

Elevator Electrical Control Products

Transformation to High Efficiency and Intelligence

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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Version: 202406
Megmeet reserves the right to modify the technical parameters and
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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 7,300 employees worldwide. MEGMEET's global presence includes R&D Centers in China, Germany, and the United States; Manufacturing Centers in Thailand, India, and China; and Regional Offices across North America, Europe, and Asia.

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.




2600+

R&D Staff




10

R&D Centers




8

R&D Manufacturing Bases



7300+

Total Employees



1700+

No. of Patents & IP Rights


R&D CAPABILITY

Sustainable R&D Investment

R&D Investment


R&D Employees

>2600




Percentage of Total Employees

35%



Percentage of Total Sales


>11%



Patents & Industry Standards

No. of Patents & IP Rights

1700+

 150+ new in 2023

National & International standards

23

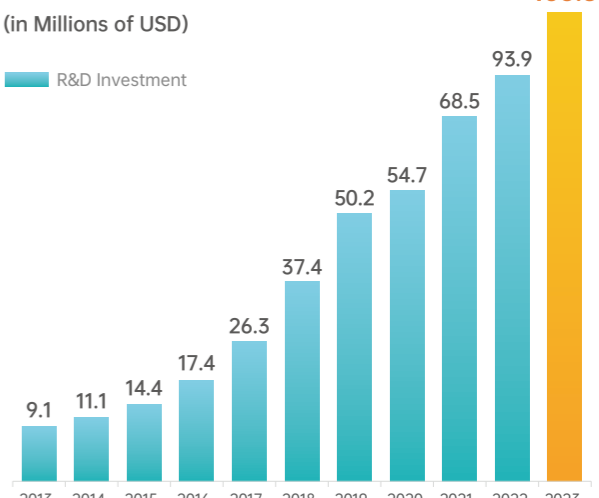
• 5 lead author

Industry Standards Drafted

27

• 16 lead author

R&D Investment (in Millions of USD)




Year	R&D Investment (Millions of USD)
2013	9.1
2014	11.1
2015	14.4
2016	17.4
2017	26.3
2018	37.4
2019	50.2
2020	54.7
2021	68.5
2022	93.9
2023	106.5

Percentage of Total Sales:

Year	Percentage of Total Sales
2013	13.77%
2014	12.13%
2015	11.93%
2016	10.98%
2017	11.81%
2018	10.52%
2019	9.42%
2020	10.90%
2021	11.09%
2022	11.55%
2023	11.41%

Testing Capabilities & Management System



MEGMEET's testing capabilities and management system have been certified by CNAS, TUV, UL-WTDP, & UL-CTF. MEGMEET's test results are recognized globally.



P01 Elevator Electrical Control Products

Elevator Electrical Control Products P02

Integrated Elevator Controller

Product Overview

Smile3000 series integrated elevator controller, independently designed by Megmeet, incorporates motor drive, elevator (group) control and internet technologies to achieve intelligence. The controller is excellent in performance, fully featured, safe and reliable, easy to operate and cost-effective.

Product Features

Excellent Drive Control Technologies

- Static auto-tuning and with-load auto-tuning
- Protection against output arc hazards
- Prevention of motor runaway caused by encoder disconnection
- No-load-cell compensation technology
- User-friendly UI for parameter settings
- Compatible with mainstream systems
- Direct-to-floor distance control, raising efficiency by 30%

Robust Safety Functions

- The main board executes 4-channel high-voltage door lock detection through a safety interface board, meeting all requirements of GB7588.2 No.2 amendments (patent)
- Upon the electrical brake releasing of a machine-roomless elevator, external power supply of the main board will display floor and direction
- UCMP function/Auto-detection of braking force
- Auto-detection of wire rope slippage
- Special brake power board with high reliability (patent)
- Smart diagnosis and classified management of elevator failures

Superior Customer-Facing Features

- Elevator speed up to 4 m/s, floors up to 48
- Integrated solution, with compact system, simple wiring, high reliability, easy operation and lower labor cost
- Allows you to carry out all parameter commissioning through the controller on the car top or inside the car
- Matches various kinds of encoders (open-collector, push-pull, UVW, Sin/Cos)
- Ultra-slim design, suitable for MRL installation (including villa elevators)
- Allows you to set parameters in group, making commissioning easier



