

Product Discontinuation Notices

Issue Date
Month Day, Year
September 2023

Product Discontinuation

Recommended Replacement

Servo Driver

Servo Driver

R88D-KT[]

R88D-GT[] R88D-GN[]-ML2

R88D-KN[]-ML2

R88D-GP08H

R88D-KT08H

Servo Motor

Servo Motor



R88M-G[]S-[] R88M-G[]T-[]-D R88M-GP[]S-[] R88M-GP[]T-[]

R

R88M-K[]S-[] R88M-K[]T-[] R88M-K[]T-[] R88M-K[]S-[]

R88M-K[]T-[]

R88M-GP[]T-[]-D

[Final order entry date]

The end of October, 2024

[Date of The Last Shipping]

The end of March, 2025

[Scheduled date of maintenance close]

The end of March, 2031

[Caution on recommended replacement]

- 1. R88D-GP08H is part of the SmartStep2 Series lineup, but it will be discontinued with G Series.
- 2. G5 Series does not have the flat type motors(R88M-GP[]). Please replace with the standard type motors.
- 3. G5 Series does not have the 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.
- 4. The mounting dimensions are not same between R88M-G1K030T-[](flange dimension:90×90) and R88M-K1K030T-[](flange dimension:100×100).
- 5. The parameters are different between G series and G5 series. Please refer to the Replace Guides (I877-E1, I878-E1).

[Difference from discontinued product]

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Recommended replacement Model	Body Color	Dimen- sions	Wire connection	Mounting Dimensions	Charac- teristics	Operation ratings	Operation methods
R88D-KT[]		*		**	*		
R88D-KN[]-ML2		*		**	*		
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]

Floudet Discontinuation and recommende	ou replacement j
Product discontinuation	Recommended replacement
R88D-GT02L	R88D-KT02L
R88D-GT04L	R88D-KT04L
R88D-GT01H	R88D-KT01H
R88D-GT02H	R88D-KT02H
R88D-GT04H	R88D-KT04H
R88D-GT08H	R88D-KT08H
R88D-GT10H	R88D-KT10H
R88D-GT15H	R88D-KT15H
R88D-GN01H-ML2	R88D-KN01H-ML2
R88D-GN02H-ML2	R88D-KN02H-ML2
R88D-GN04H-ML2	R88D-KN04H-ML2
R88D-GN08H-ML2	R88D-KN08H-ML2
R88D-GN10H-ML2	R88D-KN10H-ML2
R88D-GN15H-ML2	R88D-KN15H-ML2
R88D-GN20H-ML2	R88D-KN20H-ML2
R88D-GN30H-ML2	R88D-KN30H-ML2
R88D-GP08H	R88D-KT08H
R88M-G05030T-S2	R88M-K05030T-S2
R88M-G05030T-S2-D	R88M-K05030T-S2
R88M-G05030T-B	R88M-K05030T-B
R88M-G05030T-BS2	R88M-K05030T-BS2
R88M-G05030T-BS2-D	R88M-K05030T-BS2
R88M-G10030S	R88M-K10030S
R88M-G10030S-O	R88M-K10030S-O
R88M-G10030S-S2	R88M-K10030S-S2
R88M-G10030S-OS2	R88M-K10030S-OS2
R88M-G10030S-B	R88M-K10030S-B
R88M-G10030S-BO	R88M-K10030S-BO
R88M-G10030S-BS2	R88M-K10030S-BS2
R88M-G10030S-BOS2	R88M-K10030S-BOS2
R88M-G20030S	R88M-K20030S
R88M-G20030S-O	R88M-K20030S-O
R88M-G20030S-S2	R88M-K20030S-S2
R88M-G20030S-OS2	R88M-K20030S-OS2
R88M-G20030S-B	R88M-K20030S-B
R88M-G20030S-BO	R88M-K20030S-BO
R88M-G20030S-BS2	R88M-K20030S-BS2
R88M-G20030S-BOS2	R88M-K20030S-BOS2
R88M-G40030S	R88M-K40030S
R88M-G40030S-O	R88M-K40030S-O
R88M-G40030S-S2	R88M-K40030S-S2
R88M-G40030S-OS2	R88M-K40030S-OS2
R88M-G40030S-B	R88M-K40030S-B
R88M-G40030S-BO	R88M-K40030S-BO
R88M-G40030S-BS2	R88M-K40030S-BS2
R88M-G40030S-BOS2	R88M-K40030S-BOS2
R88M-G10030T-S2	R88M-K10030T-S2
R88M-G10030T-S2-D	R88M-K10030T-S2
R88M-G10030T-S2-D	R88M-K10030T-S2

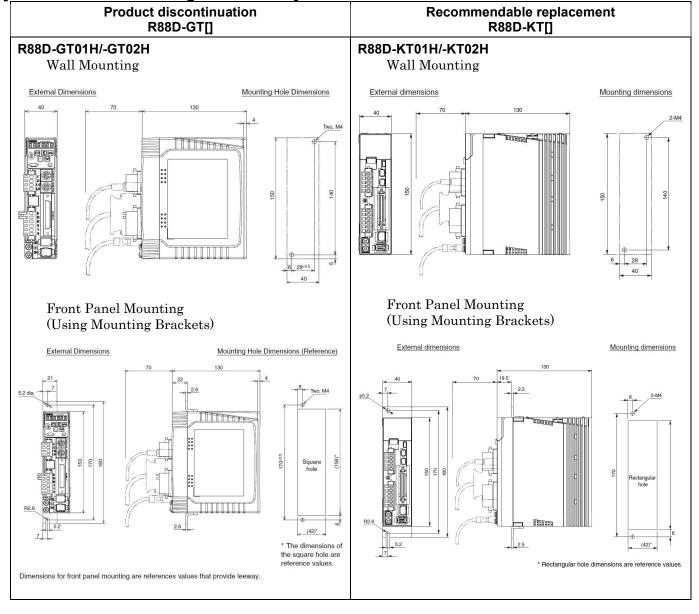
Product discontinuation	Recommended replacement
R88M-G10030T-B	R88M-K10030T-B
R88M-G10030T-BS2	R88M-K10030T-BS2
R88M-G10030T-BS2-D	R88M-K10030T-BS2
R88M-G20030T-S2	R88M-K20030T-S2
R88M-G20030T-S2-D	R88M-K20030T-S2
R88M-G20030T-B	R88M-K20030T-B
R88M-G20030T-BS2	R88M-K20030T-BS2
R88M-G20030T-BS2-D	R88M-K20030T-BS2
R88M-G40030T	R88M-K40030T
R88M-G40030T-S2	R88M-K40030T-S2
R88M-G40030T-S2-D	R88M-K40030T-S2
R88M-G40030T-B	R88M-K40030T-B
R88M-G40030T-BS2	R88M-K40030T-BS2
R88M-G40030T-BS2-D	R88M-K40030T-BS2
R88M-G75030T	R88M-K75030T
R88M-G75030T-S2	R88M-K75030T-S2
R88M-G75030T-S2-D	R88M-K75030T-S2
R88M-G75030T-B	R88M-K75030T-B
R88M-G75030T-BS2	R88M-K75030T-BS2
R88M-G75030T-BS2-D	R88M-K75030T-BS2
R88M-G1K030T-S2	R88M-K1K030T-S2
R88M-G1K030T-BS2	R88M-K1K030T-BS2
R88M-G1K530T-S2	R88M-K1K530T-S2
R88M-G1K530T-B	R88M-K1K530T-B
R88M-G1K530T-BS2	R88M-K1K530T-BS2
R88M-GP10030S	R88M-K10030S
R88M-GP10030S-O	R88M-K10030S-O
R88M-GP10030S-S2	R88M-K10030S-S2
R88M-GP10030S-OS2	R88M-K10030S-OS2
R88M-GP10030S-B	R88M-K10030S-B
R88M-GP10030S-BO	R88M-K10030S-BO
R88M-GP10030S-BS2	R88M-K10030S-BS2
R88M-GP10030S-BOS2	R88M-K10030S-BOS2
R88M-GP20030S	R88M-K20030S
R88M-GP20030S-O	R88M-K20030S-O
R88M-GP20030S-S2	R88M-K20030S-S2
R88M-GP20030S-OS2	R88M-K20030S-OS2
R88M-GP20030S-B	R88M-K20030S-B
R88M-GP20030S-BO	R88M-K20030S-BO
R88M-GP20030S-BS2	R88M-K20030S-BS2
R88M-GP20030S-BOS2	R88M-K20030S-BS2
R88M-GP40030S	R88M-K40030S
R88M-GP40030S-O	R88M-K40030S-O
R88M-GP40030S-S2	R88M-K40030S-S2
R88M-GP40030S-OS2	R88M-K40030S-OS2
R88M-GP40030S-B	R88M-K40030S-B
R88M-GP40030S-BO	R88M-K40030S-BO
R88M-GP40030S-BS2	R88M-K40030S-BS2
R88M-GP40030S-BOS2	R88M-K40030S-BOS2

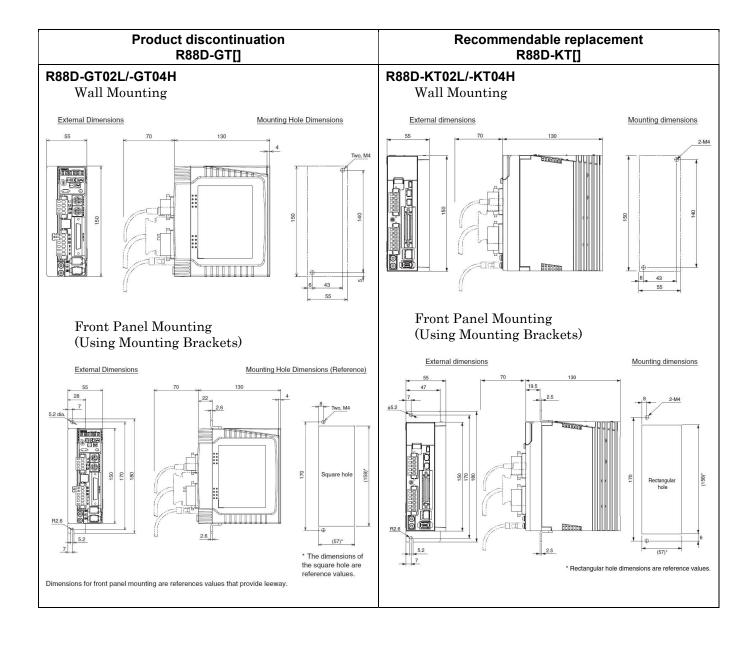
Product discontinuation	Recommended replacement
R88M-GP10030T-S2	R88M-K10030T-S2
R88M-GP10030T-S2-D	R88M-K10030T-S2
R88M-GP10030T-BS2-D	R88M-K10030T-BS2
R88M-GP20030T-S2-D	R88M-K20030T-S2
R88M-GP20030T-BS2-D	R88M-K20030T-BS2
R88M-GP40030T-S2	R88M-K40030T-S2
R88M-GP40030T-S2-D	R88M-K40030T-S2
R88M-GP40030T-BS2-D	R88M-K40030T-BS2
R88M-G1K020T-S2	R88M-K1K020T-S2
R88M-G1K020T-BS2	R88M-K1K020T-BS2
R88M-G1K520T-S2	R88M-K1K520T-S2
R88M-G1K520T-BS2	R88M-K1K520T-BS2
R88M-G2K020T	R88M-K2K020T
R88M-G2K020T-S2	R88M-K2K020T-S2
R88M-G90010T-BS2	R88M-K90010T-BS2

