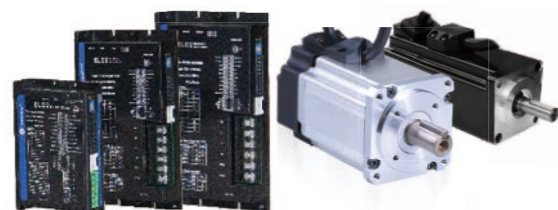


## ELD2 Brushless & Brushed DC Servo Systems



- Voltage Input:** 24~70VDC  
**Motor Frame Size:** 40mm, 42mm, 57mm, 60mm, 80mm  
**Power Range:** 0.05 - 1.0kW  
**Encoder:** 1000 ppr, 2500 ppr, 17 bit
- Position Mode**  
**Velocity Mode**  
**Torque Mode**
- Features:**
- Up to 90Amp
  - 3rd Party brushless or brushed motor compatible
  - Absolute encoder supported
- Command source:**
- Pulse+Direction(for position control)
  - Analog input(for velocity/torque control )
  - Modbus based on RS485
  - PR Mode
    - Programmable 16-segment position table,
    - Support positioning/homing/ limit/ Quick stop/ JOG...
  - CANopen
- Inputs and Outputs:**
- 2 fast pulse input, 5V only
  - 4 programable digital inputs
  - 2 programable digital outputs(2 single-ended)
  - 1 analog output: -10V to +10V(Optional)

# Brushless & Brushed DC Servo Drives

## ELD2 Series

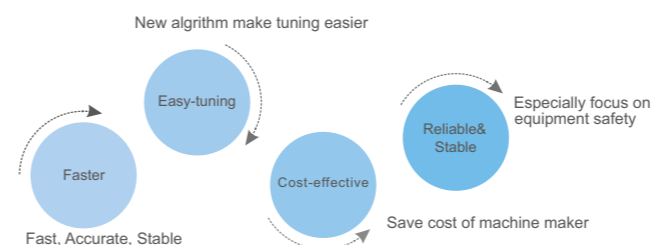


### ELD2 Series Brushless & Brushed DC Servo Drives

ELD2 series brushless & Brushed DC servo drive, power range from 25W to 1200W, adopt special DC input, motion control product designed for machines and applications that request a best balance between reasonable cost and outstanding performance with MFC/vibration suppression.

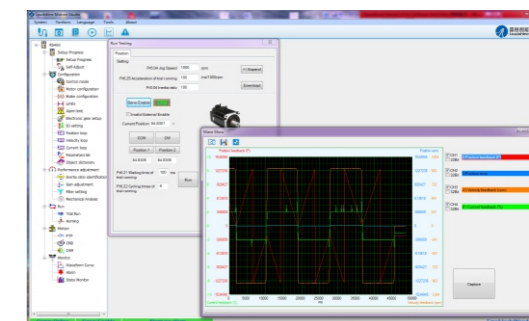
- Voltage : 24-70Vdc
- Power range : 0.25 - 1.2kw
- Up to 90Amp peak current
- Compact size
- Pulse+Direction, analog input
- Modbus,CANopen
- Brushless motor & Brushed motor suitable