Naming Rule

Smile3000 - 4 T 15

1

2

3

4

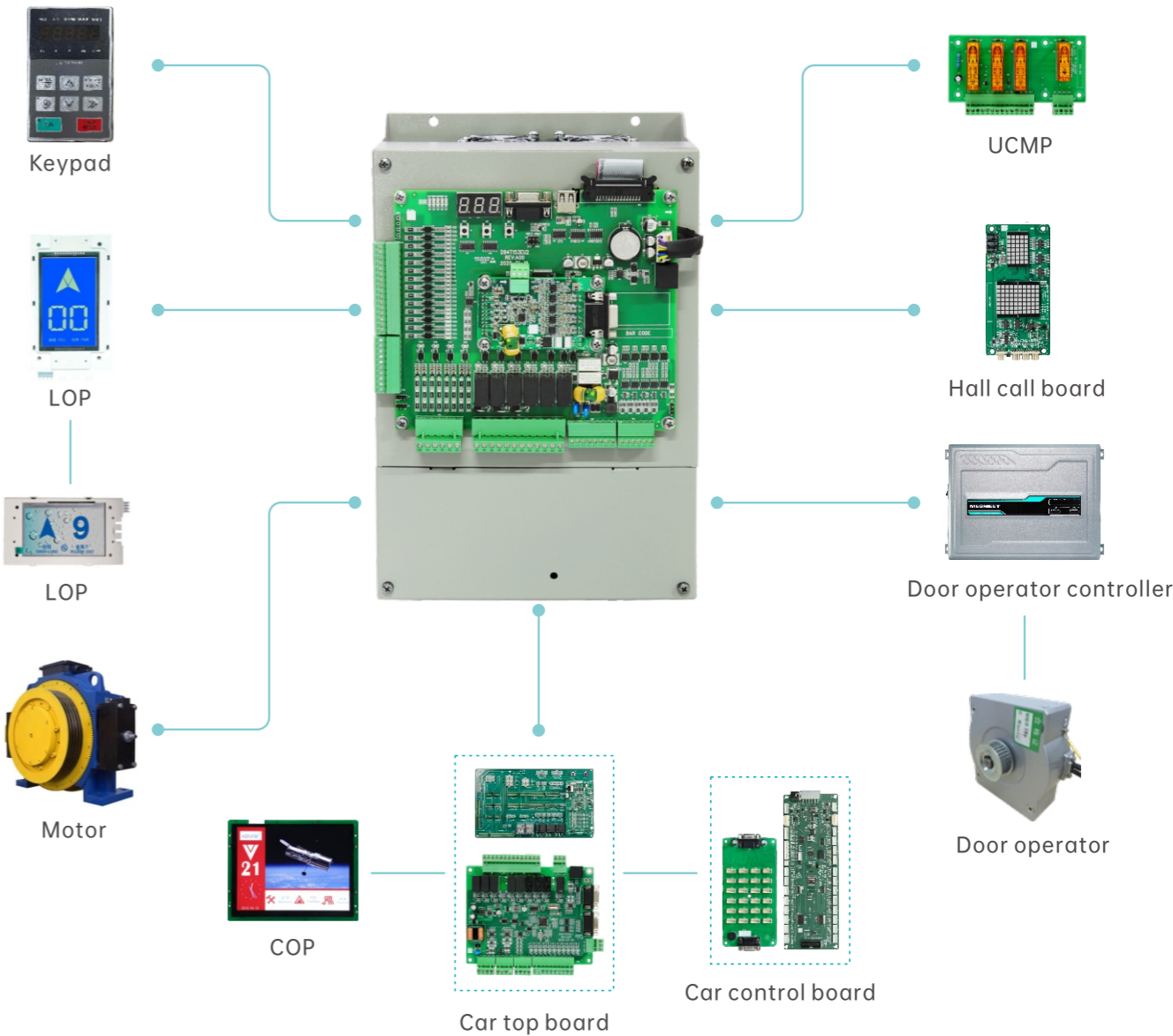
1 Product series
Integrated elevator
controller series

2 Input voltage
2: 220 V 4: 380 V

3 Input phase
S: Single-phase
T: Three-phase

4 Rated output power
(2.2 to 75 kW)
15: 15 kW

System Configuration



Electrical Control Solution for Elevators (Integrated Cabinet)



Integrated Elevator Control Cabinet

Product Features

Advanced

- High-performance drive platform, with a dual-CPU framework
- Leading parallel control of 2 elevators and group control up to 8 elevators
- Cutting-edge vector control with great motor speed regulation, improving the riding comfort

Intelligent

- Direct-to-floor distance control, deriving smooth N velocity profiles automatically
- Innovative no-load-cell start compensation technology, compatible with different encoders, achieving smooth elevator start

Integrated

- Modular design, each module easy to disassemble and replace
- Integrated with advanced CANbus, Modbus and IoT communication

Convenient

- Offers guidance for on-site elevator commissioning
- Provides various commissioning tools, including PC host software, operating panel and mobile phone App
- Beautiful appearance and impressive panel design



