1 to 2 kW Cylindrical Servomotors, 2,000 r/min, 1 to 2 kW Cylindrical Servomotors, 1,000 r/min, 900 W	R88A-CAGB□□□BR The empty boxes in the model number are for the cable length. The cable can be 3, 5, 10, 15, 20, 30, 40, or 50 m long.	 [Servomotor Connector] Straight plug: N/MS3106B20-18S (Japan Aviation Electronics Industry, Ltd.) Cable clamp: N/MS3057-12A (Japan Aviation Electronics Industry, Ltd.)	
		[400 V] Cylindrical Servomotors, 3,000 r/min, 750W to 2 kW Cylindrical Servomotors, 2,000 r/min, 400 W to 2 kW Cylindrical Servomotors, 1,000 r/min, 900 W	R88A-CAKF□□□BR The empty boxes in the model number are for the cable length. The cable can be 3, 5, 10, 15, 20, 30, 40, or 50 m long.	 [Servomotor Connector] Straight plug: N/MS3106B24-11S (Japan Aviation Electronics Industry, Ltd.) Cable clamp: N/MS3057-16A (Japan Aviation Electronics Industry, Ltd.)	
		[200 V] [400 V] Cylindrical Servomotors, 3,000 r/min, 3 to 5 kW Cylindrical Servomotors, 2,000 r/min, 3 to 5 kW Cylindrical Servomotors, 1,000 r/min, 2 to 3 kW	R88A-CAGD□□□BR The empty boxes in the model number are for the cable length. The cable can be 3, 5, 10, 15, 20, 30, 40, or 50 m long.	 [Servomotor Connector] Straight plug: N/MS3106B24-11S (Japan Aviation Electronics Industry, Ltd.) Cable clamp: N/MS3057-16A (Japan Aviation Electronics Industry, Ltd.)	

Note: Insert the cable length into the boxes in the model number of cables. (3 m: 003, 5 m: 005, 10 m: 010)

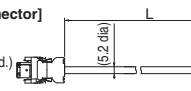

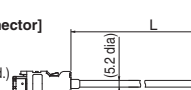
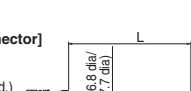
Brake Cables

Symbol	Name	Connected to	Model	Description
(2)	Non-flexible Cables Brake Cables (Non-flexible Cables)	[100 V] [200 V] Cylindrical Servomotors, 3,000 r/min, 50 to 750 W	R88A-CAKA□□□B The empty boxes in the model number are for the cable length. The cable can be 3, 5, 10, 15, 20, 30, 40, or 50 m long. (3 to 20 m: 4.4 dia, 30 to 50 m: 5.4 dia)	 [Servomotor Connector] Angle plug: JN4FT02SJ1-R (Japan Aviation Electronics Industry, Ltd.) Connector pins: ST-TMH-S-C1B-3500-(A534G) (Japan Aviation Electronics Industry, Ltd.)
		[200 V] [400 V] Cylindrical Servomotors, 1,500 r/min, 7.5 to 15 kW 1,000 r/min, 6 kW	R88A-CAGE□□□B The empty boxes in the model number are for the cable length. The cable can be 3, 5, 10, 15, 20, 30, 40, or 50 m long. (5.4 dia)	 [Servomotor Connector] Angle plug: N/MS3106B14S-2S (Japan Aviation Electronics Industry, Ltd.) Connector pins: N/MS3057-6A (Japan Aviation Electronics Industry, Ltd.)
	Flexible Cables Brake Cables (Flexible Cables)	[100 V] [200 V] Cylindrical Servomotors, 3,000 r/min, 50 to 750 W	R88A-CAKA□□□BR The empty boxes in the model number are for the cable length. The cable can be 3, 5, 10, 15, 20, 30, 40, or 50 m long. (3 to 20 m: 4.4 dia, 30 to 50 m: 6.1 dia)	 [Servomotor Connector] Angle plug: JN4FT02SJ1-R (Japan Aviation Electronics Industry, Ltd.) Connector pins: ST-TMH-S-C1B-3500-(A534G) (Japan Aviation Electronics Industry, Ltd.)

