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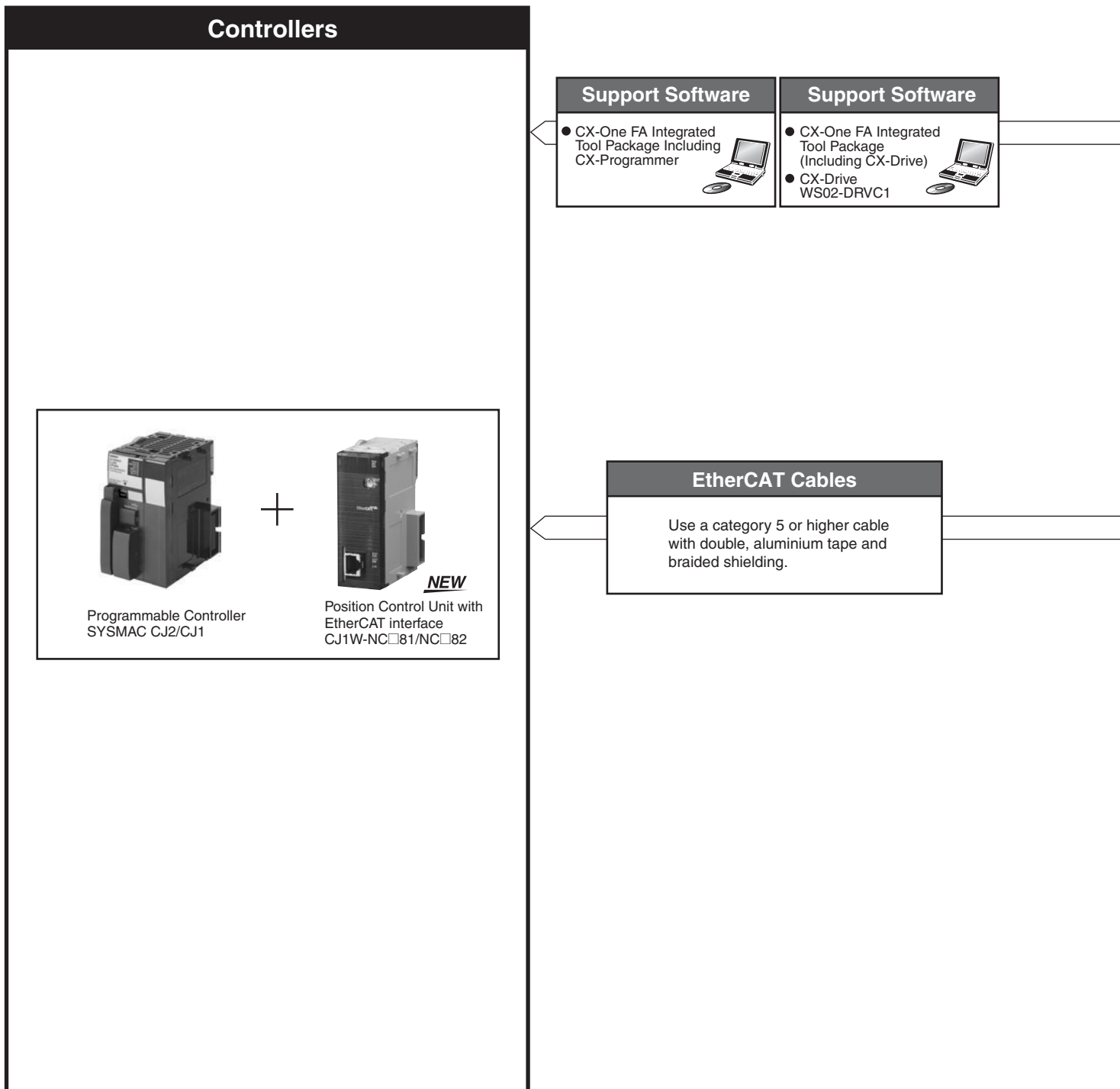
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# OMNUC G5-series AC Servomotors/Servo Drives with Built-in EtherCAT Communications

# R88M-K/R88D-KN□-ECT-R

## System Configuration



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

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

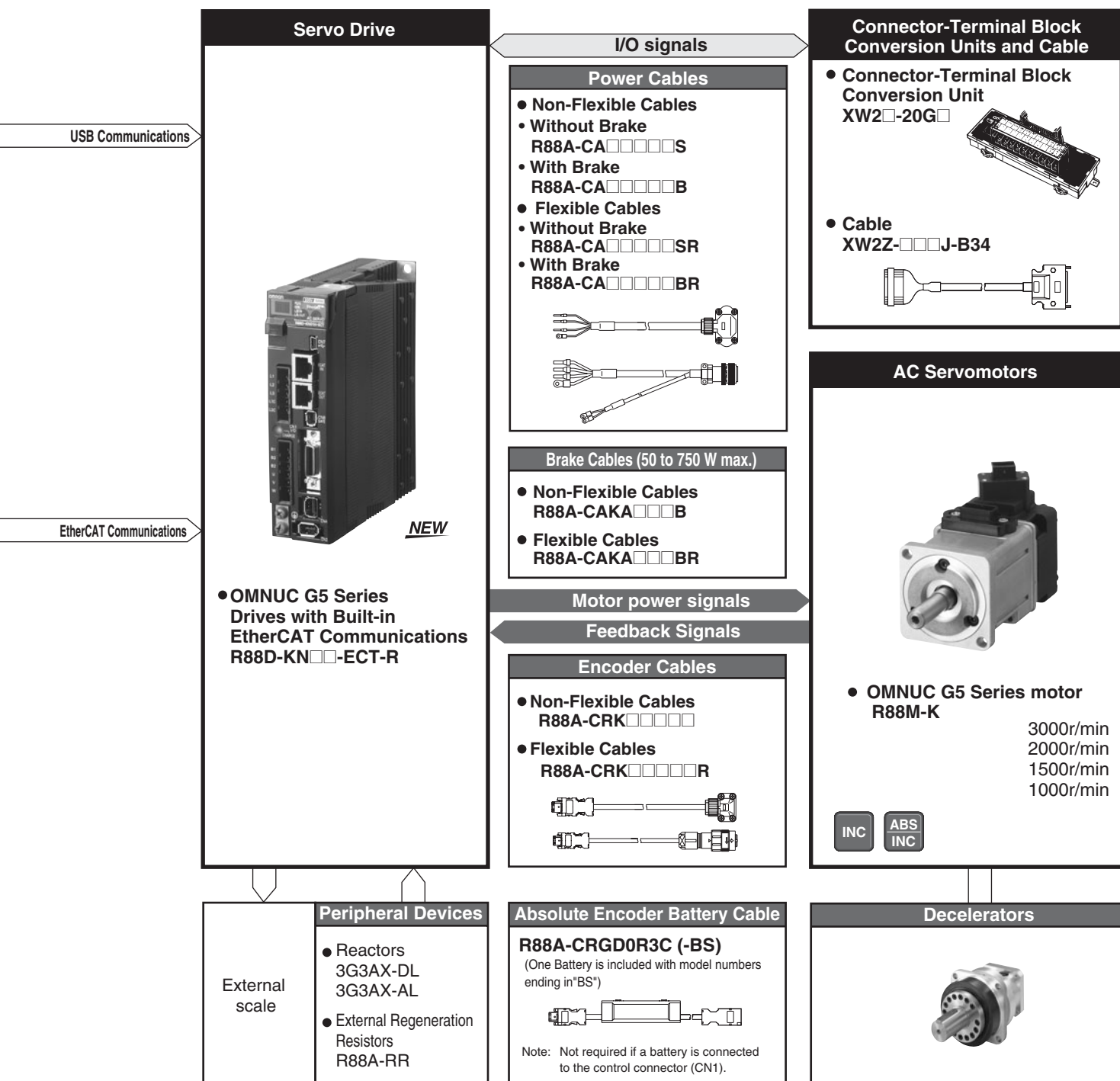


OMNUC G5-Series  
System Configuration

AC Servo Drives with Built-in  
EtherCAT Communications

Servomotors

Ordering Information



USB Communications

EtherCAT Communications

External scale

# OMNUC G5-series AC Servo Drives with Built-in EtherCAT Communications

# R88D-KN□-ECT-R



**NEW**



## Contents

- Ordering Information
- Specifications
  - General Specifications
  - Characteristics
    - Servo Drives with Single-phase 100 VAC Input Power
    - Servo Drives with Single-phase or Three-phase 200 VAC Input Power
    - Servo Drives with Three-phase 400 VAC Input Power
  - EtherCAT Communication Specifications
- Names and Functions
  - Servo Drive Part Names
  - Functions
- Dimensions

## Ordering Information

Refer to the Ordering Information.

## Specifications

### General Specifications

Item		Specifications	
Ambient operating temperature and operating humidity		0 to 55°C, 90%RH max. (with no condensation)	
Storage ambient temperature and humidity		-20 to 65°C, 90%RH max. (with no condensation)	
Operating and storage atmosphere		No corrosive gases	
Vibration resistance		10 to 60 Hz and at an acceleration of 5.88 m/s <sup>2</sup> or less (Not to be run continuously at a resonance point)	
Insulation resistance		Between power supply terminals/power terminals and FG terminal: 0.5 MΩ min. (at 500 VDC)	
Dielectric strength		Between power supply/power line terminals and FG terminal: 1,500 VAC for 1 min at 50/60 Hz	
Protective structure		Built into panel	
International standard	EC Directives	EMC Directive	EN 55011, EN 61000-6-2, IEC 61800-3
		Low Voltage Directive	EN 61800-5-1
		Machinery Directives	EN954-1 (Cat.3), EN ISO 13849-1: 2008 (PLc,d), ISO 13849-1: 2006 (PLc,d), EN61508 (SIL2), EN62061 (SIL2), EN61800-5-2 (STO), IEC61326-3-1 (SIL2)
	UL standards	UL 508C	
	CSA standards	CSA22.2 No. 14	

- Note: 1.** The above items reflect individual evaluation testing. The results may differ under compound conditions.
- 2.** Never perform dielectric strength or other megameter tests on the Servo Drive. Failure to follow this guideline may result in damaging the internal elements.
- 3.** Depending on the operating conditions, some Servo Drive parts will require maintenance. For details, refer to Users Manual (I573).

## Characteristics

### ● Servo Drives with 100 VAC Input Power for Single-phase input type

Item			R88D-KNA5L-ECT-R	R88D-KN01L-ECT-R	R88D-KN02L-ECT-R	R88D-KN04L-ECT-R
Continuous output current (rms)			1.2 A	1.7 A	2.5 A	4.6 A
Input power supply	Main circuit	Power supply capacity	0.4 KVA	0.4 KVA	0.5 KVA	0.9 KVA
		Power supply voltage	Single-phase 100 to 120 VAC (85 to 132 V) 50/60 Hz			
		Rated current	1.4 A	2.6 A	4.3 A	7.6 A
	Control circuit	Power supply voltage	Single-phase 100 to 120 VAC (85 to 132 V) 50/60 Hz			
Control method			All-digital servo			
Inverter method			IGBT-driven PWM			
PWM frequency			12.0 kHz		6.0 kHz	
Weight			Approx. 0.8 kg	Approx. 0.8 kg	Approx. 1.0 kg	Approx. 1.6 kg
Maximum applicable motor capacity			50 W	100 W	200 W	400 W
Applicable Servomotor	3,000 r/min Servomotors	<b>INC</b>	K05030H	K10030L	K20030L	K40030L
		<b>ABS</b>	K05030T	K10030S	K20030S	K40030S
	2,000 r/min Servomotors	<b>ABS</b>	-	-	-	-
		<b>ABS</b>	-	-	-	-

### ● Servo Drives with 200 VAC Input Power for Single-phase/Three-phase input type

Item			R88D-KN01H-ECT-R	R88D-KN02H-ECT-R	R88D-KN04H-ECT-R	R88D-KN08H-ECT-R	R88D-KN10H-ECT-R	R88D-KN15H-ECT-R
Continuous output current (rms)			1.2 A	1.6 A	2.6 A	4.1 A	5.9 A	9.4 A
Input power supply	Main circuit	Power supply capacity	0.5 KVA	0.5 KVA	0.9 KVA	1.3 KVA	1.8 KVA	2.3KVA
		Power supply voltage	Single-phase or 3-phase 200 to 240 VAC (170 to 264 V) 50/60 Hz					
		Rated current	1.3 A	2.4/1.3 A*1	4.1/2.4 A*1	6.6/3.6 A*1	9.1/5.9 A*1	14.2/8.1 A*1
	Control circuit	Power supply voltage	Single-phase 200 to 240 VAC (170 to 264 V) 50/60 Hz					
PWM frequency			12.0 kHz			6.0 kHz		
Weight			Approx. 0.8 kg	Approx. 0.8 kg	Approx. 1.0 kg	Approx. 1.6 kg	Approx. 1.8 kg	Approx. 1.8 kg
Maximum applicable motor capacity			100 W	200 W	400 W	750 W	1 kW	1.5 kW
Applicable Servomotor	3,000 r/min Servomotors	<b>INC</b>	K05030H K10030H	K20030H	K40030H	K75030H	-	K1K030H K1K530H
		<b>ABS</b>	K05030T K10030T	K20030T	K40030T	K75030T	-	K1K030T K1K530T
	2,000 r/min Servomotors	<b>INC</b>	-	-	-	-	K1K020H	K1K520H
		<b>ABS</b>	-	-	-	-	K1K020T	K1K520T
	1,000 r/min Servomotors	<b>INC</b>	-	-	-	-	-	K90010H
		<b>ABS</b>	-	-	-	-	-	K90010T
Control method			All-digital servo					
Inverter method			IGBT-driven PWM					

\*1. The first value is for single-phase input power and the second value is for 3-phase input power.

# AC Servomotor/Drive OMNUC G5-series

## ● Servo Drives with 200 VAC Input Power for Three-phase input type

Item			R88D-KT20H-ECT-R	R88D-KT30H-ECT-R	R88D-KT50H-ECT-R	
Continuous output current (rms)			13.4A	18.7A	33.0A	
Input power supply	Main circuit	Power supply capacity	3.3KVA	4.5KVA	7.5KVA	
		Power supply voltage	Three-phase 200 to 230 VAC (170 to 253 V), 50/60 Hz			
		Rated current	11.8A	15.1A	21.6A	
	Control circuit	Power supply voltage Single-phase 200 to 230 VAC (170 to 253 V), 50/60 Hz				
PWM frequency			6.0kHz			
Weight			Approx. 2.7kg	Approx. 4.8kg	Approx. 4.8kg	
Maximum applicable motor capacity			2kW	3kW	5kW	
Applicable Servomotors	3,000 r/min Servomotors	<b>INC</b>	K2K030H	K3K030H	K4K030H K5K030H	
		<b>ABS</b>	K2K030T	K3K030T	K4K030T K5K030T	
	2,000 r/min Servomotors	<b>INC</b>	K2K020H	K3K020H	K4K020H K5K020H	
		<b>ABS</b>	K2K020T	K3K020T	K4K020T K5K020T	
	1,000 r/min Servomotors	<b>INC</b>	-	K2K010H	K3K010H	
		<b>INC</b>	-	K2K010T	K3K010T	
	Control method			All-digital servo		
	Inverter method			IGBT-driven PWM method		

## ● Servo Drives with 400 VAC Input Power for Three-phase input type

Item			R88D-KN06F-ECT-R	R88D-KN10F-ECT-R	R88D-KN15F-ECT-R	R88D-KN20F-ECT-R	R88D-KN30F-ECT-R	R88D-KN50F-ECT-R
Continuous output current (rms)			1.5 A	2.9 A	4.7 A	6.7A	9.4A	16.5A
Input power supply	Main circuit	Power supply capacity	1.2 KVA	1.8 KVA	2.3 KVA			
		Power supply voltage	Three-phase 380 to 480 VAC (323 to 528 V) 50/60 Hz					
		Rated current	2.1 A	2.8 A	4.7 A	5.9A	7.6A	12.1A
		Heat value *	32.2 A	48 W	49 W			
	Control circuit	Power supply voltage	24 VDC (20.4 to 27.6 V)					
		Heat value *	7 W	7 W	7 W			
PWM frequency			6.0 kHz					
Weight			Approx. 1.9 kg	Approx. 1.9 kg	Approx. 1.9 kg	Approx. 2.7kg	Approx. 4.7kg	Approx. 4.7kg
Maximum applicable motor capacity			600 W	1 kW	1.5 kW	2kW	3kW	5kW
Applicable Servomotor	3,000 r/min Servomotors	<b>INC</b>	-	K75030F	K1K030F K1K530F	K2K030F	K3K030F	K4K030F K5K030F
		<b>ABS</b>	-	K75030C	K1K030C K1K530C	K2K030C	K3K030C	K4K030C K5K030C
	2,000 r/min Servomotors	<b>INC</b>	K40020F K60020F	K1K020F	K1K520F	K2K020F	K3K020F	K4K020F K5K020F
		<b>ABS</b>	K40020C K60020C	K1K020C	K1K520C	K2K020C	K3K020C	K4K020C K5K020C
	1,000 r/min Servomotors	<b>INC</b>	-	-	K90010F	-	K2K010F	K3K010F
		<b>INC</b>	-	-	K90010C	-	K2K010C	K3K010C

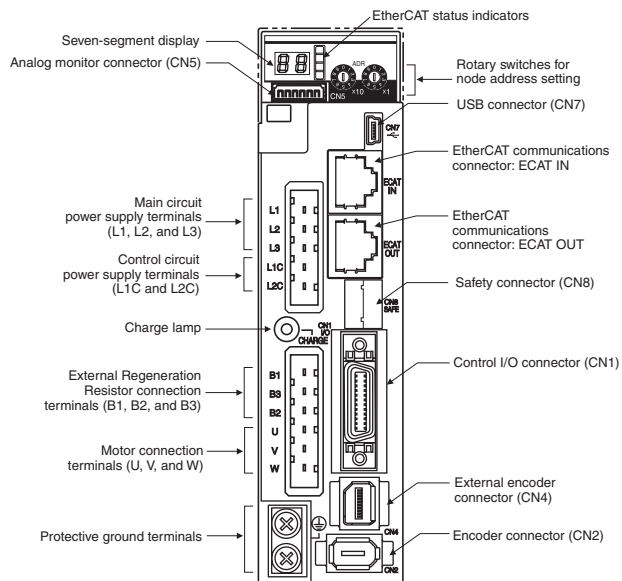
\* Not supported by the Servo Drive models dedicated for position control.

## EtherCAT Communications Specifications

Item	Specification
<b>Communications standard</b>	IEC 61158 Type 12, IEC 61800-7 CiA 402 Drive Profile
<b>Physical layer</b>	100BASE-TX (IEEE802.3)
<b>Connectors</b>	RJ45 × 2 (shielded) ECAT IN: EtherCAT input ECAT OUT: EtherCAT output
<b>Communications media</b>	Category 5 or higher (cable with double, aluminum tape and braided shielding) is recommended.
<b>Communications distance</b>	Distance between nodes: 100 m max.
<b>Process data</b>	Fixed PDO mapping
<b>Mailbox (CoE)</b>	Emergency messages, SDO requests, SDO responses, and SDO information
<b>Distributed clock</b>	Synchronization in DC mode. DC cycle: 250 μs, 500 μs, 1 ms, 2 ms, 4 ms
<b>LED indicators</b>	L/A IN (Link/Activity IN) × 1 L/A OUT (Link/Activity OUT) × 1 RUN × 1 ERR × 1
<b>CiA402 Drive Profile</b>	<ul style="list-style-type: none"> <li>• Cyclic synchronous position mode</li> <li>• Cyclic synchronous velocity mode *</li> <li>• Cyclic synchronous torque mode *</li> <li>• Touch probe function (Latch function)</li> <li>• Torque limit function</li> <li>• Homing mode *</li> </ul>

\* Not supported by the Servo Drive models dedicated for position control.

## Components and Functions



### Display

A 2-digit 7-segment display shows the node address, error codes, and other Servo Drive status.

### Charge Lamp

Lights when the main circuit power supply is turned ON.

### EtherCAT Status Indicators

These indicators show the status of EtherCAT communications. For details, refer to Users Manual (I573).

### Control I/O Connector (CN1)

Used for command input signals and I/O signals.

### Encoder Connector (CN2)

Connector for the encoder installed in the Servomotor.

### External Encoder Connector (CN4)

Connector for an encoder signal used during fully-closed control.

### EtherCAT Communications Connectors (ECAT IN and ECAT OUT)

These connectors are for EtherCAT communications.

### Analog Monitor Connector (CN5)

You can use a special cable to monitor values, such as the motor rotation speed, torque command value, etc.

### USB Connector (CN7)

Communications connector for the computer.

### Safety Connector (CN8)

Connector for safety devices.

If no safety devices are used, keep the factory-set safety bypass connector installed.

