

Servo drive & Servo motor

Single axis servo drive

ED3L - 04 A E A - FS02

ED3L Servo drive	Rated output power	Voltage supply	Options	Encoder type	Extended function
	A5 0.05kW 01 0.1kW 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	A 200VAC D 400VAC	E EtherCAT M CANopen,pulse P Profinet	A Serial encoder C Linear encoder	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

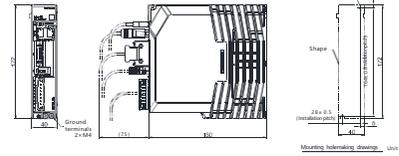
200VAC

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

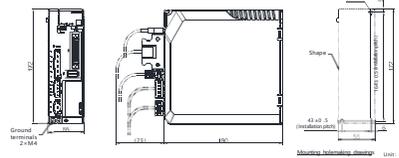
400VAC

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

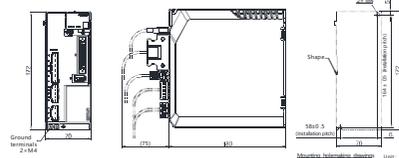
Single axis, 200VAC , Rated power: 50W~400W



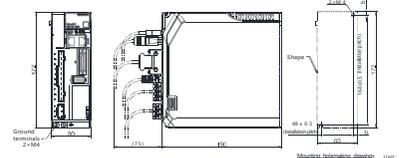
Single axis, 200VAC , Rated power: 750W~1KW



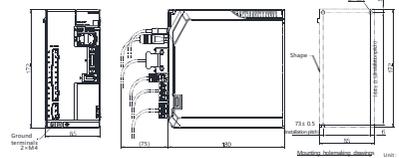
Single axis, 200VAC , Rated power: 1.5kW~2KW



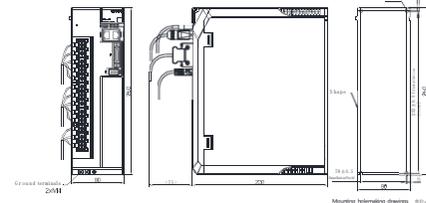
Single axis, 400VAC , Rated power: 1kW~1.5KW



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 200V~240V, -15%~+10%, 50Hz/60Hz (Power ≥ 0.75kW) Three-phase AC 380V~440V, -15%~+10%, 50Hz/60Hz
Work environment	Temperature	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 Temperature	-20°C~85°C
	Humidity	5% to 95% (with no condensation)
Operation conditions	Protection Class	IP20
	Altitude	Below 1000 m
	Vibration resistance	Vibration Resistance:4.9m/s ² ;
	Impact resistance	Shock Resistance:19.6m/s ²
	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%)
		0% of rated speed max. (For a load fluctuation of ±10%)
	Soft start time setting	±0.1% of rated speed max. (For a temperature fluctuation of 25°C±25°C)
USB communication		0 s to 10 s (Can be set separately for acceleration and deceleration.)
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 Other power products have built-in brake resistance
Protection function		Overcurrent, Overvoltage, Undervoltage, Overload, Regeneration Error, Overspeed, etc.
Utility Functions		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/ProfNet 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: 10 (Two fixed channels can be used for Touch Probe)
Torque Control	Output Signals	Operating voltage range: 5 VDC to 30 VDC Number of output points: 4 (1 of them fixed for Servo Alarm)
	External input	DC± 10V (DC± 0V~± 10V: Variable setting range)
Speed control	Built-in set	4 torque contacts
	External input	DC± 10V (DC± 0V~± 10V: Variable setting range)
Position control	Built-in set	Speed 1 to Speed 7
	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

Dual axis servo drive

ED3L - 04 04 A E A

ED3L Servo drive A-axis output power B-axis output power Voltage supply Options Encoder type

04 0.4KW
10 1.0KW

A 200VAC

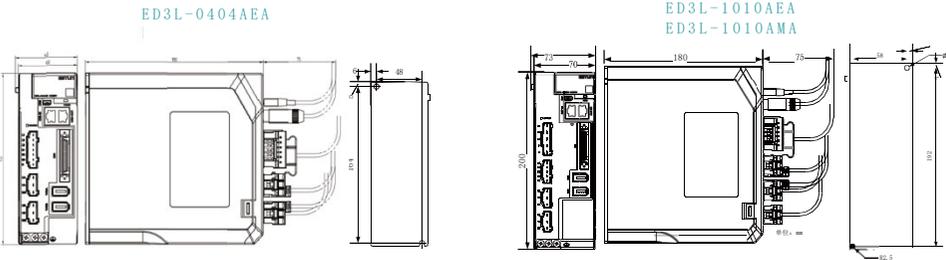
E EtherCAT
M CANopen, pulse

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	6.9	6.9
Maximum output current[Arms]	11.5	11.5	21.0	21.0
Capacity of main power supply[kVA] (Single phase)	1.9		4.5	
Capacity of main power supply[kVA] (Three-phase)	1.6		3.8	



Item		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	

Item		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	Direction selection	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.		
	Sequential output signal	Channel number	3 channels	4 channels	
		Function	The output signal is: COIN (positioning completion), VCMP (same-speed detection), TGO (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.		
Built-in 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)

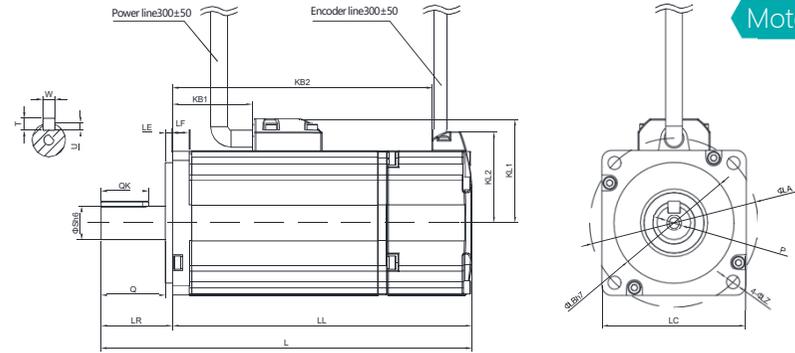
Small capacity | High speed | Low inertia

EM3A - 04 A L A 2 4 1



Rated output power	Voltage grade	encoder	Design order	Shaft end	Optional	Plug type
A5 0.05 kW 01 0.1kW 02 0.2kW 04 0.4kW 08 0.75 kW 10 1.0kW	A 200VAC	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	1 Standard plugs 2 Waterproof 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



