

R88M-G□

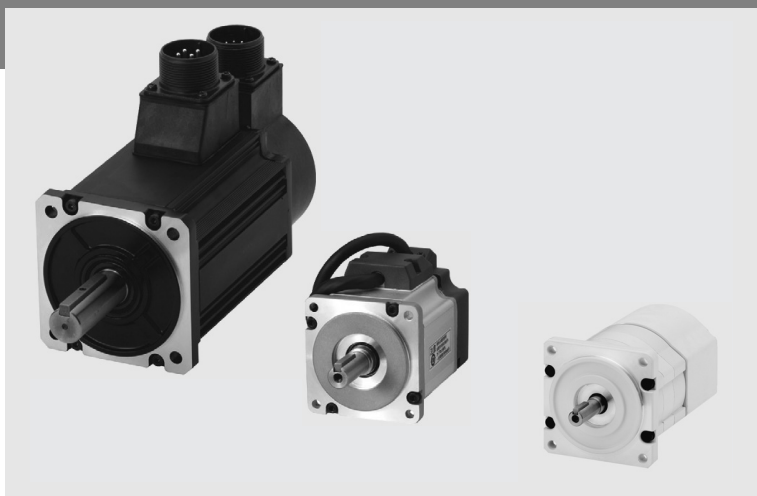
G-Series servo motors

A wide range of compact servomotors to meet all application needs

- Peak torque 300% of continuous torque during 3 seconds or more depending on model
- Servomotors supported by SmartStep2, G-Series and Accurax G5 servo drives
- Cylindrical and Flat servomotors types are available
- Encoder accuracy of 10,000 step/rev as standard and 17-bit INC/ABS encoder as optional
- IP65 as standard and shaft oil seal available
- Motors with brake as option

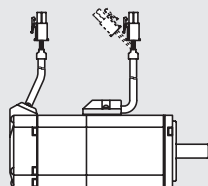
Ratings

- 230 VAC Single-phase 50 W to 1.5 kW
(rated torque from 0.16 to 8.62 Nm)

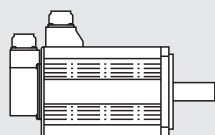


System configuration

G-Series Cylindrical type Servo motor



3000 rpm (50-750W)



3000 rpm (1000-1500 W)
2000 rpm (1000-1500 W)
1000 rpm (900 W)

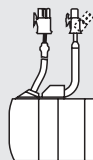
Power cable



Encoder cable

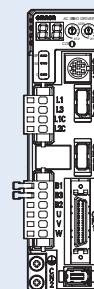


G-Series Flat type Servo motor



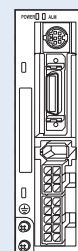
3000 rpm (100-400 W)

G-Series Servo drive



SmartStep 2 Servo drive

Servo drive controlled by pulses



Servo motor / servo drive combination

Servo motor							Servo drive		
Family		Voltage	Speed	Rated torque	Capacity	Model	SmartStep2 ³	G-Series	
Cylindric	50-750 W		3000 min ⁻¹	0.16 Nm	50 W	R88M-G05030□-□S2	R7D-BP01H	R88D-GN01H-ML2	
				0.32 Nm	100 W	R88M-G10030□-□S2	R7D-BP01H	R88D-GN01H-ML2	
				0.64 Nm	200 W	R88M-G20030□-□S2	R7D-BP02HH	R88D-GN02H-ML2	
				1.3 Nm	400 W	R88M-G40030□-□S2	R7D-BP04H	R88D-GN04H-ML2	
				2.4 Nm	750 W	R88M-G75030□-□S2	R88D-GP08H	R88D-GN08H-ML2	
	900-1500 W			2000 min ⁻¹	3.18 Nm	1000 W	R88M-G1K030T-□S2	-	R88D-GN15H-ML2
					4.77 Nm	1500 W	R88M-G1K530T-□S2	-	R88D-GN15H-ML2
					4.8 Nm	1000 W	R88M-G1K020T-□S2	-	R88D-GN10H-ML2
					7.15 Nm	1500 W	R88M-G1K520T-□S2	-	R88D-GN15H-ML2
					1000 min ⁻¹	8.62 Nm	900 W	R88M-G90010T-□S2	-
Flat	100-400 W		3000 min ⁻¹	0.32 Nm	100 W	R88M-GP10030□-□S2	R7D-BP01H	R88D-GN01H-ML2	
				0.64 Nm	200 W	R88M-GP20030□-□S2	R7D-BP02HH	R88D-GN02H-ML2	
				1.3 Nm	400 W	R88M-GP40030□-□S2	R7D-BP04H	R88D-GN04H-ML2	

- Note:** 1. For servo motor and cables part numbers refer to ordering information at the end of this chapter
2. Refer to the servo drive chapter for drive options selection and detailed specifications
3. SmartStep2 only supports incremental encoder

