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ProNet Series

All Digital AC Servo Systems



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.



04

ProNet Series All Digital AC Servo Systems

06

ProNet Series Servo Drive

12

EMJ Series Servo Motor

17

EMG Series Servo Motor

22

EMB Series Servo Motor

28

Mounting Dimension of Drive

30

Typical Connection Example

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 EtherCAT 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

PROFI
PROCESS FIELD BUS
BUS

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.

PROFIBUS communication protocol is 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	100V	200V	400V	100V	200V	400V
Medium inertia	Small capacity	EMJ 3000min ⁻¹	200W	EMJ-02B	EMJ-02A		PRONET-02B	PRONET-02A	
			400W	EMJ-04B	EMJ-04A		PRONET-04B	PRONET-04A	
			750W	EMJ-08B	EMJ-08A		PRONET-08B	PRONET-08A	
			1000W		EMJ-10A			PRONET-10A	
	Medium capacity	EMG 2000min ⁻¹	1.0kW		EMG-10A	EMG-10D		PRONET-10A	PRONET-10D
			1.5kW		EMG-15A	EMG-15D		PRONET-15A	PRONET-15D
			2.0kW		EMG-20A	EMG-20D		PRONET-20A	PRONET-20D
			3.0kW		EMG-30A	EMG-30D		PRONET-30A	PRONET-30D
			5.0kW		EMG-50A	EMG-50D		PRONET-50A	PRONET-50D
	Large capacity	EMB 1500min ⁻¹	7.5kW			EMB-75D			PRONET-70D
			11kW			EMB-1AD			PRONET-1AD
			15kW			EMB-1ED			PRONET-1ED
22kW					EMB-2BD			PRONET-2BD	

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

Specification Description for S series

ProNet-10

A

M

A

ProNet
Servo Drive

Rated Power

Power voltage

Control Style

Encoder Interface

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				
08	750W	B	100VAC			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						
2B	22KW						

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

ProNet-04/10/20AEA-EUL have completed UL508C.file No. is E365853

Specification Description for E series

ProNet- E 10 A

ProNet
Servo Drive

Feedback unit

Rated Power

Power voltage

	Sign	Specification	Sign	Specification	
	A5	50W			
E	2500P/R incremental encoder	01	100W	A	200VAC
		02	200W	D	400VAC
		04	400W	B	100VAC
		08	750W		
		10	1KW		
		15	1.5KW		
		20	2KW		
		30	3KW		
		50	5KW		

- Note : 1. ProNet-E is only equipped with wire-saving incremental encoder (2500P/R)
 2. ProNet-E does not support extended module
 3. ProNet-E-04/10/20AUL have completed UL508C File NO. is E365853

Model Comparison Table for E series

				Servo motor			Servo drive		
Series			Power	100V	200v	400V	100V	200v	400V
Medium inertia	Small capacity	EMJ 3000min ⁻¹	50W		EMJ-A5A			PRONET-E-A5A	
			100W		EMJ-01A			PRONET-E-01A	
			200W	EMJ-02B	EMJ-02A		PRONET-E-02B	PRONET-E-02A	
			400W	EMJ-04B	EMJ-04A		PRONET-E-04B	PRONET-E-04A	
			750W	EMJ-08B	EMJ-08A		PRONET-E-08B	PRONET-E-08A	
			1000W		EMJ-10A			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	

Ratings



Servo Drives Model	PRONET			02A	02B	04A	04B	08A	08B	10A	10D	15A	15D
	ProNet-E	A5A	01A	02A	02B	04A	04B	08A	08B	10A	10D	15A	15D
Servo Motors	EMJ-	A5A	01A	02 A	02B	04A	04B	08A	08B	10A	-	-	-
	EMG-			-		-		-		10A	10D	15A	15D
	EMB-			-		-		-		-	-	-	-
Continuous output current [Arms]		0.95	1.05	1.4	2.7	2.8	5.8	4.0	8.0	6.0	3.2	9.0	5.0
Max. output current [Arms]		2.85	3.15	4.2	8.1	8.4	15.1	12.	24.	18.	9.6	28.	15.
Input Power Supply Capacity		0.5	0.5	0.5	0.5	0.9	0.9	1.3	1.3	1.8	1.8	2.5	2.8
DC24V Power Supply Capacity (W)											30W		30W

Servo Drives Model	PRONET	20A	20D	30A	30D	50A	50D	70D	75D	1AD	1ED	2BD
	ProNet-E	20A	20D	30A	30D	50A	50D					
Servo Motors	EMJ-	-	-	-	-	-	-		-	-	-	
	EMG-	20A	20D	30A	30D	50A	50D					
	EMB-							75D	75D	1AD	1ED	2BD
Continuous output current [Arms]		12	6.4	18	9.0	28	15	18	18	28	38	55
Max. output current [Arms]		42	19.2	56	27	84	45	48	48	65	100	128
Input Power Supply Capacity		3.5	3.5	4.5	5.0	7.5	8.2	12	12	18	22	32
DC24V Power Supply Capacity (W)			30		45		45		45			

Specifications

Items			Specifications
Input Power Supply	Main Circuit	100V	Single-phase 100 to 120VAC 50/60Hz(0.2kw-0.4kw) Three-phase 100 to 120VAC 50/60hz(0.75kw)
		200V	Three-phase 200 to 230VAC 50/60Hz (0.75kw-5.0kW)
		400V	Three-phase 380 to 440VAC 50/60Hz (1kw-15kW)
	Control Circuit	100v	Single-phase 100 to 120VAC 50/60Hz(0.2kw-0.75kw)
		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/s ² , Impact Resistance: 19.6m/s ²
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
		Reference Voltage	±10VDC at rated torque(variable setting range:±1to 10VDC) Max. input voltage:±12V
Speed Control	Analog Input	Input Impedance	About 10MΩ min.
		Circuit Time Constant	10μs
		Rotation Direction Selection	Switches the direction by /P-CON
	Set Speed Reference	Speed Selection	Speed 1 to 7 selection
		Soft Start Setting	0 to 10s(can be set individually for acceleration and deceleration)
	Position Control	Reference Pulse	Type
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	
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.	

EtherCAT



- Integrated EtherCAT Module
- High communication speed
- Precise multiple axis synchronous control
- Revolution of traditional field bus control

Items	Specifications
Communication standard	IEC61158 Type 12, IEC61800-7 CIA402 Drive Profile
Physical layer	100BASE-TX (IEEE802.3)
Bus connection	CN4(RJ45): EtherCAT Signal IN CN5(RJ45) : EtherCAT Signal OUT
Cable	Class -5 twisted pair cable
Communication distance	Node space: within 100 meters
syncManager	SM0: output mailbox, SM1: input mailbox SM2: output process data, SM3: input process data
FMMU	FMMU0: mapping to process data (RxPDO) Receiving area FMMU0: mapping to process data (TxPDO) Transmitting area FMMU0: mapping to mailbox status
EtherCAT Commands (Data Link Layer)	APRD, FPRD, BRD, LRD, APWR, FPWR, BWR, LWR, ARMW, FRMW Note : APRW, FPRW, BRW, LRW, Commands are not supported
PDO data	Dynamic PDO mapping
Mailbox (CoE)	Emergency event, SDO request, response, SDO information Note : don't support TxPDO/RxPDO and remote TxPDO/RxPDO
Distributed clock (DC)	Free-run, DC mode (set active in configuration) Supported DC period : 250us-8ms
SII	256 bytes (read-only)
LED Indicator	EtherCAT System indicator (SYS)x1 EtherCAT Run indicator (RUN)x1 EtherCAT Error indicator (ERR)x1
CiA402 Drive Profile	Homing mode, Profile position mode, Interpolated position mode Profile velocity mode, Cyclic synchronous position mode