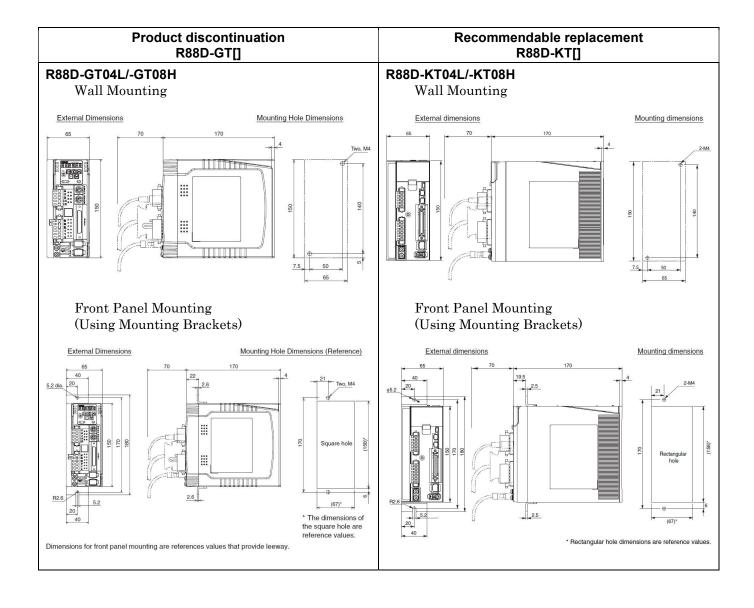
[Body color]

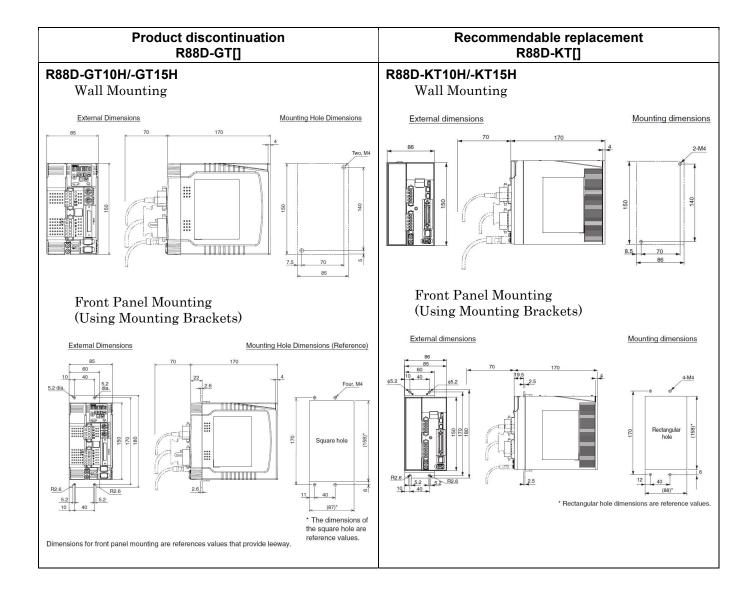
Product discontinuation	Recommendable replacement
R88D-GT[]/R88D-GN[]-ML2/R88D-GP08H	R88D-KT[]/R88D-KN[]-ML2
R88M-G[]	R88M-K[]
R88D-GT[]/R88D-GN[]-ML2/R88D-GP08H Ivory white R88M-G[] Silver, Black	R88D-KT[]/R88D-KN[]-ML2 Black R88M-K[] Silver, Black

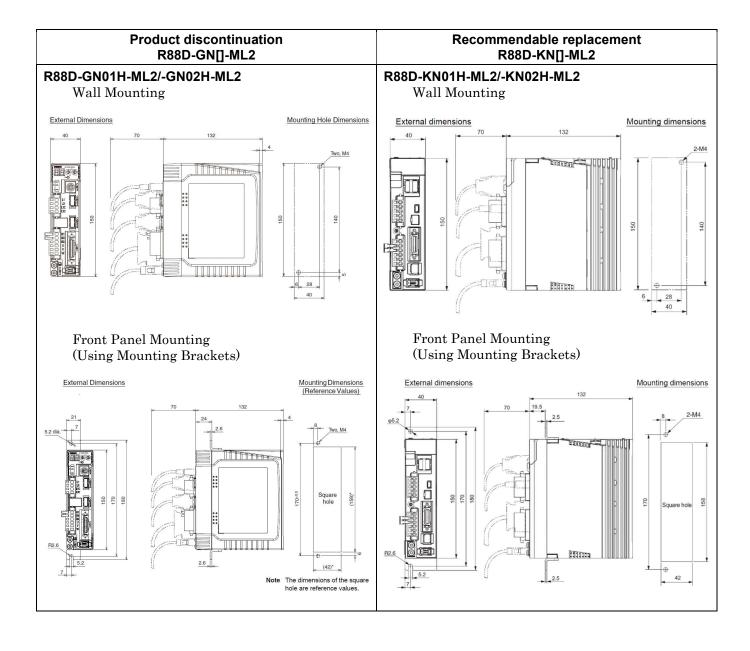
[Dimensions & Mounting dimensions]

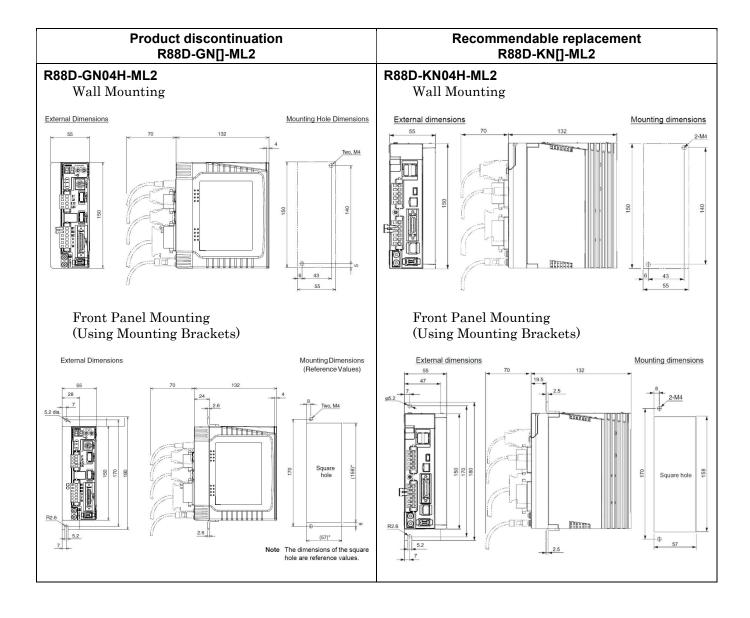


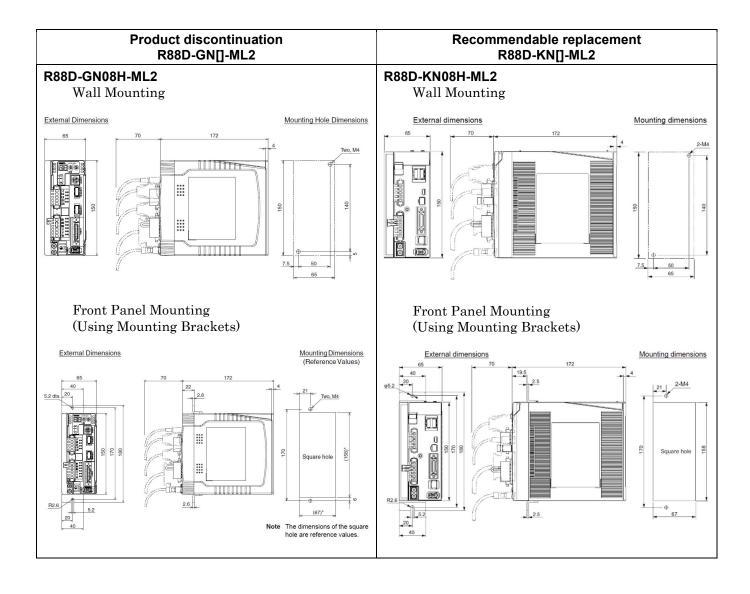


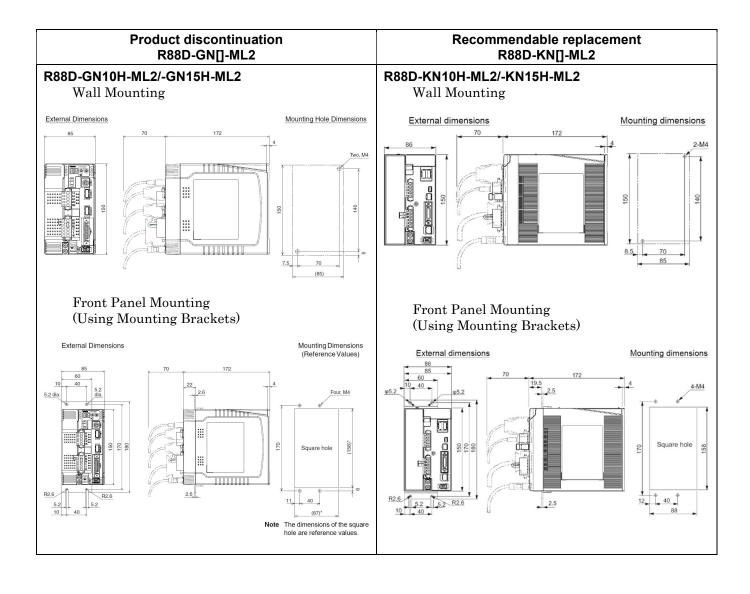


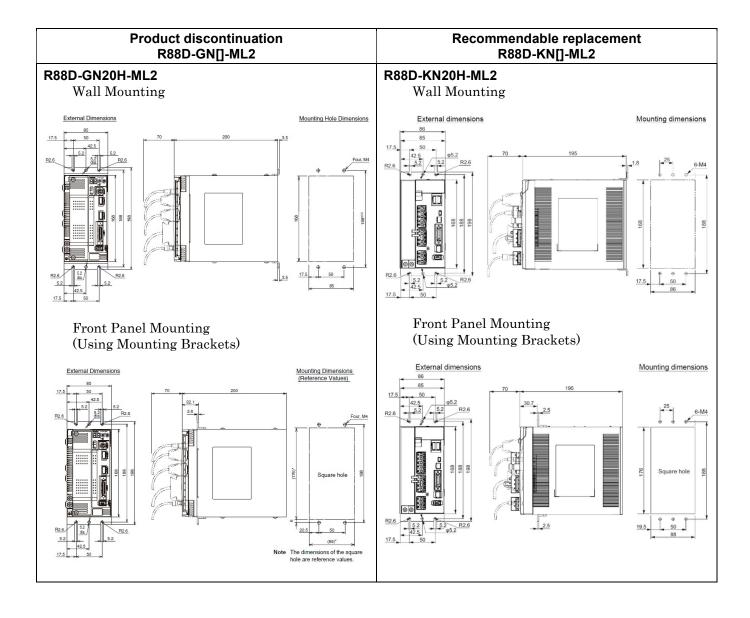


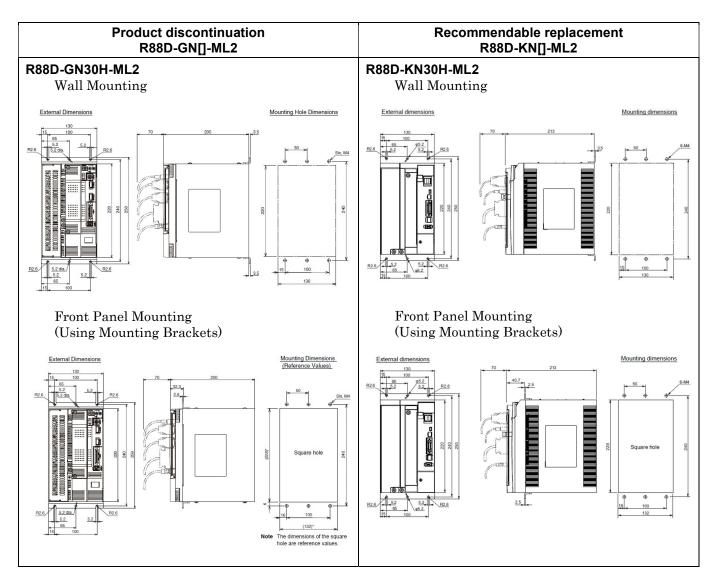


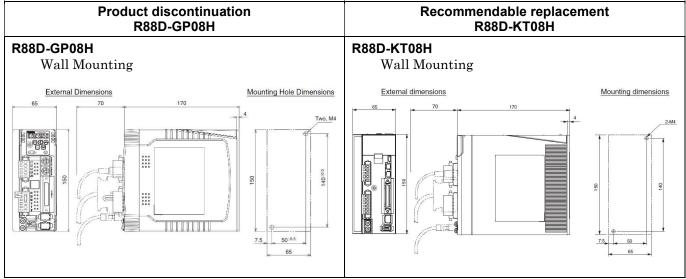






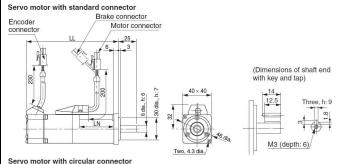


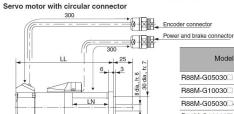




Product discontinuation R88M-G[]

