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Company profile

Shanghai STEP Electric Corporation was founded in 1995 and has been awarded with titles of National High-tech Enterprise and National Innovative Enterprise. In 2010, STEP was listed in Shenzhen Stock Exchange with stock name STEP and stock code 002527. STEP is a member of the National Robot Standardization General Working Group, a member of the National Elevator Standardization Technical Committee, the vice president of China Robot Industry Alliance, the vice president of Shanghai Robot Industry Association, and the vice president of Shanghai Intelligent Manufacturing Industry Association.

With the core of motion control technology and the focus on servo drive, frequency control, robot, industrial controller and other products, STEP develops digitalization and intelligence, and provides customers with high-quality integrated solutions for intelligent manufacturing. Its business covers the following five segments:

Electrical control: STEP is the world's leading brand of elevator control systems and has provided intelligent electrical control systems, components and technical support services for more than 2.6 million elevators worldwide for 28 years. G-Cloud is a digital and intelligent solution launched by STEP for the entire life cycle of elevators. Using advanced cloud platform technology and relying on cloud supervision, cloud services and cloud protection, G-Cloud improves the elevator intelligence level, helps users achieve digital maintenance and on-demand maintenance, and reduces elevator operation and maintenance costs.

VFD: STEP has focused on the field of power electronics and motor control for 22 years. It has an independent research and development platform, the whole chain of design, production, sales and inspection and an intelligent assembly line of automatic drive and control machine, with an annual output of 200,000 units. STEP high and low voltage inverter platform covers full power, widely used in elevator, water supply, heating air conditioning, rubber and plastics, logistics, hoisting machinery, general energy saving and other industries.

Motion control: STEP adopts its own core technologies such as multi-axis synchronization, bus control, platform control, multi-machine collaboration, commissioning free and self-adaption to provide multi-level solutions from servo drive, motion control to integrated applications, from single machine automation to intelligent manufacturing. It can provide intelligent ecological services for upstream and downstream

customers such as equipment manufacturers and system integrators.

Robot: STEP leads the market share of China's industrial robot. With the industrial robot load covering 3-600KG, STEP fully masters key technologies such as robot control system, servo system and software system, and provides industrial robots and system integration solutions to boost the high quality development of the manufacturing industry. STEP Robot Super Factory was selected as the first 20 smart factories in Shanghai, and was awarded the intelligent manufacturing demonstration unit of the National Ministry of Industry and Information Technology in 2021. STEP Amal Robot provides intelligent building unmanned service core products and intelligent solutions for the public service industry.

Intelligent manufacturing: STEP serves the automotive body in white and related components and parts, engineering machinery, furniture, bathroom, CNC machine tools and other industries and fields and provides automation core products, technologies and integrated intelligent manufacturing solutions to help China's high-end intelligent manufacturing.

The products and solutions of STEP are widely used in 3C electronics, lithium battery, semiconductor, photovoltaic, logistics, food and beverage, medical treatment, automobile, dispensing, laser, machine tools, elevators, water pumps, HVAC, rubber and plastics, general energy saving, engineering machinery, metalware, chemical products, furniture and other industries and segments, serving more than 110 countries and regions around the world.

STEP focuses on research and development, and has set up R&D centers in Shanghai, Shenzhen, Xi'an, Hangzhou, Germany and Japan, post-doctoral research workstations, and technology center laboratories with national CNAS accreditation. STEP has participated in the preparation and revision of a number of national technical standards and industry technical standards. As of mid-2022, STEP had obtained 730 national authorized patents, including 242 invention patents and 266 software copyrights.

Headquartered in Shanghai, STEP has set up production bases in Shanghai, Suzhou, Hangzhou, Shenzhen and Anhui, with more than 20 offices all over the country. Based on the globalization strategy, STEP has set up overseas subsidiaries in Germany, Japan and India and a joint venture in Malaysia, and will set up more global offices and continue to explore the global market.

Mission: to make people share the convenience and happiness of an intelligent society.

Vision: to build an international famous brand in the field of intelligent manufacturing.

Core values: customer-oriented, strive first, teamwork, dare to be brave, realistic and innovative.

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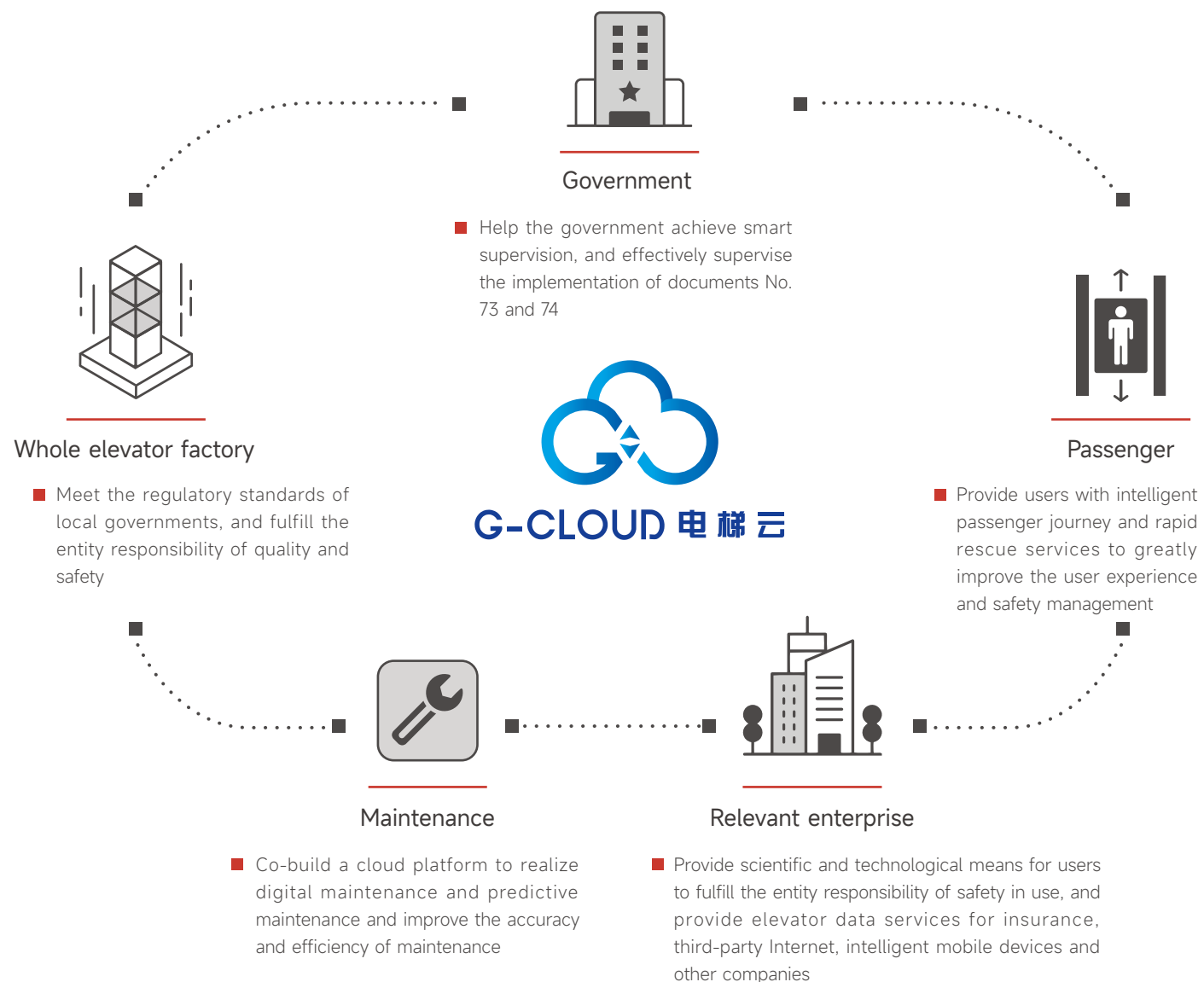


G-CLOUD

G-CLOUD

G-Cloud Services

STEP G-Cloud makes full use of its own control system advantages to achieve elevator digitization and intelligence combined with elevator IoT, cloud computing and other technologies. Holographic communication senses the elevator operating status and forms big data to identify elevator safety hazards in time, which can help customers realize digital maintenance and predictive maintenance, serve elevator production units and users to fulfill safety responsibilities with ease, and realize efficient and accurate intelligent control, investigation and scheduling.



Upgrade of Three Functions of G-Cloud

Imperative Cloud Supervision

■ Connect to the government platforms to meet the mandatory acceptance requirements

STEP G-Cloud has been successfully connected to 16 local government (provincial or municipal) platforms, providing support for customer acceptance of elevators.

■ Vibration data uploaded to the cloud to help predict faults throughout the life cycle

The vibration data of EOCD (elevator operating characteristic diagnostic unit) is uploaded to the cloud and directly reflects the mechanical performance through the cloud computing. Combined with electrical operation data and door operator data, the post alarm is transformed into an advance warning to achieve the prediction of faults in the whole life cycle.

■ Real-time transmission of elevator control data to grasp the elevator status

G-Cloud users can grasp the elevator operating status in real time through the dual-mode of the web or APP. In case of elevator fault, emergency alarm bell or vibration out of specification, G-Cloud can push relevant alarm information to the user account.

■ The LAN solution satisfies local real-time monitoring

STEP G-Cloud can integrate ESDT Ethernet terminals into the local security wired network and deploy local monitoring servers in the central control room, so as to achieve local monitoring of elevator data, thereby providing complete LAN solutions.



Upgrade of Three Functions of G-Cloud

Efficient and accurate Cloud Services

■ Predictive maintenance with big data acquisition and analysis

The ESDT series terminal of the machine room is equipped with integrated EOCD and door operator controller to realize the big data acquisition and analysis of electrical operation data, car mechanical vibration data, door operator data, audio and video data, timely find potential safety hazards, achieve predictive maintenance, and realize intelligent control, intelligent investigation, and intelligent scheduling according to the documents No. 73 and 74 issued by the State Administration for Market Regulation.

■ Door operator data uploaded to the cloud to address the chimney effect

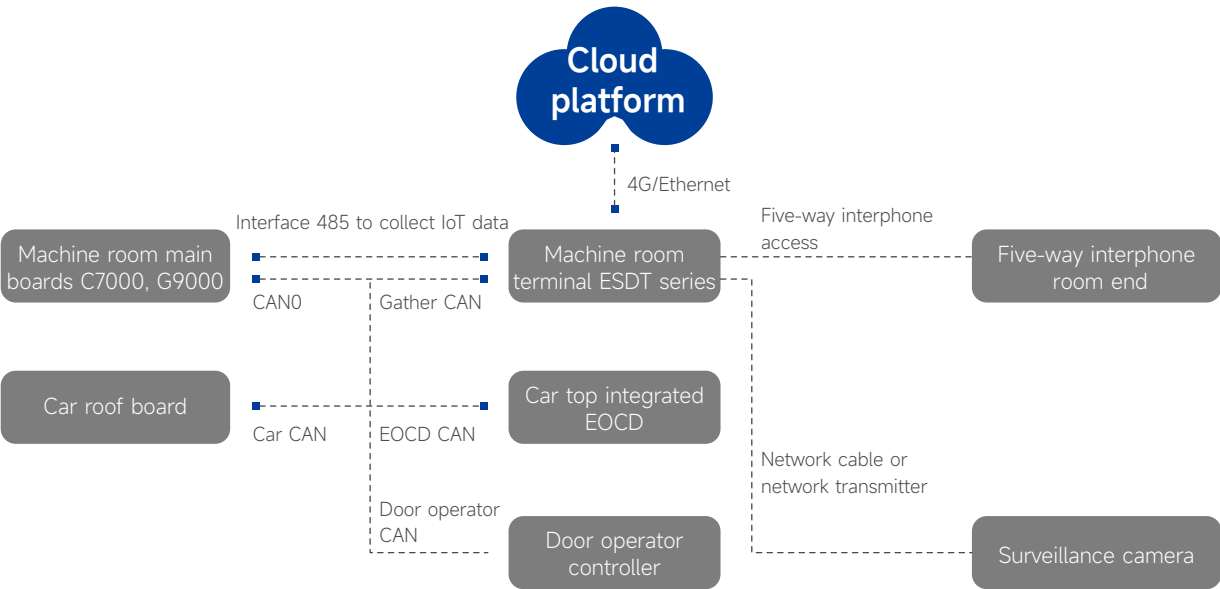
STEP door system uploaded to the cloud can provide national standards, local standards, door related data and value-added data related to the door system, effectively monitor more than 70% of the door system faults and sound a warning in a timely manner. The chimney effect can be effectively addressed by using the door system uploaded to the cloud combined with the main control system.

■ Remote shared commissioning to improve efficiency

When customers need remote assistance during on-site elevator commissioning, G-Cloud APP can provide remote shared commissioning services, greatly reducing after-sales service costs for customers and improving commissioning efficiency.

■ Encryption authentication and scientific control of accessories

G-Cloud accessories are certificated using military-grade blockchain encryption technology that has a digital currency security level to ensure that encrypted data is not tampered with or intercepted during transmission. Through accessories certification, customers can take the initiative in management of accessories and obtain long-term accessories revenue.



Upgrade of Three Functions of G-Cloud

Easy and worry-free Cloud Protection

■ Automatic tracking of emergency handling process

In case of elevator fault, the G-Cloud platform will automatically create an emergency work order and send the alarm information to the maintenance personnel. The emergency handling process platform can automatically track the elevator status changes and automatically end the emergency handling process after the elevator fault is eliminated.

■ Audio and video interactive services for emergency rescue

The ESDT terminal supports video and IP calls. Rescue workers can view the trapped persons in the car through the web or APP side, and can establish a call with trapped persons, so as to comfort trapped persons and formulate safe rescue strategies.

■ AI-assisted monitoring of safe passenger journey

The ESDT terminal that supports video can also be mounted with AI cameras to realize the status monitoring and alarm of the electromobile entering the elevator, the number of passengers, manned and unmanned elevator, and long-term door stop, to further ensure safe passenger journey.

■ Linked mobile device to achieve a smart and convenient journey

STEP G-Cloud platform can open the elevator interaction interface for smart mobile devices such as smart phones, service robots and logistics robots to achieve an intelligent and convenient escalator journey.



List of maintenance functions

Digital maintenance

■ 1.1 Real-time signal

- 1.1.1 Online status
- 1.1.2 Current service model
- 1.1.3 Car running status
- 1.1.4 Running direction
- 1.1.5 Unlocking area
- 1.1.6 Current elevator floor
- 1.1.7 Is there anyone in the car
- 1.1.8 Is the door closed properly
- 1.1.9 Car door status
- 1.1.10 Landing door status
- 1.1.11 Traction machine status
- 1.1.12 Overload
- 1.1.13 Full load
- 1.1.14 Elevator running speed
- 1.1.15 Total contactor status
- 1.1.16 Running contactor status
- 1.1.17 Safety circuit status
- 1.1.18 Upper limit action
- 1.1.19 Lower limit action
- 1.1.20 Is COP registered
- 1.1.21 Is LOP registered

■ 1.1.22 Elevator lock

1.2 Statistical data

- 1.2.1 Cumulative running time of equipment
- 1.2.2 Cumulative number of runs of equipment
- 1.2.3 Number of equipment opening and closing times
- 1.2.4 Steel cable bending times

■ 1.2.5 Cumulative running distance

1.3 Faults

- 1.3.1 Elevator fault-free
- 1.3.2 Safety circuit break during elevator running
- 1.3.3 Door closing fault
- 1.3.4 Door opening fault
- 1.3.5 Car stop outside the unlocking area
- 1.3.6 Unexpected car movement (with door open)
- 1.3.7 Motor running time limiter action (elevator running overtime)

- 1.3.8 Loss of floor position
- 1.3.9 Trapped passenger
- 1.3.10 Elevator control device fault
- 1.3.11 Elevator traction machine fault
- 1.3.12 Elevator inverter fault
- 1.3.13 Elevator overspeed
- 1.3.14 Elevator brake system fault
- 1.3.15 Main power fault (overvoltage, undervoltage, default phase)
- 1.3.16 Alarm of hit ceiling
- 1.3.17 Alarm of collapsing to the bottom of bit
- 1.3.18 Door open alarm during running
- 1.3.19 Main engine overheat
- 1.3.20 Emergency stop
- 1.3.21 Elevator communication fault
- 1.3.22 Phase loss and phase dislocation protection
- 1.3.23 Abnormal action of running contactor
- 1.3.24 Abnormal action of brake contactor
- 1.3.25 Abnormal action of star-delta contactor
- 1.3.26 Abnormal rotary encoder signal
- 1.3.27 Abnormal brake lift release monitoring
- 1.3.28 Abnormal braking force detection (insufficient braking force)
- 1.3.29 Foreign body blockage causes the door opening and closing to be blocked, so that the elevator stops running
- 1.3.30 Too long time to block door closing, so that the elevator stops running
- 1.3.31 Car lock (mechanical or electrical) failure
- 1.3.32 Door operator (door motor, transmission mechanism, drive and control system, etc.) failure
- 1.3.33 Door vane collision with roller (ball) or spacing out of tolerance
- 1.3.34 Failure of forced door closing device
- 1.3.35 Failure of door guide system (door hanger sheave, door boot, etc.)
- 1.3.36 Repeated door opening and closing
- 1.3.37 Traction rope slip or jumping out of groove
- 1.3.38 Reducer fault
- 1.3.39 Brake unit fault
- 1.3.40 Failure of electrical components (main power switch, contactor, relay, brake unit, etc.)