## Functions

### Basic control

Position control	Fully closed control
------------------	----------------------

### Advanced control

Vibration control	Gain switching	Friction torque compensation function
Adaptive filter	Torque limit	Inertia ratio switching function
Notch filter	Sequence I/O signal	Hybrid Vibration Suppression Function
Electronic gear function	Forward and reverse drive prohibition functions	Feed-forward function
Encoder dividing function	Disturbance observer function	Instantaneous speed observer function
Brake interlock	Gain switching 3 function	

### Other functions

#### Safe Torque OFF (STO) Function

##### Realtime autotuning

##### Manual tuning

##### Various parameters

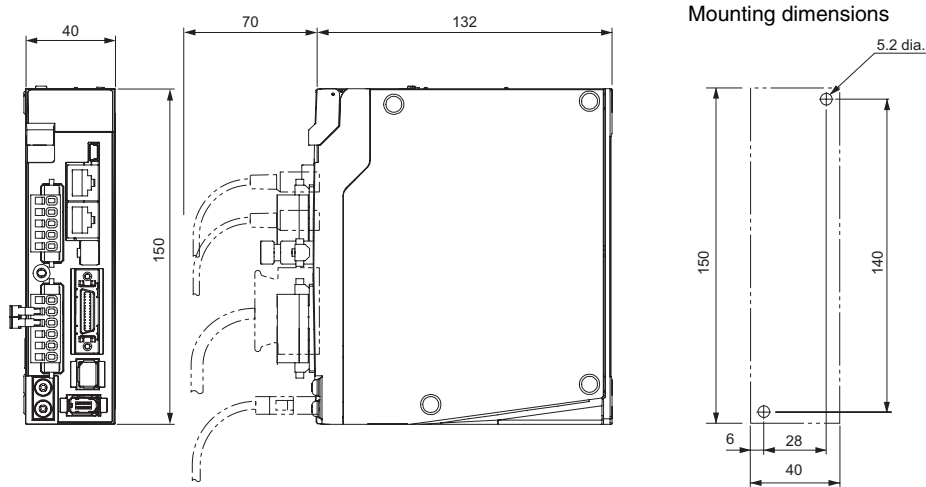
Basic Parameters	Interface Monitor Setting Parameters
Gain Parameters	Extended Parameters
Vibration Suppression Parameters	Special Parameters
Analog Control Parameters	

## Dimensions

### <Wall Mounting>

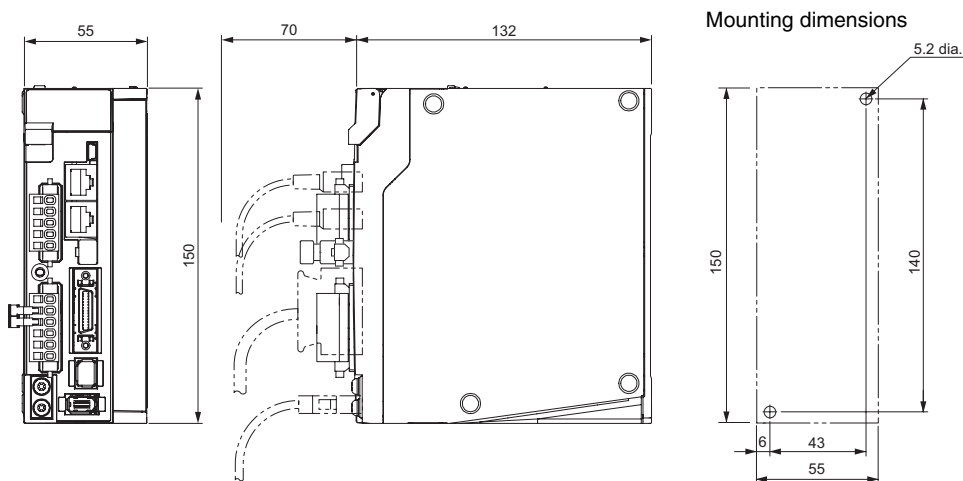
Single-phase 100 VAC R88D-KNA5L-ECT-R/KN01L-ECT-R (50 to 100 W)

Single-phase/Three-phase 200 VAC R88D-KN01H-ECT-R/KN02H-ECT-R (100 to 200W)



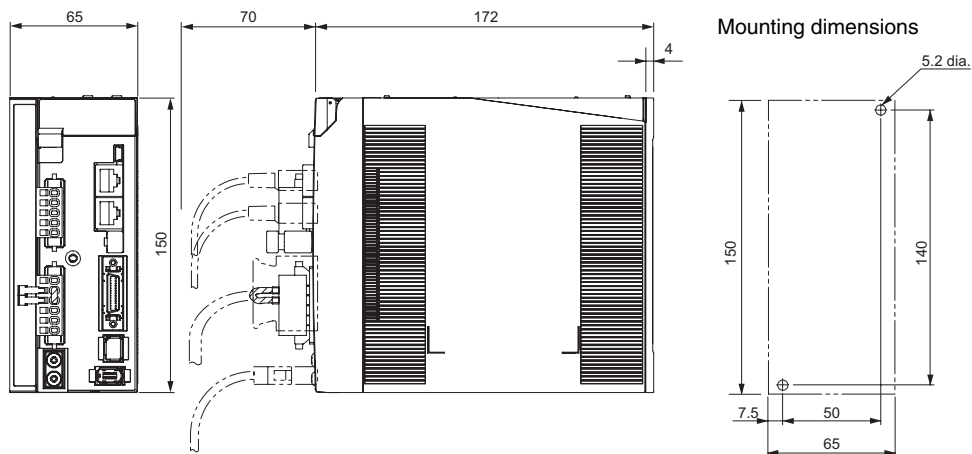
Single-phase 100 VAC R88D-KN02L-ECT-R (200W)

Single-phase/Three-phase 200 VAC R88D-KN04H-ECT-R (400W)

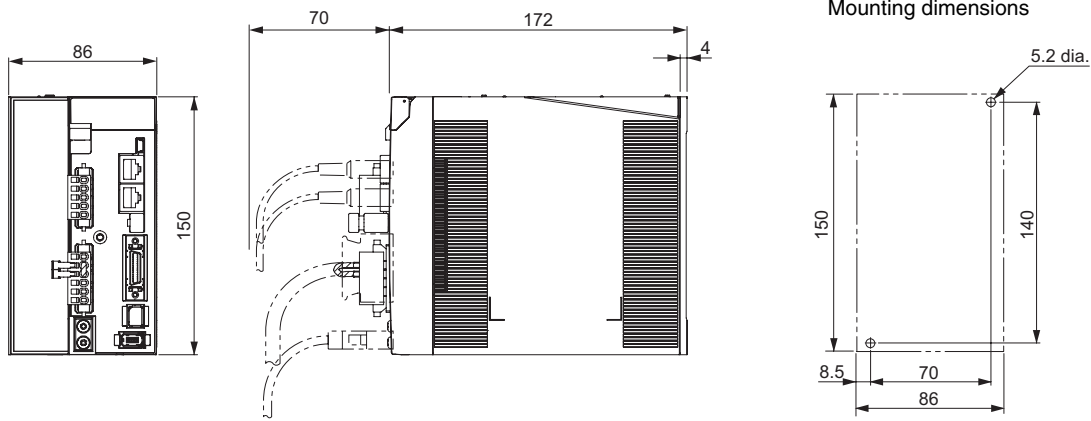


Single-phase 100 VAC R88D-KN04L-ECT-R (400W)

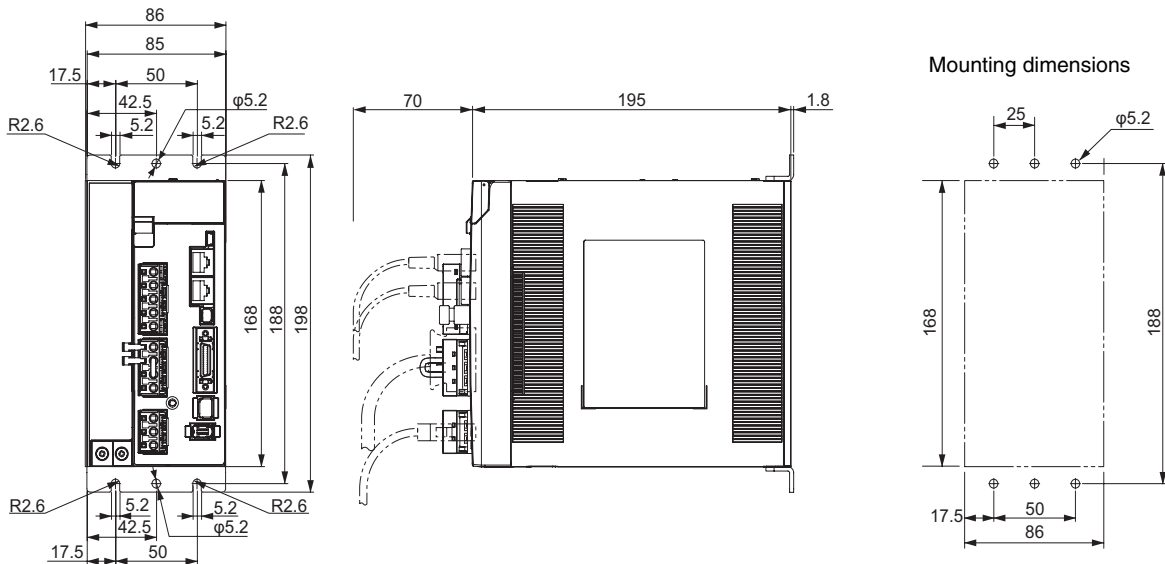
Single-phase/Three-phase 200 VAC R88D-KN08H-ECT-R (750W)



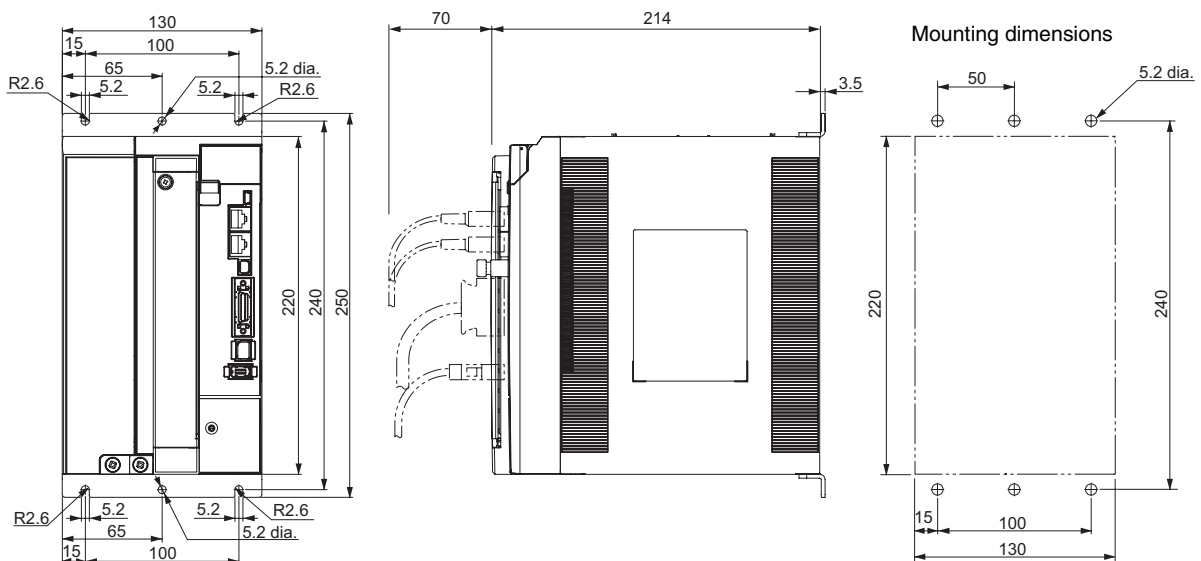
Single-phase/Three-phase 200 VAC R88D-KN10H-ECT-R/-KN15H-ECT-R (1 to 1.5kW)



Three-phase 200 VAC R88D-KN20H-ECT-R (2kW)



Three-phase 200 VAC R88D-KN30H-ECT-R/-KN50H-ECT-R (3 to 5kW)



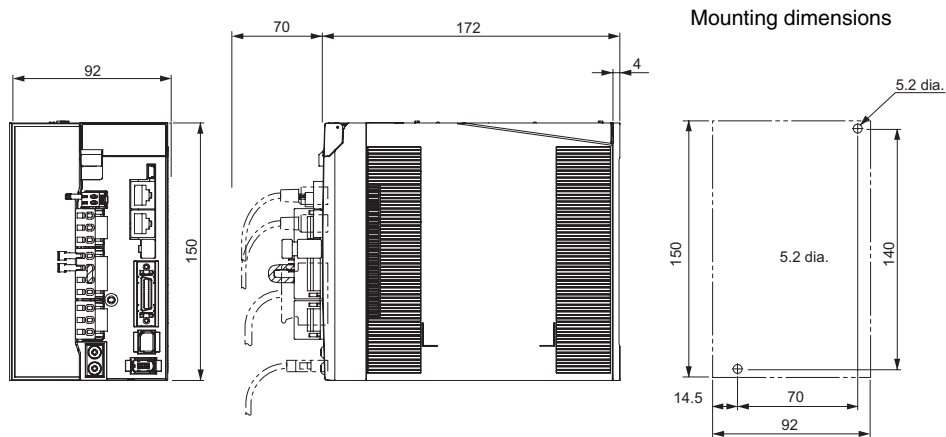
OMNUC G5-Series  
System Configuration

AC Servo Drives with Built-in  
EtherCAT Communications

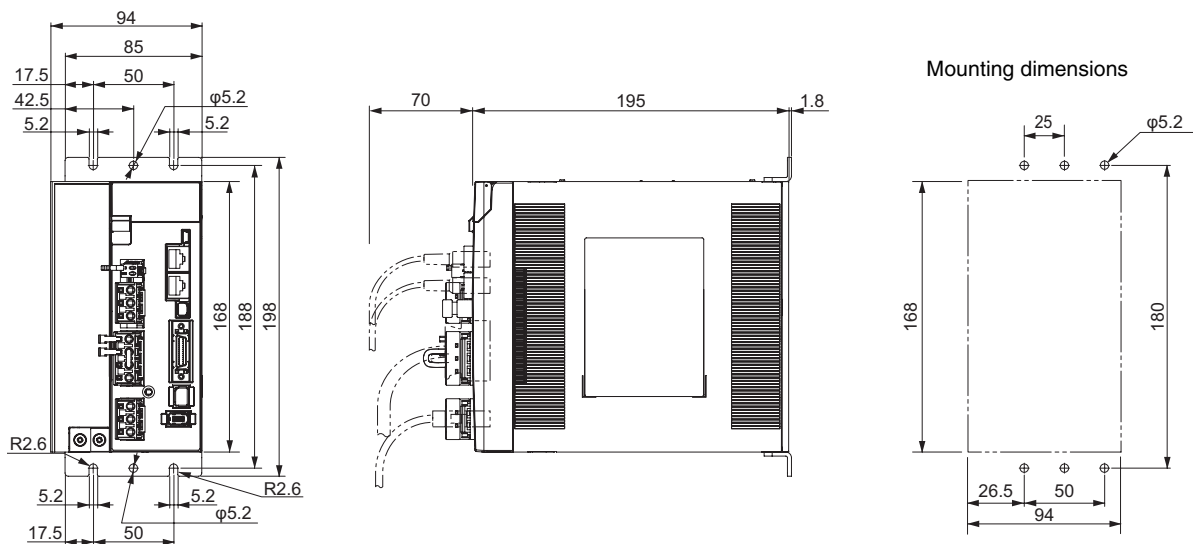
Servomotors

Ordering Information

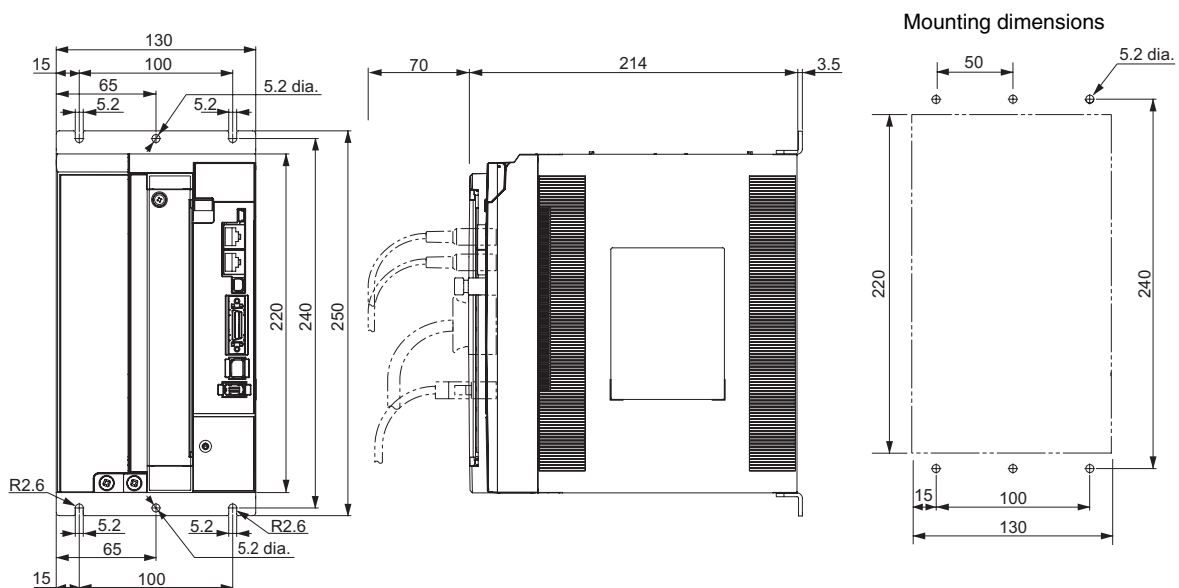
Three-phase 400 VAC R88D-KN06F-ECT-R/-KN10F-ECT-R (600W to 1.0kW)  
Three-phase 400 VAC R88D-KN15F-ECT-R (1.5kW)



Three-phase 400 VAC R88D-KN20F-ECT-R (2kW)



Three-phase 400 VAC R88D-KN30F-ECT-R/-KN50F-ECT-R (3 to 5kW)



# OMNUC G5-series AC Servomotors

# R88M-K INC ABS/INC

## Contents



- Ordering Information
- Specifications
  - General Specifications
  - Characteristics/Torque and Rotation Speed Characteristics
  - <Cylinder type>
    - 3,000 r/min servomotors (100V, 200V, 400V)
    - 2,000 r/min servomotors (200V, 400V)
    - 1,500 r/min servomotors (200V/400V)
    - 1,000 r/min servomotors (200V/400V)
  - Encoder Specifications
- Dimensions

## Ordering Information

Refer to the Ordering Information.

## Specifications

### General Specifications

Item	3,000-r/min Servomotors		1,000-r/min Servomotors 1,500-r/min Servomotors 2,000-r/min Servomotors
	50 to 750 W	1 to 1.5 kW	900 W to 1.5 kW
Ambient operating temperature and operating humidity	0 to 40°C, 20% to 85%RH (with no condensation)		
Storage ambient temperature and humidity	-20 to 65°C, 20% to 85%RH (with no condensation) Maximum temperature : 80°C for up to 72 hours		
Operating and storage atmosphere	No corrosive gases		
Vibration resistance *1	Acceleration of 49 m/s <sup>2</sup> 24.5 m/s <sup>2</sup> max. in X, Y, and Z directions when the motor is stopped		
Impact resistance	Acceleration of 98 m/s <sup>2</sup> max. 3 times each in X, Y, and Z directions		
Insulation resistance	Between power terminal and FG terminal: 20 MΩ min. (at 500 VDC)		
Dielectric strength	1,500 VAC between power terminal and FG terminal for 1 min (voltage 100 V, 200 V) 1,800 VAC between power terminal and FG terminal for 1 min (voltage 400 V) 1,000 VAC between brake terminal and FG terminal for 1 min		
Insulation class	Type B	Type F	
Protective structure	IP67 (except for through-shaft parts and motor and encoder connector pins)		
International standard	EC Directives	EMC Directive	EN 55011 class A group 1 EN 61000-6-2, IEC 61800-3 and IEC 61326-3-1
		Low Voltage Directive	EN 60034-1/-5
	UL standards	UL1004-1	
	CSA standards	CSA22.2 No. 100	

\*1. The amplitude may be increased by machine resonance. As a guideline, do not exceed 80% of the specified value.

**Note: 1.** Do not use the cable when it is laying in oil or water.

**2.** Do not expose the cable outlet or connections to stress due to bending or the weight of the cable itself.

## Characteristics/Torque and Rotation Speed Characteristics

### Characteristics

<Cylinder type>

3,000 r/min Servomotors (100 VAC Input Power)

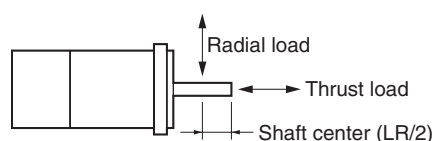
Model (R88M-)		100 VAC				
		K05030H	K10030L	K20030L	K40030L	
Item	Unit	K05030T	K10030S	K20030S	K40030S	
Rated output *1	W	50	100	200	400	
Rated torque *1	N • m	0.16	0.32	0.64	1.3	
Rated rotation speed	r/min	3,000				
Maximum rotation speed	r/min	6,000				
Momentary maximum torque *1	N • m	0.48	0.95	1.91	3.8	
Rated current *1	A (rms)	1.1	1.6	2.5	4.6	
Momentary maximum current *1	A (rms)	4.7	6.9	10.6	19.5	
Rotor inertia	Without brake	kg • m <sup>2</sup>	0.025×10 <sup>-4</sup>	0.051×10 <sup>-4</sup>	0.14×10 <sup>-4</sup>	0.26×10 <sup>-4</sup>
	With brake	kg • m <sup>2</sup>	0.027×10 <sup>-4</sup>	0.054×10 <sup>-4</sup>	0.16×10 <sup>-4</sup>	0.28×10 <sup>-4</sup>
Applicable load inertia	—	30 times the rotor inertia max. *2				
Torque constant *1	N • m/A	0.11±10%	0.14±10%	0.20±10%	0.21±10%	
Power rate *1	Without brake	kW/s	10.1	19.8	28.9	62.3
	With brake	kW/s	9.4	18.7	25.3	57.8
Mechanical time constant	Without brake	ms	1.43	1.03	0.61	0.48
	With brake	ms	1.54	1.09	0.70	0.52
Electrical time constant	ms	0.82	0.91	3.0	3.4	
Allowable radial load *3	N	68	68	245	245	
Allowable thrust load *3	N	58	58	98	98	
Weight	Without brake	kg	Approx. 0.31	Approx. 0.45	Approx. 0.78	Approx. 1.2
	With brake	kg	Approx. 0.51	Approx. 0.65	Approx. 1.2	Approx. 1.6
Radiator plate dimensions (material)	—	100 × 80 × t10 (Al)		130 × 120 × t12 (Al)		
Applicable drives (R88D-)	—	KTA5L/KNA5L-ML2/ KNA5L-ECT-R	KT01L/KNA01L-ML2/ KN01L-ECT-R	KT02L/KN02L-ML2/ KN02L-ECT-R	KT04L/KN04L-ML2/ KN04L-ECT-R	
Brake specifications	Brake inertia	kg • m <sup>2</sup>	2×10 <sup>-7</sup>	2×10 <sup>-7</sup>	1.8×10 <sup>-6</sup>	1.8×10 <sup>-6</sup>
	Excitation voltage *4	V	24 VDC ± 10%			
	Power consumption (at 20°C)	W	7	7	9	9
	Current consumption (at 20°C)	A	0.3	0.3	0.36	0.36
	Static friction torque	N • m	0.29 min.	0.29 min.	1.27 min.	1.27 min.
	Attraction time *5	ms	35 max.	35 max.	50 max.	50 max.
	Release time *5	ms	20 max.	20 max.	15 max.	20 max.
	Backlash	—	1° (reference value)			
	Allowable work per braking	J	39.2	39.2	137	137
	Allowable total work	J	4.9×10 <sup>3</sup>	4.9×10 <sup>3</sup>	44.1×10 <sup>3</sup>	44.1×10 <sup>3</sup>
	Allowable angular acceleration	rad/s <sup>2</sup>	30,000 max. (Speed of 2,800 r/min or more must not be changed in less than 10 ms.)			
	Brake limit	—	10 million times min.			
Insulation class	—	Type F				

\*1. These are the values when the motor is combined with a drive at normal temperature (20°C, 65%). The momentary maximum torque indicates the standard value.

\*2. Applicable load inertia.

- The operable load inertia ratio (load inertia/rotor inertia) depends on the mechanical configuration and its rigidity. For a machine with high rigidity, operation is possible even with high load inertia. Select an appropriate motor and confirm that operation is possible.
- If the dynamic brake is activated frequently with high load inertia, the Dynamic Brake Resistor may burn. Do not repeatedly turn the servo ON/OFF while the dynamic brake is enabled.
- The dynamic brake is designed only for emergency stops. Design the system so that the Servomotor remains stopped for at least 3 minutes after applying the dynamic brake. Otherwise the dynamic brake circuits may fail.

\*3. The allowable radial and thrust loads are the values determined for a limit of 20,000 hours at normal operating temperatures. The allowable radial loads are applied as shown in the following diagram.



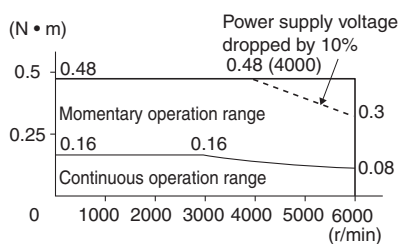
\*4. This is a non-excitation brake. (It is released when excitation voltage is applied.)

\*5. The operation time is the value (reference value) measured with a surge suppressor (CR50500 by Okaya Electric Industries Co., Ltd.).

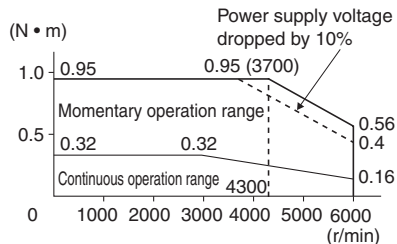
## Torque and Rotation Speed Characteristics 3,000 r/min Servomotors (100 VAC Input Power)

The following graphs show the characteristics with a 3-m Non-Flexible Cables and a 100 VAC input.

