

Power Solutions

- Communication power supply
- Server power supply
- Electric power supply
- Medical power supply
- High voltage power supply
- Display power supply
- Photovoltaic (PV)
- Energy storage system
- Charging pile components
- OA power supply
- Flat-panel power supply

Industrial Automation

- AC drive
- Servo system
- Control system
- Sensor
- Internal gear pump
- Industrial IoT
- Integrated elevator controller
- Engineering vehicle controller

EV & Railway Solutions

- In-vehicle integrated charging system
- Motor controllers
- All-in-one high voltage integrated drive
- EV compressor
- Thermal management system
- Rail transit air conditioning controller
- Frequency converter
- PFC

Intelligent Equipment

- Intelligent digital welding machine
- Industrial microwave equipment
- Intelligent oil production system of electric submersible progressing cavity pumping (ESPCP)

Home Appliance Control Solutions

- HVAC
- Cold chain
- Washing (Drying) machines
- Kitchen appliance
- Smart bidet

Precision Connection

- FFC
- FPC
- Coaxial line
- Magnet wire
- SQ common-mode inductor

MV820E

New Generation Elevator AC Drive



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WeChat Official Account



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Official Website



WeChat Mini Program

Version: 202405

Megmeet reserves the right to modify the technical parameters and appearance of the products in this catalogue without prior advice to the users.



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About Megmeet

Megmeet (Stock coed: 002851) is a comprehensive solution provider in the field of electrical automation, integrating software and hardware R&D, production, sales and services. Mastering the core technologies in electrical automation, we are engaged in six core business areas: Industrial Automation, EV & Railway Solutions, Intelligent Equipment, Power Solutions, Home Appliance Control Solutions, and Precision Connection.

Megmeet has established a strong R&D, manufacturing, marketing and service platform, empowered by an active team of more than 7300 employees, among which more than 2600 work as R&D engineers. We have set up R&D centers in cities including Shenzhen, Zhuzhou, Changsha, Wuhan, Xi'an, Hangzhou, Taizhou (Zhejiang) and Chengdu, as well as research institutes in Germany, Sweden and the United States. We have also established manufacturing centers in Zhuzhou, Heyuan, Dongguan, Hangzhou, Taizhou (Zhejiang) and Yiwu, as well as factories in Thailand and India; Our marketing and service resources have been allocated to the United States, Japan, Korea, Germany, Poland, Romania, Sweden, Turkey, India, as well as Southeast Asia

To ensure a better living environment for all human beings, Megmeet will continue the effort to improve the efficient use of electricity, promote clean energy, and maximize production efficiency in the pursuit of a world-leading position in the power electronics industry.

 **2600+**
R&D Personnel

 **11**
R&D Centers

 **8**
Manufacturing Bases

 **7300+**
Staff

 **1700+**
Patents and Copyrights

MV820E Elevator AC Drive

New Generation High Performance Elevator AC Drive

Megmeet MV820E series elevator AC drive is developed on a new core hardware platform, designed with delicate structure, and optimized for motor control to achieve the drive integration of asynchronous motors and PM synchronous motors. It is featured with modular expansions and compatible with multiple kinds of encoders, offers bus communication, flexible S-ramps as well as special logic control for elevators, enhancing control performance, improving safety and reliability, and making commissioning much easier.

