ESTUN

Your Best Servo Supplier

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ProNet Series

All Digital AC Servo Systems

CE

ISO9001

Company Profile

As China's No. 1 brand, Estun Automation is devoted to R&D, manufacturing, and sales of high-end products in the realm of motion control. Estun Automation has a completely self-owned IPR technology of AC Servo Systems which are widely applied in CNC machines, textile machines, packaging machines, printing machines, wood processing machines, and other automatization production lines. Until now, Estun Automation has an established long-term strategic partnerships with many prestigious and professional sales agents, and has become the first cooperation option for many machine manufacturers, domestic and abroad.

Servo Drive Workshop, fulfilling 6-sigma field management.

Small golf land in office building

ProNet

Series All Digital AC Servo System

Excellent Performance

- The ProNet series servo drives added features include: current forward-feedback control, acceleration forward-feedback control, speed viewer, and inertia view, which has enabled the ProNet series servo drive to improve its response performance by more than three times than previous products. Moreover, it is available with online real-time workload, inertia check, and adjustment of gain to achieve better control
- The ProNet series servo drive is able to match 17-bit serial encoders which further enhance position precision, low speed stability, and response performance.

Simple & Convenient Setting

The ProNet series servo drive offers simplicity in its ability to automatically determine the mechanical characteristics of your servo system. The servo system is equipped with an automatic adjustment feature which helps to lower debugging time and provide simpler operation.

Expansibility

- The ProNet series servo drive is designed with an expansion module interface option. This allows the user to add multiple communication interfaces to better meet their application needs. At present, the Profibus-DP bus communication expansion module is available for purchase. Future enhancements for the expansion module will include the ability to support single axis control, assistant PLC, and more.
- In order to make the servo system flexible for use, the ProNet series servo drive takes the lead in providing expansibility, with its open design. Through selective modules, the ProNet series servo drive can be expanded to accommodate various communication and feedback interfaces..

Abundant Communication Functions

CANopen EtherCAT PROFIBUS

The ProNet series servo drives come standard with a RS-485 communication port for ModBUS communication protocol and a CAN communication port for CANopen protocol.

Both Ethercat and PROFIBUS communication protocols are available through use of an external module which can be added to the drive.

Model Comparison Table for S series

Servo motor					Servo drive	
Series			Power	Model	200V	400V
Medium inertia	Small capacity	**EMJ** 3000min^{-1}	200W	EMJ-02A□A	PRONET-02A□	
			400W	EMJ-04A□A	PRONET-04A□	
			750W	EMJ-08A□A	PRONET-08A□	
			1000	EMJ-10A□A	PRONET-10A□	
	Medium capacity	**EMG** 2000min^{-1}	1.0k	EMG-10A□A	PRONET-10A□	PRONET-10D□A
			1.5k	EMG-15A□A	PRONET-15A□	PRONET-15D□A
			2.0k	EMG-20A□A	PRONET-20A□	PRONET-20D□A
			3.0k	EMG-30A□A	PRONET-30A□	PRONET-30D□A
			5.0k	EMG-50A□A	PRONET-50A□	PRONET-50D□A
		EML 1000min^{-1}	1.0k	EML-10A□A	PRONET-10A□	PRONET-10D□A
			2.0k	EML-20A□A	PRONET-20A□	PRONET-20D□A
			3.0k	EML-30A□A	PRONET-30A□	PRONET-30D□A
			4.0k	EML-40A□A	PRONET-50A□	PRONET-50D□A
	Large capacity	**EMB** 1500min^{-1}	7.5k	EMB-75D□A		PRONET-75D□A
			11kW	EMB-1AD□A		PRONET-1AD□A
			15kW	EMB-1ED□A		PRONET-1ED□A

ProNet Series Servo Drive

Features

- The response performance of the ProNet series servo drive has been greatly improved compared to the EDB series servo drive, through the addition of online real-time inspection of load inertia and gain adjustment to obtain optimal control.
- FFT Analysis to control the vibration
- Expansibility: DP-100, AE100 module

Specification Description for S series

ProNet-10 A M A

ProNet Servo Drive

Rated Power		Power voltage		Control Style		Design Sequence	
Sign	Specification	Sign	Specification	Sign	Specification	Sign	Specification
02	200W	**A**	200VAC	**M**	Position, Speed, Torque Control	**A**	17-Bit Serial Encoder
04	400W	**D**	400VAC			**B**	Resolver
08	750W			**E**	Position, Speed, Control (Support Extended Module)		
10	1KW						
15	1.5KW						
20	2KW						
30	3KW						
50	5KW						
75	7.5KW						
1A	11KW						
1E	15KW						

Note: 400VAC power supply option is only available for the 1kW to 15kW rated power option at present.

Specification Description for E series

ProNet- E 10 A

ProNet Servo Drive

Feedback unit

Sign	Specification
E	2500P/R incremental encoder

Rated Power

Sign	Specification
02	200W
04	400W
08	750W
10	1KW
15	1.5KW
20	2KW
30	3KW
50	5KW

Power voltage

Sign	Specification
A	200VAC
D	400VAC

Model Comparison Table for E series

Servo motor						Servo drive	
Series			Power	200V	400v	200V	400v
Medium inertia	Small capacity	EMJ 3000min-1	200W	EMJ-02APA		PRONET-E-02A	
			400W	EMJ-04APB		PRONET-E-04A	
			750W	EMJ-08APB		PRONET-E-08A	
			1000W	EMJ-10APB		PRONET-E-10A	
	Medium capacity	EMG 2000min-1	1.0kW	EMG-10A	EMG-10D	PRONET-E-10A	PRONET-E-10D
			1.5kW	EMG-15A	EMG-15D	PRONET-E-15A	PRONET-E-15D
			2.0kW	EMG-20A	EMG-20D	PRONET-E-20A	PRONET-E-20D
			3.0kW	EMG-30A	EMG-30D	PRONET-E-30A	PRONET-E-30D
			5.0kW	EMG-50A	EMG-50D	PRONET-E-50A	PRONET-E-50D
		EML 1000min-1	1.0kW	EML-10A	EML-10D	PRONET-E-10A	PRONET-E-10D
			2.0kW	EML-20A		PRONET-E-20A	
			3.0kW	EML-30A		PRONET-E-30A	
			4.0kW	EML-40A		PRONET-E-50A	

Ratings

Servo Drives	PRONET-	02A	04A	08A	10A	10D	15A	15D	20A	20D	30A	30D	50A	50D	75	1A	1E
Servo Motors	EMJ-	02A	04A	08A	10A	-	-	-	-	-	-	-	-	-	-	-	-
	EMG-	-	-	-	10A	10D	15A	15D	20A	20D	30A	30D	50A	50D	-	-	-
	EML-	-	-	-	10A	10D	-	-	20A	20D	30A	30D	40A	40D	-	-	-
	EMB-	-	-	-	-	-	-	-	-	-	-	-	-	-	75	1A	1E
Continuous output current [Arms]		1.4	2.8	4.0	6.0	3.2	9.0	5.0	12.0	6.4	18	9	28	15	18	28	38
Max. output current [Arms]		4.2	8.4	12.0	18.0	9.6	28.0	15.0	42.0	19.2	56	27	84	45	48	65	100
Input Power Supply Capacity		0.5	0.9	1.3	1.8	1.8	2.5	2.8	3.5	3.5	4.5	5	7.5	8.2	12	18	22

Specifications

Items			Specifications
Input Power Supply	Main Circuit	200V	Three-phase 200 to 230VAC 50/60Hz (0.75kw-5.0kW)
		400V	Three-phase 380 to 440VAC 50/60Hz (1kw-15kW)
	Control Circuit	200V	single-phase 200 to 230VAC 50/60Hz (0.2kw-5.0kW)
		400V	24VDC(1KW~7.5KW)
			single-phase 380 to 440VAC 50/60Hz (11kw-15kW)
Control Method			SVPWM Control
Feedback			Serial encoder:13072P/R
			Resolver/ wire-saving incremental encoder(2500p/r)
Operating Conditions	Ambient/Storage Temperature		Ambient temperature: 0 to +55℃,Storage Temperature:-20 to +85℃
	Ambient/Storage Humidity		90% RH or less(no condensation)
	Elevation		1000m or less
	Vibration/Impact Resistance		Vibration Resistance:4.9m/s2, Impact Resistance: 19.6m/s2
Configuration			Base-mounted
Performance	Speed Control Range		1:5000
	Speed Regulation	Load Regulation	0 to 100% load:±0.01% max
		Voltage Regulation	Rated voltage±10%: 0%(at rated speed)
		Temperature Regulation	25±25℃:±0.1% max. (at rated speed)
Torque Control	Analog Input	Reference Voltage	±10VDC at rated torque(variable setting range:±1to 10VDC)
			Max. input voltage:±12V
		Input Impedance	About 10MΩ min.
		Circuit Time Constant	10μs