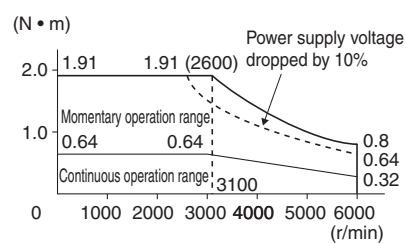
- R88M-K05030H/T (50W)



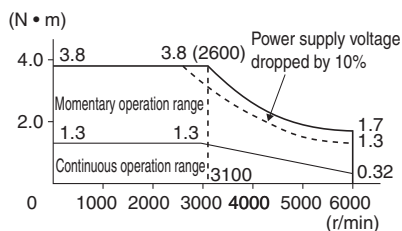
- R88M-K10030L/S (100W)



- R88M-K20030L/S (200W)



- R88M-K40030L/S (400W)



**Note:** The continuous operation range is the operation range within which continuous operation is possible. Continuous operation at the maximum speed is also possible. However, doing so will reduce the output torque.

# AC Servomotor/Drive OMNUC G5-series

## Characteristics

### 3,000 r/min Servomotors (200 VAC Input Power)

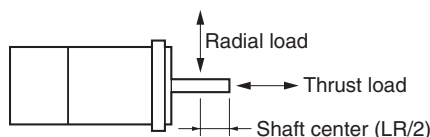
Model (R88M-)		200 VAC												
		K05030H	K10030H	K20030H	K40030H	K75030H	K1K030H	K1K530H	K2K030H	K3K030H	K4K030H	K5K030H		
Item	Unit	K05030T	K10030T	K20030T	K40030T	K75030T	K1K030T	K1K530T	K2K030T	K3K030T	K4K030T	K5K030T		
Rated output *1	W	50	100	200	400	750	1000	1500	2000	3000	4000	5000		
Rated torque *1	N • m	0.16	0.32	0.64	1.3	2.4	3.18	4.77	6.37	9.55	12.7	15.9		
Rated rotation speed	r/min	3,000												
Momentary maximum rotation speed	r/min	6,000				6,000	5,000				4,500			
Momentary maximum torque *1	N • m	0.48	0.95	1.91	3.8	7.1	9.55	14.3	19.1	28.6	38.2	47.7		
Rated current *1	A (rms)	1.1	1.1	1.5	2.4	4.1	6.6	8.2	11.3	18.1	19.6	24.0		
Momentary maximum current *1	A (rms)	4.7	4.7	6.5	10.2	17.4	28	35	48	77	83	102		
Rotor inertia	Without brake	kg • m <sup>2</sup>	0.025×10 <sup>-4</sup>	0.051×10 <sup>-4</sup>	0.14×10 <sup>-4</sup>	0.26×10 <sup>-4</sup>	0.87×10 <sup>-4</sup>	2.03×10 <sup>-4</sup>	2.84×10 <sup>-4</sup>	3.68×10 <sup>-4</sup>	6.50×10 <sup>-4</sup>	12.9×10 <sup>-4</sup>	17.4×10 <sup>-4</sup>	
	With brake	kg • m <sup>2</sup>	0.027×10 <sup>-4</sup>	0.054×10 <sup>-4</sup>	0.16×10 <sup>-4</sup>	0.28×10 <sup>-4</sup>	0.97×10 <sup>-4</sup>	2.35×10 <sup>-4</sup>	3.17×10 <sup>-4</sup>	4.01×10 <sup>-4</sup>	7.85×10 <sup>-4</sup>	14.2×10 <sup>-4</sup>	18.6×10 <sup>-4</sup>	
Applicable load inertia	—	30 times the rotor inertia max. *2				20 times the rotor inertia max.	15 times the rotor inertia max. *2		30 times the rotor inertia max. *2					
Torque constant *1	N • m/A	0.11±10%	0.21±10%	0.32±10%	0.40±10%	0.45±10%	0.37	0.45	0.44	0.41	0.49	0.49		
Power rate *1	Without brake	kW/s	10.1	19.8	28.9	62.3	65.4	49.8	80.1	110	140	126	146	
	With brake	kW/s	9.4	18.7	25.3	57.8	58.7	43.0	71.8	101	116	114	136	
Mechanical time constant	Without brake	ms	1.43	1.07	0.58	0.43	0.37	0.61	0.49	0.44	0.41	0.51	0.50	
	With brake	ms	1.54	1.13	0.66	0.46	0.42	0.71	0.55	0.48	0.49	0.56	0.54	
Electrical time constant	ms	0.82	0.90	3.2	3.4	5.3	5.8	6.3	6.7	11	12	13		
Allowable radial load *3	N	68	68	245	245	490	490	490	490	490	784	784		
Allowable thrust load *3	N	58	58	98	98	196	196	196	196	196	343	343		
Weight	Without brake	kg	Approx. 0.31	Approx. 0.46	Approx. 0.79	Approx. 1.2	Approx. 2.3	Approx. 3.5	Approx. 4.4	Approx. 5.3	Approx. 8.3	Approx. 11.0	Approx. 14.0	
	With brake	kg	Approx. 0.51	Approx. 0.66	Approx. 1.2	Approx. 1.6	Approx. 3.1	Approx. 4.5	Approx. 5.4	Approx. 6.3	Approx. 9.4	Approx. 12.6	Approx. 16.0	
Radiator plate dimensions (material)		100 × 80 × t10 (Al)		130 × 120 × t12 (Al)		170 × 160 × t12 (Al)	320 × 300 × t20 (Al)		380 × 350 × t30 (Al)					
Applicable drives (R88D-)		KT01H/ KN01H- ML2/ KN01H- ECT-R	KT01H/ KN01H- ML2/ KN01H- ECT-R	KT02H/ KN02H- ML2/ KN02H- ECT-R	KT04H/ KN04H- ML2/ KN04H- ECT-R	KT08H/ KN08H- ML2/ KN08H- ECT-R	KT15H/ KN15H- ML2/ KN15H- ECT-R	KT15H/ KN15H- ML2/ KN15H- ECT-R	KT20H/ KN20H- ML2/ KN20H- ECT-R	KT30H/ KN30H- ML2/ KN30H- ECT-R	KT50H/ KN50H- ML2/ KN50H- ECT-R	KT50H/ KN50H- ML2/ KN50H- ECT-R		
Brake specifications	Brake inertia	kg • m <sup>2</sup>	2×10 <sup>-7</sup>	2×10 <sup>-7</sup>	1.8×10 <sup>-6</sup>	1.8×10 <sup>-6</sup>	0.33×10 <sup>-4</sup>	0.33×10 <sup>-4</sup>	0.33×10 <sup>-4</sup>	0.33×10 <sup>-4</sup>	0.33×10 <sup>-4</sup>	1.35×10 <sup>-4</sup>	1.35×10 <sup>-4</sup>	
	Excitation voltage *4	V	24 VDC ± 10%											
	Power consumption (at 20°C)	W	7	7	9	9	17	19	19	19	19	22	22	
	Current consumption (at 20°C)	A	0.3	0.3	0.36	0.36	0.70±10%	0.81±10%	0.81±10%	0.81±10%	0.81±10%	0.90±10%	0.90±10%	
	Static friction torque	N • m	0.29 min.	0.29 min.	1.27 min.	1.27 min.	2.5 min.	7.8 min.	7.8 min.	7.8 min.	11.8 min.	16.1 min.	16.1 min.	
	Attraction time *5	ms	35 max.	35 max.	50 max.	50 max.	50 max.	50 max.	50 max.	50 max.	80 max.	110 max.	110 max.	
	Release time *5	ms	20 max.	20 max.	15 max.	15 max.	15 max. *6	15 max. *6	15 max. *6	15 max. *6	15 max. *6	50 max. *7	50 max. *7	
	Backlash		1° (reference value)				±1° (reference value)				1° (reference value)			
	Allowable work per braking	J	39.2	39.2	137	137	392	392	392	392	392	1470	1470	
	Allowable total work	J	4.9×10 <sup>3</sup>	4.9×10 <sup>3</sup>	44.1×10 <sup>3</sup>	44.1×10 <sup>3</sup>	4.9×10 <sup>5</sup>	4.9×10 <sup>5</sup>	4.9×10 <sup>5</sup>	4.9×10 <sup>6</sup>	4.9×10 <sup>6</sup>	2.2×10 <sup>6</sup>	2.2×10 <sup>6</sup>	
Allowable angular acceleration	rad/s <sup>2</sup>	30,000 max. (Speed of 2,800 r/min or more must not be changed in less than 10 ms.)					10,000							
Brake limit	—	10 million times min.												
Insulation class	—	Type F												

\*1. These are the values when the motor is combined with a drive at normal temperature (20°C, 65%). The momentary maximum torque indicates the standard value.

\*2. Applicable load inertia.

- The operable load inertia ratio (load inertia/rotor inertia) depends on the mechanical configuration and its rigidity. For a machine with high rigidity, operation is possible even with high load inertia. Select an appropriate motor and confirm that operation is possible.
- If the dynamic brake is activated frequently with high load inertia, the Dynamic Brake Resistor may burn. Do not repeatedly turn the servo ON/OFF while the dynamic brake is enabled.
- The dynamic brake is designed only for emergency stops. Design the system so that the Servomotor remains stopped for at least 3 minutes after applying the dynamic brake. Otherwise the dynamic brake circuits may fail.

\*3. The allowable radial and thrust loads are the values determined for a limit of 20,000 hours at normal operating temperatures. The allowable radial loads are applied as shown in the following diagram.



\*4. This is a non-excitation brake. (It is released when excitation voltage is applied.)

\*5. The operation time is the value (reference value) measured with a surge suppressor (CR50500 by Okaya Electric Industries Co., Ltd.).

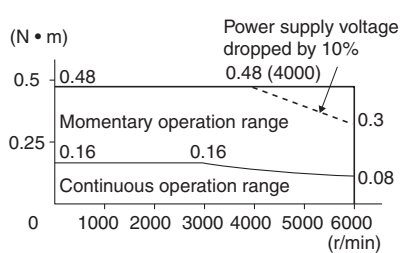
\*6. Direct current switching with a varistor (Z15D151 by Ishizuka Electronics Co.).

\*7. Direct current switching with a varistor (TNR9G820K by Nippon Chemi-Con Corporation).

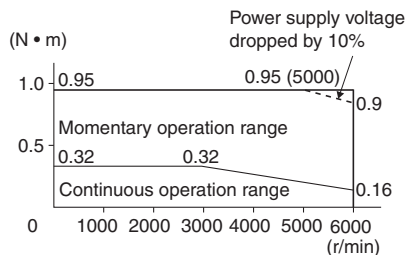
## Torque and Rotation Speed Characteristics 3,000 r/min Servomotors (200 VAC Input Power)

The following graphs show the characteristics with a 3-m Non-Flexible Cables and a 200 VAC input.

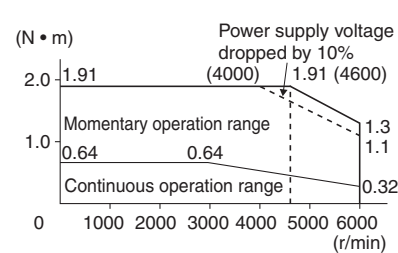
### • R88M-K05030H/T (50W)



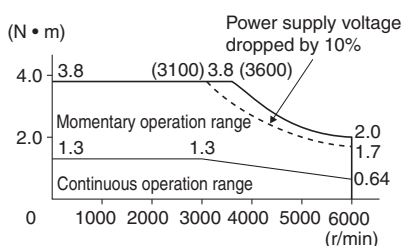
### • R88M-K10030H/T (100W)



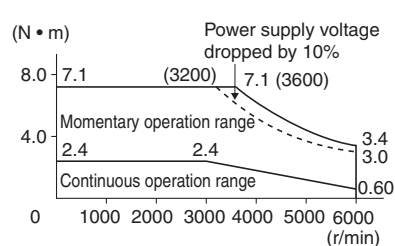
### • R88M-K20030H/T (200W)



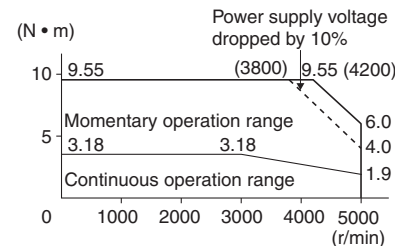
### • R88M-K40030H/T (400W)



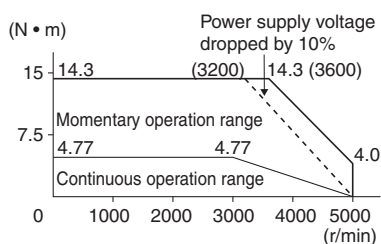
### • R88M-K75030H/T (750W)



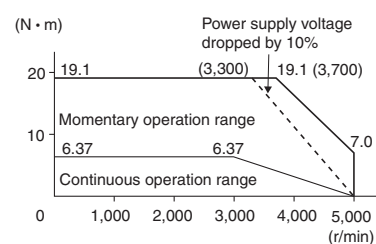
### • R88M-K1K030H/T (1kW)



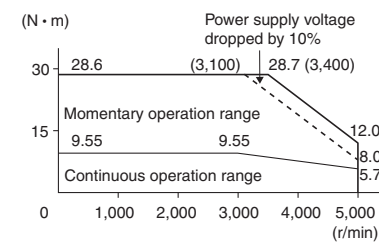
### • R88M-K1K530H/T (1.5kW)



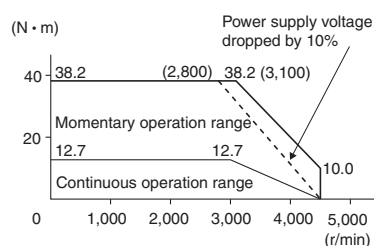
### • R88M-K2K030H/T (2kW)



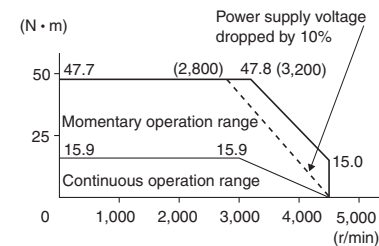
### • R88M-K3K030H/T (3kW)



### • R88M-K4K030H/T (4kW)



### • R88M-K5K030H/T (5kW)



**Note:** The continuous operation range is the operation range within which continuous operation is possible. Continuous operation at the maximum speed is also possible. However, doing so will reduce the output torque.

# AC Servomotor/Drive OMNUC G5-series

## Characteristics

### 3,000 r/min Servomotors (400 VAC Input Power)

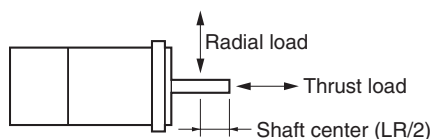
Model (R88M-)		400 VAC							
		K75030F	K1K030F	K1K530F	K2K030F	K3K030F	K4K030F	K5K030F	
Item	Unit	K75030C	K1K030C	K1K530C	K2K030C	K3K030C	K4K030C	K5K030C	
Rated output *1	W	750	1000	1500	2,000	3,000	4,000	5,000	
Rated torque *1	N • m	2.39	3.18	4.77	6.37	9.55	12.7	15.9	
Rated rotation speed	r/min	3,000							
Momentary maximum rotation speed	r/min	5,000					4,500		
Momentary maximum torque *1	N • m	7.16	9.55	14.3	19.1	28.6	38.2	47.7	
Rated current *1	A (rms)	2.4	3.3	4.2	5.7	9.2	9.9	12.0	
Momentary maximum current *1	A (rms)	10	14	18	24	39	42	51	
Rotor inertia	Without brake	kg • m <sup>2</sup>	1.61×10 <sup>-4</sup>	2.03×10 <sup>-4</sup>	2.84×10 <sup>-4</sup>	3.68×10 <sup>-4</sup>	6.50×10 <sup>-4</sup>	12.9×10 <sup>-4</sup>	17.4×10 <sup>-4</sup>
	With brake	kg • m <sup>2</sup>	1.93×10 <sup>-4</sup>	2.35×10 <sup>-4</sup>	3.17×10 <sup>-4</sup>	4.01×10 <sup>-4</sup>	7.85×10 <sup>-4</sup>	14.2×10 <sup>-4</sup>	18.6×10 <sup>-4</sup>
Applicable load inertia	—	30 times the rotor inertia max. *2							
Torque constant *1	N • mA	0.78	0.75	0.89	0.87	0.81	0.98	0.98	
Power rate *1	Without brake	kW/s	35.5	49.8	80.1	110	140	126	146
	With brake	kW/s	29.6	43	71.8	101	116	114	136
Mechanical time constant	Without brake	ms	0.67	0.60	0.49	0.45	0.40	0.51	0.50
	With brake	ms	0.8	0.70	0.55	0.49	0.49	0.56	0.54
Electrical time constant	ms	5.9	5.8	6.5	6.6	12	13	13	
Allowable radial load *3	N	490	490	490	490	490	784	784	
Allowable thrust load *3	N	196	196	196	196	196	343	343	
Weight	Without brake	kg	Approx. 3.1	Approx. 3.5	Approx. 4.4	Approx. 5.3	Approx. 8.3	Approx. 11.0	Approx. 14.0
	With brake	kg	Approx. 4.1	Approx. 4.5	Approx. 5.4	Approx. 6.3	Approx. 9.4	Approx. 12.6	Approx. 16.0
Radiator plate dimensions (material)		320 × 300 × t20 (Al)				380 × 350 × t30 (Al)			
Applicable drives (R88D-)		KT10F/ KN10F-ML2/ KN10F-ECT-R	KT15F/ KN15F-ML2/ KN15F-ECT-R	KT15F/ KN15F-ML2/ KN15F-ECT-R	KT20F/ KN20F-ML2/ KN20F-ECT-R	KT30F/ KN30F-ML2/ KN30F-ECT-R	KT50F/ KN50F-ML2/ KN50F-ECT-R	KT50F/ KN50F-ML2/ KN50F-ECT-R	
Brake specifications	Brake inertia	kg • m <sup>2</sup>	0.33×10 <sup>-4</sup>	0.33×10 <sup>-4</sup>	0.33×10 <sup>-4</sup>	0.33×10 <sup>-4</sup>	0.33×10 <sup>-4</sup>	1.35×10 <sup>-4</sup>	
	Excitation voltage *4	V	24 VDC ± 10%						
	Power consumption (at 20°C)	W	17	19	19	19	19	22	22
	Current consumption (at 20°C)	A	0.70±10%	0.81±10%	0.81±10%	0.81±10%	0.81±10%	0.90±10%	0.90±10%
	Static friction torque	N • m	2.5 min.	7.8 min.	7.8 min.	7.8 min.	11.8 min.	16.1 min.	16.1 min.
	Attraction time *5	ms	50 max.	50 max.	50 max.	50 max.	80 max.	110 max.	110 max.
	Release time *5	ms	15 max. *6	15 max. *6	15 max. *6	15 max. *6	15 max. *6	50 max. *7	50 max. *7
	Backlash	—	1° (reference value)						
	Allowable work per braking	J	392	392	392	392	392	1470	1470
	Allowable total work	J	4.9×10 <sup>5</sup>	4.9×10 <sup>5</sup>	4.9×10 <sup>5</sup>	4.9×10 <sup>5</sup>	4.9×10 <sup>5</sup>	2.2×10 <sup>6</sup>	2.2×10 <sup>6</sup>
	Allowable angular acceleration	rad/s <sup>2</sup>	10,000						
	Brake limit	—	10 million times min.						
	Insulation class	—	Type F						

\*1. These are the values when the motor is combined with a drive at normal temperature (20°C, 65%). The momentary maximum torque indicates the standard value.

\*2. Applicable load inertia.

- The operable load inertia ratio (load inertia/rotor inertia) depends on the mechanical configuration and its rigidity. For a machine with high rigidity, operation is possible even with high load inertia. Select an appropriate motor and confirm that operation is possible.
- If the dynamic brake is activated frequently with high load inertia, the Dynamic Brake Resistor may burn. Do not repeatedly turn the servo ON/OFF while the dynamic brake is enabled.
- The dynamic brake is designed only for emergency stops. Design the system so that the Servomotor remains stopped for at least 3 minutes after applying the dynamic brake. Otherwise the dynamic brake circuits may fail.

\*3. The allowable radial and thrust loads are the values determined for a limit of 20,000 hours at normal operating temperatures. The allowable radial loads are applied as shown in the following diagram.



\*4. This is a non-excitation brake. (It is released when excitation voltage is applied.)

\*5. The operation time is the value (reference value) measured with a surge suppressor (CR50500 by Okaya Electric Industries Co., Ltd.).

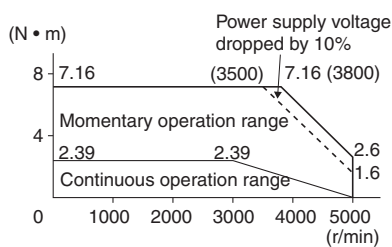
\*6. Direct current switching with a varistor (Z15D151 by Ishizuka Electronics Co.).

\*7. Direct current switching with a varistor (TNR9G820K by Nippon Chemi-Con Corporation).

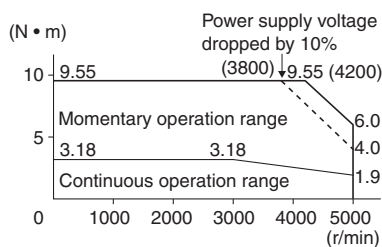
## Torque and Rotation Speed Characteristics 3,000 r/min Servomotors (400 VAC Input Power)

The following graphs show the characteristics with a 3-m Non-Flexible Cables and a 400 VAC input.

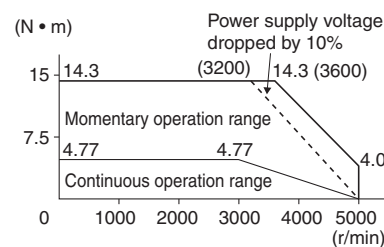
- R88M-K75030F/C (750W)



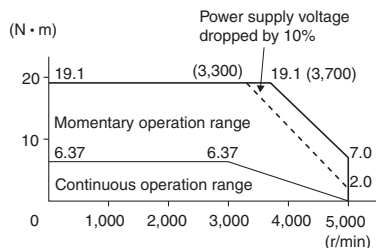
- R88M-K1K030F/C (1kW)



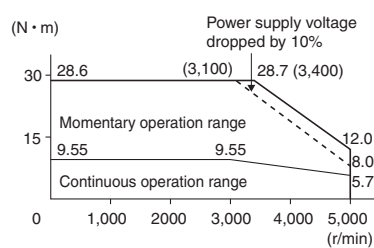
- R88M-K1K530F/C (1.5kW)



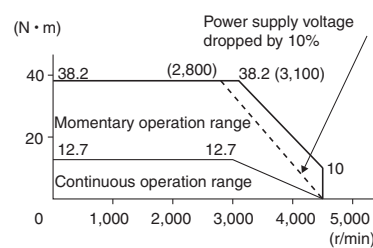
- R88M-K2K030F/C (2kW)



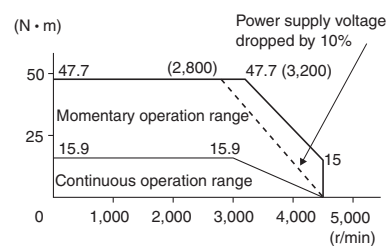
- R88M-K3K030F/C (3kW)



- R88M-K4K030F/C (4kW)



- R88M-K5K030F/C (5kW)



**Note:** The continuous operation range is the operation range within which continuous operation is possible. Continuous operation at the maximum speed is also possible. However, doing so will reduce the output torque.