- 1.3.41 Unreliable electrical connection
- 1.3.42 Alarm of stop at reference floor not leveling floor
- 1.3.43 Radiator overheat alarm report
- 1.3.44 Abnormal action of forced deceleration switch
- 1.3.45 Door lock short circuit
- 1.3.46 Other faults that prevent the elevator from restarting
- 1.3.47 Limit switch action
- 1.3.48 Emergency stop switch action
- 1.3.49 Inverter output default phase
- 1.3.50 Fault of protector against door clamping
- 1.3.51 Main engine overload
- 1.3.52 Overvoltage
- 1.3.53 Undervoltage
- 1.3.54 Abnormal leveling signal

- 1.3.55 Abnormal door area signal
- 1.3.56 Abnormal elevator speed
- 1.3.57 Machine room high temperature alarm

■ 1.4 Events

- 1.4.1 Restore to automatic operation mode
- 1.4.2 Main power outage
- 1.4.3 Enter stop service
- 1.4.4 Enter the inspection mode
- 1.4.5 The current service mode is unknown
- 1.4.6 Enter the mode of fire and emergency power operation
- 1.4.7 Electromobiles entering the elevator
- 1.4.8 Smoke in car

■ 1.5 Alarm (alarm bell)

Predictive maintenance

■ 2.1 Supplementary data of door operator

- 2.1.1 Undervoltage
- 2.1.2 Overvoltage
- 2.1.3 IPM overtemperature
- 2.1.4 EEPROM error
- 2.1.5 Self-learning error
- 2.1.6 Current detection error 1
- 2.1.7 Current detection error 2
- 2.1.8 Belt slip error
- 2.1.9 Overtorque error
- 2.1.10 Encoder error
- 2.1.11 Temperature sensor error
- 2.1.12 IPM module fault
- 2.1.13 Door opening timeout
- 2.1.14 Door closing time
- 2.1.15 Stall protection
- 2.1.16 CAN bus error
- 2.1.17 Motor overtemperature
- 2.1.18 Motor temperature sensor fault
- 2.1.19 Door width self-learning error

■ 2.2 AI

- 2.2.1 ISO vertical vibration PKPK OOS
- 2.2.2 ISO horizontal vibration PKPK OOS
- 2.2.3 ISO vertical vibration A95 OOS
- 2.2.4 ISO horizontal vibration A95 OOS
- 2.2.5 Historical vibration data
- 2.2.6 Real-time vibration data
- 2.2.7 Abnormal vibration caused by guide rail
- 2.2.8 Abnormal vibration caused by car
- 2.2.9 Vibration caused by main steel cable, traction wheel and guide wheel of car
- 2.2.10 Vibration caused by compensation chain
- 2.2.11 Vibration caused by steel cable of speed governor and tensioner speed governor
- 2.2.12 Vibration caused by brake
- 2.2.13 Vibration caused by traction machine
- 2.2.14 Electromobiles entering the elevator
- 2.2.15 Long-term door stop
- 2.2.16 Number of passengers

G-Cloud Series Products

ESDT400S Series

Product Features

- Built-in lithium battery optional
- Support CAN and RS485 ports to collect the main board data
- 4G-CAT1 all-mode for Internet access
- DC9-30V power supply
- 2-channel dry contact inputs
- Support mobile phone calls
- With housing, standard guide rail mounting
- Supply model: ESDT400S, ESDT400SL, ESDT400S-H

Application scenarios

IoT electrical data acquisition



ESDT405S series

Product Features

- Built-in lithium battery
- Support CAN and RS485 ports to collect the main board data
- 4G-CAT4
- 1LAN port
- DC9-30V power supply
- 2-channel dry contact inputs
- Support mobile phone calls
- Mounted with external camera SL-IPC-XSD001 to achieve video surveillance and audio intercom
- With housing, standard guide rail mounting
- Supply model: ESDT405S-N

Application scenarios

IoT electrical data acquisition + audio and video surveillance



ESDT400SA series

Product Features

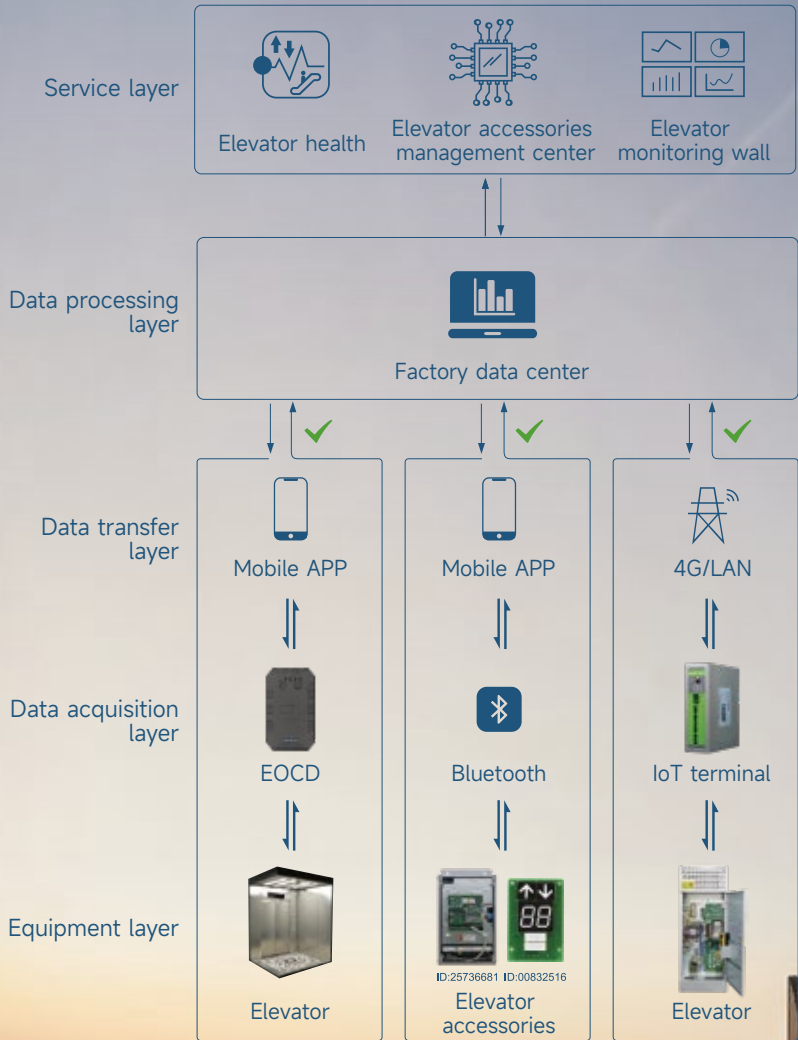
- Support CAN and RS485 ports to collect the main board data
- Support four-wire analog five-party intercom system to IP phone
- 4G-CAT4 all-mode for Internet access
- DC9-30V power supply
- 1-channel dry contact inputs
- Support mobile phone calls
- With housing, standard guide rail mounting
- Supply model: ESDT400SA, ESDT400SA-B

Application scenarios

IoT electrical data acquisition + IP calls



G-Cloud Bluetooth Module



Service layer. Including: Elevator accessories management center, factory monitoring wall and elevator health analysis

Data processing layer. Mainly the factory's data center

Data transfer layer. Mainly 4G/network cable and mobile APP

Data acquisition layer. Mainly IoT terminal, EOCD and data converter

EOCD miniature portable elevator status tester

Product Features

- EOCD miniature portable elevator status tester is an important data acquisition device in G-Cloud system, which reflects the elevator's carrying quality by collecting the changes in X/Y/Z acceleration/speed/displacement during elevator operation
- EOCD is portable in the size of a typical smart phone
- EOCD is an independent data acquisition device, independent of the elevator control system
- EOCD is very simple to use. As long as it is placed smoothly in the center of the elevator car floor, the elevator ride curve reflecting the elevator's health status can be collected by choosing the highest floor and the lowest floor to allow the elevator to run a round trip, and this information can be sent to the cloud server of the elevator manufacturer through the mobile APP



G-Cloud Bluetooth Module

Product Features

- Connected to the main board commissioning interface to open up the data path between the main board and the "STEP G-Cloud" mobile APP
- Used with "STEP G-Cloud" APP to achieve elevator accessories certification
- Used with "STEP G-Cloud" APP to achieve wireless elevator commissioning, replacing the traditional operator



ESDT400S Series

Product Features

- Support RS485 port to collect the main board data
- 4G-CAT1 all-mode for Internet access
- DC9-30V power supply

Application Scenarios

IoT electrical data acquisition

AI camera

Product Features

- AI detection and video surveillance of electromobiles, number of passengers, long-term door stop and repeated door opening and closing

Application Scenarios

Video surveillance: AI recognition



Car top integrated EOCD

Product Features

- Used with ESDT400S-H terminal
- Collect the vibration data on demand or periodically and upload to the cloud platform
- Perform ISO filtering on the X/Y/Z axes of the elevator during operation
- After calculation, obtain the vibration curve and generate the elevator operation quality report

Application Scenarios

IoT electrical data acquisition; vibration data acquisition and analysis



Cloud platform

Product Features

- APP platform for data monitoring, recording and storage
- WEB platform for data monitoring, recording, storage, accessories certification, EOCD and wireless commissioning

Application Scenarios

Platform services

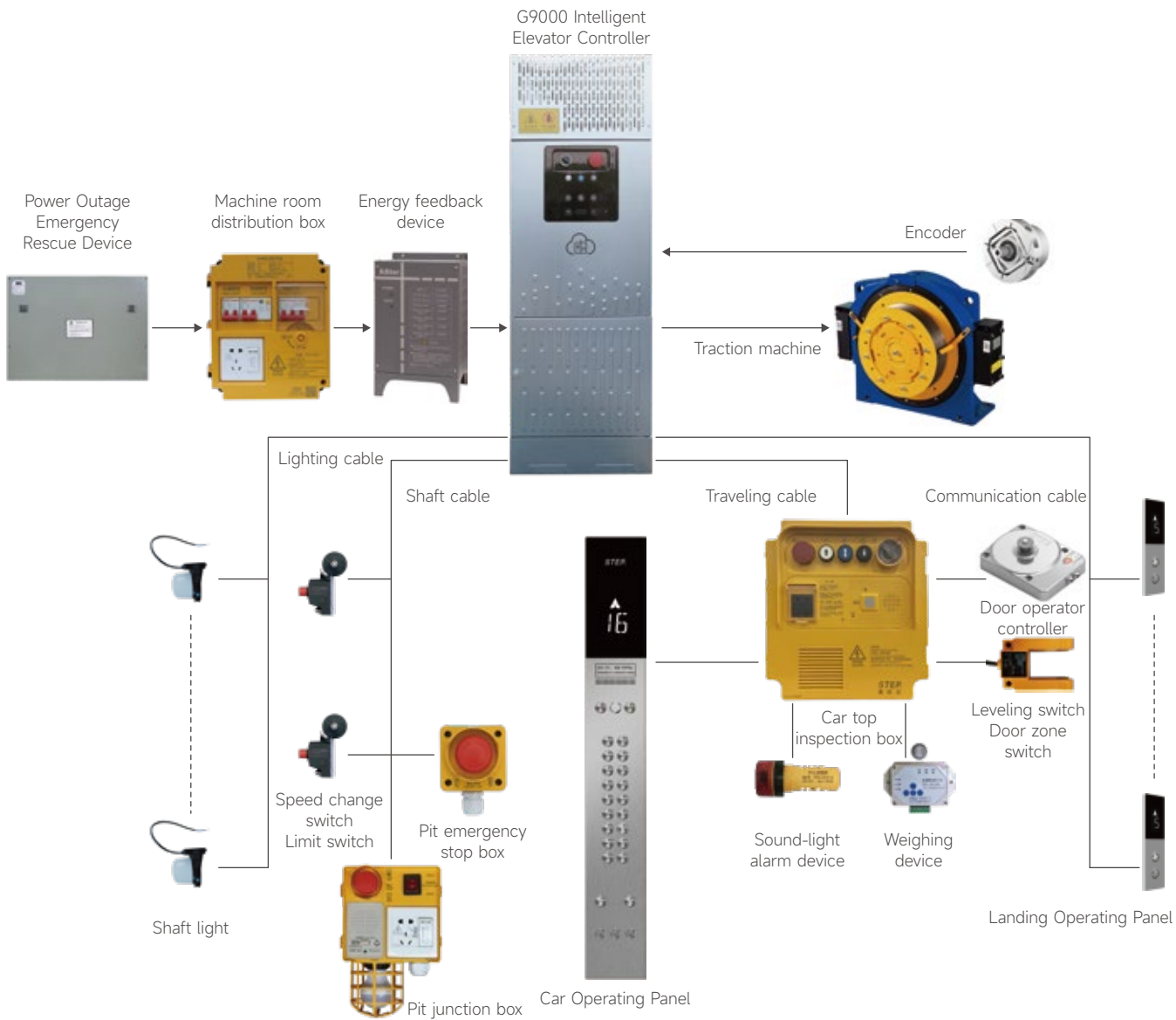




Straight elevator control system solutions

Medium and Low Speed Elevator Control System Solutions

System Block Diagram



Standard: GB/T 7588.1—2020, TSG T7007-2022, TSG T7001-2023	Control Method: Single/Duplex/Group Control
Ambient temperature: -10°C~45°C	Intercom: Five-party
Power supply: 3-phase, AC380-415V, 50/60Hz	Illumination: AC220V
Elevator speed: ≤2.5m/s	Floors: 64
Motor type: Synchronous/Asynchronous	Shaft Switch: Door zone switch, leveling switch, speed change switch and limit switch
Door operator: AC220V frequency conversion door operator	Optional Functions: energy feedback, power outage emergency rescue device



G9000 Integrated Intelligent Elevator Control Cabinet (MR)

Product Features

- New Definition** | Industrial appearance, integrated module design
- G-Cloud** | G-Cloud certification system ID to achieve accessories identification and ensure customer maintenance interests
- Safety Update** | Electronic UCMP, and arbitrary short-circuit detection of auxiliary door lock, greatly improving elevator safety
- No need to set main engine parameters** | Equipped with communication encoder to realize the main engine parameter setting-free and simplify the on-site commissioning process
- Test and Rescue** | The control cabinet is equipped with electric brake release and test operation panel to make the rescue and test "at a glance"

Technical Indicators

Power	Motor	Size (mm)	Installation
5.5-22kW	Synchronous/Asynchronous	1500x300x200	Embedded
Brake			
DC110V/3A, maintaining voltage DC110V/75V/55V optional			

C7000+ Intelligent Network Integrated Control Cabinet (MR)

Product Features

- Intelligent commissioning, fault record downloading and self-learning balance coefficient, etc
- Innovative base block design, fast sampling in high voltage circuit and others enhance the safety and reliability of the system
- Unique integrated control cabinet's installation, pre-manufactured cable, wiring board design, anti-misplugging design, etc.
- Innovative design of door structure, taking into full account the cooling effect of integrated machine in the cabinet air duct design
- Control cabinet directly molded, the same dimension below 22kW
- C7000+ control cabinet won 1 invention patent, 2 appearance patents and 3 utility model patents

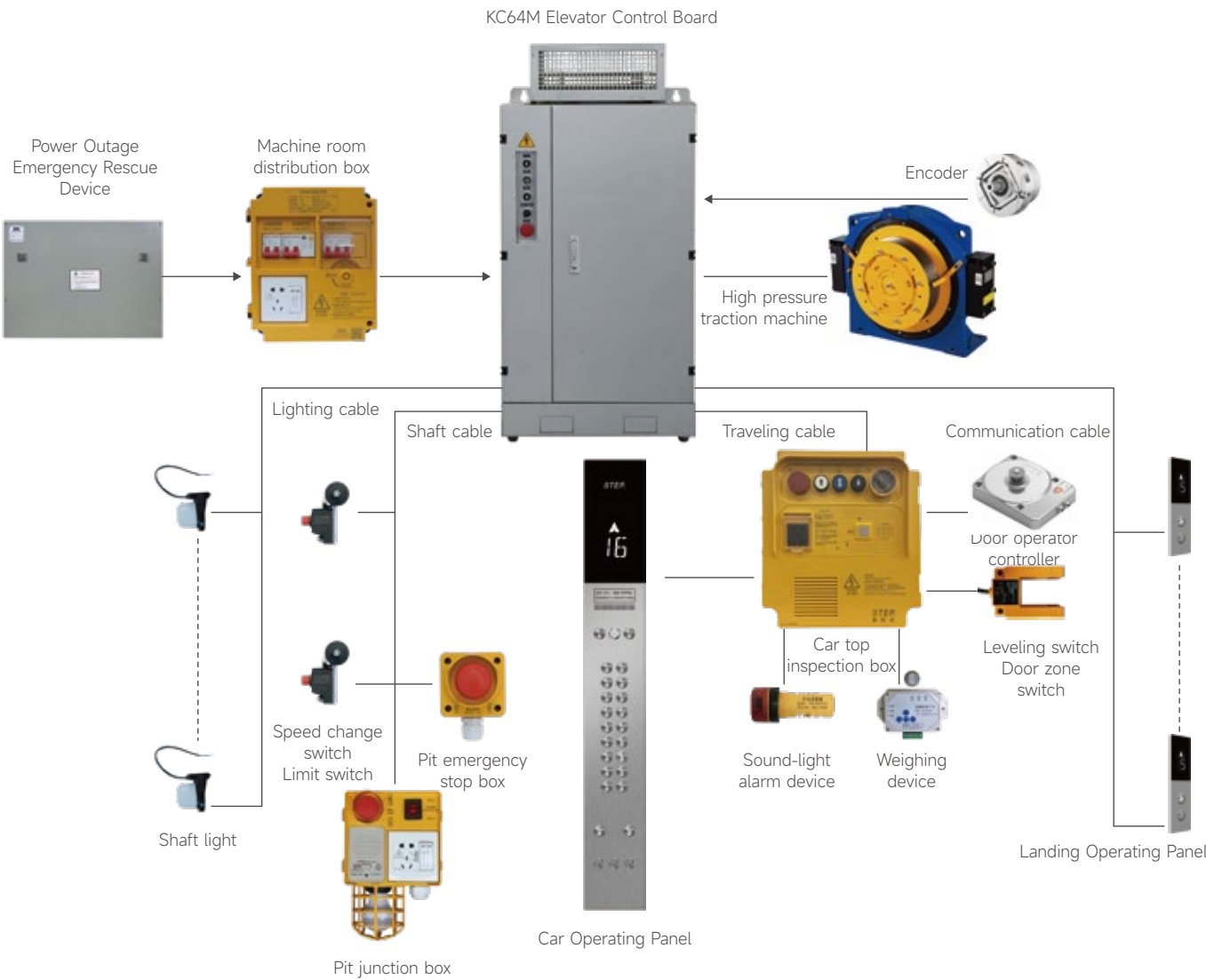
Technical Indicators

Power	Motor	Size (mm)	Installation
5.5-22kW	Synchronous/Asynchronous	1184x420x200	Wall mounted/Ground mounted
Brake			
DC110V≤3A, maintaining voltage DC110V/75V/55V optional			



Medium and High Speed Elevator Control System Solutions

System Block Diagram



Standard: GB/T 7588.1—2020.TSG T7007-2022, TSG T7001-2023	Intercom: Five-party
Ambient temperature: -10°C~45°C	Illumination: AC220V
Power supply: 3-phase, AC380-415V, 50/60Hz	Floors: 64
Elevator speed: 2.5~4m/s	Shaft Switch: Door zone switch, leveling switch, speed change switch and limit switch
Motor type: Synchronous/Asynchronous, maximum 510V high voltage main engine	Energy-efficient and power-saving: Integrated energy feedback unit, saving 20~30% energy
Door operator: AC220V frequency conversion door operator	Electromagnetic Compatibility: Built-in EMC circuit, complying with GB/T 24807 and GB/T 24808 requirements
Control Method: Single/Duplex/Group Control	



KC64M Integrated Control Cabinet (MR)

Technical Indicators

- Controller: AS380S/AS390 (four-quadrant integrated machine)
- Rated power: 5.5-22kW, 30-55kW
- Motor type: Synchronous/Asynchronous
- Motor brake: DC110V≤3A
- Cabinet material: Galvanized sheet
- Control cabinet dimension (mm): 1000×580×400
- Brake resistor cabinet dimension (mm): 420×255×117~420×255×255