Application

| Elevator speed \leq 4 m/s

Input Voltage

| 323 to 528 V AC



Naming Rule



MV820E - 4T 5.5

1

2

3

1 Product series

MV820E Elevator AC Drive

2 Voltage class

Three-phase 380 V

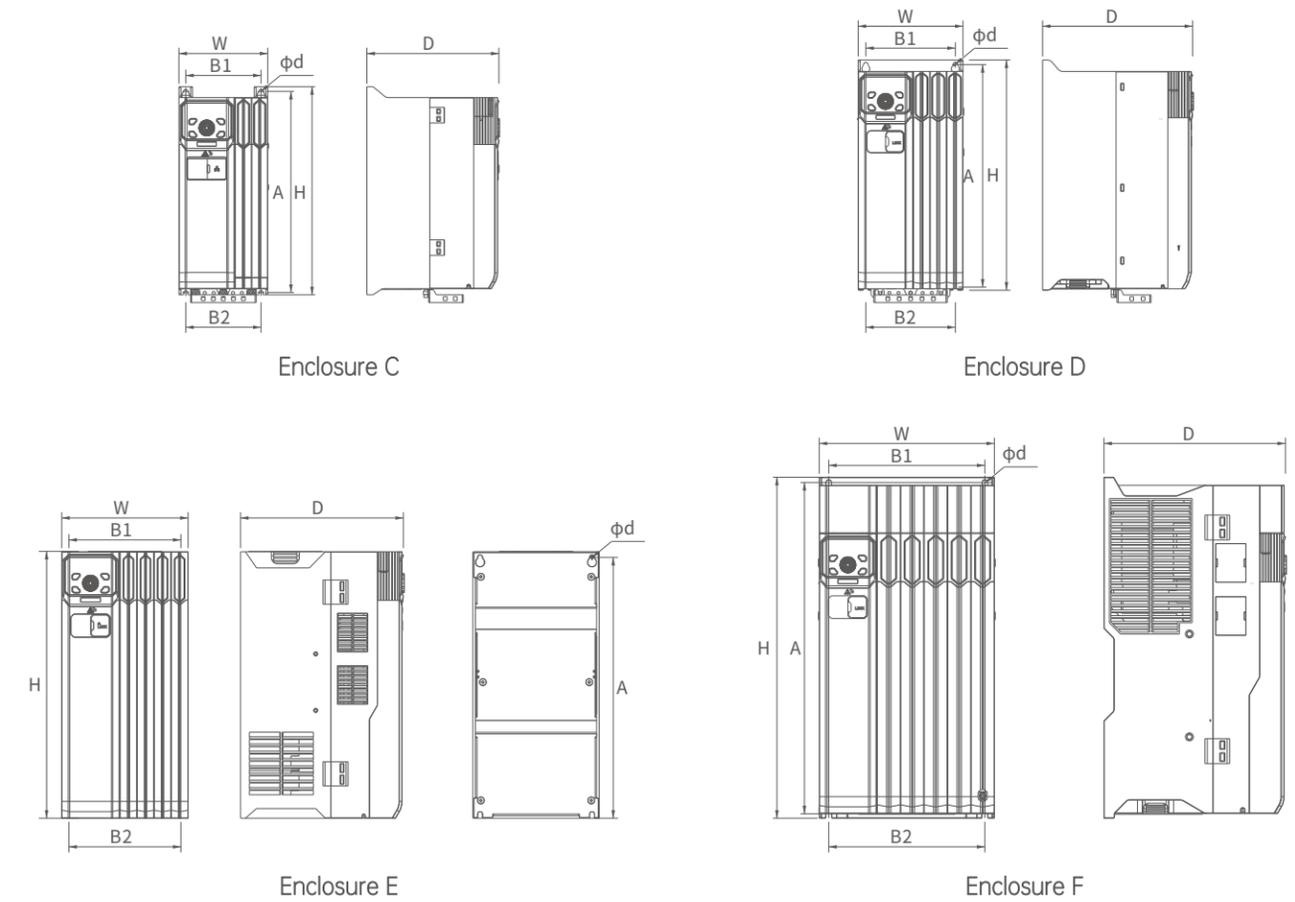
3 Rated capacity

Rated output power 5.5 kW

Technical Parameters

Enclosure model	Product model	Rated input current (A)	Rated output current (A)	Rated output power (kW)
C	MV820E-4T5.5	14.5	13.0	5.5
	MV820E-4T7.5	20.5	17.0	7.5
D	MV820E-4T11	26.0	25.0	11.0
	MV820E-4T15	35.0	32.0	15.0
E	MV820E-4T18.5	49.0	37.0	18.5
	MV820E-4T22	58.0	45.0	22.0
F	MV820E-4T30	62.0	60.0	30.0
	MV820E-4T37	76.0	75.0	37.0

Installation Dimensions



Enclosure model	Product model	Outline dimensions (mm)			Mounting dimensions (mm)			Hole diameter (mm)
		H	W	D	A	B1	B2	
C	MV820E-4T5.5	267	115	171	259	97.5	97.5	5
	MV820E-4T7.5							
D	MV820E-4T11	300	138	195.92	290	118	118	6
	MV820E-4T15							
E	MV820E-4T18.5	330	158	204.8	318	140	140	6
	MV820E-4T22							
F	MV820E-4T30	424	220	229	412	196	196	7
	MV820E-4T37							

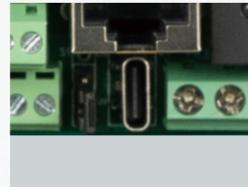
Product Overview

Product appearance:

European style design, narrow body, compact structure and a user-friendly display and interfaces. Multi-function terminals with a variety of expansions to meet diverse need in applications.

