

LITEON

光寶科技

Intelligent Integration with Innovation

LITE-ON Technology

The Best Partner for Smart Manufacturing

Industrial Automation

AC Drive
Servo Drive
HMI

فروشگاه اینترنتی اتوماسیون ۲۴
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About LITE-ON

LITE-ON Group

Founded in 1975, LITE-ON embraces being “Best Partner in Opto-Electronic, Eco-Friendly and Intelligent Technologies” as its vision to focus on the development of optoelectronics and key electronic components, and strives to build up competitive edge through resource integration and optimized management. LITE-ON produces products that are used in a broad range of applications, such as computers, communications, consumer electronics, automotive electronics, LED lighting, cloud computing, industrial automation as well as biotech and healthcare. LITE-ON is a worldwide leading provider of optoelectronics, information technology, storage devices, and mobile devices components.

For more than 40 years, LITE-ON has concentrated on establishing a competitive advantage in mass production. Through resource integration and management, we maximize the returns from a diverse product portfolio to realize excellent revenue growth and profits. In 2014, LITE-ON successfully completed its "One LITE-ON" program by integrating nine of its main subsidiaries under one management, while the main business strategy remains focusing on improving resource utilization, automation, production optimization, and streamlined processes for better productivity and efficiency. In the long-term, the focus is on profitability, sound governance and improving shareholder returns to lay down the foundation for a sustainable century enterprise.

In recent years, LITE-ON has been shifting its production focus from IT and communication towards IoT (Internet of Things) applications such as cloud computing, LED lighting, automotive, biotech, and industrial automation. The global technology industry is now set to welcome a new wave of changes, LITE-ON aims to leverage its existing advantage as a world-class enterprise in this age of changes and challenges to become the partner of choice for global customers developing innovations and applications for photonics, energy-saving and smart technologies.

IN 4C INDUSTRY

Computer - Magnesium aluminum alloy casing period punctuation. The largest transformer manufacturer in Taiwan and one of the major providers of power supplies used in notebook computers, desktops and LCD TVs.

Global market share of notebook adapters is over 60% period punctuation.

Consumer Electronics - World's 2nd largest mobile phone casing supplier.

Communication - Semiconductor components applied on communications, information, consumer electronics products' switching power supply & system power supply, photo couplers, LED, switching hubs and WLAN.

Car - As the first automotive electronics manufacturer to acquire global certification TS16949, LITE-ON Automotive concentrates on engine control system, rear parking assistance system, Body Control System, LED automotive lamp module and Cruise Control System in the automotive industry. LITE-ON Automotive is the only company in the world which is capable of providing the integrated design service in LED automotive lamp module. LITE-ON is also the world's top three supplier for assemblies of diode rectifiers for car generators.



World-Class Quality

50 factories in America, Europe, Asia.
Low DPPM capable manufacturing to service.
High quality requirement industry.

Global Network

30 branch offices and 250 hubs.
40 years of experience in ODM/OEM.



LITE-ON Industrial Automation

With 50 factories, 30 branches, and over 250 hubs, we are capable of serving our customers globally in a timely manner.

With 40 years of success in technology and outstanding quality for highest customer satisfaction period. LITE-ON is taking AC drives as a first step in industrial automation. We are aiming to provide servo systems, motion control and HMI to become a total solution provider in industrial automation over the next 10 years.

Factory Equipment Automation Benefits

- Improve overall factory productivity
- Effectively reduce operating costs
- Improve working environment
- Maintain consistent production quality
- Improve competitiveness

Market Positioning & Application

VFD

Premium Current Vector AC Drive EVO 8000 Series

0.75kW~110kW

1HP~150HP

Lathes
Hoists
Extruders
Extractors
Presses

Drawing Machines
Printing Machines
Wire Drawing Machines
Injecting Machine
Dyeing & Finishing Machines



VFD

Compact Vector Drive EVO 6800 Series

0.4kW~132kW

0.5HP~150HP

Presses
Ceramic Machines
Plastic Machines
Textile Machinery
Fans & Pumps

Disc Coal Feeders
Feeders
Belts Conveyors
Pulverized Coal Feeders



VFD

Ultra Compact Vector AC Drive EVO 6000 Series

0.2kW~3.7kW

0.25HP~5HP

Feeders
Winding Machines
Conveyors
Woodworking machinery
Food Processing Machines

Fans & Pumps
Labeling Machines
Knitting Machines
Packaging Machines
Industrial Sewing Machines



Market Positioning & Application

SERVO

MicroType High Performance Servo Drives ISA-7 Series

100W~2kW

Cutting Machines
Sawing Machines
Industrial Machinery
Conveyor Machines
Electric Discharge Machines



Human Machine Interface HMI EasyLynk

Industrial Automation Application
Smart Home Automation Application
Processing tools
CAD/CAM Manufacturing
Conveyor Application
Others Interface Application



Inverter

Premium Current Vector AC Drive / EVO 8000 Series

Provide multi-function parameters, applicable to mechanical and system engineering.

High performance with durability, accuracy and flexibility.

The best choice for the industry system integration.