Note: Insert the cable length into the boxes in the model number of cables. (3 m: 003, 5 m: 005, 10 m: 010)

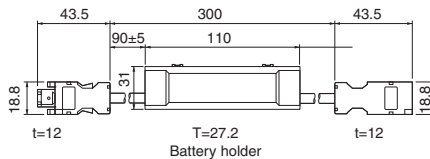
AC Servomotor/Drive G5-series

Encoder Cables (for CN2)

Symbol	Name	Connected to	Model	Description
(3)	Non-flexible Cables Standard Encoder Cables with Connectors	Cylindrical Servomotors, 3,000 r/min, 50 to 750 W (Absolute encoder/ Incremental encoder)	R88A-CRKA□□□C The empty boxes in the model number are for the cable length. The cable can be 3, 5, 10, 15, 20, 30, 40, or 50 m long. (3 to 20 m: 5.2 dia 30 to 50 m: 6.8 dia)	[Servo Drive Connector] Connector: 55100-0670 (Molex Japan Co., Ltd.)  [Servomotor Connector] Angle clamp: JN6FR07SM1 (Japan Aviation Electronics Industry, Ltd.) Connector pins: LY10-C1-A1-10000 (Japan Aviation Electronics Industry, Ltd.)
		Cylindrical Servomotors, 3,000 r/min, For 1 kW (200 V) For 750 W (400 V) Cylindrical Servomotors, 2,000 r/min, Cylindrical Servomotors, 1,000 r/min, (Absolute encoder/ Incremental encoder)	R88A-CRKC□□□N The empty boxes in the model number are for the cable length. The cable can be 3, 5, 10, 15, 20, 30, 40, or 50 m long.	[Servo Drive Connector] Connector: 55100-0670 (Molex Japan Co., Ltd.)  [Servomotor Connector] Straight plug: JN2DS10SL2-R (Japan Aviation Electronics Industry, Ltd.) Contact: JN1-22-22S-10000 (Japan Aviation Electronics Industry, Ltd.)
	Flexible Cables Robot Encoder Cables with Connectors	Cylindrical Servomotors, 3,000 r/min, 50 to 750 W (Absolute encoder/ Incremental encoder)	R88A-CRKA□□□CR The empty boxes in the model number are for the cable length. The cable can be 3, 5, 10, 15, 20, 30, 40, or 50 m long. (3 to 20 m: 5.2 dia 30 to 50 m: 6.8 dia)	[Servo Drive Connector] Connector: 55100-0670 (Molex Japan Co., Ltd.)  [Servomotor Connector] Angle clamp: JN6FR07SM1 (Japan Aviation Electronics Industry, Ltd.) Connector pins: LY10-C1-A1-10000 (Japan Aviation Electronics Industry, Ltd.)
		Cylindrical Servomotors, 3,000 r/min, For 1 kW (200 V) For 750 W (400 V) Cylindrical Servomotors, 2,000 r/min, Cylindrical Servomotors, 1,000 r/min, (Absolute encoder/ Incremental encoder)	R88A-CRKC□□□NR The empty boxes in the model number are for the cable length. The cable can be 3, 5, 10, 15, 20, 30, 40, or 50 m long. (3 to 20 m: 6.8 dia 30 to 50 m: 7.7 dia)	[Servo Drive Connector] Connector: 55100-0670 (Molex Japan Co., Ltd.)  [Servomotor Connector] Straight plug: JN2DS10SL2-R (Japan Aviation Electronics Industry, Ltd.) Contact: JN1-22-22S-10000 (Japan Aviation Electronics Industry, Ltd.)

Note: Insert the cable length into the boxes in the model number of cables. (3 m: 003, 5 m: 005, 10 m: 010)

Absolute Encoder Backup Battery and Absolute Encoder Battery Cable

Symbol	Name	Specifications	Model	Description
(4)	Absolute Encoder Battery Cable	Battery not included	0.3 m R88A-CRGD0R3C	
		One R88A-BAT01G Battery included.	0.3 m R88A-CRGD0R3C-BS	
	Absolute Encoder Backup Battery	-	R88A-BAT01G	-

Control Cables (for CN1)

