



Distributors for Australia & New Zealand
MOTION TECHNOLOGIES PTY LIMITED

24/22-30 Northumberland Road
Caringbah NSW 2229 Australia
Phone: (02) 9524 4782

sales@motiontech.com.au
www.motiontech.com.au

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ESTUN AUTOMATION CO.,LTD.



No.1888, Jiyin Road, Jiangning Development Zone, Nanjing city



No.16, Shuige Road, Jiangning Development Zone, Nanjing city



No.178, Yanhu Road, Jiangning Development Zone, Nanjing city



+86-25-52785866



+86-25-52785966



www.estun.com

Service Hotline +86 400 025 3336



Official wechat



Official website



**Summa ED3L series
full digital AC servo system**

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ALL DIGITAL AC SERVO SYSTEMS

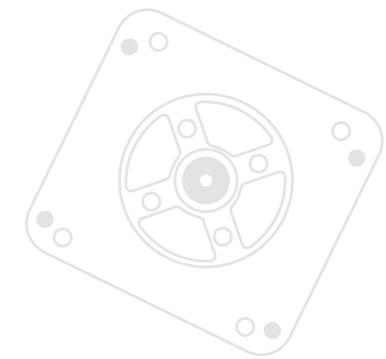
ESTUN AUTOMATION Co., Ltd. is a leading supplier and service provider of high-end automation core components and industrial robots and intelligent manufacturing systems in China.

As one of the influential enterprises in the field of motion control in China, Estun has completed the strategic transformation of its product line of automation core components from AC servo system to motion control system solutions, and its business model is fully sublimated from single axis, single machine and single unit.

Estun has actively explored the "internationalization" development strategy, successively purchased Trio from the UK and controlled M.A.I from Germany. The company invested in Barrett of America, Euclid of Italy and other companies, and established a European RESEARCH and development center in Milan, which initially completed the international layout in brand and technology, laying a solid foundation for the company to implement the development strategy in motion control solutions, intelligent collaborative robots, rehabilitation robots and industry 4.0. At present, Estun Automation has 7 overseas branches in the world, and its business covers more than 60 countries and regions.

In the future, Estun will follow the development trend of the industry, walk out a development road with Estun characteristics, take the motion control system as the first brand in China, take the mission of creating the world brand of Chinese robot, and build Estun into an international enterprise recognized and respected by peers.

A beautiful world, worthy of all our efforts



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01 Servo drive & Servo motor

Uniaxial servo driver

ED3L - 04 A E A - FS02

ED3L Servo drive



Rated output power

A5	0.05kW	200VAC	Options	Encoder type	Extended function
01	0.1kW	400VAC			
02	0.2kW				
04	0.4kW				
08	0.75kW				
10	1.0kW				
15	1.5kW				
20	2.0kW				
30	3.0kW				
50	5.0kW				
75	7.5kW				

Voltage grade

A	EtherCAT	Serial encoder	FS02 Support the STO
D	CANopen,pulse	Linear encoder	

Options

E	M
P	Profinet

Encoder type

A	Serial encoder
C	Linear encoder

Extended function

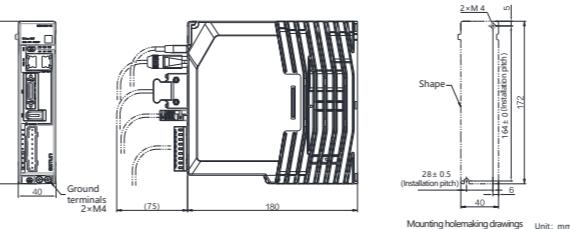
FS02 Support the STO

- Note: 1. Please refer to "Model Comparison Table" for details.
2. Only ED3L-04AEC and ED3L-10AEC support linear motors
3. The default model does not contain extended functions

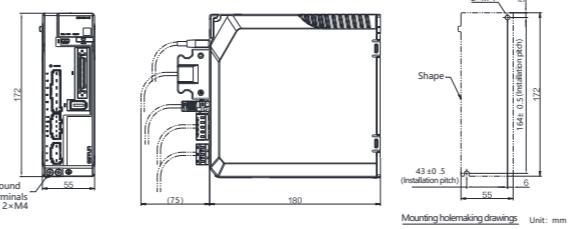
200VAC								
Driver model:ED3L-	A5A	01A	02A	04A	08A	10A	15A	20A
Continuous output current[Arms]	0.9	1.1	1.5	2.9	5.1	6.9	9.5	12.6
Maximum output current[Arms]	3.3	4.0	5.8	11.5	19.5	21.0	31.6	42.0
Capacity of main power supply[kVA] (Single phase)	0.2	0.3	0.6	1.2	1.9	2.6	4.0	-
Capacity of main power supply[kVA] (Three-phase)	-	-	-	-	1.6	2.0	3.0	3.5

400VAC						
Driver model:ED3L-	10D	15D	20D	30D	50D	75D
Continuous output current[Arms]	3.6	5.0	7.1	12.0	17.0	27.3
Maximum output current[Arms]	10.9	16.3	21.2	36.6	53.0	70.0
Capacity of main power supply[kVA] (Three-phase)	1.8	2.8	3.5	5.0	8.2	12.0

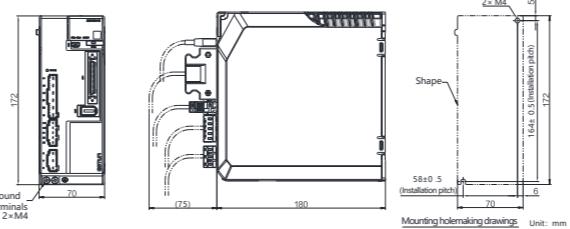
Single axis, 200VAC , Rated power: 50W~400W



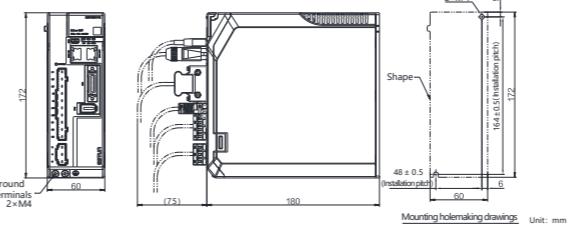
Single axis, 200VAC , Rated power: 750W~1KW



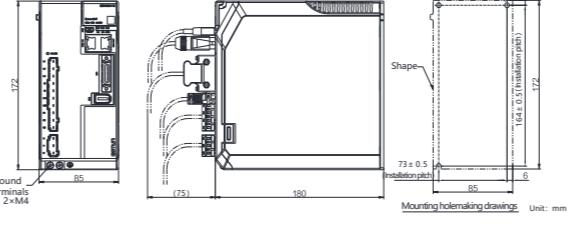
Single axis, 200VAC , Rated power: 1.5kW~2KW



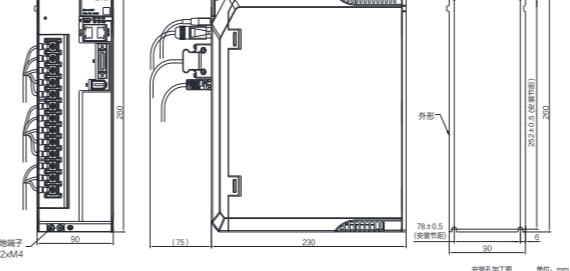
Single axis, 400VAC , Rated power: 1kW~1.5KW



Single axis, 400VAC , Rated power: 2kW~3KW



Single axis, 400VAC , Rated power: 5kW~7.5KW



General specification		Description
Input power	200VAC	Single-phase AC 200V to 240VAC 200V~240V, -15% ~ +10%, 50Hz/60Hz
	400VAC	Three-phase AC 380V ~ 440V, -15% ~ +10%, 50Hz/60Hz (Power ≥ 0.75kw)
Operation conditions	Work environment	Temperature: -5°C ~ 55°C; When used on a single device: -5°C ~ 55°C; When multiple devices are installed snugly: -5°C ~ 40°C
	Humidity	5% to 95% (with no condensation)
	Storage environment	Temperature: -20°C ~ 85°C
	Humidity	5% to 95% (with no condensation)
	Protection Class	IP20
	Altitude	Below 1000 m
	Vibration resistance	Vibration Resistance: 4.9m/s²
	Impact resistance	Impact Resistance: 19.6m/s²
	Power System	TN System
Installation structure	Base-mounted	
Performance	Coefficient of speed fluctuation	±0.01% of rated speed max. (For a load fluctuation of 0% to 100%)
	Soft start time setting	0% of rated speed max. (For a load fluctuation of ±10%)
USB communication	Conforms to USB2.0 standard (12 Mbps)	
Display	5 bit digital tube	
Panel operator	4 Buttons	
Regenerative braking	50W ~ 400W products without built-in brake resistance	
Protection function	Other power products have built-in brake resistance	
Utility Functions	Overcurrent, Overvoltage, Undervoltage, Overload, Regeneration Error, Overspeed, etc.	
Alarm recording, JOG running, load inertia recognition, mechanical analyzer, automatic setting tools, etc		

Bus type specifications		Description
Power range	50W~7.5kW	
I/O Signals	Input Signals	Allowable voltage range: 24 VDC±20% Number of input points: 5 (Two fixed channels can be used for Touch Probe)
	Output Signals	Operating voltage range: 5 VDC to 30 VDC Number of output points: 3 (1 of them fixed for Servo Alarm)
Communications and Standards	Standard EtherCAT/ProfiNet protocol and rules	

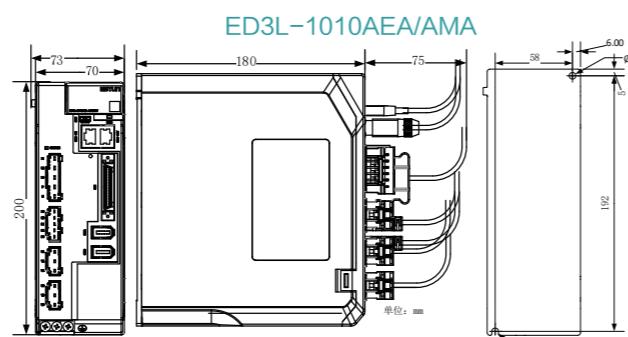
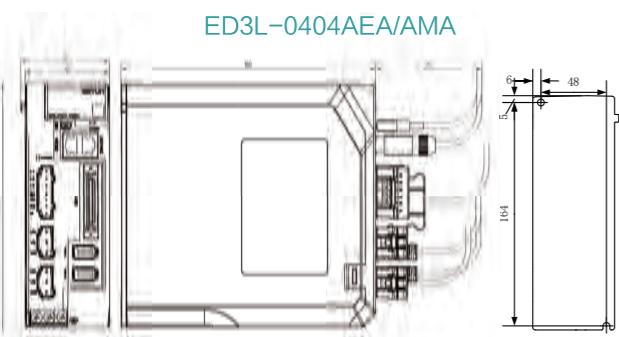
Pulse type specifications		Description
Power range	50W~7.5kW	
I/O Signals	Encoder pulse division output	A-phase, B-phase, C-phase: line drive output Number of divider pulses: Arbitrary frequency division
	Input Signals	Operating voltage range: 24 VDC±20% Number of input points: 5 (Two fixed channels can be used for Touch Probe)
	Output Signals	Operating voltage range: 5 VDC to 30 VDC Number of output points: 4 (1 of them fixed for Servo Alarm)
Torque Control	External input	DC±10V (DC± 0V~ ± 10V: Variable setting range)
	Built-in set	4 torque contacts
Speed control	External input	DC± 10V (DC± 0V~ ± 10V: Variable setting range)
	Built-in set	Speed 1 to Speed 7
Position control	External input	Choose one of the following input types: Symbol + Pulse Column; CCW + CW Pulse Column; 90° Phase Difference 2 Phase Pulse (A Phase + B Phase)
	Built-in set	32 location contacts

linear drive		Description
Power range	100W~1.0kW	
I/O Signals	Input Signals	Allowable voltage range: 24 VDC±20% Number of input points: 5
	Output Signals	Allowable voltage range: 5 VDC to 30 VDC Number of output points: 3 (One of the fixed channels is used for servo alarm)
Encoder	Pulse signal	A, B, Z (Difference)
	Hall signal	5V single-ended signal
Communications & Standards	Standard EtherCAT protocol and rules	