Naming Rule

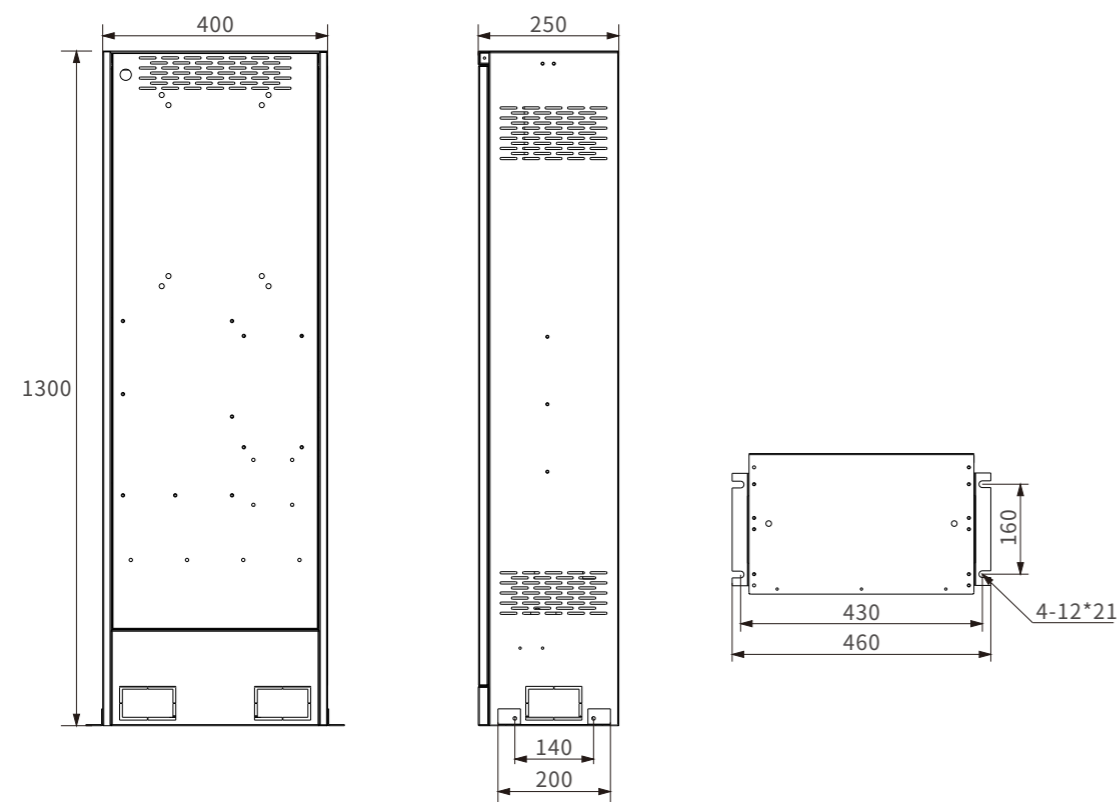
Smile3000 - M - 4 075

1 2 3 4

1 Product series Smile3000 series	2 Cabinet type Cabinet type	3 Voltage class 4: Three-phase 380 V AC	4 Power rating (5.5 to 75 kW) 075: 75 kW
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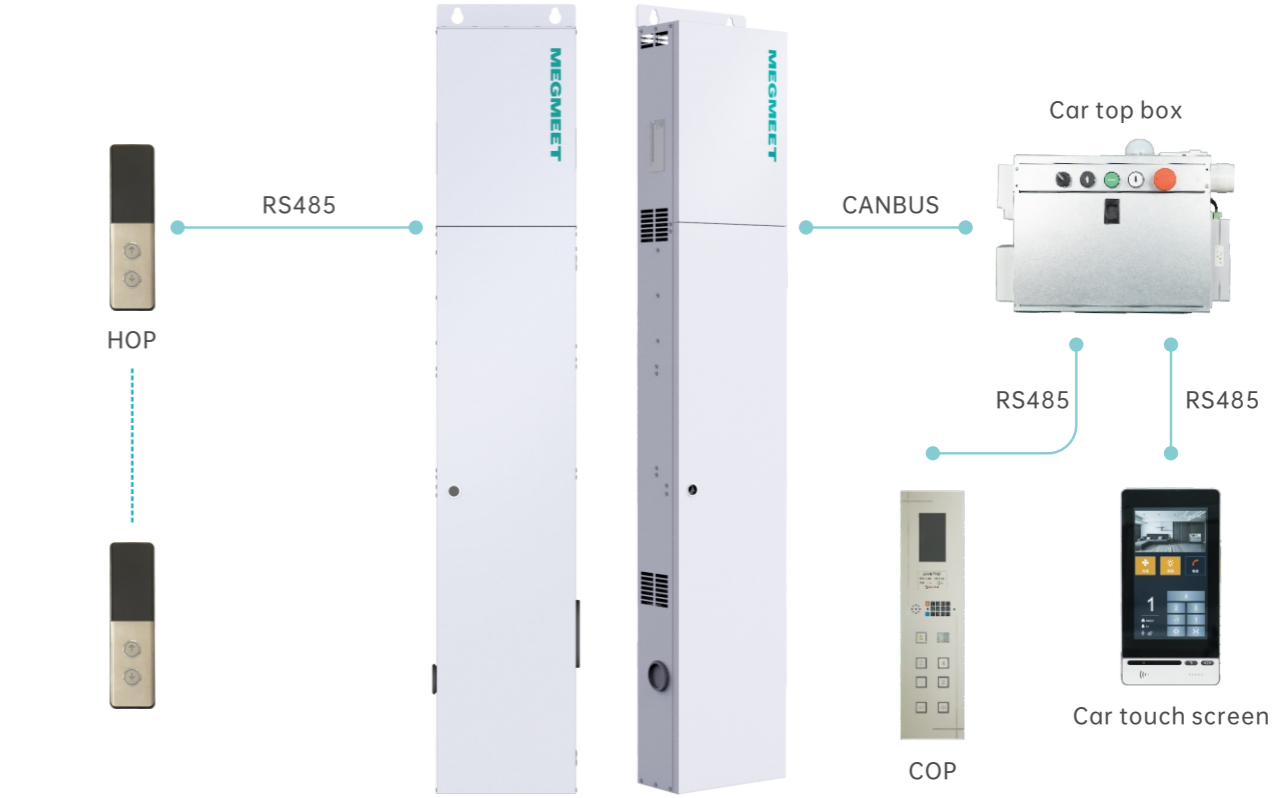
Product Dimensions



Model	Dimensions (mm)	Installation method
5.5 to 15 kW	1300 x 400 x 250	Wall-mounted/Floor-mounted
18.5 to 22 kW	1300 x 400 x 250	Floor-mounted
30 to 37 kW	1300 x 400 x 250	Floor-mounted

Home Elevator Control Cabinet

Home Elevator Solution



Naming Rule

Smile3000 - V - 2S 2.2

1 Product series
Smile3000 series

2 Cabinet type
Villa cabinet

3 Voltage class
2S: Single-phase 220 V AC
4T: Three-phase 380 V AC

4 Power rating
(1.2 to 5.5 kW)
2.2: 2.2 kW

Product Features

Quiet Running

- Advanced motor drive and logic control
- Low motor noise and multi-stage curves
- Quiet operation without contactors (STO)

Safe and Reliable

- ARD & electrical brake release as standard configuration with various rescue methods
- Remote wireless monitoring through elevator IoT, facilitating maintenance

Highly Integrated

- Modular design, easy to disassemble and replace
- Integrated with advanced CANbus, Modbus and IoT
- Ultra-slim, pleasing, in harmony with home decorations

Intelligent and Easy to Use

- Offers guidance for on-site elevator commissioning
- PC host software, panel and App commissioning
- Touch screen to display various information and perform emergency call/rescuing/maintenance

Integrated Car Top Box

Specifications

Model
Smile3000-CTH-B01
Dimensions (mm)
280 x 350 x 100 (H × W × D)