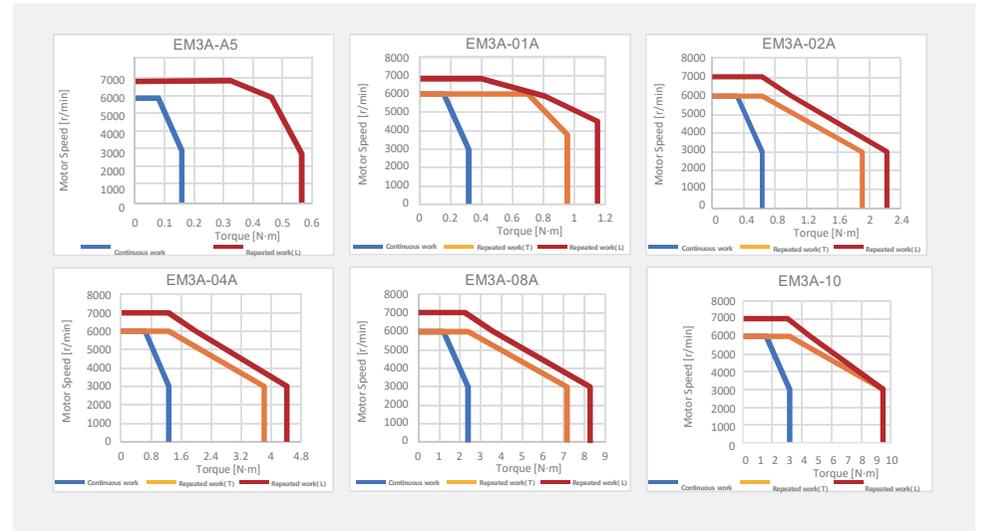
Motor size

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
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	37/35	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.

		200VAC											
EM3A-		A5AT	A5AL	01AT	01AL	02AT	02AL	04AT	04AL	08AT	08AL	10AT	10AL
Flange [mm]		40	40	60	60	80	80						
Rated power [kW]		0.05	0.1	0.2	0.4	0.75	1.0						
Rated speed [r/min]		3000	3000	3000	3000	3000	3000						
Maximum speed [r/min]		6000	6000	6000	6000	6000	6000						
Rated torque [N·m]		0.159	0.318	0.637	1.27	2.39	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		
Rated current [Arms]		0.9	1.1	1.5	2.9	5.1	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		
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)	1.14 (1.30)						
Allowable shaft end load	Radial [N]	78	78	245	245	392	392						
	Axial [N]	54	54	74	74	147	147						
Brake specification	Rated voltage	24VDC	24VDC	24VDC	24VDC	24VDC	24VDC						
	Holding torque [N·m]	≥0.32	≥0.32	≥1.5	≥1.5	≥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)	3.1 (3.8)						

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



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: 15 (1.5kW), 20 (2.0kW), 30 (3.0kW), 40 (4.0kW), 50 (5.0kW)

Voltage grade: A (200VAC), D (400VAC)

encoder: 17-bits absolute, 23-bits absolute

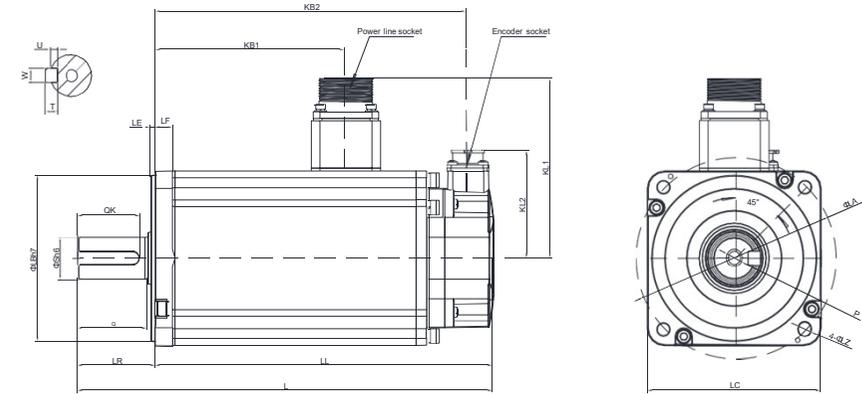
Design order: A (-)

Shaft end: 2 (Straight, with keys, Threaded)

Optional: 1 (No oil seals, No brakes), 2 (With oil seal, No brakes), 3 (No oil seals, With brake), 4 (With oil seal, With brake)

Plug type: 4 (Aviation Plug)

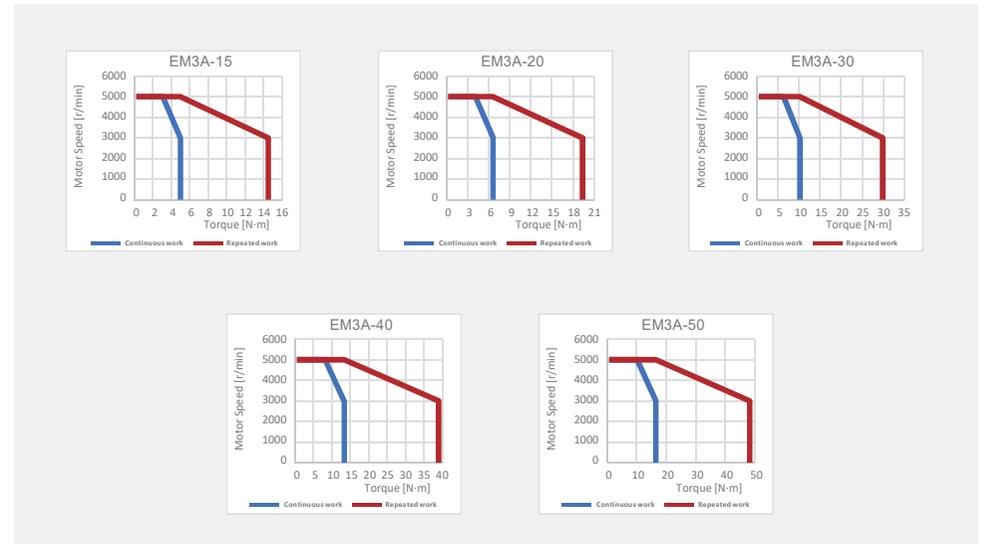
Note: 1. Please refer to "Model Comparison Table" for details.
 2. Motor body heat resistance class: F
 3. Motor body protection mode: self-cooling, IP65



	200VAC		400VAC					
	15A	20A	15D	20D	30D	40D	50D	
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	4.0	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	980
	Axial [N]	196	196	196	196	392	392	392
Brake specification	Rated voltage	24VDC	24VDC	24VDC	24VDC	24VDC	24VDC	24VDC
	Holding torque [N·m]	≥8	≥8	≥8	≥8	≥20	≥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



EM3J servo motor (200W ~ 1.0kW)