R88M-G05030T-[]/-G10030S-[]/-G10030T-[] -G05030T-[]-D/-G10030T-[]-D





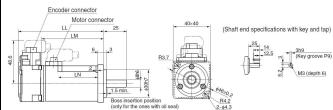
Model	Dimensi	ons (mm)
Model	LL	LN
R88M-G05030	72	26.5
R88M-G10030	92	46.5
R88M-G05030□-B□	102	26.5
R88M-G10030 -B	122	46.5

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[]

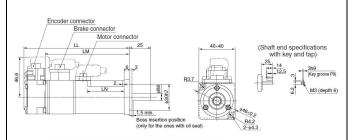
R88M-K05030T-[]/-K10030S-[]/-K10030T-[]

Without brake



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

With brake



Dimensions (mm)								
LL	LM	LN						
102	78	23						
122	98	43						
	LL 102	LL LM 102 78						

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.

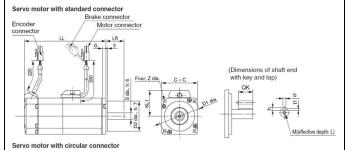
Models with an oil seal are indicated with O at the end of the model number. The motor dimensions

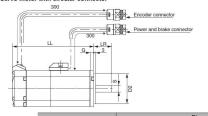
Models with an oil seal are indicated with O at the end of the model number. The motor dimensio do not change.

Product discontinuation R88M-G[]

R88M-G20030S-[]/-G40030S-[]

-G20030T-[]/-G40030T-[]/-G75030T-[] -G20030T-[]-D/-G40030T-[]-D/-G75030T-[]-D





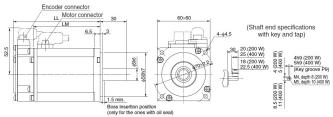
Model	Dimensions (mm)																		
	LL	LR	S	D1	D2	С	G	KL1	Z	QK	b	h	М	t1	L				
R88M-G20030□	79.5		20	30		70 50	50 00	60 6.5	43	43 4.5	18	4h9	4	M4	2.5	8			
R88M-G40030	99	30	14	70	70 50	60	6.5	43	4.5	22.5	5h9	5	M5	3	10				
R88M-G75030	112.2	35	19	19 90 70 80 8 53 6	22	6h9	6	IVIO	3.5	10									
R88M-G20030□-B□	116		30 70 50	20	20		11	70	50	60	6.5	43	4.5	18	4h9	4	M4	2.5	8
R88M-G40030□-B□	135.5			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	IVIO	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[]

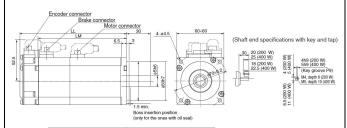
R88M-K20030S-[]/-K40030S-[] -K20030T-[]/-K40030T-[]

Without brake



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

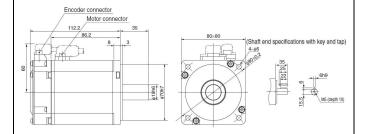
With brake



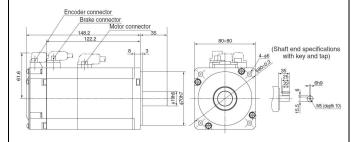
Model	Dimensions (mm)								
Woder	LL	LM	S						
R88M-K20030 -B	116	93	11						
R88M-K40030□-B□	135.5	112.5	14						

R88M-K75030T-[]

Without brake



With brake



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.

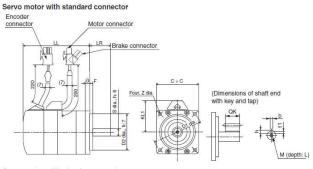
Models with an oil seal are indicated with O at the end of the model number. The motor dimensions

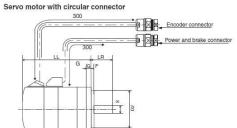
Product discontinuation R88M-G[]

R88M-GP10030S-[]/-GP20030S-[]/-GP40030S-[] -GP10030T-[]/-GP20030T-[]/-GP40030T-[]

-GP10030T-[]-D/-GP20030T-[]-D

-GP40030T-[]-D





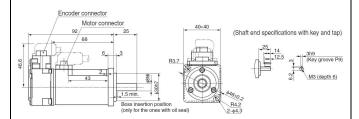
Model		Dimensions (mm)															
Model	LL	LR	S	D1	D2	С	F	G	KL1	Z	QK	b	h	tt	М	L	
R88M-GP10030S R88M-GP10030T	87.5	25	8	70	50	60	3	7	43	4.5	12.5	3h9	3	1.8	МЗ	6	
R88M-GP20030S R88M-GP20030T	94.5	30	11	90	70	80	5	8	53	5.5	18	4h9	4	2.5	M4	8	
R88M-GP40030S R88M-GP40030T	109.5	30	14	90	70	80	5	0	33	5.5	22.5	5h9	5	3	M5	10	
R88M-GP10030S-B R88M-GP10030T-B	111.5	25	8	70	50	60	3	7	43	4.5	12.5	3h9	3	1.8	МЗ	6	
R88M-GP20030S-B R88M-GP20030T-B	127	30 -		11	90	70	80	5	8	53	5.5	18	4h9	4	2.5	M4	8
R88M-GP40030S-B R88M-GP40030T-B	142		14	90	70	00	0	8	53	5.5	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.

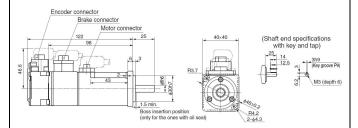
Recommendable replacement R88M-K[]

R88M-K10030S-[]/-K10030T-[]

Without brake

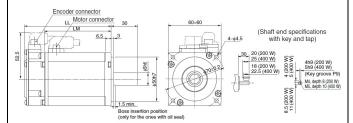


With brake



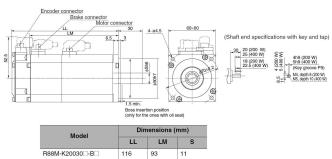
R88M-K20030S-[]/-K40030S-[] -K20030T-[]/-K40030T-[]

Without brake



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

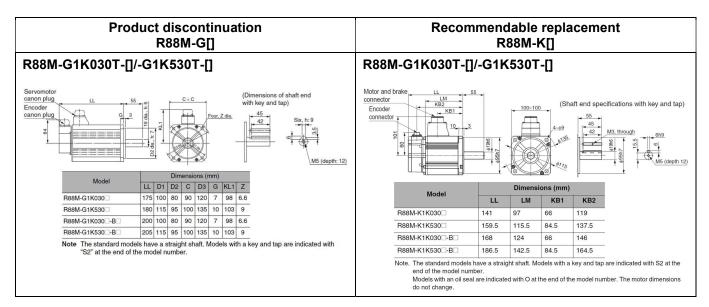
With brake

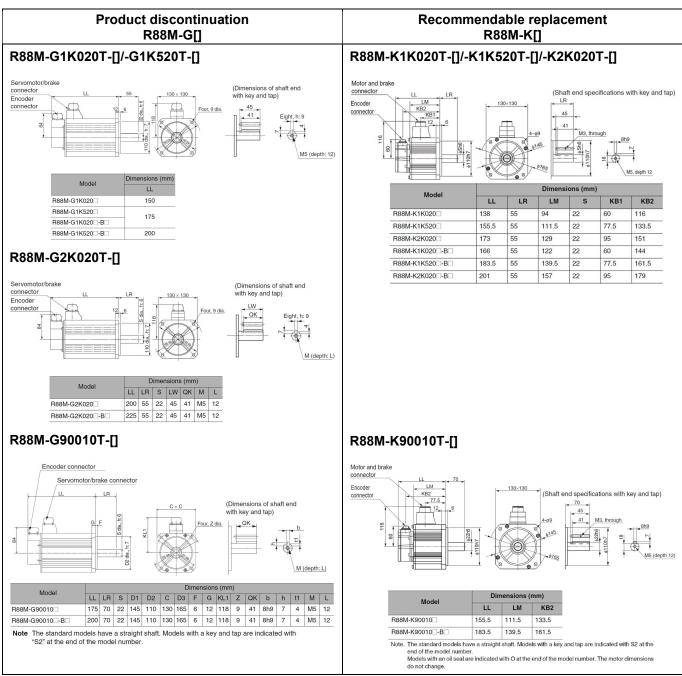


Model	Dir	nensions	(mm)	
Wodel	LL	LM	S	
R88M-K20030 -B	116	93	11	
R88M-K40030□-B□	135.5	112.5	14	

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.

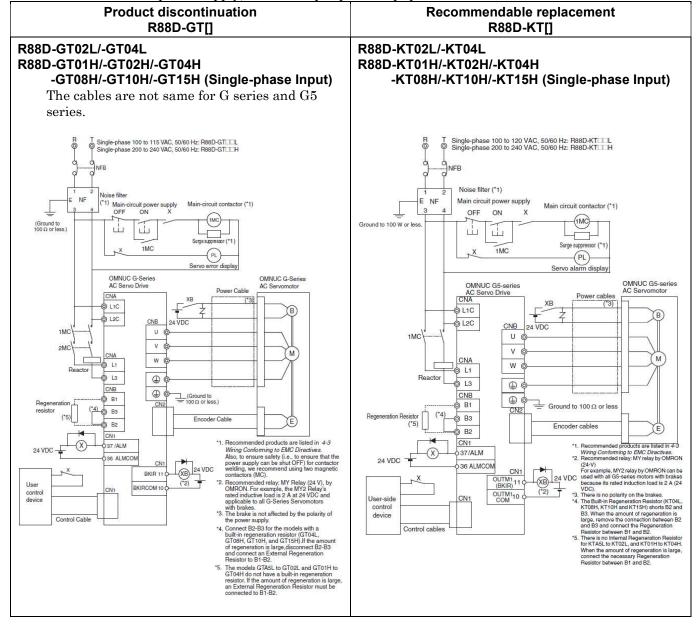
Models with an oil seal are indicated with O at the end of the model number. The motor dimensions do not change

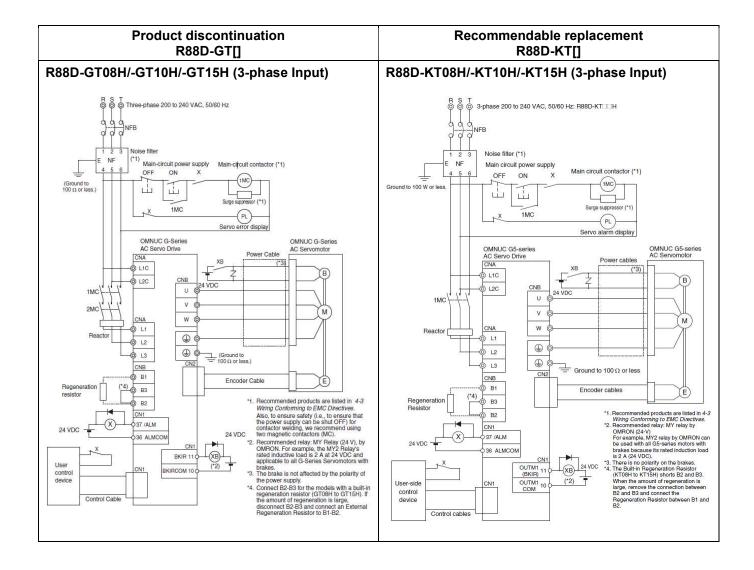




[Wire connection]