Type designation

Servo motor

R88M-GP10030H-BOS2

G-Series Servo motor

Motor type

Blank: Cylinder type
P: Flat type

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

Rated speed (r/min)

10	1000
20	2000
30	3000

Shaft end specifications

Blank	Straigh shaft, no key
S2	Straigh, key, tapped

Oil seal specifications

Blank	No oil seal
O	Oil seal

Brake specifications

Blank	No brake
B	Brake

Voltage and encoder specifications

H: 230 V with incremental encoder
T: 230 V with absolute encoder

Servo motor specifications

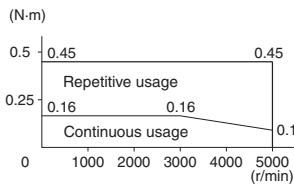
Cylindrical servo motors 3000/2000/1000 r/min

Ratings and specifications

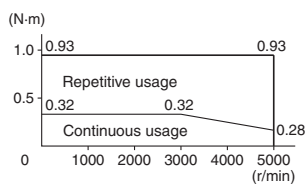
Applied voltage		230 V									
Servo motor model R88M-□		G05030□	G10030□	G20030□	G40030□	G75030□	G1K030T	G1K530T	G1K020T	G1K520T	G90010T
Rated output	W	50	100	200	400	750	1000	1500	1000	1500	900
Rated torque	N·m	0.16	0.32	0.64	1.3	2.4	3.18	4.77	4.8	7.15	8.62
Instantaneous peak torque	N·m	0.45	0.90	1.78	3.67	7.05	9.1	12.8	13.5	19.6	18.4
Rated current	A (rms)	1.1		1.6	2.6	4	7.2	9.4	5.6	9.4	7.6
Instantaneous max. current	A (rms)	3.4		4.9	7.9	12.1	21.4	28.5	17.1	28.5	17.1
Rated speed	min ⁻¹	3000							2000		1000
Max. speed	min ⁻¹	5000				4500	5000		3000		2000
Torque constant	N·m/A (rms)	0.14	0.19	0.41	0.51	0.64	0.44	0.51	0.88	0.76	1.13
Rotor moment of inertia (JM)	kg·m ² ×10 ⁻⁴	0.025	0.051	0.14	0.26	0.87	1.69	2.59	6.17	11.2	
Allowable load moment of inertia (JL)	Multiple of (JM)	30				20	15		10		
Rated power rate	kW/s	10.4	20.1	30.3	62.5	66	60	88	37.3	45.8	66.3
Applicable Encoder		Incremental encoder (10000 pulses)						-			
		Incremental /Absolute encoder(17 bits)									
Allowable radial load	N	68		245		392		490		686	
Allowable thrust load	N	58		98		147		196			
Approx. mass	kg (without brake)	0.3	0.5	0.8	1.2	2.3	4.5	5.1	6.8	8.5	
	kg (with brake)	0.5	0.7	1.3	1.7	3.1	5.1	6.5	8.7	10.1	10
Brake specifications	Rated voltage	24 VDC +/-5%					24 VDC +/-10%				
	Holding brake moment of inertia J	0.002			0.018		0.075	0.25	0.33	1.35	
	Power consumption (at 20°C)	7		9		10	18	19	14	19	
	Current consumption (at 20°C)	0.3		0.36		0.42	0.74	0.81	0.59	0.79	
	Static friction torque	0.29		1.27		2.45	4.9	7.8	4.9	13.7	
	Rise time for holding torque	35		50		70	50		80	100	
Release time	ms (max)	20		15		20	15		70	50	
Basic specifications	Rating	Continuous									
	Insulation grade	Type B					Type F				
	Ambient operating/ storage temperature	0 to +40°C/ -20 to 65°C					0 to +40°C/ -20 to 80°C				
	Ambient operating/ storage humidity	85% RH max. (non-condensing)									
	Vibration class	V-15									
	Insulation resistance	20 MΩ min. at 500 VDC between the power terminals and FG terminal									
	Enclosure	Totally-enclosed, self-cooling, IP65 (excluding shaft opening and lead wire ends)									
	Vibration resistance	Vibration acceleration 49 m/s ²					Vibration acceleration 24.5 m/s ²				
Mounting	Flange-mounted										

Torque-speed characteristics

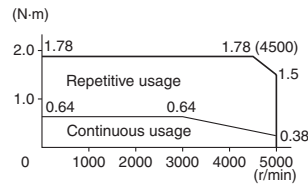
R88M-G05030H/T (50 W)



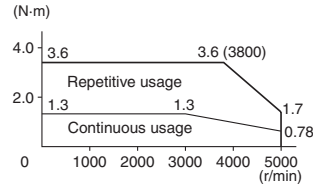
R88M-G10030H/T (100 W)



