

R88M-1□

1S servo motor

Simplified machine design and maintenance

- 23-bit resolution encoder
- Compact and small motor size
- Multi-turn encoder design without mechanics: 16-bit, 65536 turns
- Battery-free absolute multi-turn encoder
- Pre-assembled motor cables
- Designed for easy EMC compliance

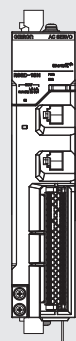
Ratings

- 230 VAC from 100 W to 1.5 kW
(rated torque from 0.318 to 8.59 Nm)
- 400 VAC from 400 W to 3 kW
(rated torque from 1.91 to 28.7 Nm)



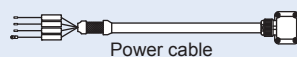
System configuration

(Refer to servo drive chapter)

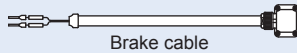


1S servo drive

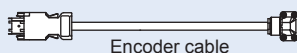
1S servo motor (Flange size 80 mm or less)



Power cable

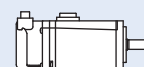


Brake cable



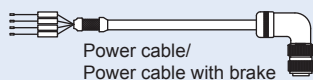
Encoder cable

SYSMAC
always in control

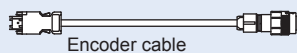


3000 rpm (100 W - 750 W)

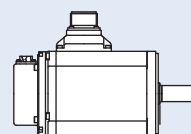
1S servo motor (Flange size 100 mm or more)



Power cable/
Power cable with brake



Encoder cable



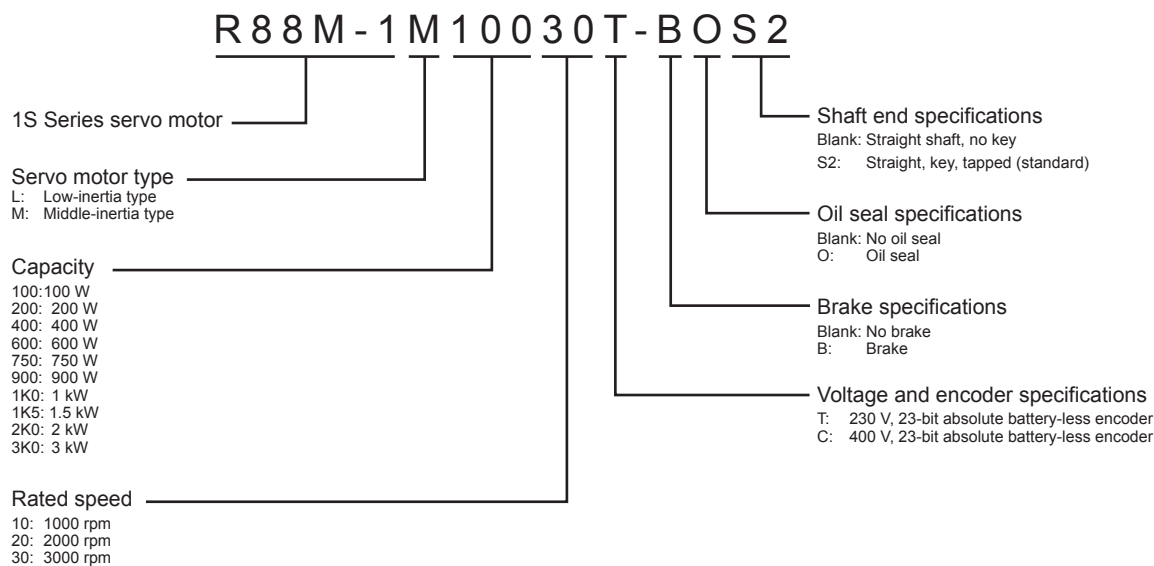
3000 rpm (1 kW - 3 kW)
2000 rpm (400 W - 3 kW)
1000 rpm (900 W - 3 kW)

Servo motor / Servo drive combination

1S servo motor						1S servo drive
Appearance	Speed	Voltage	Rated torque	Capacity	Model	
	3000 min ⁻¹	230 V	0.318 Nm	100 W	R88M-1M10030T-□	R88D-1SN01H-ECT
			0.637 Nm	200 W	R88M-1M20030T-□	R88D-1SN02H-ECT
			1.27 Nm	400 W	R88M-1M40030T-□	R88D-1SN04H-ECT
			2.39 Nm	750 W	R88M-1M75030T-□	R88D-1SN08H-ECT
			3.18 Nm	1 kW	R88M-1L1K030T-□	R88D-1SN15H-ECT
			4.77 Nm	1.5 kW	R88M-1L1K530T-□	R88D-1SN15H-ECT
		400 V	2.39 Nm	750 W	R88M-1L75030C-□	R88D-1SN10F-ECT
			3.18 Nm	1 kW	R88M-1L1K030C-□	R88D-1SN10F-ECT
			4.77 Nm	1.5 kW	R88M-1L1K530C-□	R88D-1SN15F-ECT
			6.37 Nm	2 kW	R88M-1L2K030C-□	R88D-1SN20F-ECT
	2000 min ⁻¹	230 V	4.77 Nm	1 kW	R88M-1M1K020T-□	R88D-1SN15H-ECT
			7.16 Nm	1.5 kW	R88M-1M1K520T-□	R88D-1SN15H-ECT
		400 V	1.91 Nm	400 W	R88M-1M40020C-□	R88D-1SN06F-ECT
			2.86 Nm	600 W	R88M-1M60020C-□	R88D-1SN06F-ECT
			4.77 Nm	1 kW	R88M-1M1K020C-□	R88D-1SN10F-ECT
			7.16 Nm	1.5 kW	R88M-1M1K520C-□	R88D-1SN15F-ECT
			9.55 Nm	2 kW	R88M-1M2K020C-□	R88D-1SN20F-ECT
			14.3 Nm	3 kW	R88M-1M3K020C-□	R88D-1SN30F-ECT
	1000 min ⁻¹	230 V	8.59 Nm	900 W	R88M-1M90010T-□	R88D-1SN15H-ECT
			8.59 Nm	900 W	R88M-1M90010C-□	R88D-1SN10F-ECT
		400 V	19.1 Nm	2 kW	R88M-1M2K010C-□	R88D-1SN20F-ECT
			28.7 Nm	3 kW	R88M-1M3K010C-□	R88D-1SN30F-ECT

Note: For servo motor and cable part numbers, refer to ordering information at the end of this chapter.
Note: Refer to the servo drive chapter for drive options selection and detailed specifications.

