

Power Solutions

- ☐ Telecom Power
- ☐ Server Power
- ☐ Electric Power
- ☐ Medical Power
- ☐ Display Power
- ☐ LED Power
- ☐ Laser Power
- ☐ OA Power
- ☐ Flat Panel Power
- ☐ Bi-directional Inverters for Portable Power
- ☐ Solar & BESS & EV Charging Solution

Industry Automation

- ☐ Servo System
- ☐ Control System
- ☐ Elevator Controller
- ☐ Linear Motors
- ☐ IOT Solution
- ☐ Encoder
- ☒ Variable Frequency Drive
- ☐ Internal Gear Pump

New Energy Solutions

- ☐ Multiplexed EV Charging System(OBC & DC-DC)
- ☐ Power Electronic Unit(2-in-1, 3-in-1)
- ☐ E-Compressor
- ☐ TV EDU
- ☐ Motor Control Unit
- ☐ Construction Machinery Controller
- ☐ Intelligent Active Hydraulic Suspension (i-AHS)
- ☐ Railway A/C Controller
- ☐ Railway VFD
- ☐ Light Electric Vehicle Controller
- ☐ Thermal Mgmt. System

Home Appliance Control Solutions

- ☐ Residential A/C Controller
- ☐ Commercial A/C Controller
- ☐ Heat Pump Controller
- ☐ Vehicle A/C Controller
- ☐ Solar A/C Controller
- ☐ Mini Compressor Controller
- ☐ Refrigerator Controller
- ☐ Washer/Dryer Controller
- ☐ Residential Microwave
- ☐ Industrial Microwave
- ☐ Smart Bidet
- ☐ RF Thawing System

Precision Connection

- ☐ FFC
- ☐ FPC
- ☐ Coaxial Cable
- ☐ CCS
- ☐ Litz Wire
- ☐ Peek Wire

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MV810A Series AC Drive for Air Compressors





Contents

01	About Megmeet
02	Product Overview
03-06	Product Features
07	System Wiring
08	Product Model Selection
09	Technical Specifications
10-12	Installation Dimensions

ABOUT MEGMEET

MEGMEET is a comprehensive solution provider for hardware and software R&D, production, sales, and service in the field of electrical automation. With power electronics and automation control at its core, MEGMEET's main businesses include Power Solutions, Industrial Automation, New Energy Solutions, Intelligent Equipment, Home Appliance Control Solutions, and Precision Connection.

MEGMEET has established a robust R&D, manufacturing, marketing, and service platform, with over 7,600 employees, including more than 2,800 R&D staff worldwide. MEGMEET's global presence includes R&D Centers in China, the United States, and Germany; Manufacturing Centers in Thailand, India, the United States, and China; and Regional Offices across North America, South America, Europe, Central Asia, Northeast Asia, Southeast Asia, India, the Middle East, Oceania, and Africa.

MEGMEET is committed to creating a cleaner living environment for all human beings through more efficient energy utilization and improved manufacturing efficiency. MEGMEET aims to become the world leader in electrical automation and achieve the goal of MEGMEET EVERYWHERE.

 **2800 +**
R&D Staff

 **10**
R&D Centers

 **9**
R&D Manufacturing Bases

 **7600 +**
Total Employees

 **1990 +**
No. of Patents & IP Rights



MV810A Series AC Drive for Air Compressors

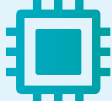
MV810A series AC drive for air compressors, developed on Megmeet's new generation of general-purpose vector platform MV800, is integrated with special logical control signals for air compressors, phase sequence detection of power supply and phase loss protection, enabling safe and reliable running of air compressor system in an all-round way.



