R88M-K/R88D-KN□-ECT

System Configuration

Controllers

- Machine Automation Controller
  NJ/NX-series
- Industrial PC Platform
  NY-series IPC Machine Controller

Automation Software

- Sysmac Studio

- Industrial PC Platform
  NY-series IPC RTOS Controller
- Programmable Multi Axis Controller (PMAC)
  CK3E/NY51□-A

EtherCAT Cables

Use a category 5 or higher cable with double, aluminium tape and braided shielding.

Programmable Controller
CJ2/CJ1

Position Control Unit with EtherCAT interface
CJ1W-NC□81/NC□82

Support Software

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

Support Software

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

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.

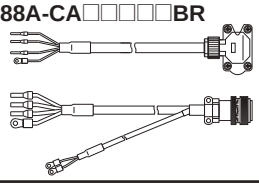
Servo Drive

● G5 Series
Drives with Built-in EtherCAT Communications
R88D-KN□□-ECT

I/O 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)

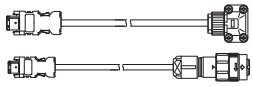
- Non-Flexible Cables
  R88A-CAKA□□□B
- Flexible Cables
  R88A-CAKA□□□BR

Motor power signals

Feedback Signals

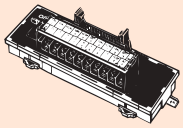
Encoder Cables

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



Connector-Terminal Block Conversion Units and Cable

● Connector-Terminal Block Conversion Unit
XW2□-20G□



● Cable
XW2Z-□□□J-B34

AC Servomotors

● G5 Series motor
R88M-K

3000r/min
2000r/min
1500r/min
1000r/min

INC ABS INC

External scale

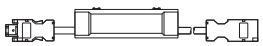
Peripheral Devices

● Reactors
3G3AX-DL
3G3AX-AL

● External Regeneration Resistors
R88A-RR

Absolute Encoder Battery Cable

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



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

Decelerators

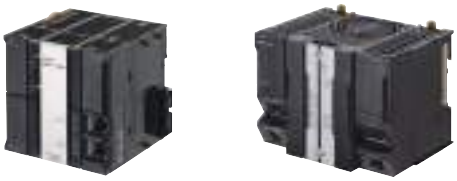
● Backlash: 3 Arcminutes max.
R88G-HPG

● Backlash: 15 Arcminutes Max.
R88G-VRXF

R88L-EC/R88D-KN□-ECT-L

System Configuration

Controllers



- Machine Automation Controller
  NJ/NX-series
- Industrial PC Platform
  NY-series IPC Machine Controller

Automation Software

- Sysmac Studio

- Industrial PC Platform
  NY-series IPC RTOS Controller
- Programmable Multi Axis Controller (PMAC)
  CK3E/NY51□-A

EtherCAT Cables

Use a category 5 or higher cable with double, aluminium tape and braided shielding.

Programmable Controller
CJ2/CJ1

Position Control Unit with EtherCAT interface
CJ1W-NC□81/NC□82

Support Software

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

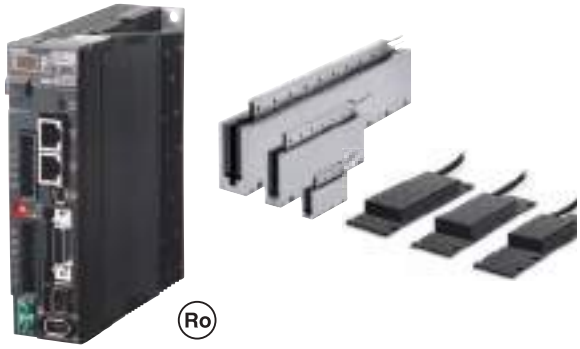
Support Software

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

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.



Servo Drive

- **G5 Series Drives with Built-in EtherCAT Communications Linear Motor type R88D-KN□□-ECT-L**

EtherCAT Communications

USB Communications

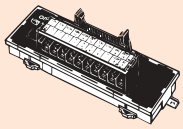
Peripheral Devices

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

I/O signals

Connector-Terminal Block Conversion Units and Cable

- **Connector-Terminal Block Conversion Unit**
  XW2□-20G□



- **Cable**
  XW2Z-□□□J-B34

Motor power signals

Power Cables

- **Power Cable**
  Supplied by the user.

