

**Product Discontinuation**

Servo Drivers

**R7D-BP[]**  
**R88D-GP08H**

Servomotors

**R88M-G[]L-[]**  
**R88M-G[]H-[]**  
**R88M-G[]H-[]-D**  
**R88M-GP[]L-[]**  
**R88M-GP[]H-[]**



**Recommended Replacement**

Servo Drivers

**R88D-KT[]**  
**R88D-KT08H**

Servomotors

**R88M-K[]L-[]**  
**R88M-K[]H-[]**  
**R88M-K[]H-[]-D**  
**R88M-K[]L-[]**  
**R88M-K[]H-[]**

**[ Final order entry date ]**

The end of March, 2027

**[ Date of The Last Shipping ]**

The end of March, 2028

**[ Scheduled date of maintenance close ]**

The end of March, 2034

**[ Caution on recommended replacement ]**

- G5 Series does not have flat type motors(R88M-GP[]). Please replace with the standard type motors.
- G5 Series does not have circular connector type motors(R88M-G[]-D), however, the protective structure between the motor and the cable of G5 Series standard motors has been improved from IP65 to IP67.
- The parameters are different between SS2 series and G5 series. Please refer to the Replace Guides (I879-E1).

**[ Difference from discontinued product ]**

Recommended replacement Model	Body Color	Dimensions	Wire connection	Mounting Dimensions	Characteristics	Operation ratings	Operation methods
R88D-KT[]	--	--	--	--	--	*	--
R88M-K[]	**	*	--	*	--	*	**
R88M-K[] (from flat type)	**	--	--	--	--	*	**

\*\* : Compatible

\* : The change is a little/Almost compatible

-- : Not compatible

- : No corresponding specification

[ Product Discontinuation and recommended replacement ]

Product discontinuation	Recommended replacement
R7D-BPA5L	R88D-KTA5L
R7D-BP01L	R88D-KT01L
R7D-BP02L	R88D-KT02L
R7D-BP01H	R88D-KT01H
R7D-BP02HH	R88D-KT02H
R7D-BP02H	R88D-KT02H
R7D-BP04H	R88D-KT04H
<b>R88D-GP08H</b>	<b>R88D-KT08H</b>
R88M-G05030H-S2	R88M-K05030H-S2
R88M-G05030H-S2-D	R88M-K05030H-S2
R88M-G05030H-BS2	R88M-K05030H-BS2
R88M-G05030H-BS2-D	R88M-K05030H-BS2
R88M-G10030L	R88M-K10030L
R88M-G10030L-O	R88M-K10030L-O
R88M-G10030L-S2	R88M-K10030L-S2
R88M-G10030L-OS2	R88M-K10030L-OS2
R88M-G10030L-B	R88M-K10030L-B
R88M-G10030L-BO	R88M-K10030L-BO
R88M-G10030L-BS2	R88M-K10030L-BS2
R88M-G10030L-BOS2	R88M-K10030L-BOS2
R88M-G20030L	R88M-K20030L
R88M-G20030L-O	R88M-K20030L-O
R88M-G20030L-S2	R88M-K20030L-S2
R88M-G20030L-OS2	R88M-K20030L-OS2
R88M-G20030L-B	R88M-K20030L-B
R88M-G20030L-BO	R88M-K20030L-BO
R88M-G20030L-BS2	R88M-K20030L-BS2
R88M-G20030L-BOS2	R88M-K20030L-BOS2
R88M-G10030H	R88M-K10030H
R88M-G10030H-S2	R88M-K10030H-S2
R88M-G10030H-S2-D	R88M-K10030H-S2
R88M-G10030H-BS2	R88M-K10030H-BS2
R88M-G10030H-BS2-D	R88M-K10030H-BS2
R88M-G20030H	R88M-K20030H
R88M-G20030H-S2	R88M-K20030H-S2
R88M-G20030H-S2-D	R88M-K20030H-S2
R88M-G20030H-OS2	R88M-K20030H-OS2
R88M-G20030H-BS2	R88M-K20030H-BS2
R88M-G20030H-BS2-D	R88M-K20030H-BS2
R88M-G40030H	R88M-K40030H
R88M-G40030H-S2	R88M-K40030H-S2
R88M-G40030H-S2-D	R88M-K40030H-S2
R88M-G40030H-BS2	R88M-K40030H-BS2
R88M-G40030H-BS2-D	R88M-K40030H-BS2
R88M-GP10030L	R88M-K10030L
R88M-GP10030L-O	R88M-K10030L-O
R88M-GP10030L-S2	R88M-K10030L-S2
R88M-GP10030L-OS2	R88M-K10030L-OS2

<b>Product discontinuation</b>	<b>Recommended replacement</b>
R88M-GP10030L-B	R88M-K10030L-B
R88M-GP10030L-BO	R88M-K10030L-BO
R88M-GP10030L-BS2	R88M-K10030L-BS2
R88M-GP10030L-BOS2	R88M-K10030L-BOS2
R88M-GP20030L	R88M-K20030L
R88M-GP20030L-O	R88M-K20030L-O
R88M-GP20030L-S2	R88M-K20030L-S2
R88M-GP20030L-OS2	R88M-K20030L-OS2
R88M-GP20030L-B	R88M-K20030L-B
R88M-GP20030L-BO	R88M-K20030L-BO
R88M-GP20030L-BS2	R88M-K20030L-BS2
R88M-GP20030L-BOS2	R88M-K20030L-BOS2
R88M-GP10030H-S2	R88M-K10030H-S2
R88M-GP10030H-S2-D	R88M-K10030H-S2
R88M-GP10030H-BS2	R88M-K10030H-BS2
R88M-GP10030H-BS2-D	R88M-K10030H-BS2
R88M-GP20030H-S2	R88M-K20030H-S2
R88M-GP20030H-S2-D	R88M-K20030H-S2
R88M-GP20030H-BS2	R88M-K20030H-BS2
R88M-GP20030H-BS2-D	R88M-K20030H-BS2
R88M-GP40030H-S2	R88M-K40030H-S2
R88M-GP40030H-S2-D	R88M-K40030H-S2
R88M-GP40030H-BS2	R88M-K40030H-BS2
R88M-GP40030H-BS2-D	R88M-K40030H-BS2

[ Body color ]

<p><b>Product discontinuation</b>  <b>Model R7D-BP[]/R88D-GP08H/R88M-G[]</b></p>	<p><b>Recommendable replacement</b>  <b>Model R88D-KT[]/R88M-K[]</b></p>
<p><b>R7D-BP[]/R88D-GP08H</b>                  Ivory white  <b>R88M-G[]</b>                  Silver, Black</p>	<p><b>R88D-KT[]</b>                  Black  <b>R88M-K[]</b>                  Silver, Black</p>

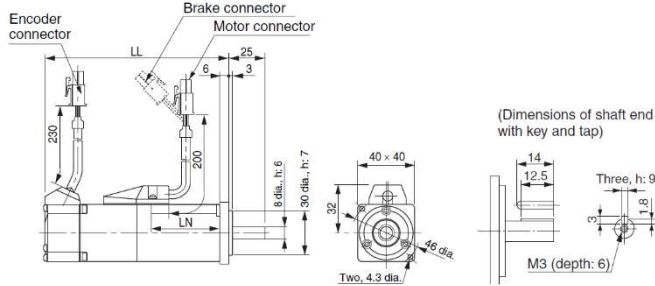
[ Dimensions & Mounting dimensions ]