Type designation



Specifications

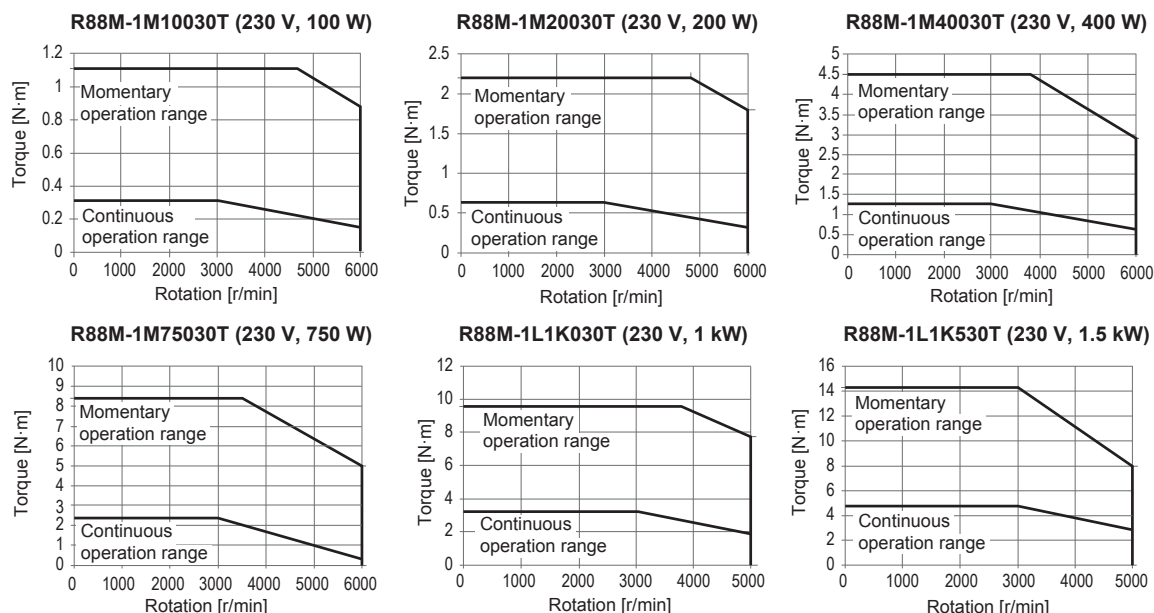
3000 r/min servo motors, 230 V

Ratings and specifications

Voltage		230 V					
Servo motor model: R88M-1□	23-bit absolute encoder	M10030T-□	M20030T-□	M40030T-□	M75030T-□	L1K030T-□	L1K530T-□
Rated output	W	100	200	400	750	1000	1500
Rated torque	Nm	0.318	0.637	1.27	2.39	3.18	4.77
Instantaneous peak torque	Nm	1.11	2.2	4.5	8.4	9.55	14.3
Rated current	A (rms)	0.84	1.5	2.5	4.6	5.2	8.8
Instantaneous max. current	A (rms)	3.1	5.6	9.1	16.9	16.9	28.4
Rated speed	min ⁻¹	3000					
Max. speed	min ⁻¹	6000					
Torque constant	N·m/A	0.42	0.48	0.56	0.59	0.67	0.58
Rotor moment of inertia	kg·m ² ×10 ⁻⁴ (without brake)	0.089	0.2232	0.4452	1.8242	2.1042	2.1042
	kg·m ² ×10 ⁻⁴ (with brake)	0.0968	0.2832	0.5052	2.0742	2.5542	2.5542
Electrical time constant	ms	0.83	2.4	2.6	3.3	5.9	6.1
Allowable radial load	N	68	245		490		
Allowable thrust load	N	58	88		196		
Weight	kg (without brake)	0.52	1.0	1.4	2.9	5.7	
	kg (with brake)	0.77	1.3	1.9	3.9	7.4	
Brake specifications	Excitation voltage*1	24 VDC ±10%					
	Holding brake moment of inertia J	kg·m ² ×10 ⁻⁴	0.0078	0.06	0.25	0.45	
	Current consumption (at 20°C)	A	0.27	0.32	0.37	0.70	
	Static friction torque	Nm (minimum)	0.32	1.37		2.55	9.3
Basic specifications	Insulation class	Type F					
	Ambient operating/storage temperature	0 to 40°C/-20 to 65°C					
	Ambient operating/storage humidity	20 to 90% (non-condensing)					
	Atmosphere	No corrosive gases					
	Insulation resistance	10 MΩ min. at 500 VDC between the power terminals and FG terminal					
	Vibration resistance	Vibration acceleration of 49 m/s ²					
	Impact resistance	Acceleration of 98 m/s ² max. 3 times each in X, Y and Z directions					
	Enclosure	IP67 (except for through-shaft parts when connectors are inserted)					

*1 This is a non-excitabile brake (it is released when excitation voltage is applied).