Symbol	Name	Connected to	Model
(5)	Control Cables for Motion Control Units	Motion Control Units (for all SYSMAC CS1/C200H)	R88A-CPG□□□◇ The empty boxes in the model number are for the cable length. The cable can be 1, 2, 3, or 5 m long. The empty diamond in the model number is for the number of axes. One axis: 1, Two axes: 2
(6)	Control Cables Direct connection cable for Position Control Unit (High-speed type)	Line-driver output type (High-speed type) for CJ1W-NC234/434	For 1 axis XW2Z-□□□J-G9 The empty boxes in the model number are for the cable length. The cable can be 1, 5, or 10 m long.
		Line-driver output type (High-speed type) for CJ1W-NC234/434	For 2 axis XW2Z-□□□J-G1 The empty boxes in the model number are for the cable length. The cable can be 1, 5, or 10 m long.
		Open collector output type (High-speed type) for CJ1W-NC214/NC414	For 1 axis XW2Z-□□□J-G13 The empty boxes in the model number are for the cable length. The cable can be 1, or 3 m long.
		Open collector output type (High-speed type) for CJ1W-NC214/NC414	For 2 axis XW2Z-□□□J-G5 The empty boxes in the model number are for the cable length. The cable can be 1, or 3 m long.

Note: Use the following codes in □□□ for the cable length: 0.5 m: 050, 1 m: 100, 2 m: 200, 3 m: 300, 5 m: 500, and 10 m: 10M. However, for General-purpose Control Cables, use "001" for a 1-m cable.

Symbol	Name		Connected to	Model
(7)	Servo Relay Units		Position Control Unit: For CJ1W-NC113/NC133 For CS1W-NC113/NC133 (For C200HW-NC113 *)	For 1 axis XW2B-20J6-1B
			Position Control Unit: For CJ1W-NC213/NC233/NC413/NC433 For CS1W-NC213/NC233/NC413/NC433 (For C200HW-NC213/NC413 *)	For 2 axis XW2B-40J6-2B
			For CJ1M-CPU21/CPU22/CPU23	For 1 axis XW2B-20J6-8A For 2 axis XW2B-40J6-9A
			For FQM1-MMA22 (Analog output) For FQM1-MMP22 (Pulse train output)	For 2 axis XW2B-80J7-12A
(8)	Servo Relay Unit Cables for Servo Drives	Position Control Unit: For CJ1W-NC□□3, CS1W/C200HW-NC□□□ * (XW2B-20J6-1B, XW2B-40J6-2B)	XW2Z-□□□J-B25 The empty boxes in the model number are for the cable length. The cable can be 1, or 2 m long.	
		For CJ1M-CPU21/CPU22/CPU23 (XW2B-20J6-8A, XW2B-40J6-9A)	XW2Z-□□□J-B31 The empty boxes in the model number are for the cable length. The cable can be 1, or 2 m long.	
		For FQM1-MMA22 (Analog output) (XW2B-80J7-12A)	XW2Z-□□□J-B27 The empty boxes in the model number are for the cable length. The cable can be 1, or 2 m long.	
		For FQM1-MMP22 (Pulse train output) (XW2B-80J7-12A)	XW2Z-□□□J-B26 The empty boxes in the model number are for the cable length. The cable can be 1, or 2 m long.	
(9)	Connection Cables	CJ1W line-driver output type for CJ1W-NC133	For 1 axis XW2Z-□□□J-A18 The empty boxes in the model number are for the cable length. The cable can be 0.5, or 1 m long.	
		CJ1W line-driver output type for CJ1W-NC233/NC433	For 2 axis XW2Z-□□□J-A19 The empty boxes in the model number are for the cable length. The cable can be 0.5, or 1 m long.	
		CS1W line-driver output type for CS1W-NC133	For 1 axis XW2Z-□□□J-A10 The empty boxes in the model number are for the cable length. The cable can be 0.5, or 1 m long.	
		CS1W line-driver output type for CS1W-NC233/NC433	For 2 axis XW2Z-□□□J-A11 The empty boxes in the model number are for the cable length. The cable can be 0.5, or 1 m long.	
	Servo Relay Unit Cables for Position Control Units	CJ1W open collector output type for CJ1W-NC113	For 1 axis XW2Z-□□□J-A14 The empty boxes in the model number are for the cable length. The cable can be 0.5, or 1 m long.	
		CJ1W open collector output type for CJ1W-NC213/NC413	For 2 axis XW2Z-□□□J-A15 The empty boxes in the model number are for the cable length. The cable can be 0.5, or 1 m long.	
		CS1W/C200HW open collector output type for CS1W-NC113 for C200HW-NC113 *	For 1 axis XW2Z-□□□J-A6 The empty boxes in the model number are for the cable length. The cable can be 0.5, or 1 m long.	
		CS1W/C200HW open collector output type for CS1W-NC213/NC413 for C200HW-NC213/NC413 *	For 2 axis XW2Z-□□□J-A7 The empty boxes in the model number are for the cable length. The cable can be 0.5, or 1 m long.	
		CSW/C200HW open collector output type for CJ1M-CPU21/CPU22/CPU23	For 1 axis XW2Z-□□□J-A33 The empty boxes in the model number are for the cable length. The cable can be 0.5, or 1 m long.	