- CE · UL Certificate

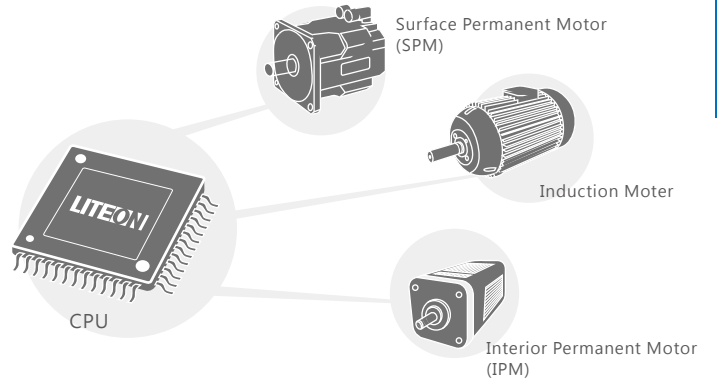


Features



Drive Various Types of Motor

- Capable of driving IM/SPM/IPM with one simple parameter setting.
- High performance Current Vector Control across motor types.



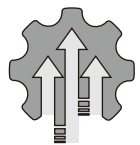
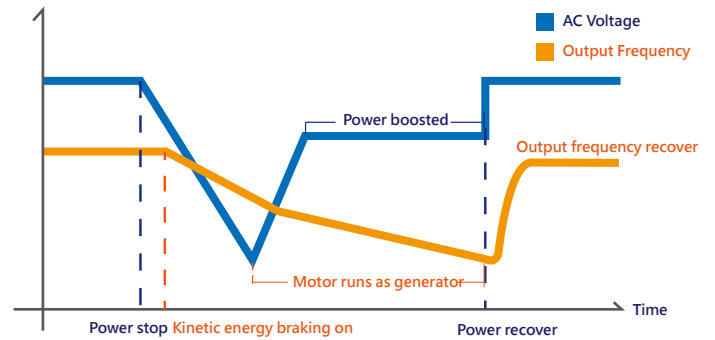
Powerful Functionality

- Unique variable fan speed and alarm information provided. (3.7~30 kW)
- Braking transistor built-in up to 30kW.
- Multi-function pulse train control.
- DC bus terminal (optional) for easy connection with AC reactors.



Kinetic Energy Braking

- When the power shuts down, the regeneration from motor braking is utilized to keep the AC drive powered until power supply recovers.



Dual Rating For More Economical Selection



Heavy Duty 3.7kW AC Motor
Application: Cranes, presses, etc.

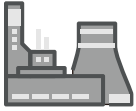


Normal Duty 5.5kW AC Motor
Application: Fans, pumps, etc.

Motor Rating kW	3 Phase 380V	
	Normal Duty Model Name	Heavy Duty Model Name
0.75		EVO800043SD75
1.5	EVO800043SD75	EVO800043S1D5
2.2	EVO800043S1D5	EVO800043S2D2
3.7	EVO800043S2D2	EVO800043S3D7
5.5	EVO800043S3D7	EVO800043S5D5
7.5	EVO800043S5D5	EVO800043S7D5
11	EVO800043S7D5	EVO800043S011
15	EVO800043S011	EVO800043S015

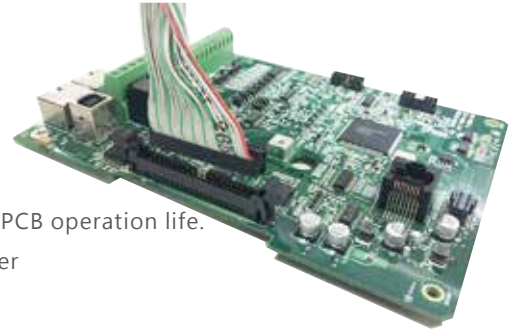
Motor Rating kW	3 Phase 380V	
	Normal Duty Model Name	Heavy Duty Model Name
18.5	EVO800043S015	EVO800043S018
22	EVO800043S018	EVO800043S022
30	EVO800043S022	EVO800043S030
37	EVO800043S030	EVO800043S037
45	EVO800043S037	EVO800043S045
55	EVO800043S045	EVO800043S055
75	EVO800043S055	EVO800043S075
90	EVO800043S075	

Features



Optimized Enviromental Immunity

- Soft cables improve reliability of signal transmission.
- 100% PCB coating effectively isolates dust and extends PCB operation life.
- Optional NEMA 1 kit ensures better protection to further extend product life span.



Strong Communication Expansion

- RS-485 and USB ports both built-in.
- USB port allows connection with Lite-On Studio PC software making data control easiest ever !
- RS-485 port allows communication with multiple AC drives.
- Supports major industrial communication including optional CANopen and more coming soon.



Easy To Maintain

- Quick release fan / Alarm information / Variable fan speed
- Remote keypad
- LCD keypad (option)