Professional Functions
for Air Compressors



Optimized
Design



Special
Interfaces



Robust
Safety Protection



01

Air compressor functions highly integrated in a simplified system

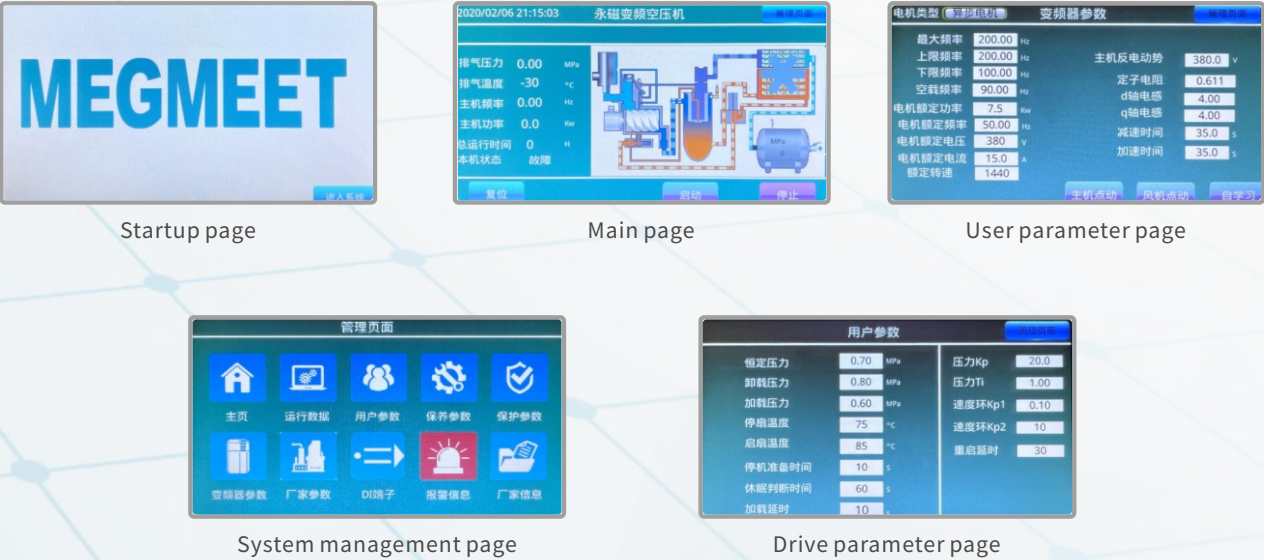
MV810A is integrated with the control logic for air compressors with no need for a traditional PLC, and combined with an HMI that facilitates commissioning, fault management and protection.



02

Special HMI, with easy and visualized operation, abundant management and monitoring screen

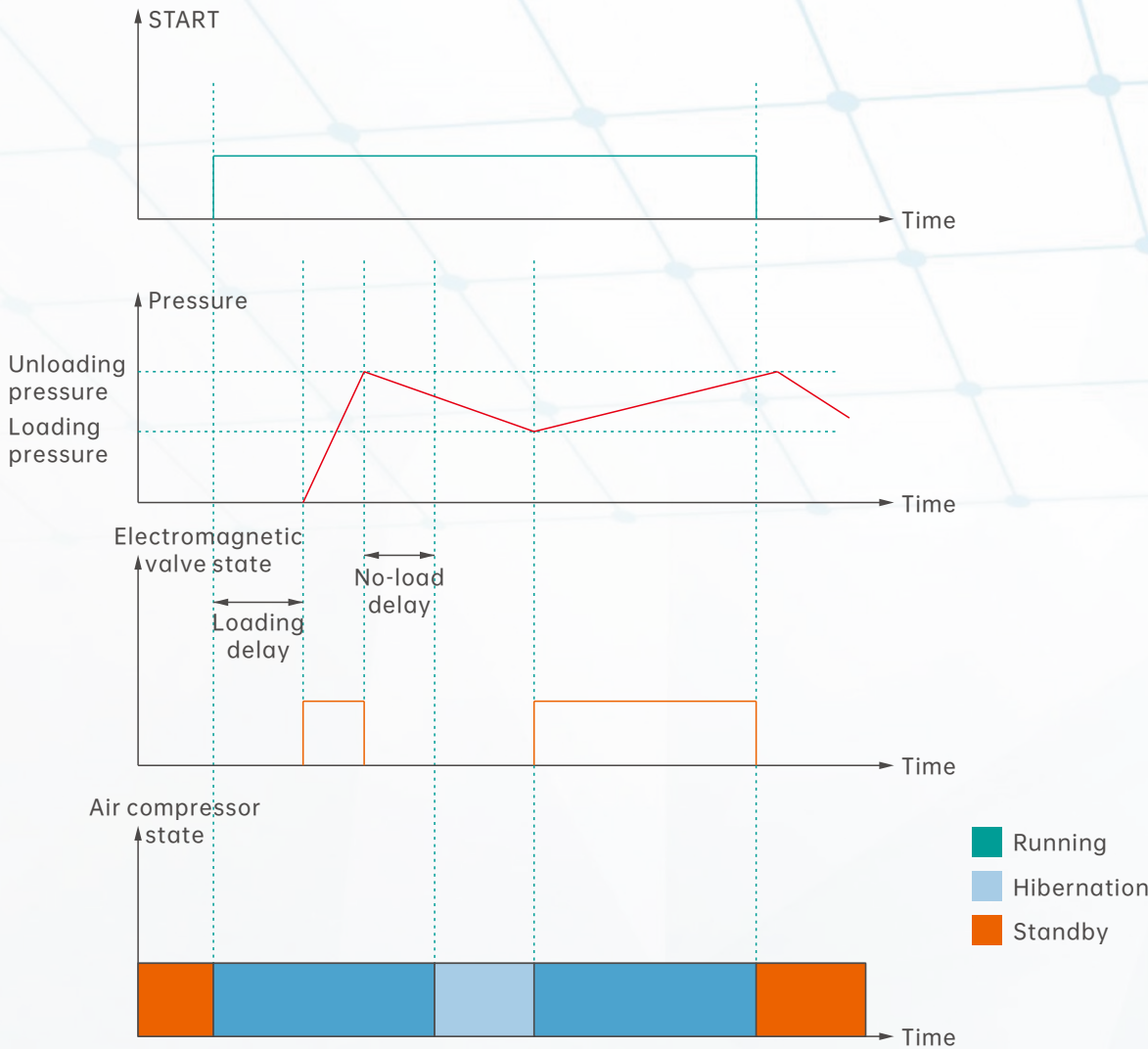
All operations related to the AC drive and the air compressor can be done on the touch screen, such as parameter auto-tuning, start-stop as well as parameter settings of air compressor.