Product Features

Integrated Car Top Functions

- Integrated with all car top functions such as intercom, lighting, inspection, car top control and door operator control (optional)
- Gorgeous light group
- Offers car top, in-car and emergency lighting
- Complied with GB7588 & EN81-20

Small Size

- Highly integrated, user-friendly and easy to maintain
- Design philosophy for simple style

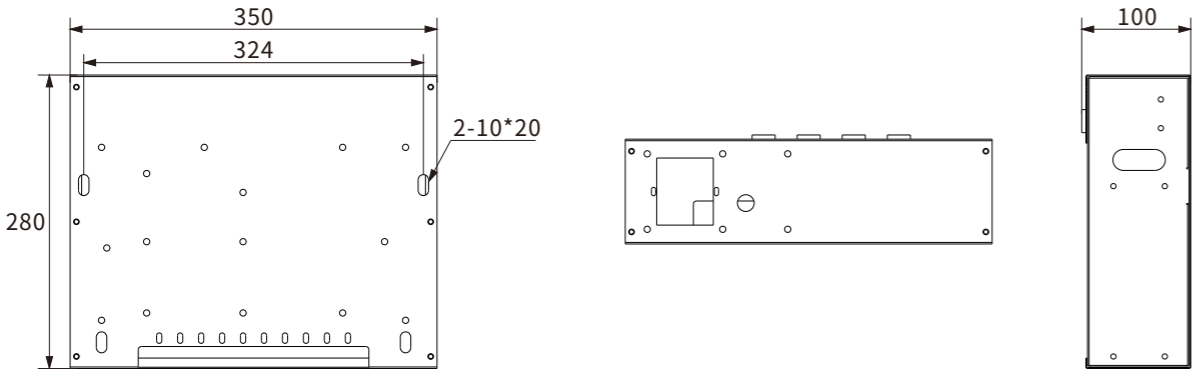
Cost Saving

- Shaft up and down leveling signals transmitted through the car top box
- Shaft up and down slow-down signals transmitted through the car top box
- Soft limit through the combination of leveling signals and slow-down signals
- Reduced shaft cables

Simple and Safe Commissioning

- Safer for car top inspection running
- Clear and easy for commissioning

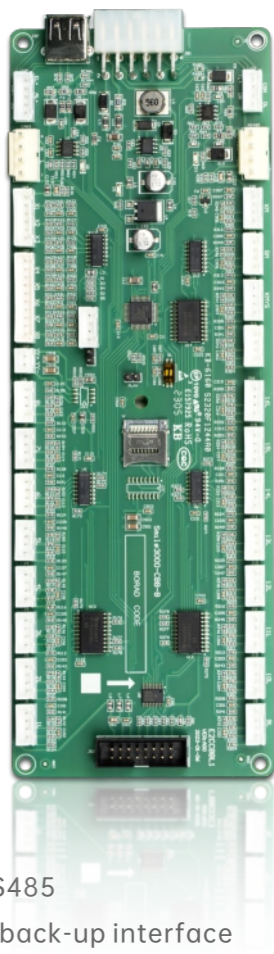
Product Dimensions



Car Control Board

Specifications

Model
Smile3000-CBB-B
Dimensions (mm)
230 x 80 x 15 (H × W × D)



Product Features

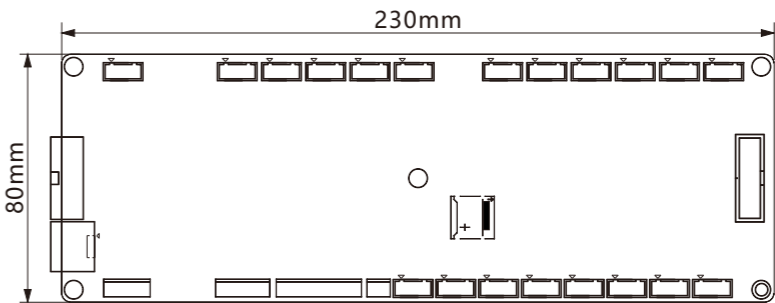
Simplified Wiring

- Just one cable is required to achieve various functions including car top inspection, car call register, car display and communication, voice announcer, in-car lighting, fan, attendant, firefighter operation and intercom

Multi-function

- Two kinds of interfaces for car display and communication: CAN and RS485
- Car call register of 16 floors, door open and close, door open delay and back-up interface
- Buzzer tweeting, voice announcer, auto BGM change and so on
- 8 programmable DIs along with functions like fan & lighting in the car, attendant, firefighter operation, independent running, car VIP, direction change, and direct travel ride for any of them
- One board for 16 floors. 48 floors at most by the cascading of control boards

Product Dimensions



Smile100 Integrated Door Operator Controller

Product Features

- Integrated closed-loop control for syn. and asyn. motors
- Ultra-thin design with superior UI
- IP21 protection and noiseless operation
- Safe and efficient communication control
- One-key commissioning and automatic curve generation
- Door vane distance learning, deriving more accurate and smoother running curves
- Enhanced protection for overvoltage, undervoltage, overcurrent, inter-phase short circuit, output phase loss and anti-clamping upon power-off
- Self-adaptive holding torque to maintain dynamic balance of the door system
- Inertia identification of door system: measures kinetic energy, friction, self-closing force and the like automatically, then regulates the drive output