Product discontinuation R7D-BP[]	Recommendable replacement R88D-KT[]
<p><b>R7D-BPA5L/-BP01L/-BP01H/-BP02H</b></p> <p>External dimensions: 140, 130, 120, 35, 15, 5, 70, 5.1, 105, 140, 130±0.5, 5, 15, 20. Mounting Hole Dimensions: Two, M4.</p>	<p><b>R88D-KTA5L/-KT01L/-KT01H/-KT02H</b></p> <p>External dimensions: 40, 70, 130, 150. Mounting dimensions: 150, 140, 6, 28, 40, 2-M4.</p>
<p><b>R7D-BP02L/-BP02HH/-BP04H</b></p> <p>External dimensions: 140, 130, 120, 40, 15, 5, 70, 5.1, 105, 140, 130±0.5, 5, 15, 25. Mounting Hole Dimensions: Two, M4.</p>	<p><b>R88D-KT02L/-KT04H</b></p> <p>External dimensions: 55, 70, 130, 150. Mounting dimensions: 150, 140, 6, 43, 55, 2-M4.</p>
<p><b>R88D-GP08H</b>                  Wall Mounting</p> <p>External Dimensions: 65, 70, 170, 4, 150, 140±0.5, 7.5, 50±0.5, 65. Mounting Hole Dimensions: Two, M4.</p>	<p><b>R88D-KT08H</b>                  Wall Mounting</p> <p>External dimensions: 65, 70, 170, 4, 150, 140, 7.5, 50, 65. Mounting dimensions: 150, 140, 7.5, 50, 65, 2-M4.</p>

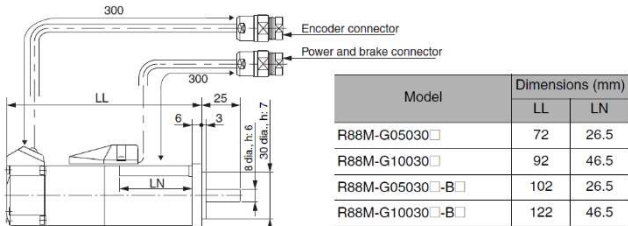
**Product discontinuation**  
**R88M-G□**

**R88M-G05030H-□/-G10030L-□/-G10030H-□**  
**-G05030H-□-D/-G10030H-□-D**

Servo motor with standard connector



Servo motor with circular connector

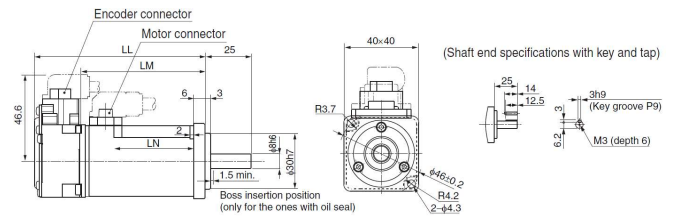


**Note** The standard models have a straight shaft. Models with a key and tap are indicated with "S2" at the end of the model number.

**Recommendable replacement**  
**R88M-K□**

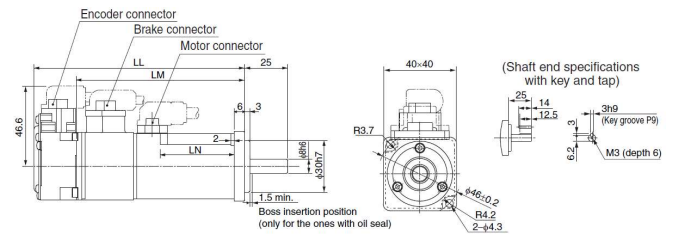
**R88M-K05030H-□/-K10030L-□/-K10030H-□**

Without brake



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

With brake

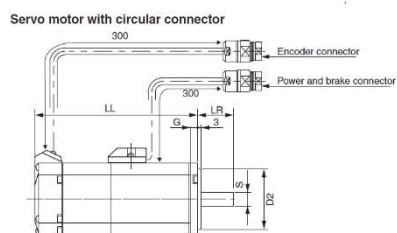
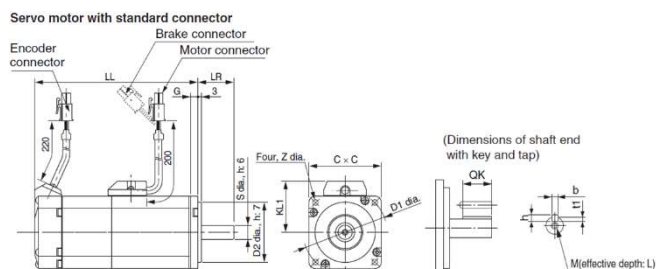


Model	Dimensions (mm)		
	LL	LM	LN
R88M-K05030□-Bx	102	78	23
R88M-K10030□-Bx	122	98	43

**Note.** The standard models have a straight shaft. Models with a key and tap are indicated with S2 at 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.

**Product discontinuation**  
**R88M-G□**

**R88M-G20030L-□/-G20030H-□/-G40030H-□**  
**-G20030H-□-D/-G40030H-□-D**



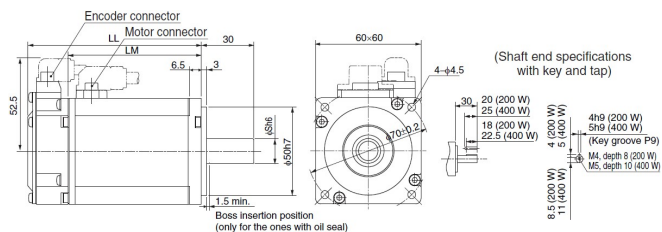
Model	Dimensions (mm)														
	LL	LR	S	D1	D2	C	G	KL1	Z	OK	b	h	M	t1	L
R88M-G20030□	79.5	11	14	70	50	60	6.5	43	4.5	18	4h9	4	M4	2.5	8
R88M-G40030□	99	30	14	70	50	60	6.5	43	4.5	22.5	5h9	5	M5	3	10
R88M-G75030□	112.2	35	19	90	70	80	8	53	6	22	6h9	6	M5	3.5	10
R88M-G20030□-B□	116	11	14	70	50	60	6.5	43	4.5	18	4h9	4	M4	2.5	8
R88M-G40030□-B□	135.5	30	14	70	50	60	6.5	43	4.5	22.5	5h9	5	M5	3	10
R88M-G75030□-B□	149.2	35	19	90	70	80	8	53	6	22	6h9	6	M5	3.5	10

**Note** The standard models have a straight shaft. Models with a key and tap are indicated with "S2" at the end of the model number.