Torque-speed characteristics



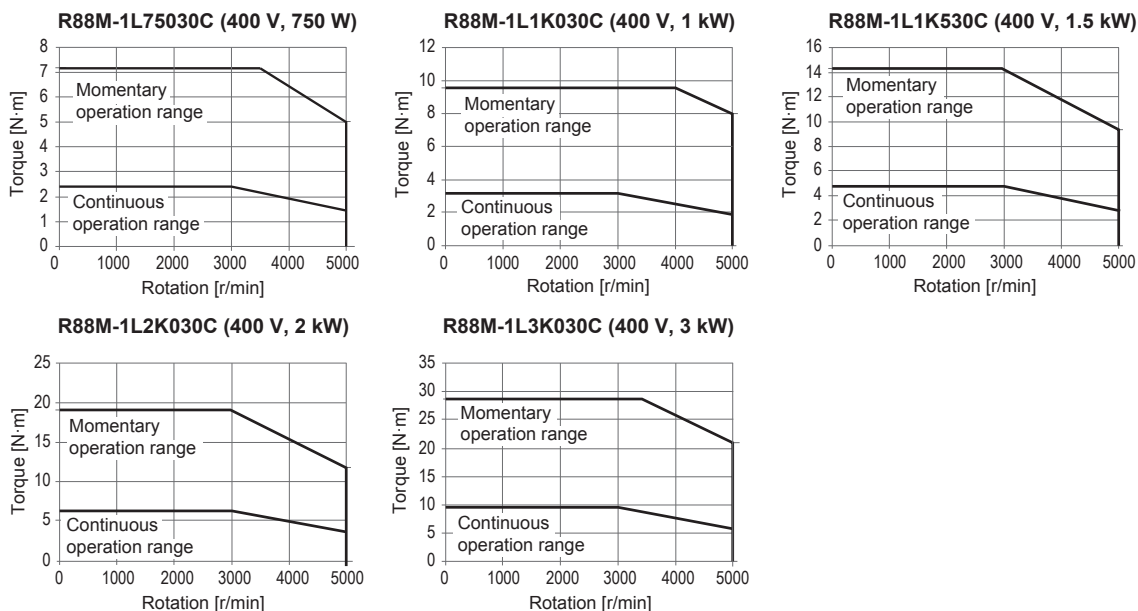
3000 r/min servo motors, 400 V

Ratings and specifications

Voltage		400 V				
Servo motor model: R88M-1□	23-bit absolute encoder	L75030C-□	L1K030C-□	L1K530C-□	L2K030C-□	L3K030C-□
Rated output	W	750	1000	1500	2000	3000
Rated torque	Nm	2.39	3.18	4.77	6.37	9.55
Instantaneous peak torque	Nm	7.16	9.55	14.3	19.1	28.7
Rated current	A (rms)	3.0	3.0	4.5	6.3	8.2
Instantaneous max. current	A (rms)	9.6	9.6	14.1	19.8	27.7
Rated speed	min ⁻¹	3000				
Max. speed	min ⁻¹	5000				
Torque constant	N·m/A	0.91	1.17	1.17	1.15	1.23
Rotor moment of inertia	kg·m ² ×10 ⁻⁴ (without brake)	1.3042	2.1042	2.1042	2.4042	6.8122
	kg·m ² ×10 ⁻⁴ (with brake)	1.7542	2.5542	2.5542	2.8542	7.3122
Electrical time constant	ms	4.3	5.9	5.9	6.3	11.0
Allowable radial load	N	490				
Allowable thrust load	N	196				
Weight	kg (without brake)	4.1	5.7	6.4	11.5	
	kg (with brake)	5.8	7.4	8.1	12.5	
Brake specifications	Excitation voltage ^{*1}	24 VDC ±10%				
	Holding brake moment of inertia J	0.45				0.50
	Current consumption (at 20°C)	0.70				0.66
	Static friction torque	9.3				12.0
Basic specifications	Insulation class	Type F				
	Ambient operating/storage temperature	0 to 40°C/-20 to 65°C				
	Ambient operating/storage humidity	20 to 90% (non-condensing)				
	Atmosphere	No corrosive gases				
	Insulation resistance	10 MΩ min. at 500 VDC between the power terminals and FG terminal				
	Vibration resistance	Vibration acceleration of 49 m/s ²				
	Impact resistance	Acceleration of 98 m/s ² max. 3 times each in X, Y and Z directions				
Enclosure		IP67 (except for through-shaft parts when connectors are inserted)				

^{*1} This is a non-excitable brake (it is released when excitation voltage is applied).