03

Intelligent hibernation and wakeup function, saving more energy

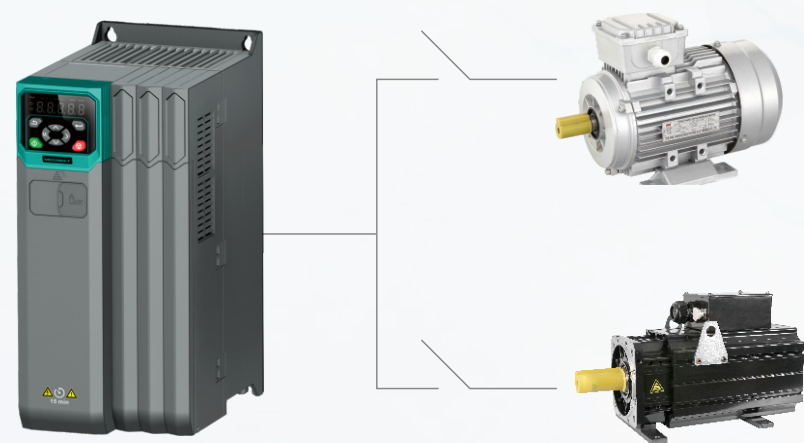
By setting the hibernation function, the air compressor enters hibernation after pressure relief, which is energy efficient.



04

Integrated drive/control for both synchronous and asynchronous air compressors

MV810A series AC drive for air compressors is integrated with control algorithms for both asynchronous motors and permanent magnet synchronous motors.

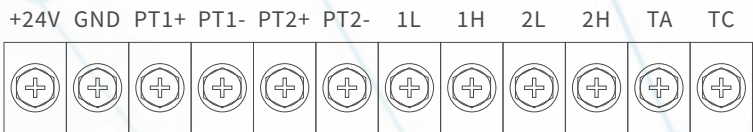


- ☒ V/F
- ☒ SVC1
- ☒ SVC2
- ☒ FVC

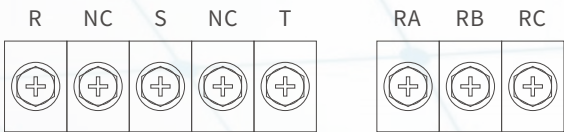
06

Special interfaces, more convenient and economical

Integrated with two temperature input interfaces, one pressure input interface, cooling blower current transformer input interface, electromagnetic valve control interface, and 24 VDC output interface



Power phase loss and phase sequence detection interfaces, as well as fan contactor control interface



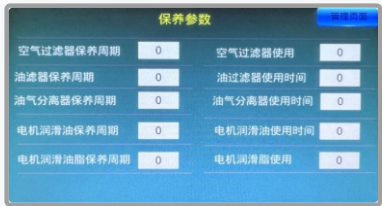
07

Robust protection, with multiple kinds of measures besides overcurrent and overvoltage protection for the AC drive

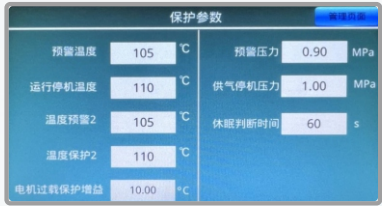
Active monitoring. It is easy to check variables of the compressor and the cooling blower, such as discharge pressure, current running frequency, current, and so on.