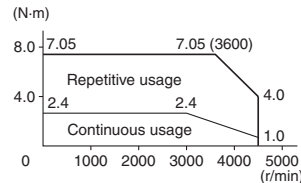
R88M-G20030H/T (200 W)



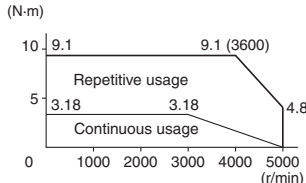
R88M-G40030H/T (400 W)



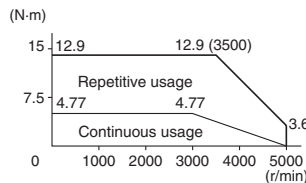
R88M-G75030H/T (750 W)



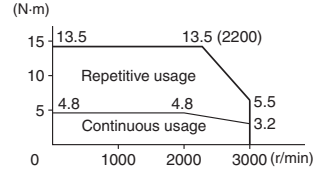
R88M-G1K030T (1 kW)



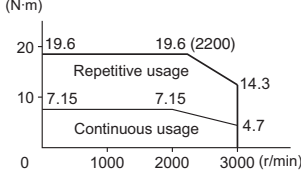
R88M-G1K530T (1.5 kW)



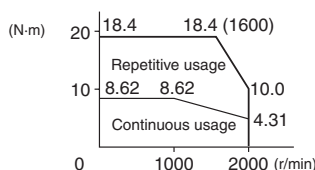
R88M-G1K020T (1 kW)



R88M-G1K520T (1.5 kW)



R88M-G90010T (900 W)



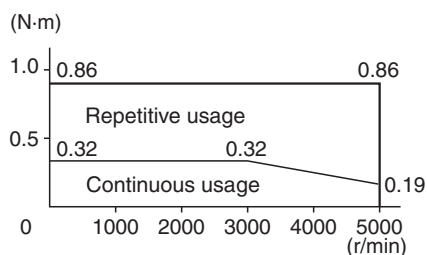
Flat servo motors 3000 r/min

Ratings and specifications

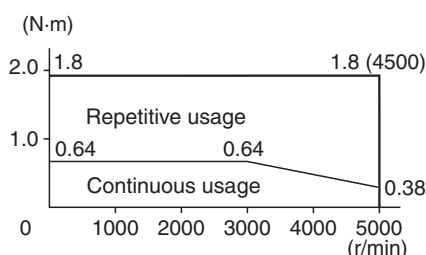
Applied voltage		230 V		
Servo motor model R88M-□		GP10030□	GP20030□	GP40030□
Rated output	W	100	200	400
Rated torque	N·m	0.32	0.64	1.3
Instantaneous peak torque	N·m	0.86	1.8	3.65
Rated current	A (rms)	1	1.6	2.5
Instantaneous max. current	A (rms)	3.1	4.9	7.5
Rated speed	min ⁻¹	3000		
Max. speed	min ⁻¹	5000		
Torque constant	N·m/A (rms)	0.34	0.42	0.54
Rotor moment of inertia (JM)	kg·m ² ×10 ⁻⁴	0.1	0.35	0.64
Allowable load moment of inertia (JL)	Multiple of (JM)	20		
Rated power rate	kW/s	10.2	11.5	25.5
Applicable encoder		Incremental (10000 pulses)		
		Incremental /Absolute encoder(17 bits)		
Allowable radial load	N	68	245	
Allowable thrust load	N	58	98	
Approx. mass	kg (without brake)	0.7	1.3	1.8
	kg (with brake)	0.9	2	2.5
Brake specifications	Rated voltage		24VDC +/-10%	
	Holding brake moment of inertia J	kg·m ² ×10 ⁻⁴	0.03	0.09
	Power consumption (at 20°C)	W	7	10
	Current consumption (at 20°C)	A	0.29	0.41
	Static friction torque	N·m (minimum)	0.29	1.27
	Rise time for holding torque	ms (max.)	50	60
	Release time	ms (max)	15	
Basic specifications	Rating		Continuous	
	Insulation grade		Type B	
	Ambient operating/ storage temperature		0 to +40 °C/ -20 to 80°C	
	Ambient operating/ storage humidity		85% RH max. (non-condensing)	
	Vibration class		V-15	
	Insulation resistance		20 MΩ min. at 500 VDC between the power terminals and FG terminal	
	Enclosure		Totally-enclosed, self-cooling, IP65 (excluding shaft opening and lead wire ends)	
	Vibration resistance		Vibration acceleration 49 m/s2	
	Mounting		Flange-mounted	