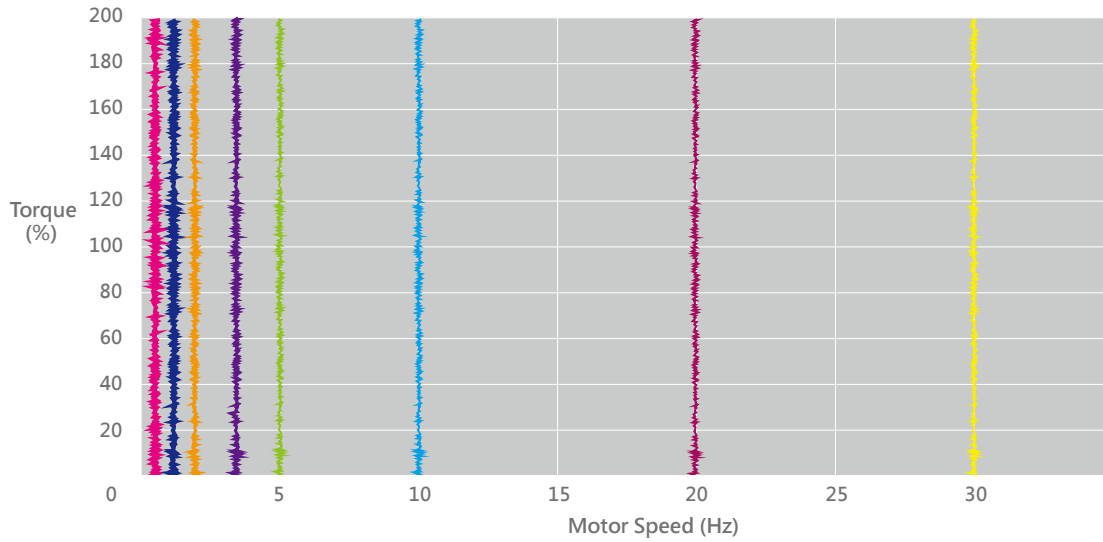


Global Certifications

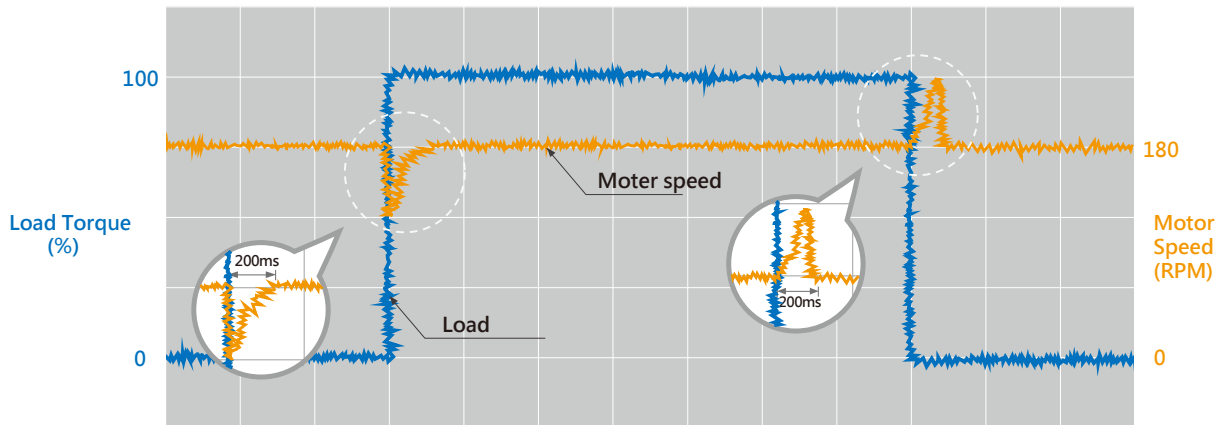
- All models comply with EU RoHS standards.
- Conformity to CE/UL/CUL.



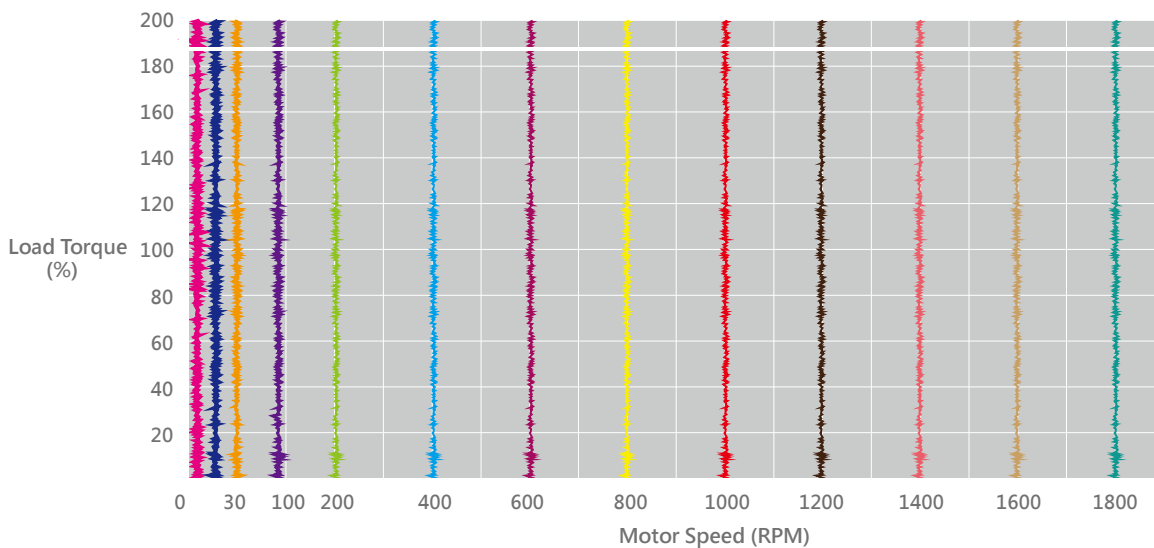
Cutting-edge Vector Driving Technology



- Outstanding performance of 200%.
- Closed-loop Current Vector Control (optional PG card).



- Sensorless Current Vector Control immediately reacts to sudden load changes.
- Wide speed control range 1:200.