Wire connection of power supply, motor and peripheral equipment

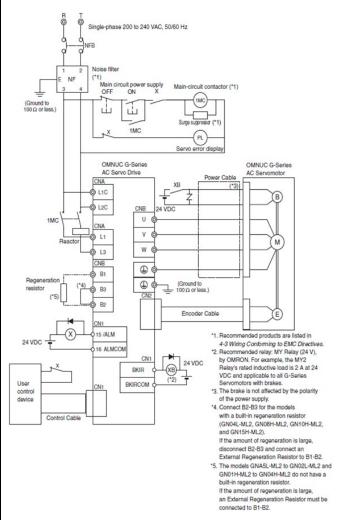




Product discontinuation R88D-GN[]-ML2

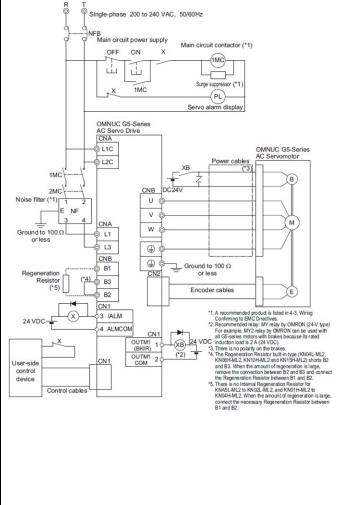
R88D-GN01H-ML2/-GN02H-ML2/-GN04H-ML2 -GN08H-ML2/-GN10H-ML2/-GN15H-ML2 (Single-phase Input)

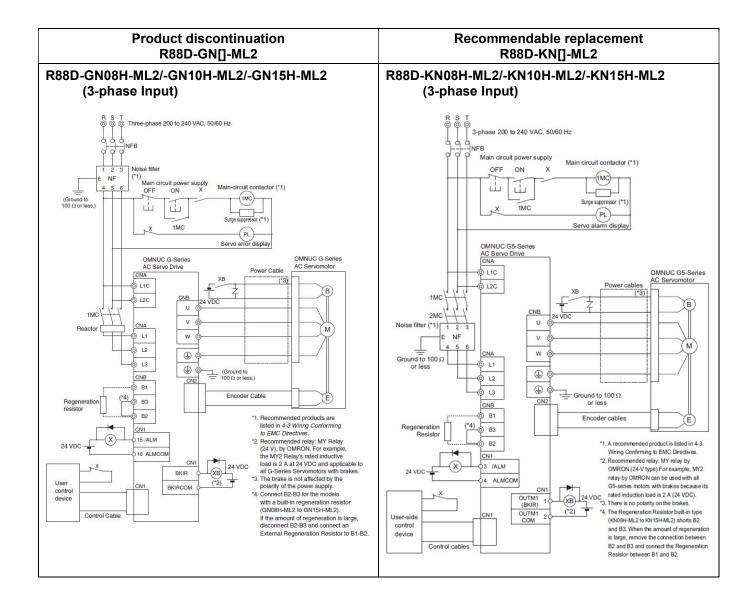
The cables are not same for G series and G5 series.



Recommendable replacement R88D-KN[]-ML2

R88D-KN01H-ML2/-KN02H-ML2/-KN04H-ML2 -KN08H-ML2/-KN10H-ML2/-KN15H-ML2 (Single-phase Input)





Product discontinuation Recommendable replacement R88D-GN[]-ML2 R88D-KN[]-ML2 R88D-GN20H-ML2/-GN30H-ML2 R88D-KN20H-ML2 Main circuit power supply Main circuit contactor (*1) ON (1MC) *1) Main circuit power supply OFF ON X Ш Main-circuit contactor (*1) Surge suppressor (*1) (IMC) (Ground to 100 Ω or less.) PL Ш Servo alarm display Surge sup 1MC OMNUC G5-Series AC Servo Drive CNA OMNUC G-Series OMNUC G-Series) L1C AC Servo Drive AC Servomotor ⊚ L2C TB1 L1C CNB 2MC \Noise filter (*1) 1 L2C U U 1MC V TB1 M w L1 Ground to 100 Ω) L1 L2 **(1)** 4 L2 L3 ⊕ (4 L3 (Ground to 100 Ω or less.) B1 CN2 CNC В3) B1 Encoder Cable (E) В3 *I. Recommended products are listed in 4-3 Wining Conforming to EMC Directives. 2. Recommended relay: MY Relay (24 V), by OMRON. For example, the MY2 Relay's rated inductive load is 2 A at 24 VDC and applicable to all G-Series Servomotors with brakes. 3. The brake is not affected by the polarity of the power supply. 4. Connect B2-B3 for the models with a built-in regeneration resistor (GN2OH-ML2 to GN5OH-ML2). If the amount of regeneration is large, disconnect B2-B3 and connect an External Regeneration Resistor to B1-B2. B2 *1. A recommended product is listed in 4-3, Wiring Confirming to EMC Directives. *2. Recommended relay: MY relay by OMRON (24-V bye) For example, MY2 relay by OMRON can be used with all G5-series motions with brakes because its G5-series motions with brakes because its and induction load is 2 A (24-VDC). *3. There is no polarity on the brakes. *4. The Regeneration Resistor bull-in type (INXQH-MLZ) shorts 82 and 83. When the amount of regeneration is large. B2 CN1 CN1 15 /ALM 3 /ALM 4 ALMCOI XB 24 VDC *3. CN1 XB 24 VDC BKIRCOM User-side control the amount of regeneration is large, remove the connection between B2 and B3 and connect the Regeneration Resistor between B1 and B2. device Control Cable R88D-KN30H-ML2 S T () () 3-phase 200 to 230VAC 50/60Hz Main circuit power supply Main circuit contactor (*1) ON ш Surge sup 1MC PL OMNUC G5-Series AC Servo Drive TB1 L1C OMNUC G5-Series L2C B TB1 U 2MC M W TB1 Ground to 100 Ω **(** L2 (1) (= Ground to 100 Ω or less L3 CN2 B1 Encoder cables В3 *1. A recommended product is listed in 4-3, Wiring Confirming to EMC Directives. *2. Recommended relay. MY relay by OMRON (24-V type) For example, MY2 relay by OMRON can be used with all G5-series motors with brakes because its В2 CN1 4 ALMCOM rated induction load is 2 A (24 VDC). XB 24 Tated induction load is 2 A (24 VDC). 3. There is no pointify on the brakes. 4. The Regeneration Resistor built-in type (KN50H-ML2, KN50H-ML2) connects 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. (*2) User-side control device OUTM1 2

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

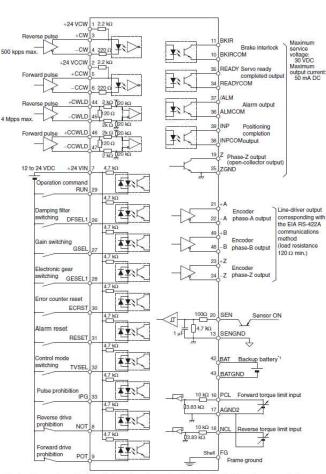
Product discontinuation R88D-GT[] +24VCW 1 2.2 kΩ +cw[3 -cw 4 220 Ω ▼ \ Maximum operating voltage: 30 VDC Maximum output current: 50 mA DC ¥\ +24VCCW 2 2.2 kΩ 35 READY +CCW[5 Servo Ready Output 34 READYCOM -CCW 6 220 Ω ¥ \$ > **▼**\ +CWLD 44 3kQ 43kQ -CWLD 45 110 Q 3 kQ 043 kQ /ALM Alarm Output 36 ALMCOM ¥\ < +CCWLD 46 3KQ 043 kQ -CCWLD 47 110 Q 3KQ 043 kQ 39 INP Positioning Completed Output 38 INPCOM ¥× K 12 to 24 VDC +24VIN ¥ \ General-purpose Output 1 RUN Command Input RU **4****(41 COM power supply: 12 VDC -5% to 24 VDC +5% Vibration Filter Switch **4***< Z Phase-Z Output (open collector output) ZCOM Gain Switch Input **4****C Conforms to EIA RS-422A (Recommended Electronic Gear Switch Input GESE **4****C Load resistance 120 to 180 Ω) TY:C Alarm Reset Input ***** 100 Ω 20 SEN SENGND Control Mode Switch Input TVSE 科人 42 BAT Backup Battery Input *1 43 BATCOM Pulse Prohibit Input 10 kΩ 16 PCL Forward Torque Limit Input D3,83 kΩ 17 AGND Reverse Drive Prohibit Input NO 松人 10 kΩ 18 NCL Reverse Torque Limit Input Forward Drive Prohibit Input 松人 Frame ground *1. If a backup battery is connected, a cable with a battery is not required.

CN1 Pin Arrangement

		24-V Open- collector Input	1	+24VCW	collector Input for Command Pulse	_	GSEL/TLSEL	Gain Switch/	26	VZERO/DF SEL/PNSEL	Input/Vibration Filter Switch/Speed Command Rotation Direction Switch
2	+24VCCW	for Command Pulse Reverse Pulses Input/	3	+CW/ +PULS/+FA	Reverse Pulses Input/ Feed Pulses Input, or 90° Phase Difference	2/	GSELTILSEL	Torque Limit Switch	28	GESEL/ VSFL3	Electronic Gear Switch/ Internally Set
4	-CW/ -PULS/-FA	Feed Pulses Input, or 90° Phase Difference Pulse Input (Phase A)		+CCW/	Pulse Input (Phase A) Forward Pulses/ Direction Signal, or	29	RUN	RUN Command			Speed Selection 3 Deviation Counte Reset/Internally
6	-CCW/	Forward Pulses/ Direction Signal, or	5	+SIGN/+FB	90° Phase Difference Pulse Input (Phase B)	31	RESET	Alarm Reset	30	ECRST/VSEL2	Set Speed Selection 2
_	-SIGN/-FB	90° Phase Difference Pulse Input (Phase B)	7	+24VIN	12 to 24-VDC Power Supply	Ĺ		Input Pulse Prohibit	32	TVSEL	Control Mode Switch Input
8	NOT	Reverse Drive Prohibit Input			Input Forward Drive	33	IPG/VSEL1	Input/Internally Set Speed Selection 1	6 %		Servo Ready
10	BKIRCOM	Brake Interlock	9	POT	Prohibit Input	35	READY	Servo Ready	34	READYCOM	Output
.0	Distriction	Output	11	BKIR	Brake Interlock	00	TIEADT	Output	36	ALMCOM	Alarm Output
12	OUTM1	General- purpose Output 1			Output	37	/ALM	Alarm Output		INPCOM/	Positioning Completed
14	REF/TREF1/	Speed Command Input/Torque	13	SENGND	Ground Common	20	INP/TGON	Positioning Completed Output/Servomotor	38	TGONCOM/	Output/Servemeter Rotation Speed Delection Output Common
14	VLIM	Command Input/ Speed Limit Input	15	AGND	Sensor Input	39	INP/TGON	Rotation Speed Detection Output	40	OUTM2	General- purpose
16	PCL/TREF2	Forward Torque Limit Input/ Torque		200000000	Ground	41	сом	General- purpose Output	-	1.000-0.000-0.000	Output 2 Absolute
	NCL	Command Input Reverse	17	AGND	Sensor Input Ground			Absolute Encoder	42	BAT	Encoder Backup Battery Input
18	NCL	Torque Limit Input	19	Z	Phase-Z Output (open	43	BATGND	Backup Battery Input	44	+CWLD	Reverse Pulse (input for line
20	SEN	Sensor ON Input			collector)	45	-CWLD	Reverse Pulse (input for line			driver only) Forward Pulse
		Encoder	21	+A	Phase-A + Output		021007	driver only) Forward Pulse	46	+CCWLD	(input for line driver only)
22	-A	Phase-A Output	23	+Z	Encoder Phase-Z	47	-CCWLD	(input for line driver only)	48	-В	Encoder Phase-B
24	-Z	Encoder Phase-Z	20		+ Output	49	+B	Encoder Phase-B			- Output
		Output	25	ZCOM	Phase-Z Output (open collector) Common	H		+ Output	50		*