Torque-speed characteristics



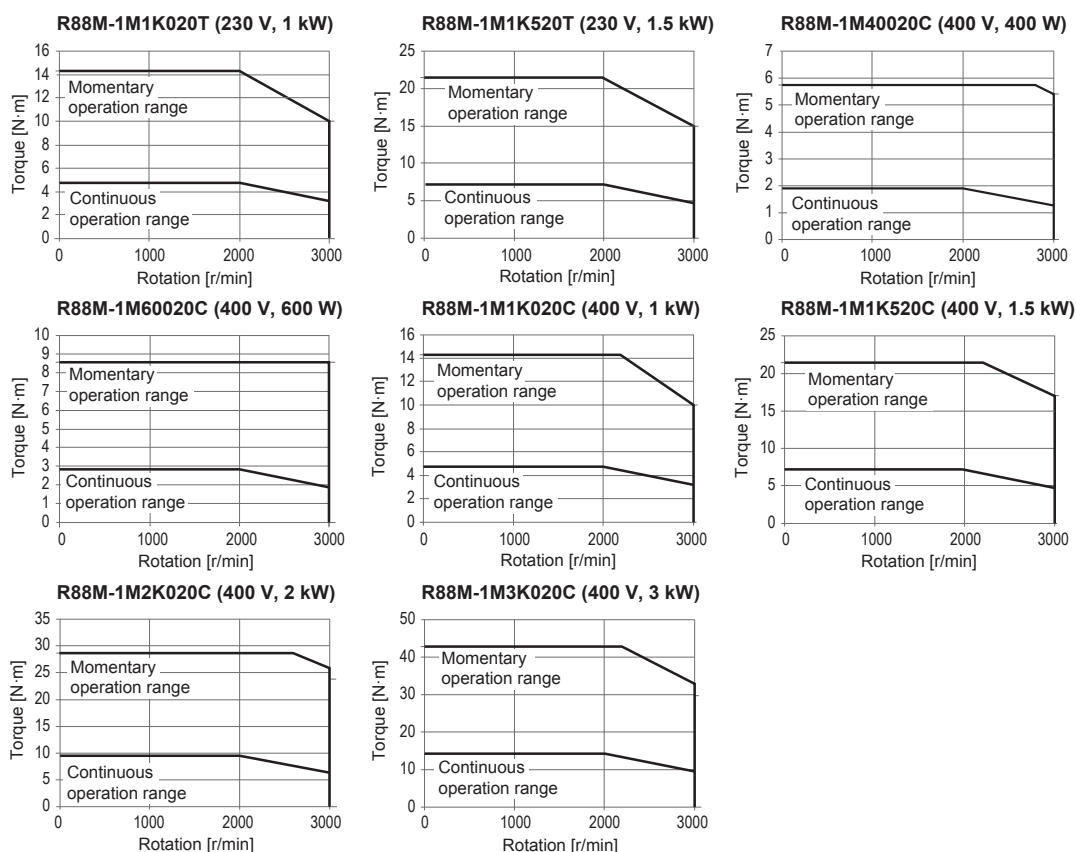
2000 r/min servo motors, 230 V/400 V

Ratings and specifications

Voltage		230 V		400 V								
Servo motor model: R88M-1□		23-bit absolute encoder	M1K020T-□	M1K520T-□	M40020C-□	M60020C-□	M1K020C-□	M1K520C-□	M2K020C-□	M3K020C-□		
Rated output		W	1000	1500	400	600	1000	1500	2000	3000		
Rated torque		Nm	4.77	7.16	1.91	2.86	4.77	7.16	9.55	14.3		
Instantaneous peak torque		Nm	14.3	21.5	5.73	8.59	14.3	21.5	28.7	43.0		
Rated current		A (rms)	5.2	8.6	1.1	1.6	2.9	4.1	5.7	8.6		
Instantaneous max. current		A (rms)	16.9	28.4	3.9	5.5	9.4	13.5	19.8	28.3		
Rated speed		min ⁻¹	2000									
Max. speed		min ⁻¹	3000									
Torque constant		N·m/A	0.93	0.83	1.75	1.84	1.69	1.75	1.75	1.74		
Rotor moment of inertia		kg·m ² ×10 ⁻⁴ (without brake)	6.0042	9.0042	2.5042	3.9042	6.0042	9.0042	12.2042	15.3122		
		kg·m ² ×10 ⁻⁴ (with brake)	6.5042	9.5042	2.8472	4.2472	6.5042	9.5042	12.7042	17.4122		
Electrical time constant		ms	13.0	15.0	6.8	7.8	13.0	13.0	14.0	20.0		
Allowable radial load		N	490							784		
Allowable thrust load		N	196							343		
Weight		kg (without brake)	6.6	8.5	3.9	4.7	6.6	8.5	10.0	12.0		
		kg (with brake)	8.6	10.5	4.8	5.8	8.6	10.5	12.0	15.0		
Brake specifications	Excitation voltage*1		24 VDC ±10%									
	Holding brake moment of inertia J		kg·m ² ×10 ⁻⁴		0.5		0.343		0.5		2.1	
	Current consumption (at 20°C)		A		0.51		0.3		0.51		0.66	0.6
	Static friction torque		Nm (minimum)		9.0		3.92		9.0		12.0	16.0
Basic specifications	Insulation class		Type F									
	Ambient operating/storage temperature		0 to 40°C/-20 to 65°C									
	Ambient operating/storage humidity		20 to 90% (non-condensing)									
	Atmosphere		No corrosive gases									
	Insulation resistance		10 MΩ min. at 500 VDC between the power terminals and FG terminal									
	Vibration resistance		Vibration acceleration of 49 m/s ²									
	Impact resistance		Acceleration of 98 m/s ² max. 3 times each in X, Y and Z directions									
Enclosure		IP67 (except for through-shaft parts when connectors are inserted)										

*1 This is a non-excitabile brake (it is released when excitation voltage is applied).

Torque-speed characteristics



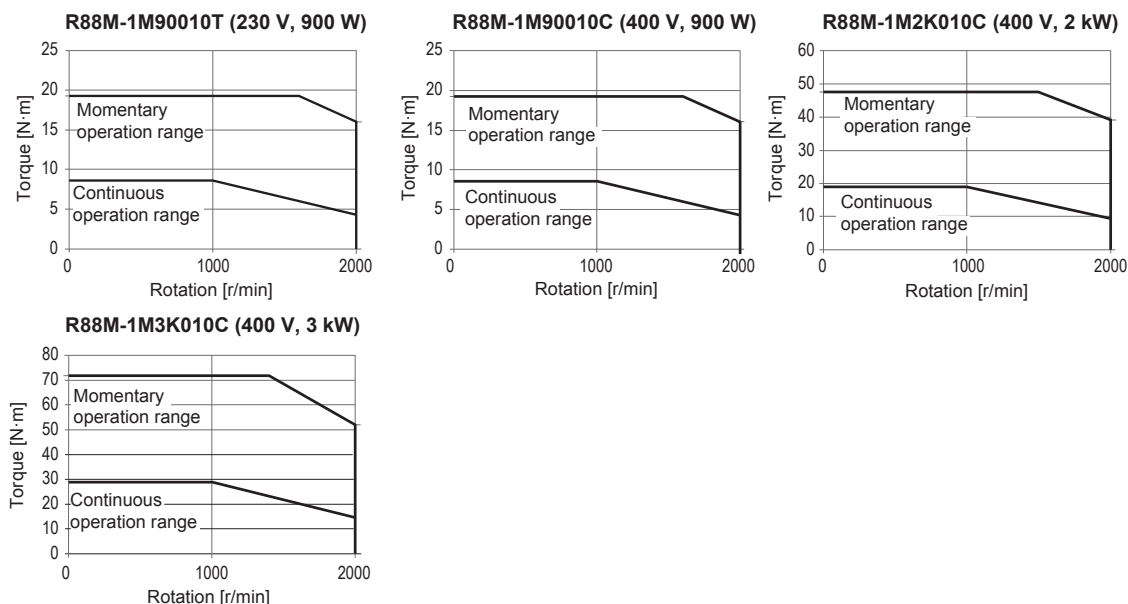
1000 r/min servo motors, 230 V/400 V

Ratings and specifications

Voltage		230 V	400 V		
Servo motor model: R88M-1□		23-bit absolute encoder	M90010T-□	M90010C-□	M2K010C-□ M3K010C-□
Rated output	W	900	900	2000	3000
Rated torque	Nm	8.59	8.59	19.1	28.7
Instantaneous peak torque	Nm	19.3	19.3	47.7	71.7
Rated current	A (rms)	6.7	3.6	7.1	10.6
Instantaneous max. current	A (rms)	16.9	9.0	19.5	27.7
Rated speed	min ⁻¹	1000			
Max. speed	min ⁻¹	2000			
Torque constant	N·m/A	1.28	2.41	3.00	2.97
Rotor moment of inertia	kg·m ² ×10 ⁻⁴ (without brake)	9.0042	9.0042	40.0122	68.0122
	kg·m ² ×10 ⁻⁴ (with brake)	9.5042	9.5042	45.1122	73.1122
Electrical time constant	ms	15.0	13.0	16.0	19.0
Allowable radial load	N	686	1176	1470	
Allowable thrust load	N	196	490		
Weight	kg (without brake)	8.5	18.0	28.0	
	kg (with brake)	10.5	22.0	33.0	
Brake specifications	Excitation voltage ^{*1}	24 VDC ±10%			
	Holding brake moment of inertia J	kg·m ² ×10 ⁻⁴	0.5	5.1	
	Current consumption (at 20°C)	A	0.51	1.2	1.0
	Static friction torque	Nm (minimum)	9.0	22.0	42.0
Basic specifications	Insulation class	Type F			
	Ambient operating/storage temperature	0 to 40°C/-20 to 65°C			
	Ambient operating/storage humidity	20 to 90% (non-condensing)			
	Atmosphere	No corrosive gases			
	Insulation resistance	10 MΩ min. at 500 VDC between the power terminals and FG terminal			
	Vibration resistance	Vibration acceleration of 49 m/s ²			
	Impact resistance	Acceleration of 98 m/s ² max. 3 times each in X, Y and Z directions			
Enclosure		IP67 (except for through-shaft parts when connectors are inserted)			