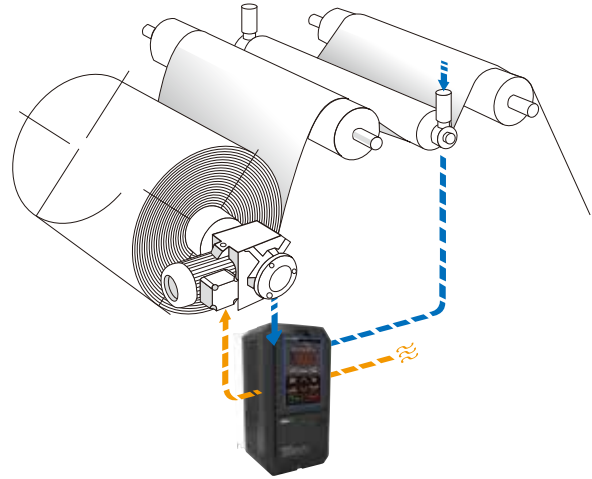
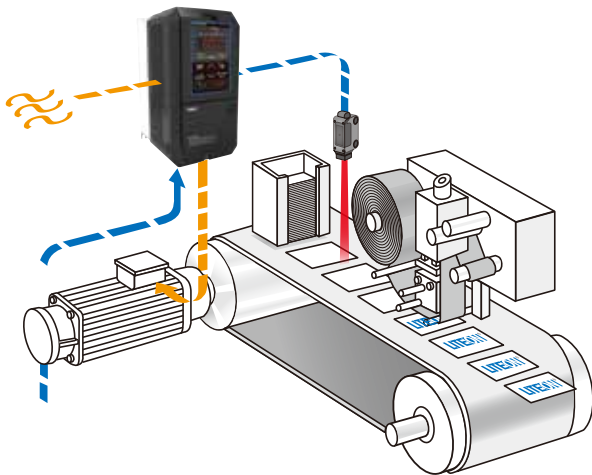


- Fast response and accurate speed control 1: 1500 with PG card.

Born For High-end Application

We make tension control easy for you

In tension control, you normally need to pay attention to materials which may break or wrinkle by unstable roll tension. EVO 8000 provides superior Current Vector Control for wide range of machine speed or reel diameter. It remains just the right tension and monitors dynamic process.

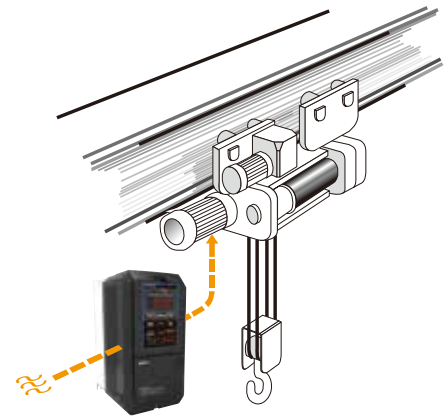


LITE-ON EVO8000 series drives permanent motors

EVO 8000 brings the best feature out of permanent motors. Our high speed CPU facilitates permanent motors' performance in dynamic applications.

Distinguished control solves vibration problem at low speed

In crane application, the lift and stability is usually a challenge. EVO 8000 achieves outstanding control at low speed and Zero Holding function. Controlling at low speed suppresses vibration and allows smooth acceleration and deceleration. This ensures smooth operation at low speed before mechanical braking in order to greatly extend life span of the machine. Zero Speed Holding function makes sure the motor keeps the cargo steady even when the speed is zero, to prevent it from fall down right after mechanical brake releases. Such function is a must to avoid any possible damage to cargo and lives.

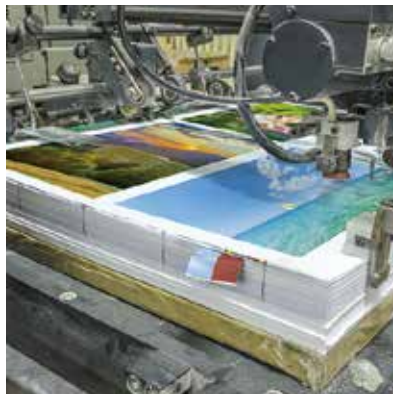


Control Method	V/F	Sensorless Current Vector Control	Current Vector Control
Application Requirement	<<<< Simple		High Accuracy >>>>
Application	Fans / Pumps	Printing Machinery Machine-tools, Extruders / Cutters	Winders
		Cranes	
		Lifting Machinery	
Speed Control	O	Zero Speed Holding	O (Zero Speed Holding)
Torque Control	×	Zero Speed Holding	O (Zero Speed Holding)
Position Control	×	×	O
Motion Control	1:40 (6 to 60Hz)	1:200 (0.3 to 60Hz)	1:1500
Applicable Motor Type	AC Motors	AC Motors	AC Motors

* Zero Speed Holding function under development

Application

- Lathes
- Hoists
- Lifts
- Gantries
- Wire Drawing Machine
- Presses
- Extractors
- Extruders
- Injecting Machines
- Dyeing & Finishing Machines



Ratings

- 200V Class

200V Class*											
Model Number	EVO800023S		D75	1D5	2D2	3D7	5D5	7D5	011	015	018
Frame			1		2		3			4	
Max. Motor Capacitor	HP	HD	1	2	3	5	7.5	10	15	20	25
	kW	HD	0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5
Input Voltage (V) / Frequency (Hz)			3 Phases , 200V ~ 240V , -15% ~ +10% , 50/60Hz								
Rating Output	Current	HD	5	8	11	17	25	33	49	65	75
	Max. Output Frequency (Hz)		0 ~ 400 Hz								
	Carrier Frequency (kHz)		2 ~ 15 kHz							2 ~ 10 kHz	
Cooling Method			Fan								