Small capacity | High speed | Medium inertia

Motor size

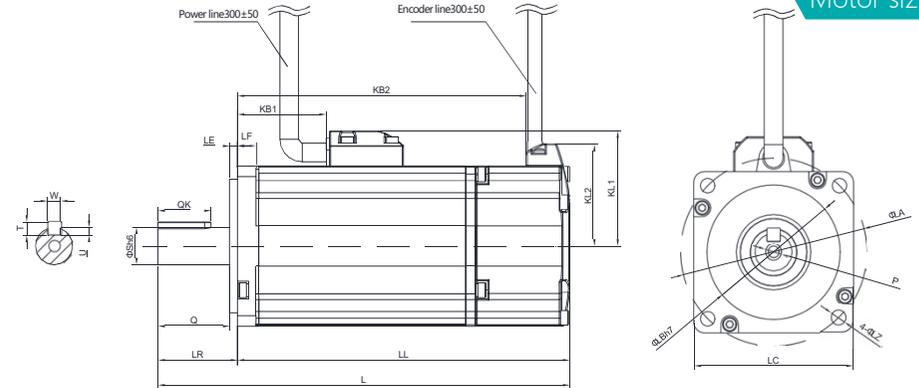
EM3J - 04 A L A 2 4 2

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/IP67

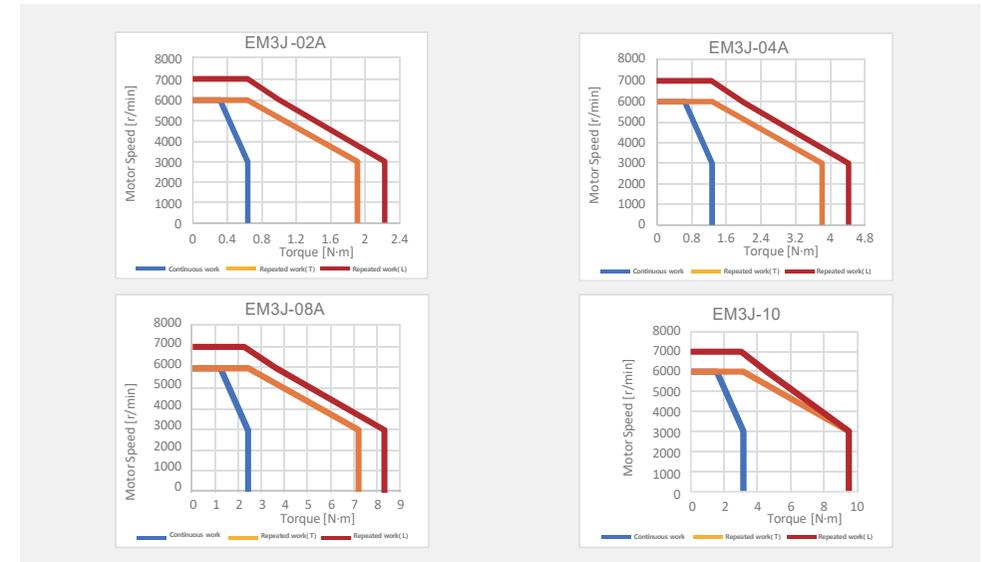


Power	EM3J-	L	LL	KB1	KB2	KL1	KL2	Flange Dimensions						S	P	key					
								LR	LE	LF	LC	LA	LB			LZ	OK	Q	W	T	U
200W	02AL	108 (137)	78 (107)	27.5 (33.5)	61.5 (90.5)	43	38	30	3	7	60	70	50	5.5	14	M5 × 12	20	27	5	5	3
200W	02AT	126.5 (155.5)	96.5 (125.5)	42.7 (48.7)	80 (109)	43	38	30	3	7	60	70	50	5.5	14	M5 × 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	10AT	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.

		200VAC							
		02AT	02AL	04AT	04AL	08AT	08AL	10AT	10AL
EM3J-									
Flange [mm]		60		60		80		80	
Rated power [kW]		0.2		0.4		0.75		1.0	
Rated speed [r/min]		3000		3000		3000		3000	
Maximum speed [r/min]		6000		6000		6000		6000	
Rated torque [N·m]		0.637		1.27		2.39		3.18	
Maximum torque [N·m]		1.91	2.23	3.81	4.46	7.17	8.37	9.54	
Rated current [Arms]		1.5		2.8		5.1		7.1	
Maximum current [Arms]		4.7	5.8	8.8	11.2	16.1	19.5	22.0	
Motor inertia [10 ⁻⁴ kg · m ²]		0.330 (0.360)		0.640 (0.680)		1.64 (1.79)		2.26 (2.41)	
Allowable shaft end load	Radial [N]	245		245		392		392	
	Axial [N]	74		74		147		147	
Brake specification	Rated voltage	24VDC		24VDC		24VDC		24VDC	
	Holding torque [N·m]	≥1.5		≥1.5		≥3.2		≥3.2	
Weight [kg]		0.9 (1.3)		1.3 (1.7)		2.3 (2.9)		3.1 (3.8)	

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



EM3G servo motor (0.85 kW ~ 7.5 kW)

Medium capacity | Medium speed | Medium inertia

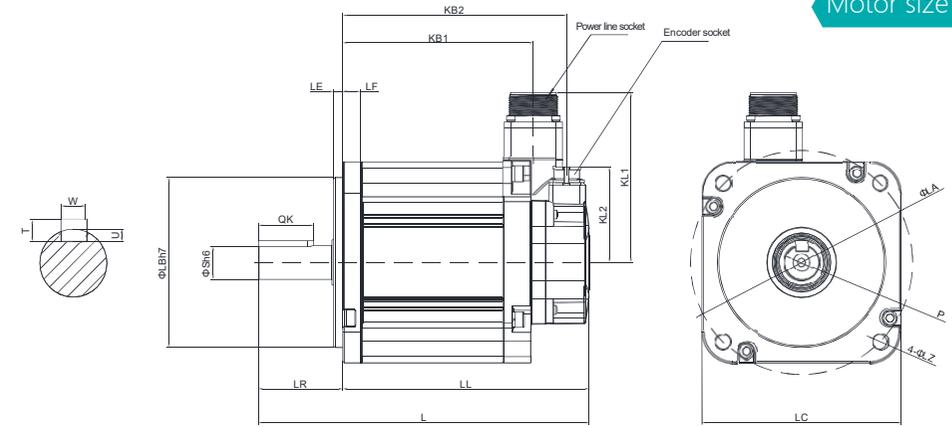
Motor size

EM3G - 13 A L A 2 2 4



Rated output power	Voltage grade	encoder	Design order	Shaft end	Optional	Plug type
09 0.85kW 3 1.3kW 8 1.8kW 29 2.9kW 44 4.4kW 5 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