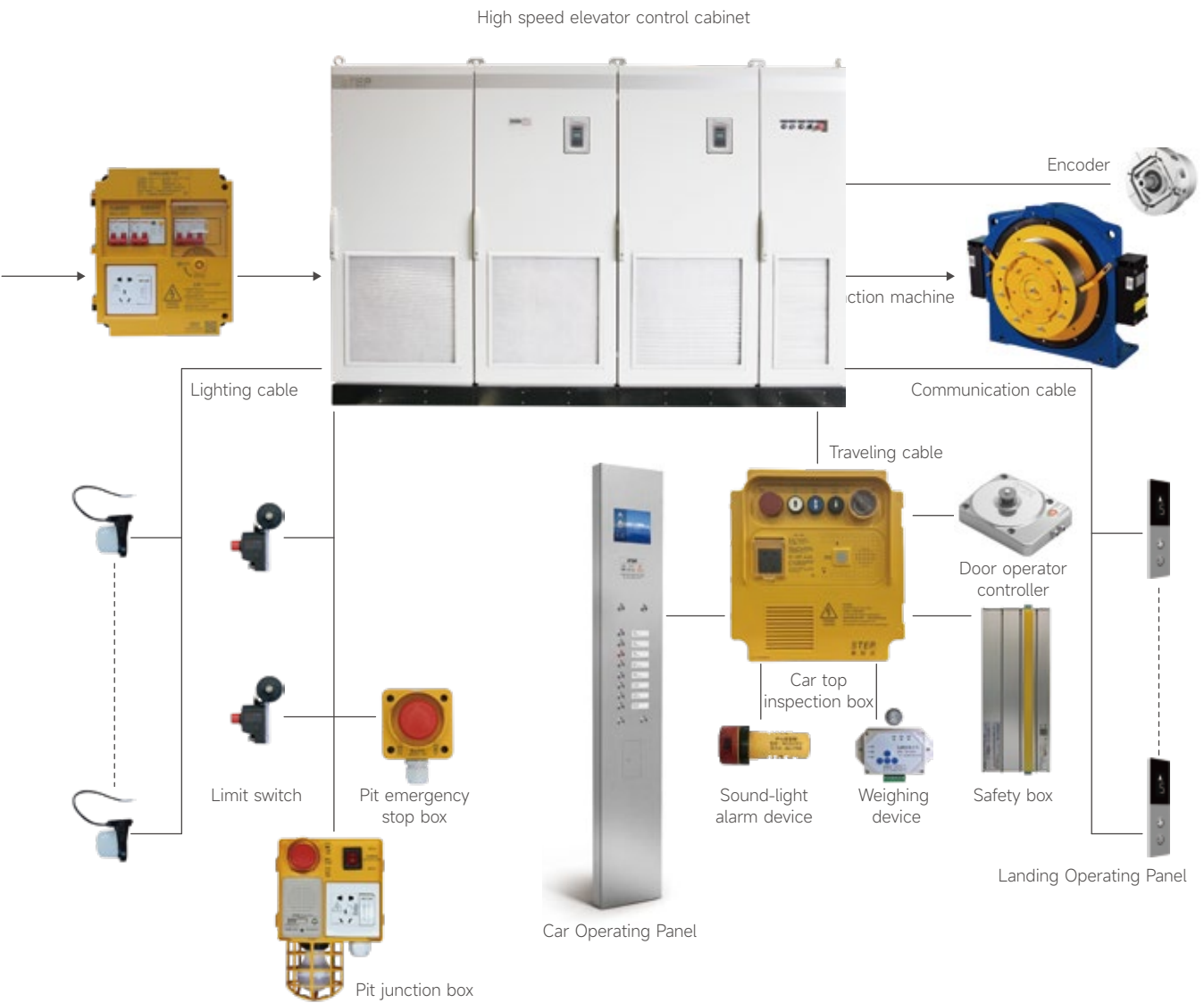
KF20M Integrated Control Cabinet (MRL)

Technical Indicators

- Controller: AS380S/AS390 (four-quadrant integrated machine)
- Rated power: 5.5-22kW, 30-55kW
- Rated speed: ≤2.5m/s
- Motor type: Synchronous/Asynchronous
- Motor brake: DC110V≤3A
- Cabinet material: Galvanized sheet, st. steel, hairline
- Control cabinet dimension (mm): 1780×400×220
- Brake resistor cabinet dimension (mm): 420×255×117~420×255×255

Super High Speed Elevator Control System Solutions

System Block Diagram



Standard: GB/T 7588.1—2020, TSG T7007-2022, TSG T7001-2023	Intercom: Five-party
Ambient temperature: -10℃~45℃	Illumination: AC220V
Power supply: 3-phase, AC380-415V, 50/60Hz	Floors: 64
Elevator speed: 4-10m/s	Shaft Switch: LIMAX 33CP safety box, limit switch
Motor type: Synchronous/Asynchronous	Energy-efficient and power-saving: Integrated energy feedback unit, saving 20-30% energy
Door operator: AC220V frequency conversion door operator	Electromagnetic Compatibility: Built-in EMC circuit, complying with GB/T 24807 and GB/T 24808 requirements
Control Method: Single/Duplex/Group Control	

Super High Speed Elevator Control Cabinet

Technical Indicators

- Suitable for full selective elevator, parallel elevator, common group control elevator and destination floor group control elevator, supporting up to 8 elevators
- Speed range: 4-10m/s
- Maximum number of floors ≤128, maximum lifting height ≤600m
- Redundant safety design, dual CPU board control and independent speed monitoring board
- Non-contact terminal deceleration switch, gray code encoding input to reduce switch input points and increase the reliability of switch action
- Complete electrical safety guarantee scheme of destroking buffer certified by national authoritative testing agency
- Use four-quadrant variable frequency control drive system
- AFE active front end: precise control of bus voltage, achieving efficient energy feedback and harmonic current feedback of ≤5%
- Torque feedforward technology for VFD to improve the speed control responsiveness, even under the condition of high acceleration (deceleration)
- Excellent speed tracking performance ensures elevator comfort
- CAN-BUS communication is used to transmit data between the control system and the drive system to improve the accuracy and reliability of speed control
- Modular cabinet design and flexible configuration can adapt to different elevator speeds and loads
- Excellent cooling structure design improves system reliability
- Clear and reliable copper bar wiring for the power cables in the cabinet
- Absolute terminal speed monitoring security system with the security level of SIL3



Four-quadrant Inverter

Technical Indicators

- Active rectifier technology is used to reduce reactive power and the power factor is close to 1
- Four-quadrant operation, with energy feedback function
- More steady DC bus
- Current harmonics less than 4% in full load
- Standard LCL filter and charging loop
- Excellent cooling structure design

Advanced controlled rectifier technology used for AS510 series AFE products, combined with LCL filter, achieves active rectification and provides constant DC power supply and energy feedback for the system. A multi-drive system operating in four quadrants composed of one ore more inverter units can run on the DC bus



Absolute Value Position System

Product Features

- Support up to 128 floors, 10m/s
- Comply with GB/T 7588.1—2020, TSG T7007-2022 and EN81-20/50
- Flexible and convenient to install, replacing electromechanical components and parts in the shaft
- Absolute position always available - no reference position required after power failure recovery
- Integrated safety sensing controller, dual channel redundancy design, integrated monitoring function
- Low noise, dirt resistance, smoke resistance and moisture resistance

Function Description

- UCMP: protection against unexpected car movement
- Pre-opening and re-leveling control function
- ETSL: use stroke buffer
- Overspeed protection (115%), including ACOP detection
- Never staggered floor
- Clean shaft: upper and lower fulcrums, with a magnetoscale in the middle, making it easy and fast to install. Leave out all leveling/door zone switches and cables, leveling/door zone plugboards and mechanical components, all deceleration/limit/limit switches and cables and mechanical components

Optional Configuration

- Inspection overspeed: 0.63m/s (configurable)
- Misdirected protection in inspection operation
- Inspection limit: short top and pit
- Ultimate overspeed: with certified and approved electronic safety gear
- Velocity limiter replacement: with certified and approved electronic safety gear



Medium and Low Speed Elevator Control Cabinet Package

No.	Type	Name	Description	Quantity	Unit	Configuration rules
1	Control cabinet	Control cabinet	MCP-ST, control cabinet, C7000+/G9000, with/without machine room	1	PC	Motor brake DC110V/≤3A,5.5- 22kW, Synchronous/Asynchronous
2		Resistor cabinet	Heat pipe type resistor cabinet; 5000MM	1	PC	External resistor, configured when no machine room is available

Medium and High Speed Elevator Control Cabinet Package

No.	Type	Name	Description	Quantity	Unit	Configuration rules
1	Control cabinet	Control cabinet	MCP-ST, control cabinet, AS380S/AS390, with/without machine room	1	PC	Motor brake DC110V/≤3A,5.5-22kW/ 30-55kW,Synchronous/Asynchronous
2		Resistor cabinet	Heat pipe type resistor cabinet; 5000MM	1	PC	External resistor, configured when no machine room is available

Super High Speed Elevator Control Cabinet Package

No.	Type	Name	Description	Quantity	Unit	Configuration rules
1	Control cabinet	Energy feedback unit	AS510+LCL filter circuit	1	PC	30-355kW
2		Drive cabinet	For high speed elevator only, AS520	1	PC	30-355kW
3		Control cabinet	MCP-ST, control cabinet, SM.01.PAD	1	PC	

Shaft Component Package

No.	Type	Name	Description	Quantity	Unit	Configuration rules
1	Shaft component	Distribution Box	Distribution Box, KKB4-67-32D/40D/50D/63D/80D	1	PC	With machine room, 5.5-7.5kW/ 11kW/15kW/18.5kW/22kW
2		Car roof inspection box	Car roof inspection box; EL.PC-I24G001H; Type rule 22 G9000&C7000; embedded inspection	1	PC	02/D1
3		Pit inspection box	Pit box; EL.PP-I220001; Type rule 22;	1	PC	
4		Landing of emergency stop switch box	Entrance emergency stop box; ABS+flame retardant; JTH-B	1	PC	
5		Monitoring room interphone	Sound device/intercom host/NKT12(1-1)A/DC12V	1	PC	Single-exchange monitoring room interphone
6			Sound device/monitoring room intercom master/ NKT12(1-1)6A/1-6 channels	1	PC	Divided system, multi-exchange, up to 6 channels; monitoring room intercom; Type rule 22
7			Emergency lighting power supply; 12VDC/2.2AH; RKP220/12D	1	PC	
14		Photoelectric switch	Photoelectric switch, PNP	4	PC	
15		Shaft limit switch	Shaft limit switch; including bracket; RY-S3-1370	4	PC	Quantity +2 when 1.75 < Speed ≤2.5M/S
16		Safety box	LIMAX33CP, mounting bracket	1	PC	Configured in Super High Speed Elevator
17		Magnetic railing ruler	AB20-80-10-1-R-D-15-BK80	N	M	Configured in Super High Speed Elevator
18		Sound-light alarm	Sound-light alarm; RKL24-01G; DC24V	1	PC	
19		Shaft lighting assembly	Fixed lighting; RKL220-5W	N	PC	
20		Encoder	Encoder; SINCOS; RS485	1	PC	
21		Light curtain	Standard light curtain; EL.PC-LC220I001; AC220V; 3.5m extension cord	1	PC	
22		Elevator air conditioning	Elevator air conditioning; EL.PC-AC.2201P-C;1hp air conditioner with cooling function only/heating and cooling air conditioner	1	PC	
23		Mounting accessories	Shaft mounting accessories package	1	PC	

Optional Package

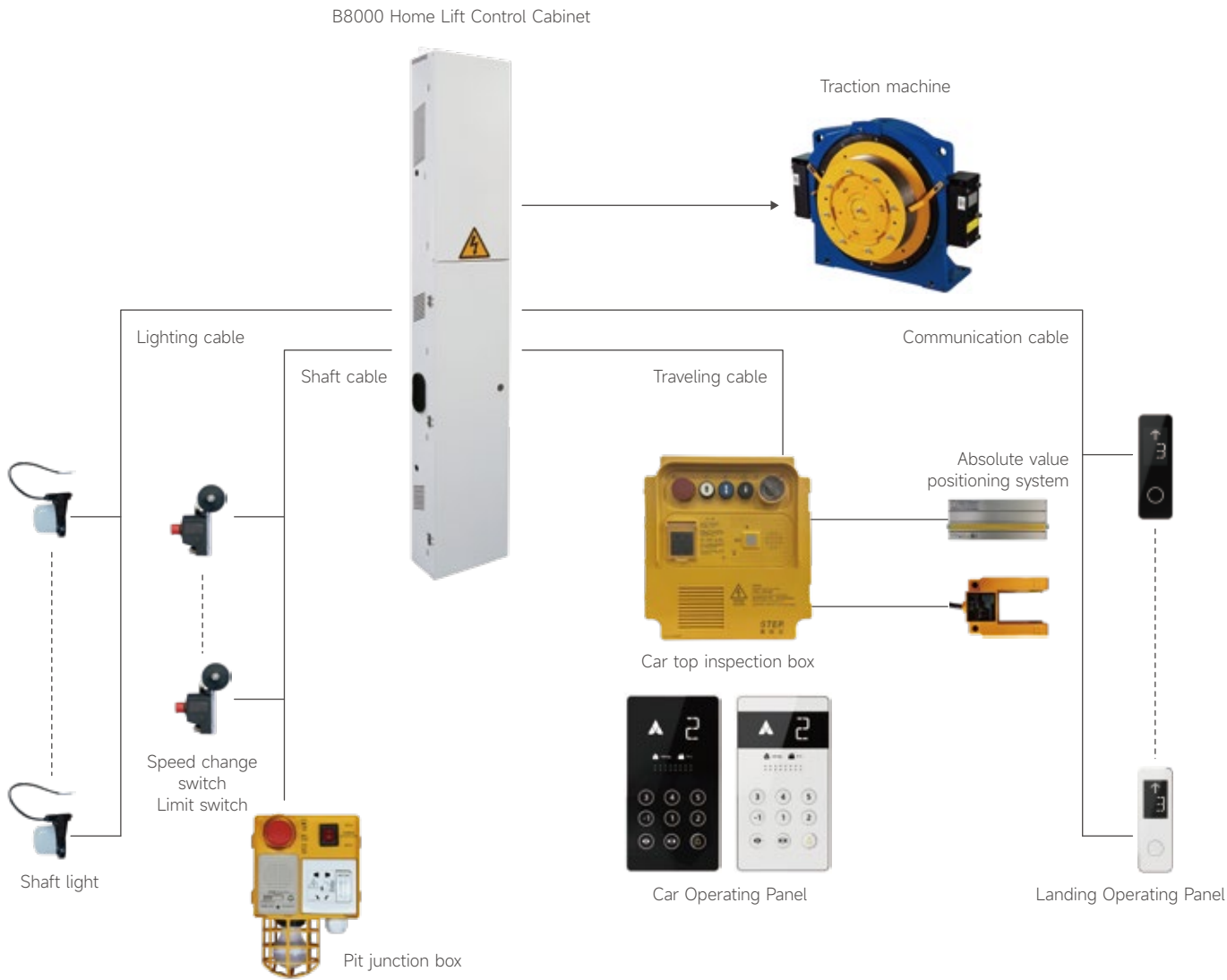
No.	Type	Name	Description	Quantity	Unit	Configuration rules
1	Optional components	Emergency leveling device	Leveling when power failure	1	PC	5.5-22kW
9		Energy feedback device	Elevator specific energy feedback AS.RG4011E/15E/18E/22E	1	PC	5.5-11kW/15kW/18.5kW/22kW
13		Switching power supply	220VAC; 24V4.5A; ABL2REM24045k	1	PC	More than 20 floors
14			TEMP01663 switching power supply box;302*154*90	1	PC	More than 20 floors

Line System Package

No.	Type	Name	Description	Quantity	Unit	Configuration rules
1	Line system	Traveling cable	20-core flat cable	n	M	Synchronous, single door configuration
			/TVVBP20/12*0.75+5*0.5+2P*0.5+1*1.5PE			
2		Traveling cable	24-core flat cable	n	M	Double door, asynchronous main engineor double door + asynchron-ous main engine
			/TVVBP24/16*0.75+5*0.5+2P*0.5+1*1.5PE			
3		Shaft switch cable	16-core round cable; RVV16/5*0.75+10*0.5+1*1.5PE	n	M	Trunk line
4		Shaft switch cable	3-core round cable; RVV3/2*0.75+1*0.75PE	10	M	Branch line
5		Shaft switch cable	2-core round cable; RVV2/2*0.5	2.5	M	Branch line
6		Shaft communication cable	4-core round cable/RVVS4/2*2*0.5; twisted pair	n	M	Trunk line
7		Shaft communication cable	4-core round cable/RVVS4/2*2*0.3; twisted pair	n	M	Branch line
8		Landing door lock cable	3-core round cable/RVV3/2*0.75+1*0.75PE	n	M	Trunk line, single door
9		Landing door lock cable	5-core round cable/RVV5/4*0.75+1*0.75PE	n	M	Trunk line, double door
10		Landing door lock cable	3-core round cable/RVV3/2*0.75+1*0.75PE	n	M	Branch line
11		Shaft lighting cable	5-core round cable/RVV5/4*0.75+1*0.75PE	n	M	Trunk line
12		Shaft lighting cable	3-core round cable; RVV3/2*0.75+1*0.75PE	n	M	Branch line
13		Main power cable	RV4mm²/RV6mm²/10mm², black/blue/yellow-green	6	M	5.5KW/7.5-15KW/18.5-22KW
14		Lighting power cable	RV2.5mm², brown/blue	6	M	
15		Motor power cable	VVRP 4*4/4*6/4*10, brown/black/gray/yellow-green	6	M	5.5KW/7.5-15KW/18.5-22KW
16		Machine room safety switch cable	3-core round cable; RVV3/2*0.75+1*0.75PE	6	M	
17		Brake switch detection cable	2-core round cable; RVV2/2*0.5	6	M	
18		Brake coil cable	3-core round cable; RVV3/2*0.75+1*0.75PE	6	M	
19		Motor temperature detection cable	2-core round cable; RVV2/2*0.5	6	M	
20		Governor test reset cable	4-core round cable/RVV4/4*0.75	6	M	Configured when no machine room is available
21		Pit safety switch cable	3-core round cable; RVV3/2*0.75+1*0.75PE	6	M	
22		Door operator power cable	3-core round cable; RVV3/2*0.75+1*0.75PE	3	M	
23		Door operator signal cable	8-core round cable; RVV8/8*0.5	3	M	
24		Light curtain and edge cable	3/4-core round cable; RVV3/2*0.75+1*0.75PE, RVP4/4*0.3	3	M	
25		Car roof fan lighting cable	4-core round cable/RVV4/3*0.75+1*0.75PE	3	M	
26		Leveling door area signal cable	8-core round cable; RVV8/8*0.5	3	M	
27		Car cable	3-core round cable; RVV3/2*0.75+1*0.75PE	3	M	
28		Car cable	5-core round cable/RVV5/4*0.75+1*0.75PE	3	M	Configured for asynchronous main engine
29		Safety clamp switch cable	3-core round cable; RVV3/2*0.75+1*0.75PE	5	M	
30		Car roof safety switch cable	3-core round cable; RVV3/2*0.75+1*0.75PE	3	M	
31		Weighing switch cable	5-core round cable; RVV5/5*0.5	5	M	
32		Sound-light alarm device cable	2-core round cable; RVV2/2*0.5	5	M	
33		Car operating panel cable	10-core round cable; RVV10/2P*0.3+8*0.3	3	M	Auxiliary car operating panel cable configured to order
34		Absolute encoder cable	19-core round cable/RVV19/18*0.75+1*2.0	1	PC	