**Recommendable replacement**  
**R88M-K□**

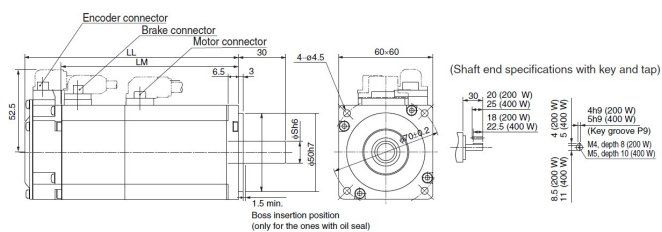
**R88M-K20030L-□/-K20030H-□/-K40030H-□**

**Without brake**



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

**With brake**

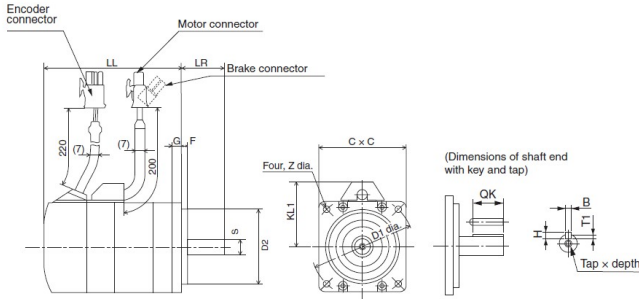


Model	Dimensions (mm)		
	LL	LM	S
R88M-K20030□-B□	116	93	11
R88M-K40030□-B□	135.5	112.5	14

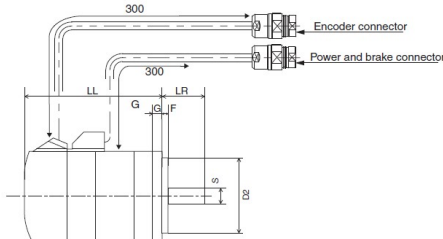
**Product discontinuation**  
**R88M-G□**

**R88M-GP10030L-□/-GP20030L-□/-GP10030H-□**  
**-GP20030H-□/-GP40030H-□/-GP10030H-□-D**  
**-GP20030H-□-D/-GP40030H-□-D**

**Servo motor with standard connector**



**Servo motor with circular connector**

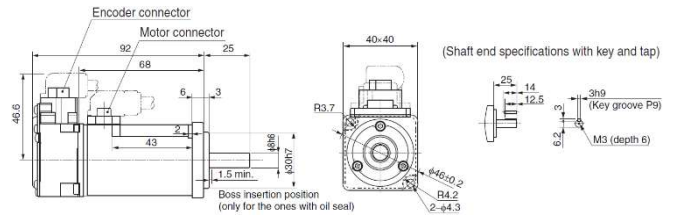


Model	Dimensions (mm)																
	LL	LR	S	D1	D2	C	F	G	KL1	Z	QK	b	h	t1	M	L	
R88M-GP10030L	60.5	25	8	70	50	60	3	7	43	4.5	12.5	3h9	3	1.8	M3	6	
R88M-GP10030H	67.5	30	11	90	70	80	5	8	53	5.5	18	4h9	4	2.5	M4	8	
R88M-GP20030L	82.5	14															
R88M-GP20030H																	
R88M-GP10030L-B□	84.5	25	8	70	50	60	3	7	43	4.5	12.5	3h9	3	1.8	M3	6	
R88M-GP20030L-B□	100	30	11	90	70	80	5	8	53	5.5							
R88M-GP20030H-B□																	
R88M-GP40030H-B□	115	14									22.5	5h9	5	3	M5	10	

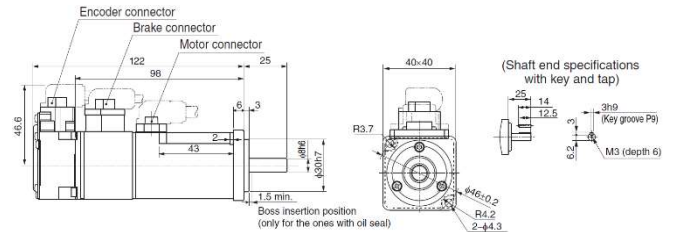
Note The standard models have a straight shaft. Models with a key and tap are indicated with "S2" at the end of the model number.

**Recommendable replacement**  
**R88M-K□**

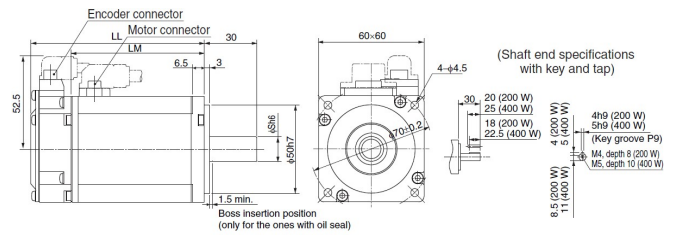
**R88M-K10030L-□/-K10030H-□**  
**Without brake**



**With brake**

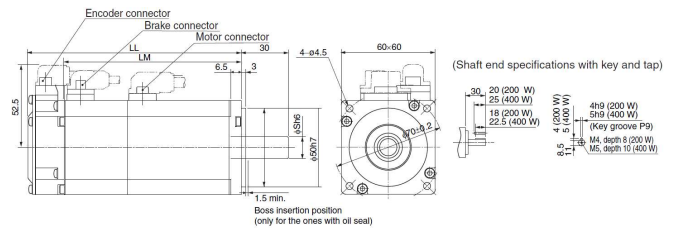


**R88M-K20030L-□/-K20030H-□/-K40030H-□**  
**Without brake**



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

**With brake**



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. Models with a key and tap are indicated with S2 at 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.

[ Wire connection ]

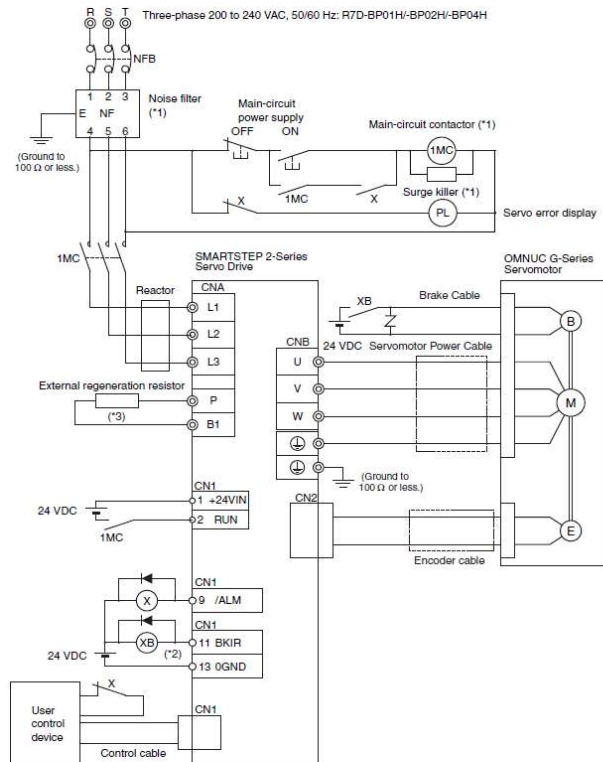
Wire connection of power supply, motor and peripheral equipment