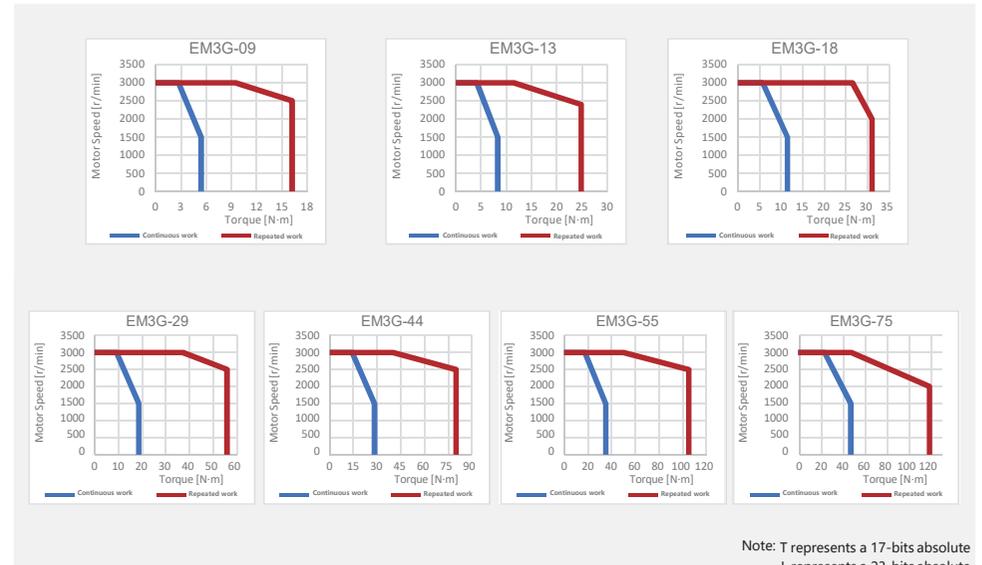


	200VAC			400VAC							
	09A	13A	18A	09D	13D	18D	29D	44D	55D	75D	
EM3G-											
Flange [mm]	130	130	130	130	130	130	180	180	180	180	
Rated power [kW]	0.85	1.3	1.8	0.85	1.3	1.8	2.9	4.4	5.5	7.5	
Rated speed [r/min]	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	
Maximum speed [r/min]	3000	3000	3000	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	1764
	Axial [N]	98	343	392	98	343	392	490	490	588	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

EM3L servo motor (1kW ~ 4kW)

Medium capacity | low speed | High inertia

Motor size

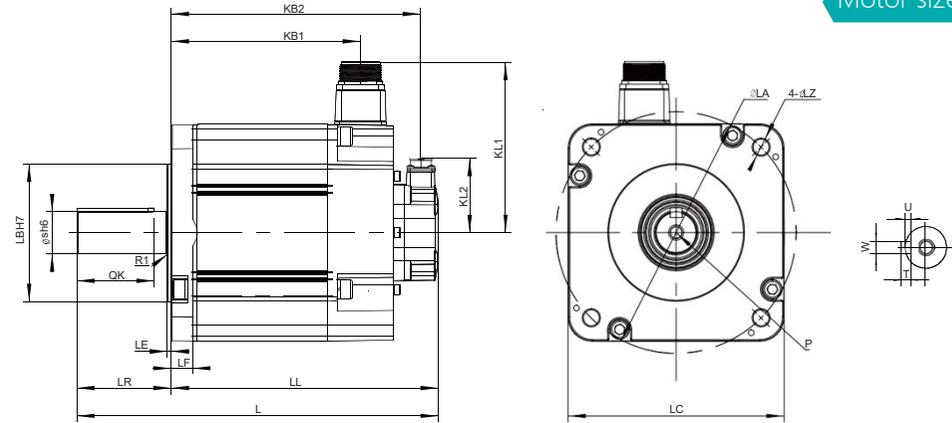
EM3L - 10 D L A 2 2 4

Rated output power Voltage grade encoder Design order Shaft end Optional Plug type



10	1.0kW	D	400VAC	T	17-bits absolute	A	-	2	Straight, with keys, Threaded	1	No oil seals, No brakes	4	Aviation Plug
20	2.0kW			L	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		

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

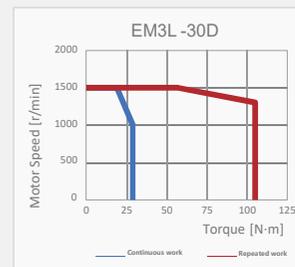
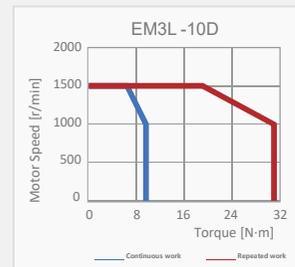


Power	EM3L-	L	LL	KB1	KB2	KL1	KL2	Flange Dimensions						S	P	key				
								LR	LE	LF	LC	LA	LB			LZ	QK	W	T	U
1.0kW	10D	215(245)	161(191)	124.5(124.5)	146(176)	112	58.5	55	6	12	130	145	110	9	22	M6×20	36	8	7	4
2.0kW	20D	258(303)	179(224)	154.5(158.8)	164(209)	142	62	79	3.2	18	180	200	114.3	13.5	35	M12×25	65	10	8	5
3.0kW	30D	290(343)	211(264)	186.5(198.8)	196(249)	142	62	79	3.2	18	180	200	114.3	13.5	35	M12×25	65	10	8	5
4.0kW	40D	360(413)	247(300)	222.5(234.8)	232(285)	142	62	113	3.2	18	180	200	114.3	13.5	42	M16×32	96	12	8	5

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

		400VAC			
		10D	20D	30D	40D
EM3L-		10D	20D	30D	40D
Flange [mm]		130	180	180	180
Rated power [kW]		1.0	2.0	3.0	4.0
Rated speed [r/min]		1000	1000	1000	1000
Maximum speed [r/min]		1500	1500	1500	1500
Rated torque [N·m]		9.55	19.1	28.7	38.2
Maximum torque [N·m]		31.0	69.0	105.0	120.0
Rated current [Arms]		3.1	5.2	8.6	10.9
Maximum current [Arms]		10.0	20.2	34.7	34.6
Motor inertia [10 ⁻⁴ kg·m ²]		22.3(22.9)	58.5(64.6)	85.5(91.5)	116.8(123)
Allowable shaft end load	Radial [N]	980	1470	1764	1764
	Axial [N]	392	490	588	588
Brake specification	Rated voltage	24VDC	24VDC	24VDC	24VDC
	Holding torque [N·m]	≥20	≥44	≥72	≥72
Weight [kg]		8.3(10.0)	17.6(21.8)	23.2(27.8)	29.0(33.6)