Biaxial servo drive

ED3L	- 04 04	A	E	A
ED3L Servo drive	A-axis output power 04 0.4KW 10 1.0KW	B-axis output power Voltage grade A 200VAC	Options E EtherCAT M CANopen,pulse	Encoder type A Serial encoder
				
Note: 1, suitable for EM3A, EM3J, EM3G servo motor				

Driver model:ED3L-	0404A	1010A
Continuous output current[Arms]	2.9	2.9
Maximum output current[Arms]	11.5	11.5
Capacity of main power supply[kVA] (Single phase)	1.9	4.5
Capacity of main power supply[kVA] (Three-phase)	1.6	3.8



Project	Specifications
ED3L-	0404AEA/1010AEA 0404AMA/1010AMA
Input power	Main circuit Single phase 200~240VAC +10%~-15% (50/60Hz) Three-phase 200~240VAC +10%~-15% (50/60Hz)
	Control voltage Single phase 200~240VAC +10%~-15% (50/60Hz)
	Control mode SVPWM

Project		Specifications				
ED3L-		0404AEA/1010AEA	0404AMA/1010AMA			
Operation conditions	Service temperature/Storage temperature	Operating temperature: -5~55°C / storage temperature: -20~85°C				
	Use humidity/store humidity	5%~95%RH(no condensation, no freezing)				
	Resistance to vibration/impact	Vibration resistance:4.9m/s ² /Impact resistance:19.6m/s ²				
	Installation structure	Installed base				
Speed control	Speed setting instruction	Only the parameter speed control mode is supported	Switch direction through/p-con			
	Speed selection	/	Speed 1~7 can be selected			
	Function	Soft start setting	0~10s(acceleration and deceleration can be set separately)			
Position control	Command pulse	Species	/	Symbol + pulse train, CCW+CW,90° phase difference 2-phase pulse (A+B)		
		Form	/	Uninsulated wire drive approx. (+5V), open collector		
		Frequency	/	× 1 frequency doubling: 4Mpps × 2 frequency doubling: 2Mpps × 4 frequency doubling: 1Mpps Open collector: 200kpps Description: Frequency will decrease when duty cycle deviation occurs		
	Set position instruction		/	32 position nodes can be set		
Input-output signal	Sequential input signal	Channel number	5 channels	10 channels		
		Function	Input signal is S-ON (servo enable), P-CON (proportional control), ALM-RST (alarm reset), CLR (position deviation clearance), P-OT (positive drive prohibition), N-OT (reverse drive prohibition), PCL (positive torque limit), NCL (negative torque limit). Except for Touch Probe, other signals can be allocated and the positive and negative logic can be changed.			
Built-in function	Sequential output signal	Channel number	3 channels	4 channels		
		Function	The output signal is: COIN (positioning completion), VCMP (same-speed detection), TGON (motor rotation detection), ALM (servo alarm), S-RDY (servo ready), BK (brake), PGC (encoder C pulse), OT (overrange detection), HOME (zero return completion), REMOTE (REMOTE IO), TCR (torque detection). Except for ALM, all signals can be assigned and the positive and negative logic can be changed.			
Protection function	Protection function	Over current, over voltage, under voltage, over load, regenerative fault, overspeed, etc				
	Auxiliary function	Alarm recording, JOG operation, load inertia identification, mechanical analyzer, automatic setting tools, etc				
	Communications functions	EtherCAT communication module uses CiA402 protocol		CAN communication port, using CANopen protocol		
	Display function	Five digital tubes, five buttons CHARGE, POWER, SYS, RUN, ERR, L/A OUT, AXIS-A/B				

EM3A servo motor(50W ~ 1.0kW)

Small capacity | High speed | Low inertia

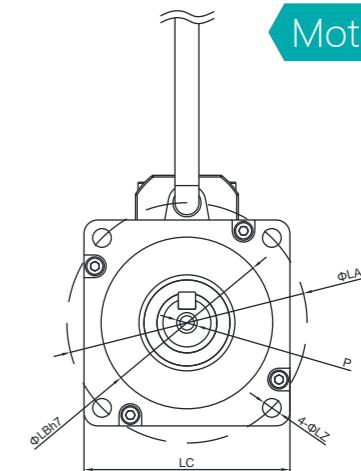
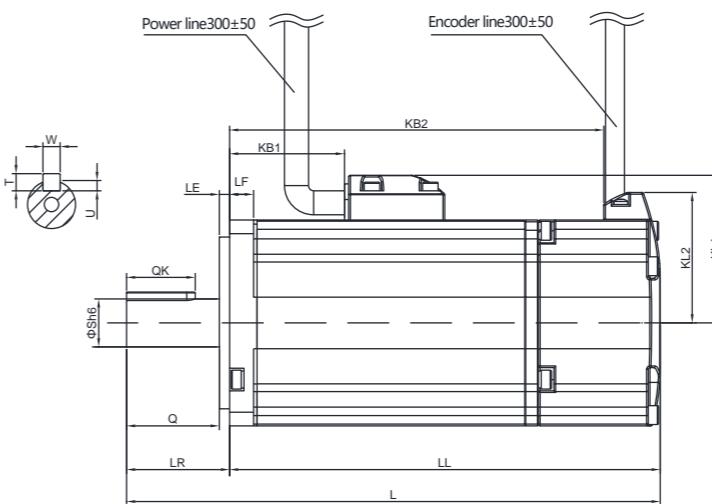
Motor size

EM3A - 04 A L A 2 4 1												
Rated output power	Voltage grade	encoder	Design order	Shaft end	Optional	Plug type						
A5 0.05kW	A 200VAC	T 17-bits absolute	A -	2 Straight,with keys, Threaded	1 No oil seals,No brakes 2 With oil seal,No brakes 3 No oil seals,With brake 4 With oil seal,With brake	1 Standard plugs 2 Waterproof plug						
01 0.1kW		L 23-bits absolute										
02 0.2kW												
04 0.4kW												
08 0.75kW												
10 1.0kW												

Note:1、Please refer to "Model Comparison Table" for details.
2、Motor body heat resistance class: F
3、Motor body protection mode: self-cooling, IP65/IP67

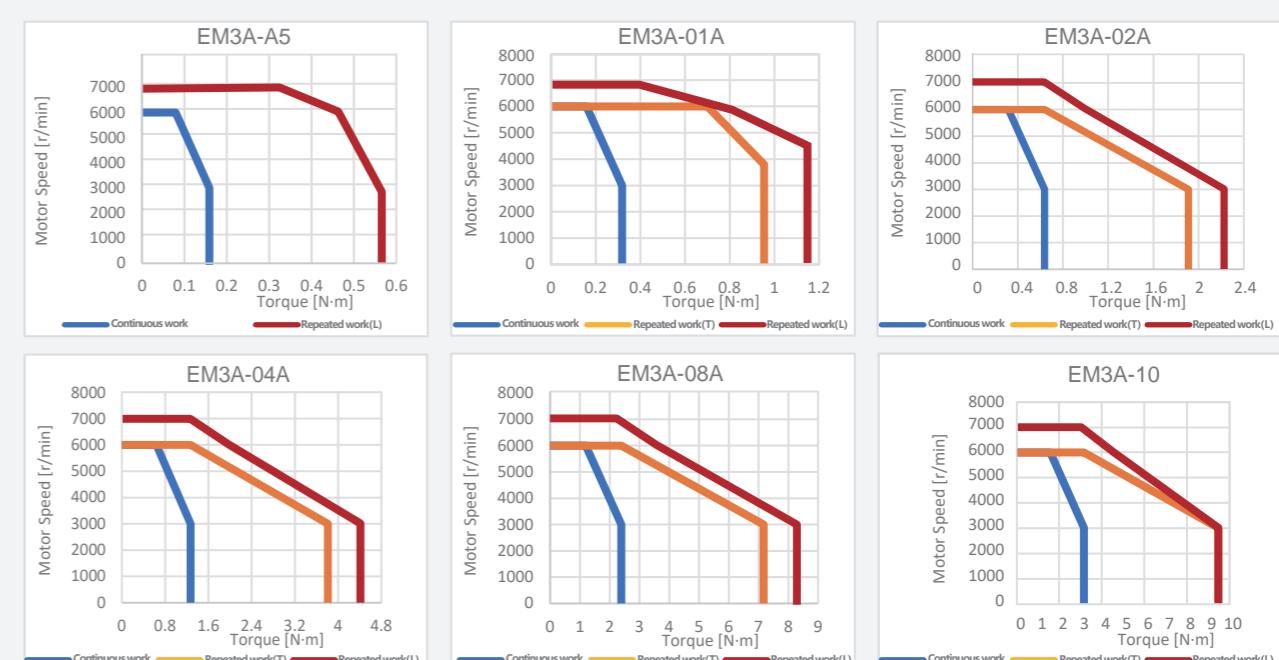
200VAC													
EM3A-		A5AT	A5AL	01AT	01AL	02AT	02AL	04AT	04AL	08AT	08AL	10AT	10AL
Flange [mm]		40	40	60	60	60	60	80	80	80	80	80	80
Rated power [kW]		0.05	0.1	0.2	0.2	0.4	0.4	0.75	0.75	1.0	1.0	1.0	1.0
Rated speed[r/min]		3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
Maximum speed [r/min]		6000	7000	6000	7000	6000	7000	6000	7000	6000	7000	6000	7000
Rated torque [N·m]		0.159	0.318	0.637	0.637	1.27	1.27	2.39	2.39	3.18	3.18	3.18	3.18
Maximum torque [N·m]		0.557	0.954	1.11	1.91	2.23	3.81	4.46	7.17	8.37	9.54	9.54	9.54
Rated current [Arms]		0.9	1.1	1.5	1.5	2.9	2.9	5.1	5.1	6.9	6.9	6.9	6.9
Maximum current [Arms]		3.3	3.5	4.0	4.7	5.8	9.2	11.5	16.1	19.5	21.0	21.0	21.0
Motor inertia [10^{-4} kg · m ²]		0.0230(0.0268)	0.0428(0.0465)	0.147(0.179)	0.244(0.276)	0.910(1.07)	0.910(1.07)	1.14(1.30)	1.14(1.30)	1.14(1.30)	1.14(1.30)	1.14(1.30)	1.14(1.30)
Allowable shaft end load	Radial[N]	78	78	245	245	392	392	392	392	392	392	392	392
	Axial[N]	54	54	74	74	147	147	147	147	147	147	147	147
Brake specification	Rated voltage	24VDC	24VDC	24VDC	24VDC	24VDC	24VDC	24VDC	24VDC	24VDC	24VDC	24VDC	24VDC
	Holding torque[N·m]	≥0.32	≥0.32	≥1.5	≥1.5	≥3.2	≥3.2	≥3.2	≥3.2	≥3.2	≥3.2	≥3.2	≥3.2
Weight[kg]		0.4(0.6)	0.5(0.7)	0.9(1.3)	1.3(1.7)	2.6(3.2)	2.6(3.2)	3.1(3.8)	3.1(3.8)	3.1(3.8)	3.1(3.8)	3.1(3.8)	3.1(3.8)

Note: The values in parentheses represent the values of motors with brakes.