Villa Elevator Solution

System Block Diagram



Standard: GB/T 21739-2008 Rules for the construction and installation of home lifts	Control method: Single/Duplex
Ambient temperature: -10°C~45°C	Elevator speed: < 1M/S
Standard: Emergency rescue, electric brake release	Optional: Support hand door, platform ladder

B8000 Home Lift Control Cabinet

Technical Indicators

- **Silent and comfortable**
Advanced drive and control technology, achieving high efficiency and energy saving; ultra-quiet operation of STO module with no running contactor; low running volume, smooth running curve and steady journey feeling
- **Safe and sound**
Safety protection functions such as automatic troubleshooting, power outage emergency rescue, electric brake release and one-touch dial; configured with the elevator IOT to realize IP call, WeChat applet function and remote wireless monitoring of the elevator
- **Good-looking and highly integrated**
Home style, exquisite shape, deep integration and small size; standard ARD and electric brake release function; meet the customized color scheme of the cabinet panel, and match the home decoration design
- **Intelligence**
New touch screen human machine interface realizes the humanized functions such as weather reminder, information release, one-click emergency call, voice and image reassurance, maintenance information push and intelligent rescue
- **Absolute value positioning**
LAMIX home, the absolute value positioning system, achieves flexible and easy installation, readily available absolute position and measurement principle without wear, contact or noise

Technical Indicators

- Power supply: single-phase 200V, 3.7kW(16.5A); 3-phase 400V, 5.5kW(13A)
- Motor type: Synchronous/Asynchronous
- Motor brake: DC110V≤2.5A
- Door operator: AC220V frequency conversion door operator
- Control method: Single/Duplex
- Illumination: AC220V
- Optional: IoT, one-touch calling, etc.
- Dimension (mm): vertical 1200×200×100; horizontal 650×360×100

Standard STO Module



Main Features

- Meet the requirements of IEC61800-3 & IEC61326-3-1 and new national standard EMC
- Replace the main contactor
- The dual-channel topology provides high reliability
- Fault detection (random failure and system failure)
- High safety integrity





E101/102 Series

Product Features

- COP: High display window ratio, ultra-narrow metal frame, home style design
- 9-grid button arrangement
- Nameplate icon instead of text, more concise and beautiful
- Whole acrylic panel (black/white)
- Embedded installation, with bottom box, highly aesthetic
- LOP: High display window ratio, stainless steel metal frame, delicate and exquisite
- Black mirror, stainless steel frame buttons
- Highlighted metal frame
- 2.5D curved glass, smooth hand feeling, like pebble texture

Standard Size

Product model	Floors	Faceplate size (mm)	Box (mm)
CEE101/102	2-6	378×200×13	368×190×39.5

Product model	Boundary dimension (mm)
LSE101/102	250×85×15

Indicator Configuration

- COP: SM.04H16/G. white segment
- LOP: SM.04V16/GE. white segment

Faceplate Options

Faceplate: Transparent acrylic (white/black screen printing)

Specified Buttons



PUA430



CSE112

E112 series

Product Features

- The COP of this product has a bright and colorful interface that can display more information at the same time. The user is allowed to design and modify the elevator touch screen display interface, to achieve its own unique style.
- Overall glass panel of LOP with aluminum frame and luxury touch buttons

Indicator Configuration

- COP: 10.1" touch screen
- LOP: SM.04VS-33 white segment

Faceplate Options

- COP: 10.1" touch screen
- LOP: Glass

Button Configuration

- COP: 10.1" touch screen
- LOP: Touch button

Standard Size

Product model	Floors	Faceplate size (mm)	Box (mm)
CSE112	2-6	295×172×28	-
LSE112	All floors	220×66×11	-

Configuration Table"●": Yes; "-": N/A

Product model	Up	Down	Intermediate floor
LSE112	●	●	●



LSE112

103 series

Product Features

COP: High display window ratio, 9-grid button arrangement, ultra-narrow metal frame, CD solid intercom button and one-click dialing
LOP: Black mirror, stainless steel frame buttons, 2.5D curved glass, smooth hand feeling, like pebble texture

Indicator Configuration

COP: SM.04H16/G
LOP: SM.04VS-31 white dot matrix

Faceplate Options

COP: Glass
LOP: Glass

Button Configuration

COP: Touch buttons
LOP: Touch button



Standard Size

Product model	Floors	Faceplate size (mm)	Box (mm)
CEC103	2-6	310×178×7.2	292×169×25
LSE103	All floors	145×70×13	-

Configuration Table●●: Yes; “-”: N/A

Product model	Up	Down	Intermediate floor
LSE103	●	●	●

DDS Destination Dispatch System

STEP DDS Advantages

- **Improved operation efficiency**
Group passengers by destination floor and reduce the stops on the intermediate floors of the elevator to provide each passenger with the shortest possible journey time.
- **Improved journey comfort**
Passengers will select the destination floor before entering the elevator, so there is no need to scramble to press the command button in the elevator car. Since the STEP DDS knows the distance between the floor selector and the car, it allows ample time for passengers to walk to the designated elevator.
- **More car space**
STEP DDS assigns a reasonable number of passengers to each elevator, and each car only serves a specific floor range, so the car is much less likely to get crowded.
- **Enhanced guidance function**
The destination floor display shows the destination floor to which the car is headed, allowing passengers to quickly recheck that they are in the right car.
- **Easier access**
For passengers with disabilities who need more time and space, the accessibility function can be activated through a card reader or special button, giving passengers more time to reach the car and more space because fewer people are assigned to the car.
- **Better security**
STEP DDS can be deeply integrated with the access control system of the building, which minimizes the unauthorized use of the elevator and improves the security of the entire building.
- **More personalization**
STEP DDS can provide users with personalized function customization services, whether they are VIPs, disabled people, or other users with special needs, at their request.
- **Excellent aesthetic design**
The floor selector of STEP DDS is designed as a capacitive touch screen, which offers a variety of sizes, interfaces and fixing methods to well match the building style.
- **Easier transformation**
STEP DDS enables quick and easy conversion of traditional elevator controls with minimal downtime.



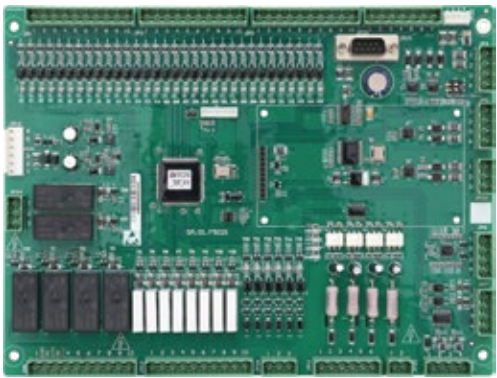


Elevator Control Components

32-bit Standard Serial Control Board SM-01-F5021

Product Features

- 32-bit high performance industrial class ARM MCU
- Double CPU design, main CPU and co-CPU monitoring each other to improve product safety performance
- Wide input voltage: DC20 ~ 28V
- 32-way low voltage opto-isolator inputs, 4-way high voltage opto-isolator inputs, 20-way relay outputs
- CAN bus serial communication mode
- Compiles with EN81 and GB7588 and passed CE and CSA certification and certification of "elevator safety circuit with electronic components"



Function Description

- Suitable for business elevator, resident elevator, hospital elevator and observation elevator
- Applies to 0.63 ~ 4m/s elevator control situations
- Maximum stops up to 64 stops
- Suitable for synchronous and asynchronous traction machine
- Analog speed and multi-speed given
- Support for three types of encoders: difference, open-collector and push-pull
- Support duplex and group control and destination floor group control functions
- Support load-weighing compensation
- Support elevator IC card management
- Support community monitoring and remote monitoring
- Support STEP standard hand-held operator
- 20 elevator fault records
- Support the car commissioning function

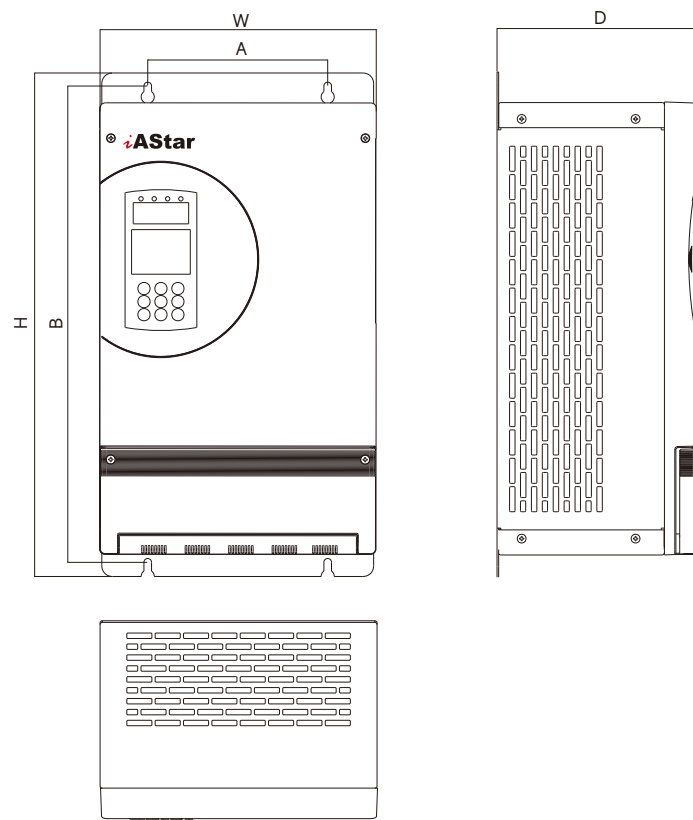
AS320 Elevator Inverter

Product Features

- Use 32-bit motor dedicated digital signal processor DSP, complex programmable logic device CPLD and intelligent power module IPM
- Innovative no-load sensor starting compensation technology, giving an excellent starting comfort without the need for a weighing device
- Use incremental ABZ encoder for synchronous motor control, and use no-load sensor starting compensation technology to achieve excellent starting comfort
- The new model is used for hardware and the resistance to junction temperature can reach 175°C, making the switching loss lower and the service life longer
- Dual 32-bit embedded microcontroller processor to jointly complete the elevator operation and motor drive control
- Anti-jamming design exceeds the highest level of industrial design requirements
- Rich and advanced elevator operation functions can fully meet various needs of customers
- Passed the CE and UL certifications



Installation Size and Quality



Specification Data

Class 200V				Class 400V			
Model AS320	Rated capacity (kVA)	Rated output current (A)	Adaption motor (kW)	Model AS320	Rated capacity (kVA)	Rated output current (A)	Adaption motor (kW)
2S01P1	2.3	6.0	1.1	4T01P1	2.7	3.5	1.1
2S02P2	4.6	12	2.2	4T02P2	4.7	6.2	2.2
2S03P7	6.9	18	3.7	4T03P7	6.9	9	3.7
2T05P5	9.5	25	5.5	4T05P5	8.5	13	5.5
2T07P5	12.6	33	7.5	4T07P5	14	18	7.5
2T0011	17.9	47	11	4T0011	18	27	11
2T0015	23	60	15	4T0015	24	34	15
2T18P5	29	75	18.5	4T18P5	29	41	18.5
2T0022	32	80	22	4T0022	34	48	22
-	-	-	-	4T0030	50	65	30
-	-	-	-	4T0037	61	80	37
-	-	-	-	4T0045	74	97	45
-	-	-	-	4T0055	98	128	55
-	-	-	-	4T0075	130	165	75

Model AS320	A (mm)	B (mm)	H (mm)	W (mm)	D (mm)	Installation aperture Φ(mm)	Installation			Tightening torque (Nm)	Mass (kg)
							Bolt	Nut	Gasket		
2S01P1	100	288.5	300	160	166	5.0	4M4	4M4	4Φ4	2	4.5
2S02P2											
2S03P7											
2T05P5	165.5	357	379	222	185	7.0	4M6	4M6	4Φ6	3	8.2
2T07P5											
2T0011											
2T0015	165	440	465	254	261	7.0	4M6	4M6	4Φ6	3	10.3
2T18P5											
2T0022											
4T02P2	100	288.5	300	160	166	5.0	4M4	4M4	4Φ4	2	4.5
4T03P7											
4T05P5											
4T07P5	165.5	357	379	222	192	7.0	4M6	4M6	4Φ6	3	8.2
4T0011											
4T0015											
4T18P5	165.5	392	414	232	192	7.0	4M6	4M6	4Φ6	3	10.3
4T0022											
4T0030											
4T0037	200	512	530	330	290	9.0	4M8	4M8	4Φ8	6	30
4T0045											
4T0055											
4T0075	320	718	750	430	351	13.0	4M13	4M13	4Φ13	29	79.5

Integrated Controller

AS380 Elevator Serial Integrated Controller

Main Features

- Prefect integration of control and drive of elevator leads to compact structure, few wiring, high reliability, easy operation and cost efficiency
- Double 32-bit MCU combines the elevator control and motor control
- Redundant safety design , double safety protection for control and drive
- CAN bus communication make the whole system easily, fast and reliable.
- Support traditional group control and destination dispatching control
- Support one main contactor solution
- Support gear and gearless motor
- Use PIM module, lower loss in switch on and off and longer lifetime.
- Creative Zero-speed torque compensation technology provides the elevators with good starting ride quality without installing weighing devices
- Close-loop vector brings higher performance in control
- New PWM dead-zone compensation technology brings less energy loss
- Dynamic PWM carrier modulation technology brings less motor noise

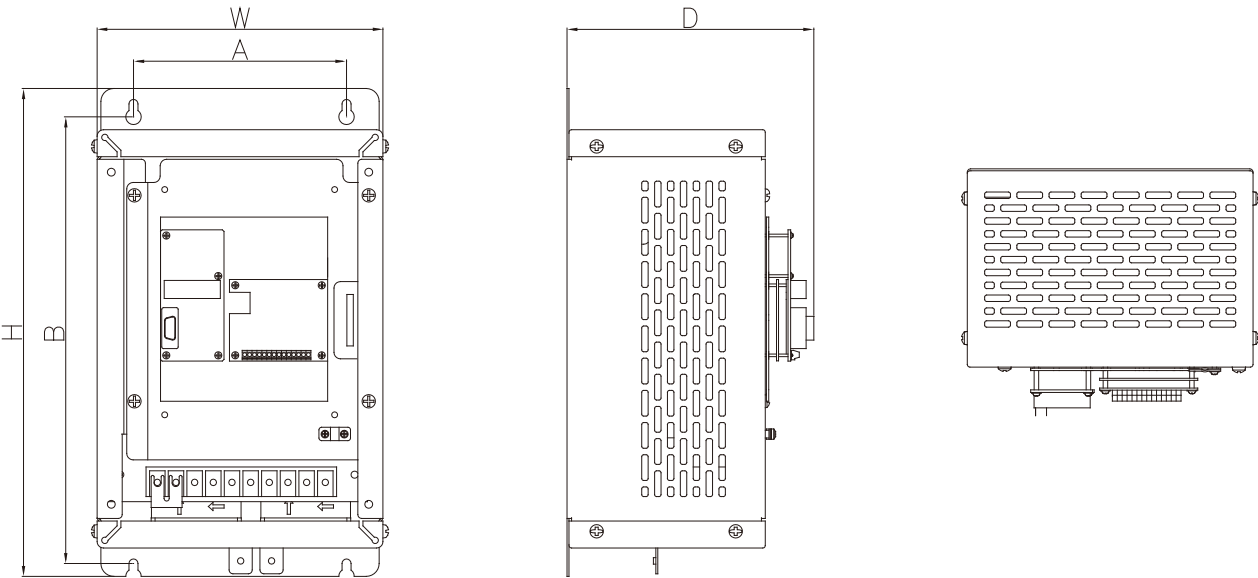


Specification Data

200V-level				400V-level			
Model AS380	Rated capacity (kVA)	Rated output current (A)	Rated power of motor (kw)	Model AS380	Rated capacity (kVA)	Rated output current (A)	Rated power of motor (kW)
2S01P1	2.3	6.0	1.1	4T01P1	2.7	3.5	1.1
2S02P2	4.6	12	2.2	4T02P2	4.7	6.2	2.2
2S03P7	6.9	18	3.7	4T03P7	6.9	9	3.7
2T05P5	9.5	25	5.5	4T05P5	8.5	13	5.5
2T07P5	12.6	33	7.5	4T07P5	14	18	7.5
2T0011	17.9	47	11	4T0011	18	27	11
2T0015	23	60	15	4T0015	24	34	15
2T18P5	29	75	18.5	4T18P5	29	41	18.5
2T0022	32	80	22	4T0022	34	48	22
-	-	-	-	4T0030	50	65	30
-	-	-	-	4T0037	61	80	37
-	-	-	-	4T0045	74	97	45
-	-	-	-	4T0055	98	128	55
-	-	-	-	4T0075	130	165	75

Technical Indicators

Item		Indicators
Maximum output voltage		input voltage
Input power supply	Number of phases voltage, and frequency	200V-level: s3.7kW single phase or three phase 220V50/60Hz; > 3.7 kW three phase 220V,50/60Hz 400V-level: three phase 380V, 50/60Hz
	Voltage range	15%~+10%
	Frequency range	-5%~+5%
	Instantaneous voltage drop	200V-level: input voltage < AC180V,low-voltage protection after 15 ms running 400V-level: input voltage < AC300V,low-voltage protection after 15 ms running
Basic features	Floor number	2-64
	Elevator rated speed	≤4.00m/s
	Group control units	≤8 units
	Communication mode	CAN-Bus
Control features	Control mode	Close loop vector control
	Overload capacity	0Hz, 150%;< 3Hz,160%;> 3Hz, 200%
	Braking torque	150%(External brake resistor), built-in brake unit
Protection grade		IP20
Installation mode		installed in the cabinet