Naming Rule

Smile100 - 2S - 04

1

2

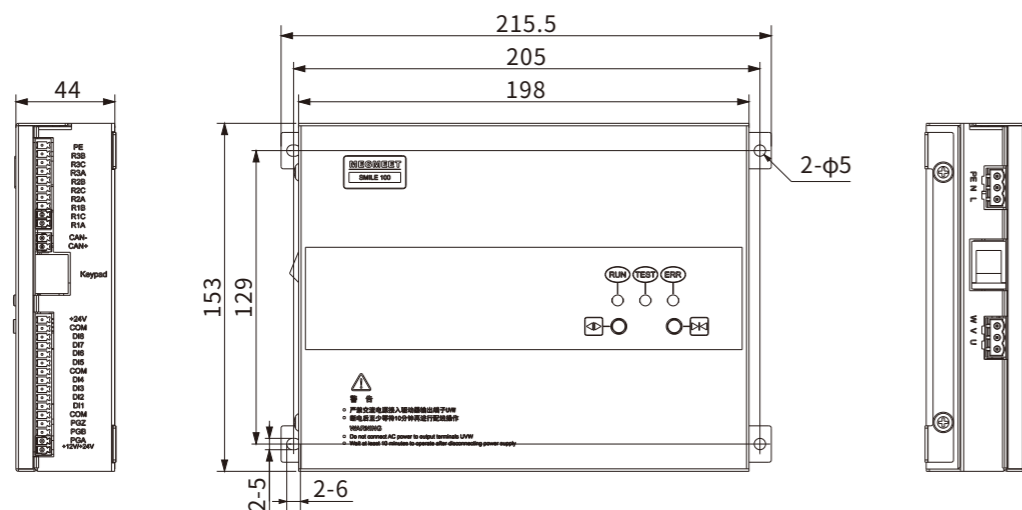
3

- 1 Product series
Smile100 series

- 2 Voltage class
2S: Single-phase 220 V AC

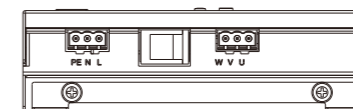
- ### 3 Power rating
- 02: 200 W
04: 400 W

Product Dimensions



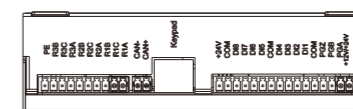
■ Terminal Wiring Description

Main Circuit Terminals



Mark	Name	Description
L, N	Single-phase power input terminals	Single-phase 220 V AC power input
U, V, W	Controller output terminals	Connected to a three-phase motor
PE	Grounding terminal	Grounding

Control Circuit Terminals

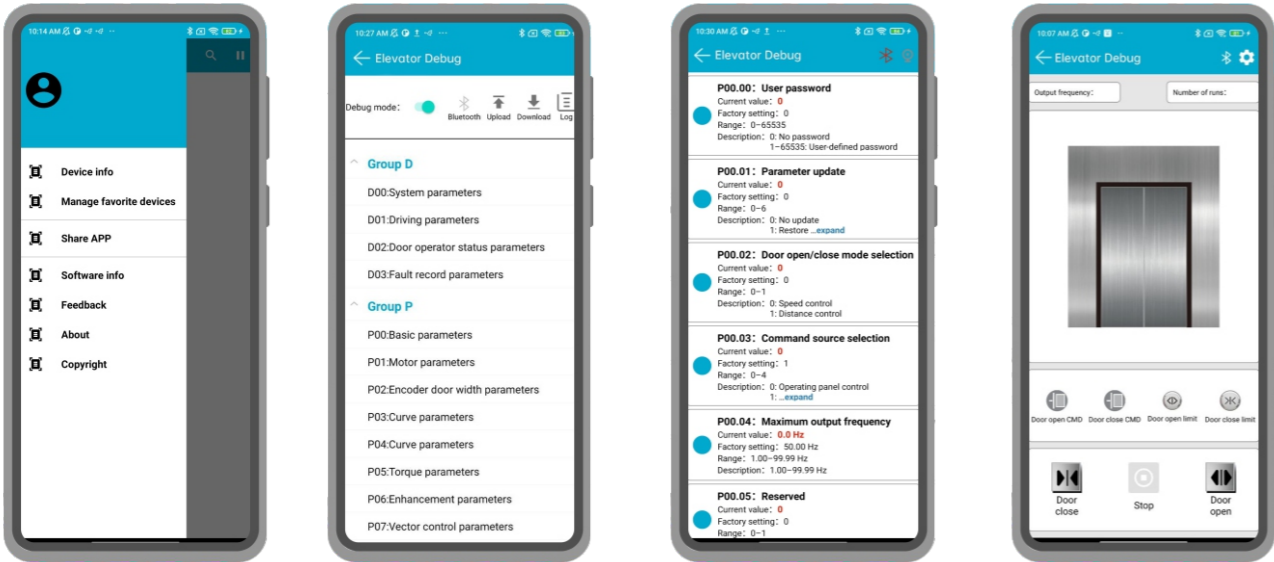


Name	Type	Mark	Function	Technical specifications
CAN	CAN	CAN+, CAN-, XCM	Communicates with car top board CAN	—
24 V	Internal 24 V power supply	+24V	24 V power supply	Power supply for the non-contact switch or encoder. Capacity: 200 mA
		COM	24 V power common	Isolated from the internal GND
PG	Encoder input	PGA	Encoder phase A	Open-collector output or push-pull output
		PGB	Encoder phase B	
		PGZ	Encoder phase Z	
DI	Digital input	DI1 to DI8	Digital signal input	Optocoupler isolation input, active low Input voltage range: 0 to 30 V DC