# AC Servomotor/Drive OMNUC G5-series

## Characteristics

### 2,000 r/min Servomotors (200 VAC Input Power)

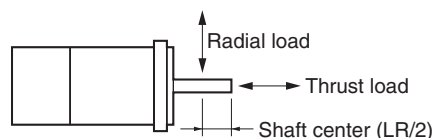
Model (R88M-)		200 VAC						
		K1K020H	K1K520H	K2K020H	K3K020H	K4K020H	K5K020H	
Item	Unit	K1K020T	K1K520T	K2K020T	K3K020T	K4K020T	K5K020T	
Rated output *1	W	1,000	1,500	2,000	3,000	4,000	5,000	
Rated torque *1	N • m	4.77	7.16	9.55	14.3	19.1	23.9	
Rated rotation speed	r/min	2,000						
Momentary maximum rotation speed	r/min	3,000						
Momentary maximum torque *1	N • m	14.3	21.5	28.6	43.0	57.3	71.6	
Rated current *1	A (rms)	5.7	9.4	11.5	17.4	21.0	25.9	
Momentary maximum current *1	A (rms)	24	40	49	74	89	110	
Rotor inertia	Without brake	kg • m <sup>2</sup>	4.60×10 <sup>-4</sup>	6.70×10 <sup>-4</sup>	8.72×10 <sup>-4</sup>	12.9×10 <sup>-4</sup>	37.6×10 <sup>-4</sup>	48.0×10 <sup>-4</sup>
	With brake	kg • m <sup>2</sup>	5.90×10 <sup>-4</sup>	7.99×10 <sup>-4</sup>	10.0×10 <sup>-4</sup>	14.2×10 <sup>-4</sup>	38.6×10 <sup>-4</sup>	48.8×10 <sup>-4</sup>
Applicable load inertia	—	10 times the rotor inertia max. *2						
Torque constant *1	N • mA	0.63	0.58	0.64	0.59	0.70	0.70	
Power rate *1	Without brake	kW/s	49.5	76.5	105	159	97.1	119
	With brake	kW/s	38.6	64.2	91.2	144	94.5	117
Mechanical time constant	Without brake	ms	0.80	0.66	0.66	0.57	0.65	0.63
	With brake	ms	1.02	0.80	0.76	0.63	0.66	0.64
Electrical time constant	ms	9.4	10	10	12	20	19	
Allowable radial load *3	N	490	490	490	784	784	784	
Allowable thrust load *3	N	196	196	196	343	343	343	
Weight	Without brake	kg	Approx. 5.2	Approx. 6.7	Approx. 8.0	Approx. 11.0	Approx. 15.5	Approx. 18.6
	With brake	kg	Approx. 6.7	Approx. 8.2	Approx. 9.5	Approx. 12.6	Approx. 18.7	Approx. 21.8
Radiator plate dimensions (material)		275 × 260 × t15 (Al)			380×350×t30 (Al)		470×440×t30 (Al)	
Applicable drives (R88D-)		KT10H/KN10H-ML2/KN10H-ECT-R	KT15H/KN15H-ML2/KN15H-ECT-R	KT20H/KN20H-ML2/KN20H-ECT-R	KT30H/KN30H-ML2/KN30H-ECT-R	KT50H/KN50H-ML2/KN50H-ECT-R	KT50H/KN50H-ML2/KN50H-ECT-R	
Brake specifications	Brake inertia	kg • m <sup>2</sup>	1.35×10 <sup>-4</sup>	1.35×10 <sup>-4</sup>	1.35×10 <sup>-4</sup>	1.35×10 <sup>-4</sup>	4.7×10 <sup>-4</sup>	4.7×10 <sup>-4</sup>
	Excitation voltage *4	V	24 VDC ± 10%					
	Power consumption (at 20°C)	W	14	19	19	22	31	31
	Current consumption (at 20°C)	A	0.59±10%	0.79±10%	0.79±10%	0.90±10%	1.3±10%	1.3±10%
	Static friction torque	N • m	4.9 min.	13.7 min.	13.7 min.	16.2 min.	24.5 min.	24.5 min.
	Attraction time *5	ms	80 max.	100 max.	100 max.	110 max.	80 max.	80 max.
	Release time *5	ms	70 max. *6	50 max. *6	50 max. *6	50 max. *6	25 max. *7	25 max. *7
	Backlash		1° (reference value)					
	Allowable work per braking	J	588	1,176	1,176	1,470	1,372	1,372
	Allowable total work	J	7.8×10 <sup>5</sup>	1.5×10 <sup>6</sup>	1.5×10 <sup>6</sup>	2.2×10 <sup>6</sup>	2.9×10 <sup>6</sup>	2.9×10 <sup>6</sup>
	Allowable angular acceleration	rad/s <sup>2</sup>	10,000					
	Brake limit	—	10 million times min.					
	Insulation class	—	Type F					

\*1. These are the values when the motor is combined with a drive at normal temperature (20°C, 65%). The momentary maximum torque indicates the standard value.

\*2. Applicable load inertia.

- The operable load inertia ratio (load inertia/rotor inertia) depends on the mechanical configuration and its rigidity. For a machine with high rigidity, operation is possible even with high load inertia. Select an appropriate motor and confirm that operation is possible.
- If the dynamic brake is activated frequently with high load inertia, the Dynamic Brake Resistor may burn. Do not repeatedly turn the servo ON/OFF while the dynamic brake is enabled.
- The dynamic brake is designed only for emergency stops. Design the system so that the Servomotor remains stopped for at least 3 minutes after applying the dynamic brake. Otherwise the dynamic brake circuits may fail.

\*3. The allowable radial and thrust loads are the values determined for a limit of 20,000 hours at normal operating temperatures. The allowable radial loads are applied as shown in the following diagram.



\*4. This is a non-excitation brake. (It is released when excitation voltage is applied.)

\*5. The operation time is the value (reference value) measured with a surge suppressor (CR50500 by Okaya Electric Industries Co., Ltd.).

\*6. Direct current switching with a varistor (Z15D151 by Ishizuka Electronics Co.).

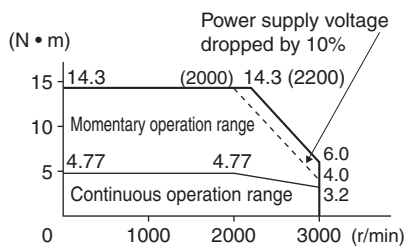
\*7. Direct current switching with a varistor (TNR9G820K by Nippon Chemi-Con Corporation).

## Torque and Rotation Speed Characteristics

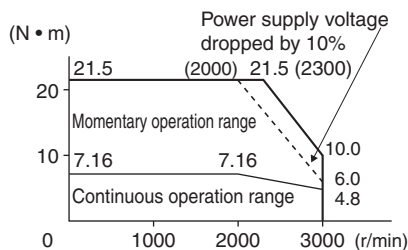
### 2,000 r/min Servomotors (200 VAC Input Power)

The following graphs show the characteristics with a 3-m Non-Flexible Cables and a 200 VAC input.

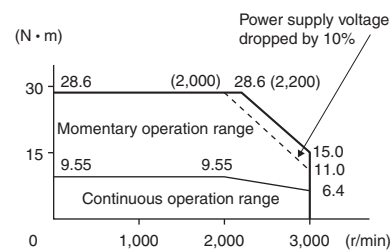
- R88M-K1K020H/T (1kW)



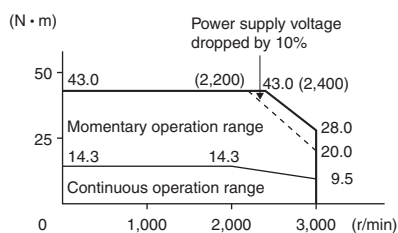
- R88M-K1K520H/T (1.5kW)



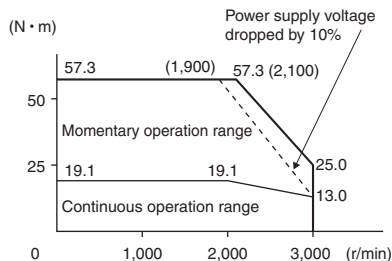
- R88M-K2K020H/T (2kW)



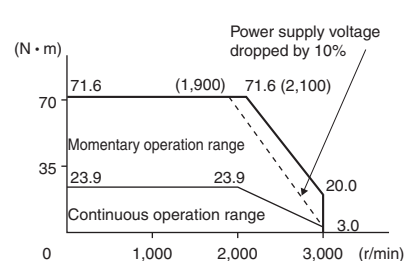
- R88M-K3K020H/T (3kW)



- R88M-K4K020H/T (4kW)



- R88M-K5K020H/T (5kW)



**Note:** The continuous operation range is the operation range within which continuous operation is possible. Continuous operation at the maximum speed is also possible. However, doing so will reduce the output torque.

# AC Servomotor/Drive OMNUC G5-series

## Characteristics

### 2,000 r/min Servomotors (400 VAC Input Power)

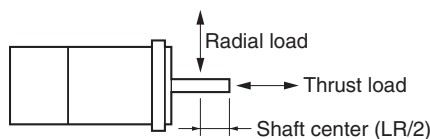
Model (R88M-)		400 VAC								
		K40020F	K60020F	K1K020F	K1K520F	K2K020F	K3K020F	K4K020F	K5K020F	
Item	Unit	K40020C	K60020C	K1K020C	K1K520C	K2K020C	K3K020C	K4K020C	K5K020C	
Rated output *1	W	400	600	1,000	1,500	2,000	3,000	4,000	5,000	
Rated torque *1	N • m	1.91	2.86	4.77	7.16	9.55	14.3	19.1	23.9	
Rated rotation speed	r/min	2,000								
Momentary maximum rotation speed	r/min	3,000								
Momentary maximum torque *1	N • m	5.73	8.59	14.3	21.5	28.7	43.0	57.3	71.6	
Rated current *1	A (rms)	1.2	1.5	2.8	4.7	5.9	8.7	10.6	13.0	
Momentary maximum current *1	A (rms)	4.9	6.5	12	20	25	37	45	55	
Rotor inertia	Without brake	kg • m <sup>2</sup>	1.61×10 <sup>-4</sup>	2.03×10 <sup>-4</sup>	4.60×10 <sup>-4</sup>	6.70×10 <sup>-4</sup>	8.72×10 <sup>-4</sup>	12.9×10 <sup>-4</sup>	37.6×10 <sup>-4</sup>	48.0×10 <sup>-4</sup>
	With brake	kg • m <sup>2</sup>	1.90×10 <sup>-4</sup>	2.35×10 <sup>-4</sup>	5.90×10 <sup>-4</sup>	7.99×10 <sup>-4</sup>	10.0×10 <sup>-4</sup>	14.2×10 <sup>-4</sup>	38.6×10 <sup>-4</sup>	48.8×10 <sup>-4</sup>
Applicable load inertia	—	10 times the rotor inertia max. *2								
Torque constant *1	N • m/A	1.27	1.38	1.27	1.16	1.27	1.18	1.40	1.46	
Power rate *1	Without brake	kW/s	22.7	40.3	49.5	76.5	105	159	97.1	119
	With brake	kW/s	19.2	34.8	38.6	64.2	91.2	144	94.5	117
Mechanical time constant	Without brake	ms	0.70	0.62	0.79	0.66	0.68	0.56	0.60	0.60
	With brake	ms	0.83	0.72	1.01	0.79	0.78	0.61	0.61	0.61
Electrical time constant	ms	5.7	5.9	10	10	10	12	21	19	
Allowable radial load *3	N	490	490	490	490	490	784	784	784	
Allowable thrust load *3	N	196	196	196	196	196	343	343	343	
Weight	Without brake	kg	Approx. 3.1	Approx. 3.5	Approx. 5.2	Approx. 6.7	Approx. 8.0	Approx. 11.0	Approx. 15.5	Approx. 18.6
	With brake	kg	Approx. 4.1	Approx. 4.5	Approx. 6.7	Approx. 8.2	Approx. 9.5	Approx. 12.6	Approx. 18.7	Approx. 21.8
Radiator plate dimensions (material)		320 × 300 × t20 (Al)			275 × 260 × t15 (Al)			380×350×t30 (Al)	470×440×t30 (Al)	
Applicable drives (R88D-)		KT06F/ KN06F-ML2/ KN06F-ECT-R	KT06F/ KN06F-ML2/ KN06F-ECT-R	KT10F/ KN10F-ML2/ KN10F-ECT-R	KT15F/ KN15F-ML2/ KN15F-ECT-R	KT20F/ KN20F-ML2/ KN20F-ECT-R	KT30F/ KN30F-ML2/ KN30F-ECT-R	KT50F/ KN50F-ML2/ KN50F-ECT-R	KT50F/ KN50F-ML2/ KN50F-ECT-R	
Brake specifications	Brake inertia	kg • m <sup>2</sup>	1.35×10 <sup>-4</sup>	1.35×10 <sup>-4</sup>	1.35×10 <sup>-4</sup>	1.35×10 <sup>-4</sup>	1.35×10 <sup>-4</sup>	1.35×10 <sup>-4</sup>	4.7×10 <sup>-4</sup>	4.7×10 <sup>-4</sup>
	Excitation voltage *4	V	24 VDC ± 10%							
	Power consumption (at 20°C)	W	17	17	14	19	19	22	31	31
	Current consumption (at 20°C)	A	0.70±10%	0.70±10%	0.59±10%	0.79±10%	0.79±10%	0.90±10%	1.3±10%	1.3±10%
	Static friction torque	N • m	2.5 min.	2.5 min.	4.9 min.	13.7 min.	13.7 min.	16.2 min.	24.5 min.	24.5 min.
	Attraction time *5	ms	50 max.	50 max.	80 max.	100 max.	100 max.	110 max.	80 max.	80 max.
	Release time *5	ms	15 max. *7	15 max. *7	70 max. *6	50 max. *6	50 max. *6	50 max. *6	25 max. *7	25 max. *7
	Backlash		1° (reference value)							
	Allowable work per braking	J	392	392	588	1176	1,176	1,470	1,372	1,372
	Allowable total work	J	4.9×10 <sup>5</sup>	4.9×10 <sup>5</sup>	7.8×10 <sup>5</sup>	1.5×10 <sup>6</sup>	1.5×10 <sup>6</sup>	2.2×10 <sup>6</sup>	2.9×10 <sup>6</sup>	2.9×10 <sup>6</sup>
	Allowable angular acceleration	rad/s <sup>2</sup>	10,000							
	Brake limit	—	10 million times min.							
Insulation class	—	Type F								

\*1. These are the values when the motor is combined with a drive at normal temperature (20°C, 65%). The momentary maximum torque indicates the standard value.

\*2. Applicable load inertia.

- The operable load inertia ratio (load inertia/rotor inertia) depends on the mechanical configuration and its rigidity. For a machine with high rigidity, operation is possible even with high load inertia. Select an appropriate motor and confirm that operation is possible.
- If the dynamic brake is activated frequently with high load inertia, the Dynamic Brake Resistor may burn. Do not repeatedly turn the servo ON/OFF while the dynamic brake is enabled.
- The dynamic brake is designed only for emergency stops. Design the system so that the Servomotor remains stopped for at least 3 minutes after applying the dynamic brake. Otherwise the dynamic brake circuits may fail.

\*3. The allowable radial and thrust loads are the values determined for a limit of 20,000 hours at normal operating temperatures. The allowable radial loads are applied as shown in the following diagram.



\*4. This is a non-excitation brake. (It is released when excitation voltage is applied.)

\*5. The operation time is the value (reference value) measured with a surge suppressor (CR50500 by Okaya Electric Industries Co., Ltd.).

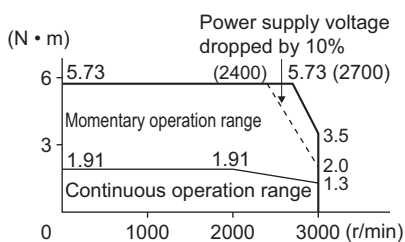
\*6. Direct current switching with a varistor (Z15D151 by Ishizuka Electronics Co.).

\*7. Direct current switching with a varistor (TNR9G820K by Nippon Chemi-Con Corporation).

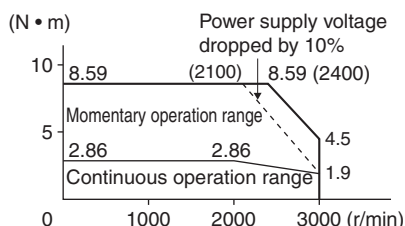
## Torque and Rotation Speed Characteristics 2,000 r/min Servomotors (400 VAC Input Power)

The following graphs show the characteristics with a 3-m Non-Flexible Cables and a 400 VAC input.

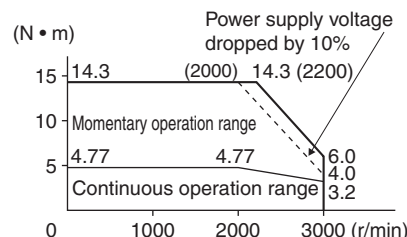
- R88M-K40020F/C (400W)



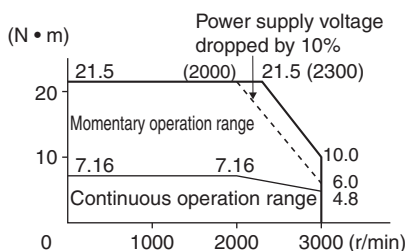
- R88M-K60020F/C (600W)



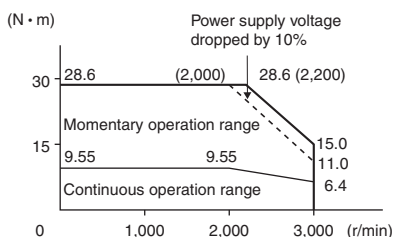
- R88M-K1K020F/C (1kW)



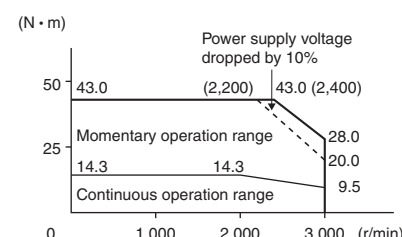
- R88M-K1K520F/C (1.5kW)



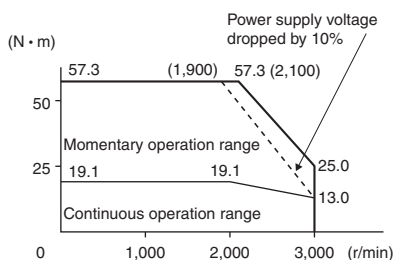
- R88M-K2K020F/C (2kW)



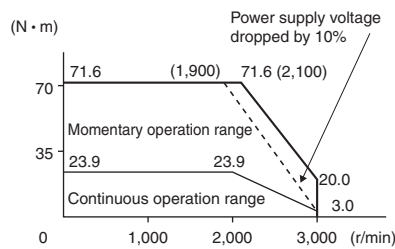
- R88M-K3K0F/C (3kW)



- R88M-K4K020F/C (4kW)



- R88M-K5K020F/C (5kW)



**Note:** The continuous operation range is the operation range within which continuous operation is possible. Continuous operation at the maximum speed is also possible. However, doing so will reduce the output torque.

# AC Servomotor/Drive OMNUC G5-series

## Characteristics

### 1,000 r/min Servomotors (200/400 VAC Input Power)

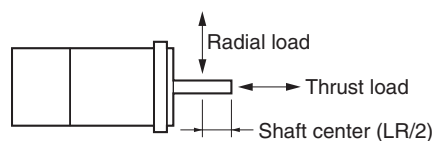
Model (R88M-)		200 VAC			400 VAC			
		K90010H	K2K010H	K3K010H	K90010F	K2K010F	K3K010F	
Item	Unit	K90010T	K2K010T	K3K010T	K90010C	K2K010C	K3K010C	
Rated output *1	W	900	2,000	3,000	900	2,000	3,000	
Rated torque *1	N • m	8.59	19.1	28.7	8.59	19.1	28.7	
Rated rotation speed	r/min	1,000						
Momentary maximum rotation speed	r/min	2,000						
Momentary maximum torque *1	N • m	19.3	47.7	71.7	19.3	47.7	71.7	
Rated current *1	A (rms)	7.6	17.0	22.6	3.8	8.5	11.3	
Momentary maximum current *1	A (rms)	24	60	80	12	30	40	
Rotor inertia	Without brake	kg • m <sup>2</sup>	6.70×10 <sup>-4</sup>	30.3×10 <sup>-4</sup>	48.4×10 <sup>-4</sup>	6.70×10 <sup>-4</sup>	30.3×10 <sup>-4</sup>	48.4×10 <sup>-4</sup>
	With brake	kg • m <sup>2</sup>	7.99×10 <sup>-4</sup>	31.4×10 <sup>-4</sup>	49.2×10 <sup>-4</sup>	7.99×10 <sup>-4</sup>	31.4×10 <sup>-4</sup>	49.2×10 <sup>-4</sup>
Applicable load inertia	—	10 times the rotor inertia max. *2						
Torque constant *1	N • mA	0.86	0.88	0.96	1.72	1.76	1.92	
Power rate *1	Without brake	kW/s	110	120	170	110	120	170
	With brake	kW/s	92.4	116	167	92.4	116	167
Mechanical time constant	Without brake	ms	0.66	0.75	0.63	0.66	0.76	0.61
	With brake	ms	0.78	0.78	0.64	0.79	0.78	0.62
Electrical time constant	ms	11	18	21	11	18	22	
Allowable radial load *3	N	686	1176	1470	686	1176	1470	
Allowable thrust load *3	N	196	490	490	196	490	490	
Weight	Without brake	kg	Approx. 6.7	Approx. 14.0	Approx. 20.0	Approx. 6.7	Approx. 14.0	Approx. 20.0
	With brake	kg	Approx. 8.2	Approx. 17.5	Approx. 23.5	Approx. 8.2	Approx. 17.5	Approx. 23.5
Radiator plate dimensions (material)		270 × 260 × t15 (Al)			470 × 440 × t30 (Al)			
Applicable drives (R88D-)		KT15H/KN15H-ML2/ KN15H-ECT-R	KT30H/ KN30H-ML2/ KN30H-ECT-R	KT50H/ KN50H-ML2/ KM50H-ECT-R	KT15F/KN15F-ML2/ KN15F-ECT-R	KT30F/ KN30F-ML2/ KM30F-ECT-R	KT50F/ KN50F-ML2/ KN50F-ECT-R	
Brake specifications	Brake inertia	kg • m <sup>2</sup>	1.35×10 <sup>-4</sup>	4.7×10 <sup>-4</sup>	4.7×10 <sup>-4</sup>	1.35×10 <sup>-4</sup>	4.7×10 <sup>-4</sup>	
	Excitation voltage *4	V	24 VDC ± 10%					
	Power consumption (at 20°C)	W	19	31	34	19	31	34
	Current consumption (at 20°C)	A	0.79±10%	1.3±10%	1.4±10%	0.79±10%	1.3±10%	1.4±10%
	Static friction torque	N • m	13.7 min.	24.5 min.	58.8 min.	13.7 min.	24.5 min.	58.8 min.
	Attraction time *5	ms	100 max.	80 max.	150 max.	100 max.	80 max.	150 max.
	Release time *5	ms	50 max. *6	25 max. *7	50 max. *7	50 max. *6	25 max. *7	50 max. *7
	Backlash		1° (reference value)					
	Allowable work per braking	J	1176	1,372	1,372	1176	1,372	1,372
	Allowable total work	J	1.5×10 <sup>6</sup>	2.9×10 <sup>6</sup>	2.9×10 <sup>6</sup>	1.5×10 <sup>6</sup>	2.9×10 <sup>6</sup>	2.9×10 <sup>6</sup>
	Allowable angular acceleration	rad/s <sup>2</sup>	10,000					
	Brake limit	—	10 million times min.					
Insulation class	—	Type F						

\*1. These are the values when the motor is combined with a drive at normal temperature (20°C, 65%). The momentary maximum torque indicates the standard value.