Maintenance prompt. When a component exceeds its maintenance date, the system will remind the user through alarm.



Protection parameter settings. You can set the pre-warning and alarm thresholds for pressure and temperature to actively protect the system safety of air compressor.

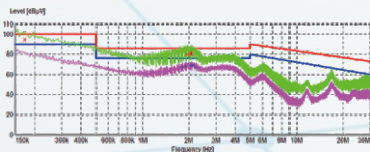


05

Optimized design

Built-in EMC filters for the whole series, creating better electromagnetic compatibility; DCL optional for 30 to 37 kW, bringing much higher power factor at the input side.

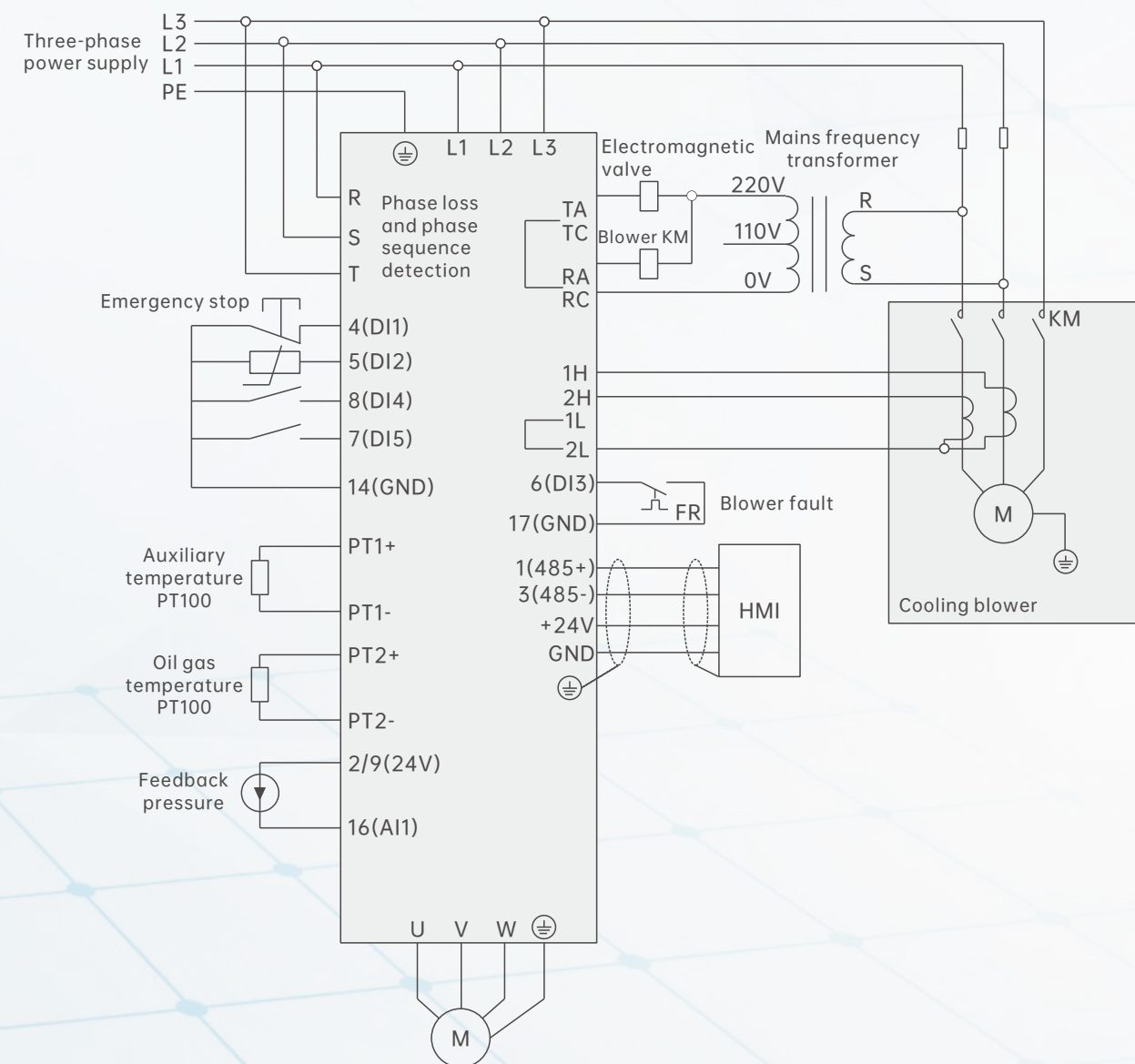
Built-in EMC filter



Optional for 30 kW and 37 kW



System Wiring



Product Model Selection

MV810A 1 - 4 T 7.5 - XX - XX

- 1 Product series
MV810A: Special for air compressors
- 2 Product iteration
1: First-generation product
- 3 Input voltage class
4: 380/480 V
- 4 Input voltage phase
T: Three-phase
- 5 Power rating (7.5 to 220 kW)
7.5: 7.5 kW