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

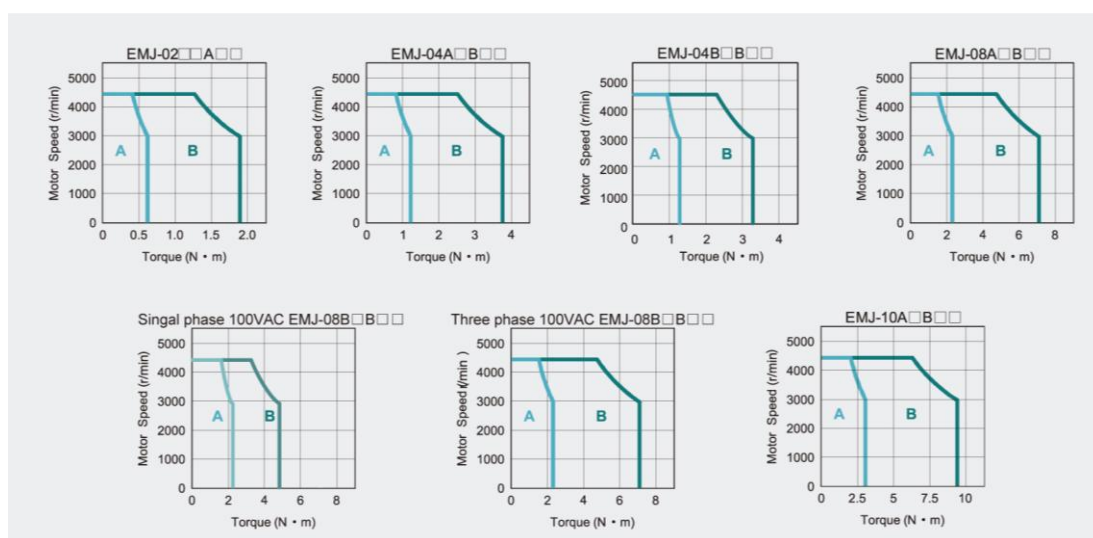
Rated Power		Power Voltage		Encoder		Design Sequence		Shaft End		Optional Parts	
Sign	Spec.	Sign	Spec.	Sign	Spec.	Sign	Spec.	Sign	Spec.	Sign	Spec.
A5	50W										
01	100W	A	200VAC			A	Design Sequence	1	Flat, without keys	1	None
02	200W			D	Incremental Encoder: 131072P/R	B				2	With Oil Seal
04	400W	B	100VAC								
08	750W										
10	1000W			S	Absolute Encoder: 13072P/R			2	Flat, with keys, with screw thread	3	With brake (DC24V)
				P	Incremental Encoder: 2500P/R					4	With oil seal, with brake (DC24V)

Rated Value and Specifications

Voltage		200VAC/100VAC									
Servo motor type	EMJ-	A5A	01A	02A	02B	04A	04B	08A	08B	10A	
Rated output power	W	50	100	200		400		750		1000	
Rated torque	N.m	0.16	0.32	0.64		1.27		2.39		3.18	
Instantaneous peak torque	N.m	0.48	0.96	1.91		3.82	3.26	7.16		9.55	
Rated current	Arms	0.98	1.05	1.4	2.7	2.8	5.8	4.0	8.2	5.3	
Instantaneous peak current	Arms	2.85	3.15	4.2	8.1	8.4	15.1	12.0	24.6	15.9	
Rated speed	min ⁻¹	3000									
Max. speed	min ⁻¹	5000			4500						
Rotator rotated inertia	x10 ⁻⁴ kg/m ²	0.0508	0.0792	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	None			17 bit Incremental/Absolute Encoder: 131072P/R						
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		49m/s ²									

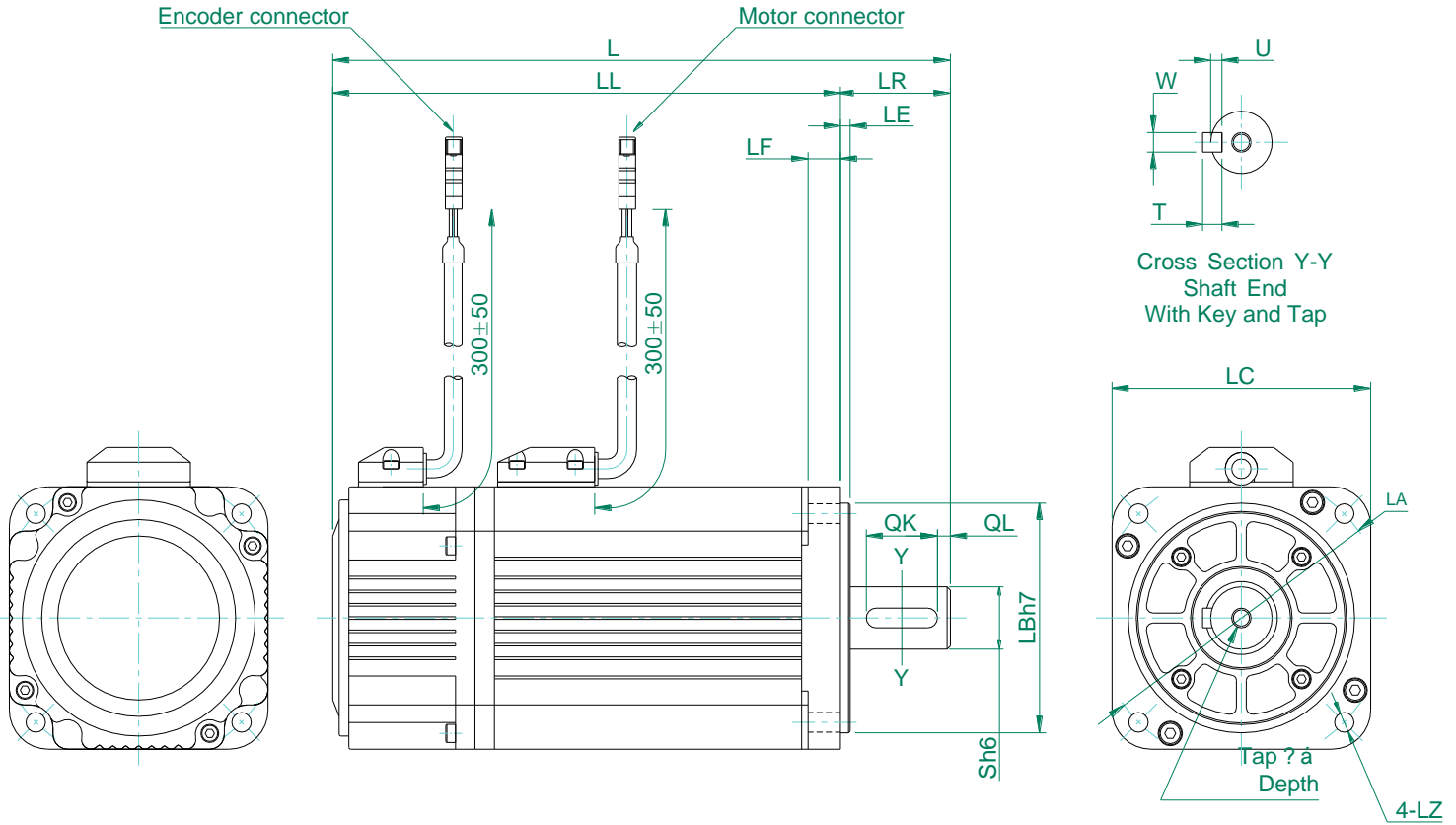
(Note): The values in parentheses are for servo motors with holding brakes.

Torque-Speed Features



A: Continuous Working Area B: Repeatable Working Area

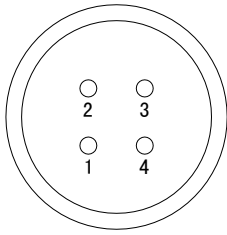
Dimensions



Model EMJ-	L	LL	Flange face							S	TapxDepth	Key				
			LR	LE	LF	LC	LA	LB	LZ			QK	QL	W	T	U
A5APA	108	83	25	2.5	10	40	46	30	4.5	8	M3x6L	14		3	3	1.8
01APA	125	100	25	2.5	10	40	46	30	4.5	8	M3x6L	14		3	3	1.8
02□P/R	141(181)	111	30	3	6	60	70	50	5.5	14	M5x10L	16	4	5	5	3
02□D	141(171)	111	30	3	6	60	70	50	5.5	14	M5x10L	16	4	5	5	3
02□S	154(194)	124	30	3	6	60	70	50	5.5	14	M5x10L	16	4	5	5	3
04□P/R	161(201)	131	30	3	6	60	70	50	5.5	14	M5x10L	16	4	5	5	3
04□D	161(191)	131	30	3	6	60	70	50	5.5	14	M5x10L	16	4	5	5	3
04□S	174(214)	144	30	3	6	60	70	50	5.5	14	M5x10L	16	4	5	5	3
08□P/R	173(216)	138	35	3	9	80	90	70	6	19	M6x15L	22	4	6	6	3.5
08□D	173(213)	138	35	3	9	80	90	70	6	19	M6x15L	22	4	6	6	3.5
08□S	186(229)	151	35	3	9	80	90	70	6	19	M6x15L	22	4	6	6	3.5
10□P/R	191(234)	156	35	3	9	80	90	70	6	19	M6x15L	22	4	6	6	3.5
10□D	191(231)	156	35	3	9	80	90	70	6	19	M6x15L	22	4	6	6	3.5
10□S	204(247)	169	35	3	9	80	90	70	6	19	M6x15L	22	4	6	6	3.5