### Easy Tuning

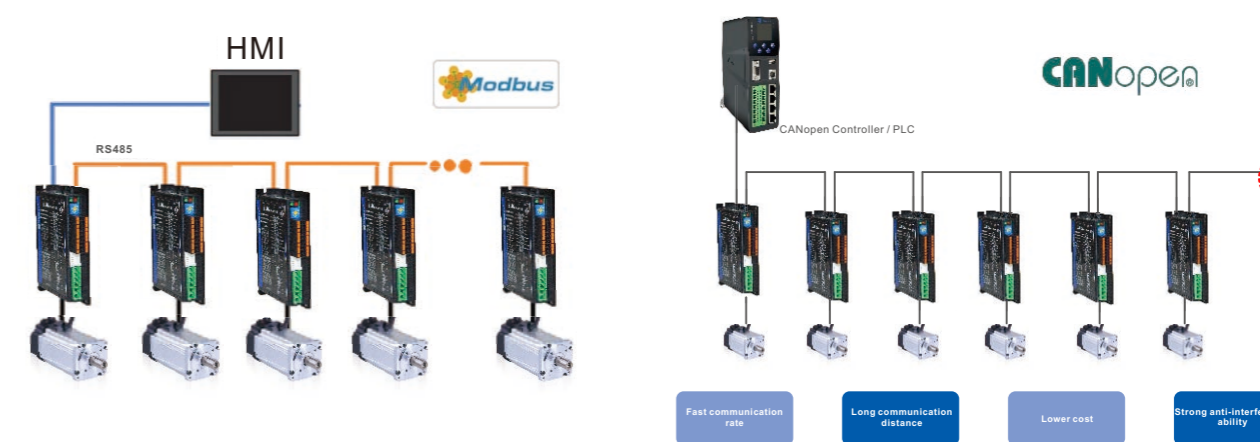


### Motion Studio

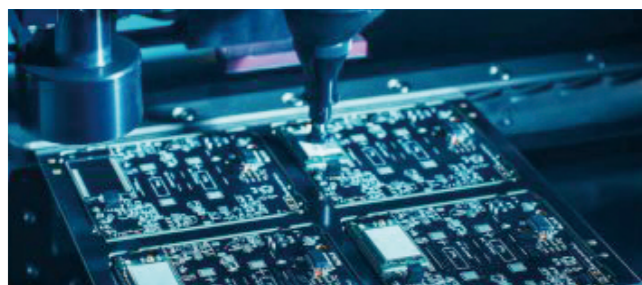
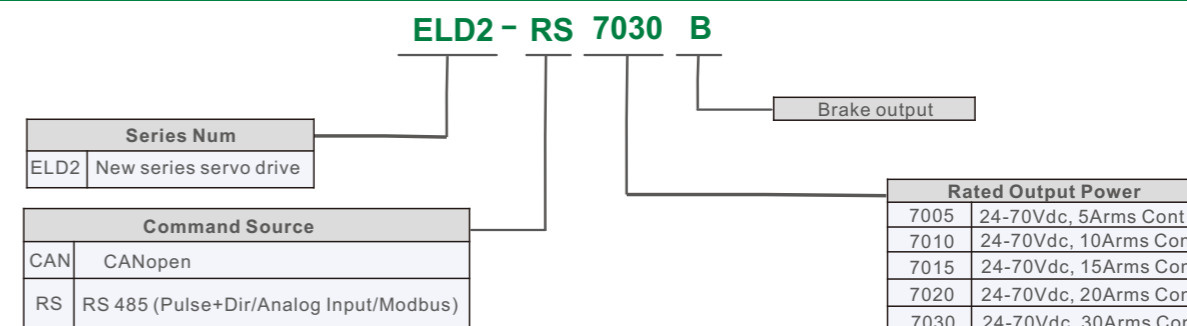
- Convenient GUI user interface
- Easy Tuning
- Real-time motion state monitoring
- Error history and resolution guide



### Supported Network



### Part Numbers



Electronic manufacturing equipment

- Dispensing machine
- Screw locking machine
- SMT
- Wire stripping machine
- Lithium battery equipment



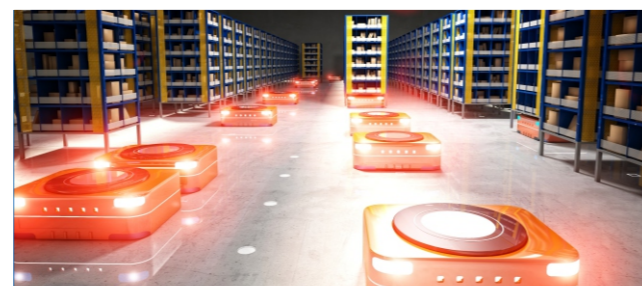
Laser machine industry

- Laser marking machine
- Laser cutting machine
- Jade carving machine
- Wood carving machine



Special machine tool industry

- CNC machine
- Die stamping machine



AGV logistics industry

- Warehouse robot
- Sorting robot
- Cross belt sorter
- Inclined guide wheel sorter
- Multi-layer shuttle