- 6 Non-standard hardware
XX: Non-standard hardware version
- 7 Non-standard software
XX: Non-standard software version

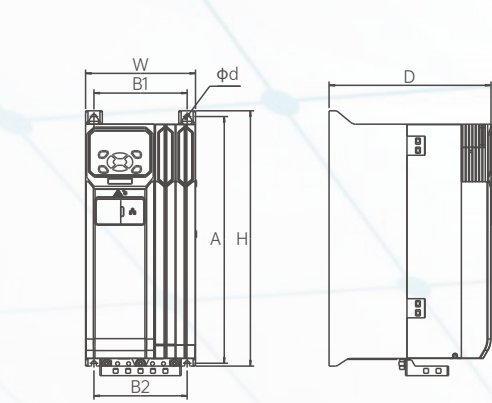
Enclosure	Product model	Rated input current (A)	Rated output current (A)	Rated output power (kW)	Fan's air volume (m³/min)
C	MV810A1-4T7.5	23.0	17.0	7.5	0.8
	MV810A1-4T11	26.0	25.0	11.0	1.8
D	MV810A1-4T15	35.0	32.0	15.0	1.8
	MV810A1-4T18.5	49.0	37.0	18.5	4.0
E	MV810A1-4T22	58.0	45.0	22.0	4.0
	MV810A1-4T30	62.0	60.0	30.0	5.8
F	MV810A1-4T37	76.0	75.0	37.0	5.8
	MV810A1-4T45	92.0	90.0	45.0	14.42
G	MV810A1-4T55	113.0	110.0	55.0	14.42
	MV810A1-4T75	157.0	152.0	75.0	14.42
H	MV810A1-4T90	180.0	176.0	90.0	14.42
	MV810A1-4T110	214.0	210.0	110.0	14.42
I	MV810A1-4T132	256.0	253.0	132.0	21.48
	MV810A1-4T160	307.0	304.0	160.0	21.48
J	MV810A1-4T185	330.0	340.0	185.0	21.48
	MV810A1-4T200	368.0	380.0	200.0	21.48
	MV810A1-4T220	410.0	426.0	220.0	21.48