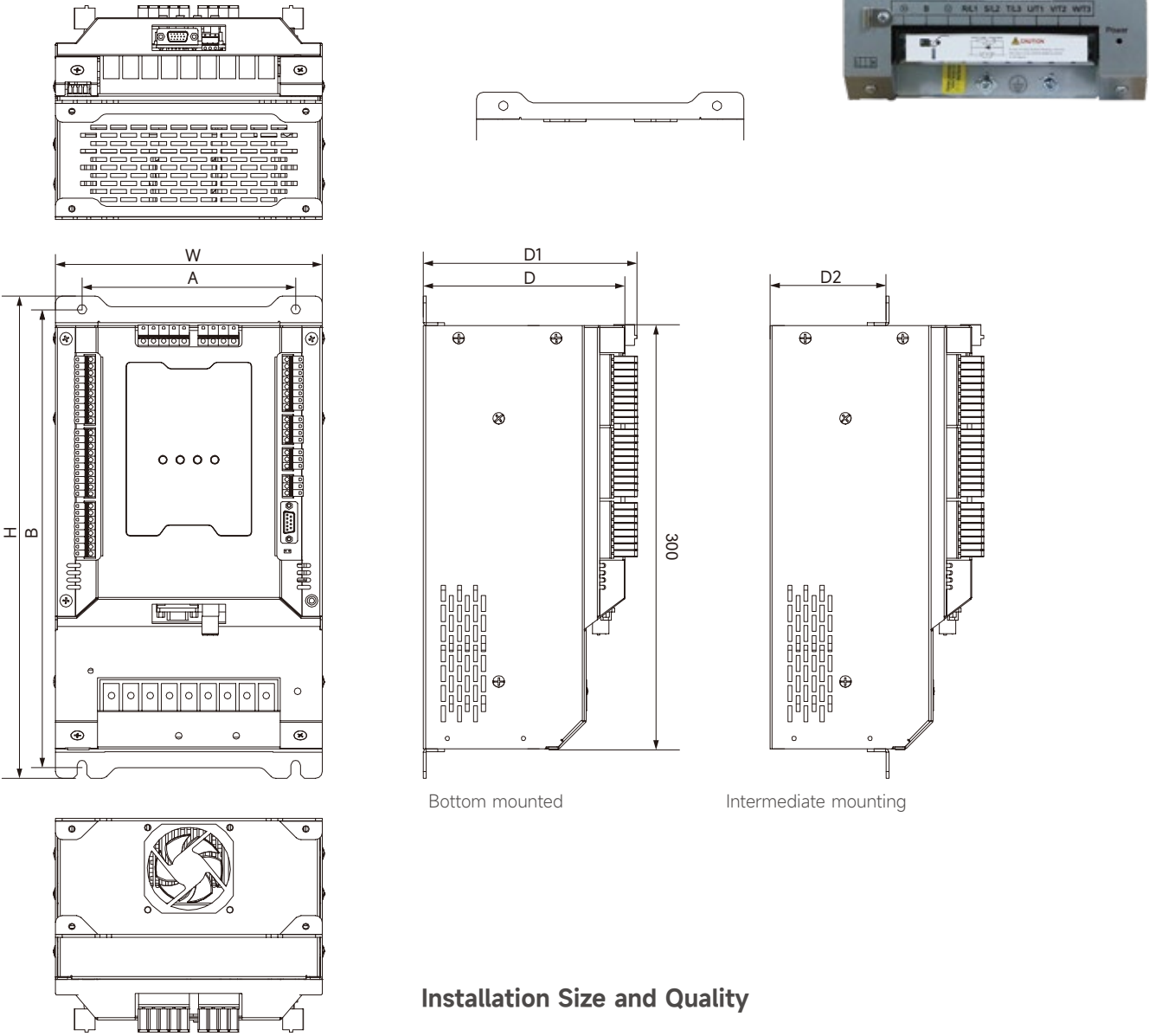
Installation Information

Model	A (mm)	B (mm)	H (mm)	W (mm)	D (mm)	Installation aperture Φ(mm)	Installation			Tightening torque (Nm)	Mass (kg)
							Bolt	Nut	Gasket		
2S01P1	100	288.5	300	160	166	5.0	4M4	4M4	4Φ4	2	4.5
2S02P2											
2S03P7											
2T05P5	165.5	357	379	222	185	7.0	4M6	4M6	4Φ6	3	8.2
2T07P5											
2T0011											
2T0015	165	440	465	254	261	7.0	4M6	4M6	4Φ6	3	10.3
2T18P5											
2T0022											
4T02P2	100	288.5	300	160	166	5.0	4M4	4M4	4Φ4	2	4.5
4T03P7											
4T05P5											
4T07P5	165.5	357	379	222	192	7.0	4M6	4M6	4Φ6	3	8.2
4T0011											
4T0015											
4T18P5	165.5	392	414	232	192	7.0	4M6	4M6	4Φ6	3	10.3
4T0022											
4T0030	200	512	530	330	290	9.0	4M8	4M8	4Φ8	6	30
4T0037	200	512	530	330	290	9.0	4M8	4M8	4Φ8	9	30
4T0045	200	587	530	330	310	10.0	4M8	4M8	4Φ8	9	42
4T0055	200	587	610	330	310	10.0	4M10	4M10	4Φ10	14	42
4T0075	320	718	750	430	351	13.0	4M13	4M13	4Φ13	29	79.5

AS380S Series Elevator Serial Integrated Controller

Product Features

- Galvanizing case, acrylic panel, beautiful and elegant
- Modular design, simple connection, good heat dissipation, flexible installation
- Advanced balance coefficient self-learning, simplifying on-site commissioning
- Bidirectional optocoupler, free choice of high and low levels, easier to use
- Low voltage input and output connectors with 5.08mm pitch, easier wiring and doubling



Installation Size and Quality

Specification Data

Model AS380S		Rated capacity (kVA)	Rated output current (A)	Adaption motor (kW)
4T05P5S		8.5	13	5.5
4T07P5S		14	18	7.5
4T0011S		18	27	11
4T0015S		24	34	15
4T18P5S		29	41	18.5
4T0022S		34	48	22
4T0030S		50	65	30
4T0037S		61	80	37

Model AS320	A (mm)	B (mm)	H (mm)	W (mm)	D (mm)	D1 (mm)	D2 (mm)	Installation aperture Φ(mm)	Installation			Tightening torque (Nm)	Mass (kg)
							Bolt		Nut	Gasket			
4T05P5S	160	324	344	200	151	160.22	73	7	4M6	4M6	4Φ6	3	6.1
4T07P5S													6.2
4T0011S		341	361										7
4T0015S													7.2
4T18P5S													7.6
4T0022S													

Note: D1 is the bottom mounting thickness dimension, and D2 is the middle mounting thickness dimension

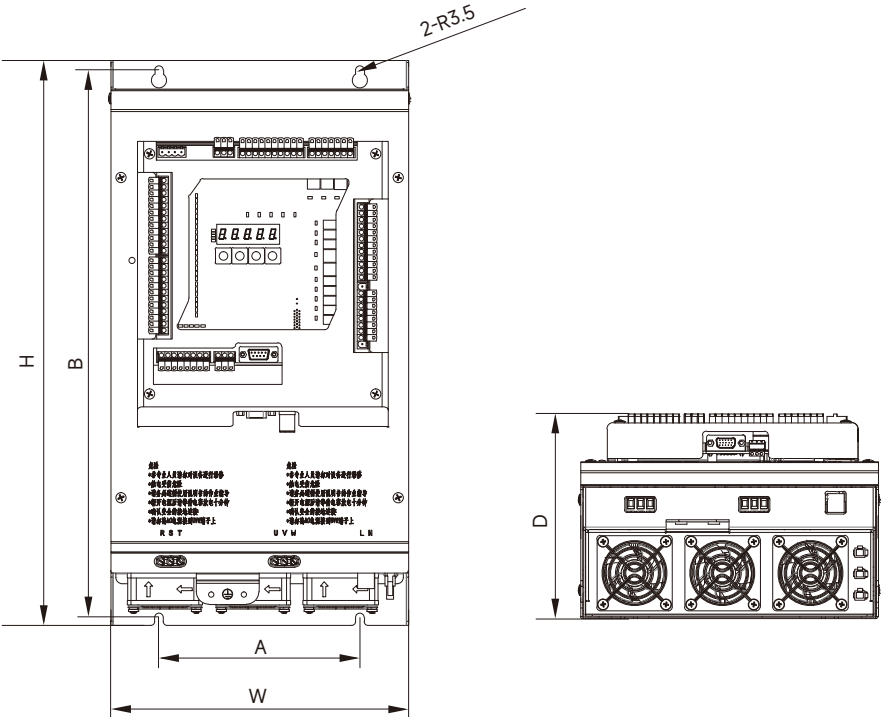
AS390 Series Four-quadrant Integrated Controller

Product Features

- High power density, multi-function integration
- Integrated energy feedback unit
- Built-in filter reactor, meeting EMC requirements of EN12015 and EN12016
- Built-in input grid detection function
- Adaptive to 510V high voltage main engine and 380V main engine
- Cover 2000kg_2.5m/s and 1600kg_3m/s
- Low noise design of the whole machine
- Save about 20 ~ 30% energy, achieving elevator energy consumption standard level 1. (GB/T 30559.2-2017/ISO 25745-2:2015)
- High quality power grid and input power factor up to 0.99
- Input current harmonics THD (i) <5%
- Support front contactor



Installation Size and Quality



Inverter model	A(mm)	B(mm)	H(mm)	W(mm)	D(mm)
4T0018	160	436	450	237	163
4T0023					
4T0036	230	544	560	280	190
4T0052					

Specification Data

Output parameters		4T0018	4T0023	4T0036	4T0052
Adaptive to 510V high voltage main engine	Rated output capacity (KVA)	16	20	32	47
	Maximum output current for acceleration (A)	27	34.5	59	87
	Rated output current at constant speed (A)	18	23	36	53
Adaptive to 380V main engine	Rated output capacity (KVA)	13	18	27	39
	Maximum output current for acceleration (A)	30	41	68	99
	Rated output current at constant speed (A)	20	27	41	60
Output frequency range (Hz)		0 150			

Output parameters	4T0018	4T0023	4T0036	4T0052
Rated input voltage (Vac)	400	400	400	400
Power grid voltage (Vac)	380~440			
Input voltage fluctuation range	+10 ~ -15%			
Interphase unbalanced pair	<3%			
Rated input capacity (kVA)	17	23	32	49
Maximum input current for acceleration (A)	36	47	80	115
Input current at constant speed (A)	24	33	46	71
Input grid frequency (Hz)	50/60			
Current harmonic THD (I)& Rated input current	<5%			
Input power factor & Rated input current	0.99			

Energy Feedback Device

AS.RG Energy Feedback Device

Product Features

- Dedicated high-speed DSP chip for timely and accurate tracking of power grid voltage, small feedback impact and high efficiency
- Use phase amplitude control algorithm PWM technology
- Use high-speed IGBT switching device, achieving less switching loss and high operating efficiency
- Sinusoidal grid-side current waveform, with a total harmonic current (THD) of less than 5%
- The grid-side power factor is adjustable, and the renewable energy feedback grid-connected device can achieve operation with negative power factor
- The brake resistor can be selected to enhance the system safety without the need for braking chopper
- Special reactor for energy feedback, with high dv/dt impact resistance, low core loss, long life and high efficiency
- The network side of the control system is characterized by current source, which is easy to make multi-unit parallel device for renewable energy
- Protection against overcurrent, short circuit, temperature abnormality and abnormal voltage on line side
- Fast dynamic response, large current output in a short time, and high overall efficiency
- Long life ball bearing fan is used for overall forced air cooling, achieving low equipment operating temperature and high feedback efficiency



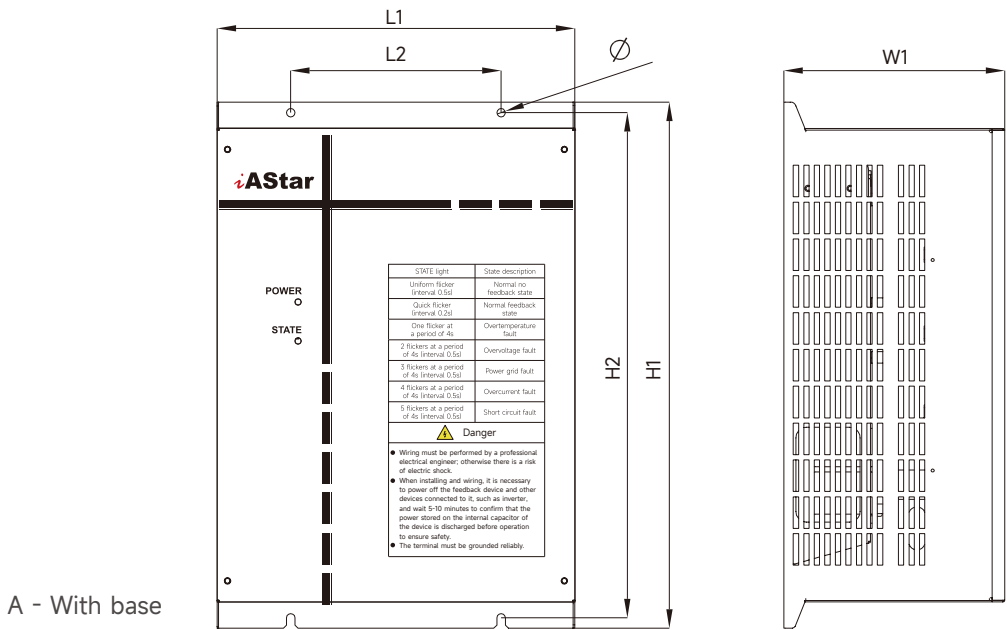
15'' column floor selector

Main Technical Indicators

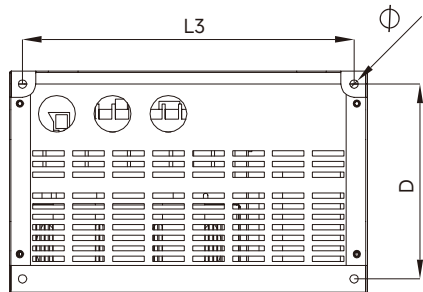
AS.RG□□□□E	2005	2007	2011	2015	4011	4015	4018	4022	4030
Adaptive inverter power/kW	5.5	7.5	11	15	11	15	18.5	22	30
Peak current/A	17	24	34	45	17	24	28	34	45
Average current/A	9	12	17	22	9	12	14	17	22

Installation Size and Quality

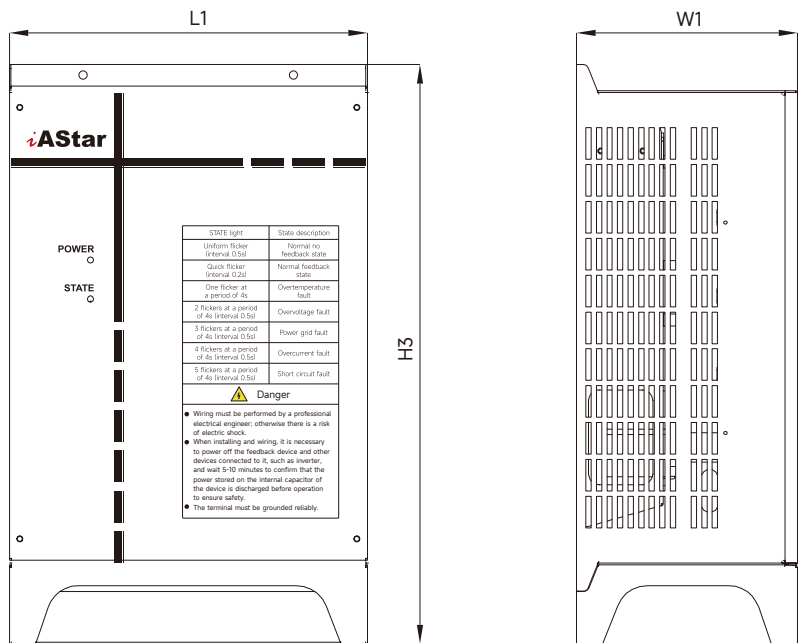
Power (kW)	L1(mm)	L2(mm)	L3(mm)	H1(mm)	H2(mm)	H3(mm)	W1(mm)	D(mm)	Φ(mm)
5.5-15kW	270	200	245	400	380	450	200	175	8
18.5-30kW	340	270	315	520	500	570	215	190	8



A - With base



B - Baseless



EMC Module

ACF-4N Series EMC Module

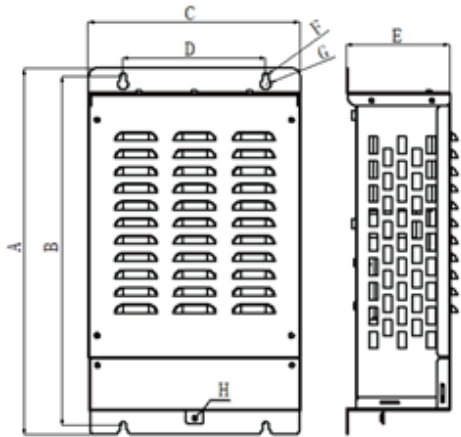
Product Features

- Support the full range of AS380 system
- Power coverage 5.5-55kW
- Integrate three-wire four-phase filter and current harmonic reactor
- Meet EN12015 and GB/T 24807 current harmonic and conduction test requirements
- Wall mounted, natural heat dissipation
- IP21 protected, ultra-thin design, well mounted



Installation Size and Quality

EMC Module Model ACF-4N-	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F	G	H	Weight (kg)
013E	425	405	245	165	120	R3.5	R6	M5	9.5
018E									14.5
027E									14.5
034E									12.3
041E									14
048E									14
080E	455	435	245	165	120	R3.5	R6	M5	15.8
128E	560	538	325	225	150	R3.5	R6	M6	26.7



Main Technical Indicators

EMC Module Model ACF-4N-	013E	018E	027E	034E	041E	048E	080E	128E
Adaptive inverter power kW	5.5kW	7.5kW	11kW	15kW	18.5kW	22kW	30/37kW	45/55kW
Adaptive inverter output current A	13	18	27	34	41	48	65/80	97/128
Rated inductance mH	6.3	3.8	3.3	2.3	1.75	1.75	0.55	0.46
Working system ED	50%						60%	
Current capability of null line (N) A	<=16A							
Adaptive network voltage V	380/400/415/440							
Adaptive three-phase current balance	<3%							
Input grid frequency Hz	50Hz							
Insulation grade	P对PE,DC2672V							

Auxiliary Board

Elevator Car Control Board SM.02/G

Product Features

- CANBUS serial communication mode, saving the traveling cable and easy to connect
- Minimum system design, competitive price advantage, 28-core traveling cable
- The button light output has overcurrent protection function
- Excellent EMC and ESD performance
- Support commissioning in the car
- Small car control board in size is suitable for thin control panel
- On-board buzzer, no additional buzzer required

Function Description

- Attendant reversal, attendant, independent, attendant by-pass, firemen
- Open door and close button interface
- Main operation car, auxiliary operation car, rear door operation car and disabled operation car dial switch for selection
- Maximum 64 command buttons

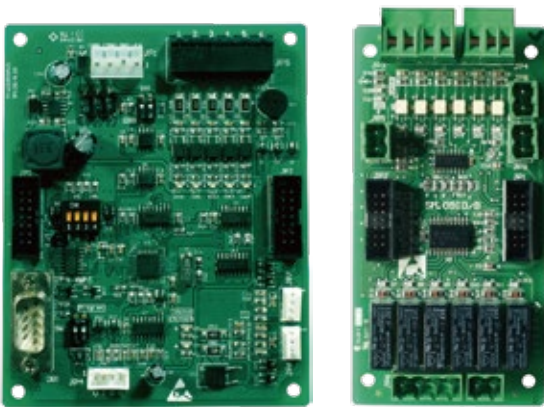
Elevator Car Control Board SM.02/J1

Product Features

- CANBUS serial communication mode, saving the traveling cable and easy to connect
- Minimum system design, competitive price advantage, 28-core traveling cable
- The button light output has overcurrent protection function
- Excellent EMC and ESD performance
- Support commissioning in the car
- Small car control board in size is suitable for thin control panel
- On-board buzzer, no additional buzzer required
- Standard 20 landing buttons
- Recovery standby point, no additional extension required
- The built-in voice module links up with the intercom module to easily achieve voice announcement function

Function Description

- Attendant reversal, attendant, independent, attendant by-pass, firemen
- Open door and close button interface
- Main operation car, auxiliary operation car, rear door operation car and disabled operation car dial switch for selection
- Maximum 64 command buttons



Extension Board SM.09IO/B

Optional Configuratio

- SM.09IO/B board for extension hold-button, NS-SW, etc.