Specifications

Items			Specifications
Speed Control	Analog Input	Reference Voltage	±10VDC at rated torque(variable setting range:±1to 10VDC)
			Max. input voltage:±12V
		Input Impedance	About 10MΩ min.
		Circuit Time Constant	10μs
	Set Speed Reference	Rotation Direction Selection	Switches the direction by /P-CON
		Speed Selection	Speed 1 to 7 selection
	Function	Soft Start Setting	0 to 10s(can be set individually for acceleration and deceleration)
Position Control	Reference Pulse	Type	Sign + pulse train, CCW+CW pulse train, or 90°phase difference 2-phase pulse(phase A + phase B)
		Form	Non-insulated line driver(+5V level),open collector
		Frequency	x1 multiplier:4Mpps
			x2 multiplier:2Mpps
			x4 multiplier:1Mpps
			Open collector:200kpps
			Frequencies drop when the duty cycle have errors
	Set Position Reference	Position Setting	Can set 16 position reference
I/O Signals	Encoder Output Pulses		Phase A, Phase B, Phase C: line driver output
			The number of dividing pulse: Any setting ratio is available
	Sequence Input	Number of Channels	8 channels
		Function	Signal allocations and positive/negative logics can be modified: Servo On(/S-ON),P control(/P-CON),alarm reset(/ALM-RST),clear error pulse(/CLR),forward run prohibited (P-OT),reverse run prohibited(N-OT),forward torque limit(/P-CL),reverse torque limit(/N-CL)
	Sequence Output	Number of Channels	4 channels
		Function	Servo alarm(ALM)Signal allocations and positive/negative logics can be modified: Positioning completion(/COIN),speed agree detection(/V-CMP),motor rotation detection(/TGON),servo ready(/S-RDY),torque limit detection(/CLT),brake interlock(/BK),encoder C pulse(/PGC)
Built-in Function	Dynamic Brake(DB) Functions		Operate during main power OFF, servo alarm, servo OFF or overtravel
	Regenerative Processing Functions		750W to 5.0KW:built-in regenerative resistor;7.5kW to 15kW:External regenerative resistor(optional)
	Protective Functions		Overcurrent, overvoltage, low voltage. overload, regeneration error, overspeed, etc.
	Utility Functions		Alarm trace back, JOG operation, Inertia detections, etc.
	Display Functions		CHARGE(red),POWER(green),7-segment 5-digit LED(Built-in digital operator function)
	Communications		RS485 communication port, use MODBUS protocol. CAN communication port, use CANOpen protocol.

DP100 Module

There are many applications based on PROFIBUS Communication in the industrial automation market. The DP100 is a PROFIBUS DP Module which can be easily added to an Estun ProNet series servo drive to help reduce project costs.

Main Features

- Bus transmitting baud rate automatic identification (9.6 Kbps~12Mbps)
- The on-card power and isolator can match demand of different net regulations
- Distribute module address freely, make data transmitted to any servo drives
- Periodic data (PZD) exchange is available by DPV0 channel
- Reading and writing no-periodic data are available by DPV1 channel
- Support DPV2, isochronous, each servo drive can sampling control isochronously, the isochronous precision can reach 1us.
- The module support motion control-oriented PROFIBUS PROFIDRIVE regulation
- Pass the coherence test and authentication of PROFIBUS

EMJ Series Servo Motor

Features

- Medium inertia
- Peak torque up to 300% of rated torque
- Various models (200w~1000w, with brake, etc.,)
- Maximum speed of up to 4,500 r/min
- Equipped with a 2,500 P/R incremental encoder or a 17-bit incremental/absolute encoder

Applications

- SMM(surface mounting machine)
- PCB puncher machine
- Robot arm
- Handing machine
- Food processing machine
- Textile machine

Model Specification Description

EMJ– 08 A D A 1 1

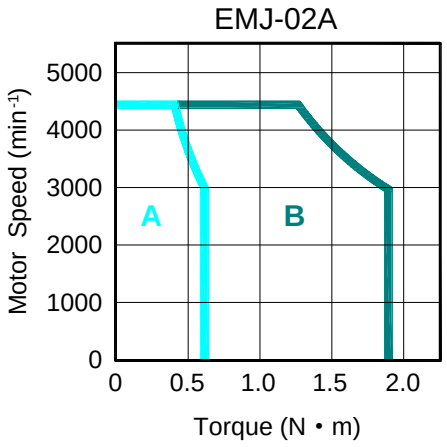
EMJ Model Servo Motor	Rated Power		Power Voltage		Encoder		Design Sequence		Shaft End		Optional Parts	
	Sign	Spec.	Sign	Spec.	Sign	Spec.	Sign	Spec.	Sign	Spec.	Sign	Spec.
	02	200W	**A**	200VAC	**D**	Incremental Encoder: 131072P/R	**A**	Design Sequence	**1**	Flat, without keys	**1**	None
	04	400W					**B**				**2**	With Oil Seal
	08	750W			**S**	Absolute Encoder: 13072P/R			**2**	Flat, with keys, with screw thread	**3**	With brake (DC24V)
	10	1000W			**P**	Incremental Encoder: 2500P/R					**4**	With oil seal, with brake (DC24V)

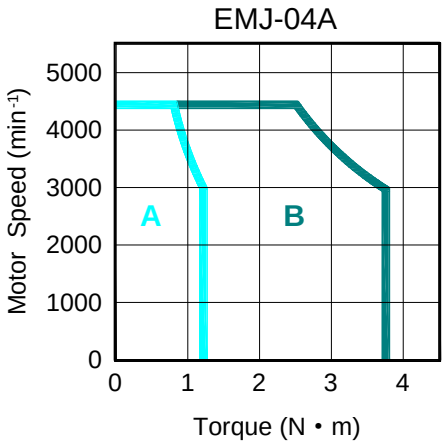
Rated Value and Specifications

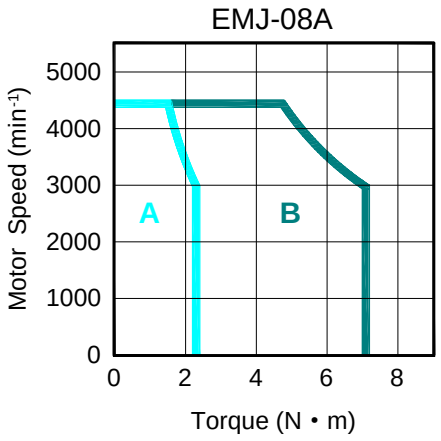
Voltage		200VAC			
Servo motor type	**EMJ-**	**02A**	**04A**	**08A**	**10A**
Rated output power	W	200	400	750	1000
Rated torque	N.m	0.64	1.27	2.39	3.18
Instantaneous peak torque	N.m	1.91	3.82	7.16	9.55
Rated current	Arms	1.4	2.8	4.0	5.3
Instantaneous peak current	Arms	4.2	8.4	12.0	15.9
Rated speed	min^{-1}	3000			
Max. speed	min^{-1}	4500			
Rotator rotated inertia	$x10^{-4}kg/m^2$	0.19(0.23)	0.31(0.35)	1.35(1.47)	1.74(1.87)
Brake rated voltage		DC24V±10%			
Brake rated power	W	7.2		11.5	
Brake holding torque	N.M	1.3		3.2	
Encoder	Standard	2500P/R incremental encoder			
	Optional	17 bit Incremental/Absolute Encoder: 131072P/R			
Heat endurance level		F			
Environment temperature		0 to +40℃ (Non-iced)			
Environment humidity		20 to 80% RH (No dew)			
Protection method		Fully enclosed, Self-Cooled, IP65 Protection Rating (Except output shaft and connector)			
Anti-vibration performance		$49m/s^2$			

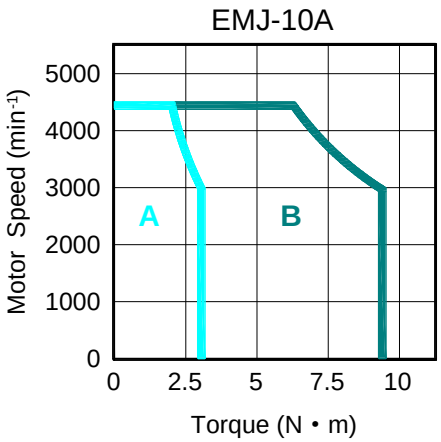
(Note): The values in parentheses are for servo motors with holding brakes.