^{*1} This is a non-excitable brake (it is released when excitation voltage is applied).

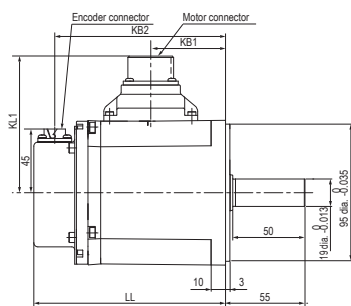
Torque-speed characteristics



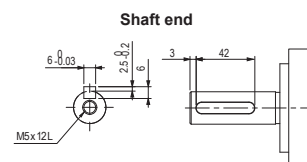
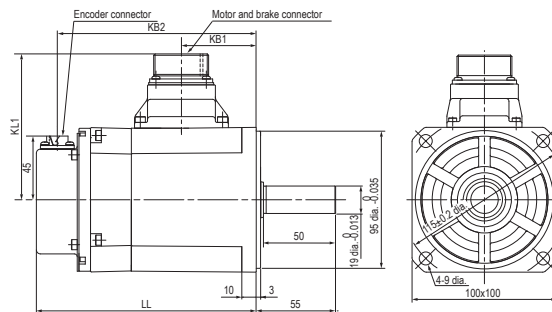
Type 2000 r/min motors (400 V, 400 W to 600 W)

Dimensions (mm)	Without brake				With brake				Approx. mass (kg)	
Model: R88M-1□	LL	KB1	KB2	KL1	LL	KB1	KB2	KL1	Without brake	With brake
M40020C-□S2	134.8	52	120.5	97	152.3	52	138	104	3.9	4.8
M60020C-□S2	151.8	69	137.5		169.3	69	155		4.7	5.8

Models without brake



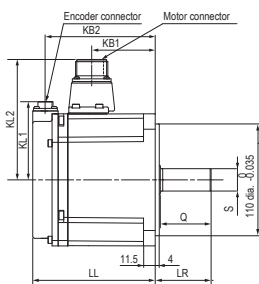
Models with brake



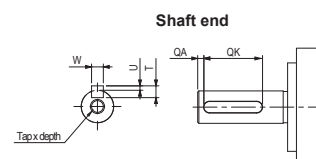
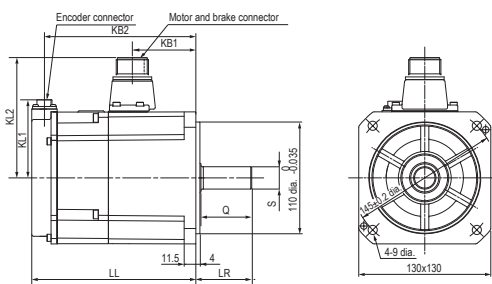
Type 2000 r/min motors (230 V, 1 kW to 1.5 kW / 400 V, 1 kW to 3 kW)

Dimensions (mm)	Without brake					With brake					LR	Shaft end										Approx. mass (kg)	
Model: R88M-1□	LL	KB1	KB2	KL1	KL2	LL	KB1	KB2	KL1	KL2		S	Q	QA	QK	W	U	T	Tap x depth	Without brake	With brake		
M1K020T-□S2	120.5	63	109	76	118	162	63	149	76	118	55	22 dia. ⁰ _{-0.013}	50	3	42	8 ⁰ _{-0.036}	3 ⁰ _{-0.4}	7	M5 x 12L	6.6	8.6		
M1K520T-□S2	138	79	125			179	79	166												8.5	10.5		
M1K020C-□S2	120.5	63	109			162	64	150												6.6	8.6		
M1K520C-□S2	138	79	125			179	81	167												8.5	10.5		
M2K020C-□S2	160	98	148			201	99	189												10.0	12.0		
M3K020C-□S2	191	119	176	45	116	234	118	219	45	119	65	24 dia. ⁰ _{-0.013}	60		52				M8 x 20L	12.0	15.0		

Models without brake



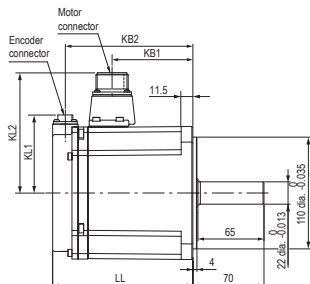
Models with brake



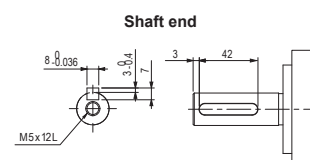
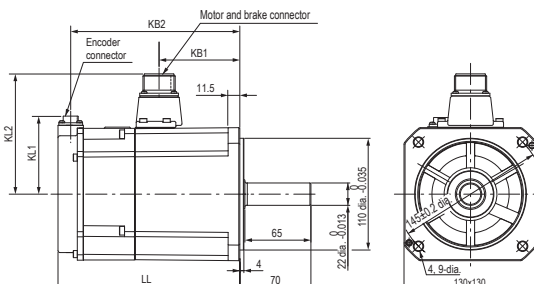
Type 1000 r/min motors (230 V, 900 W / 400 V, 900 W)

Dimensions (mm)	Without brake					With brake					Approx. mass (kg)	
Model: R88M-1□	LL	KB1	KB2	KL1	KL2	LL	KB1	KB2	KL1	KL2	Without brake	With brake
M90010T-□S2	138	79	125	76	118	179	79	166	76	118	8.5	10.5
M90010C-□S2							81	167		117		