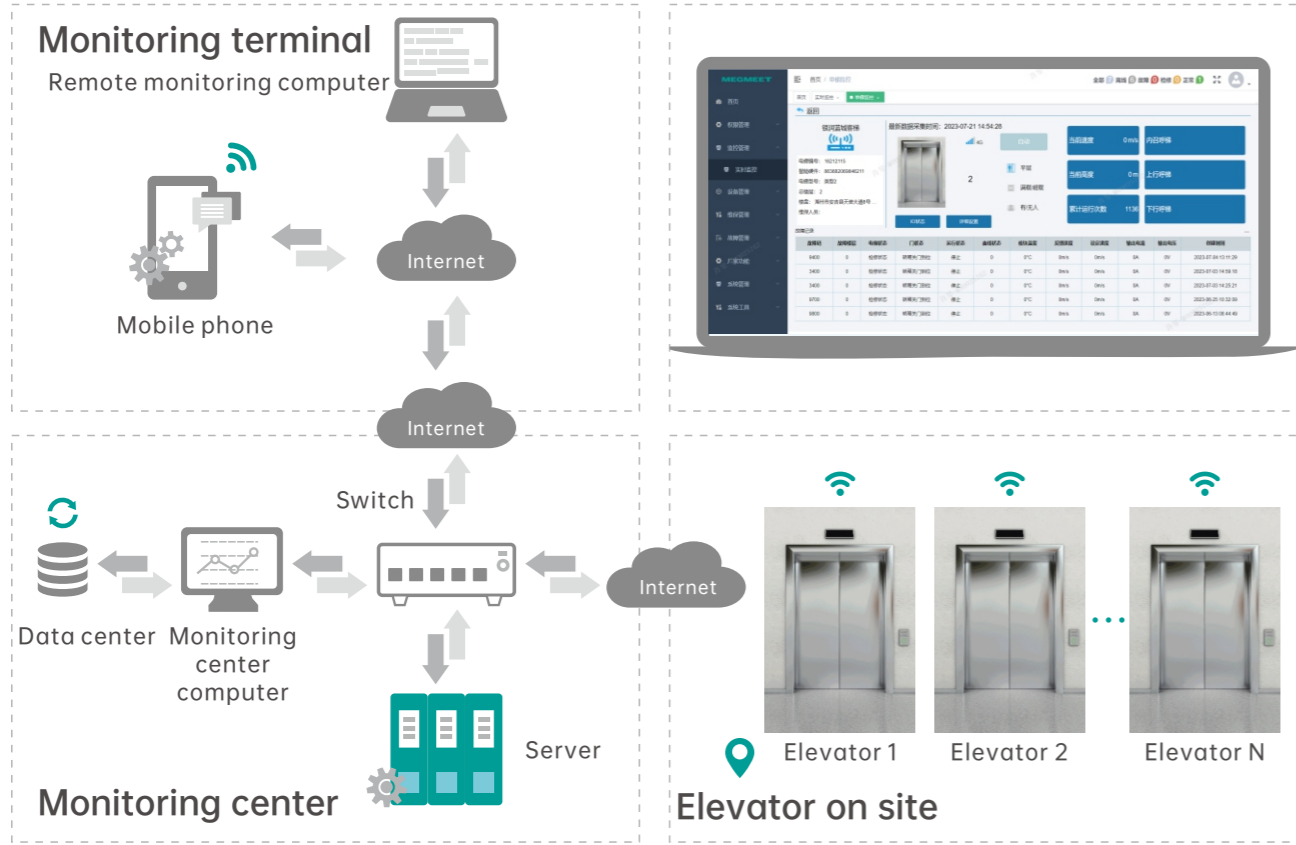
External Devices and Cables

Model	Breaker (A)	Contactor	Main circuit cable (mm²)
Smile100-2S-02	16	10	1.5
Smile100-2S-04	16	10	2.5

■ Mobile Phone App



Elevator IoT Solution



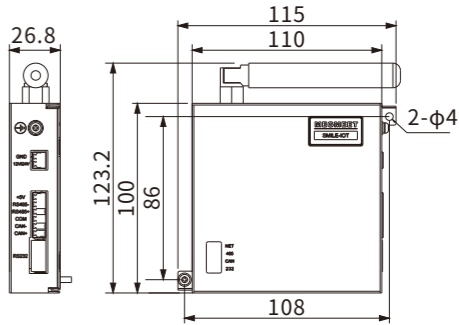
Elevator IoT Module

■ Product Overview

Model	Dimensions (mm)
Smile-IOT 4G	123.2 x 115 x 26.8 (H × W × D)

■ Product Features

Smile-IOT is used for monitoring the elevator system, which can collect running parameters, transmit information and trigger alarm automatically. The maintenance personnel can monitor the elevator running status remotely in real time through the Megmeet elevator IoT platform.



■ Terminal and Indicator Description

Terminal		Function description
GND/12V/24V	12 V or 24 V power	External 12 V or 24 V DC input
RS485-/RS485+	485 communication	485 communication with elevator control system
COM/5V	+5 V power	+5 V backup power output
CAN-/CAN+	CAN communication	CAN communication with elevator control system
RS232	232 communication	232 communication with elevator control system

Indicator	
NET (Green)	Flashing slowly (200 ms on / 1800 ms off): Searching for network Flashing slowly (1800 ms on / 200 ms off): In standby Flashing quickly (125 ms on / 125 ms off): Transmitting data
485 (Green)	Flashing: Normal communication Off: Communication disconnected
CAN (Green)	
232 (Green)	

Automatic Rescue Device ARD

Product Features

- **Smart battery management:** three-stage charging algorithm and longer battery life
- **Redundancy protection:** self-diagnosis and self-protection in abnormal cases, with higher reliability
- **Clear fault display:** fault codes displayed in binary, easy to view and fast to locate
- **Simple wiring:** clear terminal definitions and simplified wiring on site
- **Strong compatibility:** compatible with most mainstream systems, free of commissioning
- **Wide voltage range:** 380 V AC \pm 15% input, well adapted to the power grid
- **Single/Dual output:** single-phase 380 V / single-phase 380 V + single-phase 220 V, flexible voltage output
- **Wide power range:** covers the full power range of elevator system, fit for the whole series
- **Host system:** dedicated host computer software, facilitating commissioning and monitoring