Torque-Speed Features



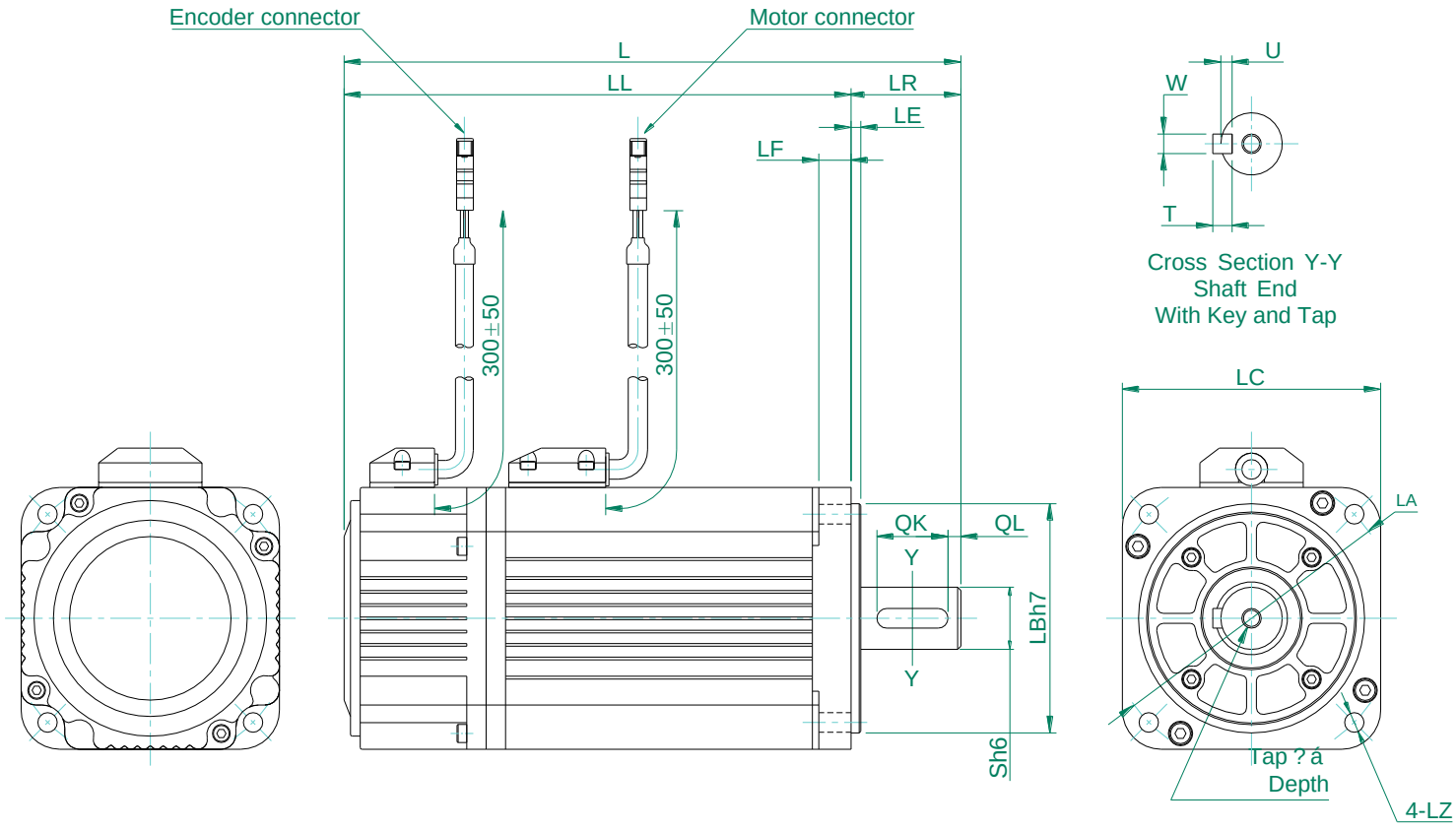






A: Continuous Working Area B: Repeatable Working Area

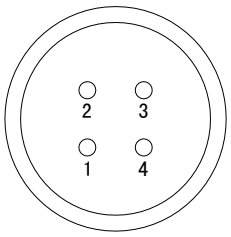
Dimensions



Model EMJ-	L	LL	Flange face							S	Tap×Depth	Key				
			LR	LE	LF	LC	LA	LB	LZ			QK	QL	W	T	U
02APA	141	111	30	3	6	60	70	50	5.5	14	M5x10L	16	4	5	5	3
02ADA	141	111	30	3	6	60	70	50	5.5	14	M5x10L	16	4	5	5	3
02ASA	154	124	30	3	6	60	70	50	5.5	14	M5x10L	16	4	5	5	3
04APB	161	131	30	3	6	60	70	50	5.5	14	M5x10L	16	4	5	5	3

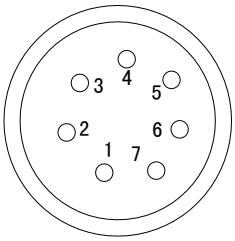
04ADB	161	131	30	3	6	60	70	50	5.5	14	M5x10L	16	4	5	5	3
04ASB	174	144	30	3	6	60	70	50	5.5	14	M5x10L	16	4	5	5	3
08APB	173	138	35	3	9	80	90	70	6	19	M6x15L	22	4	6	6	3.5
08ADB	173	138	35	3	9	80	90	70	6	19	M6x15L	22	4	6	6	3.5
08ASB	186	151	35	3	9	80	90	70	6	19	M6x15L	22	4	6	6	3.5
10APB	191	156	35	3	9	80	90	70	6	19	M6x15L	22	4	6	6	3.5
10ADB	191	156	35	3	9	80	90	70	6	19	M6x15L	22	4	6	6	3.5
10ASB	204	169	35	3	9	80	90	70	6	19	M6x15L	22	4	6	6	3.5

Connector Specifications for S series



- **Motor Connector Specifications**
- Plug：CGRSB-4BFMA-SL8001

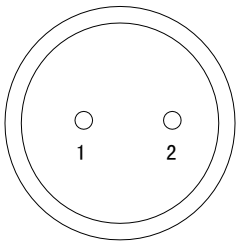
Pin No.	Signal	Color
1	U	Red
2	V	Blue
3	W	White
4	FG	Green/yellow



- **Encoder Connector specifications**
- Plug：CGRSD-7BFMA-SL8001

Pin No.	Signal	Color
1	S+	Blue
2	S-	Blue/Black
*3	BAT+	Brown
*4	BAT-	Brown/Black
5	PG5V	Red
6	PG0V	Black
7	FG	Shield

*Note: There are no BAT+ and BAT- signal outputs when using an incremental encoder r



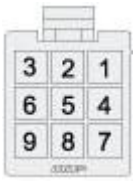
- **Brake Connector Specifications**
- Plug: CGRSB-2BFMA-SL8001

Pin No.	Signal	Color
1	B1	Blue
2	B2	White

Connector Specifications for E series

- **Motor Connector Specifications**
- Plug：172167-1 (AMP)
- Pin： 170360-1 (AMP)

Pin No.	Signal	Color
1	U phase	Red
2	V phase	Blue
3	W phase	White
4	FG	Green/yellow



- **Encoder Connector Specifications**
- Plug：172169-1 (AMP)
- Pin： 170359-3 (AMP)

Pin No.	Signal	Color
1	A+	Blue
2	B+	Green
3	C+	Yellow
4	A-	Blue/Black
5	B-	Green/Black
6	C-	Yellow/Black
7	PG5V	Red
8	PG0V	Black
9	FG	Shield

- **Brake Connector Specifications**
- Plug: 172165-1(AMP)
- Pin: 170360-1(AMP)

Pin No.	Signal	Color
1	B1	Blue
2	B2	White

EMG

Series Servo Motor

Features

- Used to drive the feed shaft of various machines
- Various Options (1.0kW~5.0kW power rating, optional brake, etc.)
- Equipped with a 2,500 P/R incremental encoder or a 17-bit incremental/absolute encoder
- IP65 Protection Level

Applications

- Machine tools
- Handling machine
- Food processing machine
- Textile machine

Model Specification Description

EMG– 10 A D A 1 1

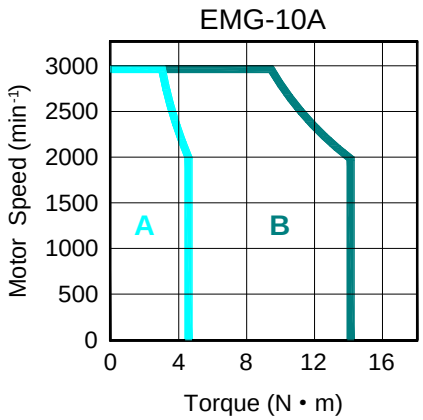
EMG Model Servo Motor	Rated Power		Power Voltage		Encoder		Design Sequence		Shaft End		Optional Parts	
	Sign	Spec.	Sign	Spec.	Sign	Spec.	Sign	Spec.	Sign	Spec.	Sign	Spec.
	10	1.0KW	**A**	200VAC	**D**	Incremental Encoder: 131072P/R	**A**	Design Sequence	**1**	Flat, without keys	**1**	None
	15	1.5KW	**D**	400VAC							**2**	With Oil Seal
	20	2.0KW			**S**	Absolute Encoder: 131072P/R			**2**	Flat, with keys, with screw thread	**3**	With brake (DC24V)
	30	3.0KW										
	50	5.0KW			**P**	Incremental Encoder: 2500P/R					**4**	With oil seal, with brake (DC24V)

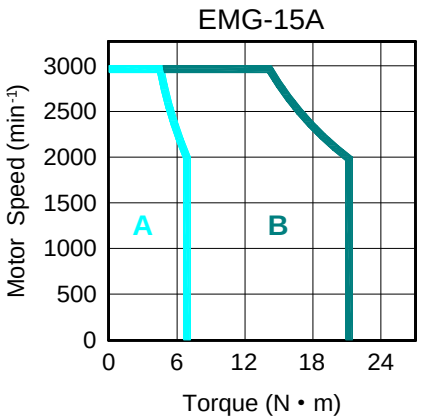
Rated Value and Specification

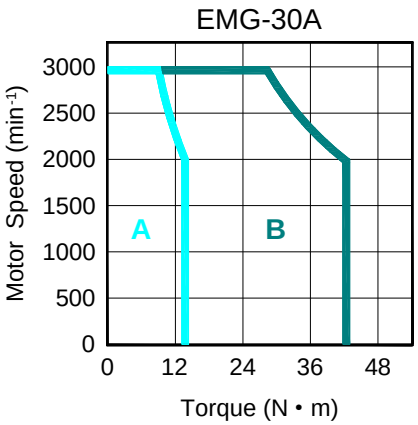
Voltage		200VAC/400VAC									
Motor type	**EMG-**	**10A**	**10D**	**15A**	**15D**	**20A**	**20D**	**30A**	**30D**	**50A**	**50D**
Rated output power	kW	1.0	1.0	1.5	1.5	2.0	2.0	3.0	3.0	5.0	5.0
Rated torque	N.m	4.78	4.78	7.16	7.16	9.55	9.55	14.3	14.3	23.9	23.9
Instantaneous peak torque	N.m	14.3	14.3	21.5	21.5	28.7	28.7	43.0	43.0	71.6	71.6
Rated current	Arms	6.0	3.2	9.0	5.0	12.0	6.4	18.0	8.8	28.0	15.0
Instantaneous peak current	Arms	18.0	9.6	27.0	15.0	36.0	19.2	54.0	26.4	84	45.0
Rated speed	min^{-1}	2000									
Max. speed	min^{-1}	3000									
Rotator rotated inertia	$x10^{-4}kg/m^2$	10(10.6)		14.5(15.1)		19.0(19.6)		41.3(44.5)		65.7(68.9)	
Brake rated voltage		DC24V±10%									
Brake rated power	W	19						35			
Brake holding torque	N.M	10						40			
Feedback unit	Standard	2500P/R incremental encoder									
	Optional	17 bit Incremental/Absolute Encoder: 131072P/R;									
Heat-endurance level		F									
Environment humidity temperature		0 to +40℃ (Non-iced)									
Environment humidity		20 to 80% RH (No dew)									
Protection method		Fully enclosed, Self-Cooled, IP65 Protection Rating (Except output shaft and connector)									
Anti-vibration performance		$24.5m/s^2$									

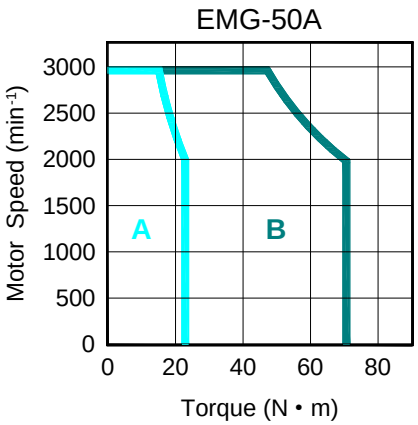
(Note): The values in parentheses are for servo motors with holding brakes.