Torque-speed characteristics

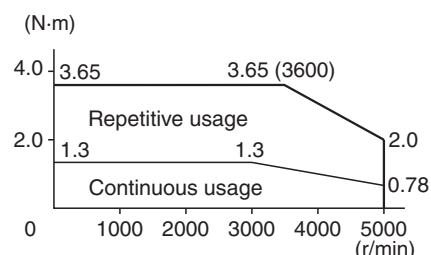
R88M-GP10030H/T (100 W)



R88M-GP20030H/T (200 W)



R88M-GP40030H/T (400 W)

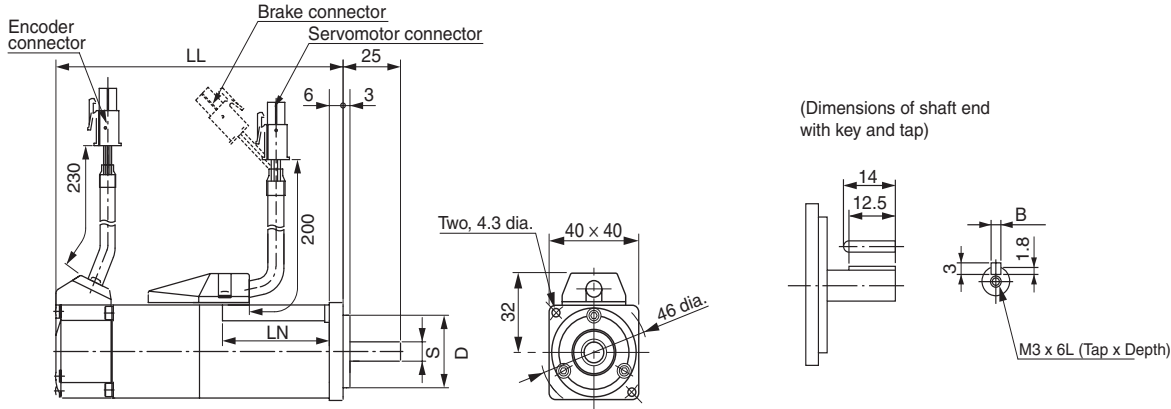


Dimensions

Servo motors

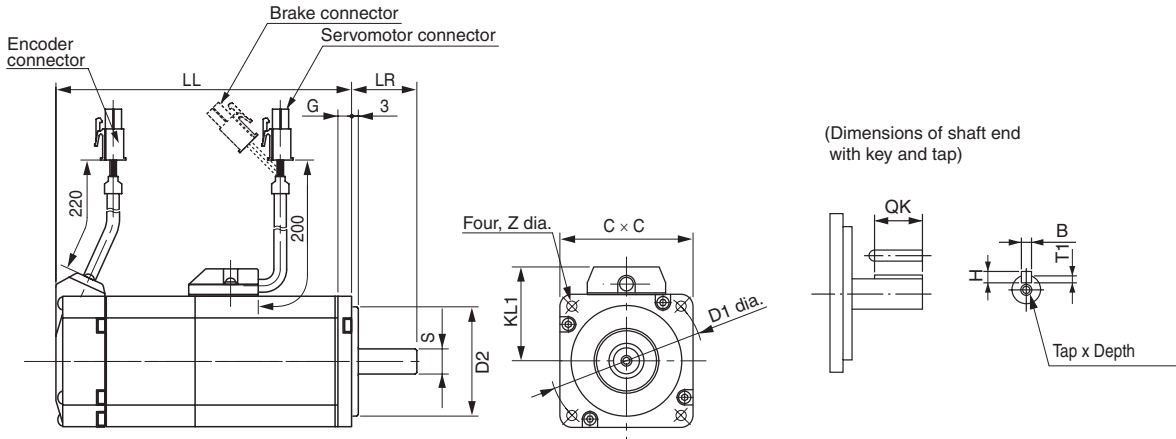
Cylindrical type 3000 r/min (230 V, 50-100 W)

Dimensions (mm)	Without brake	With brake	LN	Flange surface	Shaft end			Aprox. mass (kg)	
Model	LL	LL		D	S	B		Without brake	With brake
R88M-G05030□□S2	72	102	26.5	30 ^{h7}	8 ^{h6}	3 ^{h9}		0.3	0.5
R88M-G10030□□S2	92	122	46.5					0.5	0.7