<p align="center"><b>Product discontinuation</b> <b>R7D-BP[]</b></p>	<p align="center"><b>Recommendable replacement</b> <b>R88D-KT[]</b></p>
<p><b>R7D-BPA5L/-BP01L/-BP02L</b> <b>R7D-BP01H/-BP02HH/-BP04H (Single-phase Input)</b></p> <p>The cables are not same for SS2 series and G5 series.</p> <p>*1. Recommended products are listed in 4-3 <i>Wiring Conforming to EMC Directives</i>. We recommend that you install two contactors to help prevent accidents that may occur due to contact welding or other factors.</p> <p>*2. Recommended Relay: OMRON G7T Relay (24-VDC model)</p> <p>*3. An External Regeneration Resistor can be connected. Connect this resistor if the regenerative energy exceeds regeneration absorption capacity in the Servo Drive.</p>	<p><b>R88D-KTA5L/-KT01L/-KT02L</b> <b>R88D-KT01H/-KT02H/-KT04H (Single-phase Input)</b></p> <p>The cables are not same for SS2 series and G5 series.</p> <p>*1. Recommended products are listed in 4-3 <i>Wiring Conforming to EMC Directives</i>.</p> <p>*2. Recommended relay: MY relay by OMRON (24-V) For example, MY2 relay by OMRON can be used with all G5-series motors with brakes because its rated induction load is 2 A (24 VDC).</p> <p>*3. There is no polarity on the brakes.</p> <p>*4. The Built-in Regeneration Resistor (KT04L, KT03H, KT10H and KT15H) shorts B2 and B3. When the amount of regeneration is large, remove the connection between B2 and B3 and connect the Regeneration Resistor between B1 and B2.</p> <p>*5. There is no Internal Regeneration Resistor for KTASL to KT02L, and KT01H to KT04H. When the amount of regeneration is large, connect the necessary Regeneration Resistor between B1 and B2.</p>



**Product discontinuation**  
**R7D-BP[]**

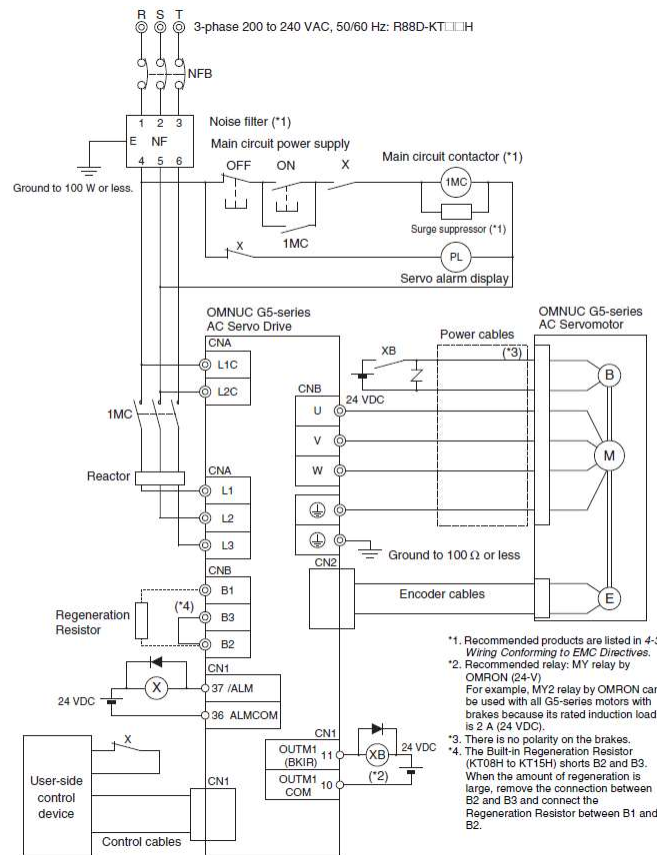
**R7D-BP01H/-BP02H/-BP04H (3-phase Input)**



- \*1. Recommended products are listed in 4-3 *Wiring Conforming to EMC Directives*. We recommend that you install two contactors to help prevent accidents that may occur due to contact welding or other factors.
- \*2. Recommended Relay: OMRON G7T Relay (24-VDC model)
- \*3. An External Regeneration Resistor can be connected. Connect this resistor if the regenerative energy exceeds regeneration absorption capacity in the Servo Drive.

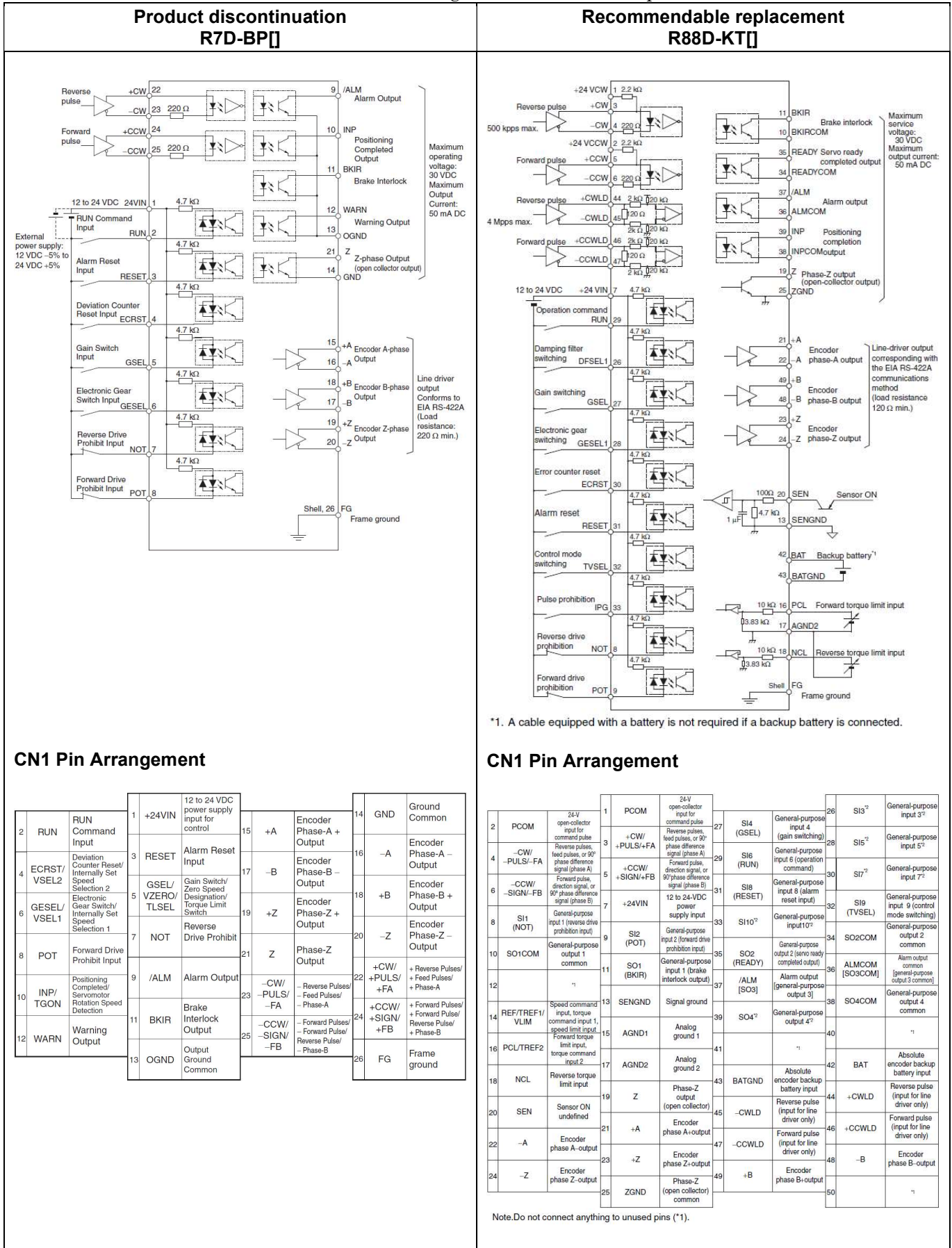
**Recommendable replacement**  
**R88D-KT[]**