Operating panel

- Silicone buttons for comfort in touch
- Ergonomic layout
- 5-digit LED display; multi-functional M button



Type-C interface

- Standard Type-C interface
- Host controller connection for parameter setting and status monitoring of the drive

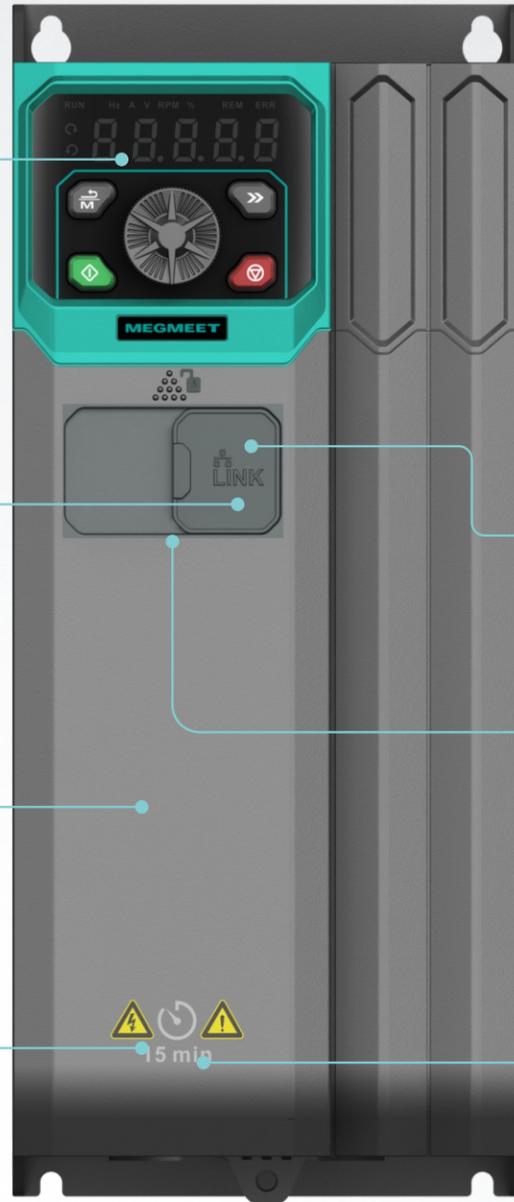
Lower cover plate

- Screwless design
- Slip-on mounting for fast and easy installation



Expansion box

- Expansion bus communication card
- PROFINET
- EtherCAT



Multi-function terminals

- AI/AO
- DI/HDI
- DO/HDO
- Thermistor input

Standard network port

- Standard network port supports remote keypad
- Remote LCD panel option available



Expansion PG card



Cooling fan

- Pop-up design of fan cover for easier replacement and cleaning



Major Selling Points

Self-adaptive

- Auto adjustment of loop gain, with smooth ride performance

Easy and intelligent

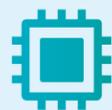
- Synchronous motor angle-free auto-tuning
- All parameters auto-tuned in the static status
- Handheld keypad, host computer software and mobile phone App for commissioning
- Direct-to-floor technology based on distance control, automatically generating the velocity profile

Safe and reliable

- No-load-cell start and anti-rollback
- High-performance asynchronous motor open-loop control with multiple protective methods
- Enabling test, brake contactor control, RUN contactor control, forced slow-down, advance door opening, shaft auto-tuning, overspeed protection, and stuck contact protection