Power	EM3A-	L	LL	KB1	KB2	KL1	KL2	Flange Dimensions				S	P	key							
								LR	LE	LF	LC			QK	Q	W	T	U			
50W	A5AL	87.5 (121)	62.5 (96)	19.8(32.8)	48.3(81.8)	33	33	25	2.5	5	40	46	30	4.3	8	M3× 6	14	22	3	3	1.8
100W	01AL	103.5(137)	78.5(112)	35.8(48.8)	64.3(97.8)	33	33	25	2.5	5	40	46	30	4.3	8	M3× 6	14	22.5	3	3	1.8
100W	01AT	113.5(147)	88.5(122)	35.8(48.8)	74.3(107.8)	33	33	25	2.5	5	40	46	30	4.3	8	M3× 6	14	22.5	3	3	1.8
200W	02AL	108 (137)	78 (107)	27.5(33.5)	61.5(90.5)	43	38	30	3	7	60	70	50	5.5	14	M5× 12	20	27	5	5	3
200W	02AT	126.5(155.5)	96.5(125.5)	42.7(48.7)	80 (109)	43	38	30	3	7	60	70	50	5.5	14	M5× 12	20	27	5	5	3
400W	04AL	129 (158)	99 (128)	48.5(54.5)	82.5(111.5)	43	38	30	3	7	60	70	50	5.5	14	M5× 12	20	27	5	5	3
400W	04AT	147.5(176.5)	117.5(146.5)	48.5(54.5)	101(130)	43	38	30	3	7	60	70	50	5.5	14	M5× 12	20	27	5	5	3
750W	08AL	151 (184)	111(144)	58.2(59.2)	35.8(67.8)	53	48	40	3	8	80	90	70	6.6	19	M6× 12	25	37	6	6	3.5
750W	08AT	167.5(200.5)	127.5(160.5)	58.2(59.2)	52.3(84.3)	53	48	40	3	8	80	90	70	6.6	19	M6× 12	25	37	6	6	3.5
1.0kW	10AL	165 (198)	125(158)	72.2(73.2)	35.8(67.8)	53	48	40	3	8	80	90	70	6.6	19	M6× 12	25	37	6	6	3.5
1.0kW	10AT	181.5(214.5)	141.5(174.5)	72.2(73.2)	34.3(56.3)	53	48	40	3	8	80	90	70	6.6	19	M6× 12	25	37	6	6	3.5

Note: The values in parentheses represent the values of motors with brakes.



Note: T represents a 17-bits absolute
L represents a 23-bits absolute

EM3A servo motor(1.5kw ~5kW)

Medium capacity | High speed | Low inertia

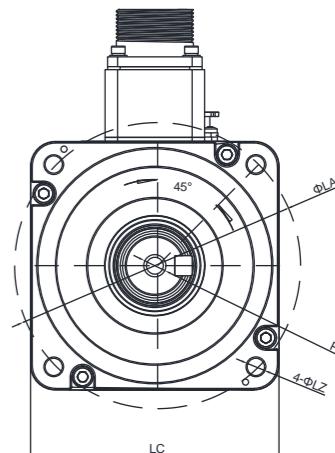
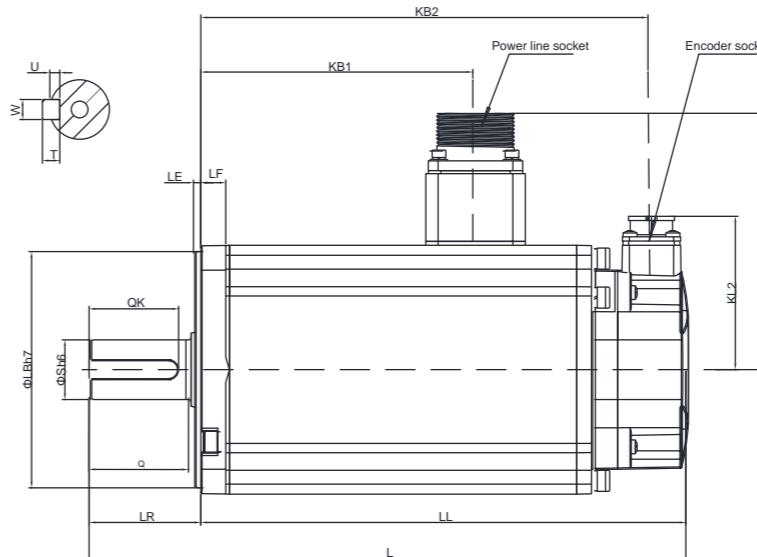
Motor size

EM3A - 15 A L B 2 2 4						
	Rated output power	Voltage grade	encoder	Design order	Shaft end	Optional
	15 1.5kW	A 200VAC	17-bits absolute	A -	2 Straight,with keys, Threaded	1 No oil seals,No brakes
	20 2.0kW	D 400VAC	23-bits absolute			2 With oil seal,No brakes
	30 3.0kW					3 No oil seals,With brake
	40 4.0kW					4 With oil seal,With brake
	50 5.0kW					
						Plug type 4 Aviation Plug

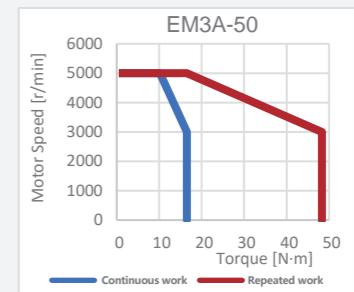
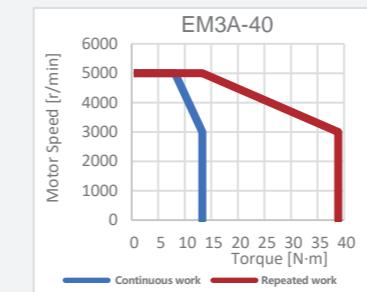
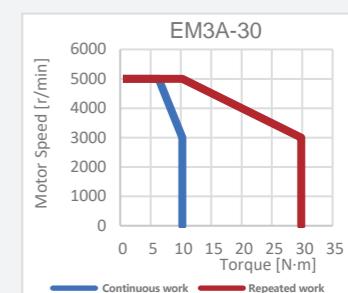
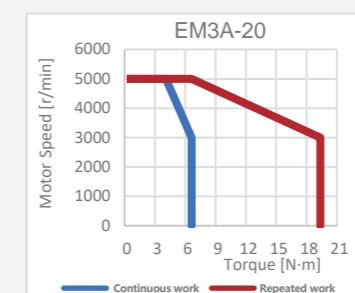
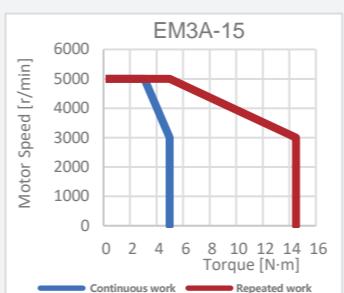
Note:1、Please refer to "Model Comparison Table" for details.
2、Motor body heat resistance class: F
3、Motor body protection mode: self-cooling, IP65/IP67

	200VAC		400VAC				
EM3A-	15A	20A	15D	20D	30D	40D	50D
Flange [mm]	100	100	100	100	130	130	130
Rated power [kW]	1.5	2.0	1.5	2.0	3.0	40	5.0
Rated speed[r/min]	3000	3000	3000	3000	3000	3000	3000
Maximum speed [r/min]	5000	5000	5000	5000	5000	5000	5000
Rated torque [N·m]	4.78	6.37	4.78	6.37	9.80	12.8	15.9
Maximum torque [N·m]	14.3	19.1	14.3	19.1	29.4	38.4	47.7
Rated current [Arms]	9.5	12.6	4.9	6.4	10.5	13.0	15.9
Maximum current [Arms]	31.6	42.0	16.3	20.5	33.0	40.0	50.0
Motor inertia [10^{-4} kg · m ²]	2.33(3.10)	2.95(3.72)	2.33(3.10)	2.95(3.72)	7.72(9.00)	10.2(11.6)	14.0(15.4)
Allowable shaft end load	Radial[N]	686	686	686	686	980	980
	Axial[N]	196	196	196	196	392	392
Brake specification	Rated voltage	24VDC	24VDC	24VDC	24VDC	24VDC	24VDC
	Holding torque[N·m]	≥8	≥8	≥8	≥8	≥20	≥20
Weight[kg]		5.1(6.4)	6.1(7.5)	5.1(6.4)	6.1(7.5)	10.0(12.0)	12.0(14.0)
						15.5(17.5)	

Note: The values in parentheses represent the values of motors with brakes.



Power	EM3A-	L	LL	KB1	KB2	KL1	KL2	Flange Dimensions						S	P	key					
								LR	LE	LF	LC	LA	LB	LZ		QK	Q	W	T	U	
1.5kW	15□	210(240)	165(195)	97(109)	150(180)	102	60	45	3	10	100	115	95	7	24	M8× 16	36	40	8	7	4
2.0kW	20□	230(260)	185(215)	117(129)	170(200)	102	60	45	3	10	100	115	95	7	24	M8× 16	36	40	8	7	4
3.0kW	30D	257(289.5)	194(226.5)	160.5	179(211.6)	110	60	63	6	12	130	145	110	9	28	M8× 16	54	55	8	7	4
4.0kW	40D	284(316.5)	221(253.5)	187.5	206(238.5)	110	60	63	6	12	130	145	110	9	28	M8× 16	54	55	8	7	4
5.0kW	50D	324(356.5)	261(293.5)	227.5	246(278.5)	110	60	63	6	12	130	145	110	9	28	M8× 16	54	55	8	7	4



Note: T represents a 17-bits absolute
L represents a 23-bits absolute

EM3A servo motor (200W ~ 1.0kW)

Small capacity | High speed | Medium inertia

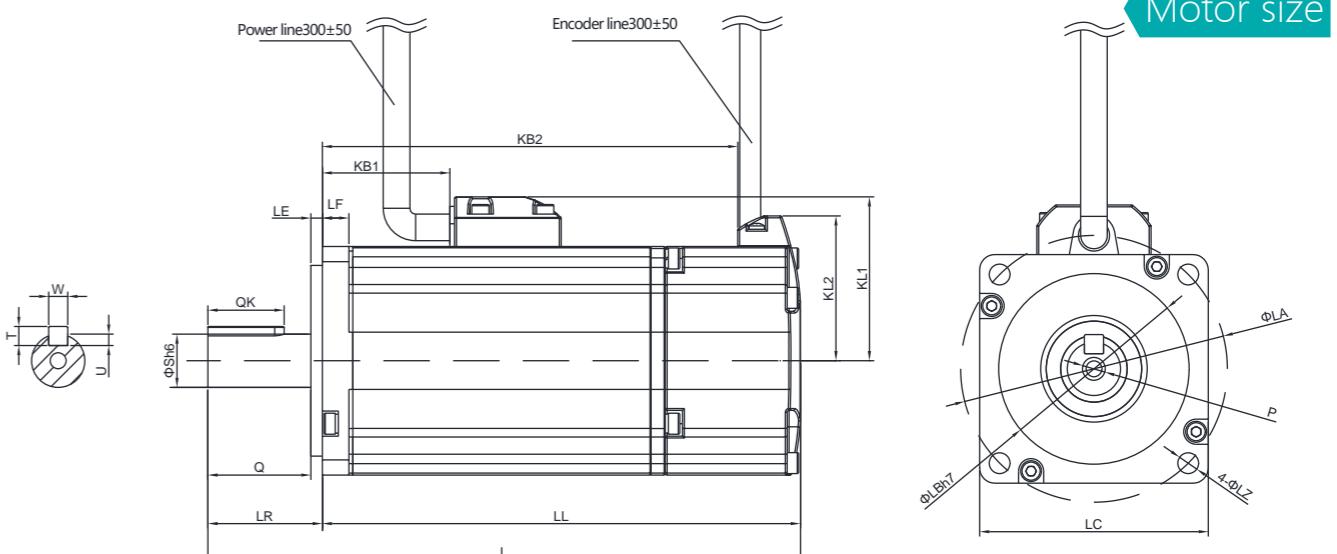
EM3J - 04		A	L	A	2	4	2
Rated output power	Voltage grade	encoder	Design order	Shaft end	Optional	Plug type	
02 0.2kW	A 200VAC	T 17-bits absolute		2 Straight,with keys, Threaded	1 No oil seals, No brakes	1 Standard plugs	
04 0.4kW	D 400VAC	L 23-bits absolute			2 With oil seal, No brakes	2 Waterproof plug	
08 0.75kW					3 No oil seals, With brake		
10 1.0kW					4 With oil seal, With brake		

Note: 1、Please refer to "Model Comparison Table" for details.
2、Heat resistance grade of motor body: F
3、Motor body protection mode: self-cooling, IP65