**R88D-KT01H/-KT02H/-KT04H (3-phase Input)**



- \*1. Recommended products are listed in 4-3 *Wiring Conforming to EMC Directives*. For example, MY2 relay by OMRON can be used with all G5-series motors with brakes because its rated induction load is 2 A (24 VDC).
- \*2. Recommended relay: MY2 relay by OMRON (24-V)
- \*3. There is no polarity on the brakes.
- \*4. The Built-in Regeneration Resistor (KT08H to KT15H) shorts B2 and B3. When the amount of regeneration is large, remove the connection between B2 and B3 and connect the Regeneration Resistor between B1 and B2.

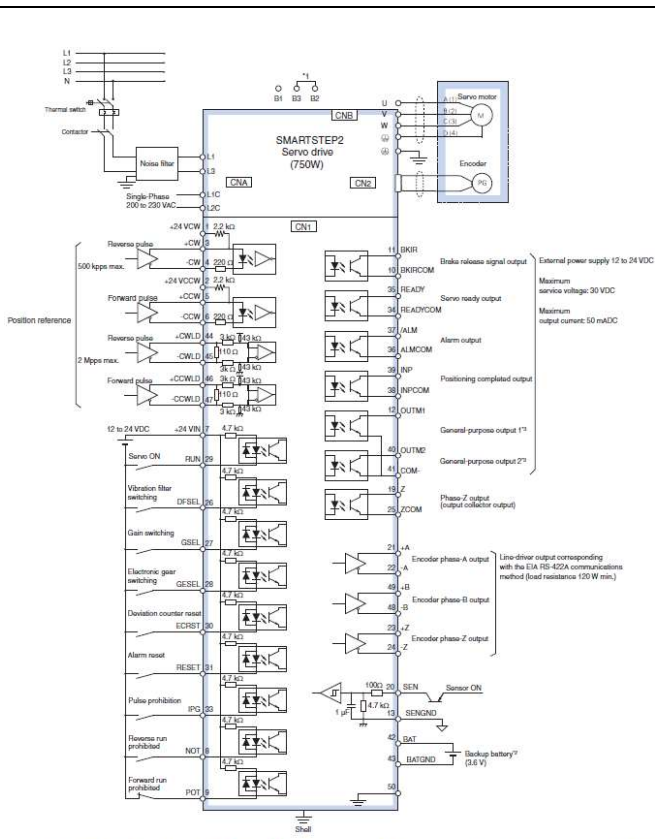
Wire connection of control I/O connector (The figure shows the case of position control)



Wire connection of power supply, motor, peripheral equipment and control I/O connector

**Product discontinuation**

**R88D-GP08H**

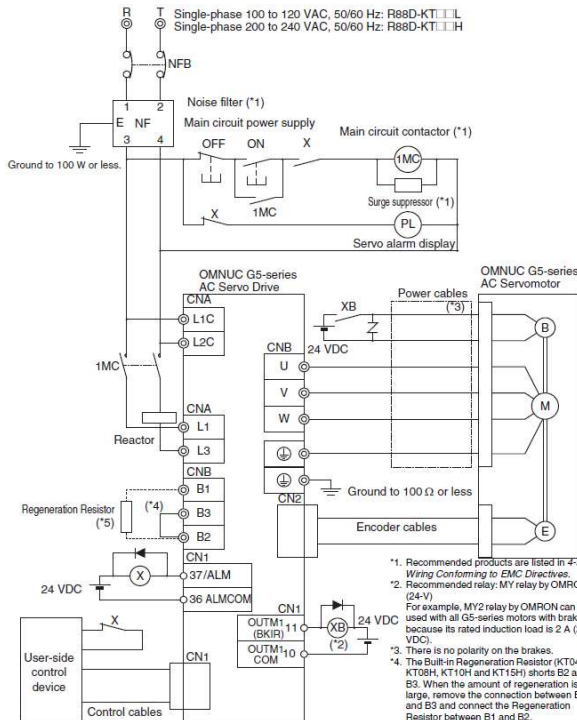


\*1 B3-B2 are short-circuited. If the internal regenerative resistor is insufficient, remove the wire between B2 and B3 and connect an external regenerative resistor between B1 and B2.  
 \*2 Use only when an absolute encoder. If a backup battery is connected, an encoder cable with a battery is not required.  
 \*3 The default values are ZSP (zero-speed detection) for OUTM1 and T-LIMIT (at torque limit) for OUTM2.

**Recommendable replacement**

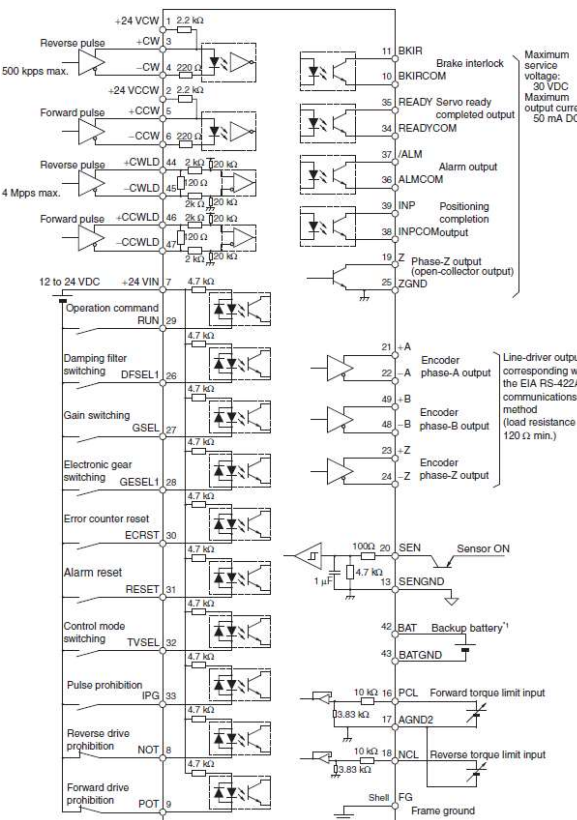
**R88D-KT08H**

**Power supply, motor and peripheral equipment**



\*1. Recommended products are listed in 4-3 Wiring Conforming to EMC Directives.  
 \*2. Recommended relay: MY relay by OMRON (24-V)  
 For example, MY2 relay by OMRON can be used with all G5-series motors with brakes because its rated induction load is 2 A (24 VDC).  
 \*3. There is no polarity on the brakes.  
 \*4. The Built-in Regeneration Resistor (KT04L, KT08H, KT10H and KT15H) shorts B2 and B3. When the amount of regeneration is large, remove the connection between B2 and B3 and connect the Regeneration Resistor between B1 and B2.  
 \*5. There is no Internal Regeneration Resistor for KTASL to KT02L, and KT01H to KT04H. When the amount of regeneration is large, connect the necessary Regeneration Resistor between B1 and B2.