AC Servo Systems

Brushless Servo Systems

Integrated Servo Motors

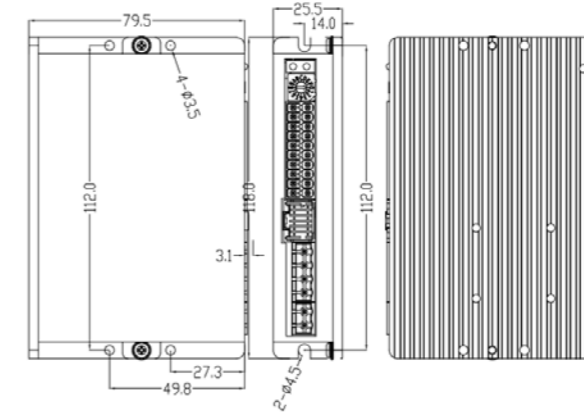
Power Supply

## Specifications

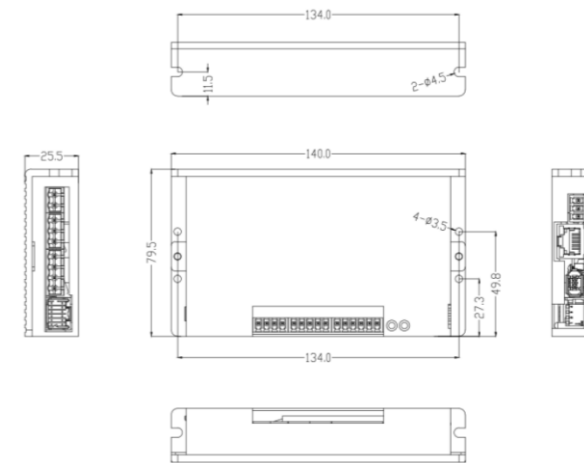
Power & Environment						
Driver Model	ELD2-RS7005 ELD2-CAN7005B	ELD2-RS7010 ELD2-CAN7010B	ELD2-RS7015B ELD2-CAN7015B	ELD2-RS7020B ELD2-CAN7020B	ELD2-RS7030B ELD2-CAN7030B	
Size(mm)	118*75.5*25.5(RS7005) 140*79.5*25.5(CAN7005B)	118*75.5*25.5(RS7010) 140*79.5*25.5(CAN7010B)	175*100.5*31	175*100.5*31	175*100.5*31	
Rated Power (kw)	0.1	0.4	0.6	0.75	1.2	
Rated Output Current (A)	5	10	15	20	30	
Max Output Current (A)	15	30	45	80	90	
Main Power	Voltage (V)	DC24-70	DC24-70	DC24-70	DC24-70	DC24-70
	Current (A)	48-60 Vdc: 3.5Arms 60-70Vdc: 3Arms	48-60 Vdc: 7Arms 60-70Vdc: 6Arms	48-60 Vdc: 10Arms 60-70Vdc: 9Arms	48-60Vdc: 14Arms 60-70Vdc: 12Arms	48-60Vdc: 20Arms 60-70Vdc: 17Arms
Control Method	IGBT PWM Sinusoidal Wave Drive					
Overload	300%					
Brake Resistor	External Connection					
Communication Interface	RS485/CAN					
Protection Rank	IP20					
CANopen Specifications						
Link Layer Protocol	CAN Field-bus					
Application Layer Protocol	CANopen protocol					
CAN-ID Type	CAN 2.0A					
Communication Rate	1Mbit/s, 500Kbit/s, 250Kbit/s, 125Kbit/s, 100Kbit/s, 50Kbit/s, 20Kbit/s					
Sub-protocol	DS 301 V4.02: CANopen application layer protocol and communication protocol DSP 402 V2.0: Device profile for drives and motion control					
CANopen Length	0 - 8bit					
Support Service	NMT: Network Management Service SDO: Service Data Object PDO: Process Data Object Devices Monitor: Node protection and heartbeat message SYNC: Synchronous generator and synchronous detection, applied to the PDO transmission EMCY: Emergency object Services					
PDO Transmission Modes	Time trigger, event trigger, asynchronization/synchronization trigger(configurable)					
PDO Number	4 TPDOs, 4 RPDOs					
Control Modes	PP (Profile Position) PV (Profile Velocity) PT (Profile Torque) HM (Homing)					
Communication & Connection						
	ELD2-RS	ELD2-CAN				
Pulse Input	2 fast pulse input, 5V-24v only	-				
Pulse Encoder Output	5V differential outputs, A/B phase	5V differential outputs, A/B phase				
Digital Input/Output	4 programmable OC inputs, 1 programmable differential output 2 programmable OC outputs, 24V	4 programmable OC inputs, 2 programmable OC outputs, 24V				
Analog Input	1 analog input: -10V to +10V	-				
Feedback Supported	1000line, 2500line, 17-Bit incremental encoder					
Matched Motors						
Motor Model	BLM Series / ACM Series / ELDM Series / Third-party Brushless + Brushed motor					
Power Range	25W - 1200W					
Voltage Range	24 - 70Vdc					
Encoder Type	1000-Line, 2500-Line, 17-Bit					
Motor Size	40mm, 42mm, 57mm, 60mm, 80mm Frame Size					
Other Requirements	Brake. oil-seal. protection level. shaft & connector can be customized					