\*2. Applicable load inertia.

- The operable load inertia ratio (load inertia/rotor inertia) depends on the mechanical configuration and its rigidity. For a machine with high rigidity, operation is possible even with high load inertia. Select an appropriate motor and confirm that operation is possible.
- If the dynamic brake is activated frequently with high load inertia, the Dynamic Brake Resistor may burn. Do not repeatedly turn the servo ON/OFF while the dynamic brake is enabled.
- The dynamic brake is designed only for emergency stops. Design the system so that the Servomotor remains stopped for at least 3 minutes after applying the dynamic brake. Otherwise the dynamic brake circuits may fail.

\*3. The allowable radial and thrust loads are the values determined for a limit of 20,000 hours at normal operating temperatures. The allowable radial loads are applied as shown in the following diagram.



\*4. This is a non-excitation brake. (It is released when excitation voltage is applied.)

\*5. The operation time is the value (reference value) measured with a surge suppressor (CR50500 by Okaya Electric Industries Co., Ltd.).

\*6. Direct current switching with a varistor (Z15D151 by Ishizuka Electronics Co.).

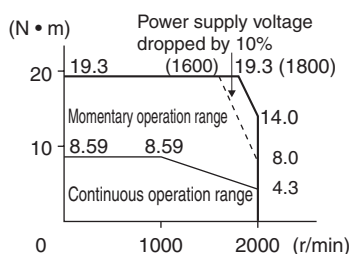
\*7. Direct current switching with a varistor (TNR9G820K by Nippon Chemi-Con Corporation).

## Torque and Rotation Speed Characteristics

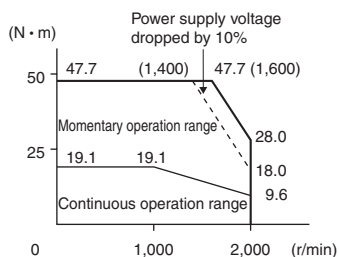
### 1,000 r/min Servomotors (200/400 VAC Input Power)

The following graphs show the characteristics with a 3-m Non-Flexible Cables and a 200 VAC input.

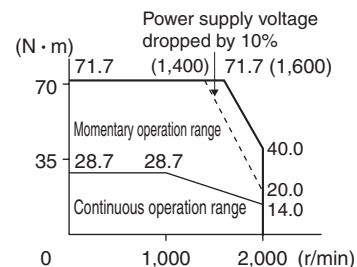
- R88M-K90010H/T/F/C (900W)



- R88M-K2K010H/T/F/C (2kW)



- R88M-K3K010H/T/F/C (3kW)



**Note:** The continuous operation range is the operation range within which continuous operation is possible. Continuous operation at the maximum speed is also possible. However, doing so will reduce the output torque.

## Encoder Specifications

### Incremental Encoders

Item	Specifications
Encoder system	Optical encoder 20 bits
Number of output pulses	Phases A and B: 262,144 pulses/rotation Phase Z: 1 pulse/rotation
Power supply voltage	5 VDC $\pm$ 5%
Power supply current	180 mA (max.)
Output signal	+S, -S
Output interface	RS485 compliant

### Absolute Encoders

Item	Specifications
Encoder system	Optical encoder 17 bits
Number of output pulses	Phases A and B: 32,768 pulses/rotation Phase Z: 1 pulse/rotation
Maximum rotations	-32,768 to +32,767 rotations
Power supply voltage	5 VDC $\pm$ 5%
Power supply current	110 mA (max.)
Applicable battery voltage	3.6 VDC
Current consumption of battery	265 $\mu$ A (for a maximum of 5 s right after power interruption) 100 $\mu$ A (for operation during power interruption) 3.6 $\mu$ A (when power is supplied to the drive)
Output signal	+S, -S
Output interface	RS485 compliant

#### Note: Multi-rotation Data Backup

- The multi-rotation data will be lost if the battery cable connector is disconnected at the motor when connecting the battery cable for the absolute encoder and battery.
- The multi-rotation data will be lost if CN2 is disconnected when connecting the battery to CN1.

## Dimensions

<Cylinder type>

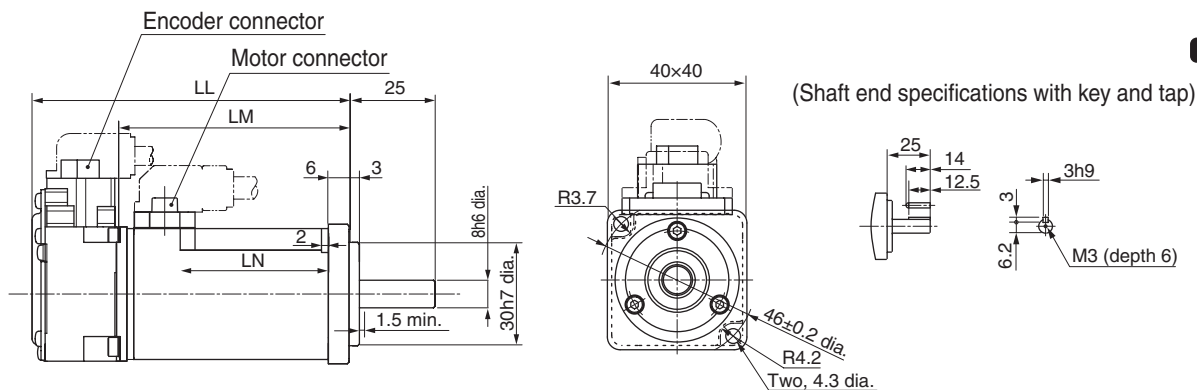
### 3,000 r/min Servomotors (100/200 VAC)

50W/100W

• Without brake

- R88M-K05030H (-S2) /-K10030L (-S2) **INC**
- R88M-K05030T (-S2) /-K10030S (-S2) **ABS**

Speed	Voltage	Motor capacity	Brake
3000r/min	100/200V	50/100W	Without brake
			With brake



CAD data

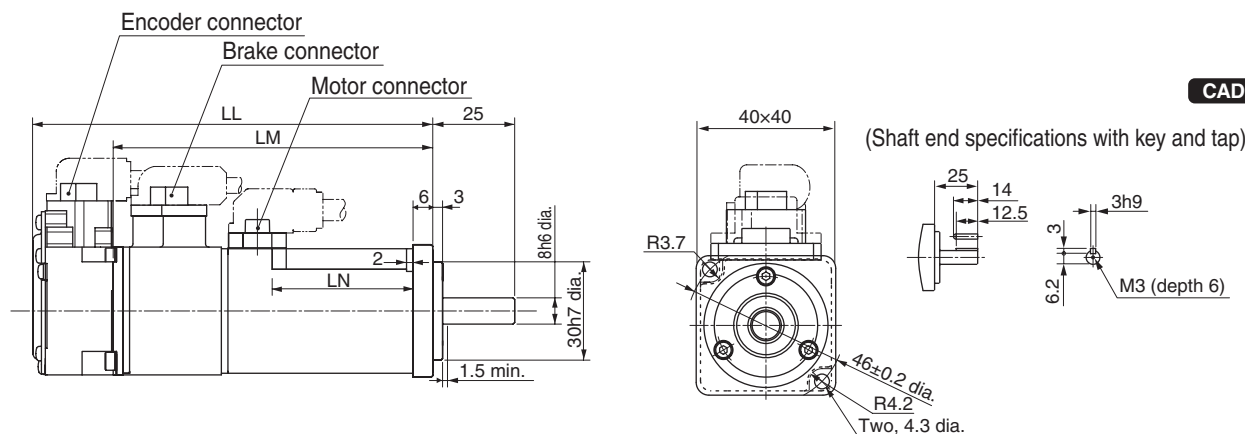
Model	Dimensions (mm)		
	LL	LM	LN
R88M-K05030□	72	48	23
R88M-K10030□	92	68	43

**Note:** The standard models have a straight shaft. A model with a key and tap is indicated by adding “S2” to the end of the model number. Models with an oil seal are indicated with O at the end of the model number. The motor dimensions do not change.

• With brake

- R88M-K05030H-B (S2) /-K10030L-B (S2) **INC**
- R88M-K05030T-B (S2) /-K10030S-B (S2) **ABS**

Speed	Voltage	Motor capacity	Brake
3000r/min	100/200V	50/100W	Without brake
			With brake



CAD data

Model	Dimensions (mm)		
	LL	LM	LN
R88M-K05030□-B□	102	78	23
R88M-K10030□-B□	122	98	43

**Note:** The standard models have a straight shaft. A model with a key and tap is indicated by adding “S2” to the end of the model number. Models with an oil seal are indicated with O at the end of the model number. The motor dimensions do not change.

# AC Servomotor/Drive OMNUC G5-series

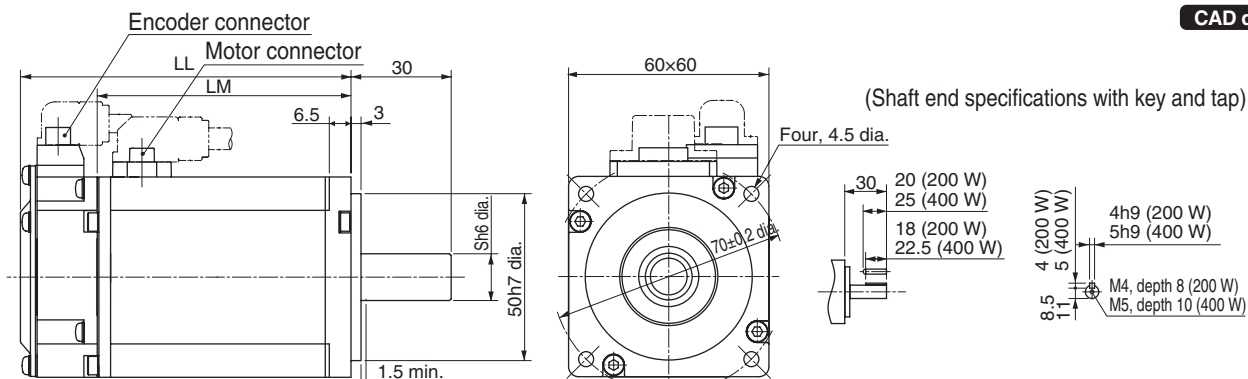
## 200W/400W

### • Without brake

- R88M-K20030□ (-S2) /-K40030□ (-S2) **INC**
- R88M-K20030□ (-S2) /-K40030□ (-S2) **ABS**

Speed	Voltage	Motor capacity	Brake
3000r/min	100/200V	200/400W	Without brake
			With brake

**CAD data**



Model	Dimensions (mm)		
	LL	LM	LN
R88M-K20030□	79.5	56.5	11
R88M-K40030□	99	76	14

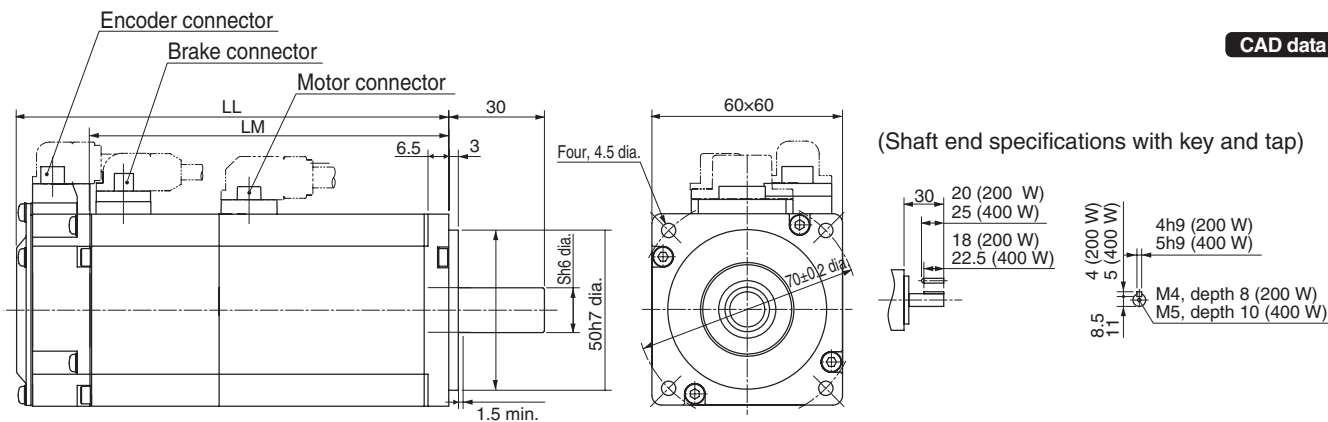
**Note:** The standard models have a straight shaft. A model with a key and tap is indicated by adding "S2" to the end of the model number. Models with an oil seal are indicated with O at the end of the model number. The motor dimensions do not change.

### • With brake

- R88M-K20030□-B (S2) /-K40030□-B (S2) **INC**
- R88M-K20030□-B (S2) /-K40030□-B (S2) **ABS**

Speed	Voltage	Motor capacity	Brake
3000r/min	100/200V	200/400W	Without brake
			With brake

**CAD data**



Model	Dimensions (mm)		
	LL	LM	S
R88M-K20030□-B□	116	93	11
R88M-K40030□-B□	135.5	112.5	14

**Note:** The standard models have a straight shaft. A model with a key and tap is indicated by adding "S2" to the end of the model number. Models with an oil seal are indicated with O at the end of the model number. The motor dimensions do not change.

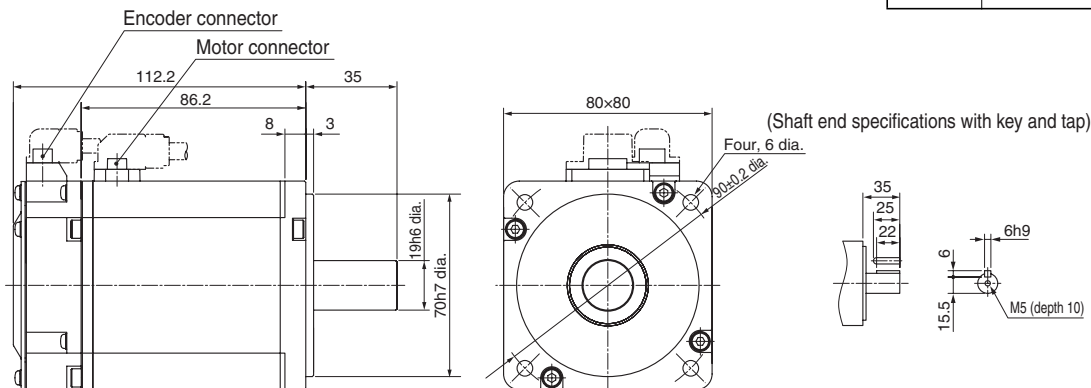
## 750W

### • Without brake

- R88M-K75030H (-S2) **INC**
- R88M-K75030T (-S2) **ABS**

Speed	Voltage	Motor capacity	Brake
3000r/min	100/200V	750W	Without brake
			With brake

CAD data



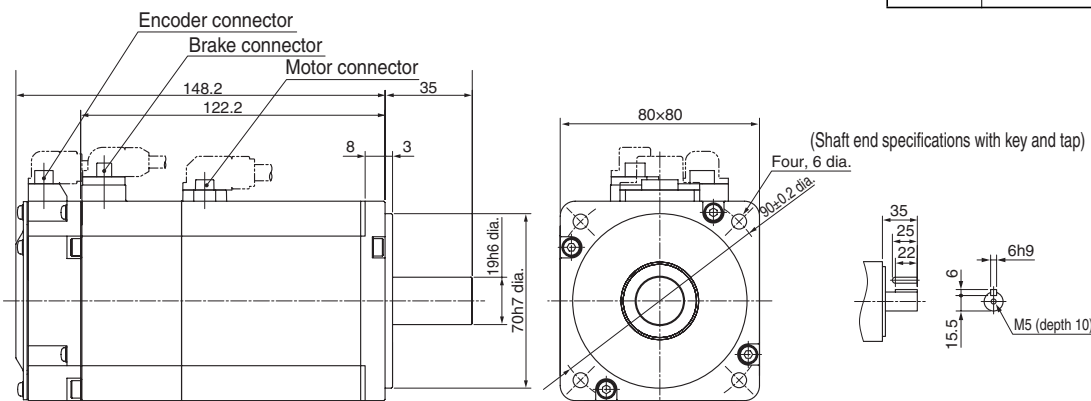
**Note:** The standard models have a straight shaft. A model with a key and tap is indicated by adding "S2" to the end of the model number. Models with an oil seal are indicated with O at the end of the model number. The motor dimensions do not change.

### • With brake

- R88M-K75030H-B (S2) **INC**
- R88M-K75030T-B (S2) **ABS**

Speed	Voltage	Motor capacity	Brake
3000r/min	100/200V	750W	Without brake
			With brake

CAD data



**Note:** The standard models have a straight shaft. A model with a key and tap is indicated by adding "S2" to the end of the model number. Models with an oil seal are indicated with O at the end of the model number. The motor dimensions do not change.

## 1kW/1.5kW/2kW

### • Without brake

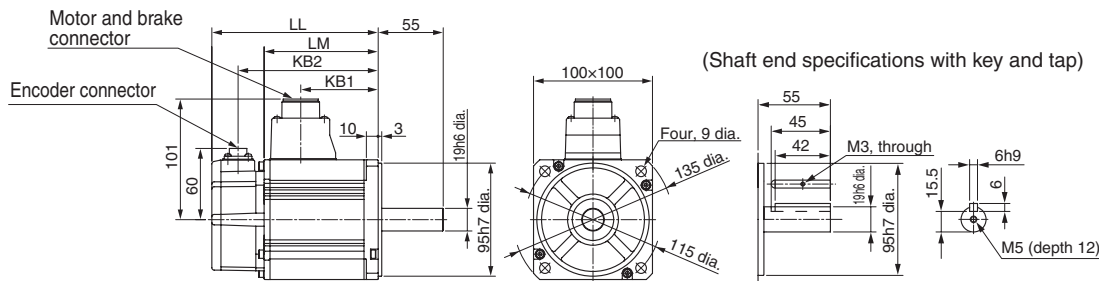
- R88M-K1K030H (-S2) /-K1K530H (-S2) /K2K030H (-S2) **INC**
- R88M-K1K030T (-S2) /-K1K530T (-S2) /K2K030T (-S2) **ABS**

### • With brake

- R88M-K1K030H-B (S2) /-K1K530H-B (S2) /K2K030H-B (S2) **INC**
- R88M-K1K030T-B (S2) /-K1K530T-B (S2) /K2K030T-B (S2) **ABS**

Speed	Voltage	Motor capacity	Brake
3000r/min	100/200V	1/1.5/2kW	Without brake
			With brake

CAD data



Model	Dimensions (mm)			
	LL	LM	KB1	KB2
R88M-K1K030□	141	97	66	119
R88M-K1K530□	159.5	115.5	84.5	137.5
R88M-K2K030□	178.5	134.5	103.5	156.5
R88M-K1K030□-B□	168	124	66	146
R88M-K1K530□-B□	186.5	142.5	84.5	164.5
R88M-K2K030□-B□	205.5	161.5	103.5	183.5

**Note:** The standard models have a straight shaft. A model with a key and tap is indicated by adding "S2" to the end of the model number. Models with an oil seal are indicated with O at the end of the model number. The motor dimensions do not change.

# AC Servomotor/Drive OMNUC G5-series

## 3kW

### • Without brake

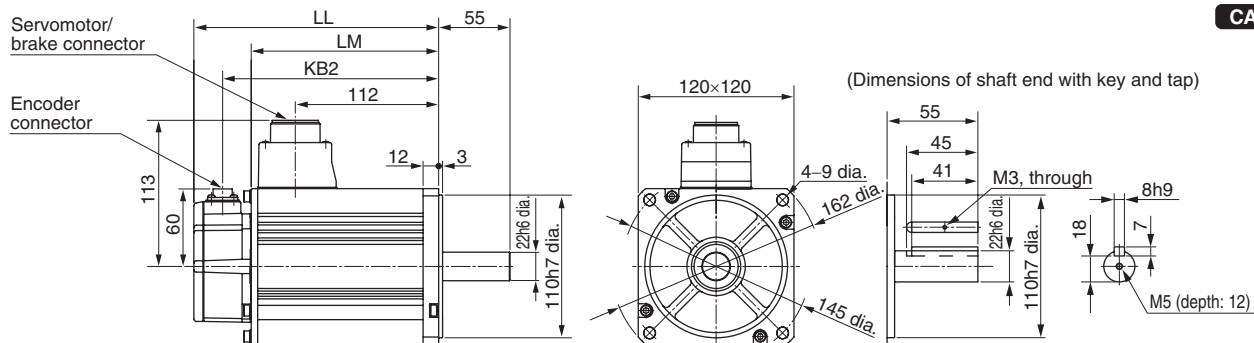
- R88M-K3K030H (-S2) **INC**
- R88M-K3K030T (-S2) **ABS**

### • With brake

- R88M-K3K030H-B (S2) **INC**
- R88M-K3K030T-B (S2) **ABS**

Speed	Voltage	Motor capacity	Brake
3000r/min	200/400V	3kW	Without brake
			With brake

CAD data



Model	Dimensions (mm)		
	LL	LM	KB2
R88M-K3K030□	190	146	168
R88M-K3K030□-B□	215	171	193

**Note:** The standard models have a straight shaft. A model with a key and tap is indicated by adding “S2” to the end of the model number. Models with an oil seal are indicated with O at the end of the model number. The motor dimensions do not change.

## 4kW/5kW

### • Without brake

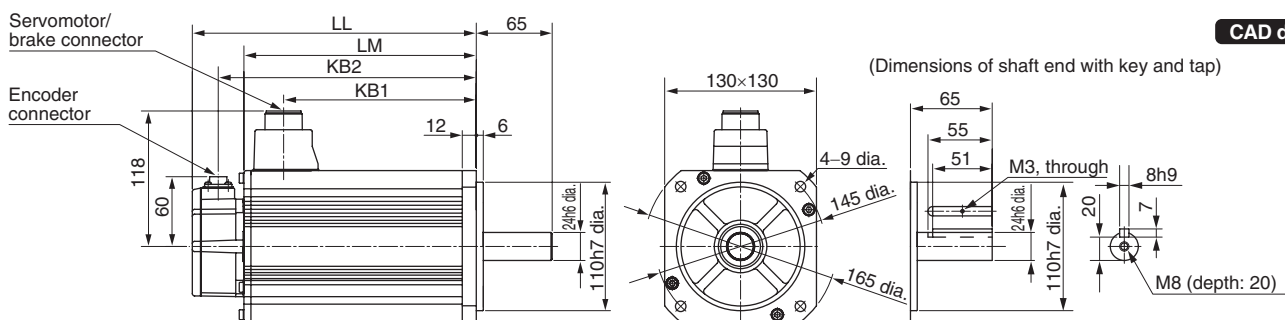
- R88M-K4K030H (-S2) /-K5K030H (-S2) **INC**
- R88M-K4K030T (-S2) /-K5K030T (-S2) **ABS**

### • With brake

- R88M-K4K030H-B (S2) /-K5K030H-B (S2) **INC**
- R88M-K4K030T-B (S2) /-K5K030T-B (S2) **ABS**

Speed	Voltage	Motor capacity	Brake
3000r/min	200/400V	4/5kW	Without brake
			With brake

CAD data



Model	Dimensions (mm)			
	LL	LM	KB1	KB2
R88M-K4K030□	208	164	127	186
R88M-K5K030□	243	199	162	221
R88M-K4K030□-B□	233	189	127	211
R88M-K5K030□-B□	268	224	162	246

**Note:** The standard models have a straight shaft. A model with a key and tap is indicated by adding “S2” to the end of the model number. Models with an oil seal are indicated with O at the end of the model number. The motor dimensions do not change.