**Control I/O**



\*1. A cable equipped with a battery is not required if a backup battery is connected.

**[ Characteristics ]**

Servo Drive

Item	Product discontinuation <b>R7D-BP[]</b>			Recommendable replacement <b>R88D-KT[]</b>		
	<b>A5L</b>	<b>01L</b>	<b>02L</b>	<b>A5L</b>	<b>01L</b>	<b>02L</b>
<b>Continuous output current</b>	1.0 A(rms)	1.6 A(rms)	2.5 A(rms)	1.2 A(rms)	1.7 A(rms)	2.5 A(rms)
<b>Main circuit power supply voltage</b>	Single-phase 100 to 115 VAC (85 to 127 V) 50/60 Hz			Single-phase 100 to 120 VAC (85 to 132 V) 50/60 Hz		
<b>Control circuit power supply voltage</b>	-			Single-phase 100 to 120 VAC (85 to 132 V) 50/60 Hz		
<b>Applicable Servomotors</b>	G05030H	G10030L	G20030L	K05030H	K10030L	K20030L

Item	Product discontinuation <b>R7D-BP[]</b>				Recommendable replacement <b>R88D-KT[]</b>		
	<b>01H</b>	<b>02HH</b>	<b>02H</b>	<b>04H</b>	<b>01H</b>	<b>02H</b>	<b>04H</b>
<b>Continuous output current</b>	1.0 A(rms)	1.6 A(rms)	1.6 A(rms)	2.5 A(rms)	1.2 A(rms)	1.6 A(rms)	2.6 A(rms)
<b>Main circuit power supply voltage</b>	Single-phase or 3-phase 200 to 240 VAC (170 to 264 V) 50/60 Hz				Single-phase or 3-phase 200 to 240 VAC (170 to 264 V) 50/60 Hz		
<b>Control circuit power supply voltage</b>	-				Single-phase 200 to 240 VAC (170 to 264 V) 50/60 Hz		
<b>Applicable Servomotors</b>	G05030H G10030H	G20030H	G20030H	G40030H	K05030H K10030H	K20030H	K40030H

Item	Product discontinuation <b>R88D-GP08H</b>	Recommendable replacement <b>R88D-KT08H</b>
<b>Continuous output current (rms)</b>	4.0 A	4.1 A
<b>Main circuit power supply voltage</b>	Single-phase or three-phase 200 to 240 VAC (170 to 264 V), 50/60 Hz	Single-phase or 3-phase 200 to 240 VAC (170 to 264 V) 50/60 Hz
<b>Control circuit power supply voltage</b>	Single-phase 200 to 240 VAC (170 to 264 V), 50/60 Hz	Single-phase 200 to 240 VAC (170 to 264 V) 50/60 Hz
<b>Applicable Servomotors</b>	G75030H	K75030H

## General Specifications of Servo Drive

Item	Product discontinuation <b>R7D-BP[]</b>	Recommendable replacement <b>R88D-KT[]</b>
Ambient operating temperature and operating humidity	0 to 55°C, 90% RH max. (with no condensation)	0 to +55°C, 20 to 85% max. (with no condensation)
Storage ambient temperature and humidity	-20 to 65°C, 90% RH max. (with no condensation)	-20 to +65°C, 20 to 85% max. (with no condensation) Maximum allowable temperature: 80°C for 72 hours maximum (with no condensation)
Operating and storage atmosphere	No corrosive gasses, no dust, no iron dust, no exposure to moisture or cutting oil	No corrosive gases
Vibration resistance	10 to 60 Hz; Acceleration: 5.9 m/s <sup>2</sup> (0.6 G) max.	10 to 60 Hz and at an acceleration of 5.88 m/s <sup>2</sup> or less (Not to be run continuously at the resonance point)
Insulation resistance	Between power supply/power line terminals and frame ground: 0.5 MΩ min. (at 500 VDC)	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 frame ground: 1,500 VAC for 1 min. at 50/60 Hz Between each control signal and frame ground: 500 VAC for 1 min.	Between power supply terminals/power line terminals and FG terminal: 1,500 VAC for 1 min at 50/60 Hz
Protective structure	Built into panel (IP10).	Built into panel
Pulse input frequency	Line driver: 500 kpps, Open collector: 200 kpps	Line driver: 4 Mpps, Open collector: 500 kpps

Item	Product discontinuation <b>R88D-GP08H</b>	Recommendable replacement <b>R88D-KT08H</b>
Ambient operating temperature and operating humidity	0 to 55°C, 90% RH max. (with no condensation)	0 to +55°C, 20 to 85% max. (with no condensation)
Storage ambient temperature and humidity	-20 to 65°C, 90% RH max. (with no condensation)	-20 to +65°C, 20 to 85% max. (with no condensation) Maximum allowable temperature: 80°C for 72 hours maximum (with no condensation)
Operating and storage atmosphere	No corrosive gasses	No corrosive gases
Vibration resistance	Smaller of either 10 to 60 Hz with double amplitude of 0.1 mm or acceleration of 5.88 m/s <sup>2</sup> max. in X, Y, and Z directions.	10 to 60 Hz and at an acceleration of 5.88 m/s <sup>2</sup> or less (Not to be run continuously at the resonance point)
Insulation resistance	Between power supply/power line terminals and frame ground: 0.5 MΩ min. (at 500 VDC)	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 frame ground: 1,500 VAC for 1 min. at 50/60 Hz Between each control signal and frame ground: 500 VAC for 1 min.	Between power supply terminals/power line terminals and FG terminal: 1,500 VAC for 1 min at 50/60 Hz
Protective structure	Built into panel (IP10).	Built into panel
Pulse input frequency	Line driver: 500 kpps, Open collector: 200 kpps	Line driver: 4 Mpps, Open collector: 500 kpps