Models without brake

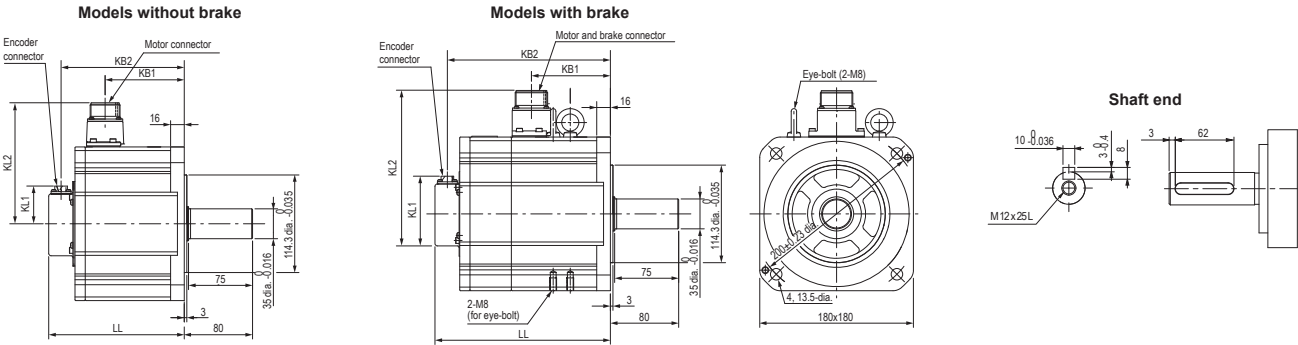


Models with brake



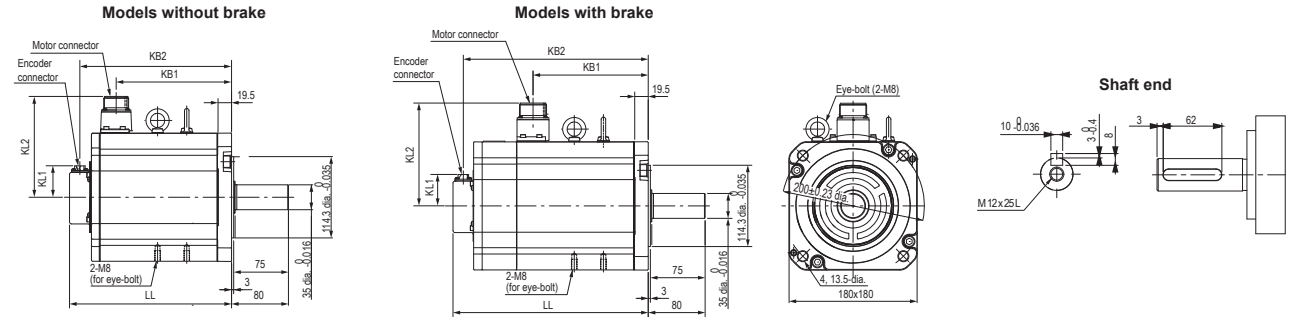
Type 1000 r/min motors (400 V, 2 kW)

Dimensions (mm)	Without brake					With brake					Approx. mass (kg)	
Model: R88M-1□	LL	KB1	KB2	KL1	KL2	LL	KB1	KB2	KL1	KL2	Without brake	With brake
M2K010C-□S2	159	93	145	45	141	206	92	191	45	144	18.0	22.0



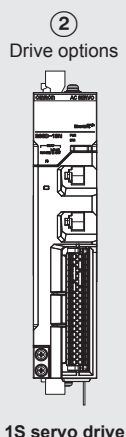
Type 1000 r/min motors (400 V, 3 kW)

Dimensions (mm)	Without brake					With brake					Approx. mass (kg)	
Model: R88M-1□	LL	KB1	KB2	KL1	KL2	LL	KB1	KB2	KL1	KL2	Without brake	With brake
M3K010C-□S2	228	162	213	45	141	274	162	260	45	144	28.0	33.0

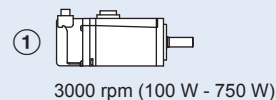
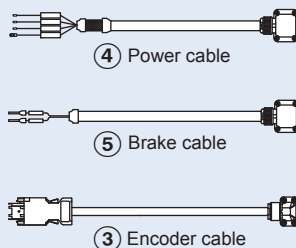


Ordering information

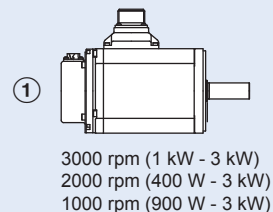
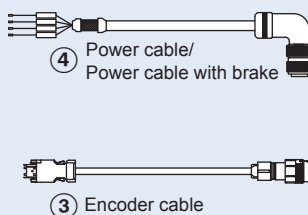
(Refer to servo drive chapter)



1S servo motor (Flange size 80 mm or less)



1S servo motor (Flange size 100 mm or more)



Servo motors

① Select motor from R88M-1□ family using motor tables in next pages.

Servo drives

② Refer to the 1S servo drive chapter for detailed drive specifications and selection of drive accessories.

Servo motors

Servo motors 3000 r/min (100 W to 3 kW)