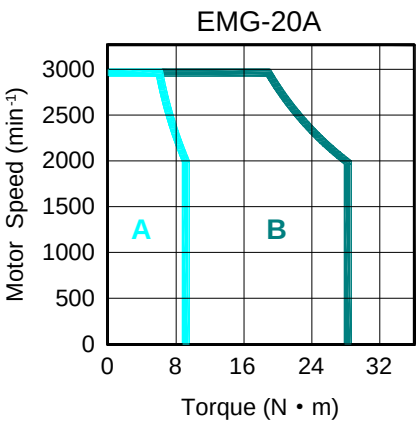
Torque-Speed Features





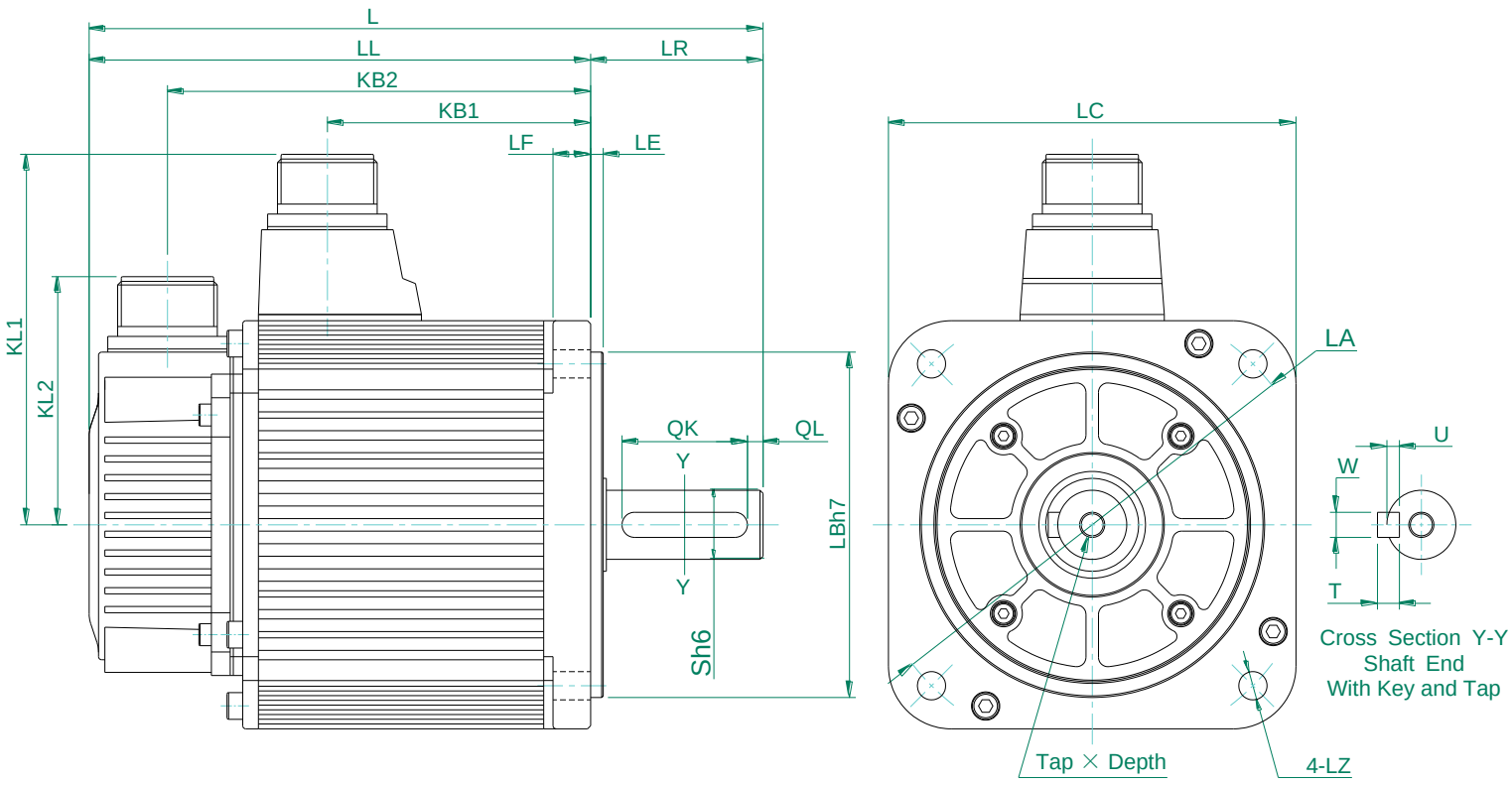






A: Continuous Working Area B: Repeatable Working Area

Dimensions



Model EMG-	L	LL	KB1	KB2	KL1	KL2	Flange face							S	Tap×Depth	Key				
							LR	LE	LF	LC	LA	LB	LZ			QK	QL	W	T	U
10	215	160	84	135	118	79	55	4	12	130	145	110	9	22	M6x20L	40	5	8	7	4
15	240	185	109	160	118	79	55	4	12	130	145	110	9	22	M6x20L	40	5	8	7	4
20	265	210	134	185	118	79	55	4	12	130	145	110	9	22	M6x20L	40	5	8	7	4
30	307	228	143	203	140	79	79	3.2	18	180	200	114.3	13.5	35	M8x16L	55	6	10	8	5
50	357	278	183	253	140	79	79	3.2	18	180	200	114.3	13.5	35	M8x16L	55	6	10	8	5

Connector Specifications for S series

- **Motor Connector Specifications**
- Plug: MS3108B20-4S(LC=130), MS3108B22-22S(LC=180)
- Receptacle：MS3102A20-4P(LC=130),MS3102A22-22P(LC=180)
- Cable Clamp: MS3057-12A

Pin No.	Signal
A	U
B	V
C	W
D	FG

- **Encoder Connector Specifications**
- Plug：MS3108B20-29S
- Receptacle： MS3102A20-29P
- Cable Clamp: MS3057-12A

Incremental/Absolute encoder

Pin No.	Signal	Color
K	S+	Blue
L	S -	Blue/Black
*T	BAT+	Brown
*S	B AT-	Brown/Black
H	PG5V	Red
G	PG0V	Black
J	FG	Shield

*Note: There are no BAT+ and BAT- signal outputs when using an incremental encoder

- **Brake Connector Specifications**
- Plug：MS3106A10SL-3S
- Receptacle： MS3102A10SL-3P
- Cable Clamp: MS3057-4A

Pin No.	Signal
A	B1
B	B2
C	-

Connector Specifications for E series

➢ Motor Connector Specifications

- ➢ Plug: MS3108B20-4S(LC=130), MS3108B22-22S(LC=180)
- ➢ Receptacle：MS3102A20-4P(LC=130),MS3102A22-22P(LC=180)
- ➢ Cable Clamp: MS3057-12A

Pin No.	Signal
A	U phase
B	V phase
C	W phase
D	FG

➢ Encoder Connector Specifications

- ➢ Plug：MS3108B20-29S
- ➢ Receptacle： MS3102A20-29P
- ➢ Cable Clamp: MS3057-12A

Pin No.	Signal	Color
A	A+	Blue
B	A -	Blue/Black
C	B+	Green/Black
D	B -	Green
E	C+	Yellow
F	C -	Yellow/Black
G	PG0V	Black
H	PG5V	Red
J	FG	Shield

➢ Brake Connector Specifications

- ➢ Plug：MS3106A10SL-3S
- ➢ Receptacle： MS3102A10SL-3P
- ➢ Cable Clamp: MS3057-4A

Pin No.	Signal
A	B1
B	B2
C	-

EML

Series Servo Motor

Features

- Used to drive the feed shaft of various machines
- Various Options (1.0kW~4.0kW power rating, optional brake, etc.)
- Equipped with a 2,500 P/R incremental encoder or a 17-bit incremental/absolute encoder
- IP65 Protection Level