## Servomotor

Item	Product discontinuation R88M-G[]			Recommendable replacement R88M-K[]			
	05030H	10030L	20030L	05030H	10030L	20030L	
Applied voltage	100 VAC 200 VAC	100 VAC		100 VAC 200 VAC	100 VAC		
Rated output [W]	50	100	200	50	100	200	
Rated torque [N·m]	0.16	0.32	0.64	0.16	0.32	0.64	
Rated rotation speed [r/min]	3000			3000			
Maximum rotation speed [r/min]	5000			6000			
Momentary maximum torque [N·m]	0.48	0.95	1.78	0.48	0.95	1.91	
Rated current [A]	1.1(rms)	1.7(rms)	2.5(rms)	1.1(rms)	1.6(rms)	2.5(rms)	
Momentary maximum current [A]	3.4(rms)	5.1(rms)	7.6(rms)	4.7(0-p)	6.9(0-p)	10.6(0-p)	
Rotor inertia [kg·m <sup>2</sup> (GD <sup>2</sup> /4)]	Without brake	2.5×10 <sup>-6</sup>	5.1×10 <sup>-6</sup>	1.4×10 <sup>-5</sup>	2.5×10 <sup>-6</sup>	5.1×10 <sup>-6</sup>	1.4×10 <sup>-5</sup>
	With brake				2.7×10 <sup>-6</sup>	5.4×10 <sup>-6</sup>	1.6×10 <sup>-5</sup>
Applicable load inertia	30 times the rotor inertia max.			30 times the rotor inertia max.			
Radiator plate dimensions (material)	100×80×t10 (Al)		130×120×t12 (Al)	100×80×t10 (Al)		130×120×t12 (Al)	
Ambient operating temperature and operating humidity	0 to 40°C, 85% RH max. (with no condensation)			0 to +40°C, 20% to 85% (with no condensation)			
Ambient storage temperature and humidity	-20 to 65°C, 85% RH max. (with no condensation)			-20 to +65°C, 20% to 85% (with no condensation) Maximum allowable temperature:80°C for 72 hours maximum (standard humidity)			
Storage and operating atmosphere	No corrosive gases			No corrosive gases			
Vibration resistance	49 m/s <sup>2</sup> max. in the X, Y, and Z directions			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 the X, Y, and Z directions			Acceleration of 98 m/s <sup>2</sup> max. 3 times each in X, Y, and Z directions			
Insulation resistance	20 MΩ min. at 500 VDC between the power terminals and FG terminal			Between power terminal and FG terminal: 20 MΩ min. (at 500 VDC)			
Dielectric strength	1,500 VAC (50 or 60 Hz) for 1 minute between the power terminals and FG terminal			1,500 VAC between power terminal and FG terminal for 1 min. 1,000 VAC between brake terminal and FG terminal for 1 min.			
Insulation grade	Type B			Type B			
Protective structure	IP65 (excluding the output shaft rotating section and lead wire ends)			IP67 (except for through-shaft parts and motor and encoder connector pins)			

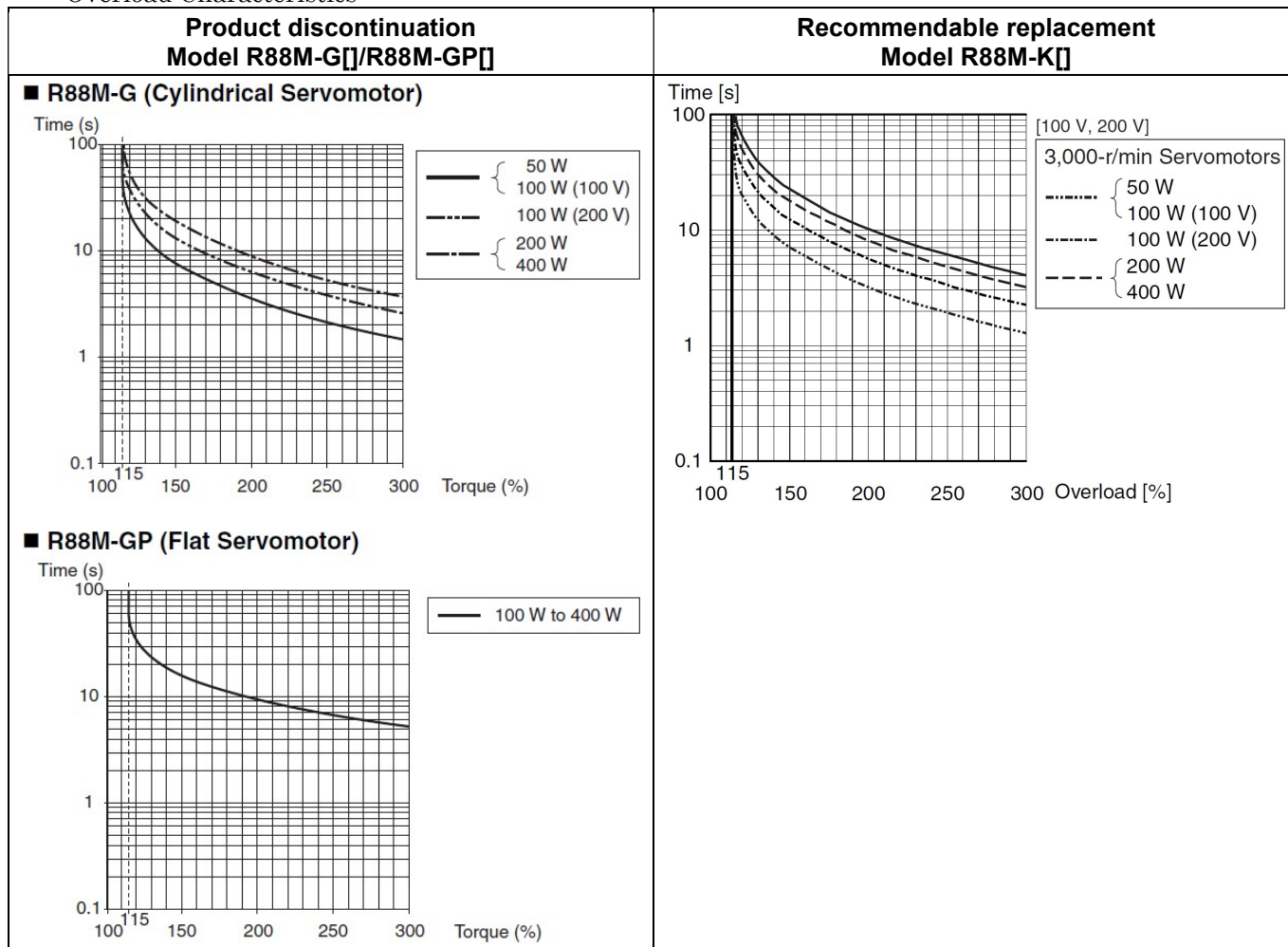
Item	Product discontinuation R88M-G[]			Recommendable replacement R88M-K[]			
	10030H	20030H	40030H	10030H	20030H	40030H	
Applied voltage	200 VAC			200 VAC			
Rated output [W]	100	200	400	100	200	400	
Rated torque [N·m]	0.32	0.64	1.3	0.32	0.64	1.3	
Rated rotation speed [r/min]	3000			3000			
Maximum rotation speed [r/min]	5000			6000			
Momentary maximum torque [N·m]	0.95	1.78	3.60	0.95	1.91	3.8	
Rated current [A]	1.1(rms)	1.6(rms)	2.6(rms)	1.1(rms)	1.5(rms)	2.4(rms)	
Momentary maximum current [A]	3.4(rms)	4.9(rms)	7.9(rms)	4.7(0-p)	6.5(0-p)	10.2(0-p)	
Rotor inertia [kg·m <sup>2</sup> (GD <sup>2</sup> /4)]	Without brake	5.1×10 <sup>-6</sup>	1.4×10 <sup>-5</sup>	2.6×10 <sup>-5</sup>	5.1×10 <sup>-6</sup>	1.4×10 <sup>-5</sup>	2.6×10 <sup>-5</sup>
	With brake				5.4×10 <sup>-6</sup>	1.6×10 <sup>-5</sup>	2.8×10 <sup>-5</sup>
Applicable load inertia	30 times the rotor inertia max.			30 times the rotor inertia max.			
Radiator plate dimensions (material)	100×80×t10 (Al)	130×120×t12 (Al)		100×80×t10 (Al)	130×120×t12 (Al)		
Ambient operating temperature and operating humidity	0 to 40°C, 85% RH max. (with no condensation)			0 to +40°C, 20% to 85% (with no condensation)			
Ambient storage temperature and humidity	-20 to 65°C, 85% RH max. (with no condensation)			-20 to +65°C, 20% to 85% (with no condensation) Maximum allowable temperature:80°C for 72 hours maximum (standard humidity)			
Storage and operating atmosphere	No corrosive gases			No corrosive gases			
Vibration resistance	49 m/s <sup>2</sup> max. in the X, Y, and Z directions			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 the X, Y, and Z directions			Acceleration of 98 m/s <sup>2</sup> max. 3 times each in X, Y, and Z directions			
Insulation resistance	20 MΩ min. at 500 VDC between the power terminals and FG terminal			Between power terminal and FG terminal: 20 MΩ min. (at 500 VDC)			
Dielectric strength	1,500 VAC (50 or 60 Hz) for 1 minute between the power terminals and FG terminal			1,500 VAC between power terminal and FG terminal for 1 min. 1,000 VAC between brake terminal and FG terminal for 1 min.			
Insulation grade	Type B			Type B			
Protective structure	IP65 (excluding the output shaft rotating section and lead wire ends)			IP67 (except for through-shaft parts and motor and encoder connector pins)			