Note: the dimensions in parentheses are for servo motors with holding brakes

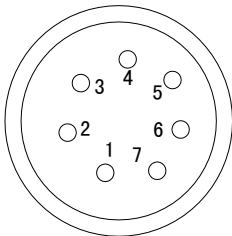
Connector Specifications for S series



➤ Motor Connector Specifications

➤ Plug: CGRSB-4BFMA-SL8001

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

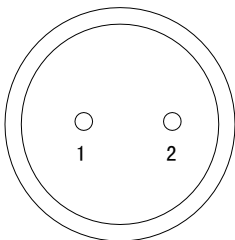


➤ Encoder Connector specifications

➤ 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

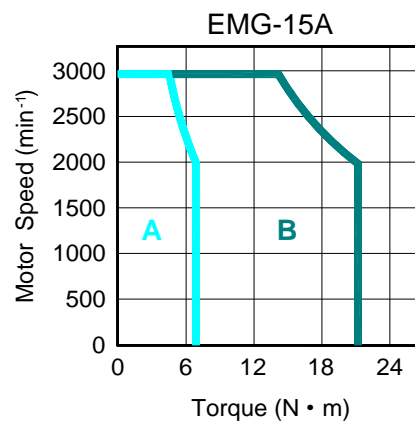
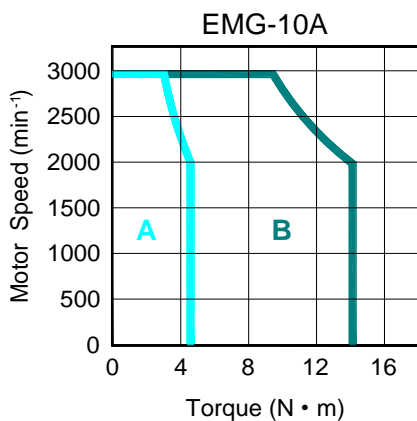
EMG Model Servo Motor	Rated Power		Power Voltage		Encoder		Design Sequence		Shaft End		Optional Parts	
	Sign	Spec.	Sign	Spec.	Sign	Spec.	Sign	Spec.	Sign	Spec.	Sign	Spec.
	10	1.0KW	A	200VAC	D	Incremental Encoder: 131072P/R	A	Design Sequence	1	Flat, without keys	1	None
	15	1.5KW	D	400VAC							2	With Oil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

Rated Value and Specification

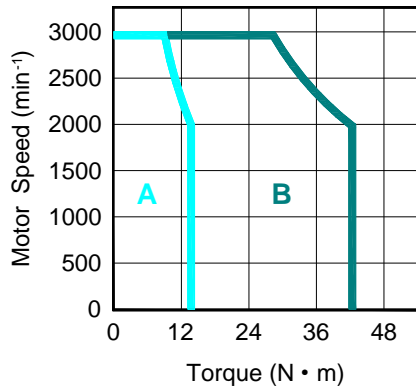
Voltage		200VAC/400VAC									
Motor type	EMG-	10A	10D	15A	15D	20A	20D	30A	30D	50A	50D
Rated output power	kW	1.0	1.0	1.5	1.5	2.0	2.0	3.0	3.0	5.0	5.0
Rated torque	N.m	4.78	4.78	7.16	7.16	9.55	9.55	14.3	14.3	23.9	23.9
Instantaneous peak torque	N.m	14.3	14.3	21.5	21.5	28.7	28.7	43.0	43.0	71.6	71.6
Rated 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°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.