- 400V Class

400V Class											
Model Number	EVO800043S		D75	1D5	2D2	3D7	5D5	7D5	011	015	
Frame			1			2		3			
Max. Motor Capacitor	HP	HD	1	2	3	5	7.5	10	15	20	
		ND	2	3	5	7.5	10	15	20	25	
	kW	HD	0.75	1.5	2.2	3.7	5.5	7.5	11	15	
		ND	1.5	2.2	3.7	5.5	7.5	11	15	18.5	
Input Voltage (V) / Frequency (Hz)			3 Phases , 380V ~ 480V , -15% ~ +10% , 50/60Hz								
Rating Output	Current	HD	3.4	4.8	5.5	9	12	18	24	31	
		ND	4.1	5.4	6.9	10.8	13	24	31	38	
	Max. Output Frequency (Hz)		0 ~ 400 Hz								
Carrier Frequency (kHz)		2 ~ 15 kHz									
Cooling Method			Fan								

400V Class											
Model Number	EVO800043S		018	022	030	037*	045*	055*	075*	090*	110*
Frame			4			5			6		
Max. Motor Capacitor	HP	HD	25	30	40	50	60	75	100	125	150
		ND	30	40	50	60	75	100	125	150	175
	kW	HD	18.5	22	30	37	45	55	75	90	110
		ND	22	30	37	45	55	75	90	110	132
Input Voltage (V) / Frequency (Hz)			3 Phases , 380V ~ 480V , -15% ~ +10% , 50/60Hz								
Rating Output	Current	HD	39	45	60	75	92	115	150	180	215
		ND	44	58	72	92	115	150	180	215	248
	Max. Output Frequency (Hz)		0 ~ 400 Hz								
Carrier Frequency (kHz)		2 ~ 10 kHz									
Cooling Method			Fan								

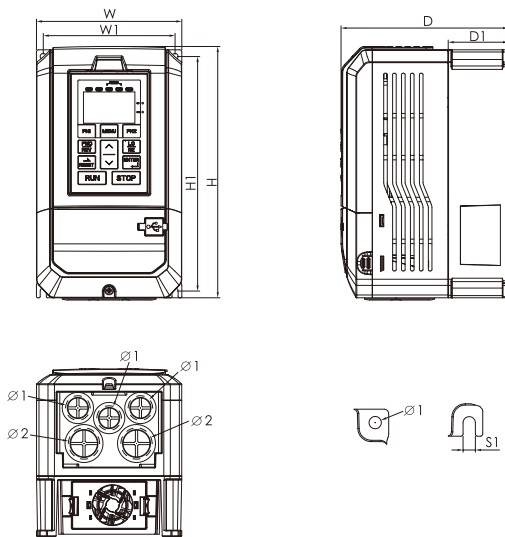
* Under development

Dimensions

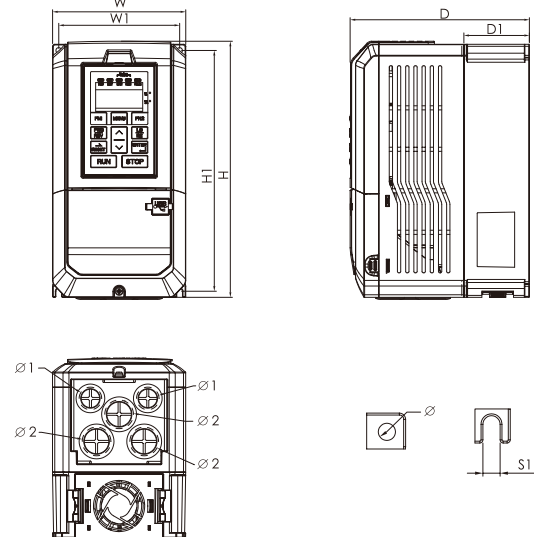
Unit : mm / inch

FRAME	W	W1	H	H1	D	D1	S1	Ø	Ø1	Ø2	Ø3
1	130 (5.12)	118 (4.65)	225 (8.85)	210 (8.26)	150 (5.90)	54 (2.12)	5.5 (0.22)	5.5 (0.22)	22 (0.86)		
2	130 (5.12)	118 (4.65)	250 (9.84)	235 (9.25)	175 (6.88)	64 (2.51)	5.5 (0.22)	5.5 (0.22)	22 (0.86)	28 (11)	
3	180 (7.09)	162 (6.38)	310 (12.2)	290.6 (11.44)	195 (7.68)	89 (3.50)	8.4 (0.33)	8.4 (0.33)	22 (0.86)	28 (11)	44 (1.73)
4	240 (9.45)	222 (8.74)	420 (16.53)	395.5 (15.57)	235 (9.25)	113.7 (4.47)	8.4 (0.33)	8.4 (0.33)	22 (0.86)	28 (11)	44 (1.73)
5	304 (11.88)	270 (10.55)	550 (21.48)	530 (20.70)	323 (12.62)	315 (12.30)	11 (0.43)	11 (0.43)			
6	344 (13.43)	260 (10.15)	665 (25.97)	640 (25.0)	358 (13.98)	350 (13.67)	11 (0.43)	11 (0.43)	19 (0.43)		