MV820E Series Features

■ New core hardware platform



New MCU Processor



Optimized motor control



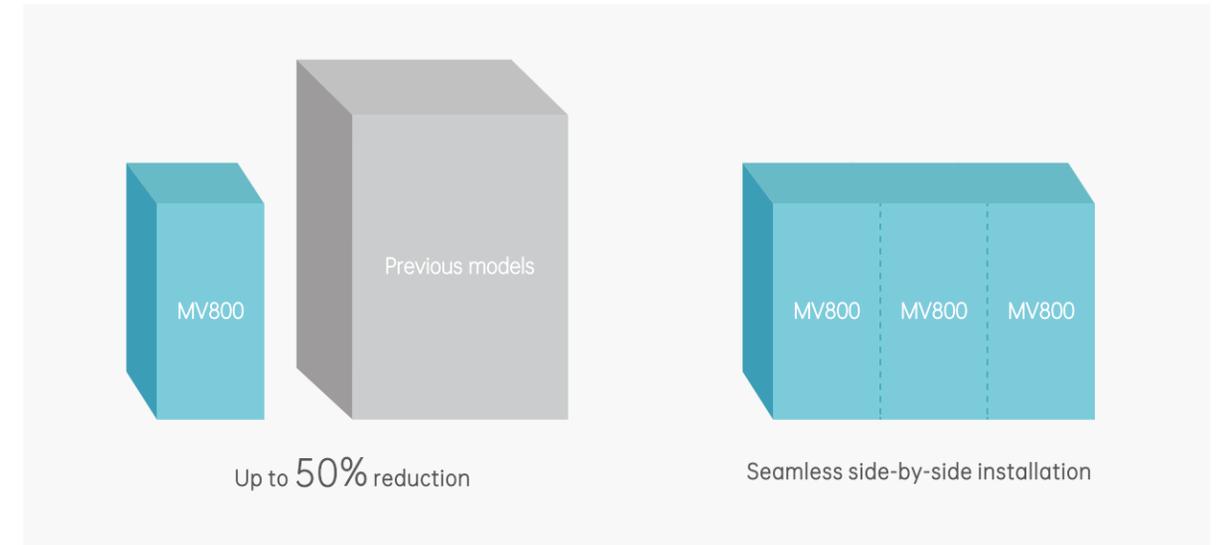
More extensive function modules



Digital conversion by input terminals

■ Compact size with book-style deployment

- European narrow-body design for the entire series, largely saving space required for installation in the electrical.
- Independent air ducts through the top and the bottom, allowing efficient use of space through seamless side-by-side installation just like books



■ Integrated control/drive

- Integrated drive of asynchronous and permanent magnet synchronous motors
- Integration of V/F, SVC and FVC control
- Integration of speed and torque modes
- Optimized motor algorithms for more accurate parameter adjustment
- Time-based multi-motor drive
- Non-standard function customization and specialized process algorithms



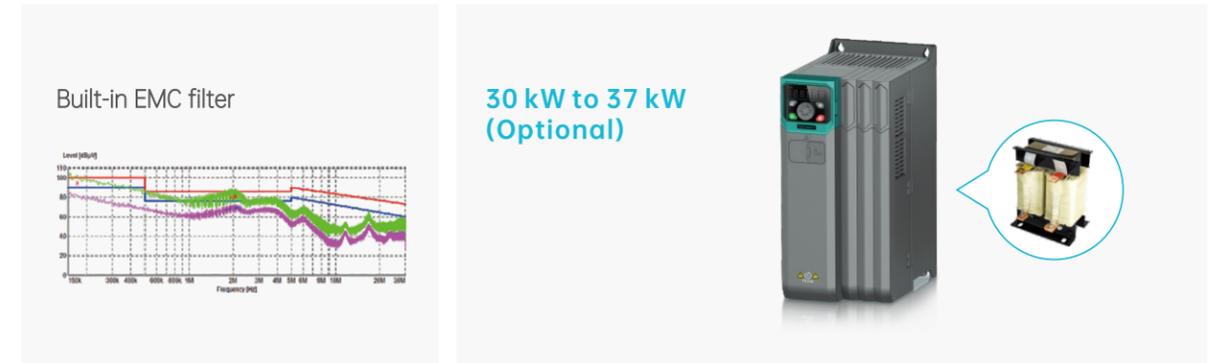
Compatible encoders

- Ordinary square wave incremental type (ABZ)
- Ordinary square wave incremental type (ABZ/UWV)
- Resolver
- SinCos
- Others (Magnetic encoders, communication encoders)