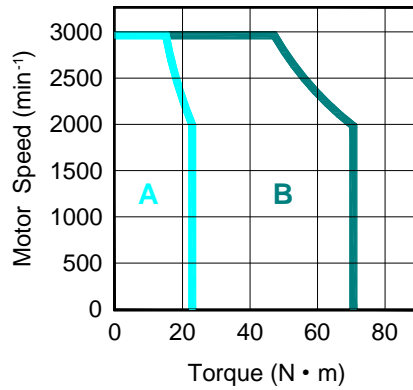
Torque-Speed Features



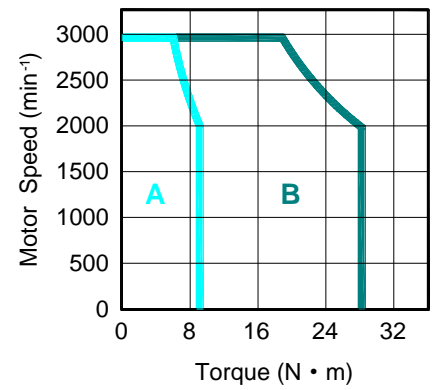
EMG-30A



EMG-50A

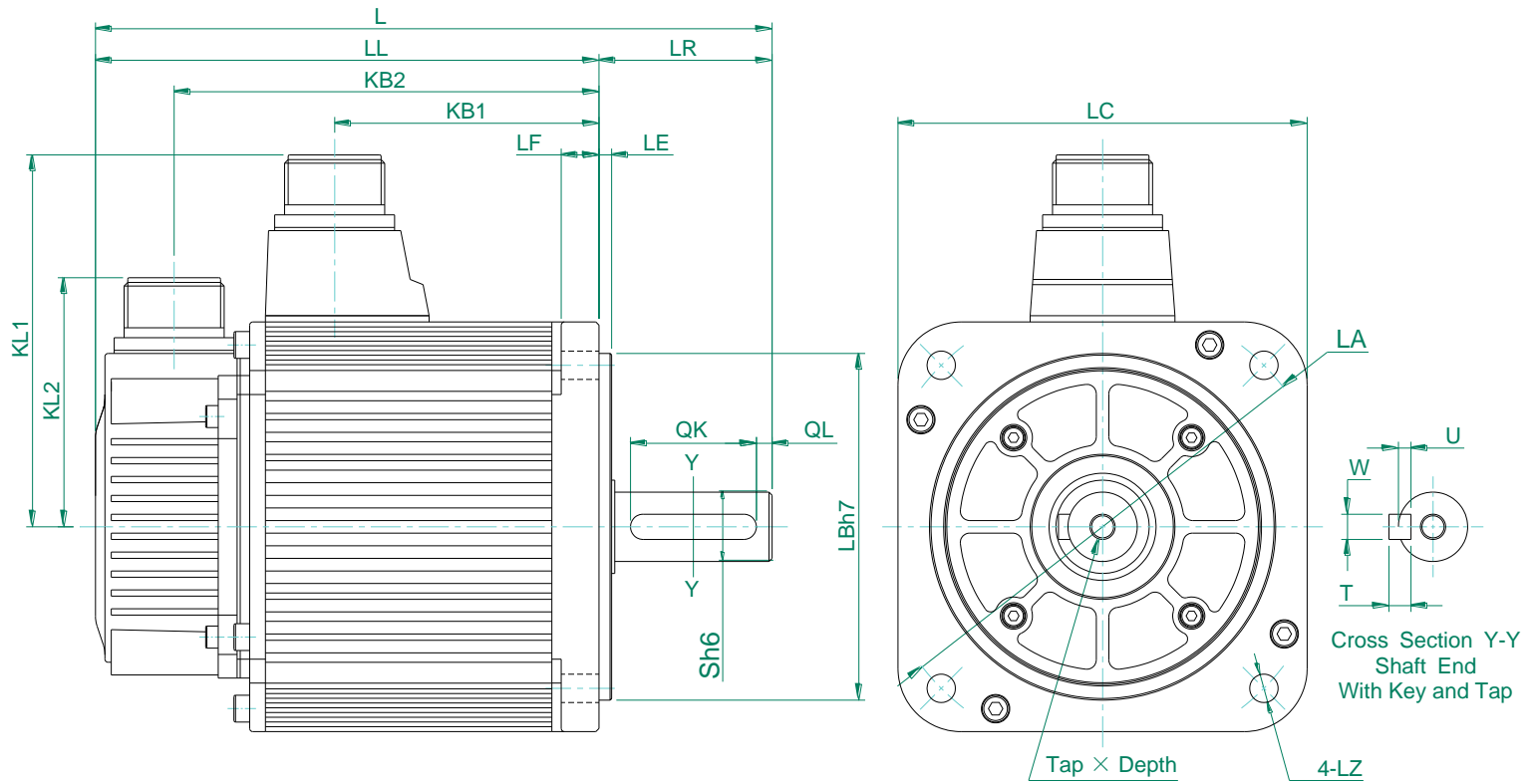


EMG-20A



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

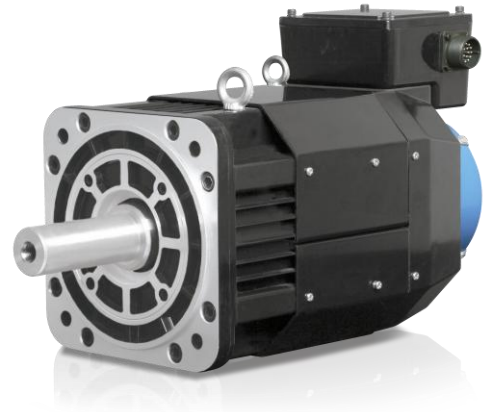
Pin No.	Signal
A	B1
B	B2
C	-

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

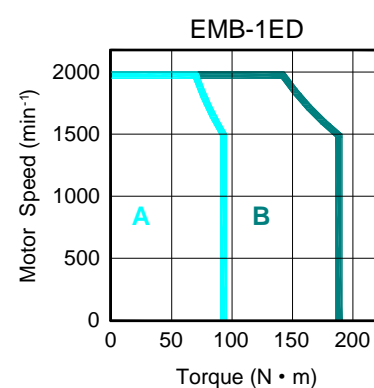
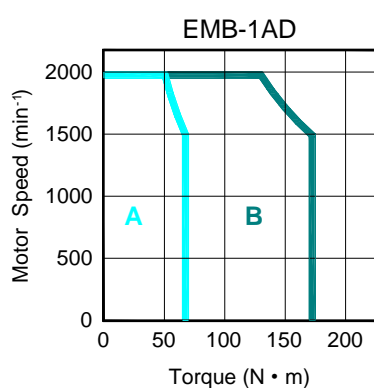
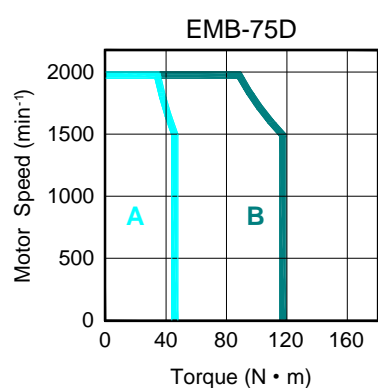
Rated Power		Power Voltage		Encoder		Design Sequence		Shaft End		Optional Parts	
Sign	Spec.	Sign	Spec.	Sign	Spec.	Sign	Spec.	Sign	Spec.	Sign	Spec.
75	7.5KW	D	400VAC	S	Absolute Encoder: 131072P/R	A	Design Sequence	1	Flat, without keys	1	None
1A	11KW										
1E	15KW			2	Flat, with keys, with screw thread			3	With brake (DC24V)		
2B	22KW									4	With oil seal, with brake (DC24V)

Rated Value and Specification

voltage		400VAC			
Servo motor Model	EMB-	75D□A	1AD□A	1ED□A	2BD□A
Rated output power	kW	7.5	11.0	15.0	22.0
Rated torque	Nm	47.8	70.0	95.5	140
Instantaneous Peak Torque	Nm	143.4	175	191	350
Rated Current	Arms	18.0	28.0	38.0	52.0
Instantaneous Max. Current	Arms	56.0	70.0	84.0	130
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)	576.62
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°C (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			

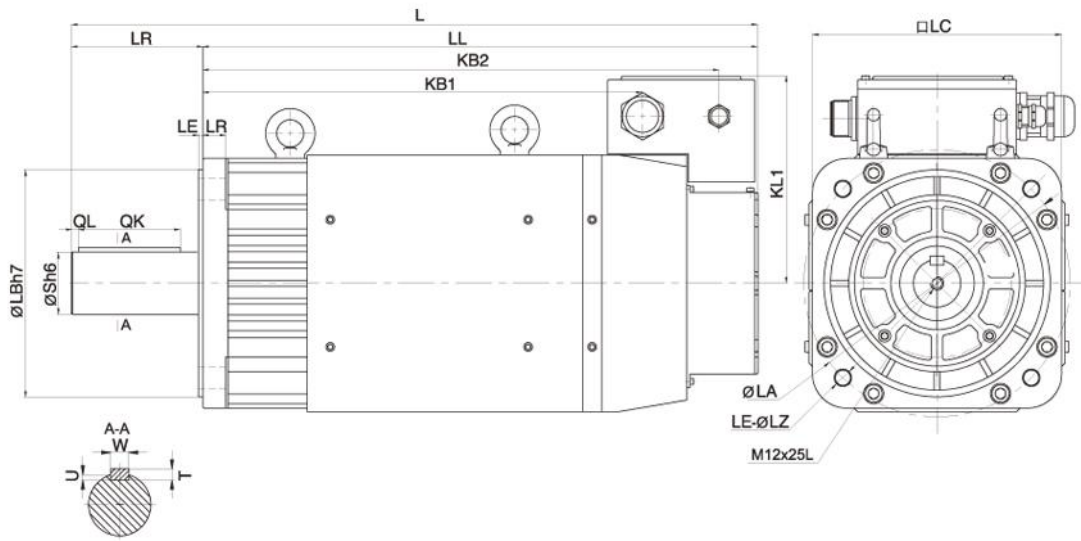
Note: The value in parentheses is for servo motors with holding brakes.

Torque-Speed Feature



A: Continuous Working Area B: Repeatable Working Area

Dimensions



Model EMB-	L	LL	KB1	KB2	KL1	Flange side							S	TapxDepth	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	M16x32L	90	6	12	8	5
1AD	580	464	416	352	184	116	4	18	220	235	200	13.5	42	M16x32L	90	6	12	8	5
1ED	615	499	451	387	184	116	4	18	220	235	200	13.5	55	M20x40L	90	6	12	10	6
2BD	720	572	432	523	250	145	5	30	280	300	250	19	60	M12x25L	128	6	18	11	7



➤ 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
ProNet-2BD		380-440VAC	10Ω/3kw=2x20Ω/1.5kw External Parallel Connection	8Ω	82A	160A

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.

Accessories

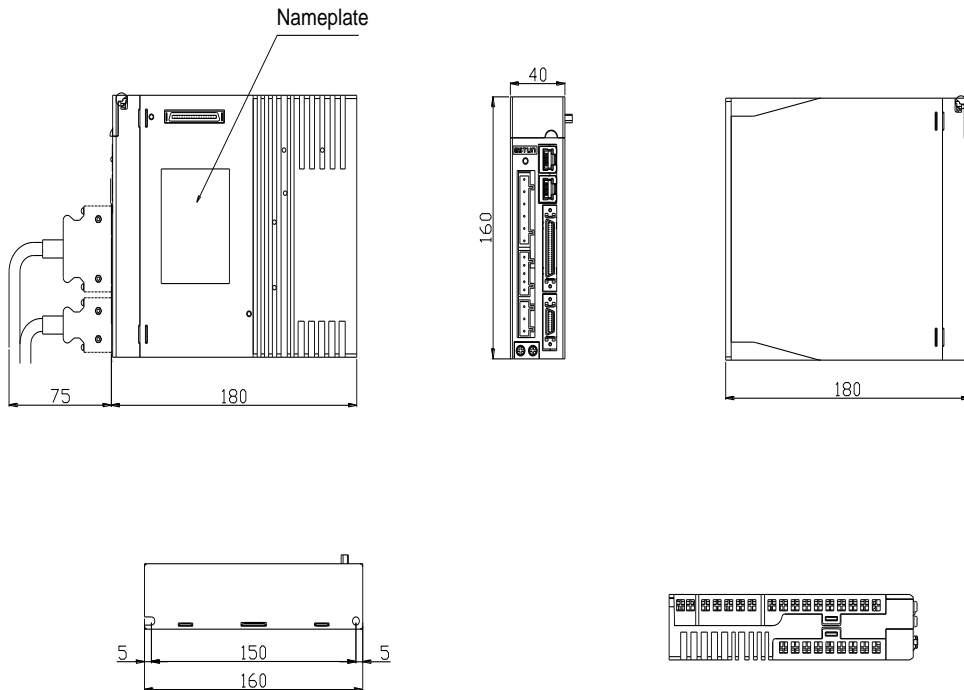
Name		Model	Specifications
Connector Kit	CN1	EC-CN1-50	
	CN2	EC-CN2-20	
Communication Cables	CN3	PSC-CC24-XX	
Serial Encoder Cables	EMJ	PSP-JE24-XX	
		PAP-JE24-XX	
	EMG EMB EML	PSP-GA24-XX	
		PAP-GA24-XX	
Wire-saving Incremental Encoder Cables	EMJ	BMP-JE24-XX	
		BMP-JB24-XX	
	EMG EML	BMP-GA24-XX	
Resolver Cables	EMG EMB EML	PRP-GA24-XX	
	EMB for low inertia	PRP-BO24-XX	
Power Cables	EMJ-02A EMJ-02B EMJ-04A EMJ-04B EMJ-08A EMJ-10A	PDM-JE18-XX	
		PDM-JB18-XX	
	EMJ-08B	PDM-JB16-XX	
	EMG-10A EMG-15A EMG-10D EMG-15D EMG-20D EMG-10A	PDM-GA16-XX	
	EMG-20A	PDM-GA14-XX(V100)	
	EML-20A	PDM-GD14-XX(V100)	
	EMG-30A EMG-50A EMG-30D EMG-50D	PDM-GD12-XX	