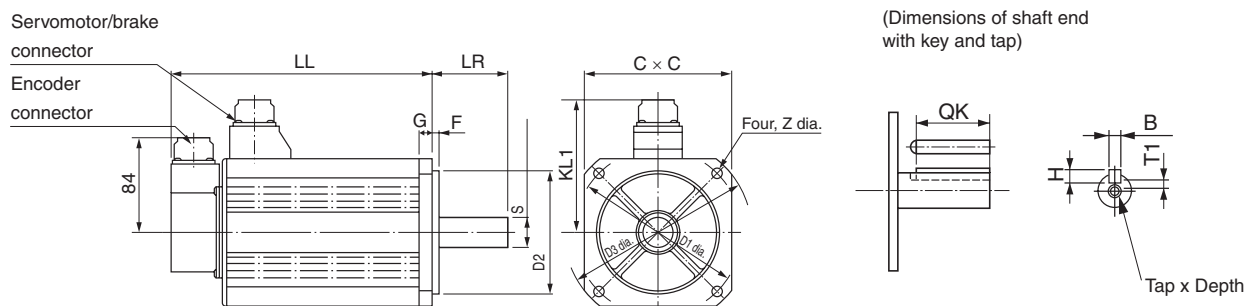
Cylindrical type 3000 r/min (230 V, 200-750 W)

Dimensions (mm)	Without brake	With brake	LR	KL1	Flange surface					Shaft end						Aprox. mass (kg)	
Model	LL	LL			D1	D2	C	G	Z	S	QK	B	H	T1	Tap x depth	Without brake	With brake
R88M-G20030□□S2	79.5	116	30	43	70	50 ^{h7}	60	6.5	4.5	11 ^{h6}	18	4 ^{h9}	4	2.5	M4x8L	0.8	1.3
R88M-G40030□□S2	99	135.5								14 ^{h6}	22.5	5 ^{h9}	5	3	M5x10L	1.2	1.7
R88M-G75030□□S2	112.2	149.2	35	53	90	70 ^{h7}	80	8	6	19 ^{h6}	22	6 ^{h9}	6	3.5		2.3	3.1



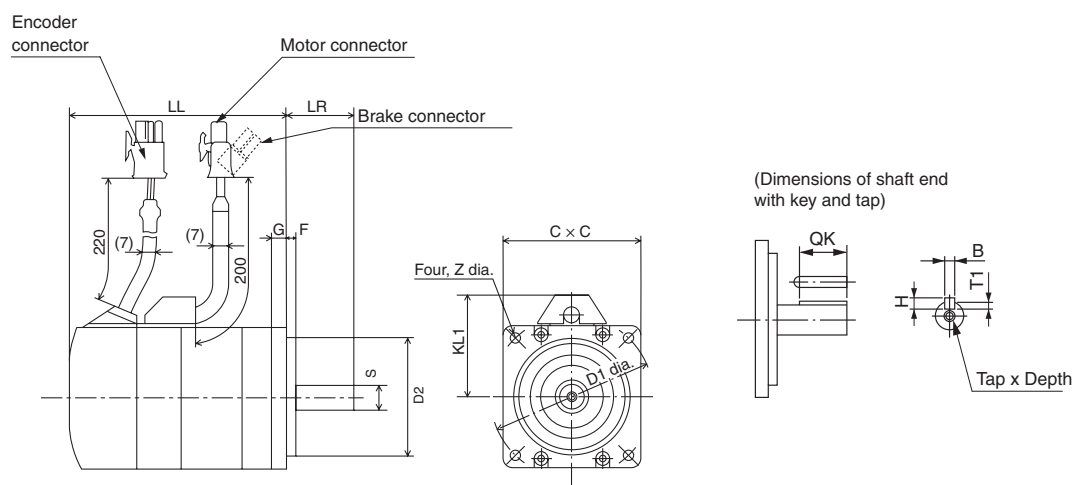
Cylindrical type 3000, 2000 and 1000 r/min (230 V, 900 kW - 1.5 kW)

Dimensions (mm)	Without brake	With brake	LR	KL1	Flange surface								Shaft end						Aprox. mass (kg)	
Model	LL	LL			D1	D2	D3	C	G	F	Z	S	QK	B	H	T1	Tap x depth	Without brake	With brake	
R88M-G1K030T-□S2	175	200	55	98	100	80 ^{h7}	120	90	7	3	6.6	19 ^{h6}	42	6 ^{h9}	6	3.5	M5x12L	4.5	5.1	
R88M-G1K530T-□S2	180	205		103	115	95 ^{h7}	135	100	10		9								5.1	6.5
R88M-G1K020T-□S2	150	175		118	145	110 ^{h7}	165	130	12	6		22 ^{h6}	41	8 ^{h9}	7	4			6.8	8.7
R88M-G1K520T-□S2	175	200																	8.5	10.1
R88M-G90010T-□S2	175	200	70																10	



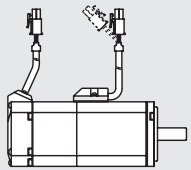
Flat type 3000 r/min (230 V, 100 W - 400 W)