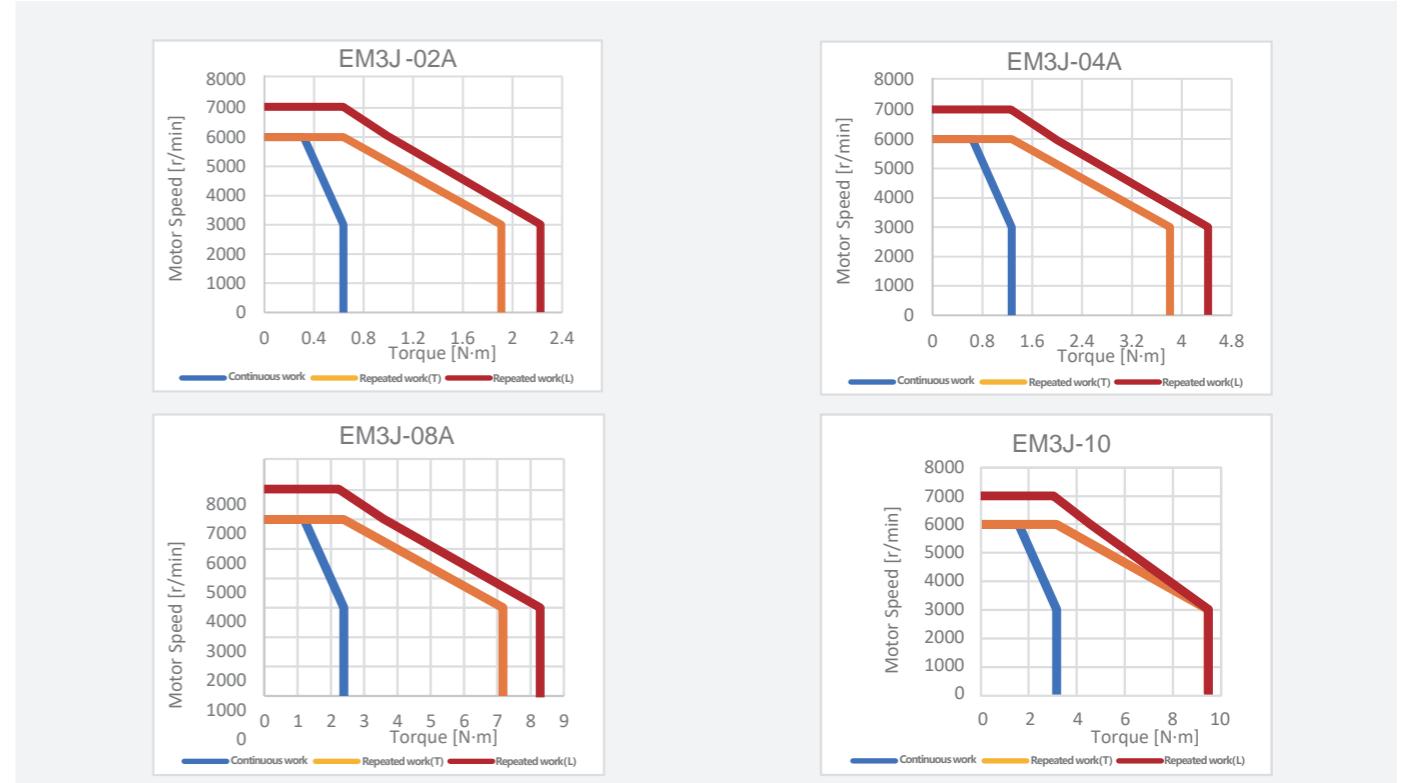
	200VAC					400VAC					
EM3A-	02AT	02AL	04AT	04AL	08AT	08AL	10AT	10AL	10DT	10DL	
Flange [mm]	60		60		80		80		80		
Rated power [kW]	0.2		0.4		0.75		1.0		1.0		
Rated speed[r/min]	3000		3000		3000		3000		3000		
Maximum speed [r/min]	6000		7000		6000		7000		6000		
Rated torque [N·m]	0.637		1.27		2.39		3.18		3.18		
Maximum torque [N·m]	1.91		2.23		3.81		4.46		7.17		
Rated current [Arms]	1.5		2.8		5.1		7.1		3.8		
Maximum current [Arms]	4.7		5.8		8.8		11.2		16.1		
Motor inertia [$10^{-4} \text{ kg} \cdot \text{m}^2$]	0.330(0.360)		0.640(0.680)		1.64(1.79)		2.26(2.41)		2.26(2.41)		
Allowable shaft end load	Radial[N]	245		245		392		392		392	
	Axial[N]	74		74		147		147		147	
Brake specification	Rated voltage	24VDC		24VDC		24VDC		24VDC		24VDC	
	Holding torque[N·m]	≥ 1.5		≥ 1.5		≥ 3.2		≥ 3.2		≥ 3.2	
Weight[kg]	0.9(1.3)		1.3(1.7)		2.3(2.9)		3.1(3.8)		3.1(3.8)		

Note: The values in parentheses represent the values of motors with brakes.



Power	EM3J-	L	LL	KB1	KB2	KL1	KL2	Flange Dimensions					S	P	key						
								LR	LE	LF	LC	LA	LB	LZ	OK	Q	W	T	U		
200W	02AL	108(137)	78(107)	27.5(33.5)	61.5(90.5)	43	38	30	3	7	60	70	50	5.5	14	M5 × 12	20	27	5	5	3
200W	02AT	126.5(155.5)	96.5(125.5)	42.7(48.7)	80(109)	43	38	30	3	7	60	70	50	5.5	14	M5 × 12	20	27	5	5	3
400W	04AL	129(158)	99(128)	48.5(54.5)	82.5(111.5)	43	38	30	3	7	60	70	50	5.5	14	M5 × 12	20	27	5	5	3
400W	04AT	147.5(176.5)	117.5(146.5)	48.5(54.5)	101(130)	43	38	30	3	7	60	70	50	5.5	14	M5 × 12	20	27	5	5	3
750W	08AL	142(175)	102(135)	58.2(59.2)	35.8(67.8)	53	48	40	3	8	80	90	70	6.6	19	M6 × 12	25	37	6	6	3.5
750W	08AT	158.5(191.5)	118.5(151.5)	58.2(59.2)	52.3(84.3)	53	48	40	3	8	80	90	70	6.6	19	M6 × 12	25	37	6	6	3.5
1.0kW	10AL	157(190)	117(150)	72.2(73.2)	34.3(56.3)	53	48	40	3	8	80	90	70	6.6	19	M6 × 12	25	37	6	6	3.5
1.0kW	10DL	173.5(206.5)	133.5(166.5)	72.2(73.2)	34.3(56.3)	53	48	40	3	8	80	90	70	6.6	19	M6 × 12	25	37	6	6	3.5

Note: The values in parentheses represent the values of motors with brakes.



EM3G servo motor(0.85kW~7.5kW)

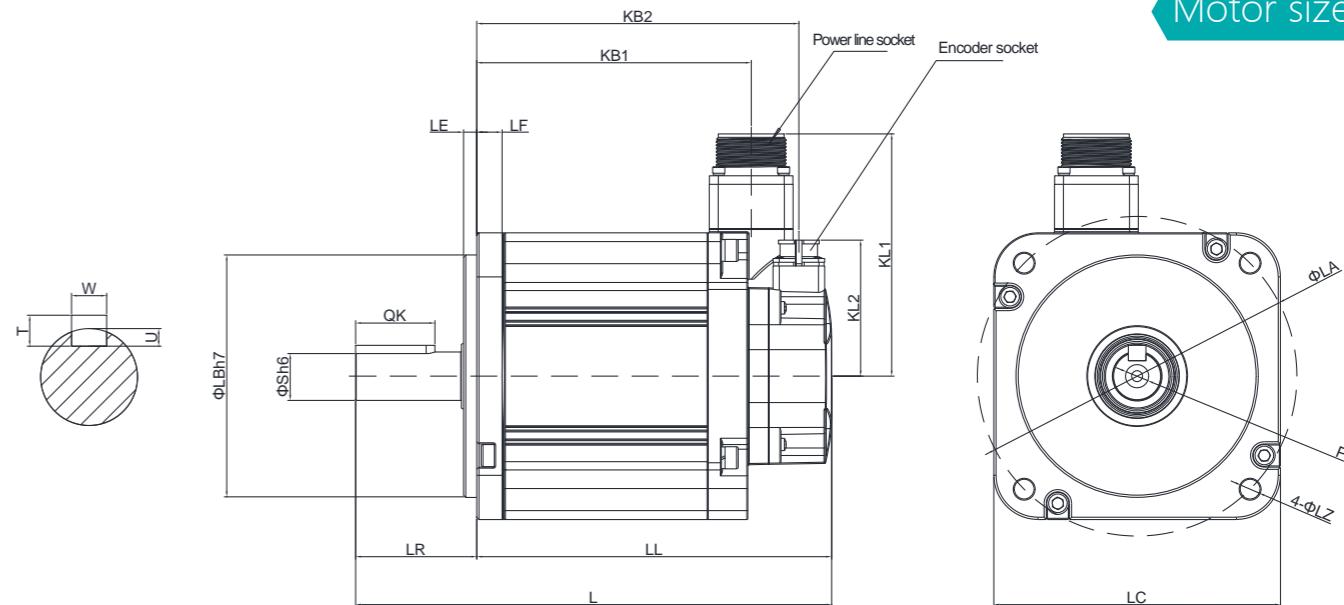
Medium capacity | Medium speed | Medium inertia

Motor size

EM3G- 13 A L A 2 2 4							
Rated output power	Voltage grade	encoder	Design order	Shaft end	Optional	Plug type	
09 0.85kW 13 1.3kW 18 1.8kW 29 2.9kW 44 4.4kW 55 5.5kW 75 7.5kW	A 200VAC D 400VAC	T 17-bits absolute L 23-bits absolute	A -	2 Straight,with keys, Threaded	1 No oil seals,No brakes 2 With oil seal,No brakes 3 No oil seals,With brake 4 With oil seal,With brake	4 Aviation Plug	
							
Note:1、Please refer to "Model Comparison Table" for details. 2、Motor body heat resistance class: F 3、Motor body protection mode: self-cooling, IP65/IP67							