## Mechanical Specifications

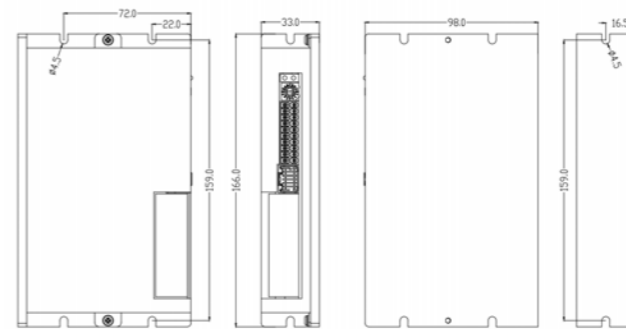
### • ELD2-RS7005/ELD2-RS7010



### • ELD2-CAN7005B/ELD2-CAN7010B



### • ELD2-\*\*7015B/ELD2-\*\*7020B/ELD2-\*\*7030B



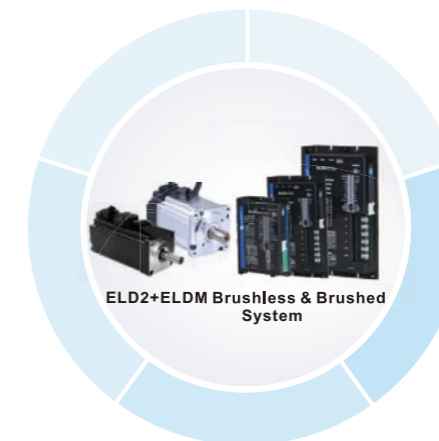
## Typical Applications



Printing Machines



Logistic



ELD2+ELDM Brushless & Brushed System



AGV Machines



Medical

# Brushless Servo Motors

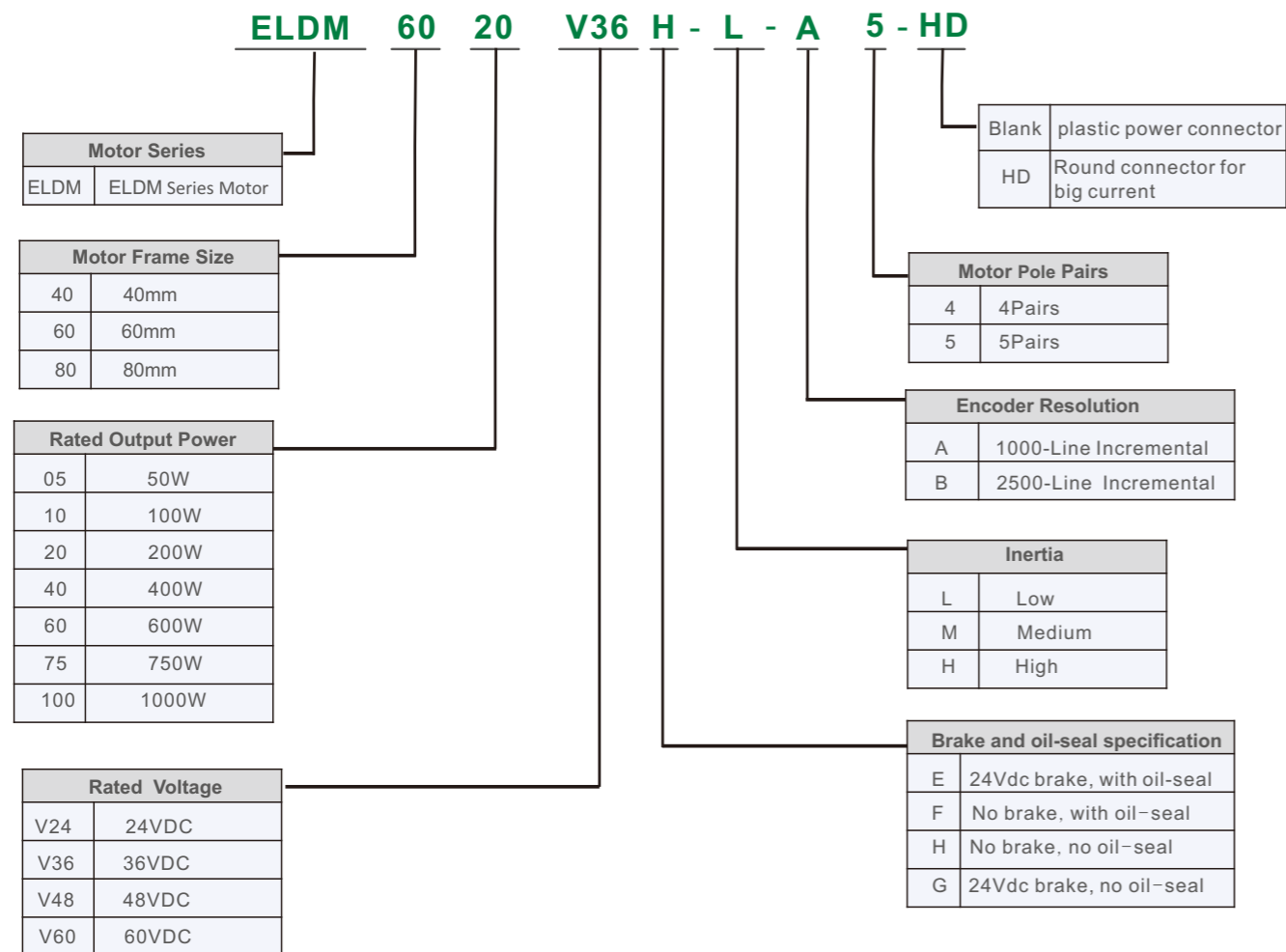
## ELDM Series

- Power range: 50W - 1000W
- Frame size: 40mm,60mm,80mm;
- Voltage range: 24 - 60Vdc
- Feedback: 1000-Line/2500-Line/17-Bit incremental encoder



ELDM series brushless servo motors offer high performance with modes ranging from 50W to 750W. Mounting is compatible with most AC servo motors on the market. Standard models come with a 1000-Line/2500-Line/17-Bit incremental encoder. When driven by ELD2 series servo drives, ELDM series motors meet normal and high accuracy application requirement.

### Part Numbers



### Servo Motors with 1000-Line/2500-Line/17-Bit Encoders

#### • Models

ELDM Series	4010V24HL-**	6020V24HL-**	6020V36HL-**	6040V48HL-**	6040V60HL-**	6060V48HL-**	6060V60HL-**