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



Model comparison table

EM3A | Low inertia | 3000 r/min

Power	Motor model	Brake	Connector	Flange	Trunnion	Drive	Input power
50W	EM3A-A5ALA221	-	Standard wire	40mm	Φ8	ED3L-A5A	Single phase AC 200V~240V
	EM3A-A5ALA241	●					
	EM3A-A5ALA222	-	Waterproof wire				
	EM3A-A5ALA242	●					
100W	EM3A-01ATA221	-	Standard wire	40mm	Φ8	ED3L-01A	Single phase AC 200V~240V
	EM3A-01ATA241	●					
	EM3A-01ATA222	-	Waterproof wire				
	EM3A-01ATA242	●					
	EM3A-01ALA221	-	Standard wire				
	EM3A-01ALA241	●					
	EM3A-01ALA222	-	Waterproof wire				
	EM3A-01ALA242	●					
200W	EM3A-02ATA221	-	Standard wire	60mm	Φ14	ED3L-02A	Single phase AC 200V~240V
	EM3A-02ATA241	●					
	EM3A-02ATA222	-	Waterproof wire				
	EM3A-02ATA242	●					
	EM3A-02ALA221	-	Standard wire			ED3L-0404A	Single phase / three phase AC 200V~240V
	EM3A-02ALA241	●					
	EM3A-02ALA222	-	Waterproof wire				
	EM3A-02ALA242	●					
400W	EM3A-04ATA221	-	Standard wire	60mm	Φ14	ED3L-04A	Single phase AC 200V~240V
	EM3A-04ATA241	●					
	EM3A-04ATA222	-	Waterproof wire				
	EM3A-04ATA242	●					
	EM3A-04ALA221	-	Standard wire			ED3L-0404A	Single phase / three phase AC 200V~240V
	EM3A-04ALA241	●					
	EM3A-04ALA222	-	Waterproof wire				
	EM3A-04ALA242	●					

Power	Motor model	Brake	Connector	Flange	Trunnion	Drive	Input power	Power cable	Encoder cable			
750W	EM3A-08ATA221	-	Standard wire	80mm	Φ19	ED3L-08A	Single phase / three phase AC 200V~240V					
	EM3A-08ATA241	●										
	EM3A-08ATA222	-	Waterproof wire									
	EM3A-08ATA242	●										
	EM3A-08ALA221	-	Standard wire									
	EM3A-08ALA241	●										
	EM3A-08ALA222	-	Waterproof wire									
EM3A-08ALA242	●											
1.0kW	EM3A-10ATA221	-	Standard wire	80mm	Φ19	ED3L-10A	Single phase / three phase AC 200V~240V					
	EM3A-10ATA241	●										
	EM3A-10ATA222	-	Waterproof wire									
	EM3A-10ATA242	●										
	EM3A-10ALA221	-	Standard wire									
	EM3A-10ALA241	●										
	EM3A-10ALA222	-	Waterproof wire									
EM3A-10ALA242	●											
1.5kW	EM3A-15ATB224	-	Aviation Plug	100mm	Φ24	ED3L-15A	Single phase / three phase AC 200V~240V	EC3P-N9314-□□	EC3S-A1924-□□ (Including battery) EC3S-I1924-□□ (No battery)			
	EM3A-15ATB244	●										
	EM3A-15ALB224	-										
	EM3A-15ALB244	●	Aviation Plug					Φ24		ED3L-15D	three phase AC 380V~440V	EC3P-N9314-□□
	EM3A-15DTB224	-										
	EM3A-15DTB244	●										
	EM3A-15DLB224	-										
	EM3A-15DLB244	●	Aviation Plug					Φ24		ED3L-20A	three phase AC 200V~240V	EC3P-N9314-□□
	EM3A-20ATB224	-										
	EM3A-20ATB244	●										
EM3A-20ALB224	-											
EM3A-20ALB244	●											
EM3A-20DTB224	-											
EM3A-20DTB244	●	Aviation Plug	Φ24	ED3L-20D	three phase AC 380V~440V	EC3P-N9314-□□						
EM3A-20DLB224	-											
EM3A-20DLB244	●											
EM3A-30DTA224	-					Aviation Plug	130mm	Φ28	ED3L-30D	three phase AC 380V~440V	EC3P-N9314-□□	
EM3A-30DTA244	●											
EM3A-30DLA224*	-											
EM3A-30DLA244*	●	Aviation Plug	130mm	Φ28	ED3L-50D	three phase AC 380V~440V	EC3P-N9314-□□					
EM3A-40DTA224	-											
EM3A-40DTA244	●											
EM3A-40DLA224*	-	Aviation Plug	130mm	Φ28	ED3L-50D	three phase AC 380V~440V	EC3P-N9314-□□					
EM3A-40DLA244*	●											
EM3A-50DTA224	-											
EM3A-50DTA244	●	Aviation Plug	130mm	Φ28	ED3L-50D	three phase AC 380V~440V	EC3P-N9314-□□					
EM3A-50DLA224*	-											
EM3A-50DLA244*	●											