Elevator Car-top Control Board SM.02H/C

Product Features

- CANBUS serial communication mode, saving the traveling cable and easy to connect
- Excellent EMC and ESD performance

Function Description

- Up and down arrival gongs, car lighting and fan energy-saving control
- Light load, full load, overload input; front and back door opening and closing output, forced door closing output; front and rear door light curtain, safety edge, opening and closing in place



Elevator Car-top Control Board SM.02/D1

Product Features

- CANBUS serial communication mode, saving the traveling cable and easy to connect
- Excellent EMC and ESD performance

Function Description

- Up and down arrival gongs, car lighting and fan energy-saving control
- Light load, full load, overload input; front and back door opening and closing output, forced door closing output; front and rear door light curtain, safety edge, opening and closing in place
- Used with car top wiring board



Extension Board SM.09IO/B

Function Description

- For both SM.02/G and SM.02/H
- 6 inputs and outputs
- Car extension function: hold-button, NS-SW
- Car-top extension function: rear door opening output, door closing output, forced door closing output; rear door opening and closing in place, safety edge



Elevator Car Call Board SM.03/P

Product Features

- The button light output has overcurrent protection function
- Excellent EMC and ESD performance

Function Description

- Used with 02/J1 car control board
- One 03/P receives maximum 10 floors of instructions
- Extended to maximum 64 floors



Elevator Car Call Board SM-03-D

Product Features

- The button light output has overcurrent protection function
- Excellent EMC and ESD performance

Function Description

- Used with car control board SM-02
- One SM-03-D supports maximum 8 instructions, and 8 boards can be extended to support 64 instructions



Elevator Car Call Board SM.03/E

Product Features

- The button light output has overcurrent protection function
- Excellent EMC and ESD performance

Function Description

- Used with car control board SM-02
- One SM.03 / E supports maximum 16 instructions, and 4 boards can be extended to support 64 instructions



Group Control Board

Elevator Group Control Board SM.GC/CI

Product Features

- The group control system can control 8 elevators at the same time, and the maximum floor number of each elevator is 48
- CANBUS serial communication
- The group control system has backup protection function. If the group control system has any problem, it will cut off the power supply. The elevators in the group control system can run normally in simplex mode
- The group control system can cut off the fault elevator

Function Description

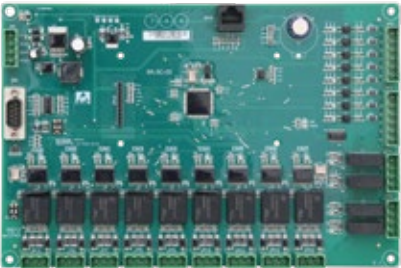
- | | |
|--------------------------|---------------------------------------|
| • Homing Function | • Non Service Floor Control |
| • Dispatch Parking Floor | • Group Region Segmentation |
| • Up Peak Service | • Partially Group Region Segmentation |
| • Down Peak Service | • Emergency Power Operation |



Destination Floor Group Control Board SM.GC/DI

Product Features

- **Super-efficient**
Based on CAN bus, various leading-edge technologies applied such as expert system, fuzzy logic, neural network ensure efficient and safe elevator operation
- **Joy-journey**
By designation dispatching system to guide passengers to the assigned lift, it reduces the average waiting time & long waiting ratio to avoid the crowded lobby and rushing people, which makes them more comfortable
- **Cost-saving**
The improvement of the operating efficiency of the system reduces the total number of building elevators configured and reduces the cost of building construction
- **Energy-saving**
The efficient operation scheduling reduces the total number of elevator operations, reduces building power consumption and achieves energy saving and environmental protection



Function Description

- Up Peak, Down Peak
- Lunch Peak Time, Noon Peak
- Peak time self-identification in idle mode
- Idle Mode, Energy Saving Mode
- Dispatch Parking
- Service for Disable
- Immediate forecasting
- Automatic switching of time period service layer
- Anti-nuisance
- Car Call Disable
- Destination floor instruction door open hold time

Product Configuration

- | | |
|--|--|
| • Support Hybrid/Full DDS
-Hybrid DDS
Destination operating panel at main entrance floor or parts of floors
Conventional landing call stations on the other floors
-Full DDS
Destination operating panel at each landing | • Multi-Choice for Destination Selector
Touch-panel, keypad, IC reader, button |
| | • Multi-Choice for Destination Indicator
Car/landing, vertical, dot matrix; landing, vertical, dot matrix; LCD/LED |

Pre-opening Control Board

Pre-opening Control Board SM-11-A/SM-11SF/A

Product Features

- Specially designed circuit enables the safety operation of the elevator during advanced door opening or re-leveling with door opening
- Safety relays which use different metal materials in one set contactor to assure that the contactor will not stick
- Modularized design, suitable for standard manufacturing, reduces errors in wire connection
- Standard guide-rail card slot bottom shell, convenient for control cabinet installation
- Complies with EN81, GB7588, passes CE certification, TUV certification and certification of “elevator safety circuit with electronic components”

Function Description

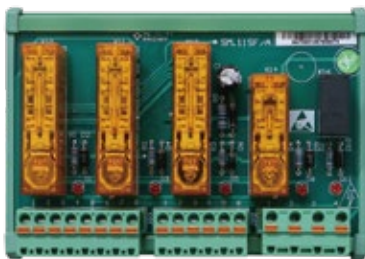
- Advanced door opening and re-leveling with door opening
- Prevent unexpected car movement
- Door loop short-circuit detection

Product Configuration

- Configurable in all control cabinets of STEP



SM-11-A (for synchronous motor)



SM-11SF/A (for asynchronous motor)

Pre-opening and Re-leveling Board SM-11-C1/SM-11-C2

Product Features

- Specially designed circuit, enables the safety operation of the elevator during advanced door opening or re-leveling with door opening
- Safety relays which use different metal materials in one set contactor to assure that the contactor will not stick
- Modularized design, suitable for standard manufacturing, reduces errors in wire connection
- Complied with GB7588 and passed the certification of programmable electronic (PESSRAE) safety related system

Function Description

- Pre-opening and re-leveling function
- Door lock short-circuit detection
- UCMP detection function

Product Configuration

- Used with STEP whole series of integrated elevator control cabinets



SM-11-C1 (for synchronous single door)



SM-11-C2 (for asynchronous or opposite door)

Extension Device

Second-generation IC Card Intelligent Elevator Management System

STEP second-generation IC card system, on the basis of the application of the first-generation IC card system applications, achieves IC card control of the elevator, floor registration instruction by swiping card, charging per service times and charging by service hours. The elevator functions with corresponding permissions can be used by swiping the corresponding IC card. The system is composed of two parts: elevator IC card controller and elevator IC card management system. The elevator IC card controller is mainly installed in the elevator front door car, the rear door car, the floor outside the front hall, the floor outside the rear hall, etc., and connected with the elevator control system to read the IC card permission information, allow and prohibit the corresponding operation. The elevator IC card management system is used to write the IC card information and assign the function permissions of the IC card

Product Features

- Functionally compatible with the first-generation IC card
- Compatible with the first-generation IC card in terms of card reader hole size
- Charging function: The interchange between the charge by swiping card and no charge can be realized through the hardware setting. The unit price is set through the upper computer to realize different prices for card swiping consumption on different floors, making the elevator use more fair
- Time limit function: The valid time of the card is set for card swiping during the validity period of corresponding card, and the elevator cannot continue to use upon expiration of the card, which needs to be renewed in the card making center
- Administrator function: The administrator card can be used in any elevator, regardless of the time and charge, as long as the elevator is in normal working condition. It is generally used by elevator administrators



MP3 Voice Announcer SVAS300

Product Features

- With small size, it can be mounted in the car operating panel and other small space
- Use TF card to store files, making data update more convenient
- Broadcast the announcement voice, background music, advertising words, etc. selected or recorded by users
- Support connection play of background music
- Volume adjustable
- Built-in speaker using the decoder technology to obtain clear and beautiful sound without the need for an external speaker
- When the elevator lighting is off, the voice announcer can be turned off to save electricity and avoid disturbing the residents
- IoT voice reassurance function (Note: Main board program support is required)



Phase Sequence Relay SW11

Product Features

- Input voltage: three-phase AC(230-440)V
- Supply frequency: (50-60)Hz
- Output port: 1 normally closed contact, 1 normally open contact
- Contact rated load: 6A/250V
- Boundary dimension (mm): 100×26×78 (length × width × height)
- Passed CE and CCC certification

Product Configuration

- Configurable in all control cabinets of STEP



Function Description

- Effectively monitor the three-phase power supply. In case of phase sequence error of the power supply (default phase or undervoltage), it can display and act immediately to ensure the normal operation of electrical equipment

DTZZ Elevator Weighing Device

Function Description

- The DTZ-III series elevator weighing device is designed for the elevator main board, which converts the weight (or the electromagnetic field by the inductive displacement transducer) into an electrical signal through the strain gauge sensor, and transmits it to the main computer board through CAN communication. Then the main computer board outputs the analog compensation voltage to the inverter to improve the starting comfort
- DTZZ III-A, mounted on rope hitch plate in the contact mounting mode, using strain gauge sensor
- DTZZ III-B, mounted in the convertible car base in the non-contact mounting mode, using inductive displacement transducer



EW-CZ03A Elevator Weighing Device

Product Features

- Non-contact induction working mode without mechanical movement itself, directly installed in the elevator at the original overload switch, without the need to change the elevator car structure
- Use the ultra-strong induced magnet to maximize the anti-jamming capability of the system
- High positioning accuracy, small size, convenient installation and commissioning, simple structure, economical and practical
- Provide switching signal output of light load, full load and overload for elevator control



I/O Extension Board

Function Description

- The I/O port can be extended via CAN bus serial communication
- Support optical coupler input and dry relay output
- SM-01-EXT supports a maximum of 20-way inputs and 32-way outputs
- SM.091CA.11 supports a maximum of 8 inputs and 8 outputs and can be extended by 8 additional inputs and 8 additional outputs through SM.091CA.12



SM.091CA.11



SM.01-EXT

Remote Monitoring Conversion Board OT.EM/A

Product Features

- 32-bit high performance industrial class ARM MCU
- Use 4-way completely independent and electrically isolated CANBUS interfaces to save cabling costs
- Use 1-way independent and electrically isolated RS485 interface
- Support the multiple connection modes of star and bus type, making field wiring simple
- Perfect monitoring of 100 independently running elevators in 500 milliseconds
- Real-time fault alarm and intelligent error checking
- The intelligent user software can be configured with multi-level permissions for hierarchical management
- Realize humanized elevator management
- The advanced intelligent elevator analysis function automatically generates various reports on the elevator parameters, performance and use
- GPRS remote monitoring interface is reserved for selecting the GPRS function according to customer needs
- BA (Intelligent Community Building Monitoring) interface is reserved for selecting the intelligent building function according to customer needs
- Excellent ESD (severity 4-8000V) and EMC (grade 4-4000V)



Function Description

- Provide intelligent elevator monitoring and management software for intelligent management of all elevators in the community and set administrator rights for remote commissioning of elevators in the community monitoring room to obtain elevator fault information and causes in a timely manner
- A variety of optional functions, such as GPRS remote monitoring, Internet remote monitoring, intelligent community security and access control function interface, are perfectly combined with domestic well-known security access control products to realize real intelligent community monitoring management solutions


Hand-held Operator SM.08/G

Function Description


- Elevator parameter setting: Elevator floors, elevator speed, etc., can be set up through the hand-held operator
- Elevator status monitoring: The following elevator status information is displayed:
 - Elevator running status such as automatic inspection, overhaul, attendant, fire, etc.
 - Car position and running direction
 - Elevator running record and error code
 - Shaft data of elevator
 - Input and output status of elevator
- Elevator shaft learning: During elevator commissioning, the hand-held operator can be used to carry out the shaft learning operation, which allows the control system to learn and record the datum of each landing position.
- Monitoring and registration of car and landing call: Hand-held operator can be used to monitor and register the car and landing call.
- Review of error codes: The error codes of the latest 20 breakdowns together with the elevator floor position and time at which they took place.
- Supports commissioning of control board, integrated driver controller and inverter etc.




Human machine interface



Arrival gong function
in this icon



Touch product
in this icon



Wall-mounted product
in this icon

Economical Series



CEA121

Product Features

This Car Operating Panel & Landing Operating Panel is a cost-effective product. The display effect is LED segment, which can clearly and intuitively display the elevator status. The bending reinforced design of the COP faceplate increases the robustness and durability of the product and can ensure the stable performance of the elevator during long-term use. At the same time, both sides of the LOP are cambered and ergonomic, making us more comfortable and natural during use. Our products are not only practical but also economical. In terms of price, our products are very competitive and offer the best price/performance ratio.

Indicator Model	CEA121	LSA122	LSA127
Indicator effect			
Indicator size	Standard: 4.3" Optional: 6.3"	3.5"	4.3"
Faceplate material	Standard: Hairline Optional: Matt	Standard: Hairline Optional: Matt	Standard: Hairline Optional: Matt
Fixing method	Embedded	Surface mounted	Surface mounted



LSA122



LSA127

Comfort Series



CEA128

Product Features

This Car Operating Panel & Landing Operating Panel adopts the classic two-stage design, making it easier and more comfortable to use. We pursue the dual goals of quality and appearance to provide good-looking products. Colorful display effects of the COP will make our use process more pleasant. Taking into account the needs of different customers for the use of car boards, more flexible panel adaptation is provided to match a variety of different types of car boards. In addition, the option of glass LOP is increased for more extensive product selection. Whether in a residential environment or office space, we are committed to making our elevator experience more comfortable and efficient, beautiful and durable.

Indicator Model	CEA128	LSA127	LSE527	LSA128
Indicator effect				
Indicator size	4.3"/6.4"/7"	4.3"	4.3"	4.3"
Faceplate material	Standard: Hairline Optional: Customizable	Standard: Hairline Optional: Matt	Glass	Standard: Hairline Optional: Customizable
Fixing method	Embedded	Surface mounted	Surface mounted	Surface mounted



LSA127



LSE527



LSA128

Luxury Series



Product Features

This Car Operating Panel & Landing Operating Panel is designed specifically for business and office environments, aiming to provide perfect user experience and customized services. We can provide personalized customized services according to customer needs, such as tailer-made elevator COP in terms of color, material and size, and use the touch button design to make them integrated in different business office environments. Our displays achieve rich and varied display effect, making them more efficient and convenient to use. There are many types of faceplate to choose from, which can be integrated with different car walls visually to achieve a higher business experience effect. The LOP system matched with this model is more complete (equipped with parallel and horizontal display), to adapt to the practical needs of different commercial buildings. And these LOPs are more commercial and can make the enterprise image more grand and professional when chosen.

Indicator Model	COP1080P	260S series	985 series	E200 series
Indicator effect				
Indicator size	Standard: 6.4", 7" Optional: 12", 15"	4.3"	4.3"	4.3"
Faceplate material	Standard: Hairline Optional: Customizable	Standard: Hairline Optional: Customizable	Standard: Hairline Optional: Customizable	Standard: Hairline Optional: Customizable
Fixing method	Embedded	Surface mounted		Surface mounted

Full-Wall Car Operating Panel



COP1080Q

Faceplate Options

Optional: Mirror, hairline, ti-golden mirror

Indicator Configuration

- Optional:
- SM.04TL/P 10.4" TFT

SM.04VL 16/Y 6.4"
- SM.04TL-04 7" TFT

SM.04VS/13
- SM.04TL/K 12.1" TFT

SM.04HL 16/H
- SM.04V16/B

Recommended Buttons



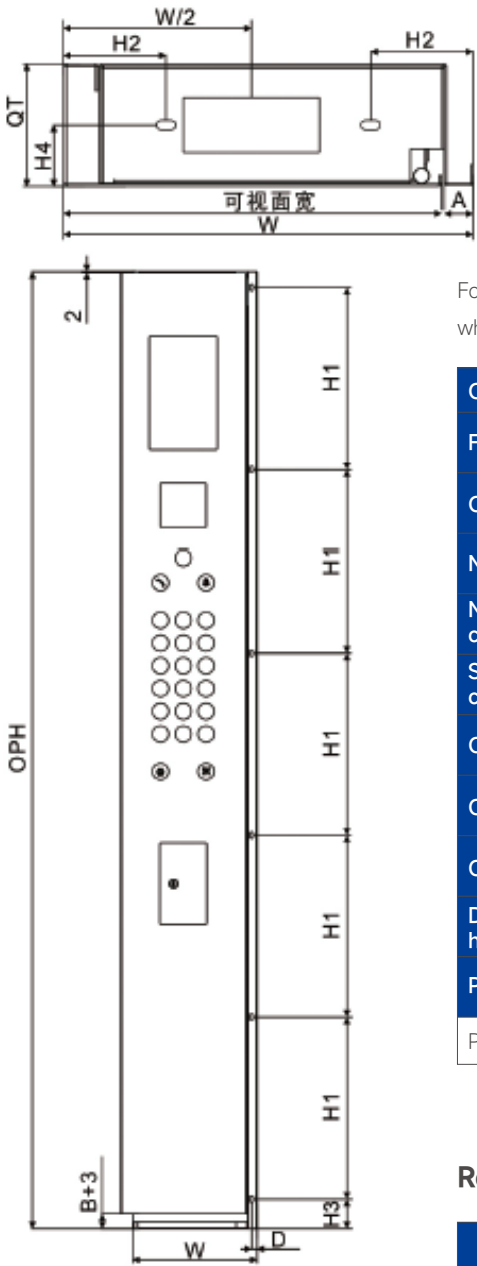
PTE130 Series (standard)