	4010V24GL-**	6020V24GL-**	6020V36GL-**	6040V48GL-**	6040V60GL-**	6060V48GL-**	6060V60GL-**
Frame Size [mm]	40	60					
Rated Power [w]	100	200	200	400	400	600	600
Voltage [VDC]	24	24	36	48	60	48	60
Rated Torque [Nm]	0.32	0.64	0.64	1.27	1.27	1.9	1.9
Rated Current [A]	5.8	11	7	10	9	15.1	10.6
Rated Speed [r/min]	3000	3000	3000	3000	3000	3000	3000
Peak Torque [Nm]	0.96	1.92	1.92	3.81	3.81	5.7	5.7
Peak Current [A]	17.4	33	21	31	27	45.3	33.5
Max Speed [r/min]	4000	4000	4000	4000	4000	4000	4000
Torque Const [Nm/A]	0.055	0.058	0.091	0.127	0.141	0.126	0.18
Voltage Const [V/krpm]	3.6	3.9	6.19	7.68	9.73	8.3	11.8
Resistance [Ω]	0.5	0.2	0.39	0.27	0.34	0.16	0.29
Inductance [mH]	0.5	0.23	0.55	0.35	0.6	0.26	0.52
Inertia [kgm <sup>2</sup> *10 <sup>-4</sup> ]	0.11	0.21	0.21	0.42	0.42	0.67	0.67
Oil Seal	X	X	X	X	X	X	X
Encoder	1000/2500 Lines/17-Bit Incremental Encoder						
Structure	Totally Enclosed, Natural Cooling(IP rating: IP54)						
Mass (kg)	Standard	0.47	1.05	1.05	1.43	1.43	1.83
	With Brake	0.59	1.41	1.41	1.79	1.79	2.79
Length (mm)	Standard	85	92	92	116	116	136
	With Brake	115	131	121.8	155	155	175
Permissible Load for the Shaft	L [mm]	22.5	27	27	27	27	27
	Radial [N]	78	245	245	245	245	245
	Thrust [N]	54	74	74	74	74	74