Technical Specifications

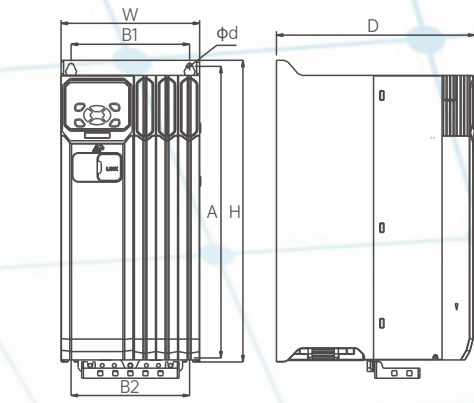
Power input	Rated voltage (V)	4T models: Three-phase 380 V to 480 V; continuous fluctuation of voltage ±10%, transient fluctuation -15% to +10%, that is, 323 V to 528 V; voltage unbalance rate < 3%, distortion rate in compliance with IEC 61800-2
	Rated input current (A)	Refer to Product Model Selection
	Rated frequency (Hz)	50/60 Hz, fluctuation range ±2 Hz
Power output	Rated output power (kW)	Refer to Product Model Selection
	Rated output current (A)	
	Output voltage (V)	Three-phase output under rated input conditions, 0 to rated input voltage, deviation less than ±3%
	Output frequency (Hz)	V/F: 0.00 to 599.00 Hz, unit: 0.01 Hz; Vector control: 0 to 599.00 Hz
Running control features	Overload capacity	1 minute for 150% rated current, 3 seconds for 180% rated current, and 1 second for 200% rated current
	Control mode	Flux vector control without PG, V/F control
	Max. output frequency	V/F control: 599 Hz, others: 599 Hz
	Speed regulation range	1:200 (flux vector control without PG)
	Speed control accuracy	±0.5% (flux vector control without PG)
	Speed fluctuation	±0.3% (flux vector control without PG)
	Torque response	< 20 ms (flux vector control without PG)
Product functions	Torque control	Torque control accuracy for flux vector control without PG ±5% (above 5 Hz for asynchronous motors, above 10 Hz for synchronous motors)
	Startup torque	0.25 Hz 150% (flux vector control without PG)
	Major functions	Speed tracking, over-torque/under-torque detection, torque limit, multi-speed running, switchover of multiple acceleration/deceleration times, auto-tuning, S-curve acceleration/deceleration, slip compensation, fan speed control, jump frequency running, energy-saving operation, PID regulation, hibernation, power dip ride-through, Modbus communication, torque control, switchover between torque control and speed control, automatic restart, DC braking, dynamic braking; simple PLC, AVR, 2 sets of motor parameters
	Basic frequency	0.01 Hz to 599.00 Hz
	Startup frequency	0.00 Hz to 50.00 Hz
	Frequency setting method	A1/AI2, terminal pulse HDI; simple PLC, multiple PLC stages, host controller communication, PID control reference
	Acceleration/Deceleration time	0.1 to 6000.0, unit: 0.1 s
Protection functions	DC braking capacity	Start 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 current of the drive
	Terminal functions	Refer to the terminal function part in the complete user manual
	Protection functions	Refer to the protection function part of the complete user manual
Others	Efficiency	7.5 kW ≥ 93%; 15 kW and below ≥ 95%
	Installation method	Wall-mounted: Vertically mounted on a solid base indoors, with at least 100 mm space for air inlet and outlet, and at least 10 mm for both the left side and the right side, air cooling
	Protection degree	IP20
	Cooling method	Air cooling
Environment	Operating site	Indoors without direct sunlight, dust, corrosive gas, combustible gas, oil mist, water vapor, drip or salt
	Altitude	Below 1000 m: derating not required; above 1000 m: derated by 1% for every increase of 100 m; maximum: 3000 m
	Ambient temperature	-10°C to +50°C, air temperature change < 0.5°C/min (derating required if the ambient temperature is above 40°C)
	Humidity	5% to 95% RH, non-condensing, no rain, snow and hail, solar radiation < 700 W/m², air pressure 70 to 106 kPa
	Vibration	Sine vibration: 2 to 9 Hz, displacement 1.5 mm; 9 to 200 Hz, 5.9 m/s² (0.6 g)
Storage temperature	Storage temperature	-30°C to +70°C, air temperature range < 1°C/min Maximum 60°C for long-time storage, 60°C to 70°C only for short-time storage