24-V Open-

Recommendable replacement R88D-KT[]



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

CN1 Pin Arrangement

_		24-V	1	PCOM	24-V open-collector input for	L		General-purpose	26	SI3 ²	General-purpose
2	PCOM	open-collector input for	-	+CW/	command pulse Reverse pulses,	27	SI4 (GSEL)	input 4 (gain switching)	H		General-purpose
4	-CW/	Reverse pulses, feed pulses, or 90°	3	+PULS/+FA	feed pulses, or 90° phase difference signal (phase A)	29	SI6	General-purpose	28	SI5 ^{*2}	input 5*2
4	-PULS/-FA	phase difference signal (phase A) Forward pulse.	5	+CCW/ +SIGN/+FB	Forward pulse, direction signal, or 90°phase difference	29	(RUN)	input 6 (operation command)	30	SI7 ²	General-purpose
6	-CCW/ -SIGN/-FB	direction signal, or 90° phase difference		+OIGIV+I D	signal (phase B)	31	SI8 (RESET)	General-purpose input 8 (alarm		0.000	General-purpose
		signal (phase B) General-purpose	7	+24VIN	power supply input			reset input) General-purpose	32	SI9 (TVSEL)	input 9 (control mode switching)
8	SI1 (NOT)	input 1 (reverse drive prohibition input)		SI2	General-purpose	33	SI10 ¹²	input10*2			General-purpose output 2
10	SO1COM	General-purpose output 1	9	(POT)	input 2 (forward drive prohibition input)	35	SO2	General-purpose output 2 (servo ready	34	SO2COM	common
	00100111	common	11	SO1 (BKIR)	General-purpose input 1 (brake		(READY)	completed output)	36	ALMCOM [SO3COM]	Alarm output common [general-purpose
12		-1	H	(DKIN)	interlock output)	37	(SO3)	Alarm output [general-purpose output 3]		[DOCCOM]	output 3 common] General-purpose
	REF/TREF1/	Speed command input, torque	13	SENGND	Signal ground		100 100	General-purpose	38	SO4COM	output 4 common
14	VLIM	command input 1, speed limit input	15	AGND1	Analog	39	SO4"2	output 4*2	40		,
16	PCL/TREF2	Forward torque limit input,	15	AGNUT	ground 1	41			40		
		torque command input 2	17	AGND2	Analog ground 2			Absolute	42	BAT	Absolute encoder backup
18	NCL	Reverse torque limit input	Н	-	Phase-Z	43	BATGND	encoder backup battery input	H		Beverse pulse
+		Sensor ON	19	Z	output (open collector)	H		Reverse pulse	44	+CWLD	(input for line driver only)
20	SEN	undefined	21	+A	Encoder	45	-CWLD	(input for line driver only)	46	+CCWLD	Forward pulse (input for line
22	-A	Encoder	21	+A	phase A+output	47	-CCWLD	Forward pulse (input for line	46	+CCWLD	driver only)
		phase A-output	23	+Z	Encoder phase Z+output			driver only)	48	-В	Encoder phase B-output
24	-Z	Encoder phase Z-output	Н		Phase-Z	49	+B	Encoder phase B+output	H		
_			25	ZGND	(open collector)	Н		8 8	50		n

Note.Do not connect anything to unused pins (*1).

Zem Snead Designation

Product discontinuation R88D-GN[]-ML2

12 to 24 VDC Alarm Output ALMCOM 36 OUTM1 1kΩ \$ **★**▼/ OUTM1COM 1kΩ ₹ **▼** OUTM2 atch 2 EXT2 OUTM2COM 1kΩ ≸ **★**▼// External Latch 1 EXT1 ОИТМЗ General-purpose Output 3 General-purp Input 1 ОИТМЗСОМ 1kΩ ≸ **▼** 1kΩ≱ ₹¥% Forward Drive Prohibit Input 1kΩ≸ ▼ 1kΩ ≸ ▼ 1 Backup Battery *1 34 BAT 33 BATCOM Shell FG

- *1. If a backup battery is connected, a cable with a battery is not required.
 *2. Inputs for pins 19 and 20 are determined by parameter settings. The diagram shows the default configuration.

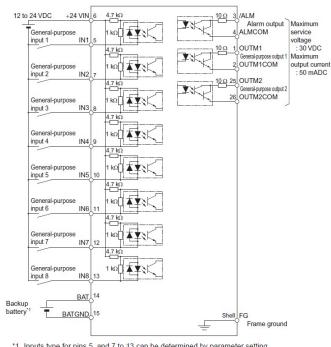
CN1 Pin Arrangement

1		Emergency	1	+24VIN	12 to 24-VDC Power Supply Input	_		Reverse Drive	19	POT	Forward Drive Prohibit Input
2	STOP	Stop Input	3	EXT3	External Latch	20	NOT	Prohibit Input	21	DEC	Origin Proximity
4	EXT2	External Latch	3	2,110	Signal 3	22	INO	External General-purpose	21	DEC	Input
-	LAIL	Signal 2	5	EXT1	External Latch		11.14	Input 0	23	IN2	External General-purpose
6	IN1	External General-purpose	3		Signal 1	24			23	1142	Input2
٥		Input 1	7	PCL	Forward Torque	24			25		
8	NCL	Reverse Torque		TOL	Limit Input	26			20		
_		Limit Input	9			Ľ			27		
10						28					
			11						29	OUTM2	General-purpose
12						30	OUTM2COM	General-purpose			Output 2
			13			_		Output 2	31	OUTM3	General-purpose
14						32	OUTM3COM	General-purpose	L		Output 3
			15	/ALM	Alarm Output			Output 3	33	BATCOM	Backup Battery
16	ALMCOM	Alarm Output	Ц			34	BAT	Backup Battery	L		Input
			17					Input	35	OUTM1COM	General-purpose
18			100			36	OUTM1	General-purpose Output 1			Output1

Note1. Do not connect anything to unused pins (*).

Note2. Inputs for pins 19 and 20 are determined by parameter settings. The diagram shows the default configuration.

Recommendable replacement R88D-KN[]-ML2



- *1. Inputs type for pins 5, and 7 to 13 can be determined by parameter setting.
 *2. Outputs type for pins 1, 2, 25 and 26 can be determined by parameter setting.
 *3. A cable equipped with a battery is not required, when a backup battery is connected.
- *4. It is not necessary to wire input pins that are not being used.

CN1 Pin Arrangement

_			1	OUTM1 (BKIR)	General-purpose Output 1 (Brake			Absolute	14	BAT	Absolute Encoder Backup
2	оитмісом	General-purpose Output 1 Common			Interlock Output)	15	BATGND	Encoder Backup Battery Input	H		Battery Input
4	ALMCOM	Alarm Output	3	/ALM	Alarm Output	17		*	16		*
-	ALMCOM	Common	5	IN1	General-purpose Input 1 (Emergency	"			18		*
6	+24 VIN	12 to 24-VDC Power		(STOP)	Stop Input)	19		*			
		Supply Input	7	IN2	General-purpose Input 2 (Forward Drive				20		*
8	IN3	General-purpose Input 3 (Reverse Drive	Ĺ	(POT)	Prohibition (nput)	21		*			
	(NOT)	Prohibition Input)	a	IN4	General-purpose Input 4 (Origin	- '			22		*
10	IN5	General-purpose		(DEC)	Proximity Input)	23		*	22		
10	(EXT3)	Input 5 (External Latch Input 3)	11	IN6	General-purpose				24		*
12	IN7	General-purpose		(EXT2)	Input 6 (External Latch Input 2)	25	OUTM2	General-purpose Output 2 (Servo			
12	(EXT1)	Input 7 (External Latch Input 1)	13	IN8 (MON0)	General-purpose Input 8 (Monitor Input 0)		(READY) Ready Outpu		26	оитм2сом	General-purpose Output 2 Common

Note Do not connect anything to unused pins (those marked with *).

Wire connection of power supply, motor, peripheral equipment and control I/O connector **Product discontinuation** Recommendable replacement R88D-GP08H R88D-KT08H Power supply, motor and peripheral equipment O 0 0 0 Single-phase 100 to 120 VAC, 50/60 Hz: R88D-KTI IL Single-phase 200 to 240 VAC, 50/60 Hz: R88D-KTI IIH NFB Noise filter (*1) CNA CN2 NF Main circuit power supply Main circuit contactor (*1) CN1 2.2 km Ш The state of -CW 4 220 C $\check{-}$ Surge suppre 1MC -(PL)ccw 6 220 d ₹% Servo alarm display OMNUC G5-series AC Servo Drive OMNUC G5-series *****< ⊚ L1C 9 L2C 24 VDC *****< CNB **₹¥**≷K * | V ₹¥\Ç W ⊚ L1 ¥×< **⊚** L3 (c **XX CNB **(1)** (0) $\stackrel{}{=}$ Ground to 100 Ω or less B1 ***C ф Вз Encoder cables) B2 ₹¥XÇ CN1 37/ALM ₹¥XÇ CN1
OUTM1
(BKIR)
OUTM110
COM XB 24 VDC For example, MY2'reisy by DMH/DN can be used with all G5 senior motions with braise bused with all G5 senior motions with braise value in a material motion load is 2 A (24 or 32. There) is no positry on the braise (T5 or 34 or 3 EXX. **EXX** TXX. *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. **Control I/O** +24 VCW 1 2.2 kG +cw]: _CW 4 220 Ω ¥ ¥ \ K +24 VCCW 2 2.2 kg 35 READY Servo ready +ccw] -CCW 6 220 Ω ▼ \ 37 /ALM Alarm output +CWLD 44 2 kg (20 kg -CWLD 45 20 Ω 20 K 2κΩ JJ20 κΩ d pulse +CCWLD 46 2κΩ 1/20 κΩ -CCWLD 47 1/20 Ω Posit 12 to 24 VDC +24 VIN #XX corresponding wit the EIA RS-422A Encoder 24 Z phase-Z output AT XX **4** 100Ω 20 SEN 4.7 kg SENGND #XXX **4****K 42 BAT Backup battery*1 43 BATGND 10 kΩ 16 PCL Forward torque limit input AT XX prohibition

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

[Characteristics] Servo Drive

Item		continuation 88D-GN[]-ML2	Recommendable replacement R88D-KT[]/R88D-KN[]-ML2			
	02L	04L	02L	04L		
Continuous output current (rms)	2.4 A	4.9 A	2.5 A	4.6 A		
Main circuit power	Single-phase 100 to 1	15 VAC (85 to 127 V),	Single-phase 100 to 120 VAC (85 to 132 V)			
supply voltage	50/6	0 Hz	50/60 Hz			
Control circuit power	Single-phase 100 to 1	15 VAC (85 to 127 V),	Single-phase 100 to 120 VAC (85 to 132 V)			
supply voltage	50/6	0 Hz	50/60 Hz			
Applicable	G20030S	G40030S	K20030S	K40030S		
Servomotors	GP20030S	GP40030S				