ProNet

Servo Drives External Dimensions

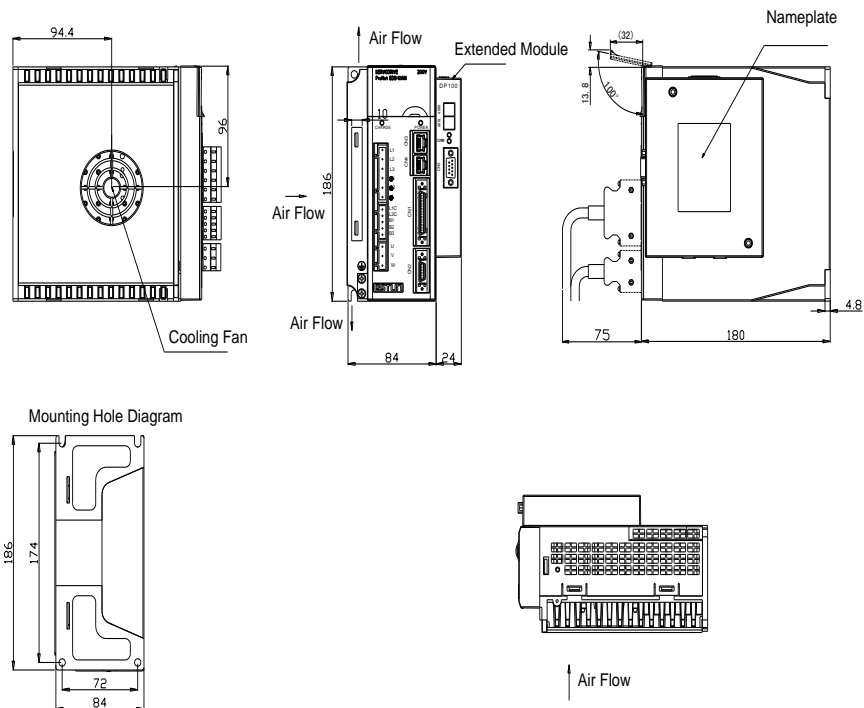
ProNet-02A/02B/04A/ ProNet-E-02A/02B/04A