Naming Rule

Smile - ARD - A 800

1

2

3

4

1 Product series
Product series

2 Accessory type
Accessory type

3 Output type
A: Single output
B: Dual output

4 Power rating
800: \leq 11 kW
1000: \leq 15 kW
2000: \leq 30 kW
3000: $>$ 30 kW

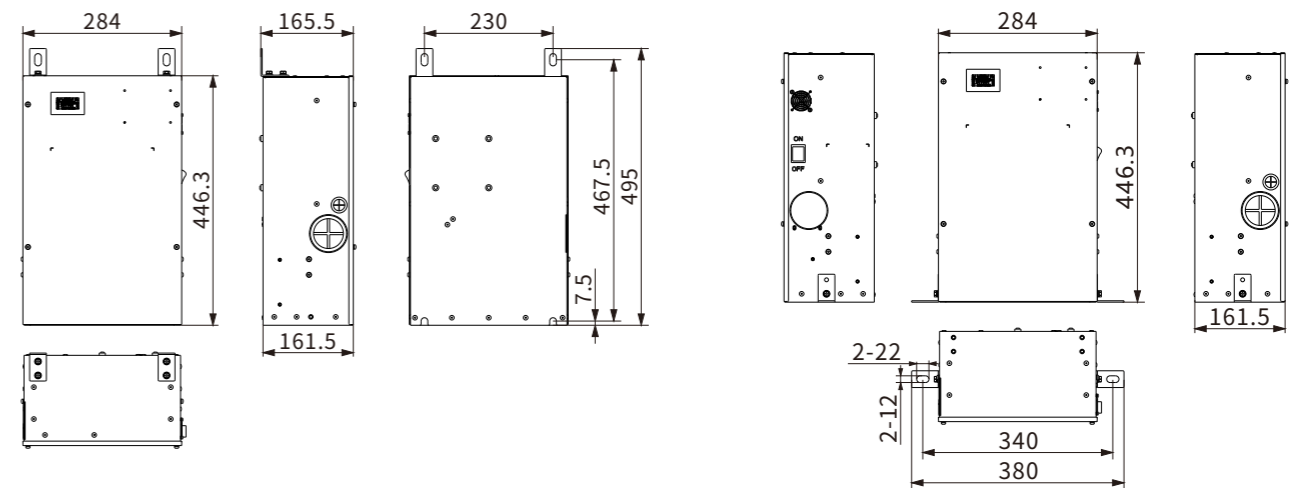
Product Dimensions

Model	L (mm)	W (mm)	H (mm)	GWT (kg)
Wall-mounted				
Smile-ARD-B-800	284	165	495	16
Smile-ARD-B-1000	284	165	495	18
Smile-ARD-A-2000	462	166	608	25
Smile-ARD-A-3000	440	191	660	35

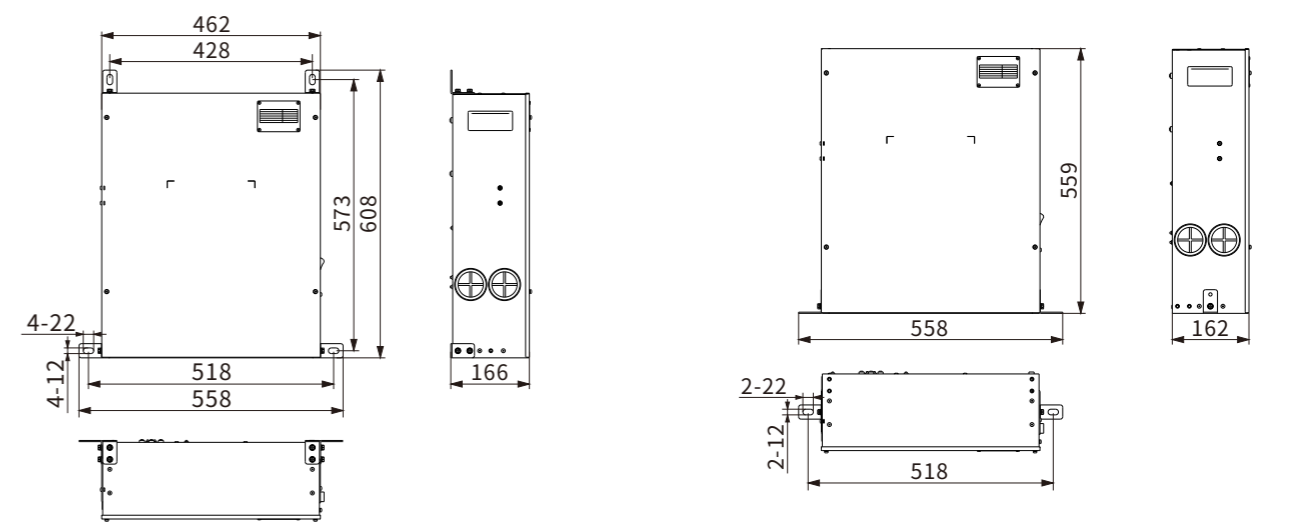
Model	L (mm)	W (mm)	H (mm)	GWT (kg)
Floor-mounted				
Smile-ARD-B-800	284	161.5	446.3	16
Smile-ARD-B-1000	284	165	495	18
Smile-ARD-A-2000	462	162	559	25
Smile-ARD-A-3000	440	187	611.3	35