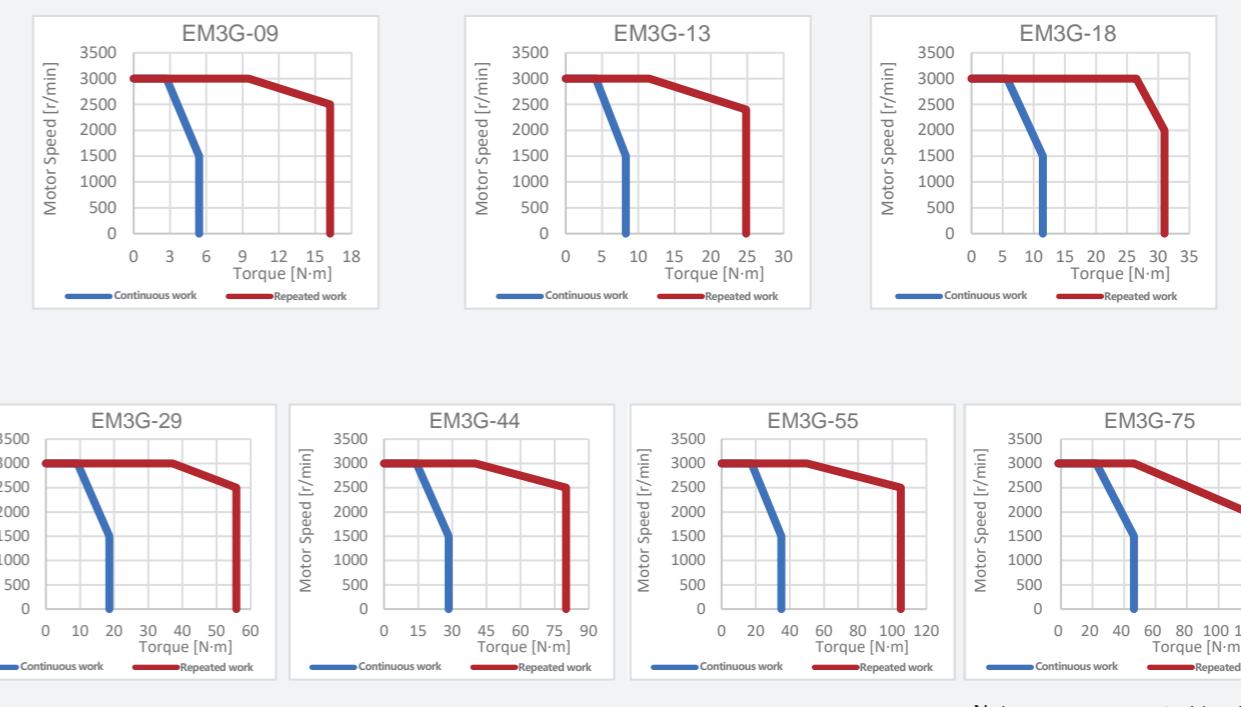
	200VAC			400VAC						
EM3A-	09A	13A	18A	09D	13D	18D	29D	44D	55D	75D
Flange [mm]	130	130	130	130	130	130	180	180	180	180
Rated power [kW]	0.85	1.3	1.8	0.85	1.3	1.8	2.9	4.4	5.5	7.5
Rated speed[r/min]	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
Maximum speed [r/min]	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
Rated torque [N·m]	5.41	8.28	11.5	5.41	8.28	11.5	18.6	28.4	35.0	48.0
Maximum torque [N·m]	16.2	24.8	31.0	16.2	24.8	31.0	55.8	80.0	105	120
Rated current [Arms]	6.8	9.7	14.5	3.4	5.0	7.1	11.5	16.8	20.3	26.5
Maximum current [Arms]	22.6	29.7	42.0	10.9	15.6	21.2	37.0	49.5	64.0	70.0
Motor inertia [10^{-4} kg · m 2]	11.9(12.5)	17.3(17.9)	22.3(22.9)	11.9(12.5)	17.3(17.9)	22.3(22.9)	43.4(49.2)	58.8(64.6)	85.5(91.5)	117(123)
Allowable shaft end load	Radial[N]	490	686	980	490	686	980	1470	1470	1764
	Axial[N]	98	343	392	98	343	392	490	490	588
Brake specification	Rated voltage	24VDC								
	Holding torque[N·m]	≥20	≥20	≥20	≥20	≥20	≥44	≥44	≥72	≥72
Weight[kg]	5.6(7.3)	7.0(8.7)	8.3(10.0)	5.6(7.3)	7.0(8.7)	8.3(10.0)	14.6(18.8)	17.6(21.8)	23.2(27.8)	29.0(33.6)

Note: The values in parentheses represent the values of motors with brakes.



Power	EM3G-	L	LL	KB1	KB2	KL1	KL2	Flange Dimensions						S	P	key				
								LR	LE	LF	LC	LA	LB	LZ		QK	W	T	U	
0.85kW	09□	185(215)	131(161)	94.5	116(146)	112	60	55	6	12	130	145	110	9	22	M6× 20	32	8	7	4
1.3kW	13□	200(230)	146(176)	109.5	131(161)	112	60	55	6	12	130	145	110	9	22	M6× 20	32	8	7	4
1.8kW	18□	215(245)	161(191)	124.5	146(176)	112	60	55	6	12	130	145	110	9	22	M6× 20	32	8	7	4
2.9kW	29D	239(284)	160(205)	135.5(139.8)	145.5(190.2)	142	60	79	3.2	18	180	200	114.3	13.5	35	M12× 25	65	10	8	5
4.4kW	44D	258(303)	179(224)	154.5(158.8)	164.5(209.2)	142	60	79	3.2	18	180	200	114.3	13.5	35	M12× 25	65	10	8	5
5.5kW	55D	324(377)	221(264)	186.5(198.8)	196.5(249.2)	142	60	113	3.2	18	180	200	114.3	13.5	42	M16× 32	96	12	10	5
7.5kW	75D	360(413)	247(300)	222.5(234.8)	232.5(285.2)	142	60	113	3.2	18	180	200	114.3	13.5	42	M16× 32	96	12	10	5

Note: The values in parentheses represent the values of motors with brakes.



Note: T represents a 17-bits absolute
L represents a 23-bits absolute

02 Model comparison table

EM3A | Low inertia | 3000 r/min

Power	Motor model	Brake	Connector	Flange	Trunnion	Drive	Input power	Power cable	Encoder cable
50W	EM3A-A5ALA221	-	Standard wire	40mm Φ8	ED3L-A5A	Single phase AC 200V~240V	EC3P-N9118-□□	EC3S-A1124-□□ (Including battery)	
	EM3A-A5ALA241	●					EC3P-B9118-□□	EC3S-I1124-□□ (No battery)	
	EM3A-A5ALA222	-	Waterproof wire				EC3P-N9718-□□	EC3S-A1724-□□ (Including battery)	
	EM3A-A5ALA242	●					EC3P-B9718-□□	EC3S-I1724-□□ (No battery)	
100W	EM3A-01ATA221	-	Standard wire	40mm Φ8	ED3L-01A	Single phase AC 200V~240V	EC3P-N9118-□□	EC3S-A1124-□□ (Including battery)	
	EM3A-01ATA241	●					EC3P-B9118-□□	EC3S-I1124-□□ (No battery)	
	EM3A-01ATA222	-	Waterproof wire				EC3P-N9718-□□	EC3S-A1724-□□ (Including battery)	
	EM3A-01ATA242	●					EC3P-B9718-□□	EC3S-I1724-□□ (No battery)	
	EM3A-01ALA221	-	Standard wire				EC3P-N9118-□□	EC3S-A1124-□□ (Including battery)	
	EM3A-01ALA241	●					EC3P-B9118-□□	EC3S-I1124-□□ (No battery)	
	EM3A-01ALA222	-	Waterproof wire				EC3P-N9718-□□	EC3S-A1724-□□ (Including battery)	
	EM3A-01ALA242	●					EC3P-B9718-□□	EC3S-I1724-□□ (No battery)	
200W	EM3A-02ATA221	-	Standard wire	60mm Φ14	ED3L-02A ED3L-0404A	Single phase AC 200V~240V	EC3P-N9118-□□	EC3S-A1124-□□ (Including battery)	
	EM3A-02ATA241	●					EC3P-B9118-□□	EC3S-I1124-□□ (No battery)	
	EM3A-02ATA222	-	Waterproof wire				EC3P-N9718-□□	EC3S-A1724-□□ (Including battery)	
	EM3A-02ATA242	●					EC3P-B9718-□□	EC3S-I1724-□□ (No battery)	
	EM3A-02ALA221	-	Standard wire				EC3P-N9118-□□	EC3S-A1124-□□ (Including battery)	
	EM3A-02ALA241	●					EC3P-B9118-□□	EC3S-I1124-□□ (No battery)	
	EM3A-02ALA222	-	Waterproof wire				EC3P-N9718-□□	EC3S-A1724-□□ (Including battery)	
	EM3A-02ALA242	●					EC3P-B9718-□□	EC3S-I1724-□□ (No battery)	
400W	EM3A-04ATA221	-	Standard wire	60mm Φ14	ED3L-04A ED3L-0404A	Single phase AC 200V~240V	EC3P-N9118-□□	EC3S-A1124-□□ (Including battery)	
	EM3A-04ATA241	●					EC3P-B9118-□□	EC3S-I1124-□□ (No battery)	
	EM3A-04ATA222	-	Waterproof wire				EC3P-N9718-□□	EC3S-A1724-□□ (Including battery)	
	EM3A-04ATA242	●					EC3P-B9718-□□	EC3S-I1724-□□ (No battery)	
	EM3A-04ALA221	-	Standard wire				EC3P-N9118-□□	EC3S-A1124-□□ (Including battery)	
	EM3A-04ALA241	●					EC3P-B9118-□□	EC3S-I1124-□□ (No battery)	
	EM3A-04ALA222	-	Waterproof wire				EC3P-N9718-□□	EC3S-A1724-□□ (Including battery)	
	EM3A-04ALA242	●					EC3P-B9718-□□	EC3S-I1724-□□ (No battery)	

Power	Motor model	Brake	Connector	Flange	Trunnion	Drive	Input power	Power cable	Encoder cable
750W	EM3A-08ATA221	-	Standard wire	80mm Φ19	ED3L-08A ED3L-1010A	Single phase / three phase AC 200V~240V		EC3P-N8118-□□	EC3S-A1124-□□ (Including battery)
	EM3A-08ATA241	●						EC3P-B8118-□□	EC3S-I1124-□□ (No battery)
	EM3A-08ATA222	-	Waterproof wire					EC3P-N8718-□□	EC3S-A1724-□□ (Including battery)
	EM3A-08ATA242	●						EC3P-B8718-□□	EC3S-I1724-□□ (No battery)
	EM3A-08ALA221	-	Standard wire					EC3P-N8118-□□	EC3S-A1124-□□ (Including battery)
	EM3A-08ALA241	●						EC3P-B8118-□□	EC3S-I1124-□□ (No battery)
	EM3A-08ALA222	-	Waterproof wire					EC3P-N8718-□□	EC3S-A1724-□□ (Including battery)
	EM3A-08ALA242	●						EC3P-B8718-□□	EC3S-I1724-□□ (No battery)
1.0kW	EM3A-10ATA221	-	Standard wire	80mm Φ19	ED3L-10A ED3L-1010A	Single phase / three phase AC 200V~240V		EC3P-N8118-□□	EC3S-A1124-□□ (Including battery)
	EM3A-10ATA241	●						EC3P-B8118-□□	EC3S-I1124-□□ (No battery)
	EM3A-10ATA222	-	Waterproof wire					EC3P-N8718-□□	EC3S-A1724-□□ (Including battery)
	EM3A-10ATA242	●						EC3P-B8718-□□	EC3S-I1724-□□ (No battery)
	EM3A-10ALA221	-	Standard wire					EC3P-N8118-□□	EC3S-A1124-□□ (Including battery)
	EM3A-10ALA241	●						EC3P-B8118-□□	EC3S-I1124-□□ (No battery)
	EM3A-10ALA222	-	Waterproof wire					EC3P-N8718-□□	EC3S-A1724-□□ (Including battery)
	EM3A-10ALA242	●						EC3P-B8718-□□	EC3S-I1724-□□ (No battery)
1.5kW	EM3A-15ATB224	-	Aviation Plug	100mm Φ24	ED3L-15A	Single phase / three phase AC 200V~240V		EC3P-N9314-□□	
	EM3A-15ATB244	●						EC3P-B9314-□□	
	EM3A-15ALB224	-						EC3P-N9314-□□	EC3S-A1924-□□ (Including battery)
	EM3A-15ALB244	●						EC3P-B9314-□□	EC3S-I1924-□□ (No battery)
	EM3A-15DTB224	-						EC3P-N9314-□□	
	EM3A-15DTB244	●						EC3P-B9314-□□	
	EM3A-15DLB224	-	Aviation Plug	100mm Φ24	ED3L-15D	three phase AC 380V~440V		EC3P-N9314-□□	
	EM3A-15DLB244	●						EC3P-B9314-□□	
2.0kW	EM3A-20ATB224	-	Aviation Plug	100mm Φ24	ED3L-20A	three phase AC 200V~240V		EC3P-N9314-□□	
	EM3A-20ATB244	●						EC3P-B9314-□□	
	EM3A-20ALB224	-						EC3P-N9314-□□	EC3S-A1924-□□ (Including battery)
	EM3A-20ALB244	●						EC3P-B9314-□□	EC3S-I1924-□□ (No battery)
	EM3A-20DTB224	-						EC3P-N9314-□□	
	EM3A-20DTB244	●						EC3P-B9314-□□	
	EM3A-20DLB224	-	Aviation Plug	100mm Φ24	ED3L-20D	three phase AC 380V~440V		EC3P-N9314-□□	
	EM3A-20DLB244	●						EC3P-B9314-□□	
3.0kW	EM3A-30DTA224	-	Aviation Plug	130mm Φ28	ED3L-30D	three phase AC 380V~440V		EC3P-N9314-□□	
	EM3A-30DTA244	●						EC3P-B9314-□□	EC3S-A1924-□□ (Including battery)
	EM3A-30DLA224	-						EC3P-N9314-□□	EC3S-I1924-□□ (No battery)
	EM3A-30DLA244</td								