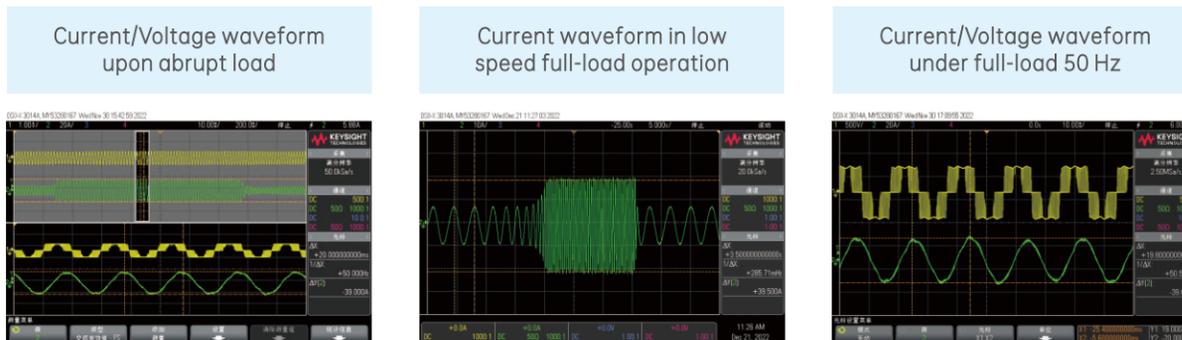


High electromagnetic compatibility

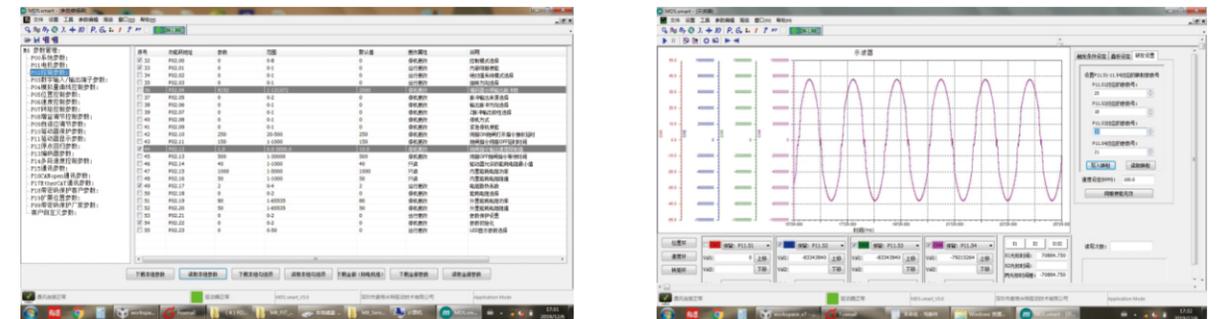
The entire series has built-in EMC filters. DCL is available for 30 kW models and above. These features offer high electromagnetic compatibility to minimize the need of clients for additional accessories.



Excellent driving performance (Qualified through 5.5 kW asynchronous motor SVC1 test)



Host controller software



- Parameter upload/download
- User-friendly HMI
- Communication based on USB2.0
- 32 bit*4-channel real-time oscilloscope display with sampling frequency up to 16K, supporting various trigger modes

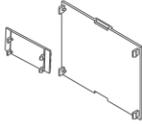
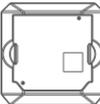
Stable, reliable, highly adaptable

Independent air duct design and galvanic isolation to avoid dust intervention

PCBA three-proof coating for seamless protection

Careful selection of components with redundant capacity for prolonged machine lifespan