* C200HW-NC was discontinued.

Note: Use the following codes in □□□ for the cable length: 0.5 m: 050, 1 m: 100, 2 m: 200, 3 m: 300, 5 m: 500, and 10 m: 10M.

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Symbol	Name		Connected to			Model	
(9)	Servo Relay Units/Connection Cables	Connection Cables	Servo Relay Unit Cables for Position Control Units	For FQM1-MMA22 (Analog output) For FQM1-MMP22 (Pulse train output)	General-purpose I/O (26 pin)	For 2 axis	XW2Z-□□□J-A28 The empty boxes in the model number are for the cable length. The cable can be 0.5, 1, or 2 m long.
				For FQM1-MMA22 (Analog output)	Special I/O (40 pin)	For 2 axis	XW2Z-□□□J-A31 The empty boxes in the model number are for the cable length. The cable can be 0.5, 1, or 2 m long.
				For FQM1-MMP22 (Pulse train output)	Special I/O (40 pin)	For 2 axis	XW2Z-□□□J-A30 The empty boxes in the model number are for the cable length. The cable can be 0.5, 1, or 2 m long.
(10)	General-purpose Control Cables with Connector on One End		Cables for General-purpose Controllers			R88A-CPG□□□S The empty boxes in the model number are for the cable length. The cable can be 0.5, 1, or 2 m long.	
(11)	For Connector Terminal Block	Connector Terminal Block Cables	Cable for General-purpose Controllers			XW2Z-□□□J-B24 The empty boxes in the model number are for the cable length. The cable can be 1, or 2 m long.	
			Cable for MECHATROLINK-II Communications			XW2Z-□□□J-B34 The empty boxes in the model number are for the cable length. The cable can be 1, or 2 m long.	
(12)		Connector-Terminal Block Conversion Units	Cable for General-purpose Controllers	M3 screws	XW2D-50G6		
			Cable for MECHATROLINK-II Communications	M3 screws	XW2D-20G6		

Note: Use the following codes in □□□ for the cable length: 0.5 m: 050, 1 m: 100, 2 m: 200, 3 m: 300, 5 m: 500, and 10 m: 10M.
However, for General-purpose Control Cables, use "001" for a 1-m cable.

Monitor Connector (for CN5)

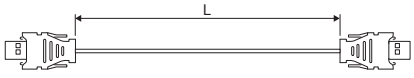
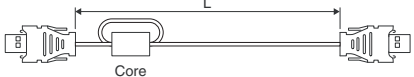
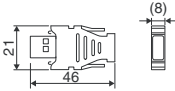
Symbol	Name	Lengths	Model
(13)	Analog Monitor Cable	1 m	R88A-CMK001S

Communications Connector (for CN7)

Symbol	Name	Description
(14)	USB communications cable	General purpose USB cable can be used

Note: Use a commercially available USB cable that is shield, equipped with a ferrite core for noise immunity, and Supporting for USB2.0. The Mini B type USB cable can be used.