#### The pin assignment of 1000-Line encoder

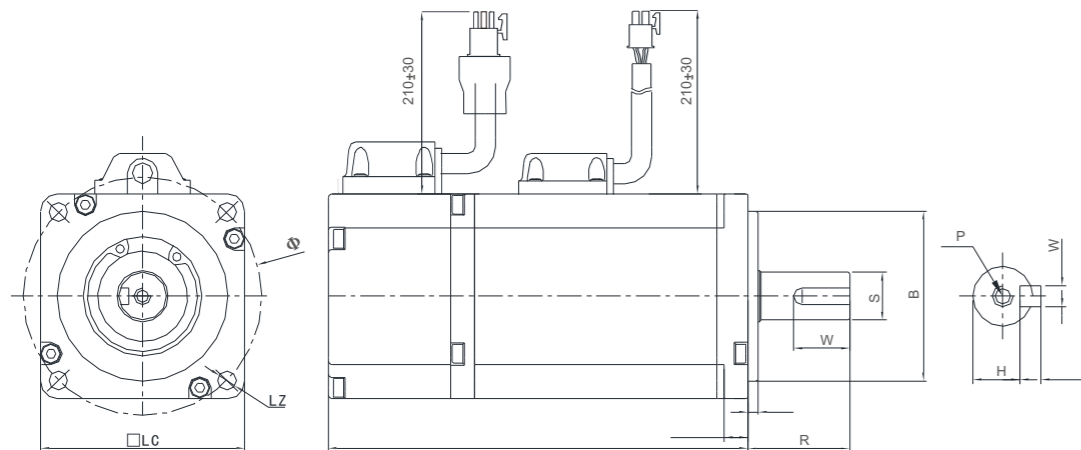
Pin	Name	Pin	Name
6	PE	2	EB+
13	+5V	12	EB-
3	GND	5	HU
1	EA+	4	HV
11	EA-	9	HW

#### The pin assignment of 2500-Line encoder

Pin	Name	Pin	Name
1	PE	5	Z-
2	+5V	6	HU+
3	GND	8	HU-
9	EA+	10	HV+
13	EA-	12	HV-
4	EB+	11	HW+
14	EB-	15	HW-
7	Z+		

ELDM Series	8075V48HM-**	8075V60HM-**	80100V48HM-**	6005V24HM-A5-600		8006V24HM-A5-150
	8075V48GM-**	8075V60GM-**	80100V48GM-**	6013V24GM-A5		8006V24GM-A5-150
Frame Size [mm]	80			60		80
Rated Power [w]	750	750	1000	50	125	55
Voltage [VAC]	48	60	48	24	24	24
Rated Torque [Nm]	2.39	2.39	3.2	0.8	0.4	1.9
Rated Current [A]	19	13	28	11	9	15.1
Rated Speed [r/min]	3000	3000	3000	600	3000	3000
Peak Torque [Nm]	7.17	7.17	9.6	2.4	1.2	5.7
Peak Current [A]	57	39	86	35	28.5	45.3
Max Speed [r/min]	4000	4000	4000	1200	5000	300
Torque Const [Nm/A]	0.13	0.18	0.11	0.07	0.044	0.126
Voltage Const [V/krpm]	8.7	12.5	7.7	5	3.2	8.3
Resistance [ $\Omega$ ]	0.09	0.2	0.06	0.2	0.09	0.16
Inductance [mH]	0.31	0.7	0.17	0.3	0.23	0.26
Inertia [kgm <sup>2</sup> *10 <sup>-4</sup> ]	1.5	1.5	2.2	0.27	0.15	0.67
Oil Seal	X	X	X	X	X	X
Encoder	1000 /2500Lines Incremental Encoder			1000 Lines Incremental Encoder		
Structure	Totally Enclosed, Natural Cooling(IP rating: IP54)					
Mass (kg)	Standard	2.93	2.93	3.32	1.1	1.9
	With Brake	3.6	3.6	4.01	1.4	2.1
Length (mm)	Standard	142	142	165	96	116
	With Brake	175	175	201	113	151
Permissible Load for the Shaft	L [mm]	32	32	32	27	32
	Radial [N]	392	392	392	245	392
	Thrust [N]	147	147	147	74	147