Applications

- Machine tools
- Handling machine
- Food processing machine
- Textile machine

Model Specification Description

EML– 10 A D A 1 1

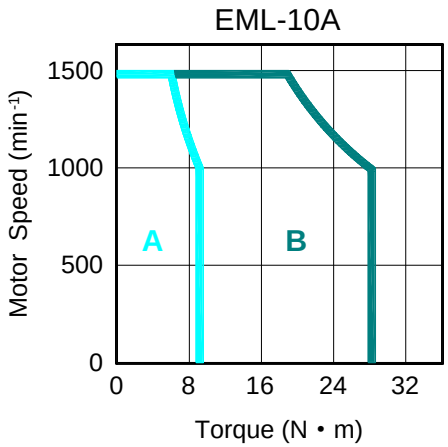
EML Model Servo Motor	Rated Power		Power Voltage		Encoder		Design Sequence		Shaft End		Optional Parts	
	Sign	Spec.	Sign	Spec.	Sign	Spec.	Sign	Spec.	Sign	Spec.	Sign	Spec.
	10	1.0KW	**A**	200Vac	**D**	Incremental Encoder: 131072P/R	**A**	Design Sequence	**1**	Flat, without keys	**1**	None
	15	1.5KW									**2**	With Oil Seal
	20	2.0KW			**S**	Absolute Encoder: 131072P/R			**2**	Flat, with keys, with screw thread	**3**	With brake (DC24V)
	30	3.0KW										
	40	4.0KW			**P**	Incremental Encoder: 2500P/R					**4**	With oil seal, with brake (DC24V)

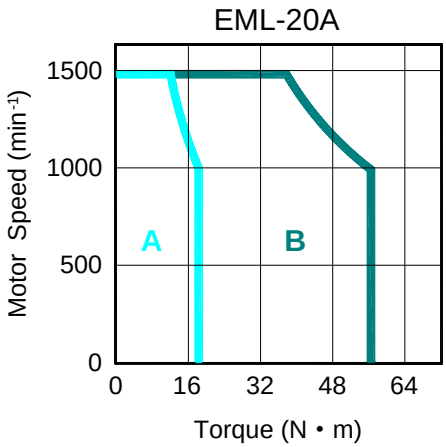
Rated Value and Specification

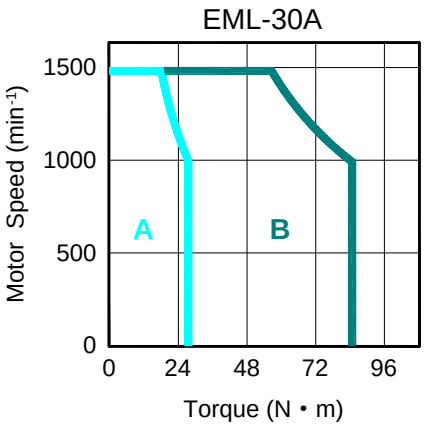
Voltage		200VAC			
Servo motor type	**EML -**	**10A**	**20A**	**30A**	**40A**
Rated output power	kW	1.0	2.0	3.0	4.0
Rated torque	N.m	9.55	19.1	28.7	38.2
Instantaneous peak torque	N.m	28.7	57.3	86.0	114.6
Rated current	Arms	6.0	12.0	18.0	24.0
Instantaneous peak current	Arms	18.0	36.0	54.0	72.0
Rated rotated speed	min -1	1000			
The highest rotated speed	min -1	1500			
Rotator rotated inertia	x10 -4 kg /m 2	19(19.6)	53.5(56.7)	77.8(81.0)	102.2(105.4)
Brake rated voltage		DC24V±10%			
Brake rated power	W	19		35	
Brake holding torque	N.M	10		40	
Feedback unit	Standard	17 bit Incremental Encoder: 131072P/R			
	Optional	17 bit Absolute Encoder: 131072P/R; Resolver			
Heat endurance level		F			
Environment temperature		0 to + 40 C (Non-iced)			
Environment humidity		20 to 80% RH (No dew)			
Protection method		Fully enclosed, Self-Cooled, IP65 Protection Rating (Except output shaft and connector)			
Anti-vibration performance		24.5m /s 2			

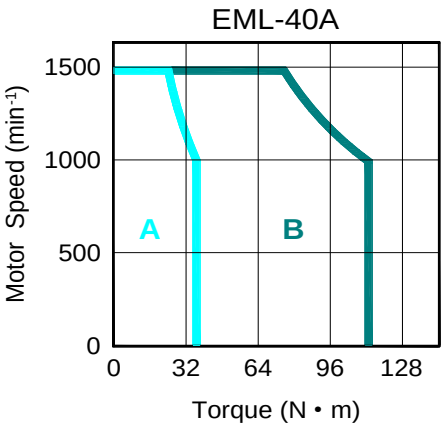
(Note): The values in parentheses are for servo motors with holding brakes.

Torque-Speed Features



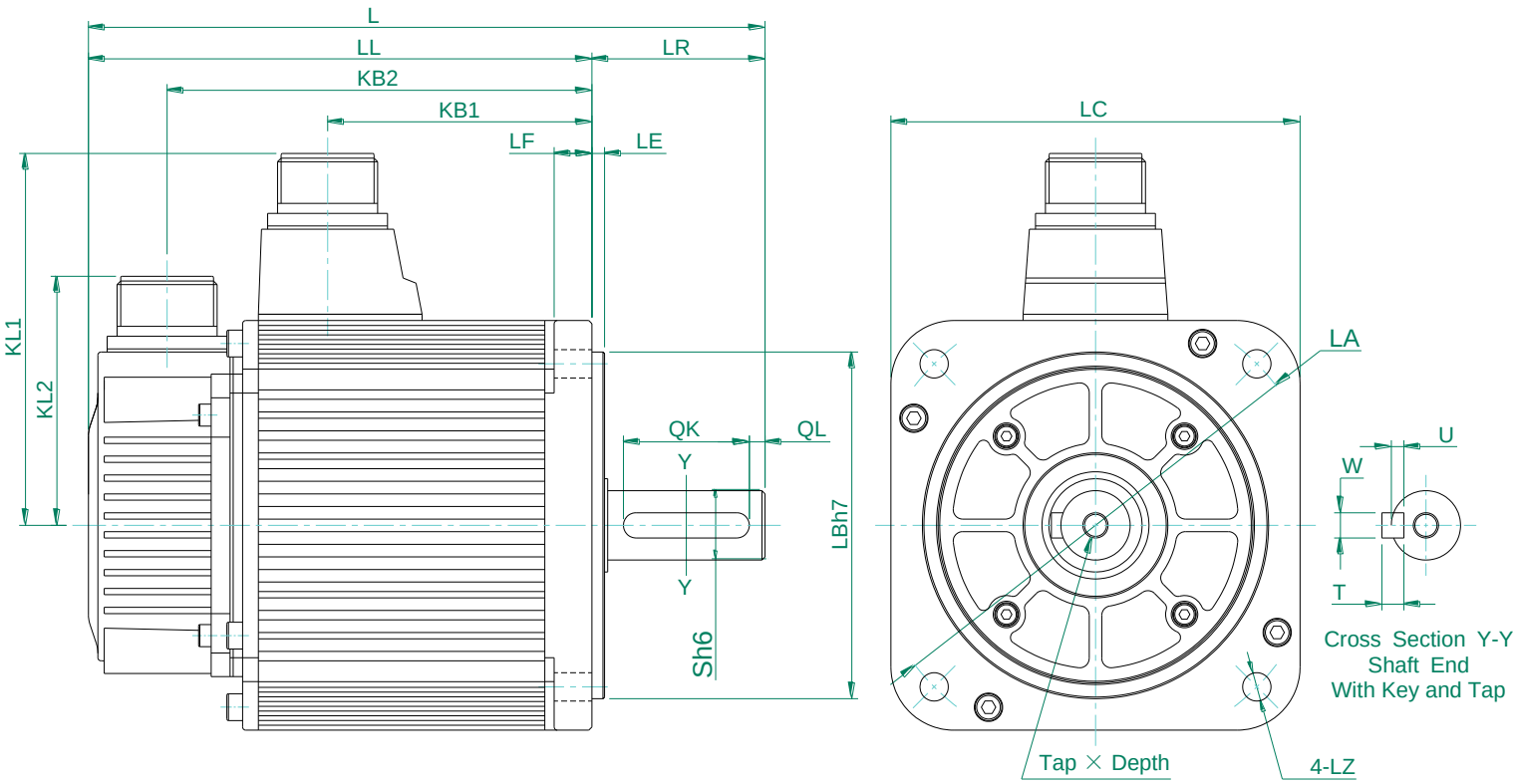






Dimensions

A: Continuous Working Area B: Repeatable Working Area



Model EML-	L	LL	KB1	KB2	KL1	KL2	Flange face							S	Tap×Depth	key				
							LR	LE	LF	LC	LA	LB	LZ			QK	QL	W	T	U
10A	265	210	134	185	118	79	55	4	12	130	145	110	9	22	M6x20L	40	5	8	7	4
20A	332	253	168	228	140	79	79	3.2	18	180	200	114	13.5	35	M8x16L	55	6	10	8	5
30A	372	293	208	268	140	79	79	3.2	18	180	200	114	13.5	35	M8x16L	55	6	10	8	5
40A	412	333	248	308	140	79	79	3.2	18	180	200	114	13.5	35	M8x16L	55	6	10	8	5

Connector Specifications for S series

➢ Motor Connector Specifications

- ➢ Plug: MS3108B20-4S(LC=130), MS3108B22-22S(LC=180)
- ➢ Receptacle：MS3102A20-4P (LC=130),MS3102A22-22P(LC=180)
- ➢ Cable Clamp: MS3057-12A

Pin No.	Signal
A	U phase
B	V phase
C	W phase
D	FG

➢ Encoder Connector Specifications

- ➢ Plug：MS3108B20-29S
- ➢ Receptacle： MS3102A20-29P
- ➢ Cable Clamp: MS3057-12A

Incremental/Absolute encoder

Pin No.	Signal	Color
K	S+	Blue
L	S -	Blue/Black
*T	BAT+	Brown
*S	B AT-	Brown/Black
H	PG5V	Red
G	PG0V	Black
J	FG	Shield