Installation Dimensions

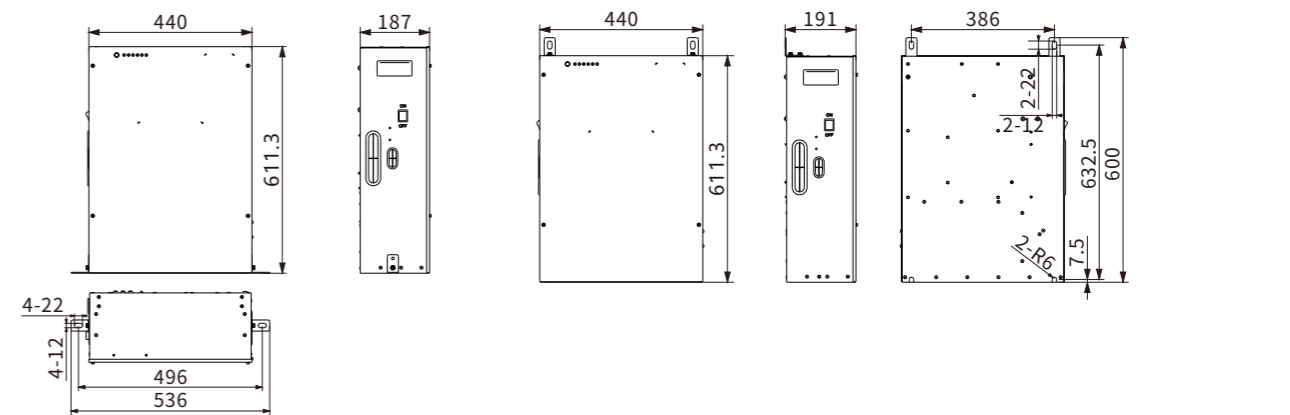
Smile-ARD-B-800



Smile-ARD-B-2000

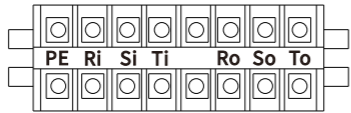


Smile-ARD-B-3000



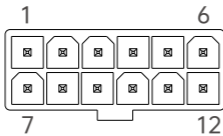
Terminal Description

Main circuit terminals



Mark	Description	Function
Ri	ARD three-phase AC power input	Connect the mains power to Ri, Si and Ti of ARD, and connect Ro, So and To to the elevator control cabinet, then the elevator can work in both normal and emergency states.
Si		
Ti		
PE		
Ro	ARD output	Note: Do not connect the input power to output terminals Ro, So and To. Otherwise, ARD will be damaged.
So		
To		

Control circuit terminals



Mark	Description	Function
Pin7	USER_GND	Power output 24 V negative
Pin1	+24V	Power output 24 V positive
Pin8	Y1 phase sequence shorting signal	Y1 and M1 are connected when ARD is in the emergency state; Y1 and M1 are disconnected when ARD exits the emergency state.
Pin2	M1	
Pin9	Y2 emergency state output signal	Y2 and M2 are connected when ARD is in the emergency state; Y2 and M2 are disconnected when ARD exits the emergency state.
Pin3	M2	
Pin10	Y3 fault output signal	Y3 and M3 are connected when ARD reports that the contactor is stuck or cannot be closed; Y3 and M3 are disconnected when the contactor faults are reset.
Pin4	M3	
Pin11	X3 rescue completion input signal	After the elevator moved to the door zone, opened the door to the limit and the main board sent a valid rescue completion signal (connecting X3 to +24 V), ARD receives the signal and stops output after 30 seconds. If the main board does not send a rescue completion signal, ARD will stop output automatically after running for 3 minutes.
Pin5	X2 inspection shutdown input signal	X2 and +24 V are connected to the auxiliary NC contact of main power air switch. When the air switch is disconnected, external three-phase mains power will be cut off and emergency rescue will not be started.
Pin12	USER_GND	Power output 24 V negative
Pin6	X1 forced rescue input signal	After one rescue by ARD, if X1 is still valid (connecting X1 to 24 V), ARD will start a second forced rescue usually used for electrical brake release.

Elevator AC Drive MV820E

Product Overview

MV820E series elevator AC drive is developed on a new core hardware platform, designed with delicate structure, and optimized for control algorithms to achieve drive integration of asyn. and PM syn. motors. It adopts modular interface expansions, matches various kinds of encoders along with bus communication, and offers flexible S-ramps as well as special logic control for elevators, enhancing control performance, improving safety and reliability, and facilitating commissioning.

Compatible encoders	Range	Input voltage
ABZ incremental encoders, UVW encoders Sin/Cos encoders (such as HEIDENHAIN 1387) EnDat encoders (such as HEIDENHAIN 1313)	Elevator speed ≤ 4 m/s	323 to 528 V AC

Product Features

- Unified control of PM synchronous/asynchronous motors
- Angle-free auto-tuning of synchronous motors
- Motor static auto-tuning of all parameters
- No-load-cell start and anti-rollback
- Loop gain auto-tuning with adaptive comfort
- Excellent open-loop control for asynchronous motors, with various protective functions
- Handheld keypad, host computer software and mobile phone App commissioning
- Direct-to-floor distance control, deriving smooth N velocity profiles automatically
- Elevator functions such as enabling test, brake contactor control, RUN contactor control, forced slow-down, door pre-open, shaft auto-tuning, overspeed protection and contact stuck protection



Other Accessories

HOP/COP



■ Lights



■ Switches/Emergency Stop Buttons...



■ Hall Inspection Boxes, Intercoms, Alarm Bells...



Business Applications

■ Case 1: a company's manufacturing base

On-site picture



Brief overview

Address	Heyuan city (Guangdong province)
Elevator brand	IFE Elevator
Elevator speed, load	0.5 m/s 3000 kg
Type	Freight elevator
Product	Model
Control cabinet	Smile3000-M-4015
COP	COP-Y01
HOP	HOP-G01
Car top inspection box	Smile3000-CTH-B01
Pit inspection box	Smile3000-PTB-B01

■ Case 2: a company's office building

On-site picture



Brief overview

Address	Chaozhou city (Guangdong province)
Elevator brand	LINGAO Elevator
Elevator speed, load	1 m/s 1000 kg
Type	Passenger elevator
Product	Model
Control cabinet	Smile3000-M-4015
COP	COP-Y01
HOP	HOP-G01
Car top inspection box	Smile3000-CTH-B01
Pit inspection box	Smile3000-PTB-B01