Installation Dimensions

Enclosure C

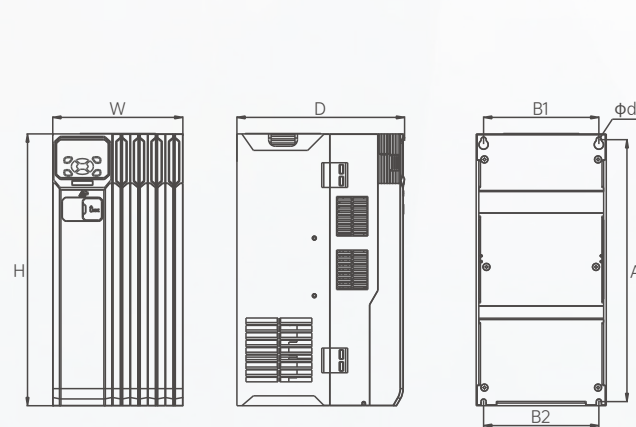


Enclosure D

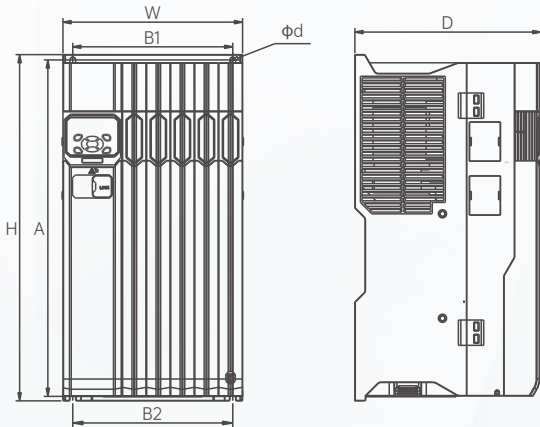


Enclosure	Product model	A (mm)	B1 (mm)	B2 (mm)	H (mm)	W (mm)	D (mm)	Mounting hole (mm)
C	MV810A1-4T7.5	259	97.5	97.5	267	115	171	5
D	MV810A1-4T11 MV810A1-4T15	290	118	118	300	138	195.92	6

Enclosure E

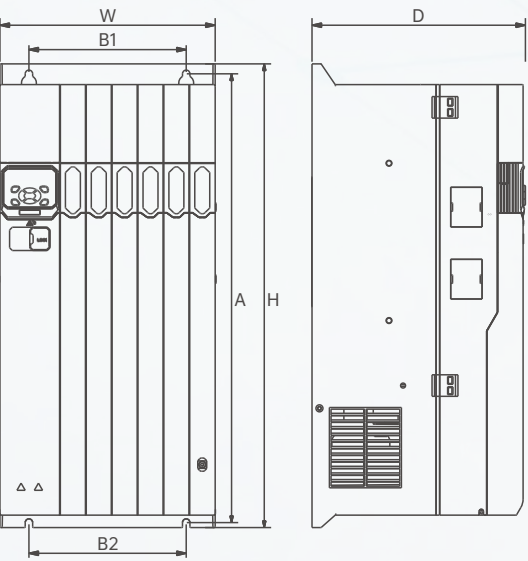


Enclosure F



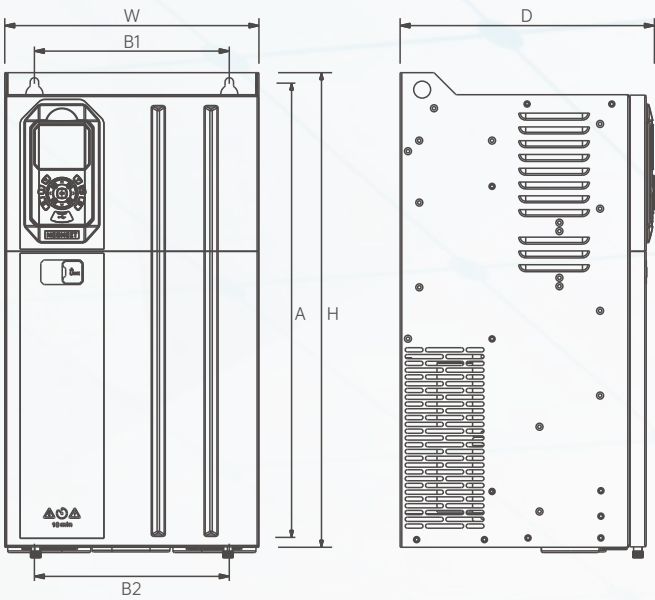
Enclosure	Product model	A (mm)	B1 (mm)	B2 (mm)	H (mm)	W (mm)	D (mm)	Mounting hole (mm)
E	MV810A1-4T18.5 MV810A1-4T22	318	140	140	330	158	204.8	6
F	MV810A1-4T30 MV810A1-4T37	412	196	196	424	220	229	7