*Note: There are no BAT+ and BAT- signal outputs
When using an incremental encoder

➢ Brake Connector Specifications

- ➢ Plug：MS3106A10SL-3S
- ➢ Receptacle： MS3102A10SL-3P
- ➢ Cable Clamp: MS3057-4A

Pin No.	Signal
A	B1
B	B2
C	-

Connector Specifications for E series

➢ Motor Connector Specifications

- ➢ Plug: MS3108B20-4S(LC=130), MS3108B22-22S(LC=180)
- ➢ Receptacle：MS3102A20-4P (LC=130),MS3102A22-22P(LC=180)
- ➢ Cable Clamp: MS3057-12A

Pin No.	Signal
A	U phase
B	V phase
C	W phase
D	FG

➢ Encoder Connector Specifications

- ➢ Plug：MS3108B20-29S
- ➢ Receptacle： MS3102A20-29P
- ➢ Cable Clamp: MS3057-12A

Pin No.	Signal	Color
A	A+	Blue
B	A -	Blue/Black
C	B+	Green/Black
D	B -	Green
E	C+	Yellow
F	C -	Yellow/Black
G	PG0V	Black
H	PG5V	Red
J	FG	Shield

➢ Brake Connector Specifications

- ➢ Plug：MS3106A10SL-3S
- ➢ Receptacle： MS3102A10SL-3P
- ➢ Cable Clamp: MS3057-4A

Pin No.	Signal
A	B1
B	B2
C	-

EMB

Series Servo Motor

Features

- Power supply voltage: 400V
- Used to drive the feed shaft of various machines
- Various Options (7.5kW~15kW power rating, optional brake, etc.)
- Equipped with a Resolver encoder or a 17-bit incremental/absolute encoder
- IP44 Protection Level

Applications

- Machine tools
- Handling machine
- Food processing machine
- Textile machine

Model Specification Description

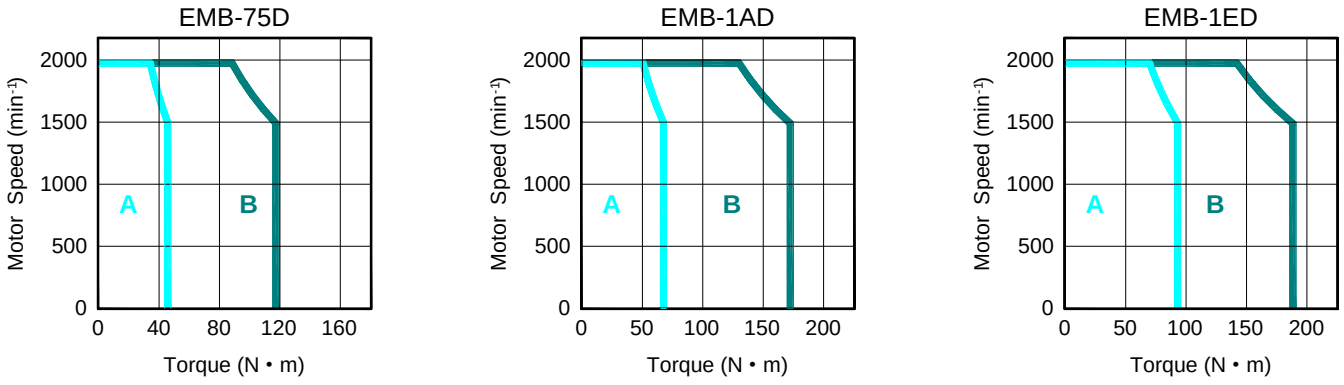
EMB– 1E D S A 1 1

EML Model Servo Motor	Rated Power		Power Voltage		Encoder		Design Sequence		Shaft End		Optional Parts	
	Sign	Spec.	Sign	Spec.	Sign	Spec.	Sign	Spec.	Sign	Spec.	Sign	Spec.
	75	7.5KW	**D**	400VAC	**S**	Absolute Encoder: 131072P/R	**A**	Design Sequence	**1**	Flat, without keys	**1**	None
	1A	11KW									**2**	With Oil Seal
	1E	15KW			**R**	Resolver			**2**	Flat, with keys, with screw thread	**3**	With brake (DC24V)
											4	With oil seal, with brake (DC24V)

Rated Value and Specification

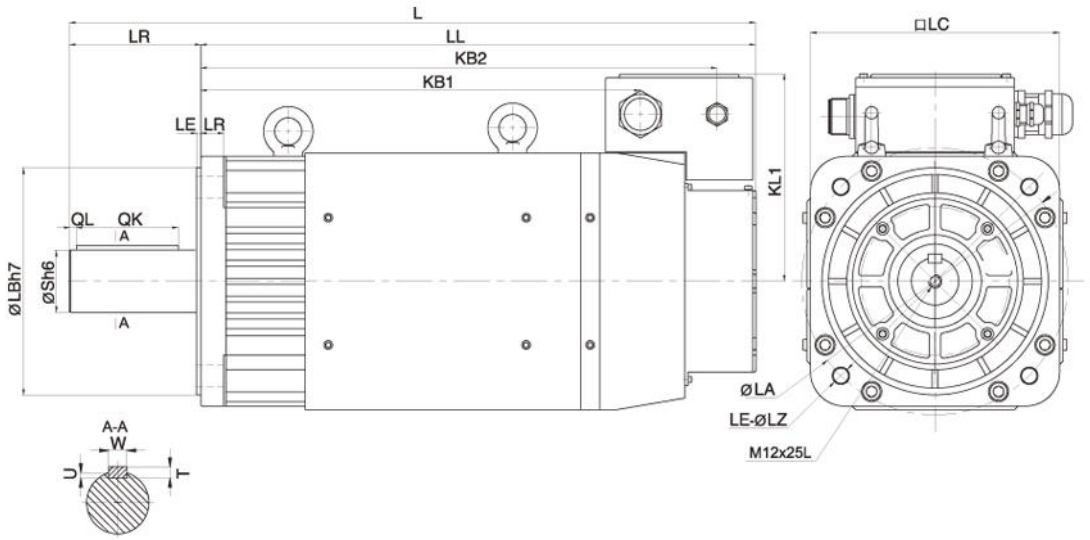
voltage		400VAC		
Servo motor Model	**EMB-**	**75D□A**	**1AD□A**	**1ED□A**
Rated output power	kW	7.5	11.0	15.0
Rated torque	Nm	47.8	70.0	95.5
Instantaneous Peak Torque	Nm	143.4	175	191
Rated Current	Arms	18.0	28.0	38.0
Instantaneous Max. Current	Arms	56.0	70.0	84.0
Rated Speed	min^{-1}	1500		
Max. Speed	min^{-1}	2000		
Rotor Moment of Inertia	$x10^{-4}kgm^2$	186.2(193.6)	217.6(278.9)	338.8(346.1)
Brake voltage		DC24V±10%		
Brake power	W	90		
Brake holding torque	N.M	100		
Feedback unit	standard	Resolver		
	option	17-bit absolute encoder:131072P/R		
Insulation Class		F		
Ambient Temperature		0 to +40℃ (non freezing)		
Ambient Humidity		20 to 80% RH (non condensing)		
Enclosure		Fully enclosed, Self-Cooled, IP65 Protection Rating (Except output shaft and connector)		
Vibration		$24.5m/s^2$		
Note: The value in parentheses is for servo motors with holding brakes.				

Torque-Speed Feature



A: Continuous Working Area B: Repeatable Working Area

Dimensions



Model EMB-	L	LL	KB1	KB2	KL1	Flange side							S	Tap×Depth	key				
						LR	LE	LF	LC	LA	LB	LZ			QK	QL	W	T	U
75D	530	414	366	302	184	116	4	18	220	235	200	13.5	42	M16×32L	90	6	12	8	5
1AD	580	464	416	352	184	116	4	18	220	235	200	13.5	42	M16×32L	90	6	12	8	5
1ED	615	499	451	387	184	116	4	18	220	235	200	13.5	55	M20×40L	90	6	12	10	6

➢ Brake Connector Specifications

➢ Plug：MS3106A10SL-3S

➢ Receptacle： MS3102A10SL-3P

➢ Cable Clamp: MS3057-4A

Pin No.	Signal
A	B1
B	B2
C	-

➢ Encoder Connector Specifications

➢ Plug：MS3108B20-29S

➢ Receptacle： MS3102A20-29P

➢ Cable Clamp: MS3057-12A

Incremental/Absolute encoder

Pin No.	Signal	Color
K	S+	Blue
L	S -	Blue/Black
T	BAT+	Brown
S	B AT-	Brown/Black
H	PG5V	Red
G	PG0V	Black
J	FG	Shield

Resolver

Pin No.	Signal	Color
K	SIN+	Yellow
L	SIN-	Blue
T	COS+	Red
S	COS-	Black
H	R1	Red/White
G	R2	Yellow/White
J	FG	Shield

Optional spare part

Control cables are available in addition to a 50-pin converter, allowing for easier testing.