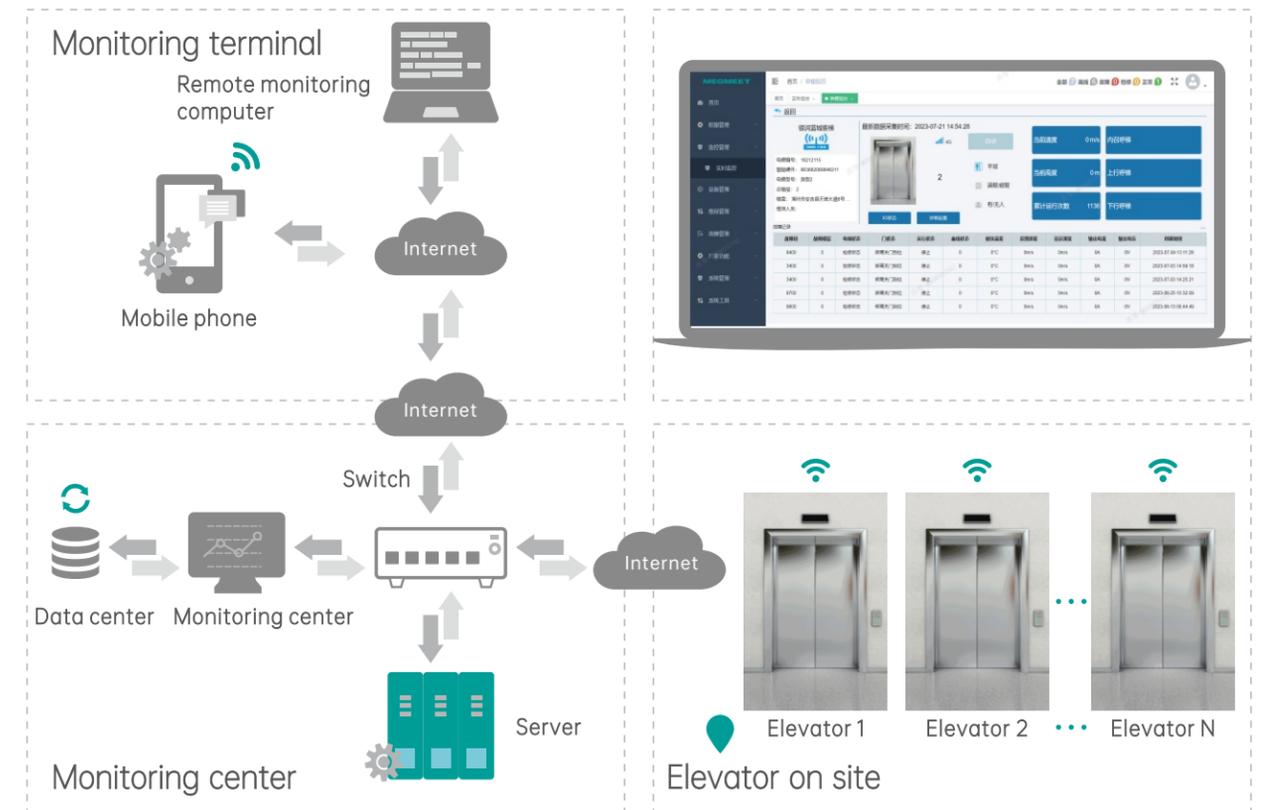
Options & Accessories

Category	Name	Model	Diagram	Support model	Function
Protection	Dustproof kit	MV810-FHJ		All plastic-case models	Prevents dust from entering the drive
	Embedded mounting bracket kit	MV810-EMBB MV810-EMBC MV810-EMBD		Whole series	For embedded installation of drives, air duct protection and independent heat dissipation
	Reinforced metal bottom plate	MV810-MTEB MV810-MTEC MV810-MTED		All plastic-case models	For use in high-temperature or oily environment
Communication	PROFINET communication cards	MV810-PNET01		Whole series	The PROFINET protocol supports 100 Mbps full duplex
PG card	Simple incremental PG card	MV810-PG01		Whole series	Suitable for 5 V differential encoders, open collector (OC) output encoders and push-pull complementary output encoders, with 5 V and 12 V output voltage options
Installation and maintenance	LED keypad	MV820-DP01		MV820	Shuttle, parameter copy function
	Keypad mounting base	MV820-JPT		Whole series	This base allows the MV820 keypad to be mounted to the cabinet door
	Wire fixation bracket	MV810-FIXB MV810-FIXC MV810-FIXD		Whole series	Shielded cable grounding and wire fixation function
	Guide rail bracket	MV-DIN3563		Size B	Standard DIN 35 mm guide rail bracket mounting base, 63 mm mounting hole distance