Item	Product discontinuation R88M-GP[]					Recommendable replacement R88M-K[]					
	10030L	20030L	10030H	20030H	40030H	10030L	20030L	10030H	20030H	40030H	
Applied voltage	100 VAC		200 VAC			100 VAC		200 VAC			
Rated output [W]	100	200	100	200	400	100	200	100	200	400	
Rated torque [N·m]	0.32	0.64	0.32	0.64	1.3	0.32	0.64	0.32	0.64	1.3	
Rated rotation speed [r/min]	3000					3000					
Maximum rotation speed [r/min]	5000					6000					
Momentary maximum torque [N·m]	0.85	1.86	0.90	1.82	3.60	0.95	1.91	0.95	1.91	3.8	
Rated current [A]	1.6(rms)	2.5(rms)	1.0(rms)	1.6(rms)	4.4(rms)	1.6(rms)	2.5(rms)	1.1(rms)	1.5(rms)	2.4(rms)	
Momentary maximum current [A]	6.9(0-p)	10.5(0-p)	4.3(0-p)	6.8(0-p)	18.6(0-p)	6.9(0-p)	10.6(0-p)	4.7(0-p)	6.5(0-p)	10.2(0-p)	
Rotor inertia [kg·m <sup>2</sup> (GD <sup>2</sup> /4)]	Without brake	9.0×10 <sup>-6</sup>	3.4×10 <sup>-5</sup>	9.0×10 <sup>-6</sup>	3.4×10 <sup>-5</sup>	6.4×10 <sup>-5</sup>	5.1×10 <sup>-6</sup>	1.4×10 <sup>-5</sup>	5.1×10 <sup>-6</sup>	1.4×10 <sup>-5</sup>	2.6×10 <sup>-5</sup>
	With brake						5.4×10 <sup>-6</sup>	1.6×10 <sup>-5</sup>	5.4×10 <sup>-6</sup>	1.6×10 <sup>-5</sup>	2.8×10 <sup>-5</sup>
Applicable load inertia	20 times the rotor inertia max.					30 times the rotor inertia max.					
Radiator plate dimensions (material)	130×120×t10 (Al)	170×160×t12 (Al)	130×120×t10 (Al)	170×160×t12 (Al)		100×80×t10 (Al)	130×120×t12 (Al)	100×80×t10 (Al)	130×120×t12 (Al)		
Ambient operating temperature and operating humidity	0 to 40°C, 85% RH max. (with no condensation)					0 to +40°C, 20% to 85% (with no condensation)					
Ambient storage temperature and humidity	-20 to 65°C, 85% RH max. (with no condensation)					-20 to +65°C, 20% to 85% (with no condensation) Maximum allowable temperature:80°C for 72 hours maximum (standard humidity)					
Storage and operating atmosphere	No corrosive gases					No corrosive gases					
Vibration resistance	49 m/s <sup>2</sup> max. in the X, Y, and Z directions					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 the X, Y, and Z directions					Acceleration of 98 m/s <sup>2</sup> max. 3 times each in X, Y, and Z directions					
Insulation resistance	20 MΩ min. at 500 VDC between the power terminals and FG terminal					Between power terminal and FG terminal: 20 MΩ min. (at 500 VDC)					
Dielectric strength	1,500 VAC (50 or 60 Hz) for 1 minute between the power terminals and FG terminal					1,500 VAC between power terminal and FG terminal for 1 min. 1,000 VAC between brake terminal and FG terminal for 1 min.					
Insulation grade	Type B					Type B					
Protective structure	IP65 (excluding the output shaft rotating section and lead wire ends)					IP67 (except for through-shaft parts and motor and encoder connector pins)					



[ Operation ratings ]

Overload Characteristics



Incremental Encoder Specifications

Item	Product discontinuation Model R88M-G[]/R88M-GP[]	Recommendable replacement Model R88M-K[]
<b>Encoder system</b>	Optical encoder	Optical encoder 20 bits
<b>Number of output pulses</b>	Phases A and B: 2,500 pulses/rotation Phase Z: 1 pulse/rotation	Phases A and B: 262,144 pulses/rotation Phase Z: 1 pulse/rotation
<b>Power supply voltage</b>	5 VDC ±5%	5 VDC ±5%
<b>Power supply current</b>	180 mA (max.)	180 mA (max.)
<b>Output signals</b>	+S, -S	+S, -S
<b>Output interface</b>	RS-485 compliance	RS-485 compliance

[ Operation methods ]

Item	Product discontinuation Model R7D-BP[]/R88D-GP08H	Recommendable replacement Model R88D-KT[]
<b>Parameter Unit</b>	SS2 Series can be operated or monitored with the Parameter Unit. Also, SS2 Series can be set up the parameters with the PC Tools.	OMNUC G5 Series doesn't support the Parameter Unit. Please set up the parameters with the PC Tools.
<b>RS232/485 communications</b>	Available	Not available (Substitute with USB)

Specifications and prices in this product news are as of the issue date and are subject to change without notice.  
Only main changes in specifications are described in this document. Please be sure to read the relevant catalogs, datasheets, product specifications, instructions, and manuals for precautions and necessary information when using products.