Symbol	Specifications						Model	Compatible 1S servo drive
	Voltage	Encoder and design		Rated torque	Capacity	Flange size		
①	230 V	Absolute encoder (23-bit)	Without brake	0.318 Nm	100 W	40 mm	R88M-1M10030T-S2	R88D-1SN01H-ECT
				0.637 Nm	200 W	60 mm	R88M-1M20030T-S2	R88D-1SN02H-ECT
				1.27 Nm	400 W	60 mm	R88M-1M40030T-S2	R88D-1SN04H-ECT
				2.39 Nm	750 W	80 mm	R88M-1M75030T-S2	R88D-1SN08H-ECT
				3.18 Nm	1 kW	100 mm	R88M-1L1K030T-S2	R88D-1SN15H-ECT
				4.77 Nm	1.5 kW	100 mm	R88M-1L1K530T-S2	R88D-1SN15H-ECT
		Straight shaft with key and tap	With brake	0.318 Nm	100 W	40 mm	R88M-1M10030T-BS2	R88D-1SN01H-ECT
				0.637 Nm	200 W	60 mm	R88M-1M20030T-BS2	R88D-1SN02H-ECT
				1.27 Nm	400 W	60 mm	R88M-1M40030T-BS2	R88D-1SN04H-ECT
				2.39 Nm	750 W	80 mm	R88M-1M75030T-BS2	R88D-1SN08H-ECT
				3.18 Nm	1 kW	100 mm	R88M-1L1K030T-BS2	R88D-1SN15H-ECT
				4.77 Nm	1.5 kW	100 mm	R88M-1L1K530T-BS2	R88D-1SN15H-ECT
	400 V	Straight shaft with key and tap	Without brake	2.39 Nm	750 W	100 mm	R88M-1L75030C-S2	R88D-1SN10F-ECT
				3.18 Nm	1 kW	100 mm	R88M-1L1K030C-S2	R88D-1SN10F-ECT
				4.77 Nm	1.5 kW	100 mm	R88M-1L1K530C-S2	R88D-1SN15F-ECT
				6.37 Nm	2 kW	100 mm	R88M-1L2K030C-S2	R88D-1SN20F-ECT
				9.55 Nm	3 kW	130 mm	R88M-1L3K030C-S2	R88D-1SN30F-ECT
			With brake	2.39 Nm	750 W	100 mm	R88M-1L75030C-BS2	R88D-1SN10F-ECT
				3.18 Nm	1 kW	100 mm	R88M-1L1K030C-BS2	R88D-1SN10F-ECT
				4.77 Nm	1.5 kW	100 mm	R88M-1L1K530C-BS2	R88D-1SN15F-ECT
				6.37 Nm	2 kW	100 mm	R88M-1L2K030C-BS2	R88D-1SN20F-ECT
				9.55 Nm	3 kW	130 mm	R88M-1L3K030C-BS2	R88D-1SN30F-ECT

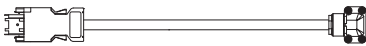
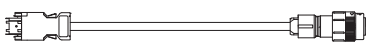
Servo motors 2000 r/min (400 W to 3 kW)

Symbol	Specifications					Model	Compatible 1S servo drive	
	Voltage	Encoder and design	Rated torque	Capacity	Flange size			
①	230 V	Absolute encoder (23-bit)	Without brake	4.77 Nm	1 kW	130 mm	R88M-1M1K020T-S2	R88D-1SN15H-ECT
				7.16 Nm	1.5 kW	130 mm	R88M-1M1K520T-S2	R88D-1SN15H-ECT
		Straight shaft with key and tap	With brake	4.77 Nm	1 kW	130 mm	R88M-1M1K020T-BS2	R88D-1SN15H-ECT
				7.16 Nm	1.5 kW	130 mm	R88M-1M1K520T-BS2	R88D-1SN15H-ECT
	400 V	Without brake	Without brake	1.91 Nm	400 W	100 mm	R88M-1M40020C-S2	R88D-1SN06F-ECT
				2.86 Nm	600 W	100 mm	R88M-1M60020C-S2	R88D-1SN06F-ECT
				4.77 Nm	1 kW	130 mm	R88M-1M1K020C-S2	R88D-1SN10F-ECT
				7.16 Nm	1.5 kW	130 mm	R88M-1M1K520C-S2	R88D-1SN15F-ECT
				9.55 Nm	2 kW	130 mm	R88M-1M2K020C-S2	R88D-1SN20F-ECT
				14.3 Nm	3 kW	130 mm	R88M-1M3K020C-S2	R88D-1SN30F-ECT
		With brake	With brake	1.91 Nm	400 W	100 mm	R88M-1M40020C-BS2	R88D-1SN06F-ECT
				2.86 Nm	600 W	100 mm	R88M-1M60020C-BS2	R88D-1SN06F-ECT
				4.77 Nm	1 kW	130 mm	R88M-1M1K020C-BS2	R88D-1SN10F-ECT
				7.16 Nm	1.5 kW	130 mm	R88M-1M1K520C-BS2	R88D-1SN15F-ECT
				9.55 Nm	2 kW	130 mm	R88M-1M2K020C-BS2	R88D-1SN20F-ECT
				14.3 Nm	3 kW	130 mm	R88M-1M3K020C-BS2	R88D-1SN30F-ECT

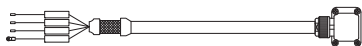
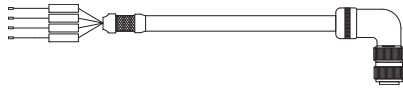
Servo motors 1000 r/min (900 W to 3 kW)

Symbol	Specifications					Model	Compatible 1S servo drive	
	Voltage	Encoder and design		Rated torque	Capacity			Flange size
①	230 V	Absolute encoder (23-bit)	Without brake	8.59 Nm	900 W	130 mm	R88M-1M90010T-S2	R88D-1SN15H-ECT
			With brake	8.59 Nm	900 W	130 mm	R88M-1M90010T-BS2	R88D-1SN15H-ECT
	400 V	Straight shaft with key and tap	Without brake	8.59 Nm	900 W	130 mm	R88M-1M90010C-S2	R88D-1SN10F-ECT
				19.1 Nm	2 kW	180 mm	R88M-1M2K010C-S2	R88D-1SN20F-ECT
				28.7 Nm	3 kW	180 mm	R88M-1M3K010C-S2	R88D-1SN30F-ECT
			With brake	8.59 Nm	900 W	130 mm	R88M-1M90010C-BS2	R88D-1SN10F-ECT
				19.1 Nm	2 kW	180 mm	R88M-1M2K010C-BS2	R88D-1SN20F-ECT
				28.7 Nm	3 kW	180 mm	R88M-1M3K010C-BS2	R88D-1SN30F-ECT