## 3,000 r/min Servomotors (400 VAC)

750W/1kW/1.5kW/2kW

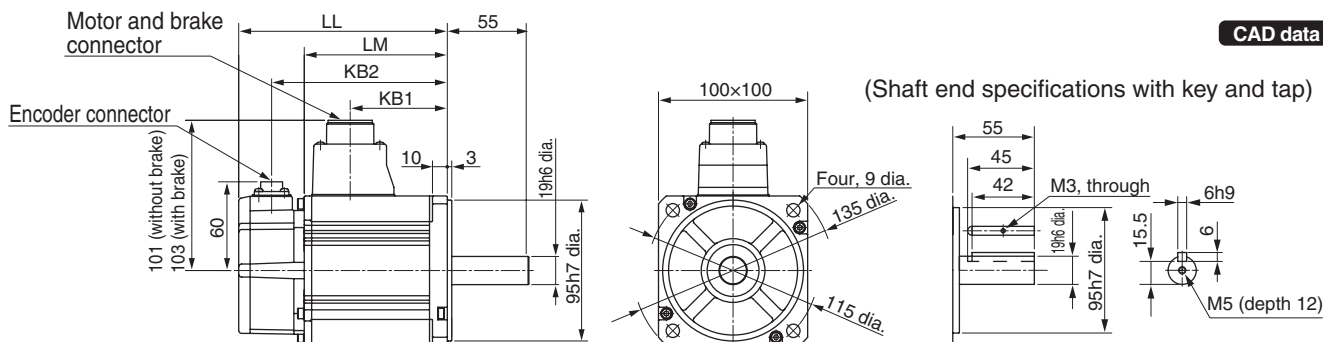
### • Without brake

- R88M-K75030F (-S2) /-K1K030F (-S2) /-K1K530F (-S2) /-K2K030F (-S2) **INC**
- R88M-K75030C (-S2) /-K1K030C (-S2) /-K1K530C (-S2) /-K2K030C (-S2) **ABS**

Speed	Voltage	Motor capacity	Brake
3000r/min	400V	750W/ 1/1.5/2kW	Without brake With brake

### • With brake

- R88M-K75030F-B (S2) /-K1K030F-B (S2) /-K1K530F-B (S2) /-K2K030F-B (S2) **INC**
- R88M-K75030C-B (S2) /-K1K030C-B (S2) /-K1K530C-B (S2) /-K2K030C-B (S2) **ABS**



**CAD data**

Model	Dimensions (mm)			
	LL	LM	KB1	KB2
R88M-K75030□	131.5	87.5	56.5	109.5
R88M-K1K030□	141	97	66	119
R88M-K1K530□	159.5	115.5	84.5	137.5
R88M-K2K030□	178.5	134.5	103.5	156.5
R88M-K75030□-B□	158.5	114.5	53.5	136.5
R88M-K1K030□-B□	168	124	63	146
R88M-K1K530□-B□	186.5	142.5	81.5	164.5
R88M-K2K030□-B□	205.5	161.5	100.5	183.5

**Note:** The standard models have a straight shaft. A model with a key and tap is indicated by adding "S2" to the end of the model number. Models with an oil seal are indicated with O at the end of the model number. The motor dimensions do not change.

## 3kW

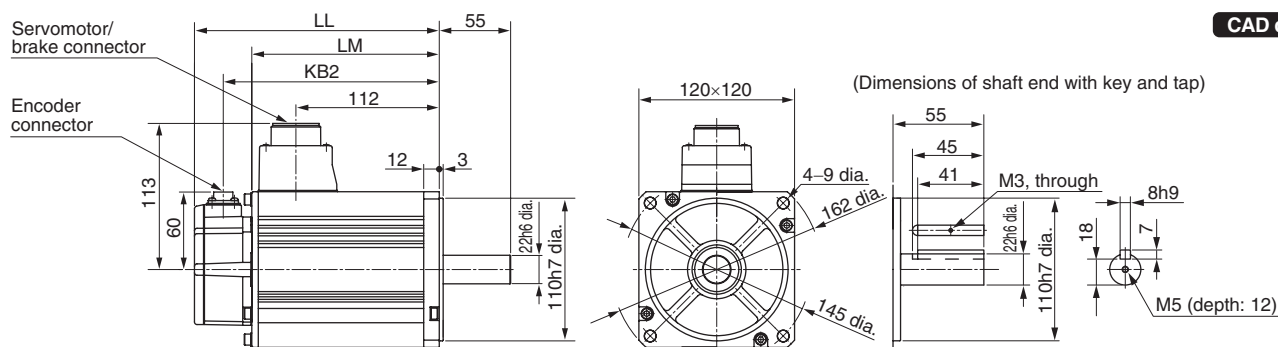
### • Without brake

- R88M-K3K030F (-S2) **INC**
- R88M-K3K030C (-S2) **ABS**

### • With brake

- R88M-K3K030F-B (S2) **INC**
- R88M-K3K030C-B (S2) **ABS**

Speed	Voltage	Motor capacity	Brake
3000r/min	400V	3kW	Without brake With brake



**CAD data**

Model	Dimensions (mm)		
	LL	LM	KB2
R88M-K3K030□	190	146	168
R88M-K3K030□-B□	215	171	193

**Note:** The standard models have a straight shaft. A model with a key and tap is indicated by adding "S2" to the end of the model number. Models with an oil seal are indicated with O at the end of the model number. The motor dimensions do not change.

# AC Servomotor/Drive OMNUC G5-series

## 4kW/5kW

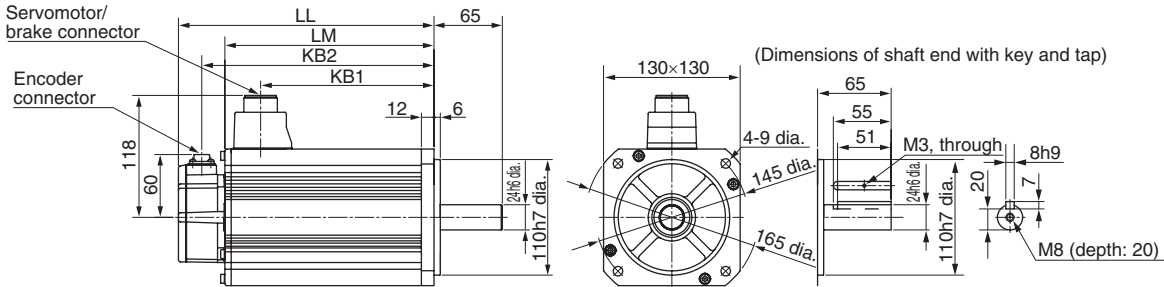
### • Without brake

- R88M-K4K030F (-S2) /-K5K030F (-S2) **INC**
- R88M-K4K030C (-S2) /-K5K030C (-S2) **ABS**

### • With brake

- R88M-K4K030F-B (S2) /-K5K030F-B (S2) **INC**
- R88M-K4K030C-B (S2) /-K5K030C-B (S2) **ABS**

Speed	Voltage	Motor capacity	Brake
3000r/min	400V	4/5kW	Without brake With brake



CAD data

Model	Dimensions (mm)			
	LL	LM	KB1	KB2
R88M-K4K030□	208	164	127	186
R88M-K5K030□	243	199	162	221
R88M-K4K030□-B□	233	189	127	211
R88M-K5K030□-B□	268	224	162	246

**Note:** The standard models have a straight shaft. A model with a key and tap is indicated by adding "S2" to the end of the model number. Models with an oil seal are indicated with O at the end of the model number. The motor dimensions do not change.

## 2,000 r/min Servomotors (200 VAC)

1kW/1.5kW/2kW/3kW

**• Without brake**

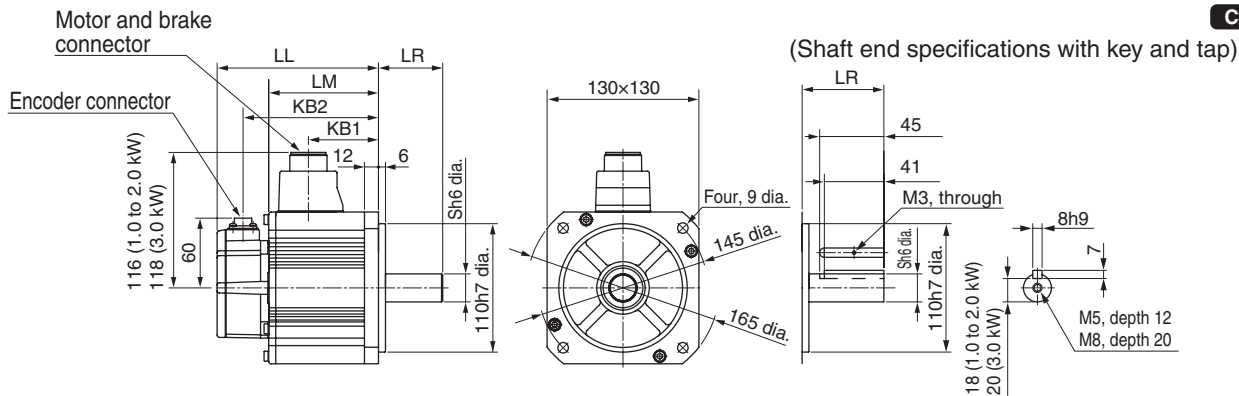
- R88M-K1K020H (-S2) /-K1K520H (-S2) /-K2K020H (-S2) /-K3K020H (-S2) **INC**
- R88M-K1K020T (-S2) /-K1K520T (-S2) /-K2K020T (-S2) /-K3K020T (-S2) **ABS**

**• With brake**

- R88M-K1K020H-B (S2) /-K1K520H-B (S2) /-K2K020H-B (S2) /-K3K020H-B (S2) **INC**
- R88M-K1K020T-B (S2) /-K1K520T-B (S2) /-K2K020T-B (S2) /-K3K020T-B (S2) **ABS**

Speed	Voltage	Motor capacity	Brake
2000r/min	200V	1/1.5/2/3kW	Without brake
			With brake

**CAD data**



Model	Dimensions (mm)					
	LL	LR	LM	S	KB1	KB2
R88M-K1K020□	138	55	94	22	60	116
R88M-K1K520□	155.5	55	111.5	22	77.5	133.5
R88M-K2K020□	173	55	129	22	95	151
R88M-K3K020□	208	65	164	24	127	186
R88M-K1K020□-B□	163	55	119	22	60	141
R88M-K1K520□-B□	180.5	55	136.5	22	77.5	158.5
R88M-K2K020□-B□	198	55	154	22	95	176
R88M-K3K020□-B□	233	65	189	24	127	211

**Note:** The standard models have a straight shaft. A model with a key and tap is indicated by adding "S2" to the end of the model number. Models with an oil seal are indicated with O at the end of the model number. The motor dimensions do not change.

## 4kW/5kW

**• Without brake**

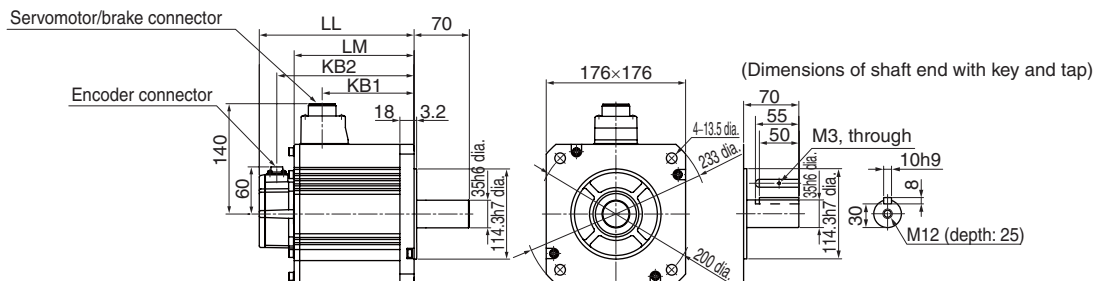
- R88M-K4K020H (-S2) /-K5K020H (-S2) **INC**
- R88M-K4K020T (-S2) /-K5K020T (-S2) **ABS**

**• With brake**

- R88M-K4K020H-B (S2) /-K5K020H-B (S2) **INC**
- R88M-K4K020T-B (S2) /-K5K020T-B (S2) **ABS**

Speed	Voltage	Motor capacity	Brake
2000r/min	200V	4/5kW	Without brake
			With brake

**CAD data**



Model	Dimensions (mm)			
	LL	LM	KB1	KB2
R88M-K4K020□	177	133	96	155
R88M-K5K020□	196	152	115	174
R88M-K4K020□-B□	202	158	96	180
R88M-K5K020□-B□	221	177	115	199

**Note:** The standard models have a straight shaft. A model with a key and tap is indicated by adding "S2" to the end of the model number. Models with an oil seal are indicated with O at the end of the model number. The motor dimensions do not change.

OMNUC G5-Series  
System Configuration

AC Servo Drives with Built-in  
EtherCAT Communications

Servomotors

Ordering Information

# AC Servomotor/Drive OMNUC G5-series

## 2,000 r/min Servomotors (400 VAC)

### 400W/600W

#### • Without brake

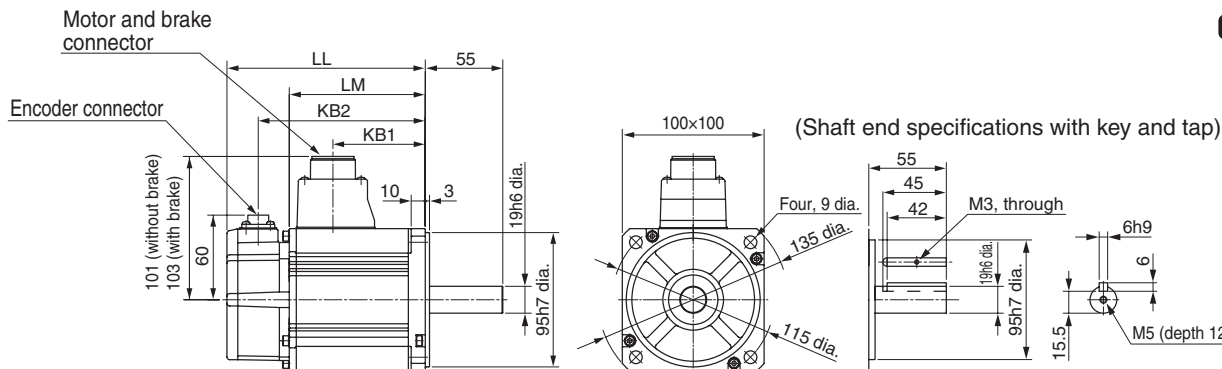
- R88M-K40020F (-S2) /-K60020F (-S2) **INC**
- R88M-K40020C (-S2) /-K60020C (-S2) **ABS**

#### • With brake

- R88M-K40020F-B (S2) /-K60020F-B (S2) **INC**
- R88M-K40020C-B (S2) /-K60020C-B (S2) **ABS**

Speed	Voltage	Motor capacity	Brake
2000r/min	400V	400/600W	Without brake With brake

**CAD data**



Model	Dimensions (mm)			
	LL	LM	KB1	KB2
R88M-K40020□	131.5	87.5	56.5	109.5
R88M-K60020□	141	97	66	119
R88M-K40020□-B□	158.5	114.5	53.5	136.5
R88M-K60020□-B□	168	124	63	146

**Note:** The standard models have a straight shaft. A model with a key and tap is indicated by adding "S2" to the end of the model number. Models with an oil seal are indicated with O at the end of the model number. The motor dimensions do not change.

### 1kW/1.5kW/2kW/3kW

#### • Without brake

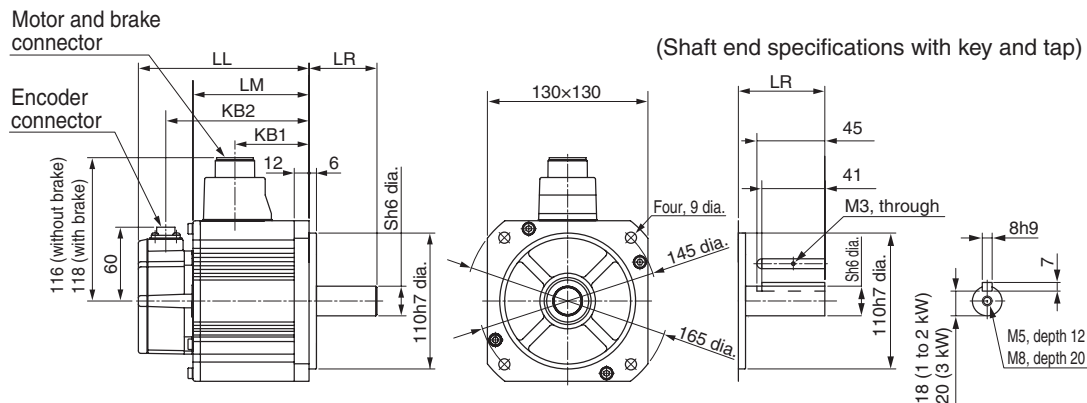
- R88M-K1K020F (-S2) /-K1K520F (-S2) /-K2K020F (-S2) /-K3K020F (-S2) **INC**
- R88M-K1K020C (-S2) /-K1K520C (-S2) /-K2K020C (-S2) /-K3K020C (-S2) **ABS**

#### • With brake

- R88M-K1K020F-B (S2) /-K1K520F-B (S2) /-K2K020F-B (S2) /-K3K020F-B (S2) **INC**
- R88M-K1K020C-B (S2) /-K1K520C-B (S2) /-K2K020C-B (S2) /-K3K020C-B (S2) **ABS**

Speed	Voltage	Motor capacity	Brake
2000r/min	400V	1/1.5/2/3kW	Without brake With brake

**CAD data**



Model	Dimensions (mm)						
	LL	LR	LM	S	KB1	KB2	
R88M-K1K020□	138	55	94	22	60	116	
R88M-K1K520□	155.5	55	111.5	22	77.5	133.5	
R88M-K2K020□	173	55	129	22	95	151	
R88M-K3K020□	208	65	164	24	127	186	
R88M-K1K020□-B□	163	55	119	22	57	141	
R88M-K1K520□-B□	180.5	55	136.5	22	74.5	158.5	
R88M-K2K020□-B□	198	55	154	22	92	176	
R88M-K3K020□-B□	233	65	189	24	127	211	

**Note:** The standard models have a straight shaft. A model with a key and tap is indicated by adding "S2" to the end of the model number. Models with an oil seal are indicated with O at the end of the model number. The motor dimensions do not change.

## 4kW/5kW

### • Without brake

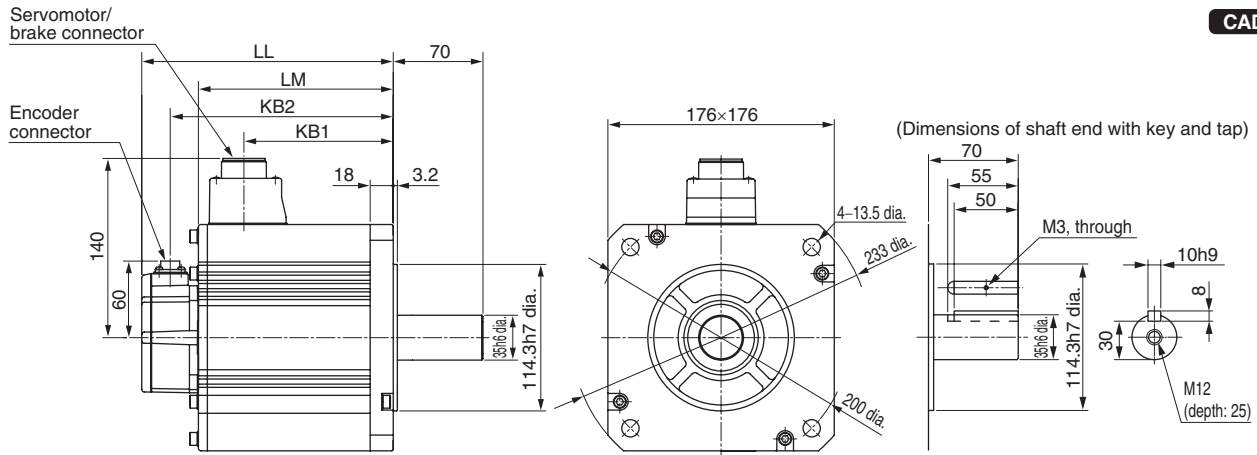
- R88M-K4K020F (-S2) /-K5K020F (-S2) **INC**
- R88M-K4K020C (-S2) /-K5K020C (-S2) **ABS**

### • With brake

- R88M-K4K020F-B (S2) /-K5K020F-B (S2) **INC**
- R88M-K4K020C-B (S2) /-K5K020C-B (S2) **ABS**

Speed	Voltage	Motor capacity	Brake
2000r/min	400V	4/5kW	Without brake With brake

**CAD data**



Model	Dimensions (mm)			
	LL	LM	KB1	KB2
R88M-K4K020□	177	133	96	155
R88M-K5K020□	196	152	115	174
R88M-K4K020□-B□	202	158	96	180
R88M-K5K020□-B□	221	177	115	199

**Note:** The standard models have a straight shaft. A model with a key and tap is indicated by adding "S2" to the end of the model number. Models with an oil seal are indicated with O at the end of the model number. The motor dimensions do not change.

# AC Servomotor/Drive OMNUC G5-series

## 1,000 r/min Servomotors (200 VAC)

900W

• **Without brake**

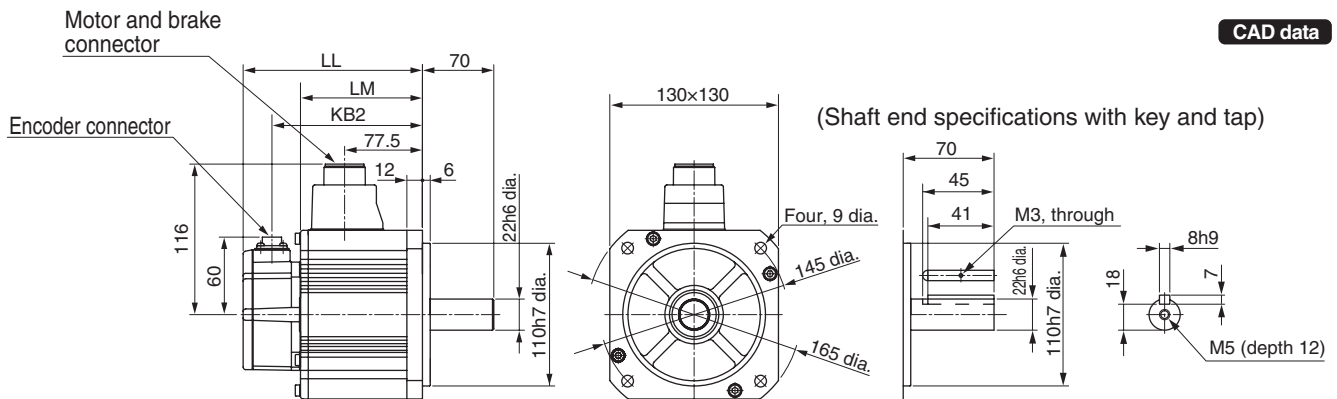
- R88M-K90010H (-S2) **INC**
- R88M-K90010T (-S2) **ABS**

• **With brake**

- R88M-K90010H-B (S2) **INC**
- R88M-K90010T-B (S2) **ABS**

Speed	Voltage	Motor capacity	Brake
1000r/min	200V	900W	Without brake With brake

**CAD data**



Model	Dimensions (mm)		
	LL	LM	KB2
R88M-K90010□	155.5	111.5	133.5
R88M-K90010□-B□	180.5	136.5	158.5

**Note:** The standard models have a straight shaft. A model with a key and tap is indicated by adding "S2" to the end of the model number. Models with an oil seal are indicated with O at the end of the model number. The motor dimensions do not change.