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	-	Aviation Plug			ED3L-10D	three phase AC 380V~440V	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	-	Aviation Plug			ED3L-15D	three phase AC 380V~440V	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	-	Aviation Plug			ED3L-20D	three phase AC 380V~440V	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 ED3L-0404A	Single phase 200V~240V	EC3P-N9118-□□	EC3S-A1124-□□ (Including battery)			
	EM3J-02ATA241	●						EC3P-B9118-□□	EC3S-I1124-□□ (No battery)			
	EM3J-02ATA222	-	Waterproof wire					EC3P-N9718-□□	EC3S-A1724-□□ (Including battery)			
	EM3J-02ATA242	●						EC3P-B9718-□□	EC3S-I1724-□□ (No battery)			
	EM3J-02ALA221	-	Standard wire					EC3P-N9118-□□	EC3S-A1124-□□ (Including battery)			
	EM3J-02ALA241	●						EC3P-B9118-□□	EC3S-I1124-□□ (No battery)			
	EM3J-02ALA222	-	Waterproof wire			EC3P-N9718-□□	EC3S-A1724-□□ (Including battery)					
	EM3J-02ALA242	●				EC3P-B9718-□□	EC3S-I1724-□□ (No battery)					
	400W	EM3J-04ATA221	-			Standard wire	60mm	Φ14	ED3L-04A ED3L-0404A	Single phase / three phase AC 200V~240V	EC3P-N9118-□□	EC3S-A1124-□□ (Including battery)
		EM3J-04ATA241	●								EC3P-B9118-□□	EC3S-I1124-□□ (No battery)
		EM3J-04ATA222	-			Waterproof wire					EC3P-N9718-□□	EC3S-A1724-□□ (Including battery)
		EM3J-04ATA242	●								EC3P-B9718-□□	EC3S-I1724-□□ (No battery)
EM3J-04ALA221		-	Standard wire	EC3P-N9118-□□	EC3S-A1124-□□ (Including battery)							
EM3J-04ALA241		●		EC3P-B9118-□□	EC3S-I1124-□□ (No battery)							
EM3J-04ALA222		-	Waterproof wire	EC3P-N9718-□□	EC3S-A1724-□□ (Including battery)							
EM3J-04ALA242		●		EC3P-B9718-□□	EC3S-I1724-□□ (No battery)							
750W		EM3J-08ATA221	-	Standard wire	80mm	Φ19			ED3L-08A ED3L-1010A	Single phase / three phase AC 200V~240V	EC3P-N8118-□□	EC3S-A1124-□□ (Including battery)
		EM3J-08ATA241	●								EC3P-B8118-□□	EC3S-I1124-□□ (No battery)
		EM3J-08ATA222	-	Waterproof wire							EC3P-N8718-□□	EC3S-A1724-□□ (Including battery)
		EM3J-08ATA242	●								EC3P-B8718-□□	EC3S-I1724-□□ (No battery)
	EM3J-08ALA221	-	Standard wire	EC3P-N8118-□□			EC3S-A1124-□□ (Including battery)					
	EM3J-08ALA241	●		EC3P-B8118-□□			EC3S-I1124-□□ (No battery)					
	EM3J-08ALA222	-	Waterproof wire	EC3P-N8718-□□			EC3S-A1724-□□ (Including battery)					
	EM3J-08ALA242	●		EC3P-B8718-□□			EC3S-I1724-□□ (No battery)					
	1.0kW	EM3J-10ATA221	-	Standard wire			80mm	Φ19	ED3L-10A ED3L-1010A	Single phase / three phase AC 200V~240V	EC3P-N8118-□□	EC3S-A1124-□□ (Including battery) EC3S-I1124-□□ (No battery)
		EM3J-10ATA241	●								EC3P-B8118-□□	
		EM3J-10ALA221	-	Standard wire							EC3P-N8118-□□	
		EM3J-10ALA241	●								EC3P-B8118-□□	
EM3J-10DTA221		-	Standard wire	ED3L-10D	three phase AC 380V~440V	EC3P-N8118-□□			EC3S-A1124-□□ (Including battery) EC3S-I1124-□□ (No battery)			
EM3J-10DTA241		●				EC3P-B8118-□□						
EM3J-10DLA221		-				EC3P-N8118-□□						
EM3J-10DLA241		●				EC3P-B8118-□□						

EM3L | High inertia | 1000 r/min

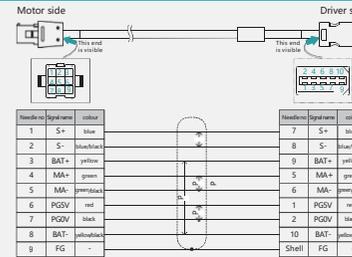
Power	Motor model	Brake	Connector	Flange	Trunnion	Drive	Input power	Power cable	Encoder cable
1 kW	EM3L-10DLA224	-	Aviation Plug	130 mm	φ22	ED3L-10D	Three phase AC 380V~440V	EC3P-N9314-□□	EC3S-A1924-□□ (Including battery)
	EM3L-10DLA244	●						EC3P-B9314-□□	EC3S-11924-□□ (No battery)
	EM3L-10DTA224	-	Aviation Plug					EC3P-N9314-□□	EC3S-A1924-□□ (Including battery)
	EM3L-10DTA244	●						EC3P-B9314-□□	EC3S-11924-□□ (No battery)
2 kW	EM3L-20DLA224	-	Aviation Plug	180 mm	φ35	ED3L-20D	Three phase AC 380V~440V	EC3P-N9212-□□	EC3S-A1924-□□ (Including battery)
	EM3L-20DLA244	●						EC3P-B9212-□□	EC3S-11924-□□ (No battery)
	EM3L-20DTA224	-	Aviation Plug					EC3P-N9212-□□	EC3S-A1924-□□ (Including battery)
	EM3L-20DTA244	●						EC3P-B9212-□□	EC3S-11924-□□ (No battery)
3 kW	EM3L-30DLA224	-	Aviation Plug	180 mm	φ35	ED3L-30D	Three phase AC 380V~440V	EC3P-N9212-□□	EC3S-A1924-□□ (Including battery)
	EM3L-30DLA244	●						EC3P-B9212-□□	EC3S-11924-□□ (No battery)
	EM3L-30DTA224	-	Aviation Plug					EC3P-N9212-□□	EC3S-A1924-□□ (Including battery)
	EM3L-30DTA244	●						EC3P-B9212-□□	EC3S-11924-□□ (No battery)
4 kW	EM3L-40DLA224	-	Aviation Plug	180 mm	φ42	ED3L-50D	Three phase AC 380V~440V	EC3P-N9211-□□	EC3S-A1924-□□ (Including battery)
	EM3L-40DLA244	●						EC3P-B9211-□□	EC3S-11924-□□ (No battery)
	EM3L-40DTA224	-	Aviation Plug					EC3P-N9211-□□	EC3S-A1924-□□ (Including battery)
	EM3L-40DTA244	●						EC3P-B9211-□□	EC3S-11924-□□ (No battery)

- Note:
1. "-" Represents a model without brakes, ● Indicates a model with brakes.
 2. Encoder cable with battery is selected by default, If there is no absolute demand, You can select the battery free cable model.
 3. □□ in the cable model indicates the length. Standard length: 1M5(1.5m), 03(3m), 05(5m), 08(8m), 10(10m), 12(12m), 15(15m), 20(20m). Flexible cables are optional, marked with -Rx. For example, the model of EC3P-N9118-03 flexible cable is EC3P-N9118-RX-03.
 4. Example: EC3P-N9118-03 Shielded cable model: EC3P-N9118-SS-03.
 4. The selection of I/O plug is determined by the driver: EtherCAT / PN driver product: 26 pin plug (sm-26). Pulse driver products :50-pin plug (SM-50).
 5. Optional debugging cable model: USB communication cable MINI USB- double magnetic ring shielding -1M5.
 6. Optional communication cable model: DK-HSB-RJ45-CAT5E-XX.