Enclosure G



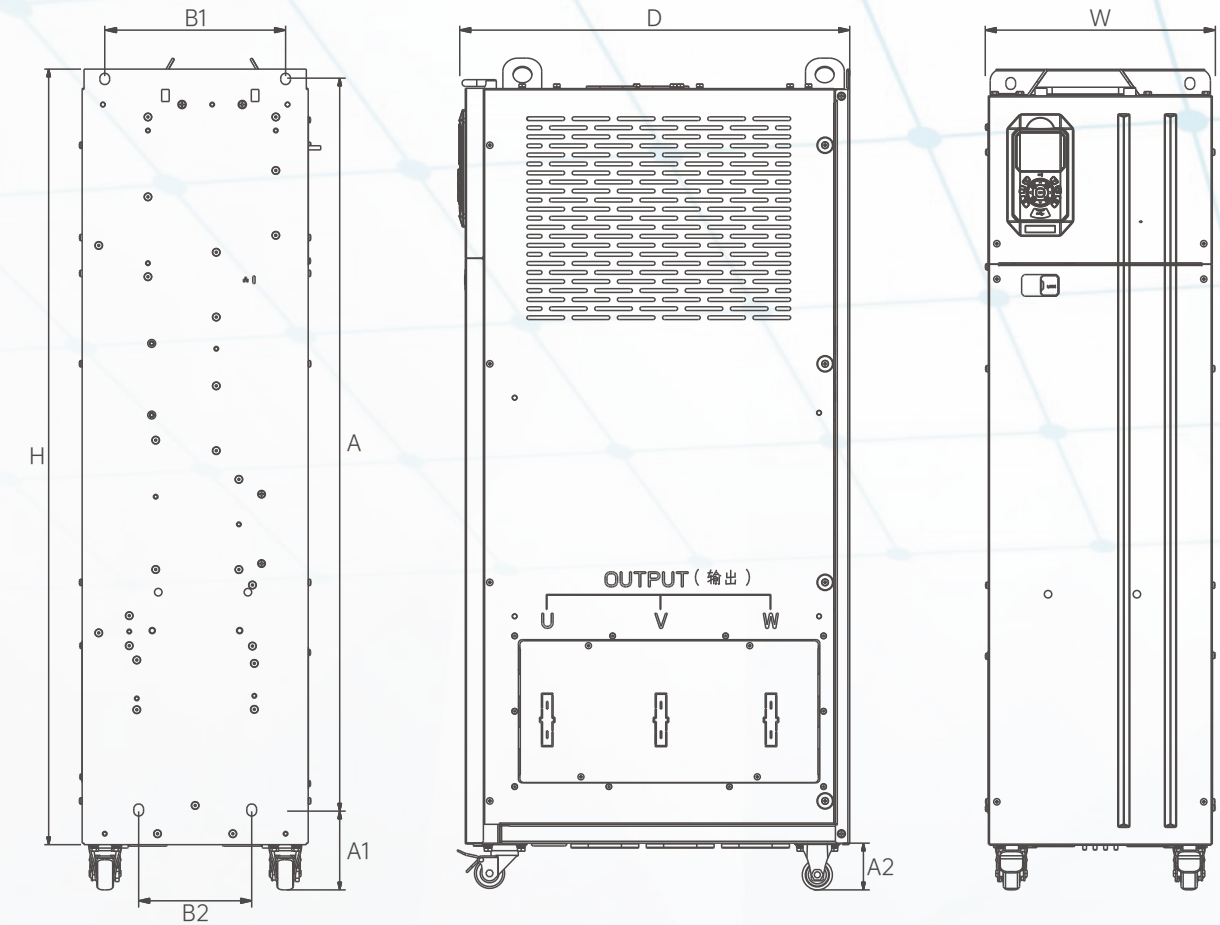
Enclosure	Product model	A (mm)	B1 (mm)	B2 (mm)	H (mm)	W (mm)	D (mm)	Mounting hole (mm)
G	MV810A1-4T45	542	190	190	560	260	255	9
	MV810A1-4T55							
	MV810A1-4T75							
H	MV810A1-4T90	539	230	230	560	300	300	10
	MV810A1-4T110							

Enclosure H



Enclosure	Product model	A (mm)	B1 (mm)	B2 (mm)	H (mm)	W (mm)	D (mm)	Mounting hole (mm)
I	MV810A1-4T132	875	230	230	900	310	429	10
	MV810A1-4T160							

Enclosure J



Enclosure	Product model	A (mm)	A1 (mm)	A2 (mm)	B1 (mm)	B2 (mm)	H (mm)	W (mm)	D (mm)
J	MV810A1-4T185	970	106	62	240	150	1029	300	520
	MV810A1-4T200								
	MV810A1-4T220								

Enclosure I