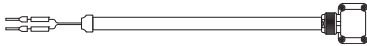
Encoder cables

Symbol	Specifications		Model	Appearance
③	Encoder cable for servo motors R88M-1M(100/200/400/750)30T-□	1.5 m	R88A-CR1A001-5CF-E	
		3 m	R88A-CR1A003CF-E	
		5 m	R88A-CR1A005CF-E	
		10 m	R88A-CR1A010CF-E	
		15 m	R88A-CR1A015CF-E	
		20 m	R88A-CR1A020CF-E	
	Encoder cable for servo motors R88M-1L(1K0/1K5)30T-□ R88M-1L(750/1K0/1K5/2K0/3K0)30C-□ R88M-1M(1K0/1K5)20T-□ R88M-1M(400/600/1K0/1K5/2K0/3K0)20C-□ R88M-1M90010T-□ R88M-1M(900/2K0/3K0)10C-□	1.5 m	R88A-CR1B001-5NF-E	
		3 m	R88A-CR1B003NF-E	
		5 m	R88A-CR1B005NF-E	
		10 m	R88A-CR1B010NF-E	
		15 m	R88A-CR1B015NF-E	
		20 m	R88A-CR1B020NF-E	

Power cables

Symbol	Specifications		Model	Appearance
④	For 230 V servo motors R88M-1M(100/200/400/750)30T-□S2 Note: For servo motors with brake R88M-1M(100/200/400/750)30T-BS2, the separate brake cable R88A-CA1A□□□BF-E is needed.	Without brake	1.5 m R88A-CA1A001-5SF-E	
			3 m R88A-CA1A003SF-E	
			5 m R88A-CA1A005SF-E	
			10 m R88A-CA1A010SF-E	
			15 m R88A-CA1A015SF-E	
			20 m R88A-CA1A020SF-E	
	For 230 V servo motors R88M-1L(1K0/1K5)30T-□S2 R88M-1M(1K0/1K5)20T-□S2 R88M-1M90010T-□S2	Without brake	1.5 m R88A-CA1C001-5SF-E	
			3 m R88A-CA1C003SF-E	
			5 m R88A-CA1C005SF-E	
			10 m R88A-CA1C010SF-E	
			15 m R88A-CA1C015SF-E	
			20 m R88A-CA1C020SF-E	
		With brake	1.5 m R88A-CA1C001-5BF-E	
			3 m R88A-CA1C003BF-E	
			5 m R88A-CA1C005BF-E	
			10 m R88A-CA1C010BF-E	
			15 m R88A-CA1C015BF-E	
			20 m R88A-CA1C020BF-E	
	For 400 V servo motors R88M-1L(750/1K0/1K5/2K0)30C-□S2 R88M-1M(400/600/1K0/1K5/2K0)20C-□S2 R88M-1M90010C-□S2	Without brake	1.5 m R88A-CA1C001-5SF-E	
			3 m R88A-CA1C003SF-E	
			5 m R88A-CA1C005SF-E	
			10 m R88A-CA1C010SF-E	
			15 m R88A-CA1C015SF-E	
			20 m R88A-CA1C020SF-E	
		With brake	1.5 m R88A-CA1E001-5BF-E	
			3 m R88A-CA1E003BF-E	
			5 m R88A-CA1E005BF-E	
			10 m R88A-CA1E010BF-E	
			15 m R88A-CA1E015BF-E	
			20 m R88A-CA1E020BF-E	
	For 400 V servo motors R88M-1L3K030C-□S2 R88M-1M3K020C-□S2 R88M-1M(2K0/3K0)10C-□S2	Without brake	1.5 m R88A-CA1E001-5SF-E	
			3 m R88A-CA1E003SF-E	
			5 m R88A-CA1E005SF-E	
			10 m R88A-CA1E010SF-E	
			15 m R88A-CA1E015SF-E	
			20 m R88A-CA1E020SF-E	
		With brake	1.5 m R88A-CA1E001-5BF-E	
			3 m R88A-CA1E003BF-E	
			5 m R88A-CA1E005BF-E	
			10 m R88A-CA1E010BF-E	
			15 m R88A-CA1E015BF-E	
			20 m R88A-CA1E020BF-E	

Brake cables (for 230 V, 100 W to 750 W servo motors)

Symbol	Specifications	Model	Appearance
⑤	Brake cable only For 230 V servo motors with brake R88M-1M(100/200/400/750)30T-BS2	1.5 m R88A-CA1A001-5BF-E	
		3 m R88A-CA1A003BF-E	
		5 m R88A-CA1A005BF-E	
		10 m R88A-CA1A010BF-E	
		15 m R88A-CA1A015BF-E	
		20 m R88A-CA1A020BF-E	

Connectors for encoder, power and brake cables

Specifications		Applicable servo motor	Model
Connectors for encoder cables	Drive side (CN2)	All models	R88A-CN101R
	Motor side	R88M-1M(100/200/400/750)30T-□	R88A-CNK02R
		R88M-1L(1K0/1K5)30T-□	R88A-CN104R
		R88M-1L(750/1K0/1K5/2K0/3K0)30C-□	
		R88M-1M(1K0/1K5)20T-□ R88M-1M(400/600/1K0/1K5/2K0/3K0)20C-□ R88M-1M90010T-□ R88M-1M(900/2K0/3K0)10C-□	
Connectors for power cables	Motor side	R88M-1M(100/200/400/750)30T-S2	R88A-CN111A
		R88M-1L(1K0/1K5)30T-S2 R88M-1M(1K0/1K5)20T-S2 R88M-1M90010T-S2 R88M-1L(750/1K0/1K5/2K0)30C-S2 R88M-1M(400/600/1K0/1K5/2K0)20C-S2 R88M-1M90010C-S2	MS3108E20-4S
		R88M-1L(1K0/1K5)30T-BS2 R88M-1M(1K0/1K5)20T-BS2 R88M-1M90010T-BS2	MS3108E20-18S
		R88M-1L3K030C-S2 R88M-1M3K020C-S2 R88M-1M(2K0/3K0)10C-S2	MS3108E22-22S
		R88M-1L(750/1K0/1K5/2K0/3K0)30C-BS2 R88M-1M(400/600/1K0/1K5/2K0/3K0)20C-BS2 R88M-1M(900/2K0/3K0)10C-BS2	MS3108E24-11S
		R88M-1M(100/200/400/750)30T-BS2	R88A-CN111B
Connectors for brake cables	Motor side	R88M-1M(100/200/400/750)30T-BS2	R88A-CN111B

Cable clamp (spare parts)

Applicable 1S power cable	Model
230 V, 100 W to 750 W models	R88A-SC011S-E
230 V, 1.5 kW model 400 V, 600 W to 3 kW models	R88A-SC021S-E

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

Cat. No. SysCat_I189E-EN-01C In the interest of product improvement, specifications are subject to change without notice.