## 2kW/3kW

• **Without brake**

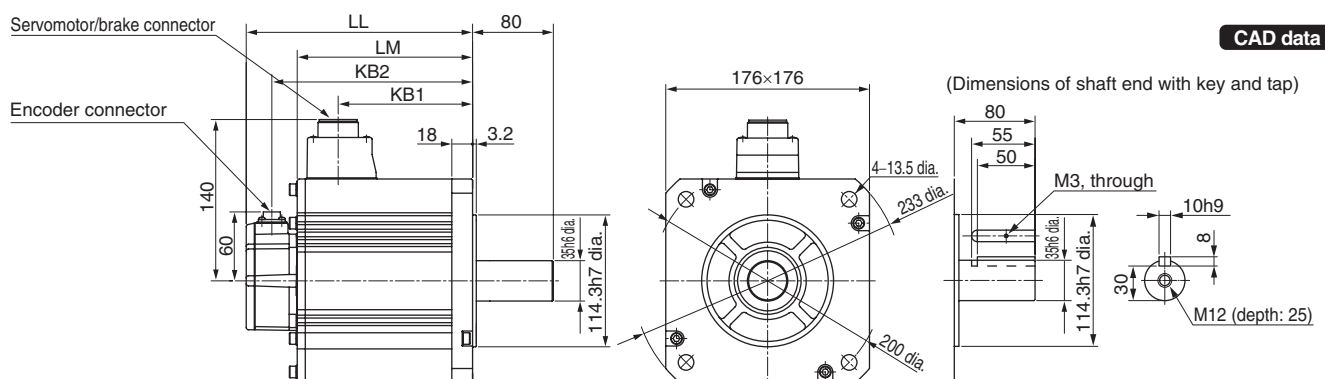
- R88M-K2K010H (-S2) /-K3K010H (-S2) **INC**
- R88M-K2K010T (-S2) /-K3K010T (-S2) **ABS**

• **With brake**

- R88M-K2K010H-B (S2) /-K3K010H-B (S2) **INC**
- R88M-K2K010T-B (S2) /-K3K010T-B (S2) **ABS**

Speed	Voltage	Motor capacity	Brake
1000r/min	200V	2/3kW	Without brake With brake

**CAD data**



Model	Dimensions (mm)			
	LL	LM	KB1	KB2
R88M-K2K010□	163.5	119.5	82.5	141.5
R88M-K3K010□	209.5	165.5	128.5	187.5
R88M-K2K010□-B□	188.5	144.5	82.5	166.5
R88M-K3K010□-B□	234.5	190.5	128.5	212.5

**Note:** The standard models have a straight shaft. A model with a key and tap is indicated by adding "S2" to the end of the model number. Models with an oil seal are indicated with O at the end of the model number. The motor dimensions do not change.

## 1,000 r/min Servomotors (400 VAC)

900W

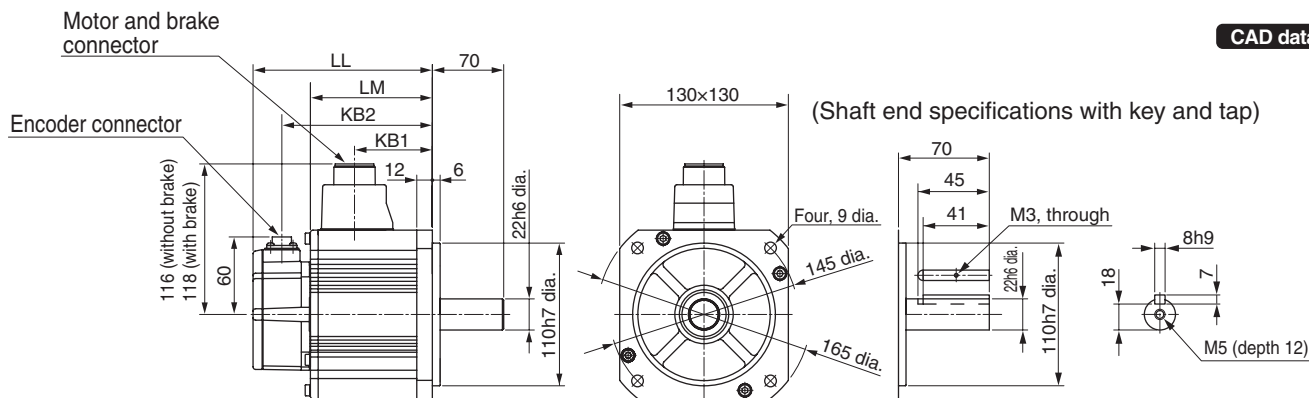
• Without brake

- R88M-K90010F (-S2) **INC**
- R88M-K90010C (-S2) **ABS**

• With brake

- R88M-K90010F-B (S2) **INC**
- R88M-K90010C-B (S2) **ABS**

Speed	Voltage	Motor capacity	Brake
1000r/min	400V	900W	Without brake With brake



CAD data

Model	Dimensions (mm)			
	LL	LM	KB1	KB2
R88M-K90010□	155.5	111.5	77.5	133.5
R88M-K90010□-B□	180.5	136.5	74.5	158.5

**Note:** The standard models have a straight shaft. A model with a key and tap is indicated by adding “S2” to the end of the model number. Models with an oil seal are indicated with O at the end of the model number. The motor dimensions do not change.

## 2kW/3kW

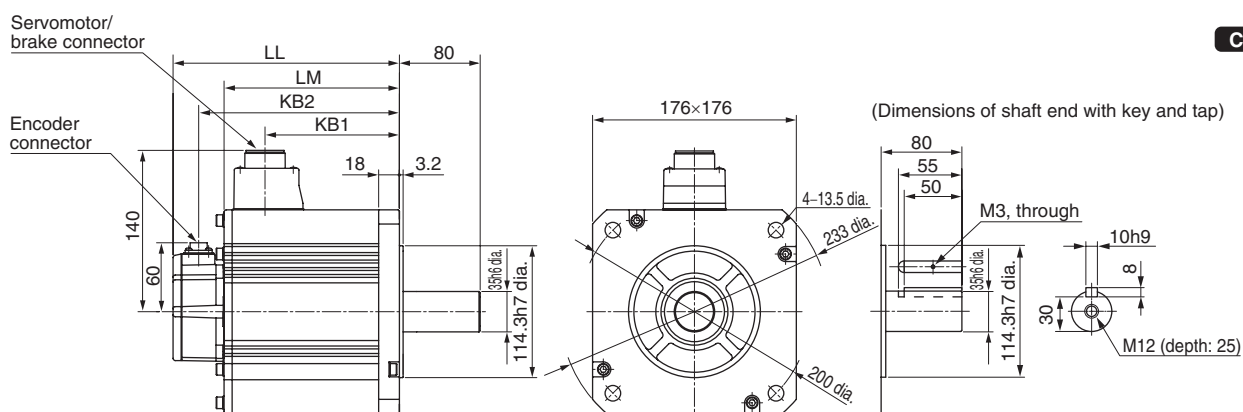
• Without brake

- R88M-K2K010F (-S2) /-K3K010F (-S2) **INC**
- R88M-K2K010C (-S2) /-K3K010C (-S2) **ABS**

• With brake

- R88M-K2K010F-B (S2) /-K3K010F-B (S2) **INC**
- R88M-K2K010C-B (S2) /-K3K010C-B (S2) **ABS**

Speed	Voltage	Motor capacity	Brake
1000r/min	400V	2/3kW	Without brake With brake



CAD data

Model	Dimensions (mm)			
	LL	LM	KB1	KB2
R88M-K2K010□	163.5	119.5	82.5	141.5
R88M-K3K010□	209.5	165.5	128.5	187.5
R88M-K2K010□-B□	188.5	144.5	82.5	166.5
R88M-K3K010□-B□	234.5	190.5	128.5	212.5

**Note:** The standard models have a straight shaft. A model with a key and tap is indicated by adding “S2” to the end of the model number. Models with an oil seal are indicated with O at the end of the model number. The motor dimensions do not change.

OMNUC G5-Series  
System Configuration

AC Servo Drives with Built-in  
EtherCAT Communications

Servomotors

Ordering Information



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# Ordering Information

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## AC Servomotors/Servo Drives with Built-in EtherCAT Communications

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## Interpreting Model Numbers

### Servo Drives

**R88D-K N 01 H -ECT -R**

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

No.	Item	Symbol	Specifications
(1)	OMNUC G5 Series Servo Drives		
(2)	Drive Type	N	Network
(3)	Maximum Applicable Servomotor Capacity	A5	50W
		01	100W
		02	200W
		04	400W
		06	600W
		08	750W
		10	1kW
		15	1.5kW
		20	2kW
		30	3kW
40	4kW		
50	5kW		
(4)	Power Supply Voltage	L	AC100V
		H	AC200V
		F	AC400V
(5)	Communications Type	-ECT	EtherCAT
(6)	Model	-R	Model limited to connection to CJ1W-NC□81/NC□82

### Servomotors

**R88M-K □ 750 30 H -BO S2**

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

No.	Item	Symbol	Specifications
(1)	OMNUC G5-series Servomotor		
(2)	Motor Type	Blank	Cylinder type
(3)	Applicable Servomotor Capacity	—	—
		050	50W
		100	100W
		200	200W
		400	400W
		600	600W
		750	750W
		900	900W
		1K0	1kW
		1K5	1.5kW
		2K0	2kW
		3K0	3kW
		4K0	4kW
		5K0	5kW
(4)	Rated Rotation Speed	10	1000r/min
		20	2000r/min
		30	3000r/min
(5)	Applied Voltage	F	400 VAC (incremental encoder) <b>INC</b>
		H	200 VAC (incremental encoder) <b>INC</b>
		L	100 VAC (incremental encoder) <b>INC</b>
		C	400 VAC (absolute encoder) <b>ABS/INC</b>
		T	200 VAC (absolute encoder) <b>ABS/INC</b>
		S	100 VAC (absolute encoder) <b>ABS/INC</b>
(6)	Options	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

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

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 G□-Series 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 (only frame number 11B)
		11	1/11 (except frame number 65A)
		12	1/12 (only frame number 65A)
		20	1/20 (only frame number 65A)
		21	1/21 (except frame number 65A)
		25	1/25 (only frame number 65A)
		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-VRSF 09 B 100 C J**

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

No	Item	Symbol	Specifications
(1)	Decelerator for G□-Series Servomotors Backlash = 15' 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	050	50 W
		100	100 W
		200	200 W
		400	400 W
		750	750 W
(5)	Motor Type	Blank	3,000-r/min cylindrical servomotors
		-	-
(6)	Backlash	C	Backlash = 15' Max
(7)	Option	J	With key (without tap)

Table of 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	With brake / Without brake	Blank	O	Blank	S2	
				400	200	100	400	200	100	-					B
				F	H	L	C	T	S	Blank	With brake				
Cylinder	50 W	3,000 r/min	R88M-K05030 *		●			●			●	●	●	●	
	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	●	●		●	●		●	●	●	●	●	
	3kW		R88M-K3K030	●	●		●	●		●	●	●	●	●	
	4kW		R88M-K4K030	●	●		●	●		●	●	●	●	●	
	5kW	R88M-K5K030	●	●		●	●		●	●	●	●	●		
	400 W	2,000 r/min	R88M-K40020	●			●			●	●	●	●	●	
	600 W		R88M-K60020	●			●			●	●	●	●	●	
	1 kW		R88M-K1K020	●	●		●	●		●	●	●	●	●	
	1.5 kW		R88M-K1K520	●	●		●	●		●	●	●	●	●	
	2 kW		R88M-K2K020	●	●		●	●		●	●	●	●	●	
	3kW		R88M-K3K020	●	●		●	●		●	●	●	●	●	
	4kW		R88M-K4K020	●	●		●	●		●	●	●	●	●	
	5kW		R88M-K5K020	●	●		●	●		●	●	●	●	●	
	900 W	1,000 r/min	R88M-K90010	●	●		●	●		●	●	●	●	●	
	2 kW		R88M-K2K010	●	●		●	●		●	●	●	●	●	
3kW	R88M-K3K010		●	●		●	●		●	●	●	●	●		
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) <b>INC</b> H: 200 VAC (with incremental encoder) <b>INC</b> L: 100 VAC (with incremental encoder) <b>INC</b> C: 400 VAC (with absolute encoder) <b>ABS/INC</b> T: 200 VAC (with absolute encoder) <b>ABS/INC</b> S: 100 VAC (with absolute encoder) <b>ABS/INC</b>						Blank: Without brake B: 24 VDC With brake		Blank: Without oil seals O: With oil seals		Blank: Straight shaft S2: With key and tap	

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

## Ordering Information

### AC Servo Drives EtherCAT Communications

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

OMNUC G5-Series  
System Configuration

AC Servo Drives with Built-in  
EtherCAT Communications

Servomotors

Ordering Information

# AC Servomotor/Drive OMNUC G5-series

## 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 without key	
Voltage	Rated output	Without oil seals		
Without brake	100 V	50 W	R88M-K05030H	
		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		
	1.5 kW	R88M-K1K530F		
With brake	100 V	50 W	R88M-K05030H-B	
		100 W	R88M-K10030L-B	
		200 W	R88M-K20030L-B	
		400 W	R88M-K40030L-B	
	200 V	50 W	R88M-K05030H-B	
		100 W	R88M-K10030H-B	
		200 W	R88M-K20030H-B	
		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	
400 V	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		
	1.5 kW	R88M-K1K530F-B		

Note: Models with oil seals are also available.

Rotation speed	Encoder	Option
3000r/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	R88M-K05030H-S2	
		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		
	1.5 kW	R88M-K1K530F-S2		
With brake	100 V	50 W	R88M-K05030H-BS2	
		100 W	R88M-K10030L-BS2	
		200 W	R88M-K20030L-BS2	
		400 W	R88M-K40030L-BS2	
	200 V	50 W	R88M-K05030H-BS2	
		100 W	R88M-K10030H-BS2	
		200 W	R88M-K20030H-BS2	
		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	
400 V	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		
	1.5 kW	R88M-K1K530F-BS2		

Note: Models with oil seals are also available.

Rotation speed	Encoder	Option
3000r/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	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	
	400 V	3 kW	R88M-K3K030T	
		4 kW	R88M-K4K030T	
		5 kW	R88M-K5K030T	
		750 W	R88M-K75030C	
1 kW		R88M-K1K030C		
1.5 kW		R88M-K1K530C		
With brake	100 V	2 kW	R88M-K2K030C	
		3 kW	R88M-K3K030C	
		4 kW	R88M-K4K030C	
		5 kW	R88M-K5K030C	
	200 V	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	
		1 kW	R88M-K1K030T-B	
1.5 kW		R88M-K1K530T-B		
2 kW		R88M-K2K030T-B		
400 V	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		

Note: Models with oil seals are also available.

Rotation speed	Encoder	Option
3000r/min	INC	Without key
	ABS/INC	With key

	Specifications		Model	
			With absolute encoder	
			Straight shaft withkey and tap	
	Voltage	Rated output	Without oil seals	
Without brake	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	
	400 V	3 kW	R88M-K3K030T-S2	
		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		
With brake	100 V	2 kW	R88M-K2K030C-S2	
		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-K10030T-BS2	
		200 W	R88M-K20030T-BS2	
		400 W	R88M-K40030T-BS2	
		750 W	R88M-K75030T-BS2	
		1 kW	R88M-K1K030T-BS2	
1.5 kW		R88M-K1K530T-BS2		
2 kW		R88M-K2K030T-BS2		
400 V	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		

Note: Models with oil seals are also available.

# AC Servomotor/Drive OMNUC G5-series

## ● 2,000-r/min servomotors

Rotation speed	Encoder	Option
2000r/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 kW
1.5 kW	R88M-K1K520H			
2 kW	R88M-K2K020H			
3 kW	R88M-K3K020H			
4 kW	R88M-K4K020H			
400 V	5 kW		R88M-K5K020H	
	400 W		R88M-K40020F	
	600 W		R88M-K60020F	
	1 kW		R88M-K1K020F	
	1.5 kW		R88M-K1K520F	
With brake	200 V	2 kW	R88M-K2K020F	
		3 kW	R88M-K3K020F	
		4 kW	R88M-K4K020F	
		5 kW	R88M-K5K020F	
		1 kW	R88M-K1K020H-B	
	400 V	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	
With brake	200 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.

Rotation speed	Encoder	Option
2000r/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 kW
1.5 kW	R88M-K1K520H-S2			
2 kW	R88M-K2K020H-S2			
3 kW	R88M-K3K020H-S2			
4 kW	R88M-K4K020H-S2			
400 V	5 kW		R88M-K5K020H-S2	
	400 W		R88M-K40020F-S2	
	600 W		R88M-K60020F-S2	
	1 kW		R88M-K1K020F-S2	
	1.5 kW		R88M-K1K520F-S2	
With brake	200 V	2 kW	R88M-K2K020F-S2	
		3 kW	R88M-K3K020F-S2	
		4 kW	R88M-K4K020F-S2	
		5 kW	R88M-K5K020F-S2	
		1 kW	R88M-K1K020H-BS2	
	400 V	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	
With brake	200 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
2000r/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	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		
	400 V	400 W	R88M-K40020C	
		600 W	R88M-K60020C	
		1 kW	R88M-K1K020C	
		1.5 kW	R88M-K1K520C	
2 kW		R88M-K2K020C		
400 V	3 kW	R88M-K3K020C		
	4 kW	R88M-K4K020C		
	5 kW	R88M-K5K020C		
	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		
400 V	5 kW	R88M-K5K020T-B		
	400 W	R88M-K40020C-B		
	600 W	R88M-K60020C-B		
	1 kW	R88M-K1K020C-B		
	1.5 kW	R88M-K1K520C-B		
400 V	2 kW	R88M-K2K020C-B		
	3 kW	R88M-K3K020C-B		
	4 kW	R88M-K4K020C-B		
	5 kW	R88M-K5K020C-B		

**Note:** Models with oil seals are also available.

Rotation speed	Encoder	Option
2000r/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	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		
	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		
400 V	3 kW	R88M-K3K020C-S2		
	4 kW	R88M-K4K020C-S2		
	5 kW	R88M-K5K020C-S2		
	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		
400 V	5 kW	R88M-K5K020T-BS2		
	400 W	R88M-K40020C-BS2		
	600 W	R88M-K60020C-BS2		
	1 kW	R88M-K1K020C-BS2		
	1.5 kW	R88M-K1K520C-BS2		
400 V	2 kW	R88M-K2K020C-BS2		
	3 kW	R88M-K3K020C-BS2		
	4 kW	R88M-K4K020C-BS2		
	5 kW	R88M-K5K020C-BS2		

**Note:** Models with oil seals are also available.

# AC Servomotor/Drive OMNUC G5-series

## ● 1,500-r/min servomotors

Rotation speed	Encoder	Option
1500r/min	INC	Without key
	ABS/INC	With key

Specifications			Model	
			With absolute encoder	
Voltage	Rated output	Straight shaft without key		
		Without oil seals		
Without brake	200 V	7.5 kW	R88M-K7K515T	Available soon
		11 kW	R88M-K11K015T	Available soon
		15 kW	R88M-K15K015T	Available soon
	400 V	7.5 kW	R88M-K7K515C	Available soon
		11 kW	R88M-K11K015C	Available soon
		15 kW	R88M-K15K015C	Available soon
With brake	200 V	7.5 kW	R88M-K7K515T-B	Available soon
		11 kW	R88M-K11K015T-B	Available soon
		15 kW	R88M-K15K015T-B	Available soon
	400 V	7.5 kW	R88M-K7K515C-B	Available soon
		11 kW	R88M-K11K015C-B	Available soon
		15 kW	R88M-K15K015C-B	Available soon

**Note:** Models with oil seals are also available.

Rotation speed	Encoder	Option
1500r/min	INC	Without key
	ABS/INC	With key

Specifications			Model	
			With absolute encoder	
Voltage	Rated output	Straight shaft with key and tap		
		Without oil seals		
Without brake	200 V	7.5 kW	R88M-K7K515T-S2	Available soon
		11 kW	R88M-K11K015T-S2	Available soon
		15 kW	R88M-K15K015T-S2	Available soon
	400 V	7.5 kW	R88M-K7K515C-S2	Available soon
		11 kW	R88M-K11K015C-S2	Available soon
		15 kW	R88M-K15K015C-S2	Available soon
With brake	200 V	7.5 kW	R88M-K7K515T-BS2	Available soon
		11 kW	R88M-K11K015T-BS2	Available soon
		15 kW	R88M-K15K015T-BS2	Available soon
	400 V	7.5 kW	R88M-K7K515C-BS2	Available soon
		11 kW	R88M-K11K015C-BS2	Available soon
		15 kW	R88M-K15K015C-BS2	Available soon

**Note:** Models with oil seals are also available.

## ● 1,000-r/min servomotors

Rotation speed	Encoder	Option
1000r/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
1000r/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 Available soon	
6 kW			R88M-K6K010T Available soon	
400 V		900 W	R88M-K90010C	
		2 kW	R88M-K2K010C	
		3 kW	R88M-K3K010C	
		4.5 kW	R88M-K4K510C Available soon	
		6 kW	R88M-K6K010C Available soon	
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 Available soon	
		6 kW	R88M-K6K010T-B Available soon	
	400 V	900 W	R88M-K90010C-B	
		2 kW	R88M-K2K010C-B	
		3 kW	R88M-K3K010C-B	
		4.5 kW	R88M-K4K510C-B Available soon	
		6 kW	R88M-K6K010C-B Available soon	

**Note:** Models with oil seals are also available.

Rotation speed	Encoder	Option
1000r/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
1000r/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 Available soon	
6 kW			R88M-K6K010T-S2 Available soon	
400 V		900 W	R88M-K90010C-S2	
		2 kW	R88M-K2K010C-S2	
		3 kW	R88M-K3K010C-S2	
		4.5 kW	R88M-K4K510C-S2 Available soon	
		6 kW	R88M-K6K010C-S2 Available soon	
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 Available soon	
		6 kW	R88M-K6K010T-BS2 Available soon	
	400 V	900 W	R88M-K90010C-BS2	
		2 kW	R88M-K2K010C-BS2	
		3 kW	R88M-K3K010C-BS2	
		4.5 kW	R88M-K4K510C-BS2 Available soon	
		6 kW	R88M-K6K010C-BS2 Available soon	

**Note:** Models with oil seals are also available.

## 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
1 kW	1/5	R88G-HPG32A052K0B
	1/11	R88G-HPG32A112K0B
	1/21	R88G-HPG32A211K5B
	1/33	R88G-HPG50A332K0B
	1/45	R88G-HPG50A451K5B
1.5 kW	1/5	R88G-HPG32A052K0B
	1/11	R88G-HPG32A112K0B
	1/21	R88G-HPG32A211K5B
	1/33	R88G-HPG50A332K0B
	1/45	R88G-HPG50A451K5B
2 kW	1/5	R88G-HPG32A052K0B
	1/11	R88G-HPG32A112K0B
	1/21	R88G-HPG50A212K0B
	1/33	R88G-HPG50A332K0B
3 kW	1/5	R88G-HPG32A053K0B
	1/11	R88G-HPG50A113K0B
	1/21	R88G-HPG50A213K0B
4 kW	1/5	R88G-HPG32A054K0B
	1/11	R88G-HPG50A115K0B
5 kW	1/5	R88G-HPG50A055K0B
	1/11	R88G-HPG50A115K0B

- Note:**
- The standard models have a straight shaft.
  - 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.
  - The diameter of the Servomotor shaft insertion hole is the same as the diameter of the shaft of the applicable Servomotor.