• Dimensions



Motor Series	LC (mm)	LZ (mm)	LA (mm)	S (mm)	LB (mm)	LL (mm)	LR (mm)	LE (mm)	LG (mm)	LW (mm)	RH (mm)	W (mm)	T (mm)	TP (mm)
ELDM4010V24HL-**	40	$\phi$ 4.5	46	$\phi$ 8	$\phi$ 30	85	25	2.5	7	15.5	6	3	3	M3 $\overline{\phi}$ 6
ELDM4010V24GL-**	40	$\phi$ 4.5	46	$\phi$ 8	$\phi$ 30	115	25	2.5	7	15.5	6	3	3	M3 $\overline{\phi}$ 6
ELDM6020V24HL-**	60	$\phi$ 5.5	70	$\phi$ 14	$\phi$ 50	92	30	3	6.5	16.5	11	5	5	M5 $\overline{\phi}$ 0
ELDM6020V24GL-**	60	$\phi$ 5.5	70	$\phi$ 14	$\phi$ 50	131	30	3	6.5	16.5	11	5	5	M5 $\overline{\phi}$ 0
ELDM6020V36HL-**	60	$\phi$ 5.5	70	$\phi$ 14	$\phi$ 50	92	30	3	6.5	16.5	11	5	5	M5 $\overline{\phi}$ 0
ELDM6020V36GL-**	60	$\phi$ 5.5	70	$\phi$ 14	$\phi$ 50	121.8	30	3	6.5	16.5	11	5	5	M5 $\overline{\phi}$ 0
ELDM6040V48HL-**	60	$\phi$ 5.5	70	$\phi$ 14	$\phi$ 50	116	30	3	6.5	16.5	11	5	5	M5 $\overline{\phi}$ 0
ELDM6040V48GL-**	60	$\phi$ 5.5	70	$\phi$ 14	$\phi$ 50	155	30	3	6.5	16.5	11	5	5	M5 $\overline{\phi}$ 0
ELDM6040V60HL-**	60	$\phi$ 5.5	70	$\phi$ 14	$\phi$ 50	116	30	3	6.5	16.5	11	5	5	M5 $\overline{\phi}$ 0
ELDM6040V60GL-**	60	$\phi$ 5.5	70	$\phi$ 14	$\phi$ 50	155	30	3	6.5	16.5	11	5	5	M5 $\overline{\phi}$ 0
ELDM6060V48HL-**	60	$\phi$ 5.5	70	$\phi$ 14	$\phi$ 50	136	30	3	6.5	16.5	11	5	5	M5 $\overline{\phi}$ 0
ELDM6060V48GL-**	60	$\phi$ 5.5	70	$\phi$ 14	$\phi$ 50	175	30	3	6.5	16.5	11	5	5	M5 $\overline{\phi}$ 0
ELDM6060V60HL-**	60	$\phi$ 5.5	70	$\phi$ 14	$\phi$ 50	136	30	3	6.5	16.5	11	5	5	M5 $\overline{\phi}$ 0
ELDM6060V60GL-**	60	$\phi$ 5.5	70	$\phi$ 14	$\phi$ 50	175	30	3	6.5	16.5	11	5	5	M5 $\overline{\phi}$ 0
ELDM8075V48HM-**	80	$\phi$ 6.6	90	$\phi$ 19	$\phi$ 70	142	35	3	8	25	15.5	6	6	M6 $\overline{\phi}$ 0
ELDM8075V48GM-**	80	$\phi$ 6.6	90	$\phi$ 19	$\phi$ 70	177	35	3	8	25	15.5	6	6	M6 $\overline{\phi}$ 0
ELDM8075V60HM-**	80	$\phi$ 6.6	90	$\phi$ 19	$\phi$ 70	142	35	3	8	25	15.5	6	6	M6 $\overline{\phi}$ 0
ELDM8075V60GM-**	80	$\phi$ 6.6	90	$\phi$ 19	$\phi$ 70	177	35	3	8	25	15.5	6	6	M6 $\overline{\phi}$ 0
ELDM80100V48HM-**	80	$\phi$ 6.6	90	$\phi$ 19	$\phi$ 70	165	35	3	8	25	15.5	6	6	M6 $\overline{\phi}$ 0
ELDM80100V48GM-**	80	$\phi$ 6.6	90	$\phi$ 19	$\phi$ 70	201	35	3	8	25	15.5	6	6	M6 $\overline{\phi}$ 0
ELDM6005V24HM-A5-600	60	$\phi$ 5.5	70	$\phi$ 14	$\phi$ 50	96	30	3	6.5	16.5	11	5	5	M6 $\overline{\phi}$ 0
ELDM6013V24GM-A5	60	$\phi$ 5.5	70	$\phi$ 14	$\phi$ 50	113	30	3	6.5	16.5	11	5	5	M6 $\overline{\phi}$ 0
ELDM8006V24HM-A5-150	80	$\phi$ 6.6	90	$\phi$ 19	$\phi$ 70	116	35	3	8	25	15.5	6	6	M6 $\overline{\phi}$ 0
ELDM8006V24GM-A5-150	80	$\phi$ 6.6	90	$\phi$ 19	$\phi$ 70	151	35	3	8	25	15.5	6	6	M6 $\overline{\phi}$ 0