Item		uct discontinu GT[]/R88D-GN		Recommendable replacement R88D-KT[]/R88D-KN[]-ML2				
	01H	02H	04H	01H	02H	04H		
Continuous output current (rms)	1.16 A	1.6 A	2.7 A	1.2 A	1.6 A	2.6 A		
Main circuit power supply voltage	Single-phase 2	00 to 240 VAC 50/60 Hz	(170 to 264 V),	Single-phase or 3-phase 200 to 240 VAC (170 to 264 V) 50/60 Hz				
Control circuit power supply voltage	Single-phase 2	00 to 240 VAC 50/60 Hz	(170 to 264 V),	Single-phase 2	200 to 240 VAC 50/60 Hz	(170 to 264 V)		
Applicable Servomotors	G05030T G10030T GP10030T	G20030T GP20030T	G40030T GP40030T	K05030T K10030T	K20030T	K40030T		

Item	1	uct discontinu GT[]/R88D-GN R88D-GP08H		Recommendable replacement R88D-KT[]/R88D-KN[]-ML2				
	08H (GP08H)	10H	15H	08H	10H	15H		
Continuous output current (rms)	4.0 A	5.9 A	9.8 A	4.1 A	5.9 A	9.4 A		
Main circuit power supply voltage		-phase or three 40 VAC (170 to 50/60 Hz		Single-phase or 3-phase 200 to 240 VAC (170 to 264 V) 50/60 Hz				
Control circuit power supply voltage	Single-phase 2	00 to 240 VAC 50/60 Hz	(170 to 264 V),	Single-phase 200 to 240 VAC (170 to 264 V) 50/60 Hz				
Applicable Servomotors	G75030T	G1K020T	G1K030T G1K530T G1K520T G90010T	K75030T	K1K020T	K1K030T K1K530T K1K520T K90010T		

Item	Product disc R88D-GT[]/R8	continuation 88D-GN[]-ML2	Recommendable replacement R88D-KT[]/R88D-KN[]-ML2			
	20H	30H	20H	30H		
Continuous output current (rms)	14.3 A	17.4 A	13.4 A	18.7 A		
Main circuit power	Three-phase 200 to 23	0 VAC (170 to 253 V),	3-phase 200 to 230	VAC (170 to 253 V)		
supply voltage	50/6	0 Hz	50/6	0 Hz		
Control circuit power	Single-phase 200 to 23	30 VAC (170 to 253 V),	Single-phase 200 to 23	230 VAC (170 to 253 V)		
supply voltage	50/6	0 Hz	50/60 Hz			
Annliachla	G2K030T	G3K030T	K2K030T	K3K030T		
Applicable Servomotors	G2K020T	G3K020T	K2K020T	K3K020T		
Servoniolors		G2K010T		K2K010T		

General Specifications of Servo Drive

Item	Product discontinuation R88D-GT[]/R88D-GN[]-ML2	Recommendable replacement R88D-KT[]/R88D-KN[]-ML2		
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 condensatio		
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 ² max. in X, Y, and Z directions.	10 to 60 Hz and at an acceleration of 5.88 m/s² or less (Not to be run continuously at the resonance point)		
Insulation resistance	Between power supply/power line terminals and frame ground: 0.5 M Ω 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		
High-response frequency	1kHz	2kHz		

Servomotor

Item	Р		continuatio	on	Rec		ole replacer VI-K[]	nent		
item	05030T	10030S	20030S	40030S	05030T	10030S	20030S	40030S		
Applied voltage			VAC				VAC			
Rated output [W]	50	100	200	400	50	100	200	400		
Rated torque [N·m]	0.16	0.32	0.64	1.3	0.16	0.32	0.64	1.3		
Rated rotation speed [r/min]		30	00			30	000			
Maximum rotation speed [r/min]		50	00		6000					
Momentary maximum torque [N·m]	0.45	0.93	1.78	3.6	0.48	0.95	1.91	3.8		
Rated current [A]	1.1(rms)	1.7(rms)	2.5(rms)	4.6(rms)	1.1(rms)	1.6(rms)	2.5(rms)	4.6(rms)		
Momentary maximum current [A]		5.1(rms)	7.6(rms)	13.9(rms)	4.7(0-p)	6.9(0-p)	10.6(0-p)	19.5(0-p)		
Rotor inertia Without brake	2.5×10 ⁻⁶	5.1×10 ⁻⁶	1.4×10 ⁻⁵	2.6×10 ⁻⁵	2.5×10 ⁻⁶	5.1×10 ⁻⁶	1.4×10 ⁻⁵	2.6×10 ⁻⁵		
(GD ² /4)] With brake	2.5 10	3.1410	1.4710	2.0^10	2.7×10 ⁻⁶	5.4×10 ⁻⁶	1.6×10 ⁻⁵	2.8×10 ⁻⁵		
Applicable load inertia	30	times the ro	tor inertia m	nax.	30 times the rotor inertia max.					
Radiator plate dimensions (material)	100×80	100×80×t10 (AI) 130×120×t12 (AI)				<t10 (ai)<="" th=""><th>130×120</th><th>×t12 (AI)</th></t10>	130×120	×t12 (AI)		
Ambient operating temperature and operating humidity	(5% RH max ndensation)			(with no co	20% to 85% ndensation)			
Ambient storage temperature and humidity	-2		35% RH ma ndensation)		-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 corros	ive gases				sive gases	·		
Vibration resistance			nd accelerat K, Y, and Z		24.5 m/s	s² max. in X	n of 49 m/s² , Y, and Z d tor is stoppe	irections		
Impact resistance			m/s² max. 3 and Z direct				m/s² max. 3 and Z direction			
Insulation resistance	20 M	Ω min. at 50	00 VDC bet Is and FG to	ween			inal and FG (at 500 VDC			
Dielectric strength			60 Hz) for 1 minals and	minute 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			e B				oe B			
Protective structure	`	-	output shafead wire end	0			ough-shaft p er connecto			

Item	Product discontinuation R88M-G[]			Recommendable replacement R88M-K[]					
	05030T	10030T	20030T	40030T	05030T	10030T	20030T	40030T	
Applied voltage		200	VAC			200	VAC		
Rated output [W]	50	100	200	400	50	100	200	400	
Rated torque [N·m]	0.16	0.32	0.64	1.3	0.16	0.32	0.64	1.3	
Rated rotation speed [r/min]		30	00		3000				
Maximum rotation speed [r/min]	5000					6000			
Momentary maximum torque [N·m]	0.45	0.90	1.78	3.67	0.48	0.95	1.91	3.8	
Rated current [A]	1.1(rms)	1.1(rms)	1.6(rms)	2.6(rms)	1.1(rms)	1.1(rms)	1.5(rms)	2.4(rms)	
Momentary maximum current [A]	3.4(rms)	3.4(rms)	4.9(rms)	7.9(rms)	4.7(0-p)	4.7(0-p)	6.5(0-p)	10.2(0-p)	
Rotor inertia brake	2.5×10 ⁻⁶	5.1×10 ⁻⁶	1.4×10 ⁻⁵	2.6×10 ⁻⁵	2.5×10 ⁻⁶	5.1×10 ⁻⁶	1.4×10 ⁻⁵	2.6×10 ⁻⁵	
(GD ² /4)] With brake	2.5~10	3.1~10	1.4~10	2.0^10	2.7×10 ⁻⁶	5.4×10 ⁻⁶	1.6×10 ⁻⁵	2.8×10 ⁻⁵	
Applicable load inertia	30 1	times the ro	tor inertia m	ıax.	30 times the rotor inertia max.				
Radiator plate dimensions (material)	100×80×t10 (AI) 130×120×t12 (AI)				100×80	×t10 (AI)	130×120)×t12 (AI)	
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 corros	ive gases			No corros	ive gases	•	
Vibration resistance	49 m/s² n	nax. in the >	nd accelerat Հ, Y, and Z ɗ	directions	24.5 m/s w	Accelerations ² max. in X hen the mo	, Y, and Z d tor is stoppe	irections ed	
Impact resistance	Acceleration of 98 m/s ² max. 3 times each in the X, Y, and Z directions				Acceleration of 98 m/s² 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			е В		Type B				
Protective structure		cluding the	output shaft ad wire end		IP67 (except for through-shaft parts and motor and encoder connector pins)				

Item	Prod	uct discontinu R88M-G[]	ation	Recommendable replacement R88M-K[]				
item	75030T	1K030T	1K530T	75030T	1K030T	1K530T		
Applied voltage	7 00001	200 VAC	1110001	700001	200 VAC	1110001		
Rated output [W]	750	1000	1500	750	1000	1500		
Rated torque [N·m]	2.4	3.18	4.77	2.4	3.18	4.77		
Rated rotation speed				<u> </u>				
[r/min]		3000		3000				
Maximum rotation	4500	FO	100	6000 5000				
speed [r/min]	4500	5000		6000	3000			
Momentary								
maximum torque	7.05	9.1	12.8	7.1	9.55	14.3		
[N·m]								
Rated current [A]	4(rms)	7.2(rms)	9.4(rms)	4.1(rms)	6.6(rms)	8.2(rms)		
Momentary	12.1(rms)	21.4(rms)	28.5(rms)	17.4(0-p)	28(0-p)	35(0-p)		
maximum current [A]	` ′	(,		(5 -)	(
Rotor inertia Without brake				8.7×10 ⁻⁵	2.03×10 ⁻⁴	2.84×10 ⁻⁴		
Ika m²	8.7×10 ⁻⁵	1.69×10 ⁻⁴	2.59×10 ⁻⁴					
(GD ² /4)] With brake				9.7×10⁻⁵	2.35×10 ⁻⁴	3.17×10 ⁻⁴		
Drake	20 times the			20 times the				
Applicable load	rotor inertia	15 times the ro	otor inertia max.	rotor inertia	15 times the ro	otor inertia max.		
inertia	max.	15 times the re	nes the rotor mertia max.		13 times the rotor mertia in			
Radiator plate	max			max.				
dimensions			320×300×t30	170×160×t12	320×300×t20 (AI)			
(material)		(AI)		(AI)				
Ambient operating	0 to 40°C, 85% RH max.			O to	140°C 200/ to	0.50/		
temperature and	(with no condensation)				+40°C, 20% to th no condensat			
operating humidity	,	ii iio condensai	lioii)	`	,			
Ambient storage	-20 to 65°C,			-20 to +65°C, 20% to 85% (with no condensation)				
temperature and	85% RH max.		85% RH max.					
humidity	(with no	(with no co	ndensation)	Maximum allowable temperature:80°C for				
_	condensation)			72 hours maximum (standard humidity)				
Storage and operating	NI NI	o corrocivo goo	00	No corrosive gases				
atmosphere	IN	o corrosive gas	es					
aunospiieie	10 to 2,500 Hz							
	and							
	acceleration of	10 to 2.50	00 Hz and	Acceleration of 49 m/s ²				
Vibration resistance			24.5 m/s ² max.		ax. in X, Y, and			
	in the X, Y,	in the X, Y, ar	nd Z directions		the motor is sto			
	and Z	, ,						
	directions							
Impact resistance	Acceleration of 98 m/s² max. 3 times			Acceleration of 98 m/s ² max. 3 times				
	each in the X, Y, and Z directions			each in X, Y, and Z directions				
Insulation resistance	$20~\text{M}\Omega$ min. at 500 VDC between the power terminals and FG terminal			Between power terminal and FG terminal:				
	the power termin		·G terminal	20 MΩ min. (at 500 VDC)				
	1,500 VAC (50 or 60 Hz) for 1 minute			1,500 VAC between power terminal and FG terminal for 1 min.				
Dielectric strength								
	perween me po	e power terminals and FG terminal		1,000 VAC between brake terminal				
Insulation grade	Type B	Tur	pe F	and FG terminal for 1 min.				
		ling the output s			Type B Type F			
Protective structure		n and lead wire		IP67 (except for through-shaft parts and				
<u> </u>	350110	ii aiiu icau Wile	orius)	motor and encoder connector pins)				