Unit: mm

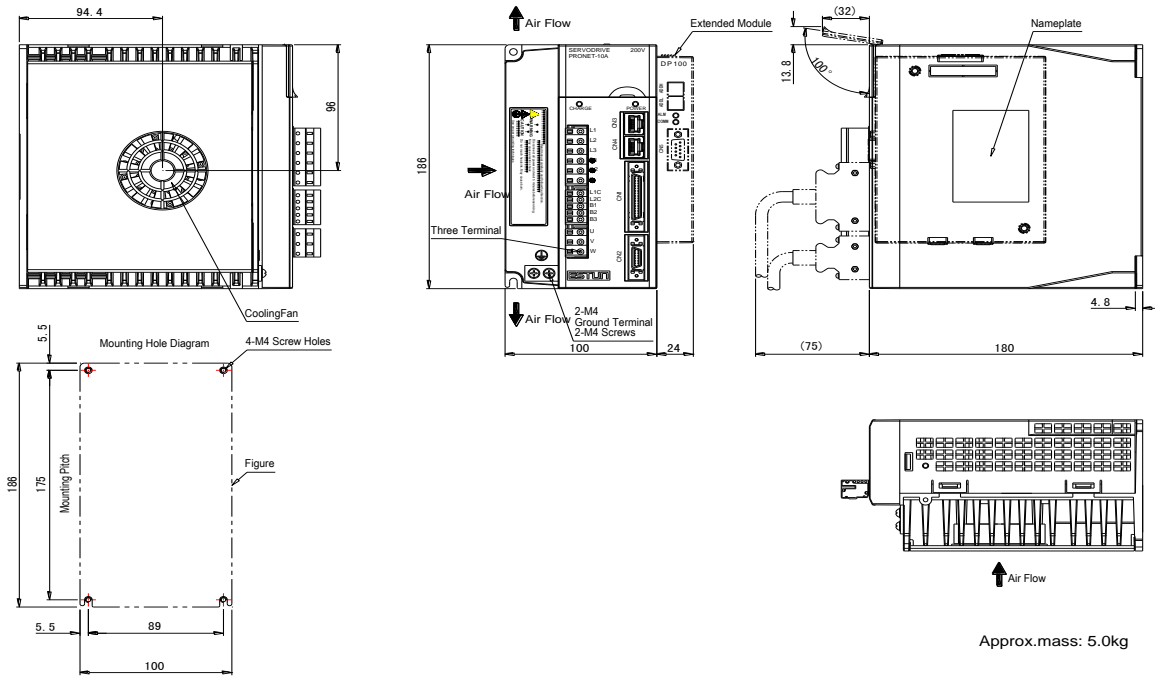


ProNet-04B/08A/10A/ ProNet-E-04B/08A/10A

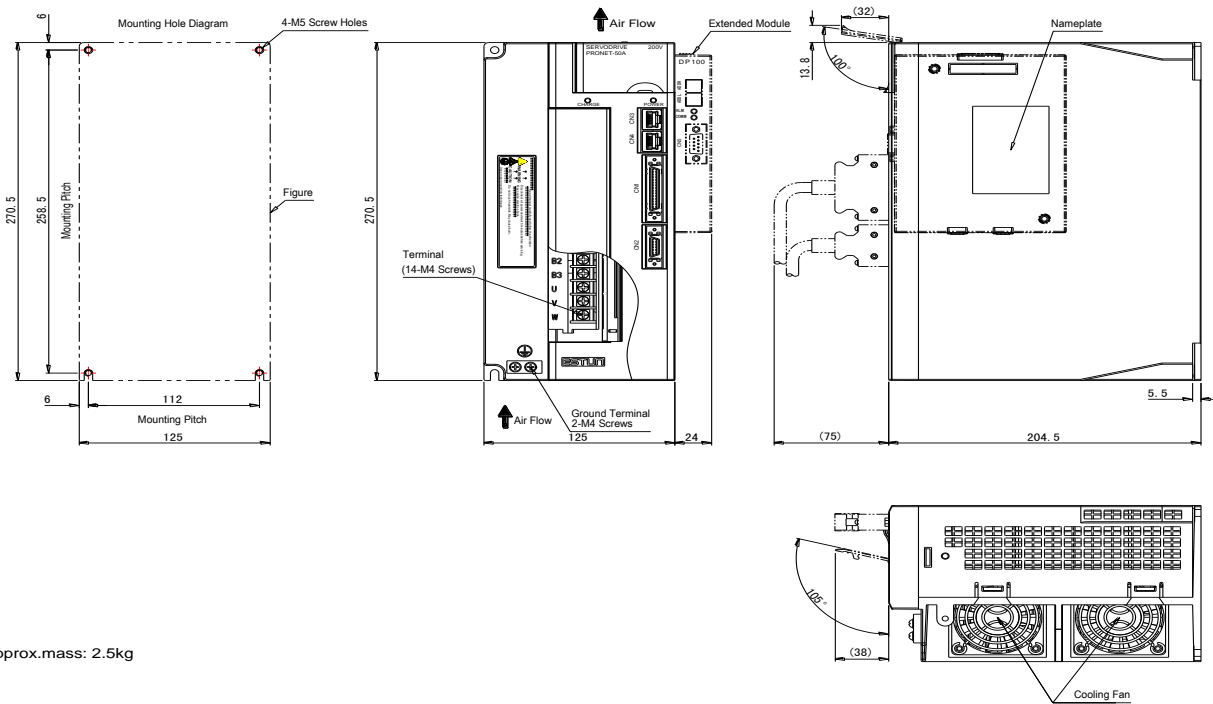
Unit: mm



ProNet-08B/10D/15A/15D/20A/20D ProNet-E-08B/10D/15A/15D/20A/20D/



ProNet-30A/30D/50A/50D/70D ProNet-E-30A/30D/50A/50D

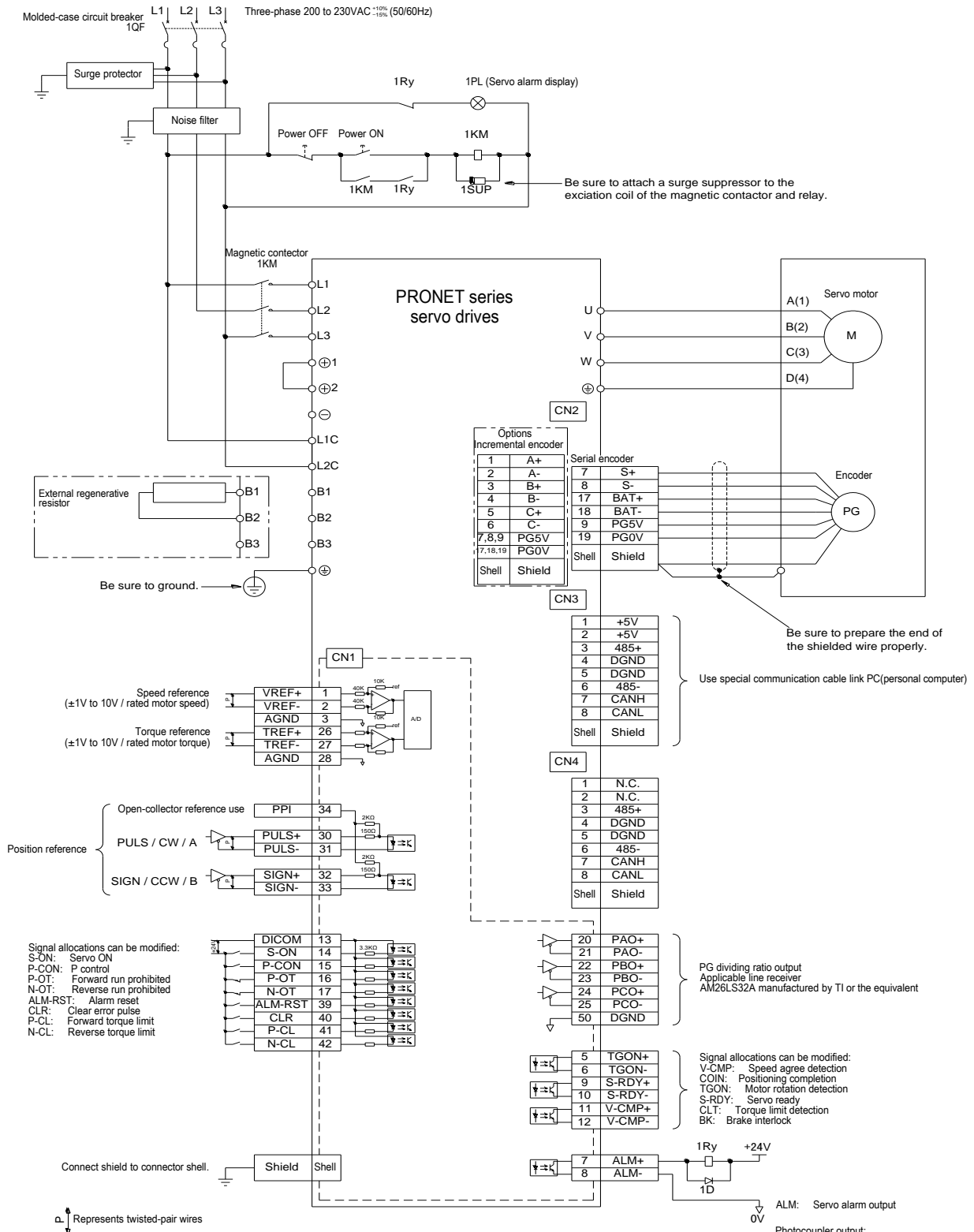


Approx.mass: 2.5kg

ProNet

Typical Connection Example

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

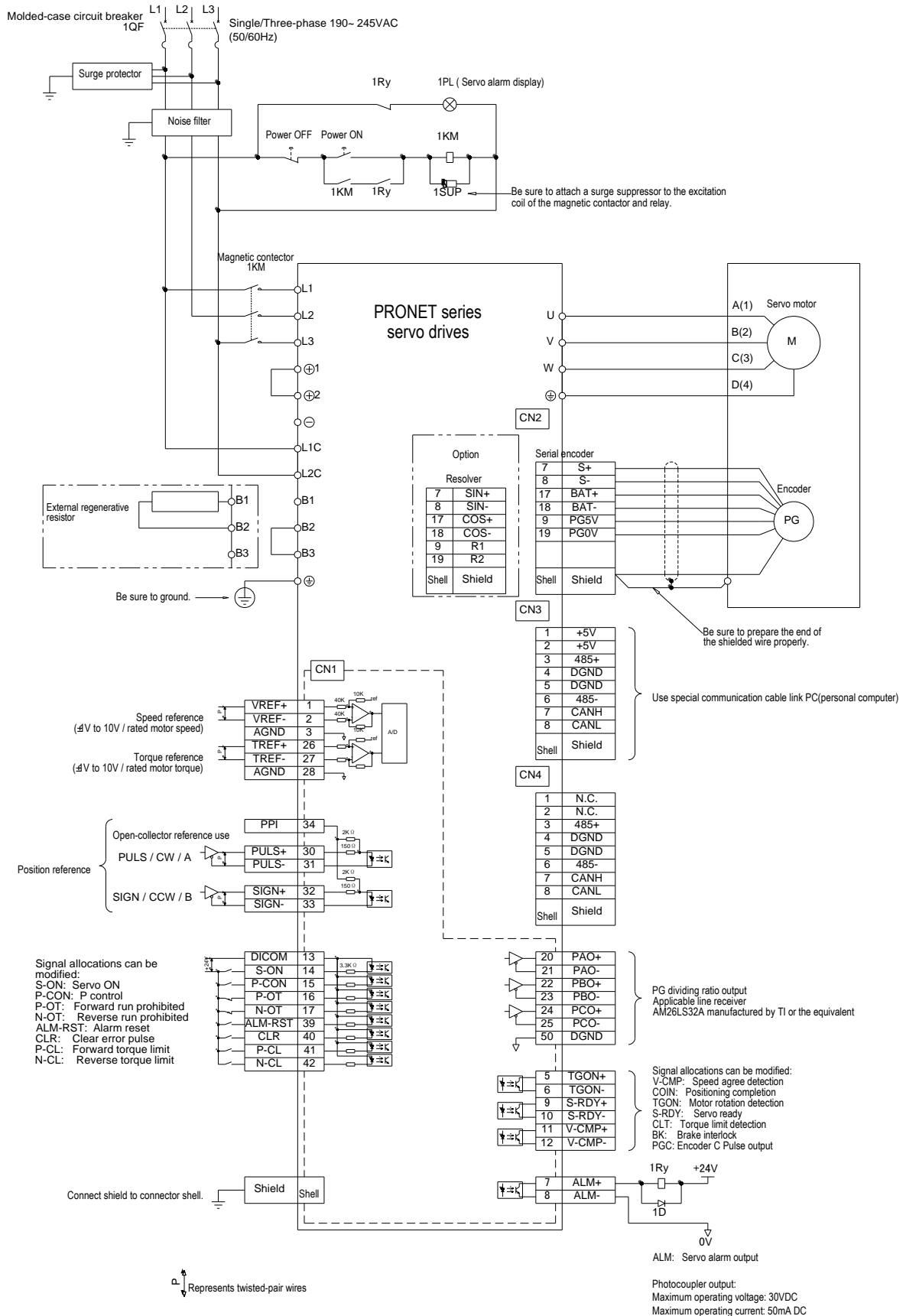


Note:

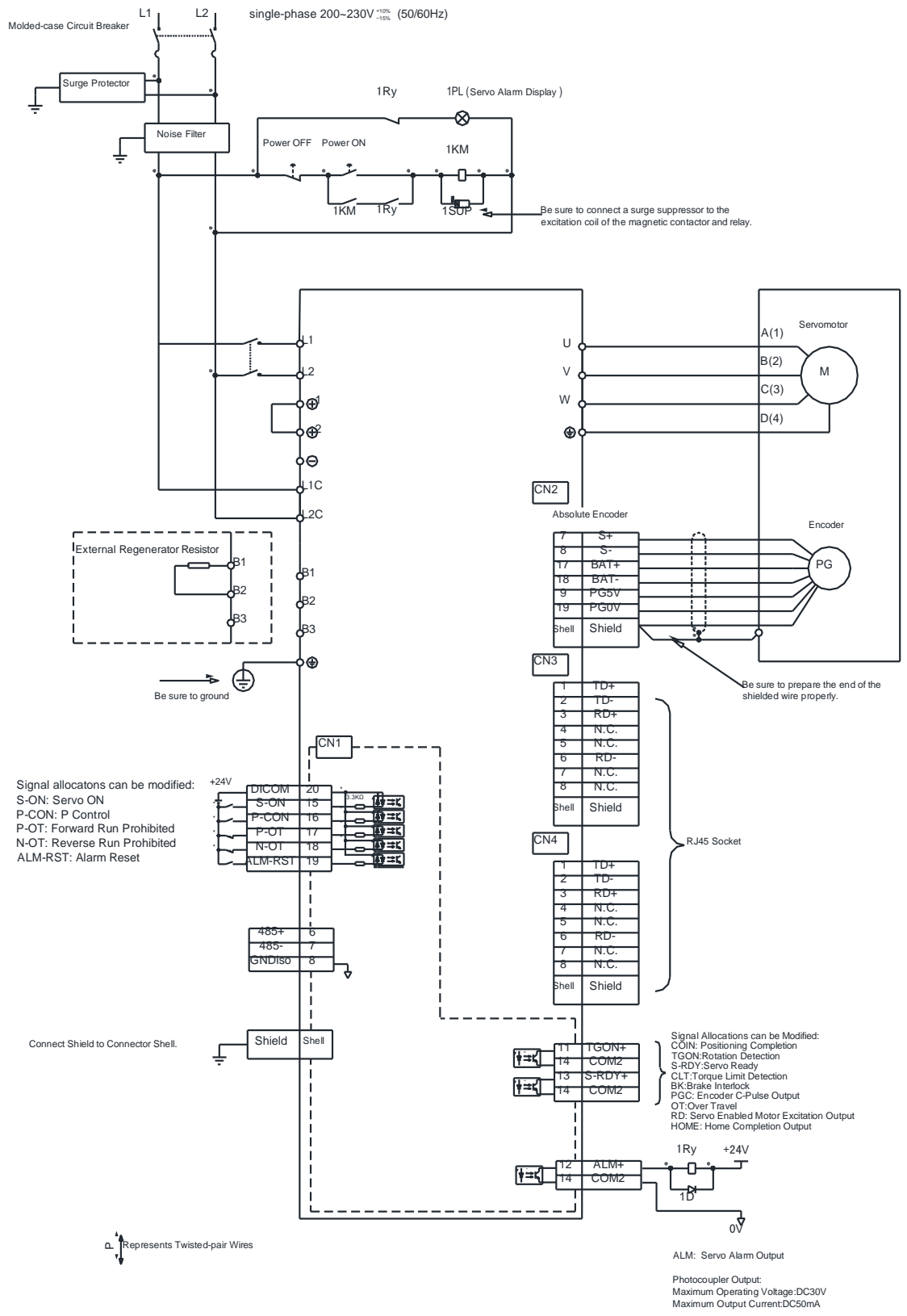
- The L1,L2,L3 and L1c,L2c terminals wiring method of ProNet 02/04 servo drives is different from other ProNet series servo drives. Please note the specific terminal definition while wiring.
- External regenerative resistor for ProNet-02/04 is provide by customer,the model of ASQ60W50? KGO resistor is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

Photocoupler output:
Maximum operating voltage: 30VDC
Maximum operating current: 50mA DC

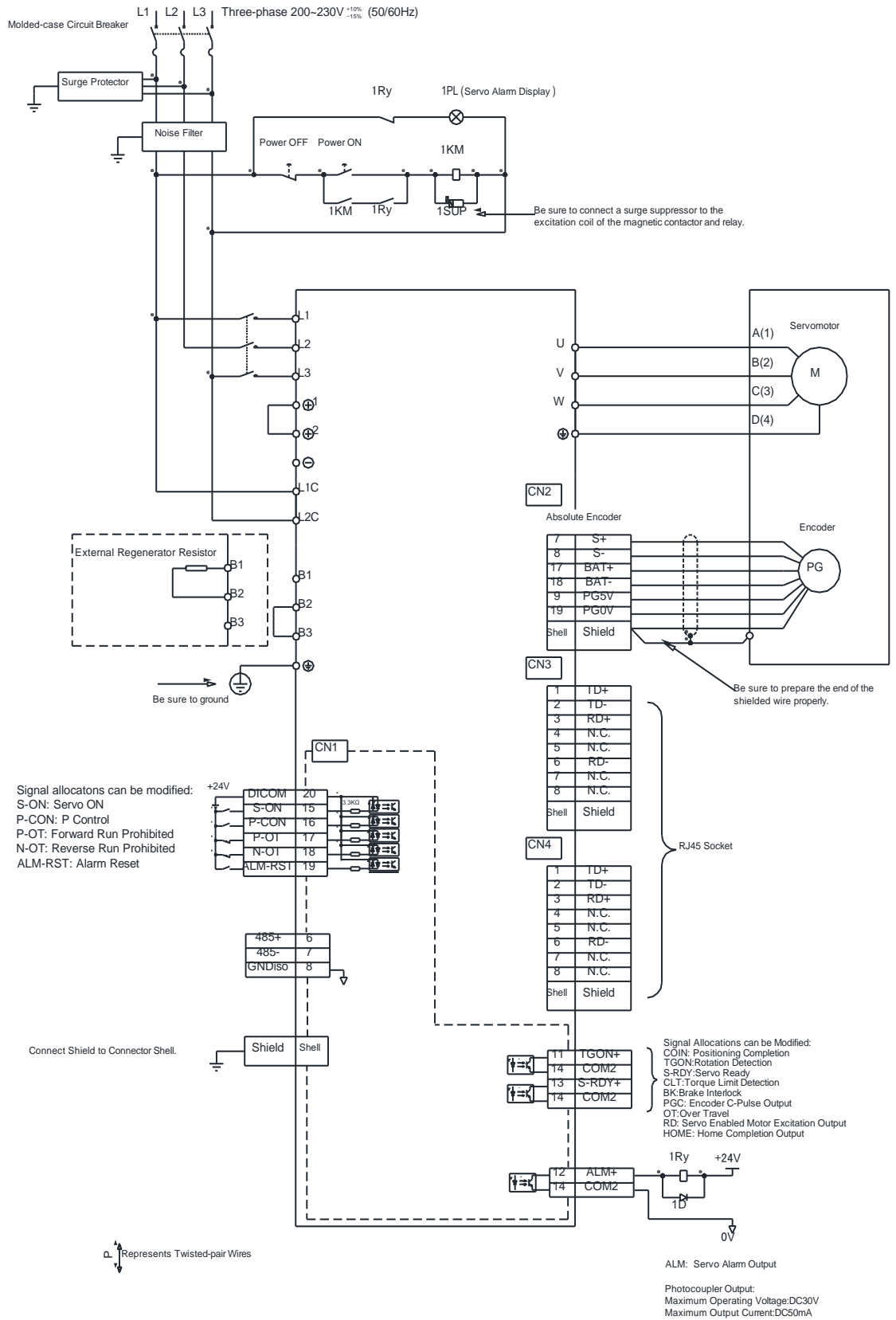
Three-phase 200VAC (ProNet-08A to 50A)