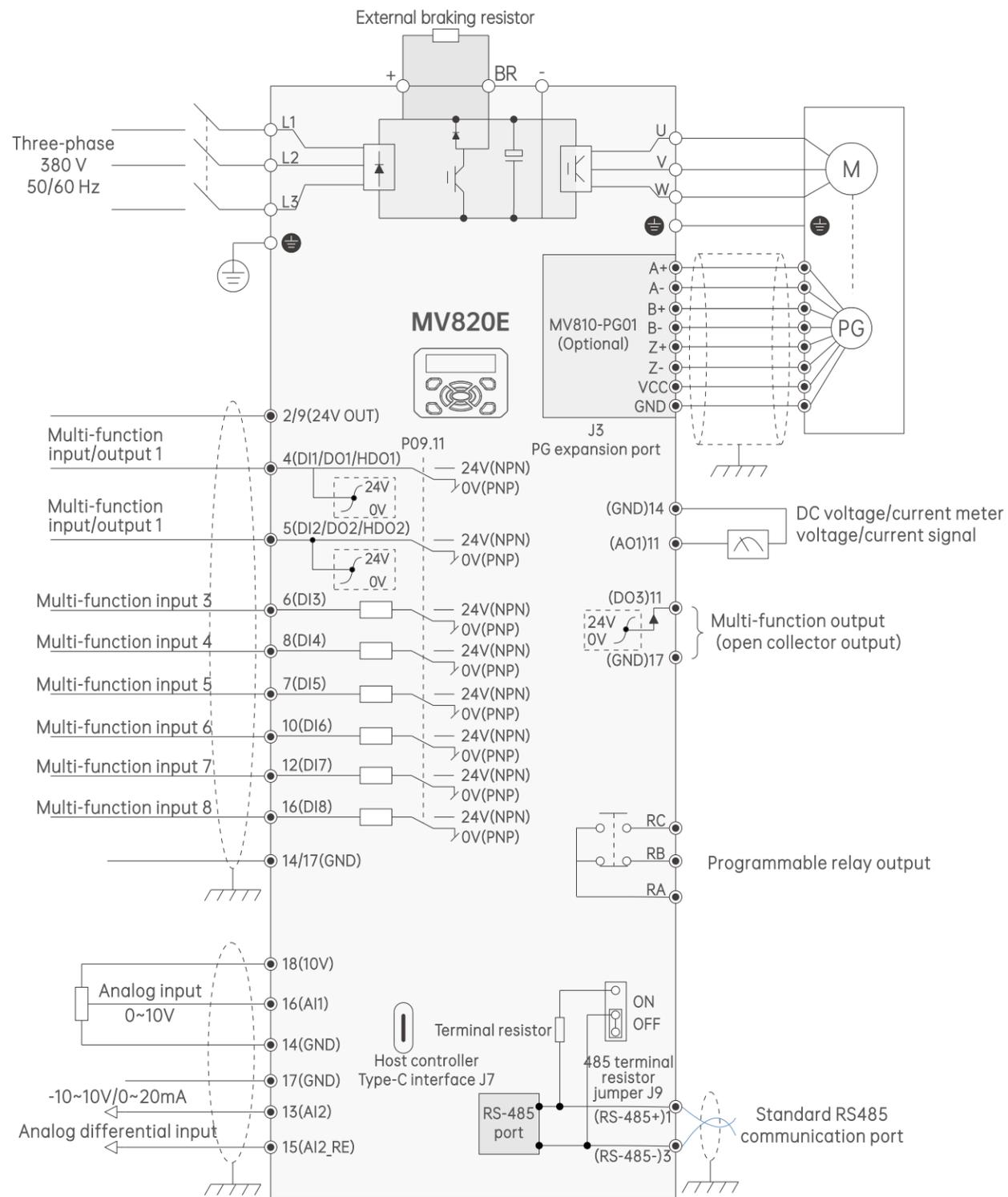
Mobile Phone App + Bluetooth Module



Elevator IoT Solution



Standard operation wiring



Terminal Wiring Description

Terminal	Function
L1, L2, L3	Three-phase 380 V AC or three-phase 220 V AC input terminals
+, BR	Connected to the external braking resistor
+, -	DC bus terminals
U, V, W	Three-phase AC output terminals
⊕	PE connection terminal, also used to secure the wire fixation bracket

Signal type	Terminal mark	Terminal name	Terminal function
Power	2/9, 14/17	+24V,GND	+24 V reference power output, permissible maximum output current 200 mA
Digital input	4	DI1	NPN or PNP input selected through P09.11
	5	DI2	
	6	DI3	
	8	DI4	
Digital output	11	DO3	Maximum output current: 50 mA
	RA, RB, RC	Relay	RA-RB: normally closed, RA-RC: normally open Contact capacity: AC 250 V / 2 A (COS=1) AC 250 V / 1 A (COS=0.4) DC 30 V / 1 A
Communication	1	RS485+	Standard RS485 communication interface Use twisted pair cables or shielded cables
	3	RS485-	