PB36 PB33



EBC22



For the full-wall car operating panel, please provide valid data according to the chart, which is conducive to accurate drawing and improved efficiency

Car position	Right front wall/left front wall		
Floor thickness B		(Either-or)	
Car wall bending thickness A			
Net opening height OPH			
Number of car wall connecting holes N			
Spacing of car wall connecting holes H1		Initial height of connecting holes H3	
COP wall thickness QT			
COP wall width W			
Connecting hole H2		Hole spacing D	
Distance between connecting hole and faceplate H4			
Position of cable outlet hole		Right front wall□/ left front wall□	
Please set the units in the table as (mm)			

Relationship between visual width and indicator size (unit:mm)	
Indicator Model	COP visual width
SM.04TL-04 (7" horizontal, vertical)	≥250
SM.04TL/G (8" horizontal, vertical)	≥280
SM.04TL/H (10.4" horizontal, vertical)	≥300
SM.04TL/K (12.1" horizontal, vertical)	≥350

Car Operating Panel & Landing Operating Panel



CEA300

300 Series

Product Features

Flat plate type; innovative interface layout; large display window

Faceplate Options

Standard: Hairline
Optional: Matt, mirror

Recommended Buttons



Standard Size

Product model	Floors	Faceplate size (mm)	Box (mm)
CEA300	2-16	1210×170×3	1180×157×70
	17-24	1390×170×3	1360×157×70
	25-36	1390×200×3	1360×183×70

Product model	Boundary dimension (mm)	Box (mm)
LSC300	380×100×15	-
DSC300	380×175×15	-
HEC300	400×110×3	413×100×50

Configuration Table●●: Yes; "-": N/A

Product model	Up	Down	Up & Down	Up &Base	Up, Down & Base
LSC300	●	●	●	●	●
DSC300	●	●	●	●	●



Indicator Configuration

COP:
SM.04VS/13, SM.04V16/B, SM.04VL16/Y 6.4',
SM.04TL-04 7'TFT

LOP:
SM.04VS/12E, SM.04V16/AE, SM.04VL16/XE 4.3',
SM.04TL/W 4.3TFT

Horizontal:
SM.04HS/L, SM.04H16/A, SM.04HL16/D

CEA121

Product Features

The bending reinforced design of the COP faceplate increases the robustness and durability of the product
Both sides of LOP are cambered and ergonomic

Indicator Configuration

COP: SM.04V16/AEII
SM.04V16/B
LOP: SM.04V16/M

Faceplate Options

COP: st. steel, hairline
LOP: st. steel, hairline, st. steel, matt

Specified Buttons



Standard Size

Product model	Floors	Faceplate size (mm)	Box (mm)
CEA121	2-16	1210×170×1.5	1180×157×50
	17-24	1390×170×1.5	1360×157×50
	25-36	1390×200×1.5	1360×183×50
LSA127	All floors	337×92×12	-

Configuration Table●●: Yes; "-": N/A

Product model	Up	Down	Up & Down	Up &Base	Up, Down & Bas
LSA127	●	●	●	●	●



CEA121

LSA127



CEA128



LSA128

CEA128

Product Features

COP and LOP, flat plate type; innovative interface; classic two-stage design with large display window

Faceplate Options

COP: st. steel, hairline, st. steel, matt
LOP: st. steel, hairline, st. steel, matt

Indicator Configuration

COP: SM.04V16/B
SM.04VL16/Y
SM.04V16/AEII
SM.04VL16/XEII
SM.04TL-04 7"
LOP: SM.04V16/AEII
SM.04VL16/XEII
SM.04TL/W 4.3"

Specified Buttons



PUA125



PUA123

Standard Size

Product model	Floors	Faceplate size (mm)	Box (mm)
CEA128	2-16	1210×170×2	1180×157×70
	17-24	1390×170×2	1360×157×70
	25-36	1390×200×2	1360×183×70
LSA128	All floors	360×100×13.5	-

Configuration Table* ●": Yes; "-": N/A

Product model	Up	Down	Up & Down	Up &Base	Up, Down & Base
LSA128	●	●	●	●	●



CEC260



LSC260S



DSC260S

260 Series

Product Features

COP: Thin design, illumination of button and indicator in the same color, good visual effect and fashionable profile border
LOP: Sectional design, large display, illumination of button and indicator in the same color, good visual effect

Faceplate Options

COP: Hairline, mirror
LOP: st. steel, hairline, st. steel mirror, st. steel ti-gold

Indicator Configuration

COP: SM.04VS/13
SM.04V16/B
SM.04VL16/Y 6.4'
LOP: SM.04VS/12EII
SM.04V16/AEII
SM.04VL16/XEII

Specified Buttons



PB33



PB31

Standard Size

Product model	Floors	Faceplate size (mm)	Box (mm)
CEC260	2-36	1400×190×12.8	1360×157×70
LSC260S	-	350×105×13	-
DSC260S	-	350×170×13	-

Configuration Table* ●": Yes; "-": N/A

Product model	LSC260S	DSC260S
Up	●	●
Down	●	●
Up & Down	●	●
Up &Base	●	●
Up, Down & Base	●	●



231 Series

Product Features

Car Operating Panel

Ultra-thin design, overall thickness 16mm

Button line free design improves the overall reliability of the product and supports IC card module

Wall-mounted, field installation efficiency increased by 80%, two-speed size, support up to 36 floors.

Landing Operating Panel

Ultra-thin design, simple modeling. Large area display window, three-digit display.

Energy saving, environmental protection, safety and reliability, high cost performance

Indicator Configuration

COP: SM.04V16/AE 4.3'

LOP: SM.04VL16GE

Faceplate Options

COP: hairline, st. steel, matt

LOP: hairline, st. steel

Specified Buttons



Standard Size

Product model	Floors	Faceplate size (mm)
CSA231	2-24	1200×200×16
	25-36	1400×200×16
	2-18 (with IC card)	1200×200×16
	19-30 (with IC card)	1400×200×16

Product model	Boundary dimension (mm)
LSA120	320×90×13

Configuration Table* ●": Yes; "-": N/A

Product model	Up	Down	Up & Down	Up & Base	Up, Down & Bas
LSA120	●	●	●	●	●



1010A Series

Product Features

Hairline in the middle, mirror on both sides

Faceplate Options

Faceplate: Hairline in the middle, mirror on both sides

Indicator Configuration

COP: SM.04VL16/LII, SM.04TL-04 7", SM.04VR/01

LOP: SM.04VL16/LII, SM.04VS/12EII, SM.04V16/AEII, SM.04VR/01

Specified Buttons



Standard Size

Product model	Floors	Faceplate size (mm)	Box (mm)
COP1010A	2-8	1026×170×2	1000×157×70
	9-16	1206×170×2	1180×157×70
	17-24	1386×170×2	1360×157×70
	25-32	1566×170×2	1540×157×70

Product model	Faceplate size (mm)	Box (mm)
EH1010A	440×110×2	413×100×50
EHD1010A	440×190×2	413×170×50



COP120A Series

Product Features

Classical and all-match

Faceplate Options

Faceplate: Hairline, mirror, titanium

Indicator Configuration

COP: SM.04VL16/LII, SM.04TL-04 7", SM.04VR/01
LOP: SM.04VL16/LII, SM.04VS/12EII, SM.04V16/AEII, SM.04VR/01

Specified Buttons



Standard Size

Product model	Floors	Faceplate size (mm)	Box (mm)
COP120A	2-8	1030×170×3	1000×157×70
	9-16	1210×170×2	1180×157×70
	17-24	1390×170×3	1360×157×70
	25-32	1390×200×3	1360×183×70

Product model	Faceplate size (mm)	Box (mm)
EH120A	440×110×3	413×100×50
EHD120A	440×190×3	413×170×50

COP820

Product Features

Flat plate type

Faceplate Options

Faceplate: Hairline
Faceplate Thickness: 2mm

Standard Size

Product model	Floors	Faceplate size (mm)	Box (mm)
COP820	2-16	380×260×2	360×240×50
	17-24	380×360×2	360×340×50
	25-39	470×360×2	450×340×50



Hall Lantern

Faceplate Options

Faceplate: Hairline
Faceplate Thickness: 3mm

Recall Light Options of Hall Lantern

Product model	Recall Light
AEC335	<input type="checkbox"/> White



AEC335

Fireman’s Switch

Product model	Fixing method	Faceplate material	Faceplate size (mm)
EF274	Embedded	Hairline	185×90×2
EF980	Surface mounted	Hairline	150×100×18
FSC300	Surface mounted	Matt	130×100×15



Surface Mounted Landing Operating Panel



E200 Series

Product Features

Stainless steel right angle hemming process. The frame and the faceplate are compared in terms of two materials, and the locking dog installation is easy

Faceplate Options

Faceplate: Hairline, mirror

Indicator Configuration

Landing Operating Panel
Standard: SM.04VL16/XE 4.3'
Optional: SM.04VS/12E, SM.04V16/AE
Horizontal
Standard: SM.04HL16/D 5.7'
Optional: SM.04HS/L, SM.04H16/A

Specified Buttons



Standard Size

Product model	Boundary dimension (mm)
LSE200	300(350)×90×13
DSE200	330(350)×170×13
HSE200	300×95×13
BSE200	270×90×13
KSE201	170×70×13
KSE200 \ FSE200	90×70×13

Configuration Table

●*: Yes; "-": N/A

Product model	Up	Down	Up & Down	Up & Base	Up, Down & Base
LSE200	●	●	●	●	●
DSE200	●	●	●	●	●



980 Series

Product Features

Directly molded with 304 stainless steel, a variety of configurations for choice

Faceplate Options

Faceplate: Hairline, mirror

Indicator Configuration

Landing Operating Panel

Standard: SM.04VL 16/XE 4.3' monochrome LCD
Optional: SM.04TL/S 4.3'TFT true color, SM.04VS/G dot matrix

Horizontal

Standard: SM.04HL 16/ B 4.3' monochrome LCD

Specified Buttons



Standard Size

Product model	Boundary dimension (mm)
EH980\EHH980	320(360)×100×18
EHD980	350×190×18
ES980\EF980\EW980	150×100×18
ESF980	130×100×18

Configuration Table●": Yes; "-": N/A

Product model	Up	Down	Up & Down	Up & Base	Up, Down & Base
EH980	●	●	●	●	●
EHD980	●	●	●	●	●
EW980	●	●	●	●	●

985 Series

Product Features

Zamak frame, good compatibility

Faceplate Options

EH985A: black screen with st. steel faceplate
EH985B: white screen with st. steel faceplate
EH985C: st. steel
EH985D: acrylic

Specified Buttons



Indicator Configuration

Landing Operating Panel

Standard: SM.04VL 16/L 4.3'
Optional: SM.04VL 16/XE 4.3', SM.04TL/S 4.3'TFT

Standard Size

Product model	Boundary dimension (mm)
EH985 (A\B\C\D)	350×96×18

Configuration Table●": Yes; "-": N/A

Product model	Up	Down	Up & Down	Up &Base	Up, Down & Base
EH985 (A\B\C\D)	●	●	●	●	●





LSA122

LSA122

Product Features

The landing operating panel is designed in segments.
Both sides are cambered and ergonomic, making us
more comfortable and natural during use.

Faceplate Options

LOP: st. steel, hairline, st. steel, matt

Indicator Configuration

LOP: SM.04V16/GEII

Recommended Buttons



PUA125

Standard Size

Product model	Floors	Faceplate size (mm)	Box (mm)
LSA122	All floors	320×90×13	-

Configuration Table*●": Yes; "-": N/A

Product model	Up	Down	Up & Down	Up & Base	Up, Down & Base
LSA122	●	●	●	●	●



LSA123

LSA123

Product Features

Aluminum framed edge of LOP, flat plate design, elegant and beautiful

Faceplate Options

LOP: st. steel, hairline, st. steel
mirror, st. steel matt

Indicator Configuration

LOP: SM.04V16/GEII

Recommended Buttons



PUA560

Standard Size

Product model	Floors	Faceplate size (mm)	Box (mm)
LSA123	All floors	310×90×13	-

Configuration Table*●": Yes; "-": N/A

Product model	Up	Down	Up & Down	Up &Base	Up, Down & Base
LSA123	●	●	●	●	●



LSE527

LSE527

Product Features

Glass LOP, exquisite, high-end and elegant

Faceplate Options

LOP: Glass

Indicator Configuration

LOP: SM.04V16/M
SM.04V16/J

Recommended Buttons



PUA125

Standard Size

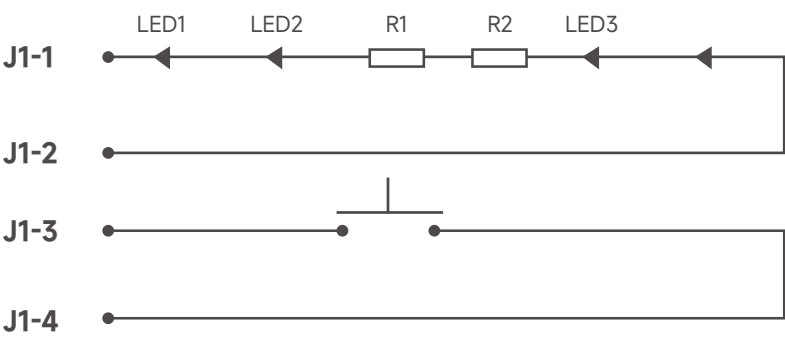
Product model	Floors	Faceplate size (mm)	Box (mm)
LSE527	All floors	338×89×13	-

Configuration Table*●": Yes; "-": N/A

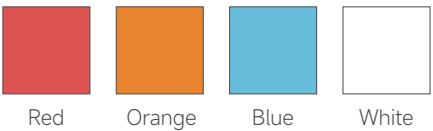
Product model	Up	Down	Up & Down	Up & Base	Up, Down & Base
LSE527	●	●	●	●	●

Button

Standard Button Sequence Diagram



Standard Button Recall Light



Standard Button Text Symbols

-3, -2, -1, 1~36, open, close, alarm bell,
intercom, up arrow, down arrow, B, B1, B2,
B3, G, H, M

PB31/PB31BZ (Buzzer)

Boundary dimension: $\Phi 40 \times 15.5$
Working voltage: DC24V
Body: Polycarbonate, Chromeplated
Fixing method: Frontal mounting, fastening by jam-nut
Recall light: Red, Org, Blu, Whi
Touch Plate Finishing: concentric hairline
Braille: Yes

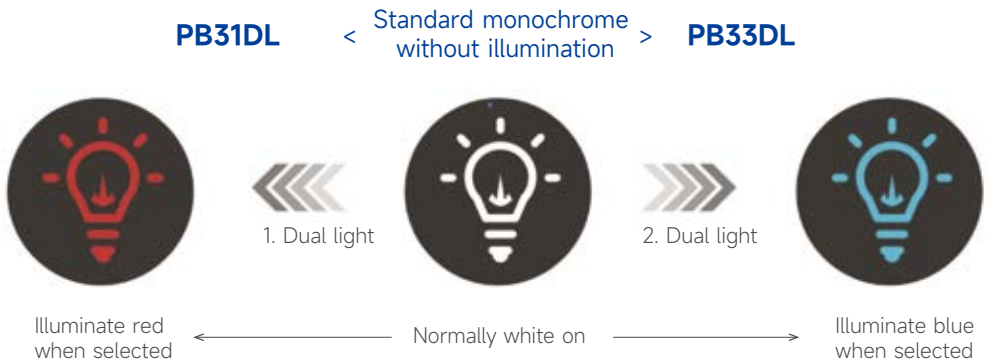


PB33/PB33BZ (Buzzer)

Boundary dimension: $\Phi 38 \times 15.5$
Working voltage: DC24V
Body: metal insert
Fixing method: Frontal mounting, fastening by jam-nut
Recall light: Red, Org, Blu, Whi
Touch Plate Finishing: concentric hairline
Braille: Yes



Dual-Light Push Button PB31DL/PB33DL

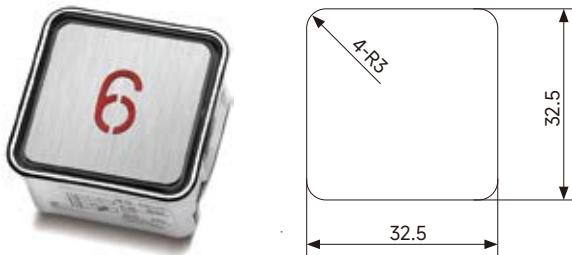


The name of the dual light is the original model suffixed by -DL; DL stands for Dual Light
The dual light button illuminates white light normally and illuminates red or blue when it is selected
The car call board must be 03-E, not 03-D

EB210

Boundary dimension: □34.5×24.4
Working voltage: DC24V
Body: metal insert
Fixing method: Frontal mounting, clip

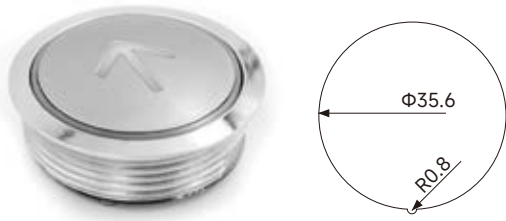
Recall light: Red, Org, Blu, Whi
Touch Plate Finishing: Hairline
Braille: Yes (EB218)



PB36

Boundary dimension: Φ39×15.5
Working voltage: DC24V
Body: metal insert
Fixing method: Frontal mounting, fastening by jam-nut

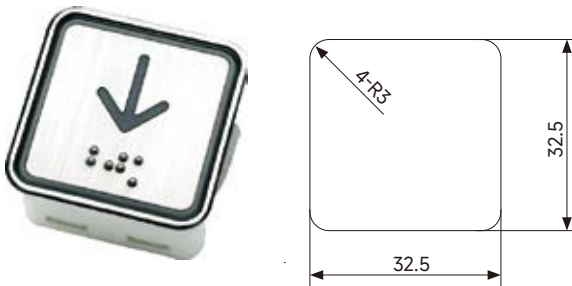
Recall light: Red, Org, Blu, Whi
Touch Plate Finishing: Titanium black hairline, matt
Braille: Yes



EB218

Overall dimensions: 34× 34× 25
Working voltage: DC24V
Body: metal insert
Fixing method: Front embedded, fastener fixed

Recall light: Red, Org, Whi, Blu
Touch Plate Finishing: Vertical hairline, mirror



EB960

Boundary dimension: Φ42×24.5
Working voltage: DC24V
Body: metal insert
Fixing method: Frontal mounting, fastening by jam-nut

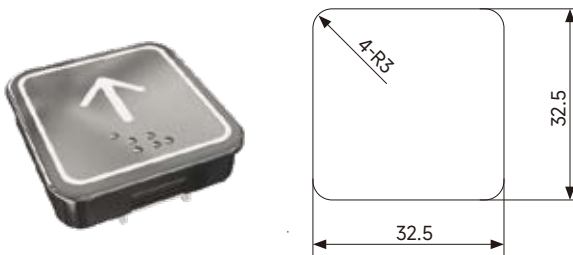
Recall light: Red, Whi, Blu
Touch Plate Finishing: concentric hairline, ti-golden, mirror
Braille: Yes