EM3G | Medium inertia| 1500 r/min

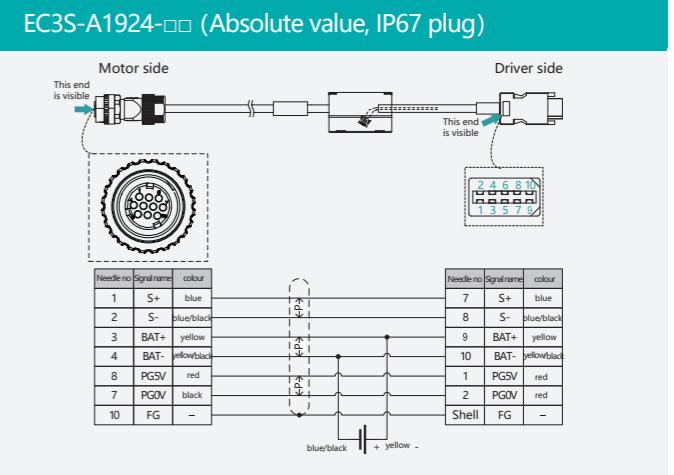
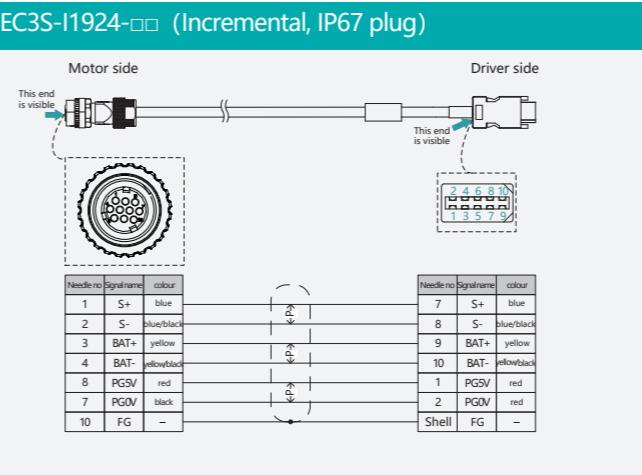
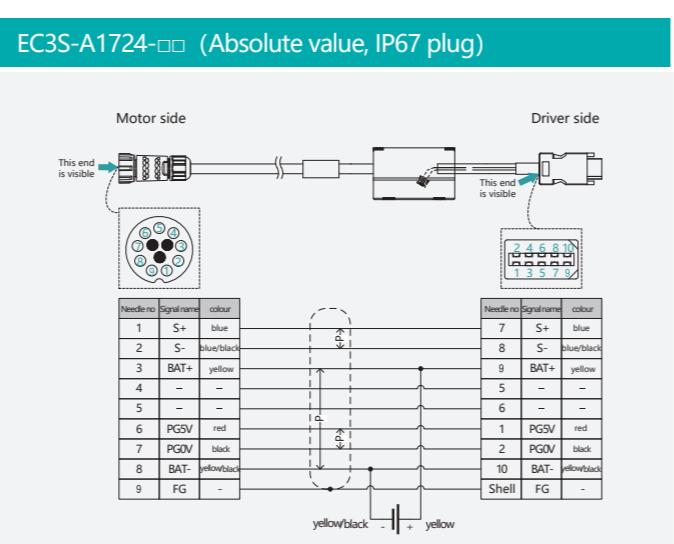
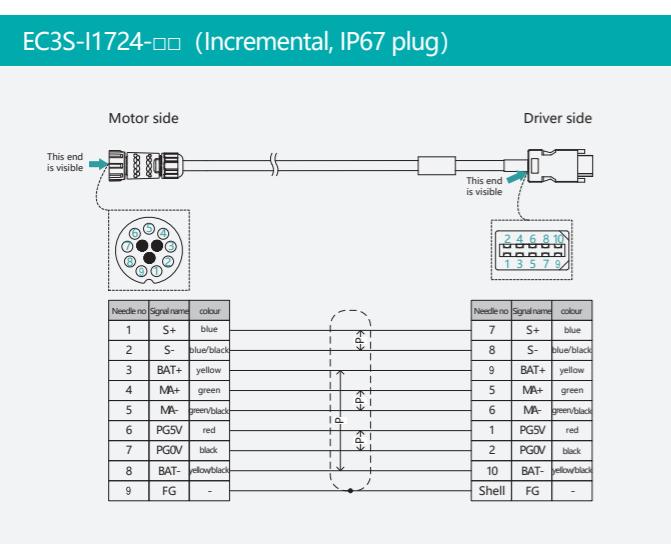
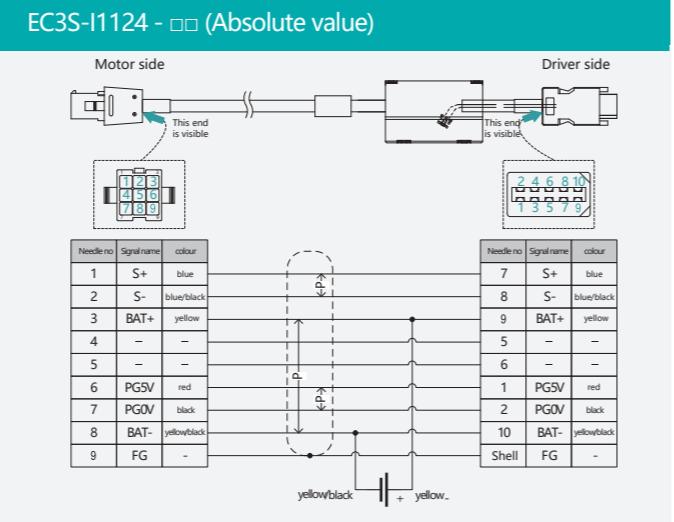
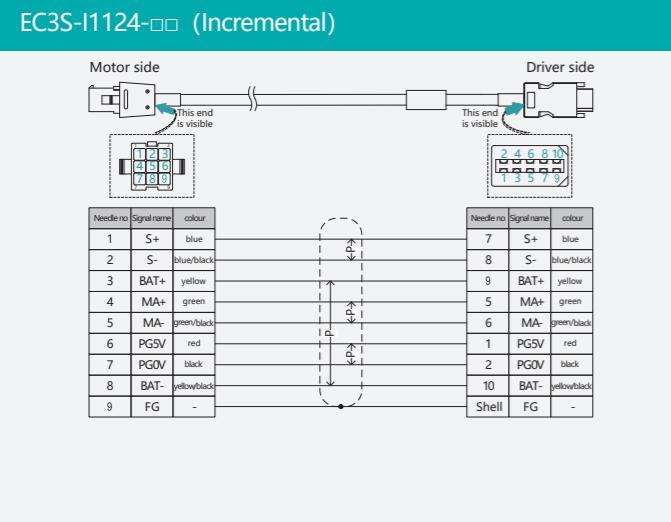
Power	Motor model	Brake	Connector	Flange	Trunnion	Drive	Input power	Power cable	Encoder cable
850W	EM3G-09ATA224	-	Aviation Plug	130mm	Φ22	ED3L-10A ED3L-1010A	Single phase / three phase AC 200V~240V	EC3P-N9314-□□	EC3S-A1924-□□ (Including battery) EC3S-I1924-□□ (No battery)
	EM3G-09ATA244	●						EC3P-B9314-□□	
	EM3G-09ALA224	-						EC3P-N9314-□□	
	EM3G-09ALA244	●						EC3P-B9314-□□	
	EM3G-09DTA224	-						EC3P-N9314-□□	
	EM3G-09DTA244	●						EC3P-B9314-□□	
	EM3G-09DLA224	-						EC3P-N9314-□□	
	EM3G-09DLA244	●						EC3P-B9314-□□	
1.3kW	EM3G-13ATA224	-	Aviation Plug	130mm	Φ22	ED3L-15A	Single phase / three phase AC 200V~240V	EC3P-N9314-□□	EC3S-A1924-□□ (Including battery) EC3S-I1924-□□ (No battery)
	EM3G-13ATA244	●						EC3P-B9314-□□	
	EM3G-13ALA224	-						EC3P-N9314-□□	
	EM3G-13ALA244	●						EC3P-B9314-□□	
	EM3G-13DTA224	-						EC3P-N9314-□□	
	EM3G-13DTA244	●						EC3P-B9314-□□	
	EM3G-13DLA224	-						EC3P-N9314-□□	
	EM3G-13DLA244	●						EC3P-B9314-□□	
1.8kW	EM3G-18ATA224	-	Aviation Plug	130mm	Φ22	ED3L-20A	three phase AC 200V~240V	EC3P-N9314-□□	EC3S-A1924-□□ (Including battery) EC3S-I1924-□□ (No battery)
	EM3G-18ATA244	●						EC3P-B9314-□□	
	EM3G-18ALA224	-						EC3P-N9314-□□	
	EM3G-18ALA244	●						EC3P-B9314-□□	
	EM3G-18DTA224	-						EC3P-N9314-□□	
	EM3G-18DTA244	●						EC3P-B9314-□□	
	EM3G-18DLA224	-						EC3P-N9314-□□	
	EM3G-18DLA244	●						EC3P-B9314-□□	
2.9kW	EM3G-29DTA224	-	Aviation Plug	180mm	Φ35	ED3L-30D	three phase AC 380V~440V	EC3P-N8214-□□	EC3S-A1924-□□ (Including battery) EC3S-I1924-□□ (No battery)
	EM3G-29DTA244	●						EC3P-B8214-□□	
	EM3G-29DLA224	-						EC3P-N8214-□□	
	EM3G-29DLA244	●						EC3P-B8214-□□	
4.4kW	EM3G-44DTA224	-	Aviation Plug	180mm	Φ35	ED3L-50D	three phase AC 380V~440V	EC3P-N9212-□□	EC3S-A1924-□□ (Including battery) EC3S-I1924-□□ (No battery)
	EM3G-44DTA244	●						EC3P-B9212-□□	
	EM3G-44DLA224	-						EC3P-N9212-□□	
	EM3G-44DLA244	●						EC3P-B9212-□□	
5.5kW	EM3G-55DTA224	-	Aviation Plug	180mm	Φ42	ED3L-75D	three phase AC 380V~440V	EC3P-N9212-□□	EC3S-A1924-□□ (Including battery) EC3S-I1924-□□ (No battery)
	EM3G-55DTA244	●						EC3P-B9212-□□	
	EM3G-55DLA224	-						EC3P-N9212-□□	
	EM3G-55DLA244	●						EC3P-B9212-□□	
7.5kW	EM3G-75DTA224	-	Aviation Plug	180mm	Φ42	ED3L-75D	three phase AC 380V~440V	EC3P-N9211-□□	EC3S-A1924-□□ (Including battery) EC3S-I1924-□□ (No battery)
	EM3G-75DTA244	●						EC3P-B9211-□□	
	EM3G-75DLA224	-						EC3P-N9211-□□	
	EM3G-75DLA244	●						EC3P-B9211-□□	