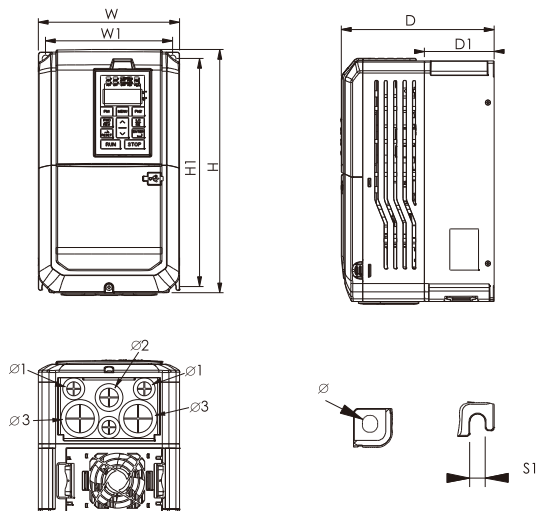
Frame 1



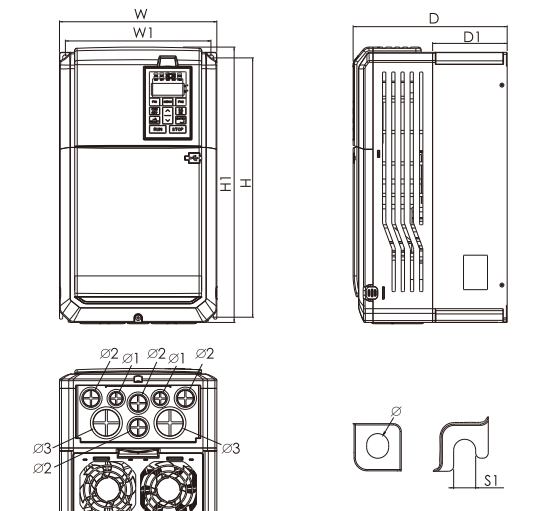
Frame 2



Frame 3

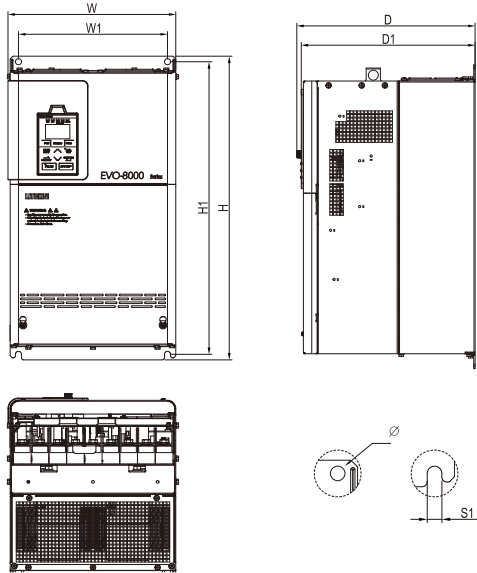


Frame 4

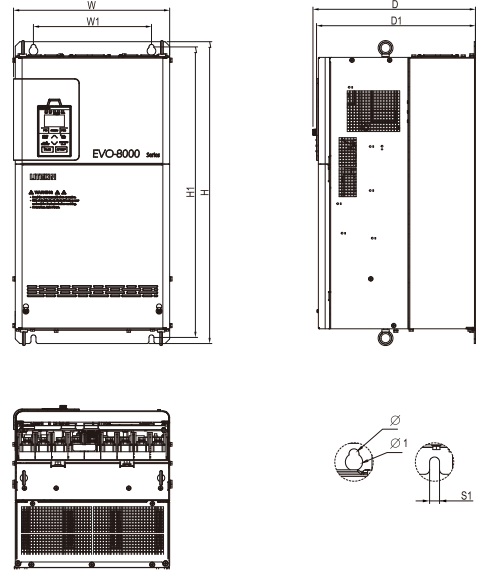


Dimensions

Frame 5



Frame 6



General Specification

Item		Specification
Control Characteristic	Control Method	V/F Control, Closed-Loop V/F Control, IM / PM Closed-Loop Current Vector Control, IM / PM Open-Loop Current Vector Control
	Output Frequency	0~400 Hz
	Frequency Accuracy	Digital Input: within $\pm 0.01\%$ of the Max. output frequency
		Analog Input: within $\pm 0.1\%$ of max. output frequency
	Frequency Setting Resolution	Digital Input : 0.01Hz
		Analog Output : 1/1000 of max. frequency
	Starting Torque	150% / 3Hz (V/F and Closed-Loop V/F) 200% / 0.3Hz (Sensorless Current Vector Control) 200% / 0 r/min (IM/PM Closed-Loop Current Vector Control) 100% / 5% (PM Open-Loop Current Vector Control)
	Speed Control Range*1	1: 40 (V/F and V/F with PG) 1:200 (IM Sensorless Current Vector Control) 1:20 (PM Sensorless Current Vector Control) 1:1500 (IM/PM Current Vector Control with PG)
	Speed Control Accuracy*1	$\pm 0.2\%$ (Open-Loop Vector Control) $\pm 0.02\%$ (Closed-Loop Vector Control)
	Speed Response	10 Hz in Sensorless Current Vector Control 50 Hz in Current Vector Control
	Acc/Dec Time	0.0 ~ 6000.0 sec
	Braking Torque	approx. 20%
	V/F Pattern	15 fixed and 1 programmable
Overload Capacity	120% for 1 min. within every 10 min. (Normal Duty) 150% for 1 min. within every 10 min. (Heavy Duty)	