Dimensions (mm)	Without brake	With brake	LR	KL1	Flange surface						Shaft end						Aprox. mass (kg)		
Model	LL	LL			D1	D2	C	F	G	Z	S	QK	B	H	T1	Tap x depth	Without brake	With brake	
R88M-GP10030H-□S2	60.5	84.5	25	43	70	50 ^{h7}	60	3	7	4.5	8 ^{h6}	12.5	3 ^{h9}	3	1.8	M3x6L	0.7	0.9	
R88M-GP10030T-□S2	87.5	111.5																	
R88M-GP20030H-□S2	67.5	100	30	53	90	70 ^{h7}	80	5	8	5.5	11 ^{h6}	18	4 ^{h9}	4	2.5	M4x8L	1.3	2	
R88M-GP20030T-□S2	94.5	127																	
R88M-GP40030H-□S2	82.5	115										14 ^{h6}	22.5	5 ^{h9}	5	3.0	M5x10L	1.8	2.5
R88M-GP40030T-□S2	109.5	142																	

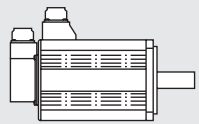


Ordering information

① **G-Series Cylindrical type Servo motor**

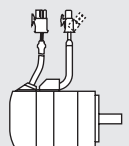


3000 rpm (50-750W)



3000 rpm (1000-1500 W)
2000 rpm (1000-1500 W)
1000 rpm (900 W)

① **G-Series Flat type Servo motor**



3000 rpm (100-400 W)

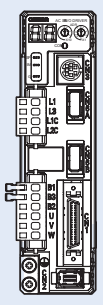
③ Encoder cable

④ Absolute Encoder Battery cable

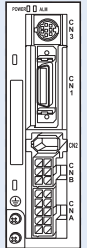
⑤ Power cable

⑥ Brake cable

② **G-Series Servo drive**



② **SmartStep 2 Servo drive**
Servo Drive controlled by pulses



Note: The symbols ①②③④⑤⑥.... show the recommended sequence to select the servo motor and cables

Servo motor

① Select motor from Cylindrical and Flat types using motor tables in next pages.

Servo drive

② Refer to G-Series and SmartStep2 servo drive chapters for detailed drive specifications and selection of drive accessories.

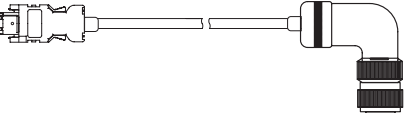
Cylindrical servo motors 3000/2000/1000 r/min (50 - 1.5 kW)

Symbol	Specifications						Servo motor model	Compatible servo drives ②			
	Voltage	Encoder and design	Speed	Design	Rated torque	Capacity		SmartStep2	G-Series		
 (50-750 W)  (900-1500 W)	230 V	Incremental encoder (10000 pulses)	3000 min ⁻¹	Without brake	0.16 Nm	50 W	R88M-G05030H-S2	R7D-BP01H	R88D-GN01H-ML2		
					0.32 Nm	100 W	R88M-G10030H-S2	R7D-BP01H	R88D-GN01H-ML2		
					0.64 Nm	200 W	R88M-G20030H-S2	R7D-BP02HH	R88D-GN02H-ML2		
					1.3 Nm	400 W	R88M-G40030H-S2	R7D-BP04H	R88D-GN04H-ML2		
				2.4 Nm	750 W	R88M-G75030H-S2	R88D-GP08H	R88D-GN08H-ML2			
				0.32 Nm	100 W	R88M-G10030H-BS2	R7D-BP01H	R88D-GN01H-ML2			
				0.64 Nm	200 W	R88M-G20030H-BS2	R7D-BP02HH	R88D-GN02H-ML2			
				1.3 Nm	400 W	R88M-G40030H-BS2	R7D-BP04H	R88D-GN04H-ML2			
				2.4 Nm	750 W	R88M-G75030H-BS2	R88D-GP08H	R88D-GN08H-ML2			
				0.32 Nm	100 W	R88M-G10030T-S2	-	R88D-GN01H-ML2			
				0.64 Nm	200 W	R88M-G20030T-S2	-	R88D-GN02H-ML2			
				1.3 Nm	400 W	R88M-G40030T-S2	-	R88D-GN04H-ML2			
		2.4 Nm	750 W	R88M-G75030T-S2	-	R88D-GN08H-ML2					
		3.18 Nm	1 kW	R88M-G1K030T-S2	-	R88D-GN15H-ML2					
		4.77 Nm	1.5 kW	R88M-G1K530T-S2	-	R88D-GN15H-ML2					
		0.32 Nm	100 W	R88M-G10030T-BS2	-	R88D-GN01H-ML2					
		0.64 Nm	200 W	R88M-G20030T-BS2	-	R88D-GN02H-ML2					
		1.3 Nm	400 W	R88M-G40030T-BS2	-	R88D-GN04H-ML2					
		2.4 Nm	750 W	R88M-G75030T-BS2	-	R88D-GN08H-ML2					
		3.18 Nm	1 kW	R88M-G1K030T-BS2	-	R88D-GN15H-ML2					
		Absolute/ incremental encoder (17 bits)	Straight shaft with key & tap	2000 min ⁻¹	Without brake	4.8 Nm	1 kW	R88M-G1K020T-S2	-	R88D-GN10H-ML2	
						7.15 Nm	1.5 kW	R88M-G1K520T-S2	-	R88D-GN15H-ML2	
					With brake	4.8 N m	1 kW	R88M-G1K020T-BS2	-	R88D-GN10H-ML2	
						7.15 Nm	1.5 kW	R88M-G1K520T-BS2	-	R88D-GN15H-ML2	
					1000 min ⁻¹	Without brake	8.62 Nm	900 W	R88M-G90010T-S2	-	R88D-GN15H-ML2
							With brake			R88M-G90010T-BS2	-