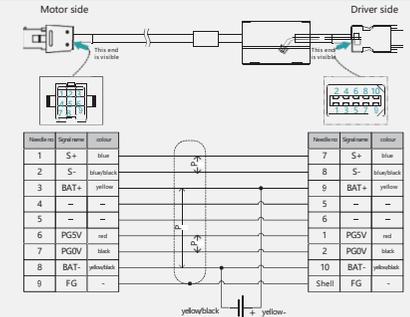
Accessories

Encoder cable

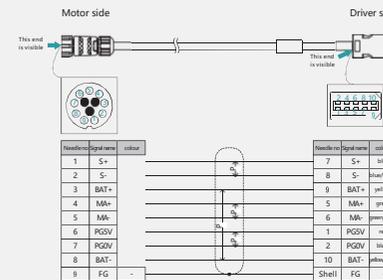
EC3S-I1124-□□ (Incremental)



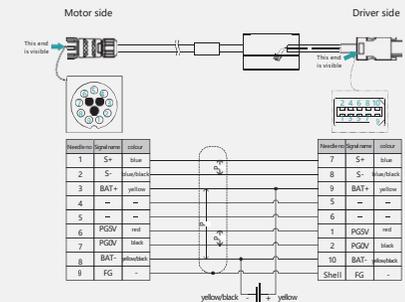
EC3S-A1124 - □□ (Absolute)

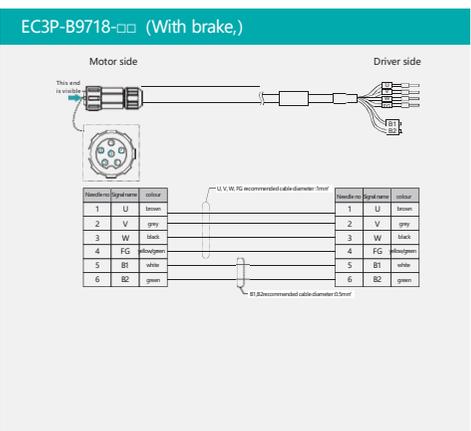
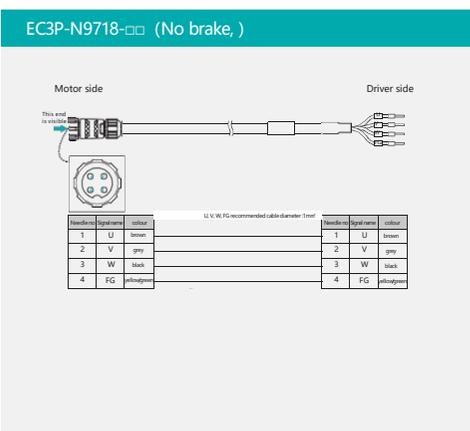
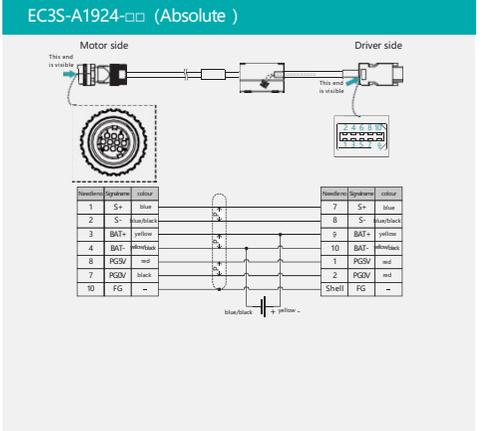
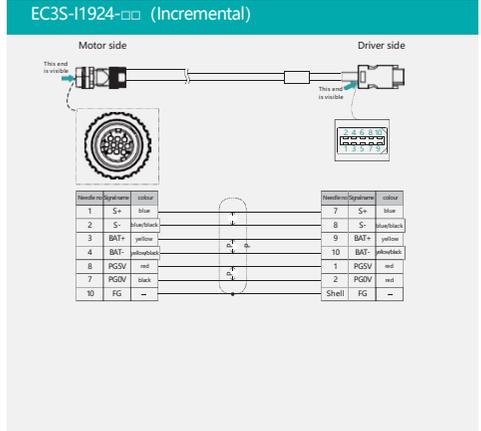


EC3S-I1724-□□ (Incremental)

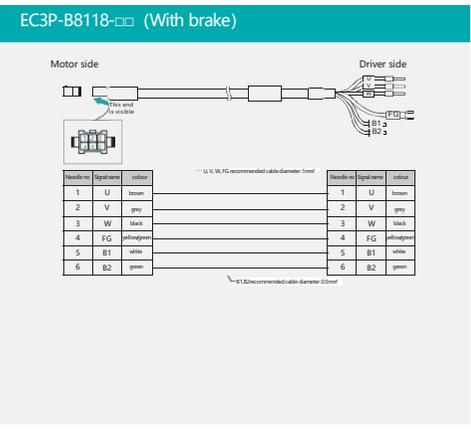
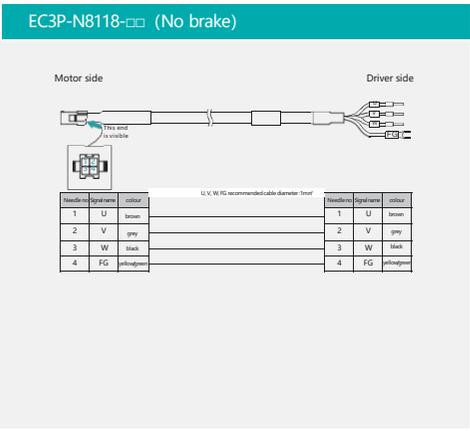
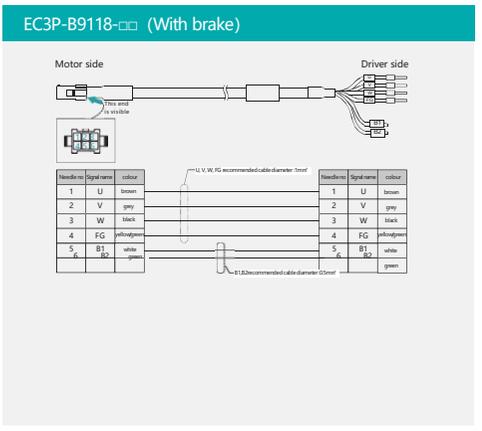
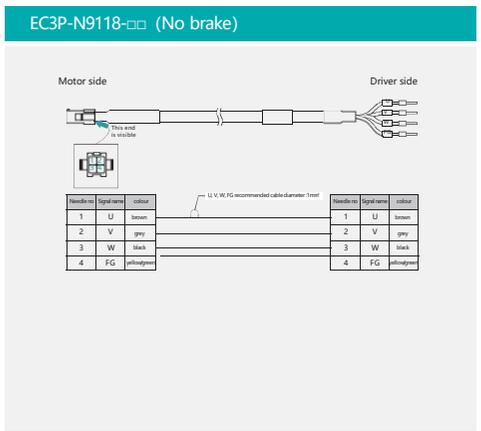