EM3J | Medium inertia | 3000 r/min

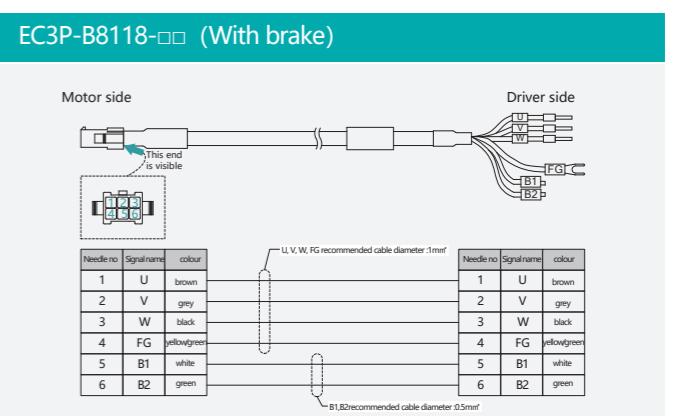
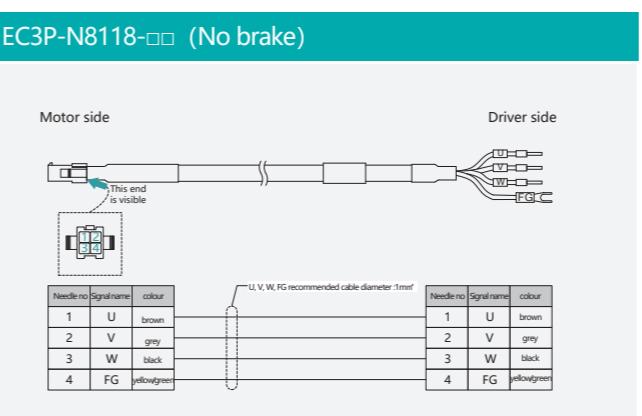
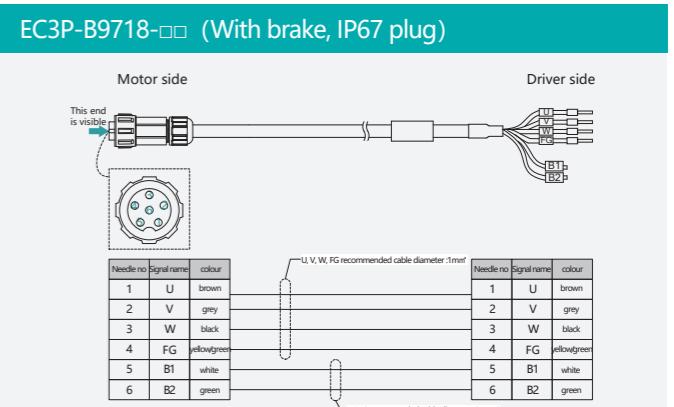
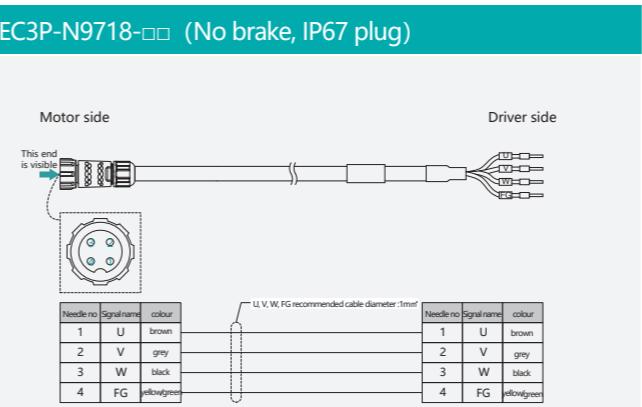
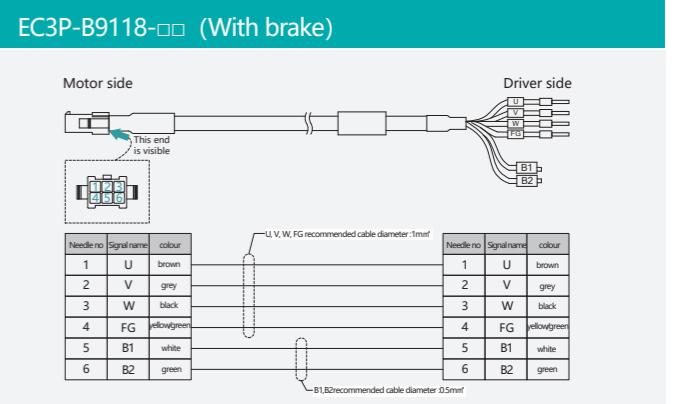
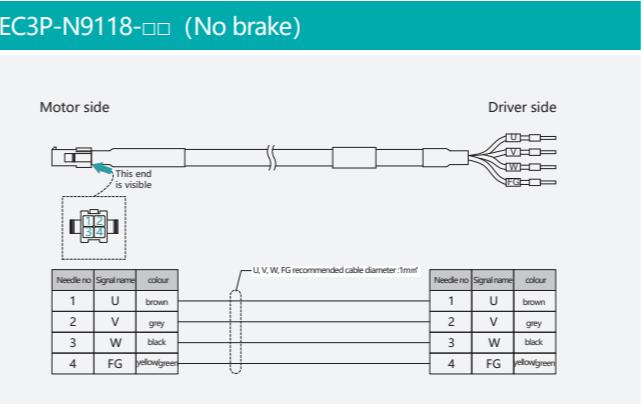
Power	Motor model	Brake	Connector	Flange	Trunnion	Drive	Input power	Power cable	Encoder cable
200W	EM3J-02ATA221	-	Standard wire	60mm	Φ14	ED3L-02A	Single phase	EC3P-N9118-□□	EC3S-A1124-□□ (Including battery) EC3S-I1124-□□ (No battery)
	EM3J-02ATA241	●						EC3P-B9118-□□	
	EM3J-02ATA222	-						EC3P-N9718-□□	
	EM3J-02ATA242	●						EC3P-B9718-□□	
	EM3J-02ALA221	-						EC3P-N9118-□□	
	EM3J-02ALA241	●						EC3P-B9118-□□	
	EM3J-02ALA222	-						EC3P-N9718-□□	
	EM3J-02ALA242	●						EC3P-B9718-□□	
400W	EM3J-04ATA221	-	Waterproof wire	60mm	Φ14	ED3L-04A	Single phase / three phase AC	EC3P-N9118-□□	EC3S-A1124-□□ (Including battery) EC3S-I1124-□□ (No battery)
	EM3J-04ATA241	●						EC3P-B9118-□□	
	EM3J-04ATA222	-						EC3P-N9718-□□	
	EM3J-04ATA242	●						EC3P-B9718-□□	
	EM3J-04ALA221	-						EC3P-N9118-□□	
	EM3J-04ALA241	●						EC3P-B9118-□□	
	EM3J-04ALA222	-						EC3P-N9718-□□	
	EM3J-04ALA242	●						EC3P-B9718-□□	
750W	EM3J-08ATA221	-	Standard wire	80mm	Φ19	ED3L-08A	Single phase / three phase AC	EC3P-N8118-□□	EC3S-A1124-□□ (Including battery) EC3S-I1124-□□ (No battery)
	EM3J-08ATA241	●						EC3P-B8118-□□	
	EM3J-08ATA222	-						EC3P-N8718-□□	
	EM3J-08ATA242	●							

03 Accessories

Encoder cable

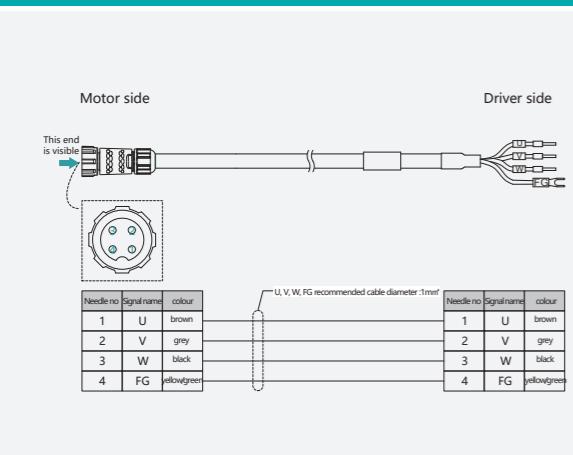


Power cable

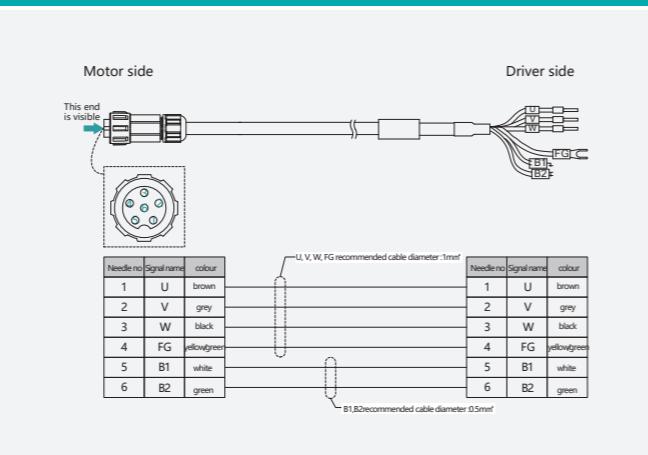


Power cable

EC3P-N8718-□□ (No brake, IP67 plug)

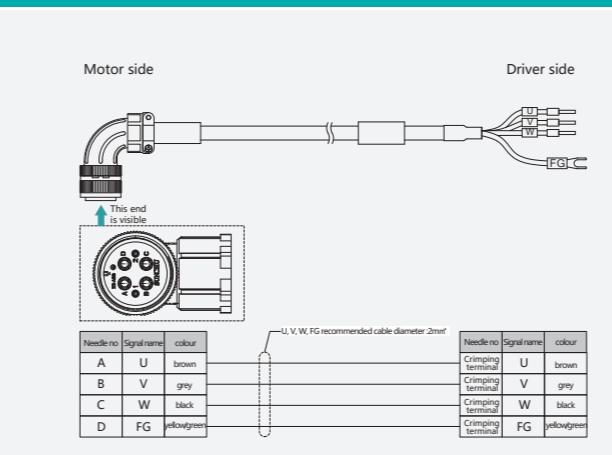


EC3P-B8718-□□ (With brake, IP67 plug)

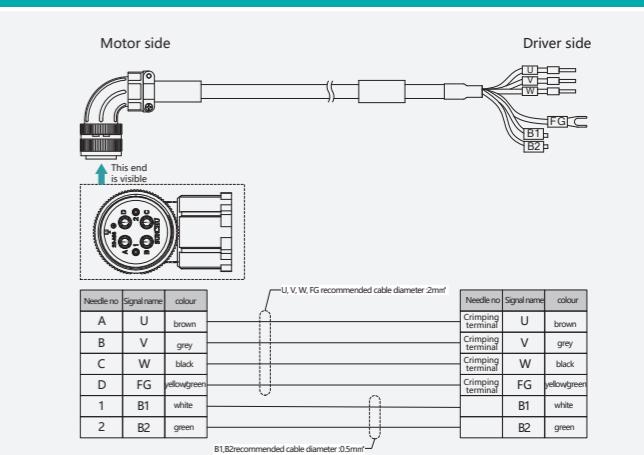


Power cable

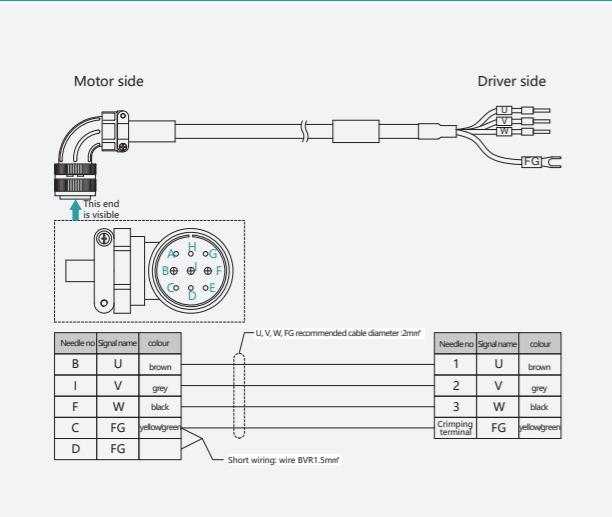
EC3P-N8214-□□ (No brake, IP67 plug)