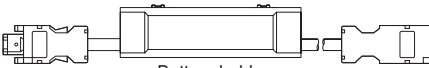
Flat type servo motors 3000 r/min (100 - 400 W)

Symbol	Specifications					Servo motor model	Compatible servo drives ⁽²⁾	
	Voltage	Encoder and design		Rated torque	Capacity		SmartStep2	G-Series
	230 V	Incremental encoder (10000 pulses)	Without brake	0.32 Nm	100 W	R88M-GP10030H-S2	R7D-BP01H	R88D-GN01H-ML2
				0.64 Nm	200 W	R88M-GP20030H-S2	R7D-BP02HH	R88D-GN02H-ML2
				1.3 Nm	400 W	R88M-GP40030H-S2	R7D-BP04H	R88D-GN04H-ML2
			With brake	0.32 Nm	100 W	R88M-GP10030H-BS2	R7D-BP01H	R88D-GN01H-ML2
				0.64 Nm	200 W	R88M-GP20030H-BS2	R7D-BP02HH	R88D-GN02H-ML2
				1.3 Nm	400 W	R88M-GP40030H-BS2	R7D-BP04H	R88D-GN04H-ML2
		Absolute/ incremental encoder (17 bits)	Without brake	0.32 Nm	100 W	R88M-GP10030T-S2	-	R88D-GN01H-ML2
				0.64 Nm	200 W	R88M-GP20030T-S2	-	R88D-GN02H-ML2
				1.3 Nm	400 W	R88M-GP40030T-S2	-	R88D-GN04H-ML2
			With brake	0.32 Nm	100 W	R88M-GP10030T-BS2	-	R88D-GN01H-ML2
				0.64 Nm	200 W	R88M-GP20030T-BS2	-	R88D-GN02H-ML2
				1.3 Nm	400 W	R88M-GP40030T-BS2	-	R88D-GN04H-ML2

Encoder cables

Symbol	Specifications	Model	Appearance
③	Encoder cable for absolute encoder (50-750 W) R88M-G(50/100/200/400/750)30T-□ R88M-GP(100/200/400)30T-□	1.5 m R88A-CRGA001-5CR-E	
		3 m R88A-CRGA003CR-E	
		5 m R88A-CRGA005CR-E	
		10 m R88A-CRGA010CR-E	
		15 m R88A-CRGA015CR-E	
		20 m R88A-CRGA020CR-E	
	Encoder cable for Incremental encoder (50-750 W) R88M-G(50/100/200/400/750)30H-□ R88M-GP(100/200/400)30H-□	1.5 m R88A-CRGB001-5CR-E	
		3 m R88A-CRGB003CR-E	
		5 m R88A-CRGB005CR-E	
		10 m R88A-CRGB010CR-E	
		15 m R88A-CRGB015CR-E	
		20 m R88A-CRGB020CR-E	
	Encoder cable for Absolute encoder (900-1500 W) R88M-G(1K0/1K5)30T-□ R88M-G(1K0/1K5)20T-□ R88M-G90010T-□	1.5 m R88A-CRGC001-5NR-E	
		3 m R88A-CRGC003NR-E	
		5 m R88A-CRGC005NR-E	
		10 m R88A-CRGC010NR-E	
		15 m R88A-CRGC015NR-E	
		20 m R88A-CRGC020NR-E	

Absolute encoder battery cable

Symbol	Specifications	Model	Appearance
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 2,000 mA.h 3.6V	- R88A-BAT01G	

Note: The absolute encoder battery cable is only an extension and must be used with an absolute encoder cable.