EC3S-A1724-□□ (Absolute)



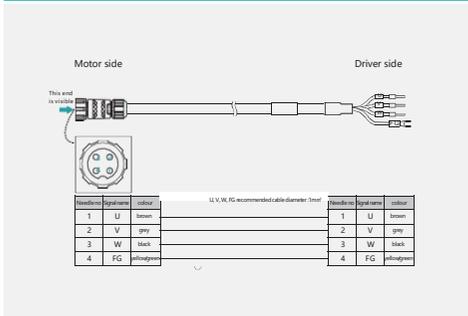


Power cable

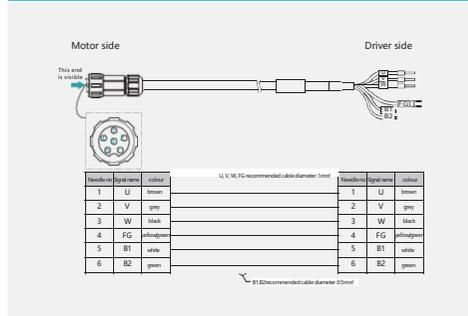


Power cable

EC3P-N8718-□□ (No brake)

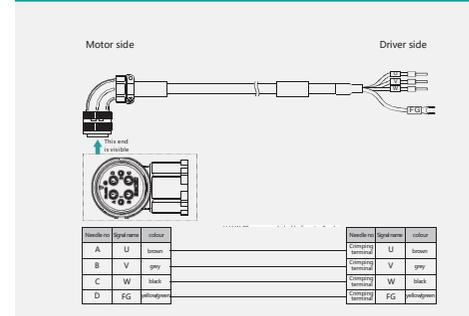


EC3P-B8718-□□ (With brake)

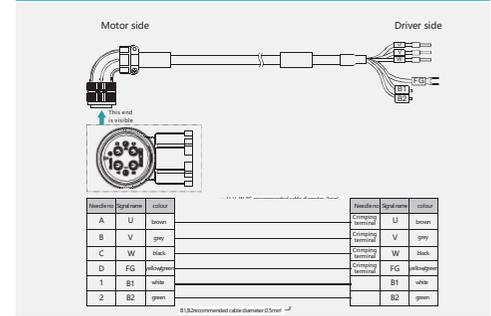


Power cable

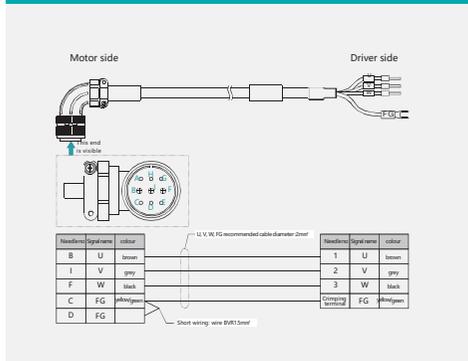
EC3P-N8214-□□ (No brake)



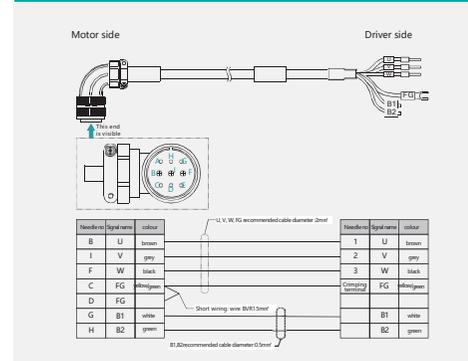
EC3P-B8214-□□ (With brake)



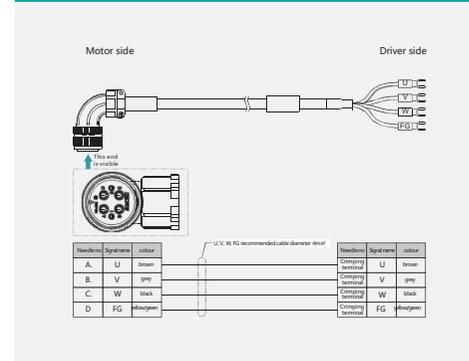
EC3P-N9314-□□ (No brake)



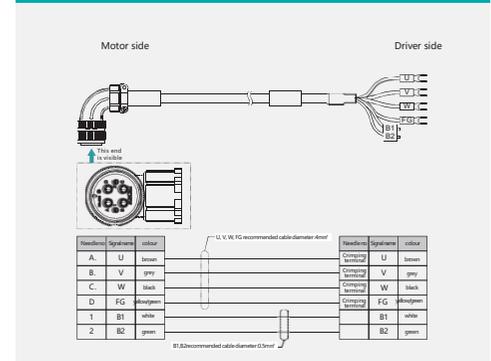
EC3P-B9314-□□ (With brake)



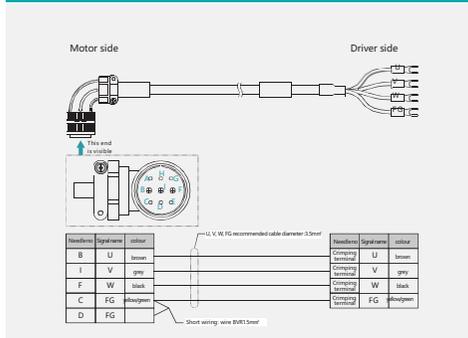
EC3P-N9212-□□ (No brake)



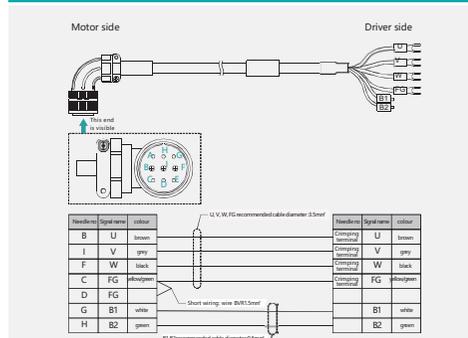
EC3P-B9212-□□ (With brake)



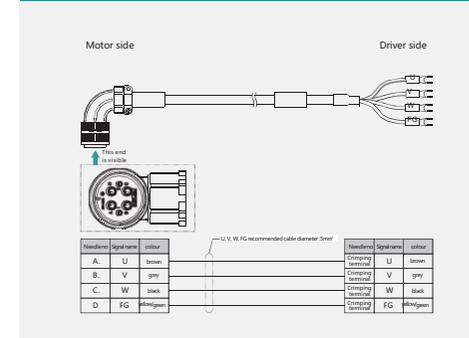
EC3P-N9319-□□ (No brake)



EC3P-B9319-□□ (With brake)



EC3P-N9211-□□ (No brake)



EC3P-B9211-□□ (With brake)