Parameter Function	Torque Control, Speed/Torque Control Switching, Feed Forward Control, Zero Speed Holding, Momentary Power Restart, Speed Search, Overtorque/Undertorque Detection, Torque Limit, Multi-Step Speed, Acc./Dec. Switch, S-Curve Acc./Dec., 3-Wire Sequence Control, Auto-Tuning, Cooling Fan ON/OFF Switch, Slip Compensation, Torque Compensation, Frequency Jump, Upper/Lower Limits for Frequency Command, DC Braking at Run/Stop, PID Control including Pause Function, Energy Saving Mode, Fault Reset, Kinetic Energy Braking, Auto Voltage Adjustment, Overvoltage Suppression, Traverse, etc.	
Operating Environment	Area of Use	Indoor without corrosive gas/liquid or flammable gas/liquid/oil mist/dust
	Ambient Temperature	-10 °C ~ +50° C, -10° C ~ +40° C (NEMA1) , below 90% RH without froze or condensation
	Storage Temperature	-20°C ~ +60°C
	Altitude	Up to 1000 meters
	Vibration	Below 9.8 m/s ² (10 ~ 20Hz), below 5.9 m/s ² (20 ~ 55Hz)
	Enclosure	IP20, NEMA1 (with NEMA kit option)
Number of I/O	Analog Input (AI)	2 points A1: 0 ~ 10V, -10 ~ 10V / A2: 0 or 4 ~ 20mA, 0 ~ 10V, 0 ~ 5V
	Digital Input (DI)	8 points
	Analog Output (AO)	2 points FM: 0 ~ 10V, -10 ~ 10V / AM: 0 or 4 ~ 20mA, 0~10V
	Digital Output (DO)	2 points
	Relay Output (RO)	2 points
	Pulse Input (PI)	1 point
	Pulse Output (PO)	1 point
Build-In	Modbus (RS-485), USB port	
Option	Profibus-DP*, CANopen, DeviceNet*, EtherCAT*	

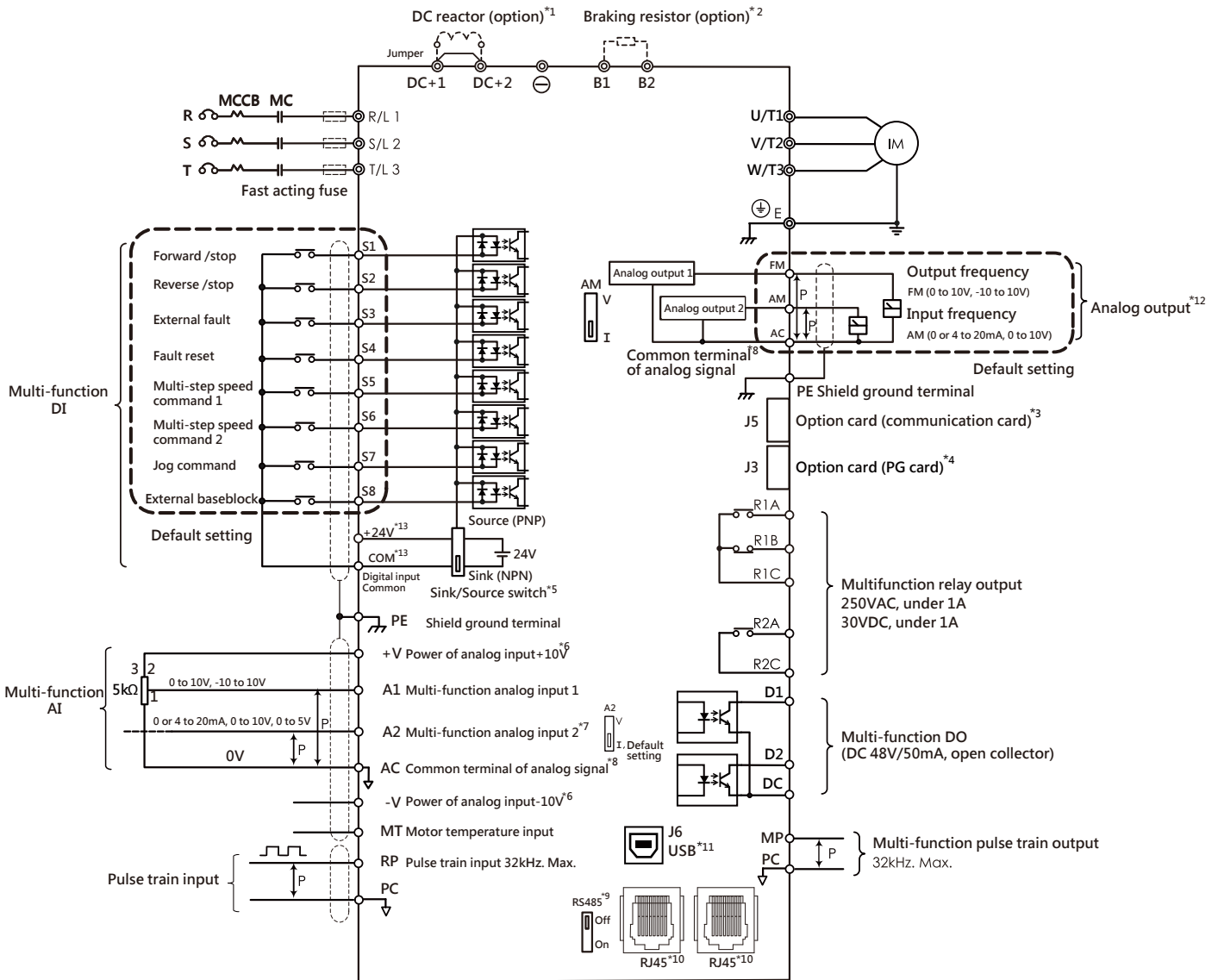
*1. This value is measured in the laboratory environment, if demand, please contact your local dealer or contact LITE-ON.