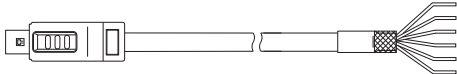
MECHATROLINK-II Communication Cable

Symbol	Name	Length (L)	Model (OMRON model number)	Yaskawa model number	Description
(15)	MECHATROLINK-II Communication Cable * Can be connected to R88D-GN and R88D-KN only.	0.5m	FNY-W6002-A5	JEPMC-W6002-A5-E	(without ring core and USB connector on both ends) 
		1m	FNY-W6002-01	JEPMC-W6002-01-E	
		3m	FNY-W6002-03	JEPMC-W6002-03-E	
		5m	FNY-W6002-05	JEPMC-W6002-05-E	
	MECHATROLINK-II Communication Cable	0.5m	FNY-W6003-A5	JEPMC-W6003-A5	(with ring core and USB connector on both ends) 
		1m	FNY-W6003-01	JEPMC-W6003-01	
		3m	FNY-W6003-03	JEPMC-W6003-03	
		5m	FNY-W6003-05	JEPMC-W6003-05	
		10m	FNY-W6003-10	JEPMC-W6003-10	
		20m	FNY-W6003-20	JEPMC-W6003-20	
(16)	MECHATROLINK-II Terminating resistance	-	FNY-W6022	JEPMC-W6022	

EtherCAT Communication Cable

Symbol	Name	Description
(17)	Ethernet Cable	EtherCAT Communication Cables <ul style="list-style-type: none"> • Use a category 5 or higher cable with double, aluminum tape and braided shielding. Connector (Modular Plug) Specifications <ul style="list-style-type: none"> • Use a category 5 or higher, shielded connector.

External encoder Cables

Symbol	Name	Length (L)	Model	Description
(18)	Serial Communications Cable	10m	R88A-CRKE010SR	CN4 with Connectors 

Connectors

Connectors	Name	Model
CN1	Control I/O Connector (General-purpose Input)	R88A-CNU11C
	Control I/O Connector (MECHATROLINK-II Communications) (EtherCAT Communications)	R88A-CNW01C
CN2	Encoder Connector	R88A-CNW01R
CN4	External scale connector	R88A-CNK41L
CN8	Safety connector	R88A-CNK81S

Servomotor Connector

Connectors	Name	Connected to	Model
-	Motor connector for encoder cable	3,000 r/min, 50 to 750 W	R88A-CNK02R
		3,000 r/min, 1 to 5 kW (200 V)/750 W to 5 kW (400 V) 2,000 r/min, 1,000 r/min	R88A-CNK04R
-	Power cable connector	750 W max. (100 V/200 V)	R88A-CNK11A
-	Brake cable connector	750 W max. (100 V/200 V)	R88A-CNK11B

Related Manuals

Please read the relevant manuals of G5-Series

English Cat. No.	Japanese Cat. No.	Type	Name
I571	SBCE-357	R88D-KT/R88M-K	G5-SERIES AC SERVOMOTOR AND SERVO DRIVE USER'S MANUAL
I572	SBCE-358	R88D-KN□-ML2/R88M-K	G5-SERIES MECHATROLINK-II Communications AC SERVOMOTOR AND SERVO DRIVE USER'S MANUAL
I573	SBCE-360	R88D-KN□-ECT-R/R88M-K	G5-SERIES EtherCAT Communications for Position Control AC SERVOMOTOR AND SERVO DRIVE USER'S MANUAL
I576	SBCE-365	R88D-KN□-ECT/R88M-K	G5-SERIES EtherCAT Communications AC SERVOMOTOR AND SERVO DRIVE USER'S MANUAL
I577	SBCE-366	R88D-KN□-ECT-L/R88L-EC	G5-SERIES EtherCAT Communications Linear Motor Type LINEARMOTOR AND DRIVE USER'S MANUAL
W487	SBCE-359	CJ1W-NC□81/CJ1W-NC□82	CJ-series Position Control Unit Operation Manual
W446	SBCA-337	CXONE-AL□□D-V□	CX-Programmer Operation Manual
W453	SBCE-375	CXONE-AL□□D-V□	CX-Drive OPERATION MANUAL
W504	SBCA-470	SYSMAC-SE2□□□	Sysmac Studio Version 1 Operation Manual

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Note: Do not use this document to operate the Unit.

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