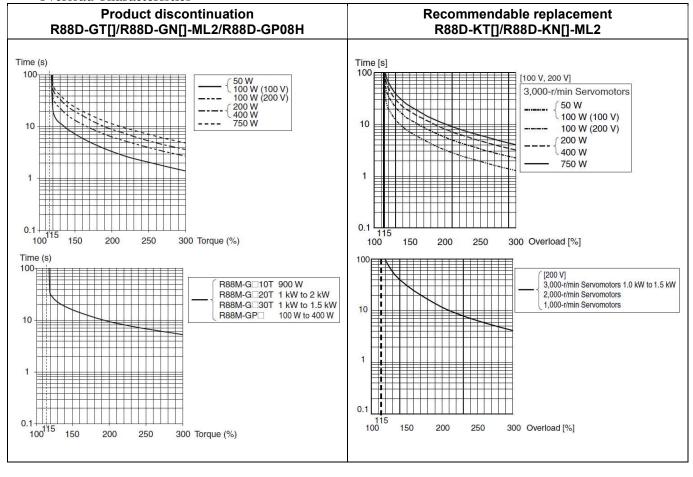
Item	Product discontinuation R88M-G[]			Recommendable replacement R88M-K[]				
	P10030S	P20030S	P40030S	10030S	20030S	40030S		
Applied voltage		100 VAC			100 VAC	I		
Rated output [W]	100	200	400	100	200	400		
Rated torque [N·m]	0.32	0.64	1.3	0.32	0.64	1.3		
Rated rotation speed		3000		3000				
[r/min]	3000			3000				
Maximum rotation	50	00	4500		6000			
speed [r/min]	30		4300					
Momentary		4.0		0.05	4.04			
maximum torque	0.84	1.8	3.6	0.95	1.91	3.8		
[N·m]	4.0()	0.5()	4.4/	4.0()	0.5()	4.0()		
Rated current [A]	1.6(rms)	2.5(rms)	4.4(rms)	1.6(rms)	2.5(rms)	4.6(rms)		
Momentary	4.9(rms)	7.5(rms)	13.3(rms)	6.9(0-p)	10.6(0-p)	19.5(0-p)		
maximum current [A] Without	, ,		, ,					
Rotor inertia				5.1×10 ⁻⁶	1.4×10 ⁻⁵	2.6×10 ⁻⁵		
[Kg·m²	1.0×10 ⁻⁵	3.5×10⁻⁵	6.5×10 ⁻⁵					
(GD ² /4)] brake				5.4×10 ⁻⁶	1.6×10 ⁻⁵	2.8×10 ⁻⁵		
Applicable load	20.11							
inertia	20 time	s the rotor iner	ia max.	30 times the rotor inertia max.				
Radiator plate	120~120~110			100,00,410				
dimensions	130×120×t10	170×160	×t12 (AI)	100×80×t10	×t12 (AI)			
(material)	(AI)	(AI) 1754165412 (74)		(AI) 130% 120% 12				
Ambient operating	0 to	40°C, 85% RH	may	0 to	+40°C, 20% to	85%		
temperature and		n no condensat			h no condensat			
operating humidity	(****							
Ambient storage	00.4				-20 to +65°C, 20% to 85%			
temperature and		80°C, 85% RH		(with no condensation)				
humidity	(Witi	n no condensat	ion)	Maximum allowable temperature:80°C for 72 hours maximum (standard humidity)				
Storage and				72 nours ma	aximum (standa	ira numiaity)		
Storage and operating	N/	o corrosive gas	<u> </u>	No corrosive gases				
atmosphere		John Osive gas						
	46			Acceleration of 49 m/s ²				
Vibration resistance		0 Hz and acce		24.5 m/s ² max. in X, Y, and Z directions				
	49 m/s² max. in the X, Y, and Z directions		d Z directions	when the motor is stopped				
Import resistance	Acceleration of 98 m/s ² max. 3 times			Acceleration of 98 m/s ² max. 3 times				
Impact resistance	each in the X, Y, and Z directions			each in X, Y, and Z directions				
Insulation resistance	$20~\text{M}\Omega$ min. at $500~\text{VDC}$ between			Between power terminal and FG terminal:				
	the power terminals and FG terminal			20 MΩ min. (at 500 VDC)				
	, _	,		1,500 VAC between power terminal				
Dielectric strength		(50 or 60 Hz) f		and FG terminal for 1 min.				
	between the power terminals and FG terminal			1,000 VAC between brake terminal				
Inculation and		Tuna D		and FG terminal for 1 min.				
Insulation grade	ID65 (avalud	Type B	hoft rotation	Type B				
Protective structure		ing the output s		IP67 (except for through-shaft parts and				
	section	n and lead wire	enus)	motor and encoder connector pins)				

Item	Product discontinuation R88M-G[]			Recommendable replacement R88M-K[]				
	P10030T	P20030T	P40030T	10030T	20030T	40030T		
Applied voltage		200 VAC			200 VAC	I		
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		2000		•	2000	1		
[r/min]		3000		3000				
Maximum rotation		5000			6000			
speed [r/min]		3000			0000			
Momentary								
maximum torque	0.86	1.8	3.65	0.95	1.91	3.8		
[N·m]	4/	4.07	0.5()	4.44	4.5()	2.4()		
Rated current [A]	1(rms)	1.6(rms)	2.5(rms)	1.1(rms)	1.5(rms)	2.4(rms)		
Momentary	3.1(rms)	4.9(rms)	7.5(rms)	4.7(0-p)	6.5(0-p)	10.2(0-p)		
maximum current [A]	` '	. ,	` ′	. ' /	,	` ' '		
Rotor inertia Without brake				5.1×10 ⁻⁶	1.4×10 ⁻⁵	2.6×10 ⁻⁵		
[Kg·m²	1.0×10 ⁻⁵	3.5×10 ⁻⁵	3.5×10 ⁻⁵ 6.4×10 ⁻⁵					
(GD ² /4)] brake				5.4×10 ⁻⁶	1.6×10 ⁻⁵	2.8×10 ⁻⁵		
Applicable load			_					
inertia	20 time	s the rotor iner	tia max.	30 times the rotor inertia max.				
Radiator plate	400400440			40000140				
dimensions	130×120×t10	130×120×t10 (AI) 170×160×t12 (AI)		100×80×t10	130×120	×t12 (AI)		
(material)	(AI)			(AI)				
Ambient operating	0 to	40°C, 85% RH	may	0 to	0 to +40°C, 20% to 85%			
temperature and		no condensat			no condensat			
operating humidity	(With	The condensat						
Ambient storage		0000 050/ 51			-20 to +65°C, 20% to 85%			
temperature and		80°C, 85% RH		(with no condensation)				
humidity	(With	n no condensat	ion)	Maximum allowable temperature:80°C for 72 hours maximum (standard humidity)				
Ctorono and				72 nours ma	iximum (standa	ira numiaity)		
Storage and operating	Nic	corrosive gas	<u> </u>	No corrosive gases				
atmosphere		Journalive gas	03					
аппоорного				Acceleration of 49 m/s ²				
Vibration resistance		0 Hz and acce		24.5 m/s ² max. in X, Y, and Z directions				
	49 m/s² max. in the X, Y, and Z directions		d Z directions	when the motor is stopped				
luon a at was ! at a a a a	Acceleration	Acceleration of 98 m/s² max. 3 times			Acceleration of 98 m/s² max. 3 times			
Impact resistance		ne X, Y, and Z		each in X, Y, and Z directions				
Insulation resistance	20 MΩ m	in. at 500 VDC	between	Between power terminal and FG terminal:				
moulation resistance	the power terminals and FG terminal			20 MΩ min. (at 500 VDC)				
				1,500 VAC between power terminal				
Dielectric strength		(50 or 60 Hz) f		and FG terminal for 1 min.				
	between the power terminals and FG terminal				1,000 VAC between brake terminal			
Inculation and de					and FG terminal for 1 min.			
Insulation grade	IDGE /	Type B		Type B				
Protective structure		ing the output s		IP67 (except for through-shaft parts and				
	section	n and lead wire	enas)	motor and encoder connector pins)				

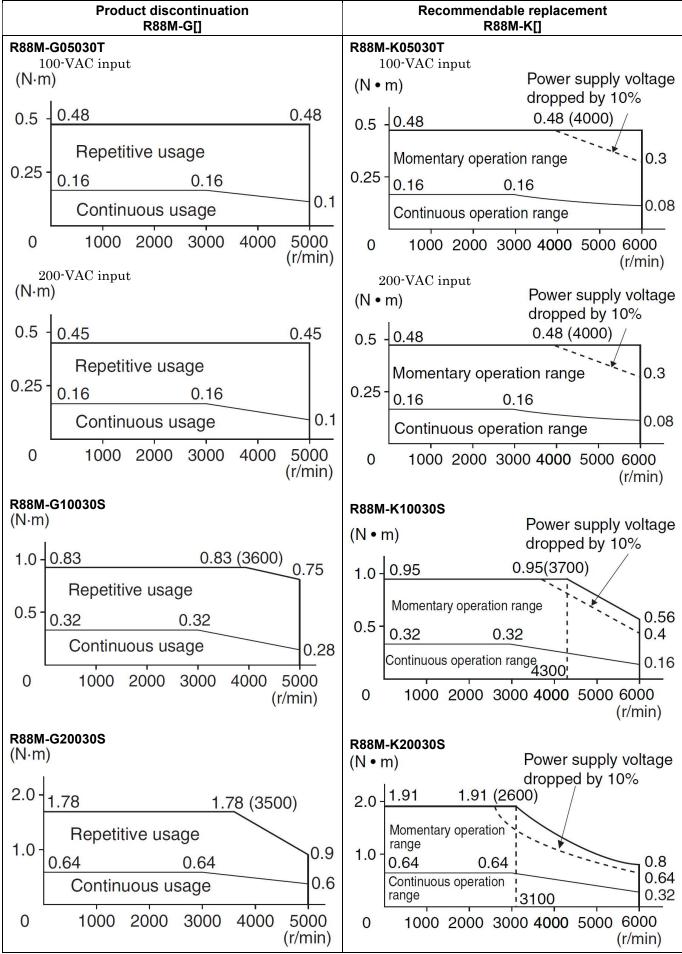
Item	Р	roduct disc R88N	continuatio //-G[]	n	Recommendable replacement R88M-K[]			
	1K020T	1K520T	2K020T	90010T	1K020T 1K520T 2K020T			90010T
Applied voltage	200 VAC			200 VAC				
Rated output [W]	1000	1500	2000	900	1000	1500	2000	900
Rated torque [N·m]	4.8	7.15	9.54	8.62	4.77	7.16	9.55	8.59
Rated rotation speed [r/min]	2000			1000	2000			1000
Maximum rotation speed [r/min]		3000		2000	3000			2000
Momentary maximum torque [N·m]	13.5	19.6	26.5	18.4	14.3	21.5	28.6	19.3
Rated current [A]	5.6(rms)	9.4(rms)	12.3(rms)	7.6(rms)	5.7(rms)	9.4(rms)	11.5(rms)	7.6(rms)
Momentary maximum current [A]	17.1(rms)	28.5(rms)	37.1(rms)	17.1(rms)	24(0-p)	40(0-p)	49(0-p)	24(0-p)
Rotor inertia	6.17×10 ⁻⁴	1.12×10 ⁻³	1.52×10 ⁻³	1.12×10 ⁻³	4.60×10 ⁻⁴	6.70×10 ⁻⁴	8.72×10 ⁻⁴	6.70×10 ⁻⁴
(GD ² /4)] With brake	0.17~10	1.12~10	1.52~10	1.12~10	5.90×10 ⁻⁴	7.99×10 ⁻⁴	10.0×10 ⁻⁴	7.99×10 ⁻⁴
Applicable load inertia	10 1	times the ro	tor inertia m	nax.	10 times the rotor inertia max.			
Radiator plate dimensions (material)	275×260×t15 (AI)				275×260×t15 (AI)			
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 80°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)			e:80°C for
Storage and operating atmosphere		No corros	ive gases			No corros	ive gases	•
Vibration resistance	24.5 m/s ²	max. in the	nd accelerat X, Y, and Z	directions	when the motor is stopped			irections ed
Impact resistance	Acceleration of 98 m/s ² max. 2 times vertically				Acceleration of 98 m/s² 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.			erminal n. rminal
Insulation grade		Тур	e F		Type F			
Protective structure		cluding the	output shaft ad wire end			cept for thro		