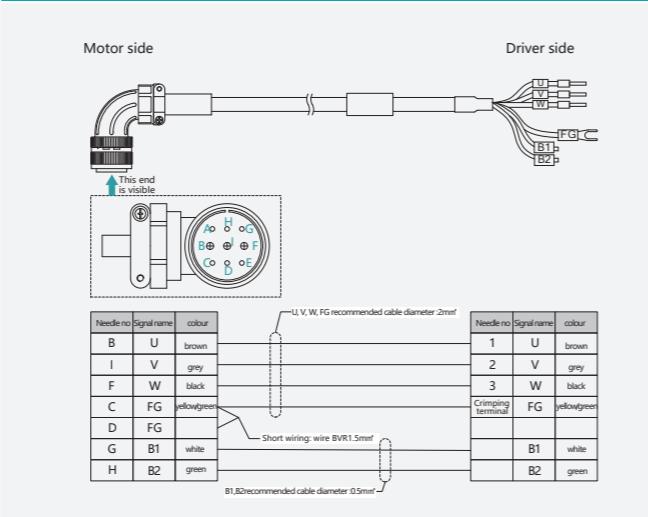
EC3P-B8214-□□ (With brake, IP67 plug)



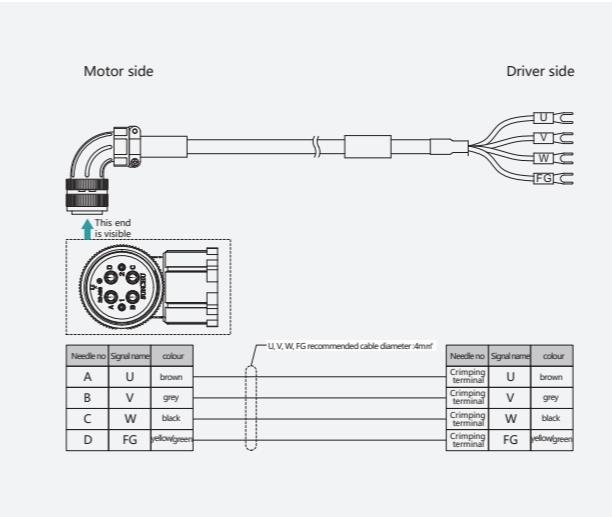
EC3P-N9314-□□ (No brake, IP67 plug)



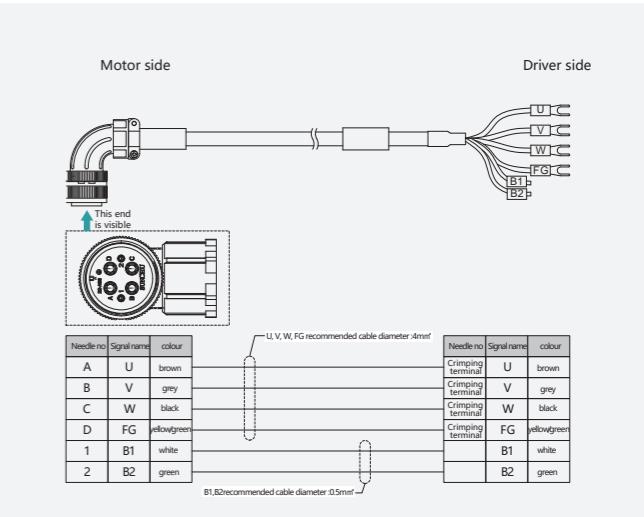
EC3P-B9314-□□ (With brake, IP67 plug)



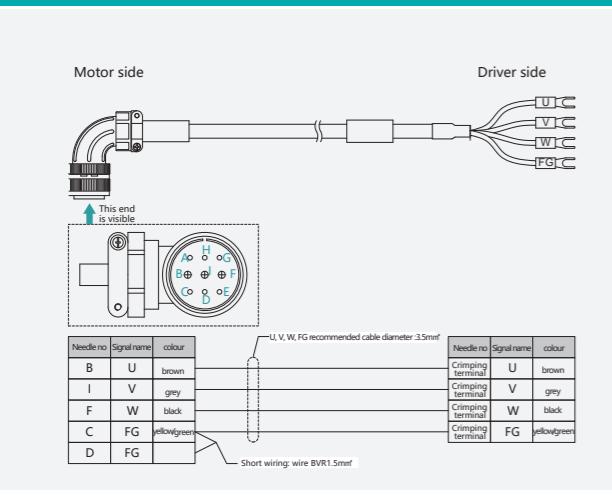
EC3P-N9212-□□ (No brake, IP67 plug)



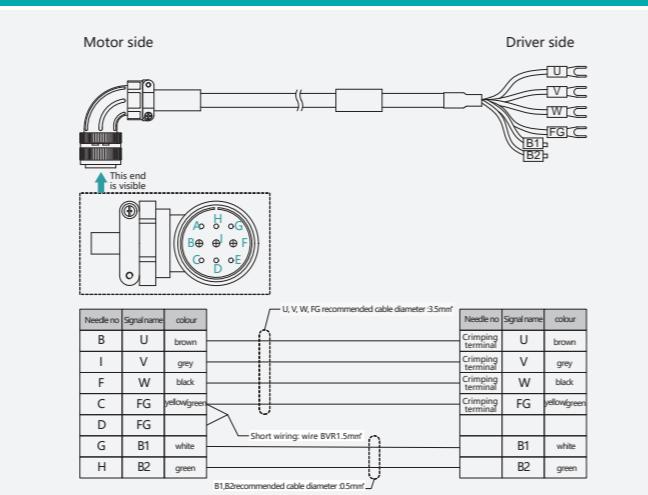
EC3P-B9212-□□ (With brake, IP67 plug)



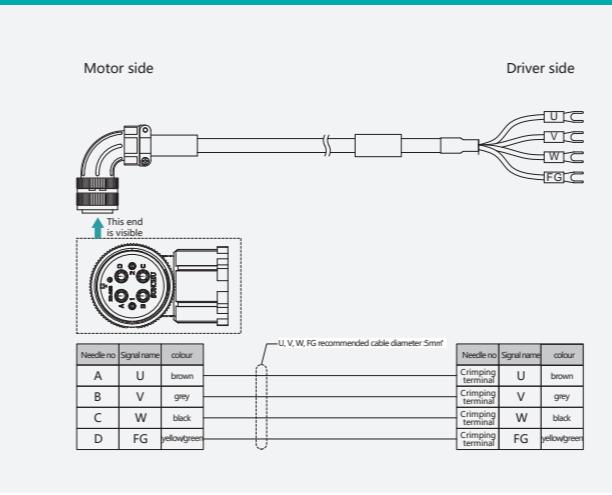
EC3P-N9319-□□ (No brake, IP67 plug)



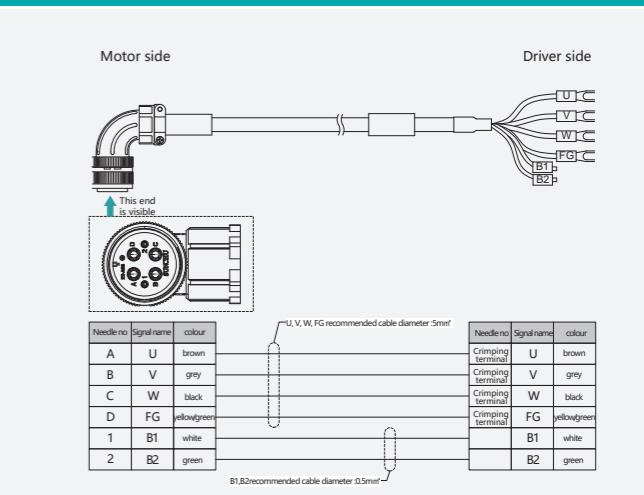
EC3P-B9319-□□ (With brake, IP67 plug)



EC3P-N9211-□□ (No brake, IP65 plug)



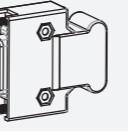
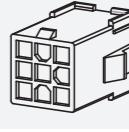
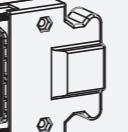
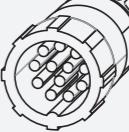
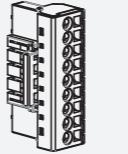
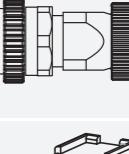
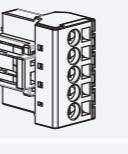
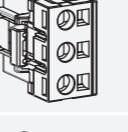
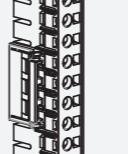
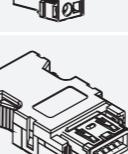
EC3P-B9211-□□ (With brake, IP65 plug)



Peripheral specifications

Driver	Main circuit voltage	Built-in regenerative resistor specification	Minimum external regenerative resistance	Minimum current of circuit breaker
ED3L-A5A	Single phase AC 200V~240V	-	45Ω	4A (Single phase)
ED3L-01A	Single phase AC 200V~240V	-	45Ω	4A (Single phase)
ED3L-02A	Single phase AC 200V~240V	-	45Ω	4A (Single phase)
ED3L-04A	Single phase AC 200V~240V	-	45Ω	4A (Single phase)
ED3L-08A	Single phase/three phase AC 200V~240V	50Ω / 60W	25Ω	10A (Single phase) / 6A (three phase)
ED3L-10A	Single phase/three phase AC 200V~240V	50Ω / 60W	25Ω	16A (Single phase) / 6A (three phase)
ED3L-15A	Single phase/three phase AC 200V~240V	40Ω / 80W	25Ω	20A (Single phase) / 16A (three phase)
ED3L-20A	three phase AC 200V~240V	40Ω / 80W	25Ω	16A (three phase)
ED3L-10D	three phase AC 380V~440V	100Ω / 80W	65Ω	4A (three phase)
ED3L-15D	three phase AC 380V~440V	100Ω / 80W	65Ω	6A (three phase)
ED3L-20D	three phase AC 380V~440V	50Ω / 80W	40Ω	10A (three phase)
ED3L-30D	three phase AC 380V~440V	50Ω / 80W	40Ω	16A (three phase)
ED3L-50D	three phase AC 380V~440V	35Ω / 80W	20Ω	20A (three phase)
ED3L-75D	three phase AC 380V~440V	35Ω / 80W	20Ω	25A (three phase)

Other accessories

Motor side			Driver side		
Name	Illustration	Involving	Name	Illustration	Involving
IO plug SM-26J		ED3L bus driver (EtherCAT or Profinet)	Encoder plug (Standard wire)		EM3Amotor (0.05kW ~ 1kW) EM3J motor EC3S-I1124-XX EC3S-A1124-XX
IO plug SM-50J		ED3L pulse driver	Encoder plug (Waterproof wire)		EM3Amotor (0.05kW ~ 1kW) EM3J motor EC3S-I1724-XX EC3S-A1724-XX
Main circuit terminal Straight type, 9 pin,10A		ED3L driver (200VAC, 0.05kW ~ 0.4kW)	Encoder plug (Straight type, 10pin,3A)		EM3A motor (1.5kW ~ 5kW) EM3G motor EC3S-A1924-XX EC3S-I1924-XX
Main circuit terminal Straight type, 6pin,20A		ED3L driver (200VAC, 0.75kW ~ 2kW)	Motor power plug (No brake, wire)		EM3A motor (0.05kW ~ 1kW) EM3J motor EC3P-N9118-XX EC3P-N8118-XX
Control loop terminal Straight type, 5pin, 14.5A		ED3L driver (200VAC, 0.75kW ~ 2kW)	Motor power plug (With brake, wire)		EM3A motor (0.05kW ~ 1kW) EM3J motor EC3P-B9118-XX EC3P-B8118-XX
Motor power terminal Straight type, 3pin, 20A		ED3L driver (0.75kW ~ 3kW)	Motor power plug (No brake, Waterproof wire)		EM3A motor (0.05kW ~ 1kW) EM3J motor EC3P-N9718-XX EC3P-N8718-XX
Main loop terminal Straight type, 10pin, 32A		ED3L driver (400VAC, 1kW ~ 3kW)	Motor power plug (With brake, Waterproof wire)		EM3A motor(0.05kW ~ 1kW) EM3J motor EC3P-B9718-XX EC3P-B8718-XX
Encoder plug (SM-10P-B)		All drives	Motor power plug (Bending type, 9pin,13A+23A)		EM3G motor(0.85kW ~ 1.8kW) EM3A motor(1.5kW~5.0kW) EC3P- □9314-XX EC3P- □9319-XX
			Motor power plug (Bending type, 6pin,13A+46A)		EM3G motor(2.9kW ~ 7.5kW) EC3P- □8214-XX EC3P- □9212-XX EC3P- □9211-XX