Linear Moter

- **Iron-core Type**

Motor Coil Unit : R88L-EC-FW-□
Magnet Trac : R88L-EC-FM-□

- **Ironless Type**

Motor Coil Unit : R88L-EC-GW-□
Magnet Trac : R88L-EC-GM-□

Feedback Signals

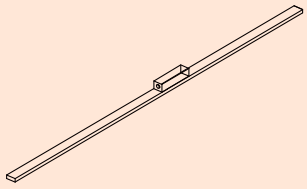
External encoder Cables

- **Serial Communications Cable**
  R88A-CRKE010SR

- **90° Phase Difference Input Cable**
  Supplied by the user

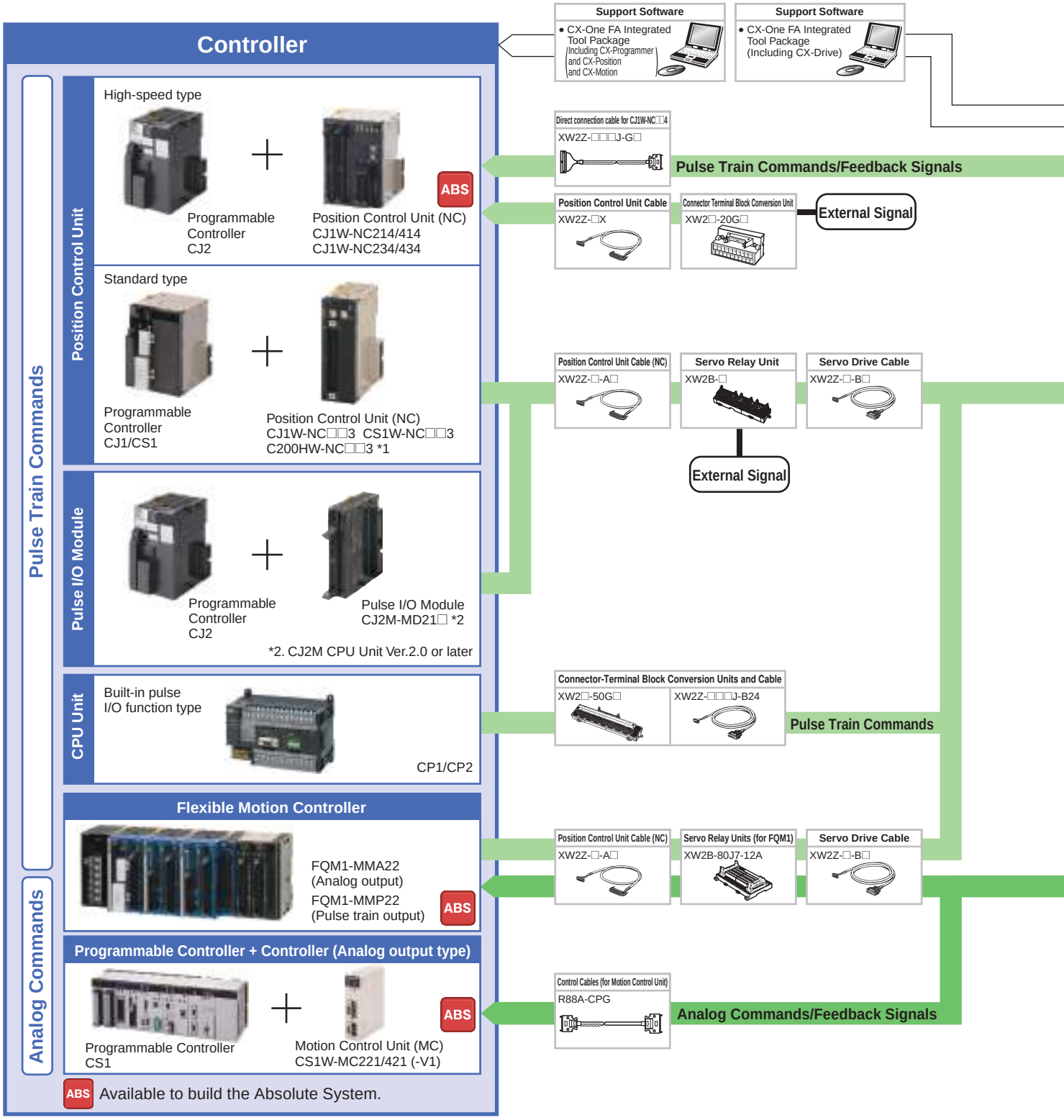
External encoder

- **Commercial Product**
  Supplied by the user.



R88M-K/R88D-KT

System Configuration



*1. C200HW-NC was discontinued.

OMRON

The Preeminent Servo That Revolutionizes Motion Controll

- 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

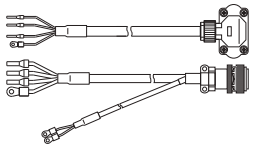
- G5 Series driver
  R88D-KT

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



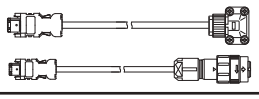
Brake Cables (50 to 750 W or less)

- 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-CRKC□□□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

INC ABS INC

External scale

Peripheral Devices

- 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

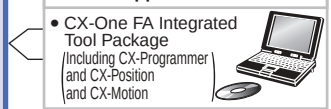
- Backlash: 3 Arcminutes max.
  R88G-HPG
- Backlash: 15 Arcminutes Max.
  R88G-VRXF

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)

Programmable Controller
CJ1

Position Control Unit
CJ1W-NC□71

MECHATROLINK-II

Programmable Controller
CS1

Position Control Unit
CS1W-NC□71

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.

USB communi-cations

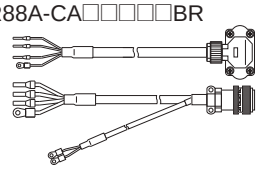
Servo Drive

- **G5 Series driver R88D-KN□□-ML2**

I/O 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)

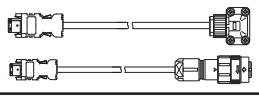
- Non-flexible Cables R88A-CAKA□□□B
- Flexible Cables R88A-CAKA□□□BR

Motor power signals

Feedback Signals

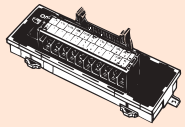
Encoder Cables

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



Connector-Terminal Block Conversion Units and Cable

- **Connector-Terminal Block Conversion Unit XW2□-20G□**



- **Cable XW2Z-□□□J-B34**

AC Servomotors

- **G5 Series motor R88M-K**

3000r/min
2000r/min
1000r/min

INC ABS INC

External scale

Peripheral Devices

- 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