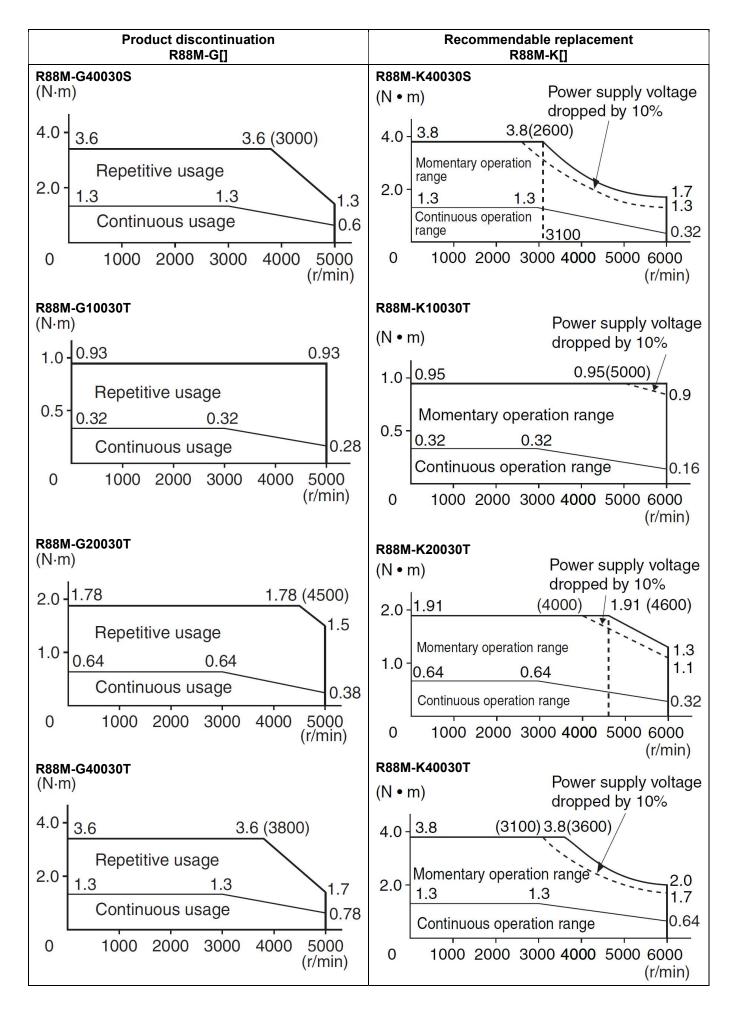
[Operation ratings]

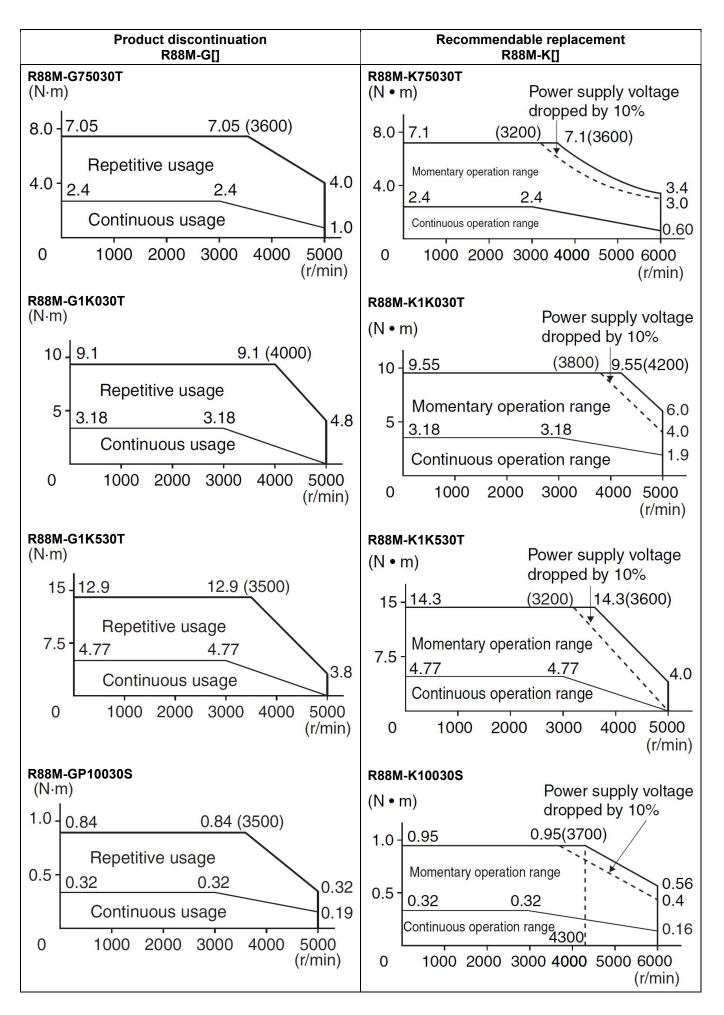
Overload Characteristics

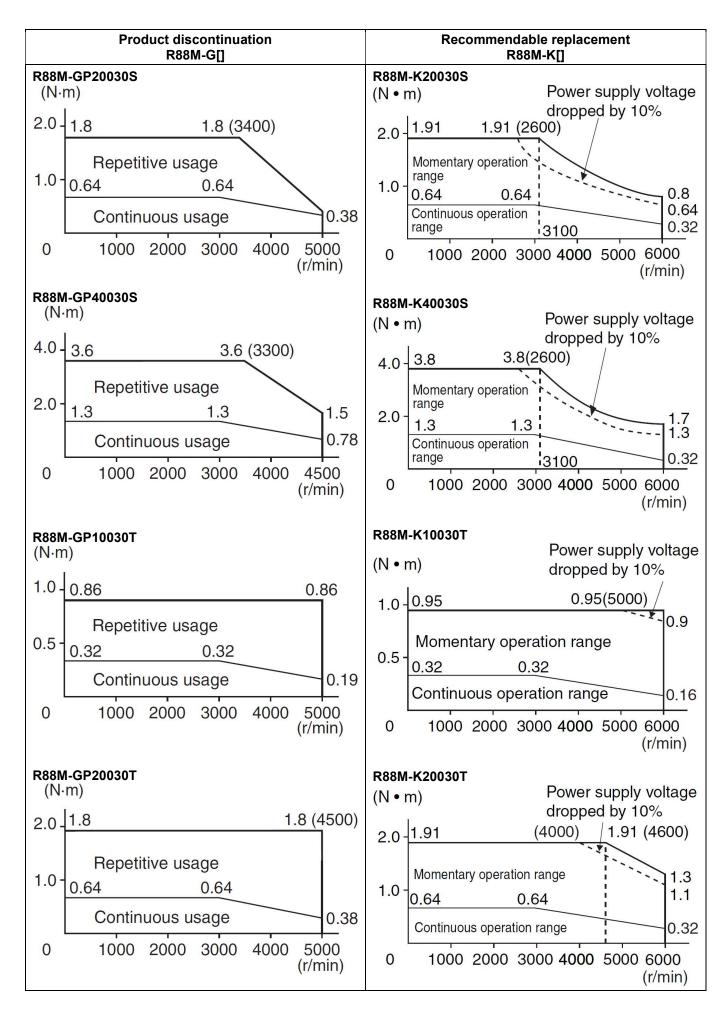


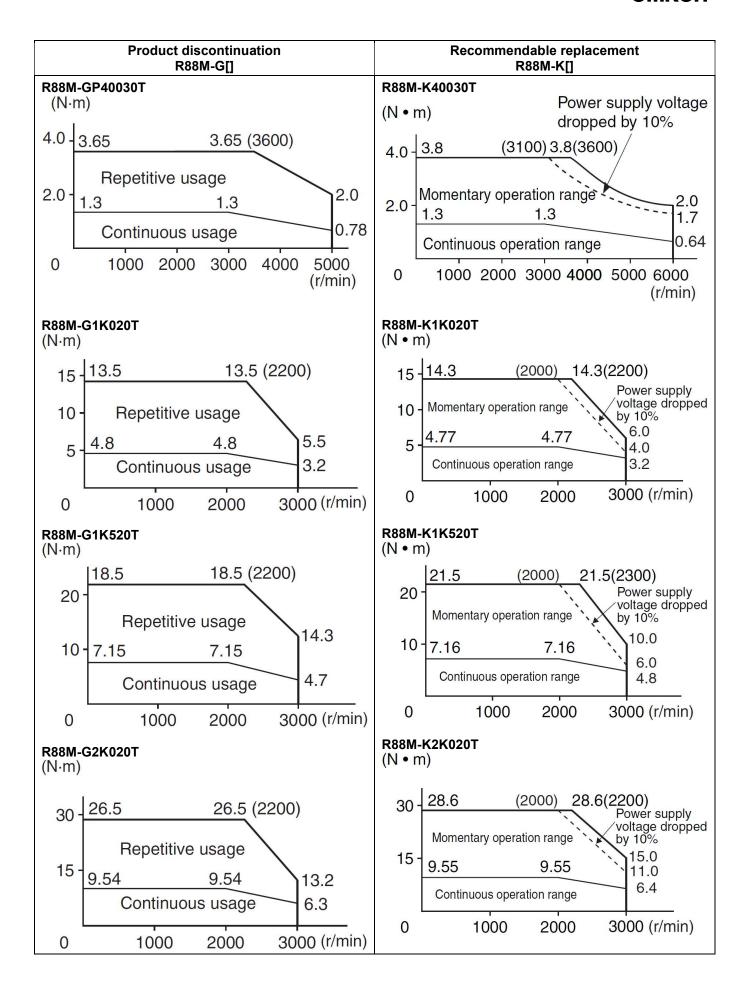
Torque-Rotational Speed Characteristics (with a 3-m standard cable)

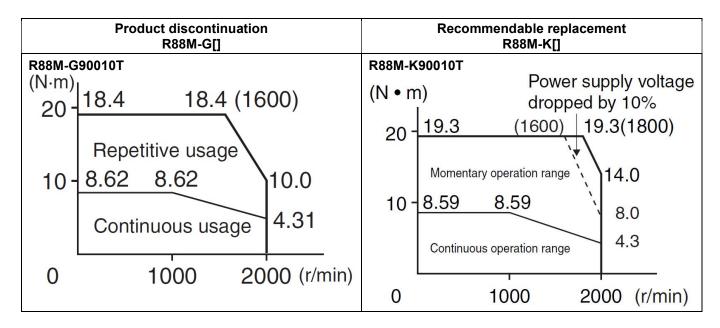












Incremental Encoder Specifications (Absolute encoder specifications are same)

Item	Product discontinuation R88M-G[]	Recommendable replacement R88M-K[]		
Encoder system	Optical encoder	Optical encoder 20 bits		
Number of output pulses	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		
Power supply voltage	5 VDC ±5%	5 VDC ±5%		
Power supply current	180 mA (max.)	180 mA (max.)		
Output signals	+S, -S	+S, -S		
Output interface	RS-485 compliance	RS-485 compliance		

[Operation methods]

Item	Product discontinuation R88D-GT[]/R88D-GN[]-ML2	Recommendable replacement R88D-KT[]/R88D-KN[]-ML2
Parameter Unit	OMNUC G Series can be operated or monitored with the Parameter Unit. Also, OMNUC G 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.
RS232/485 communications	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.