Chapter 2 Products Overview

2.1 Servo drive model description

EM SD1 - B S 100
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❶	❷	❸	❹	❺
Company Code	Products series: SD1	Drive type: B: B frame C: C frame D: D frame E: E frame	Voltage: S: 220V E: 380V	Max. output current: 076: 7.6A 100: 10A

2.2 Name of the driver's parts

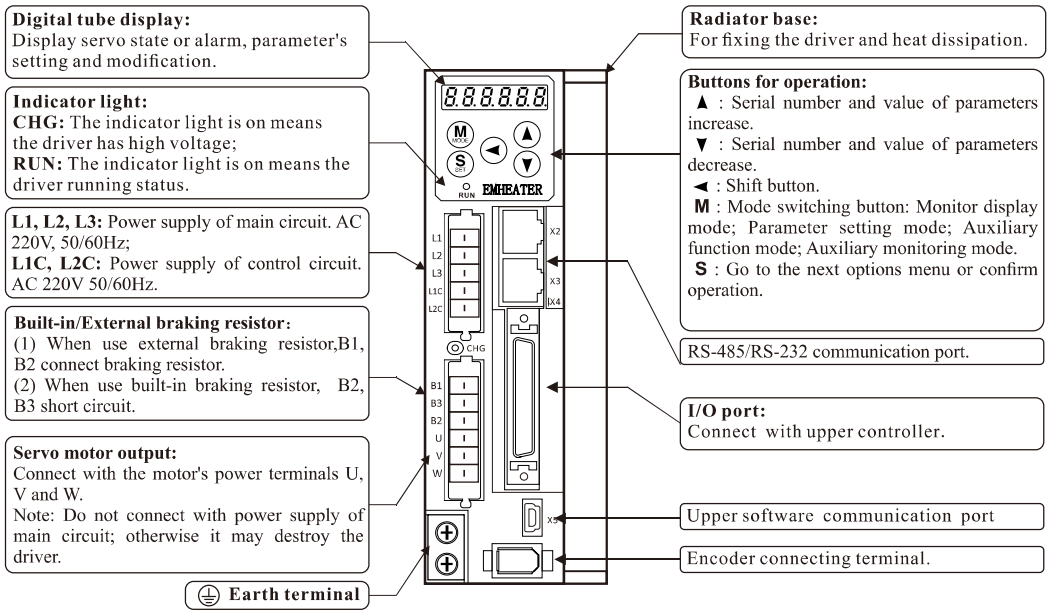

Diagram 2.1 Names of the driver's parts

2.3 Servo drive model and specifications

Drive model	EMSD1-B		EMSD1-C	EMSD1-D		EMSD1-E	
	S016	S028	S055	S076	S100	S180	S260
Input voltage of main circuit	Single /Three phase 220V（-15%~+10V）50/60Hz						
Input voltage of control circuit	Single phase 220V（-15%~+10V）50/60Hz						
Max. continuous working Current /A	1.6	2.8	5.5	7.6	10.0	18.0	26.0
Max. instantaneous output current /A	4.8	8.4	16.5	22.8	30.0	54.0	78.0
Encoder feedback	17bit absolute encoder 23bit absolute encoder						
Max. motor power/kW	0.2	0.4	0.75	1.0	1.5	3.0	5.0

2.4 Specifications of servo drive

Item		Specifications
Input power	Main circuit	Single/Three phase 220V（-15%~+10V）50/60Hz
	Control circuit	Single phase 220V（-15%~+10V）50/60Hz
Control Mode		(1) Position control (2) Speed control (3) Torque control (4) Position/Speed control (5) Position/Torque control (6) Speed/Torque control
Encoder feedback		17bit absolute encoder 23bit absolute encoder
Control Signal	Input	10 Programmable DI input: (1) Servo enable(SRV-ON) (2) Emergency stop (3) Alarm and fault reset (4) Pulse prohibited (5) Control mode switch (6) Position deviation counter clear (7) Internal command 1(INTCMD1) (8) Internal command 2 (INTCMD2) (9) Internal command 3 (INTCMD3) (10) Internal command 4 (INTCMD4) (11) Internal command trigger (12) Speed command direction selection (13) Gain switching (14) Speed command zero fixed enable (15) Electronic gear ratio numerator selection 1 (16) Electronic gear ratio numerator selection 2 (17) Forward JOG (18) Negative JOG (19) Prohibit forward drive (20) Prohibit reverse drive (22) Torque command direction selection (23) External detector input (24) Return to Origin (25) Internal torque limit 2
	Output	4 Programmable DO output: (1) Servo ready (2) Motor zero speed (3) Positioning arrival (4) Location close (5) Alarm output (6) Brake control (7) Motor rotation (8) Warning output (9) Speed approaching (10) Consistent speed (11) Torque limit (12) Speed limit (13) Consistent torque (14) Return to Origin (15) Servo enable
Analog signal input		2 input:

		(1) AI1 (2) AI2
Pulse signal	Input	2 input: Optical coupler input: receive differential signal or collector open circuit signal through optocoupler circuit.
	Output	4 output: 3 linear driver outputs 1 open collector output
Position control		(1) External pulse input: Input form:1) Quadrature pulse A+B phase; 2) CCW pulse+ CW pulse; 3) Pulse + direction. Electronic gear ratio range: 1~2^{30} (2) 16-segment internal command
Speed control		(1) Digital speed input (2) Analog AI1/AI2 input (3) 16-segment internal command
Torque control		(1) Digital torque input (2) Analog AI1/AI2 input (3) 16-segment internal command
Communication	RS485	1:n Communication (n≤31)
	RS232	1:1 Communication
Display		6-digit LED display, 5 keys, 1 LED light
Brake		B frame: no built in resistor(External only) C/D frame: built in resistor(External option) E frame: no built in resistor(External only)
Monitoring function		Motor speed, torque, position deviation, command pulse accumulation、current position of motor, input/output IO signal, DC bus voltage, etc.
Protection function		Short circuit, over current, under voltage, over voltage, overload, overheating, phase sequence error, encoder fault, position deviation, power failure protection, etc.
Temperature		Operation: 0℃~50℃(No dewing) Storage: -20℃~65℃(Max. temperature: 80℃ 72 hours)
Humidity		Operation and storage both should at 90%RH below(No dewing)
Altitude		1000mbelow sea level
Vibration		0.5G（4.9m/s^2）below, 10~60Hz(Can not be used continuously at resonance frequency)