## Ordering Information

Frame(mm)	NO.	Length (mm)	Diameter (mm)	Servo Drive	Power Cable	Encoder Cable	Brake Cable		
40	ELDM4010V24HL-**	85	Φ8	ELD2-RS7010 ELD2-CAN7010B	CABLE-ACM*M*	CABLE-LD2-BM*M*			
	ELDM4010V24GL-**	115					CABLE-SC*M*-S		
60	ELDM6020V24HL-**	92	Φ14						
	ELDM6020V24GL-**	131					CABLE-SC*M*-S		
	ELDM6020V36HL-**	92							
	ELDM6020V36GL-**	121.8					CABLE-SC*M*-S		
	ELDM6040V48HL-**	116							
	ELDM6040V48GL-**	155					CABLE-SC*M*-S		
	ELDM6040V60HL-**	116							
	ELDM6040V60GL-**	155					CABLE-SC*M*-S		
	ELDM6060V48HL-**	136					ELD2-RS7015B ELD2-CAN7015B		
	ELDM6060V48GL-**	175						CABLE-SC*M*-S	
ELDM6060V60HL-**	136								
ELDM6060V60GL-**	175	CABLE-SC*M*-S							
80	ELDM8075V48HM-**	142	Φ19	ELD2-RS7020B ELD2-CAN7020B					
	ELDM8075V48GM-**	177							
	ELDM8075V60HM-**	142							
	ELDM8075V60GM-**	177							
	ELDM80100V48HM-**	165			ELD2-RS7030B ELD2-CAN7030B				
	ELDM80100V48GM-**	201				CABLE-SC*M*-S			
60	ELDM6005V24HM-A5-600	96	Φ14	ELD2-RS7010 ELD2-CAN7010B					
60	ELDM6013V24GM-A5	113	Φ14		CABLE-SC*M*-S				
80	ELDM8006V24HM-A5-150	116	Φ19						
	ELDM8006V24GM-A5-150	151			CABLE-SC*M*-S				

ELD2 Series  
 Configuration Cable: CABLE-PC-1  
 CANopen/RS485 Communication Cable: CABLE-TX1M0-LD2

## Power Supplies



- 220VAC ± 10% or 110 VAC ± 10%
- Higher Reliability and mass production
- High efficiency, low temperature rising

### Features

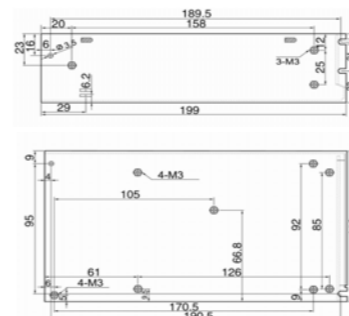
- 1.8 or 3 times overload
- Compact Size, Light in Weight
- Use Switch to select input voltage 220VAC ± 10%
- Over-current, Over-voltage, Low-voltage Protections
- Big Power with High Efficiency
- CE and RoHS

### Electrical Specifications

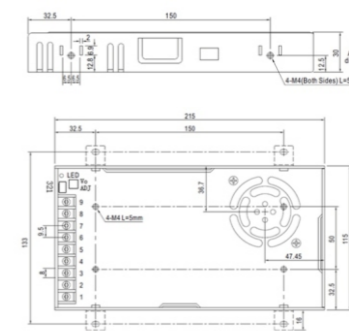
Model	Output Voltage (VDC)	Continuous Current(A)	Peak Current(A)	Input Voltage	Power(W)	Dimensions (mm)	Weight(Kg)
SPS2410(V3.0)	24	10	30	220VAC ± 10%	240	199*110*50	0.8
SPS3611(V3.0)	36	11	33		400	215*115*30	0.6
SPS488(V3.0)	48	8.3	24.9		400	215*115*30	0.6
SPS606(V3.0)	60	6.7	20.1		400	215*115*30	0.6

### Mechanical Specifications

(unit: mm, 1inch=25.4mm)



SPS2410(V2.0)



SPS3611(V2.0)/SPS488(V2.0)/SPS607(V2.0)