Technical Specifications

Input power	
Rated voltage (V)	4T models: three-phase 380 V to 480 V; voltage continuous fluctuation $\pm 10\%$, transient fluctuation -15% to $+10\%$, that is, 323 V to 528 V; voltage unbalance rate $< 3\%$
Rated input current (A)	Please refer to Table 1-1 of the user manual
Rated frequency (Hz)	50 Hz/60 Hz, fluctuation range ± 2 Hz
Output power	
Standard applicative motor (kW)	
Rated capacity (kVA)	Please refer to table 1-1 of the user manual
Rated current (A)	
Rated voltage (V)	Three-phase output under rated input conditions, 0 to rated input voltage, deviation less than $\pm 3\%$
Output frequency (Hz)	V/F: 0.00 to 599.0 Hz (unit: 0.01 Hz); vector control: 0.00 to 599.00 Hz
Overload capacity	1 min for 150% rated current, 3 s for 180% rated current, 1 s for 200% rated current
Operation control features	
Control mode	Vector control without PG, V/F control; vector control with PG
Maximum output frequency	V/F control: 599.0 Hz; other control: 599.0 Hz; high frequency version: 3500 Hz
Speed regulation range	1: 200 (flux vector control without PG); 1: 1000 (flux vector control with PG)
Speed control precision	$\pm 0.5\%$ (flux vector control without PG); $\pm 0.02\%$ (flux vector control with PG)
Speed fluctuation	$\pm 0.3\%$ (flux vector control without PG); $\pm 0.1\%$ (flux vector control with PG)
Torque response	< 20 ms (flux vector control without PG); < 10 ms (flux vector control with PG)
Torque control	Torque control precision $\pm 5\%$ for flux vector control without PG (above 5 Hz for asynchronous motors; above 10 Hz for synchronous motors); torque control precision $\pm 3\%$ for flux vector with PG
Startup torque	0.25 Hz 150% (flux vector control without PG); 0.00 Hz 180% (flux vector control with PG)
Product functions	
Key functions	Fast tracking, over-torque/under-torque detection, torque limit, multi-speed reference, switchover of multiple acceleration/deceleration time, auto-tuning, S curve acceleration/deceleration, slip compensation, switchover of torque and speed control modes, automatic restart, and dynamic braking; simple PLC, AVR, switchover between two sets of motor parameters: fan speed control, frequency hopping, energy saving operation, PID adjustment (sleep function), power dip ride-through and multi-command switchover. Modbus communication, torque control, fieldbus communication, master-slave control, and so on.
Basic frequency	0.1Hz~599.0Hz
Startup frequency	0.0Hz~50.0Hz
Frequency setting mode	Digital panel setting, analog setting: AI1/AI2, terminal pulse HDI setting; simple PLC reference, multiple PLC reference, host controller communication setting, PID control reference, fieldbus communication

Acceleration/Deceleration time	0.1 to 6000.0, (unit: 0.1 s)
Dynamic braking capacity	Built-in braking unit for all MV810G1 models as standard configuration, braking ratio 0.0 to 100.0%
DC braking capacity	Startup frequency: 0.00 Hz to 599.00 Hz; braking time: 0.1 s to 50.0 s braking current: 0% to 100%, according to the nominal rated current of the drive
Terminal functions	Please refer to the terminal function part for details.

Product function	
Please refer to fault protection part for details	

Others	
Efficiency	7.5kW or below: $\geq 93\%$; 15kW or below: $\geq 95\%$
Installation method	Wall-mounted. Mounted vertically on a solid indoor base, with at least 100 mm space for air inlet and outlet, and at least 10 mm space on the left and right sides of the case.
Protection degree	IP20
Cooling mode	Air cooling

Environment	
Operating site	Indoors, away from direct sunlight, free from dust, corrosive gas, combustible gas, oil mist, water vapor, water dripping or salt etc.
Altitude	Normal operation without derating for altitude ≤ 1000 m; derating by 1% for every additional 100 m in altitude; maximum altitude: 3000 m.
Ambient temperature	-10°C to $+50^{\circ}\text{C}$, air temperature change less than $0.5^{\circ}\text{C}/\text{min}$; derating required if the ambient temperature is above 40°C
Humidity	5% to 95% RH; no condensing, rain, snow, or hail; solar radiation below $700 \text{ W}/\text{m}^2$; air pressure: 70 to 106 kPa
Vibration	Sine vibration: 1.5 mm displacement for 2 to 9 Hz; $5.9 \text{ m}/\text{s}^2$ (0.6g) for 9 to 200 Hz
Storage temperature	-30°C to $+70^{\circ}\text{C}$; air temperature change less than $1^{\circ}\text{C}/\text{min}$; maximum 60°C for long-term storage; 60°C to 70°C for short-term storage only