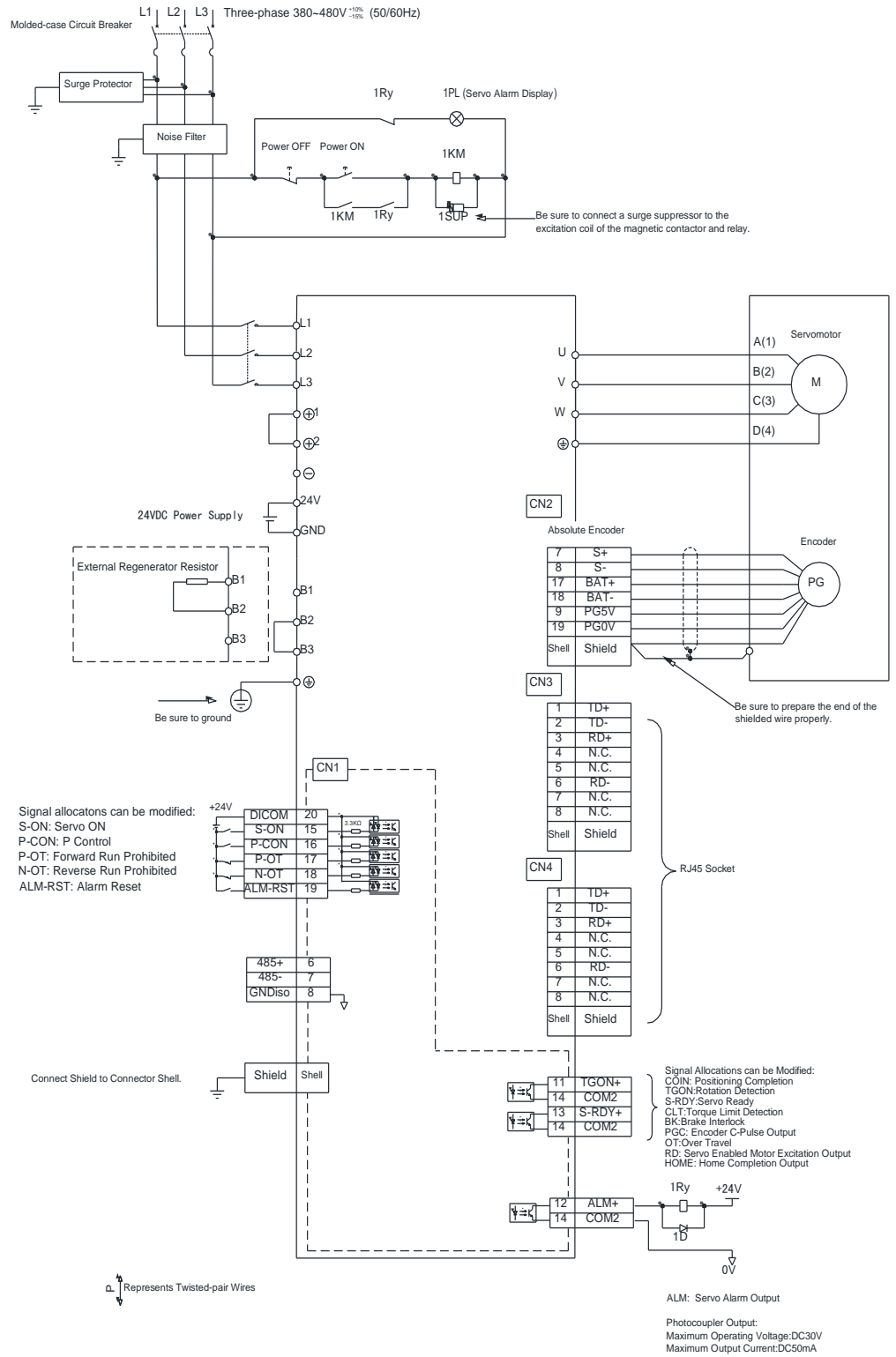
Single-phase 200VAC (ProNet-02AEA-EC to ProNet-04AEA-EC)



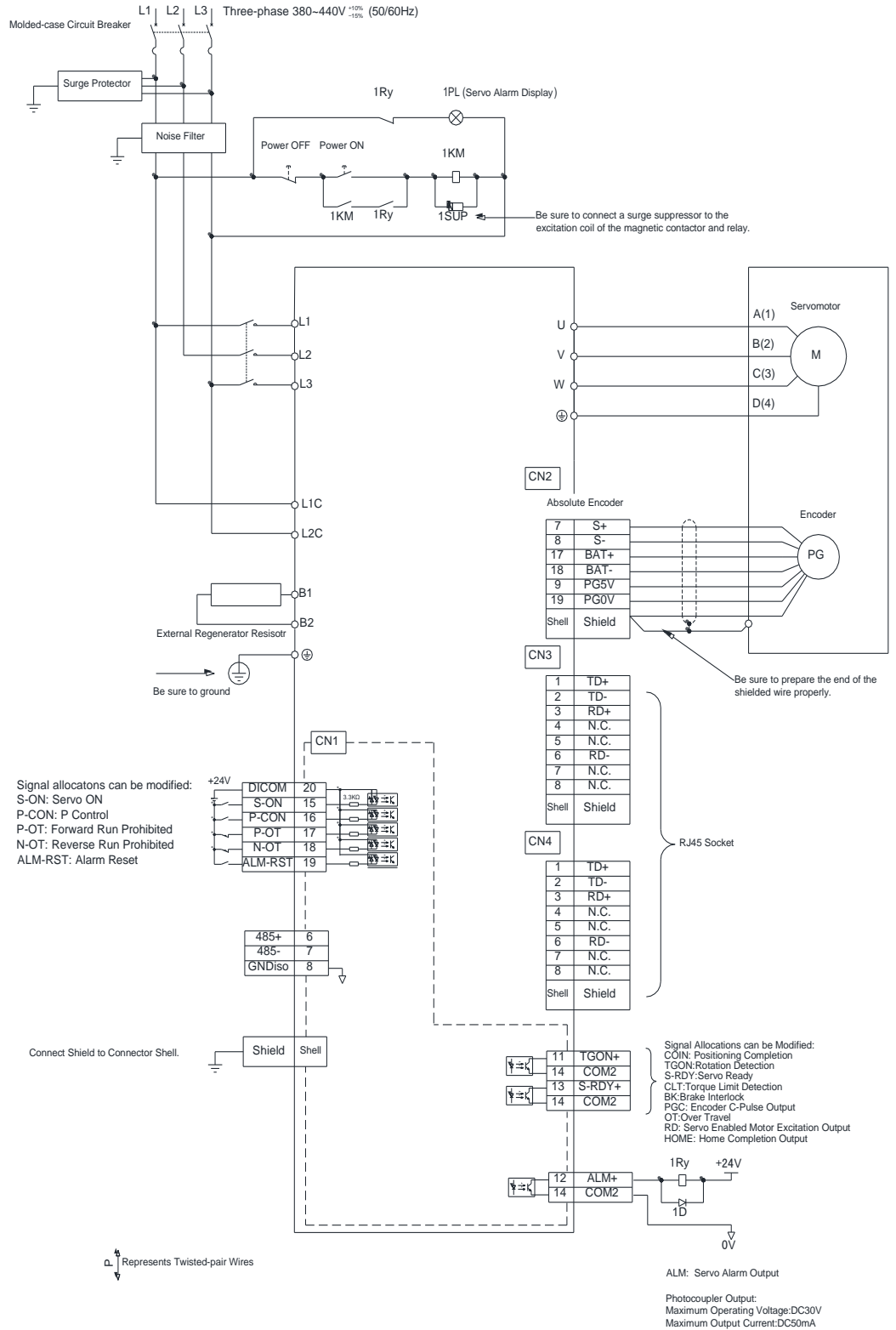
Three-phase 200VAC(ProNet-08AEA-EC to ProNet-50AEA-EC)



Three-phase 400VAC(ProNet-10DEA-EC to ProNet-75DEA-EC)



Three-phase 400VAC(ProNet-1ADEA-EC to ProNet-2BDEA-EC)



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**
- ES2014-A ProNet Series Product Brochure**

The logo for ESTUN, featuring the word "ESTUN" in a bold, sans-serif font. The letters are white with a dark grey shadow effect, giving it a 3D appearance. The logo is centered on a dark grey background.

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