Control Cable

Converter

	Item No.	Length	Pin	Connector	Wire
Control Cable	NC-50-01	1m	50	3M	Twisted-pair
	NC-50-02	2m			
	NC-50-03	3m			
	NC-50-05	5m			
Converter	CV-50	1.5m	50	3M	Twisted-pair

Selecting Peripheral Devices

Servo Drive (ProNet)	Servo Drive (ProNet-E)	Main Circuit Voltage	Specification for Internal Regenerative Resistor	Min. Allowable Resistance	Min. Rated Input Current for Three -phase Filters	Min. Rated Current for Circuit Breaker
ProNet-02A	ProNet-E-02A	200-230VAC	50Ω/60w External Connection	25Ω	——	10A
ProNet-04A	ProNet-E-04A	200-230VAC	50Ω/60w External Connection	25Ω	——	10A
ProNet-08A	ProNet-E-08A	200-230VAC	50Ω/60w	25Ω	——	25A
ProNet-10A	ProNet-E-10A	200-230VAC	50Ω/60w	25Ω	——	25A
ProNet-15A	ProNet-E-15A	200-230VAC	60Ω/80w	25Ω	——	35A
ProNet-20A	ProNet-E-20A	200-230VAC	60Ω/80w	25Ω	——	55A
ProNet-30A	ProNet-E-30A	200-230VAC	10Ω/300w	10Ω	27A	70A
ProNet-50A	ProNet-E-50A	200-230VAC	10Ω/300w	10Ω	42A	100A
ProNet-10D	ProNet-E-10D	380-480VAC	200Ω/80w	50Ω	——	12A
ProNet-15D	ProNet-E-15D	380-480VAC	200Ω/80w	50Ω	——	20A
ProNet-20D	ProNet-E-20D	380-480VAC	200Ω/80w	40Ω	——	24A
ProNet-30D	ProNet-E-30D	380-480VAC	40Ω/300w	35Ω	14A	33A
ProNet-50D	ProNet-E-50D	380-480VAC	40Ω/300w	20Ω	23A	55A
ProNet-75D		380-480VAC	40Ω/300w	20Ω	27A	60A
ProNet-1AD		380-440VAC	20Ω/1.5kw External Connection	17Ω	42A	80A
ProNet-1ED		380-440VAC	15Ω/1.5kw External Connection	12Ω	57A	120A

400V Control Circuit Power Supply (+24VDC)

Servo Drive	Switching Power
ProNet-10D	NES-35-24(35W)
ProNet-15D	NES-35-24(35W)
ProNet-20D	NES-35-24(35W)
ProNet-30D	NES-50-24(50W)
ProNet-50D	NES-50-24(50W)
ProNet-75D	NES-50-24(50W)

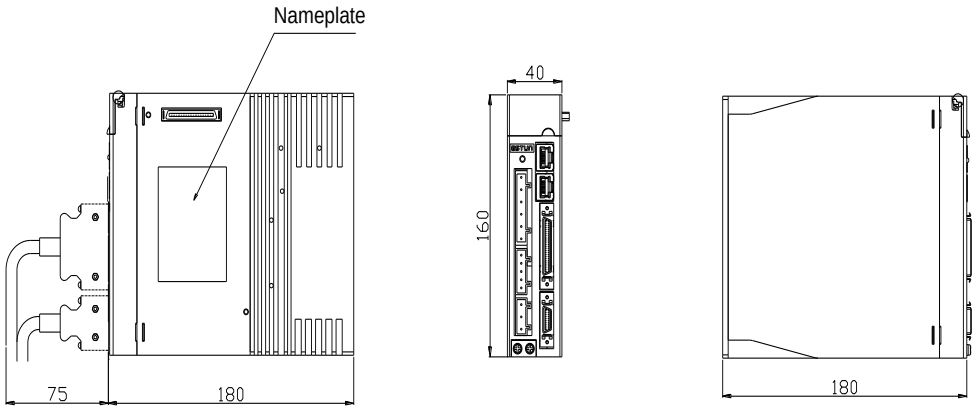
Note: For more information about the SMPS, please refer to the Mean Well manual.