### ● 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	1/25	R88G-HPG65A255K0SB
	1/5	R88G-HPG50A055K0SB
	1/11	R88G-HPG50A115K0SB
	1/20	R88G-HPG65A205K0SB
	1/25	R88G-HPG65A255K0SB

- Note:**
- The standard models have a straight shaft.
  - 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.
  - The diameter of the Servomotor shaft insertion hole is the same as the diameter of the shaft of the applicable Servomotor.

● 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.
  3. The diameter of the Servomotor shaft insertion hole is the same as the diameter of the shaft of the applicable Servomotor.

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-VRSF05B100CJ
	1/9	R88G-VRSF09B100CJ
	1/15	R88G-VRSF15B100CJ
	1/25	R88G-VRSF25B100CJ
	1/5	R88G-VRSF05B100CJ
100 W	1/9	R88G-VRSF09B100CJ
	1/15	R88G-VRSF15B100CJ
	1/25	R88G-VRSF25B100CJ
	1/5	R88G-VRSF05B200CJ
200 W	1/9	R88G-VRSF09C200CJ
	1/15	R88G-VRSF15C200CJ
	1/25	R88G-VRSF25C200CJ
	1/5	R88G-VRSF05C400CJ
400 W	1/9	R88G-VRSF09C400CJ
	1/15	R88G-VRSF15C400CJ
	1/25	R88G-VRSF25C400CJ
	1/5	R88G-VRSF05C750CJ
750 W	1/9	R88G-VRSF09D750CJ
	1/15	R88G-VRSF15D750CJ
	1/25	R88G-VRSF25D750CJ
	1/5	R88G-VRSF05D750CJ

- Note:** The diameter of the Servomotor shaft insertion hole is the same as the diameter of the shaft of the applicable Servomotor.

## 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	<b>Note:</b> 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-CAKA005S			
	10 m	R88A-CAKA010S			
	15m	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 3 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		

##### 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	

##### 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	
[100V/200V] 3000r/min Servomotors of 1.0 to 5.0kW 2000r/min Servomotors 1000r/min Servomotors [400V] 3000r/min Servomotors of 750W to 5.0kW 2000r/min Servomotors 1000r/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	

## <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		<b>Note:</b> 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 2 to 3 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			

### 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		

### Encoder Cable

Specifications		Flexible Cables	
		Model	
[100 V/200 V] 3,000-r/min Servomotors of 50 to 750 W	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	
[100V/200V] 3000r/min Servomotors of 1.0 to 5.0kW 2000r/min Servomotors 1000r/min Servomotors [400V] 3000r/min Servomotors of 750W to 5.0kW 2000r/min Servomotors 1000r/min Servomotors	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	<b>R88A-CRGD0R3C</b>
Absolute Encoder Battery Cable (One R88A-BAT01G Battery included)	0.3 m	<b>R88A-CRGD0R3C-BS</b>

### Absolute Encoder Backup Battery

Specifications	Model
2,000 mA • 3.6 V	<b>R88A-BAT01G</b>

### Analog Monitor Cable

Name	Length	Model
Analog Monitor Cable	1 m	<b>R88A-CMK001S</b>

### Servomotor Connector

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

## ■ Control Cables

### Control Cables

Name	Specifications	Model
		Connector Terminal Block Cables
Connector Terminal Block	Conversion Unit for General-purpose Controllers (M3 screws)	Through type <b>XW2B-20G4</b>
	Conversion Unit for General-purpose Controllers (M3.5 screws)	Through type <b>XW2B-20G5</b>
	Conversion Unit for General-purpose Controllers (M3 screws)	Slim type <b>XW2D-20G6</b>

## ■ EtherCAT Communications Cables

Category 5 or higher (100BASE-TX) straight cable with double shielding (aluminum tape and braided shielding) is recommended.

### Servo Drive Connectors (common)

Name	Connects to	Model
Encoder Connector	CN2	<b>R88A-CNW01R</b>
External Scale Connector	CN4	<b>R88A-CNK41L</b>
Safety Connector	CN8	<b>R88A-CNK81S</b>

### Servo Drive Connectors (EtherCAT Communications)

Name	Connects to	Model
Control I/O Connector	CN1	<b>R88A-CNW01C</b>

■ 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
EtherCAT Communications	
R88D-KNA5L-ECT (-R)/-KN01H-ECT (-R) (Single-phase)	3G3AX-DL2002
R88D-KN01L-ECT (-R)/-KN02H-ECT (-R) (Single-phase)	3G3AX-DL2004
R88D-KN02L-ECT (-R)/-KN04H-ECT (-R) (Single-phase)	3G3AX-DL2007
R88D-KN04L-ECT (-R)/-KN08H-ECT (-R)/ -KN10H-ECT (-R) (Single-phase)	3G3AX-DL2015
R88D-KN15H-ECT (-R) (Single-phase)	3G3AX-DL2022
R88D-KN01H-ECT (-R)/-KN02H-ECT (-R)/ -KN04H-ECT (-R)/-KN08H-ECT (-R)/ -KN10H-ECT (-R)/-KN15H-ECT (-R) (Three-phase)	3G3AX-AL2025
R88D-KN20H-ECT (-R)/-KN30H-ECT (-R)	3G3AX-AL2055
R88D-KN50H-ECT (-R)	3G3AX-AL2110
R88D-KN06F-ECT (-R)/-KN10F-ECT (-R)/ -KN15F-ECT (-R)	3G3AX-AL4025
R88D-KN20F-ECT (-R)/-KN30F-ECT (-R)	3G3AX-AL4055
R88D-KN50F-ECT (-R)	3G3AX-AL4110

Mounting Brackets (L Brackets for Rack Mounting)

Specifications	Model
EtherCAT Communications	
R88D-KNA5L-ECT (-R)/-KN01L-ECT (-R)/ -KN01H-ECT (-R)/-KN02H-ECT (-R)	R88A-TK01K
R88D-KN02L-ECT (-R)/-KN04H-ECT (-R)	R88A-TK02K
R88D-KN04L-ECT (-R)/-KN08H-ECT (-R)	R88A-TK03K
R88D-KN10H-ECT (-R)/-KN15H-ECT (-R)/ -KN06F-ECT (-R)/-KN10F-ECT (-R)/ -KN15F-ECT (-R)	R88A-TK04K

■ Support Software

Product name	Specifications	Specifications		Model
		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 runs on following OS. OS: Windows XP (Service Pack 3 or higher), Vista, or 7 <b>Note:</b> Except for Windows XP 64-bit version. CX-One Version.4.□ includes CX-Drive Ver.2.□. For details, refer to the CX-One catalog (Cat. No. R134).	1 license *1	DVD *2	CXONE-AL01D-V4

\*1. Multi licenses are available for the CX-One (3, 10, 30, or 50 licenses).

\*2. The CX-One is also available on CD (CXONE-AL□□C-V4).

## Combination table

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

<Cylinder Type>

#### ● 3,000-r/min servomotors and Servo Drives

Voltage	Servo Drive	Servomotor		
		Rated output	With incremental encoder	With absolute encoder
Single-phase 100 to 115 VAC	R88D-KNA5L-ECT-R	50 W	R88M-K05030H-□	R88M-K05030T-□
	R88D-KN01L-ECT-R	100 W	R88M-K10030L-□	R88M-K10030S-□
	R88D-KN02L-ECT-R	200 W	R88M-K20030L-□	R88M-K20030S-□
	R88D-KN04L-ECT-R	400 W	R88M-K40030L-□	R88M-K40030S-□
Single-phase/3-phase 200 to 240 VAC	R88D-KN01H-ECT-R *	50 W	R88M-K05030H-□ *	R88M-K05030T-□ *
	R88D-KN01H-ECT-R	100 W	R88M-K10030H-□	R88M-K10030T-□
	R88D-KN02H-ECT-R	200 W	R88M-K20030H-□	R88M-K20030T-□
	R88D-KN04H-ECT-R	400 W	R88M-K40030H-□	R88M-K40030T-□
	R88D-KN08H-ECT-R	750 W	R88M-K75030H-□	R88M-K75030T-□
	R88D-KN15H-ECT-R *	1 kW	R88M-K1K030H-□ *	R88M-K1K030T-□ *
3-phase 200 to 240 VAC	R88D-KN15H-ECT-R	1.5 kW	R88M-K1K530H-□	R88M-K1K530T-□
	R88D-KN20H-ECT-R	2 kW	R88M-K2K030H-□	R88M-K2K030T-□
	R88D-KN30H-ECT-R	3 kW	R88M-K3K030H-□	R88M-K3K030T-□
	R88D-KN50H-ECT-R	4 kW	R88M-K4K030H-□	R88M-K4K030T-□
3-phase 400 to 480 VAC	R88D-KN50H-ECT-R	5 kW	R88M-K5K030H-□	R88M-K5K030T-□
	R88D-KN10F-ECT-R	750 W	R88M-K75030F-□	R88M-K75030C-□
	R88D-KN15F-ECT-R *	1 kW	R88M-K1K030F-□ *	R88M-K1K030C-□ *
	R88D-KN15F-ECT-R	1.5 kW	R88M-K1K530F-□	R88M-K1K530C-□
	R88D-KN20F-ECT-R	2 kW	R88M-K2K030F-□	R88M-K2K030C-□
	R88D-KN30F-ECT-R	3 kW	R88M-K3K030F-□	R88M-K3K030C-□
3-phase 400 to 480 VAC	R88D-KN50F-ECT-R	4 kW	R88M-K4K030F-□	R88M-K4K030C-□
	R88D-KN50F-ECT-R	5 kW	R88M-K5K030F-□	R88M-K5K030C-□

#### ● 2,000-r/min Servomotors and Servo Drives

Voltage	Servo Drive	Servomotor		
		Rated output	With incremental encoder	With absolute encoder
Single-phase/3-phase 200 to 240 VAC	R88D-KN10H-ECT-R	1 kW	R88M-K1K020H-□	R88M-K1K020T-□
	R88D-KN15H-ECT-R	1.5 kW	R88M-K1K520H-□	R88M-K1K520T-□
3-phase 200 to 240 VAC	R88D-KN20H-ECT-R	2 kW	R88M-K2K020H-□	R88M-K2K020T-□
	R88D-KN30H-ECT-R	3 kW	R88M-K3K020H-□	R88M-K3K020T-□
	R88D-KN50H-ECT-R	4 kW	R88M-K4K020H-□	R88M-K4K020T-□
	R88D-KN50H-ECT-R	5 kW	R88M-K5K020H-□	R88M-K5K020T-□
3-phase 400 to 480 VAC	R88D-KN06F-ECT-R	400 W	R88M-K40020F-□	R88M-K40020C-□
	R88D-KN06F-ECT-R	600 W	R88M-K60020F-□	R88M-K60020C-□
	R88D-KN10F-ECT-R	1 kW	R88M-K1K020F-□	R88M-K1K020C-□
	R88D-KN15F-ECT-R	1.5 kW	R88M-K1K520F-□	R88M-K1K520C-□
	R88D-KN20F-ECT-R	2 kW	R88M-K2K020F-□	R88M-K2K020C-□
	R88D-KN30F-ECT-R	3 kW	R88M-K3K020F-□	R88M-K3K020C-□
	R88D-KN50F-ECT-R	4 kW	R88M-K4K020F-□	R88M-K4K020C-□
	R88D-KN50F-ECT-R	5 kW	R88M-K5K020F-□	R88M-K5K020C-□

#### ● 1,000-r/min Servomotors and Servo Drives

Voltage	Servo Drive	Servomotor		
		Rated output	With incremental encoder	With absolute encoder
Single-phase/3-phase 200 to 240 VAC	R88D-KN15H-ECT-R *	900 W	R88M-K90010H-□ *	R88M-K90010T-□ *
3-phase 200 to 240 VAC	R88D-KN30H-ECT-R *	2 kW	R88M-K2K010H-□ *	R88M-K2K010T-□ *
	R88D-KN50H-ECT-R *	3 kW	R88M-K3K010H-□ *	R88M-K3K010T-□ *
Single-phase/3-phase 400 to 480 VAC	R88D-KN15F-ECT-R *	900 W	R88M-K90010F-□ *	R88M-K90010C-□ *
	R88D-KN30F-ECT-R *	2 kW	R88M-K2K010F-□ *	R88M-K2K010C-□ *
	R88D-KN50F-ECT-R *	3 kW	R88M-K3K010F-□ *	R88M-K3K010C-□ *

\* Please note the capacity of Servo Drive and Servomotor are not same in this combination.

## 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□ (Also used with R88M-K10030□)	R88G-HPG11B09050B□ (Gear ratio 1/9)	R88G-HPG14A21100B□ (Also used with R88M-K10030□)	R88G-HPG14A33050B□	R88G-HPG14A45050B□
R88M-K10030□	R88G-HPG11B05100B□	R88G-HPG14A11100B□	R88G-HPG14A21100B□	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□ (Also used with R88M-K2K030□)	R88G-HPG32A112K0B□ (Also used with R88M-K2K030□)	R88G-HPG32A211K5B□ (Also used with R88M-K1K5030□)	R88G-HPG32A33600SB□ (Also used with R88M-K60020□)	R88G-HPG50A451K5B□ (Also used with R88M-K1K530□)
R88M-K1K030□	R88G-HPG32A052K0B□ (Also used with R88M-K2K030□)	R88G-HPG32A112K0B□ (Also used with R88M-K2K030□)	R88G-HPG32A211K5B□ (Also used with R88M-K1K5030□)	R88G-HPG50A332K0B□ (Also used with R88M-K2K030□)	R88G-HPG50A451K5B□ (Also used with R88M-K1K530□)
R88M-K1K530□	R88G-HPG32A052K0B□ (Also used with R88M-K2K030□)	R88G-HPG32A112K0B□ (Also used with R88M-K2K030□)	R88G-HPG32A211K5B□	R88G-HPG50A332K0B□ (Also used with R88M-K2K030□)	R88G-HPG50A451K5B□
R88M-K2K030□	R88G-HPG32A052K0B□	R88G-HPG32A112K0B□	R88G-HPG50A212K0B□	R88G-HPG50A332K0B□	-
R88M-K3K030□	R88G-HPG32A053K0B□	R88G-HPG50A113K0B□	R88G-HPG50A213K0B□	-	-
R88M-K4K030□	R88G-HPG32A054K0B□	R88G-HPG50A115K0B□ (Also used with R88M-K5K030□)	-	-	-
R88M-K5K030□	R88G-HPG50A055K0B□	R88G-HPG50A115K0B□	-	-	-

### ● 2,000-r/min servomotors

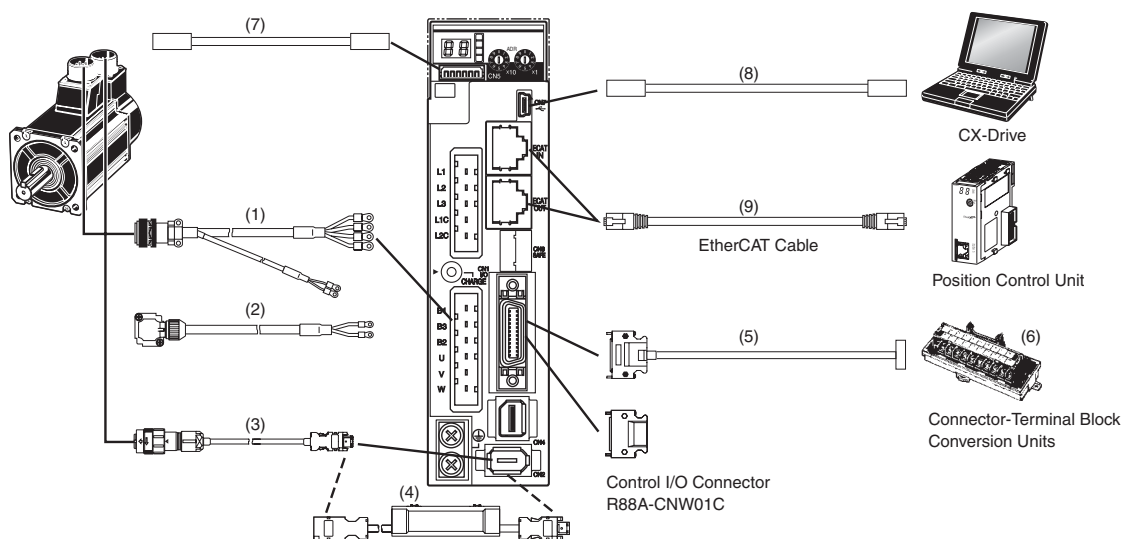
Motor model	1/5	1/11	1/21 (1/20 for flange size No.65)	1/33 (1/25 for flange size No.65)	1/45
R88M-K40020□ (Only 400 V)	R88G-HPG32A052K0B□ (Also used with R88M-K2K030□)	R88G-HPG32A112K0B□ (Also used with R88M-K2K030□)	R88G-HPG32A211K5B□ (Also used with R88M-K1K5030□)	R88G-HPG32A33600SB□ (Also used with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

### ● 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□ (Also used with R88M-K5K020□)	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□)	R88G-HPG65A255K0SB□ (Also used with R88M-K5K020□)

## Cable Combinations

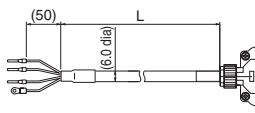
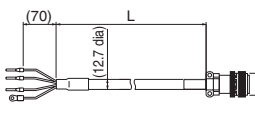
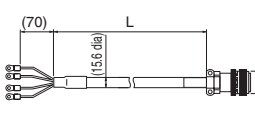
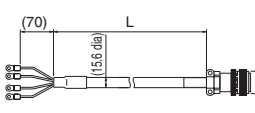
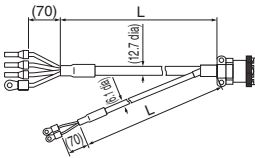
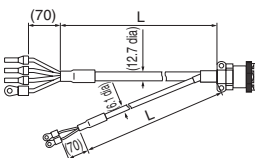
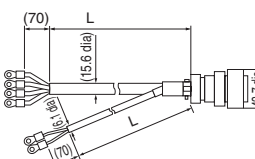
### ● EtherCAT Communications



### Servomotor Power Cables (For CNB)

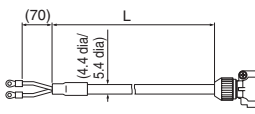
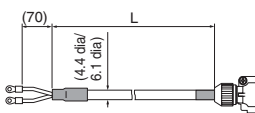
Symbol	Name	Connected to	Model	Description	
(1)	Without Brakes Standard Servomotor Power Cables for Servomotors without Brakes	[100 V] [200 V] Cylindrical Servomotors, 3,000 r/min, 50 to 750 W	R88A-CAKA□□□□S The empty boxes in the model number are for the cable length. The cable can be 3, 5, 10, 15, 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 2kW 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 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/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, 1 to 2 kW Cylindrical Servomotors, 2,000 r/min, 1 to 2 kW Cylindrical Servomotors, 1,000 r/min, 900 W	R88A-CAKB□□□□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.)	
	With Brakes Standard Servomotor Power Cables for Servomotors with Brakes	<b>Note:</b> There are separate connectors for power and brakes for 100 V and 200 V 3,000-r/min motors of 50 to 750 W. Therefore, when a motor with a brake is used, it will require both a power cable for a motor without a 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□□□□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, 1 to 2 kW Cylindrical Servomotors, 2,000 r/min, 400 W to 2 kW Cylindrical Servomotors, 1,000 r/min, 900 W	R88A-CAKB□□□□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.)	
		[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, 1,000 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□□□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	<b>Note:</b> There are separate connectors for power and brakes for 100 V and 200 V 3,000-r/min motors of 50 to 750 W. Therefore, when a motor with a brake is used, it will require both a power cable for a motor without a 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, 1 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, 1,000 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)

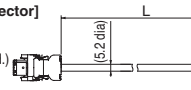
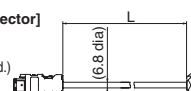
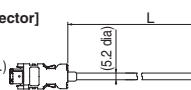
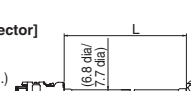
## Brake Cables

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.)
	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)

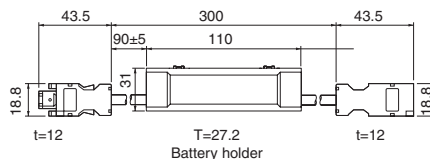
# AC Servomotor/Drive OMNUC G5-series

## 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 or higher (200 V) For 750 W or higher (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: JN1-22-20S-10000 (Japan Aviation Electronics Industry, Ltd.)
(3)	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 or higher (200 V) For 750 W or higher (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.) Cable clamp: 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)	For Connector Terminal Block	Connector Terminal Block Cables	Cable for EtherCAT Communications type	
(6)		Connector-Terminal Block Conversion Units	Cable for EtherCAT Communications type	M3 screws XW2B-20G4
				M3.5 screws XW2B-20G5
			M3 screws XW2D-20G6	

**Note:** Insert the cable length into the boxes in the model number of cables. (1m: 100, 2m: 200)

## Monitor Connector (for CN5)

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

## Communications Connector (for CN7)

Symbol	Name	Description
(8)	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.

## Connectors

Connectors	Name	Model
CN1	Control I/O Connector (for EtherCAT Communications type)	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	[100V/200V] 3,000 r/min (50 to 750 W)	R88A-CNK02R
-	Motor connector for encoder cable	[100V/200V] 3,000 r/min (1.0 to 5 kW) 2,000 r/min, 1,000 r/min [400V] 3,000 r/min, 2,000 r/min and 1,000 r/min	R88A-CNK04R
-	Power cable connector	[100 V/200 V] 750 W max.	R88A-CNK11A
-	Brake cable connector	[100 V/200 V] 750 W max.	R88A-CNK11B

## EtherCAT Communication Cable

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

## About Manuals

Manual	Man. No.	Model	Application	Description
OMNUC G5-SERIES EtherCAT Communications AC SERVMOTOR AND SERVO DRIVE USER'S MANUAL	I573	R88M-K□ R88D-KN□-ECT-R	Information on OMNUC G5 Series	Describes the setting and application procedures for G5 series.
CJ-series Position Control Unit Operation Manual	W487	CJ1W-NC281 CJ1W-NC481 CJ1W-NC881 CJ1W-NCF81 CJ1W-NC482 CJ1W-NC882	Information on CJ1W-NC281/-NC481/-NC881/ -NCF81/-NC482/-NC882 Position Control Units	Describes the setting and application procedures for the Position Control Units.
CX-Programmer Operation Manual	W446	CXONE-AL□□C-V□ /-AL□□D-V□	Support Software for Windows computers CX-Programmer operating procedure	Describes operating procedures for the CX-Programmer.
CX-Drive Operation Manual	W453	CXONE-AL□□C-V□/ -AL□□D-V□ WS02-DRVC1	Support Software for Inverter and Servo CX-Drive setting procedure	Describes operating procedures for the CX-Drive.

**Read and Understand this Catalog**

Please read and understand this catalog before purchasing the product. Please consult your OMRON representative if you have any questions or comments.

**Warranty and Limitations of Liability**

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Dimensions and weights are nominal and are not to be used for manufacturing purposes, even when tolerances are shown.

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