*2. Under development

Terminal Block Description

Type	Terminal Name	Code	Terminal Discription
Main Circuit	AC power input	R/L1	Input power terminal
		S/L2	
		T/L3	
	Braking resistor	B1	30kW and below: Braking transistor built-in.
		B2	Please purchase optional braking resistor to connect
	Braking module	DC+	37kW and above: Please purchase optional braking module to connect
		DC-	
DC reactor	DC+1/ DC+2	400V class, 7.5kW~30kW: Please remove the jumper and connect DC reactor to these terminals. 400V class >=37kW: selection of build-in P/DC+ reactor is available.	
	P / DC+		
AC drive output	U/T1	Please connect to AC motor	
	V/T2		
	W/T3		
Ground terminal	E	Ground terminal for AC drive. Please ensure grounding is properly wired.	
Control Circuit	Digital input terminal 1	S1	ON : Forward /OFF : Stop
	Digital input terminal 2	S2	ON : Reversae /OFF : Stop
	Digital input terminal 3	S3	External fault (normal open)
	Digital input terminal 4	S4	Photo couler: input voltage 24V/ 8mA Default setting on sink mode.
	Digital input terminal 5	S5	Use Sink/Source DIP switch on the control board to set sink/source mode for multi-function digital inputs.
	Digital input terminal 6	S6	
	Digital input terminal 7	S7	Multi-speed frequency command 1
	Digital input terminal 8	S8	Multi-speed frequency command 2
	Digital input signal power	24V	+24V / 200mA digital control signal common
	Digital input common	COM	Common terminal of digital input for NPN/PNP mode switch. Please ensure the mode is selected correctly when connecting.
	Digital output terminal 1	D1	Programmable digital output terminal
	Digital output terminal 2	D2	48V/ 2 ~ 50mA
	Digital output common	DC	Digital output terminal
	Auxiliary power	+V 、 -V	±10V / 20mA auxiliary power terminal for analog input
	Analog input terminal 1	A1	Multi-function analog input terminal 1, 0~10V/ -10V~+10V
	Analog input terminal 2	A2	Multi-function analog input terminal 2, 0 or 4~20mA/ 0~10V/ 0~5V
	Analog input 1	FM	Programmable analog output 0~10V/ -10V~+10V
	Analog input 2	AM	Multi-function analog output 0 or 4~20mA/ 0~10V
	Analog signal common	AC	Common terminal of analog signal
	Motor temperature sensor signal	MT	To connect temperature sensor of AC motor in order to make AC drive aware of motor operation temperature and react accordingly
	Pulse train input terminal	RP	To give command via pulse train input terminal
	Pulse train output terminal	MP	Multi-function pulse train output 30Vp-p/30mA max. frequency 32kHz
	Common Pulse train terminal	PC	Common terminal for pulse train signals
Shielded Ground	PE	Ground terminal for control signal shielded cable to effectively suppress external interference. Please ensure this is properly wired.	
Relay 1	R1A	Normal open terminal	
	R1B	Normal closed terminal	
	R1C	Common terminal	
	R2A	Normal open terminal	
Relay 2	R2C	Normal open terminal	
Com.	RS-485 port	RJ45-1 RJ45-2	To connect RS-485 communication at max. speed 115200 bps
	USB port	USB	To connect PC to use LiteON Studio software

Wiring Diagram



- ⊙ indicates main circuit
- indicates control circuit
- ⋯ indicates shielded cable
- ⌈⌋ indicates twisted-pair shielded cable

Notes:

- *1. Please remove DC+ (+1/+2) jumper when installing DC reactor.
- *2. When using braking resistor, please ensure stall prevention function is off.
- *3. J5 is port of optional communication card. Please refer to user manual when installing it.
- *4. J3 is port of optional speed control feedback card (PG card). Such option card may be needed depending on control mode. Please also refer to user manual when installing it.
- *5. Multi-function analog input S1~S8 can be switched between Sink(NPN) or Source(PNP) mode. Default: NPN mode.
- *6. +V/-V is analog auxiliary power. Please do not connect +V with -V.
- *7. Switch A2 is used to set analog input as voltage input or current input.
- *8. AC is common terminal of analog signal (Analog Common).
- *9. Switch of RS-485 terminal resistor. Please set the last AC drive's terminal resistor ON when paralleling multiple AC drives through communication.
- *10. RJ45 is the communication port of RS-485.
- *11. USB port is used to connect PC through USB cable.
- *12. Analog output is used to connect frequency meter, current meter, voltage meter and power meter.
- *13. This catalog includes the blueprint of our products in the future. For more precise specifications, please refer to the quick start that alongside with our products. If you have any question, please contact our authorized distributors or LITE-ON.