Power cables

for SmartStep2 servo drive

Symbol	Specifications	Model	Appearance
⑤	For servomotors from 50 to 400 W R88M-G(50/100/200/400)30□ R88M-GP(100/200/400)30□ For servomotors with brake, a separate cable (R88A-CAGA□BR-E) is needed	1.5 m R7A-CAB001-5SR-E	
		3 m R7A-CAB003SR-E	
		5 m R7A-CAB005SR-E	
		10 m R7A-CAB010SR-E	
		15 m R7A-CAB015SR-E	
		20 m R7A-CAB020SR-E	
	For servomotors 750W R88M-G75030□ For servomotors with brake, a separate cable (R88A-CAGA□BR-E) is needed	1.5 m R88A-CAGA001-5SR-E	
		3 m R88A-CAGA003SR-E	
		5 m R88A-CAGA005SR-E	
		10 m R88A-CAGA010SR-E	
		15 m R88A-CAGA015SR-E	
		20 m R88A-CAGA020SR-E	

for G-Series servo drive

Symbol	Specifications	Model	Appearance
⑤	For servomotors from 50 to 750W R88M-G(50/100/200/400/750)30□ R88M-GP(100/200/400)30□ For servomotors with brake, a separate cable (R88A-CAGA□BR-E) is needed	1.5 m R88A-CAGA001-5SR-E	
		3 m R88A-CAGA003SR-E	
		5 m R88A-CAGA005SR-E	
		10 m R88A-CAGA010SR-E	
		15 m R88A-CAGA015SR-E	
		20 m R88A-CAGA020SR-E	
	For servomotors from 900 to 1.5 kW without brake R88M-G(1K0/1K5)30T-S2 R88M-G(1K0/1K5)20T-S2 R88M-G90010T-S2	1.5 m R88A-CAGB001-5SR-E	
		3 m R88A-CAGB003SR-E	
		5 m R88A-CAGB005SR-E	
		10 m R88A-CAGB010SR-E	
		15 m R88A-CAGB015SR-E	
		20 m R88A-CAGB020SR-E	
	For servomotors from 900 to 1.5 kW with brake R88M-G(1K0/1K5)30T-BS2 R88M-G(1K0/1K5)20T-BS2 R88M-G90010T-BS2	1.5 m R88A-CAGB001-5BR-E	
		3 m R88A-CAGB003BR-E	
		5 m R88A-CAGB005BR-E	
		10 m R88A-CAGB010BR-E	
		15 m R88A-CAGB015BR-E	
		20 m R88A-CAGB020BR-E	

Brake cable (for 50-750W servomotors)

Symbol	Specifications	Model	Appearance
⑥	Brake cable only. For servomotors from 50 to 750W with brake R88M-G(050/100/200/400/750)30□-BS2, R88M-GP(100/200/400)30□-BS2	1.5 m R88A-CAGA001-5BR-E	
		3 m R88A-CAGA003BR-E	
		5 m R88A-CAGA005BR-E	
		10 m R88A-CAGA010BR-E	
		15 m R88A-CAGA015BR-E	
		20 m R88A-CAGA020BR-E	

Connectors for power, encoder and brake cables

Specifications	Applicable Servomotor	Model
Connectors for power cables	Drive side (CNB) R88M-G(050/100/200/400)30H□, R88M-GP(100/200/400)30H□ (SmartStep2 Servo drives only)	R7A-CNB01A
	Motor side R88M-G(050/100/200/400/750)30□, R88M-GP(100/200/400)30□	R88A-CNG01A
	Motor side R88M-G(1K0/1K5)30□-S2, R88M-G(1K0/1K5)20□-S2, R88M-G90010□-S2 (without brake)	MS3108E20-4S
	Motor side R88M-G(1K0/1K5)30□-BS2, R88M-G(1K0/1K5)20□-BS2, R88M-G90010□-BS2 (with brake)	MS3108E20-18S
Connectors for encoder cables	Drive side (CN2) -	R88A-CNW01R
	Motor side R88M-G(050/100/200/400/750)30T-□, R88M-GP(100/200/400)30T-□ (Absolute encoder)	R88A-CNG01R
	Motor side R88M-G(050/100/200/400/750)30H-□, R88M-GP(100/200/400)30H-□ (Incremental encoder)	R88A-CNG02R
	Motor side R88M-G(1K0/1K5)30T-□, R88M-G(1K0/1K5)20T-□, R88M-G90010T-□	MS3108E20-29S
Connector for brake cable	Motor side R88M-G(050/100/200/400/750)30□-BS2, R88M-GP(100/200/400)30□-BS2	R88A-CNG01B

- Note:** 1. All cables listed are flexible and shielded (except the R88A-CAGA□□□BR-E which is only a flexible cable)
2. The R88A-CRGC□□□NR-E, R88A-CAGB□□□SR-E and R88A-CAGB□□□BR-E cables have IP67 class (including connector)

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.
To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.