ProNet

Servo Drives External Dimensions

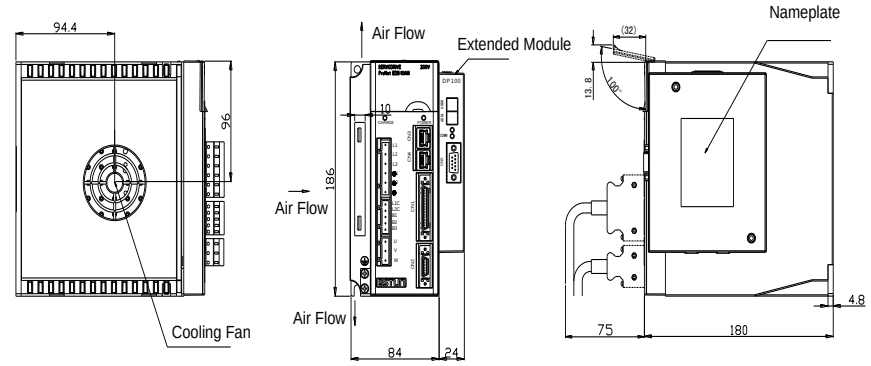
ProNet-02A/04A/ ProNet-E-02A/04A

Unit：mm



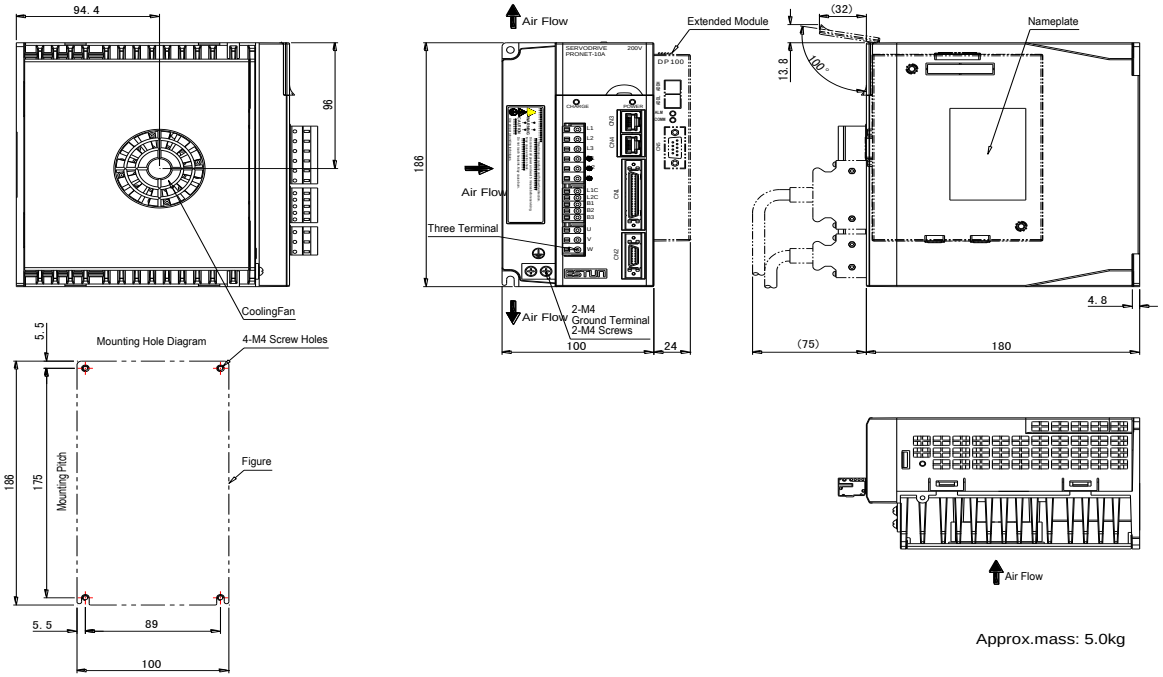
ProNet-08A/10A/ ProNet-E-08A/10A

Unit: mm



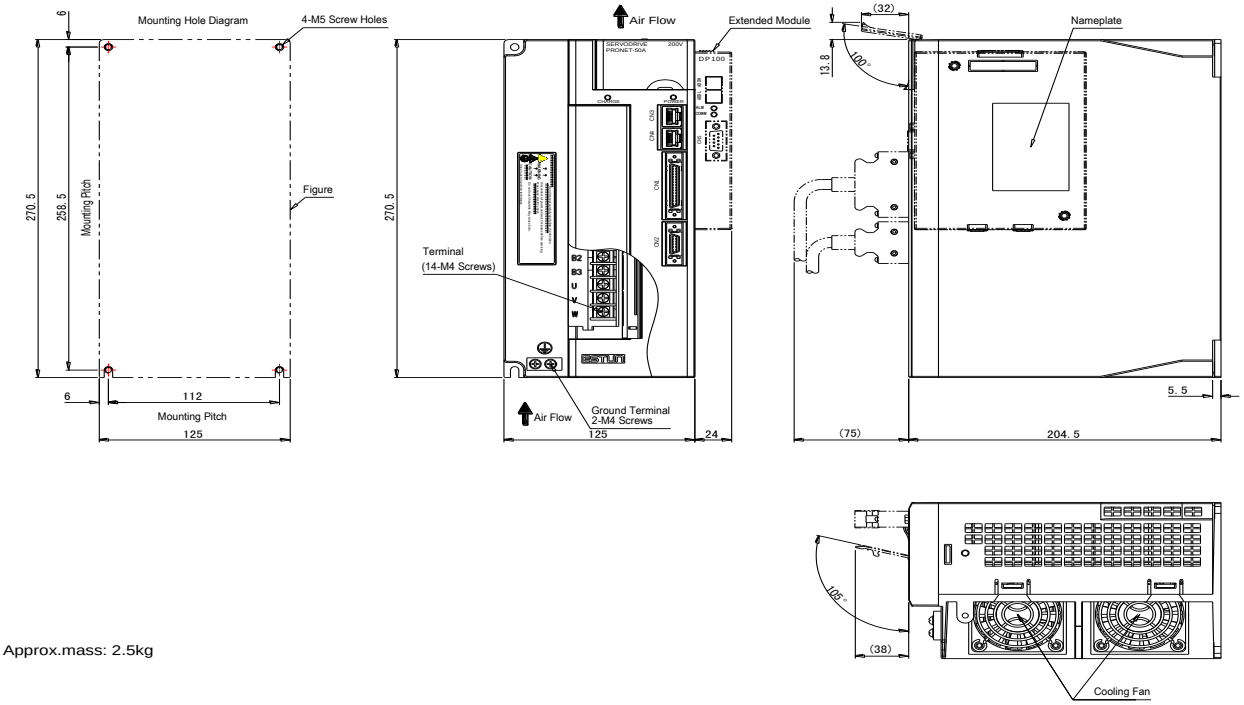
Mounting Hole Diagram

ProNet-15A/20A/ ProNet-E-15A/20A, ProNet-10D/15D/20D/ ProNet-E-10D/15D/20D



Approx.mass: 5.0kg

ProNet-30A/50A/ ProNet-E-30A/50A, ProNet-30D/50D/75D/ ProNet-E-30D/50D

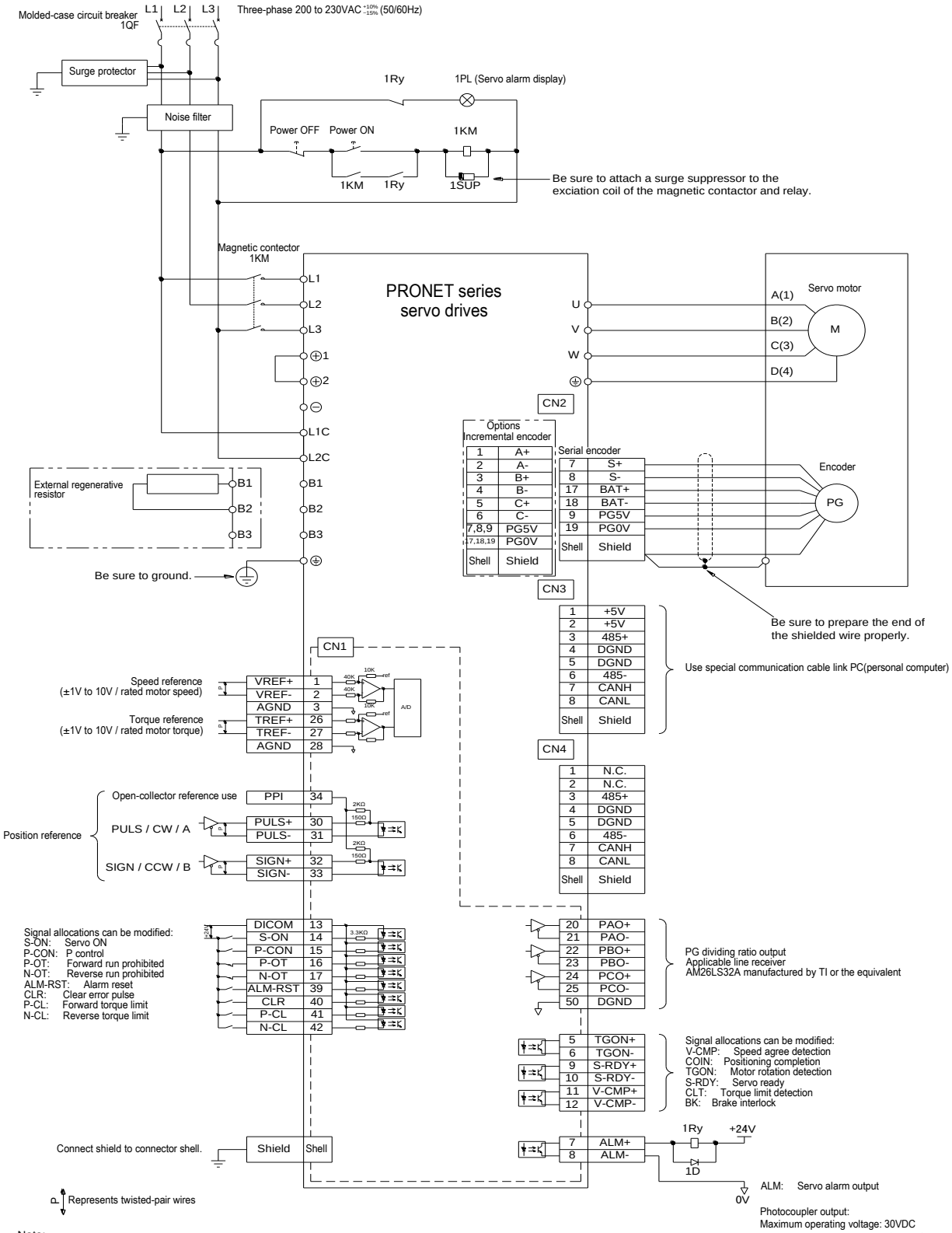


Approx.mass: 2.5kg

ProNet

Typical Connection Example

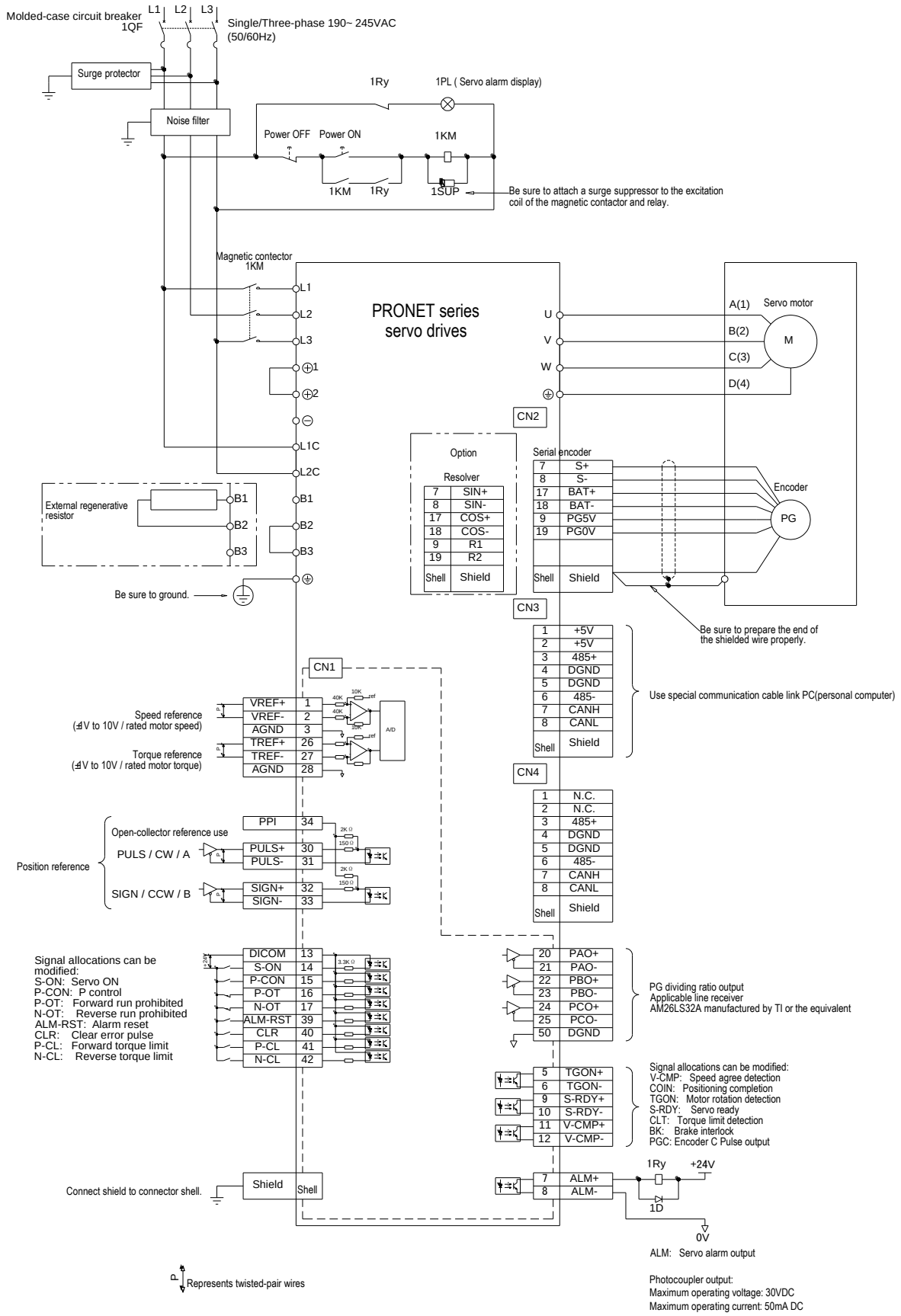
Three-phase 200VAC (ProNet-02A to 04A)



Note:

1. The L1,L2,L3 and L1c,L2c terminals wiring method of ProNet 02/04 servo drives is different from other ProNet series servo drives. Please note the specific terminal definition while wiring.
2. External regenerative resistor for ProNet-02/04 is provide by customer,the model of ASQ60W50? KGO resistor is recommended.
3. ProNet-02/04 servo drives are also available for single phase connection.
4. Change Pn521 from "1" to "0",when using the external regenerative resistor in ProNet-02/04 servo drives.

Three-phase 200VAC (ProNet-08A to 50A)



Vision

Enjoy your life from Automation!

Estun's Brochures and Technical Guidance

ES2011-A Estun Outline
ES2011-B Motor Outline
ES2012-A EDC Series Product Brochure
ES2013-A ProNet Series Product Brochure

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