PUA123

Boundary dimension: 34.2×34.2×10
Working voltage: DC24V
Body: metal insert
Fixing method: Front embedded, fastener fixed

Recall light: Red, Whi, Blu
Touch Plate Finishing: Vertical hairline, matt
Braille: Yes



PUA125

Boundary dimension: Φ36.5×13
Working voltage: DC24V
Body: metal insert
Fixing method: Frontal mounting, fastening by jam-nut

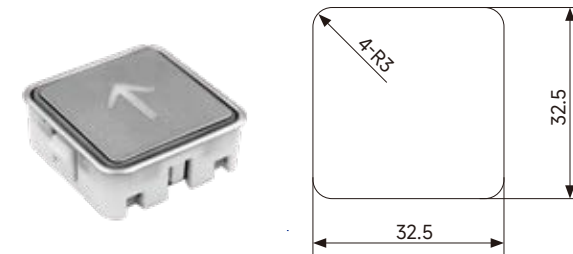
Recall light: Red, Whi, Blu
Touch Plate Finishing: Vertical hairline, matt, mirror
Braille: Yes



PUA210

Overall dimensions: 34× 34× 12
Working voltage: DC24V
Body: metal insert
Fixing method: Front embedded, fastener fixed

Recall light: Red, Whi, Blu
Touch Plate Finishing: matt, mirror
Braille: Yes



PUA560

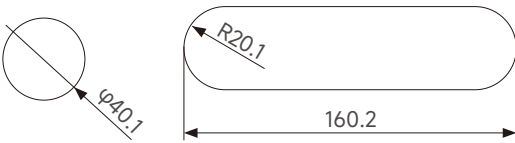
Boundary dimension: Φ38×15
Working voltage: DC24V
Body: metal insert
Fixing method: Frontal mounting, fastening by jam-nut

Recall light: Red, Whi, Blu
Touch Plate Finishing: Vertical hairline, matt, mirror
Braille: Yes



PTE120 Series

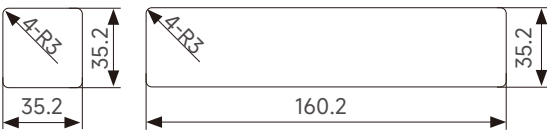
Working voltage: DC24V
Faceplate thickness: 2~3mm
Fixing method: embed, with stud
Touch Plate Finishing: Champagne gold acrylic (standard)
Size: PTE121 (68×50×43), PTE122 (188×50×38)



PTE121 (Dual light, blue or green on white)
PTE122 (Dual light, blue or green on white)

PTE110 Series

Working voltage: DC24V
Faceplate thickness: 2~3mm
Fixing method: embed, with stud
Faceplate material: hairline (STD.), mirror, ti-golden
Size: PTE112/113/115/116 (188×45×43), PTE111/114 (63×45×43)



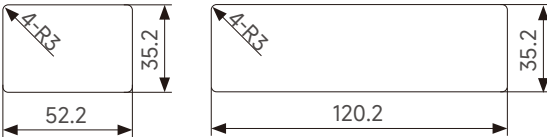
PET111 (Dual light, blue or green on white)
PET114 (Recall light: white)
PET113 (Dual light, blue or green on white)
PET116 (Recall light: white)



PET112 (Dual light, blue or green on white)
PET115 (Recall light: white)

PTE130 Series

Working voltage: DC24V
Faceplate thickness: 2~3mm
Fixing method: embed, with stud
Touch Plate Finishing: Mirror (standard)
Size: PTE132/134(148×45×43), PTE131/133(63×45×43)



PET131 (Dual light, blue or green on white)
PET133 (Recall light: white)
PET132 (Dual light, blue or green on white)
PET134 (Recall light: white)

Indicators



SM.04TL/W

Display Size: 4.3"
Display mode: TFT
Resolution: 480×272
Install mode: Horizontal/Vertical
Apply For: Car/Hall
Boundary dimension (mm): 163×73×10.6

SM.04TL-04

Display Size: 7"
Display mode: TFT
Resolution: 800*480
Install Mode: Vertical/Horizontal
Apply For: COP, horizontal
Boundary dimension (mm): 117×189×20





SM.04TL/P (Video)

Display Size: 10.4'
Display mode: TFT
Resolution: 800×600
Install mode: Horizontal/Vertical
Apply For: COP, horizontal
Boundary dimension (mm): 253.2×179.2×41



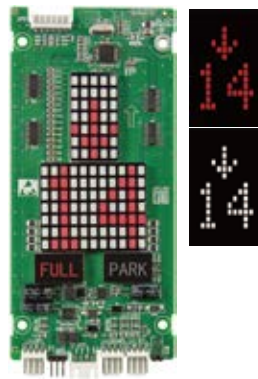
SM.04TL/K (Video)

Display Size: 12.1'
Display mode: TFT
Resolution: 800×600
Install mode: Horizontal/Vertical
Apply For: CAR
Boundary dimension (mm): 283.5×262×46



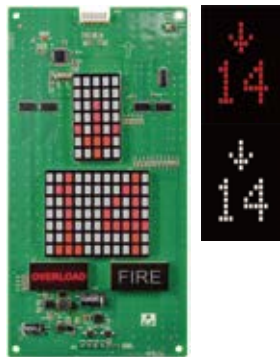
SM.04TL/N (Video)

Display Size: 15'
Display mode: TFT
Resolution: 1024×768
Install Mode: Vertical/Horizontal
Apply For: COP, horizontal
Overall dimensions: 333× 297× 39



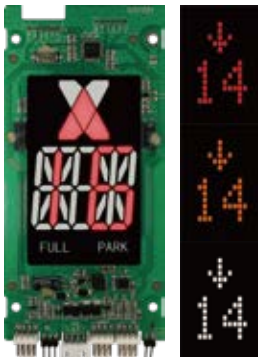
SM.04VS/12EII

Illuminate Mode: Dot matrix
Illuminate Color: Red, White
Install Mode: Vertical
Apply For: Hall
Boundary dimension (mm): 162.5×72×7.7
Function Display: FULL, PARK



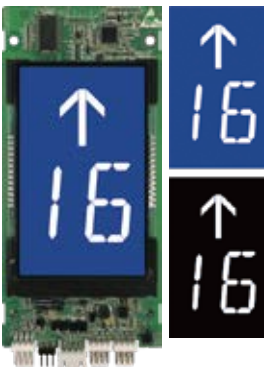
SM.04VS/13

Illuminate Mode: Superlarge dot matrix
Illuminate Color: Red, Orange, White
Install Mode: Vertical
Apply For: CAR
Boundary dimension (mm): 213.4×109.2×20
Function display: OVERLOAD, FIRE



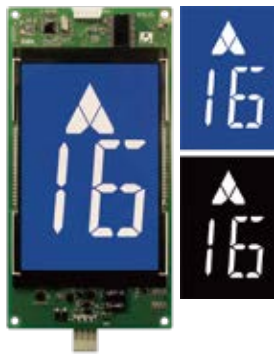
SM.04V16/AEII

Illuminate Mode: Segment
Illuminate Color: Red, Orange, White
Install Mode: Vertical
Apply For: Hall
Boundary dimension (mm): 162.5×72×8
Function Display: FULL, PARK



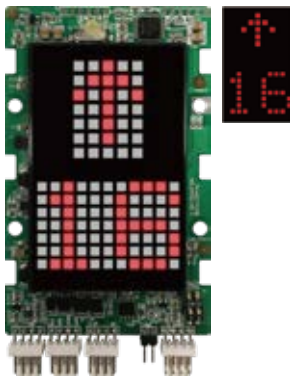
SM.04VL 16/XEII

Display Size: 4.3'
Display mode: Segment LCD
Illuminate Color: White on blue, white on black
Install Mode: Vertical
Apply For: Hall
Boundary dimension (mm): 162.4×72×8.5
Function Display: FULL, PARK



SM.04VL 16/Y

Display Size: 6.4'
Display mode: Segment LCD
Illuminate Color: White on blue, white on black
Install Mode: Vertical
Apply For: CAR
Boundary dimension (mm): 213.4×109.2×21
Function display: OVERLOAD, FIRE



SM.04VS/09EII

Illuminate Mode: Dot matrix
Illuminate Color: Red
Install Mode: Vertical
Apply For: Hall
Boundary dimension (mm): 117×64×8



SM.04V16/B

Illuminate Mode: Segment
Illuminate Color: Red, Orange, White
Install Mode: Vertical
Apply For: CAR
Boundary dimension (mm): 213.4×109.2×19.9
Function display: OVERLOAD, FIRE



SM.04V16/GEII

Illuminate Mode: Segment
Illuminate Color: White
Install Mode: Vertical
Apply For: Hall
Boundary dimension (mm): 117×64×8
Function Display: FULL, PARK



SM.04V16/M

Display Mode: Segment
Illuminate Color: White
Install Mode: Vertical
Apply For: Hall
Boundary dimension: 140×73×8
Function Display: FULL, INS

Sirius Standard Ultra-thin

Industry-leading, ultra-thin design

Smart IoT commissioning-free

“Zero” waiting for door opening and closing

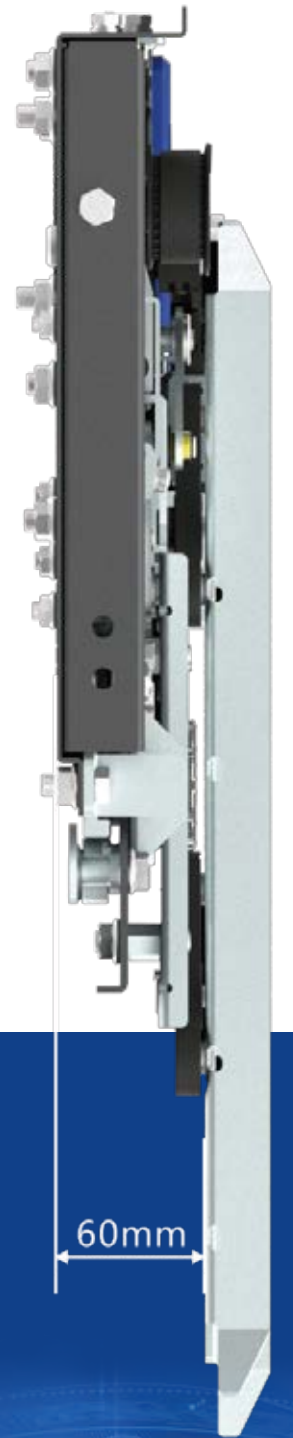
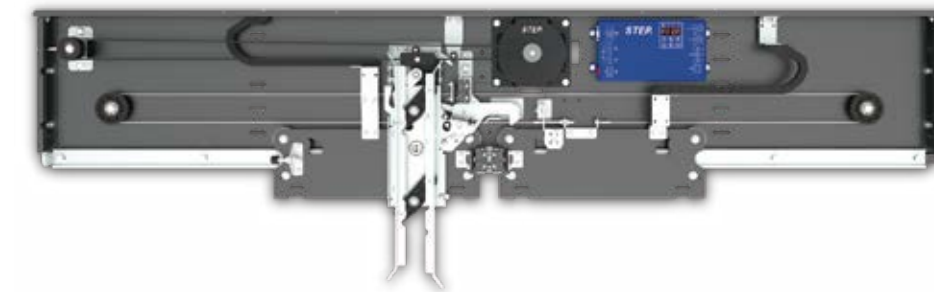
No anxiety during rush hours

Door operator thickness 60mm

Suitable for various car sizes

Meet government IoT requirements

Elevator Cloud provides door operator signals



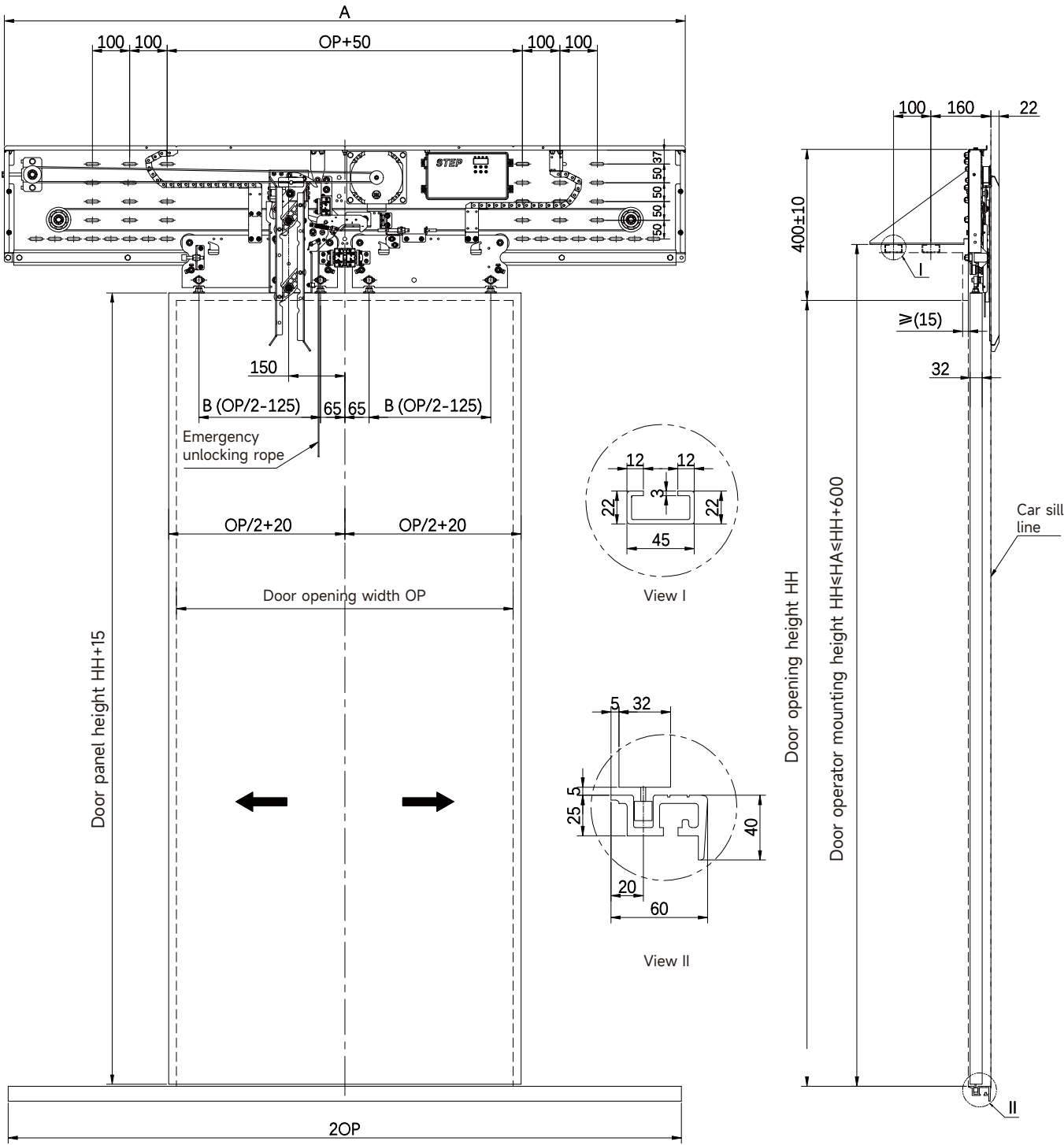
Compact ultra-thin “body”

60mm

STEP Sirius Door Operators

DMJ07-C2 Two-Panel Center Opening Permanent Magnet Synchronous Door Operator

Dimension drawing of product mounting interface



Product Range

Type	Net opening width (mm)	Net opening height (mm)
C2	600-1200	2000-2400

Technical Parameters

Standard and specification	GB/T 7588.1&2
Elevator speed	Up to 2.5m/s
Landing door linkage	General-purpose Japanese landing door, door lock interface 161
Protection grade	IP20
Sill material	Aluminum sill
Elevator door vane	Integrated car door vane
Shaft environment temperature	-25°C ~ +40°C
Humidity range	< 90%RH at 25°C, < 50%RH at 40°C

Door Motor Parameters

Motor type	Permanent magnet synchronous door motor
Rated power	105W
Rated torque	2.0N.m
Protection grade	IP54
Maximum towing weight	160 kg

Controller Parameters

Power	200W
Input voltage range	AC180V ~ AC260V
Working frequency	50 Hz±5%, 60Hz±5%
Protection grade	IP20
Running mode	CAN or I/O interface
Controller mounting position	Top/inside

Delivery Type

	Door motor + sill + mounting accessories	Door panel + light curtain
Standard	√	×
Optional	√	√

Parameter List

OP	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
A	1250	1350	1420	1520	1620	1720	1820	1920	2020	2120	2220	2320	2420
B	175	200	225	250	275	300	325	350	375	400	425	450	475

STEP Sirius Pro

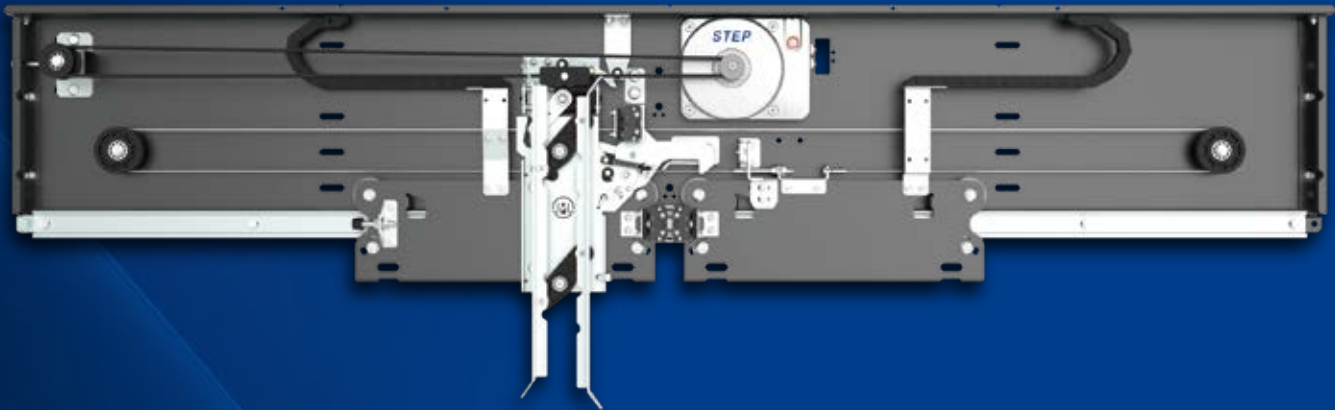
Upgrade based on all advantages of the Standard Edition...

Based on 30 years of research on dynamic adaptive control algorithms, STEP has joined hands with top door operator experts in the industry to launch an epoch-making servo door system.

One wisdom "core"

STEP Sirius Pro

STEP Sirius Pro | Drive control integration based on servo technology



Servo technology, motor, drive, control, integrated design

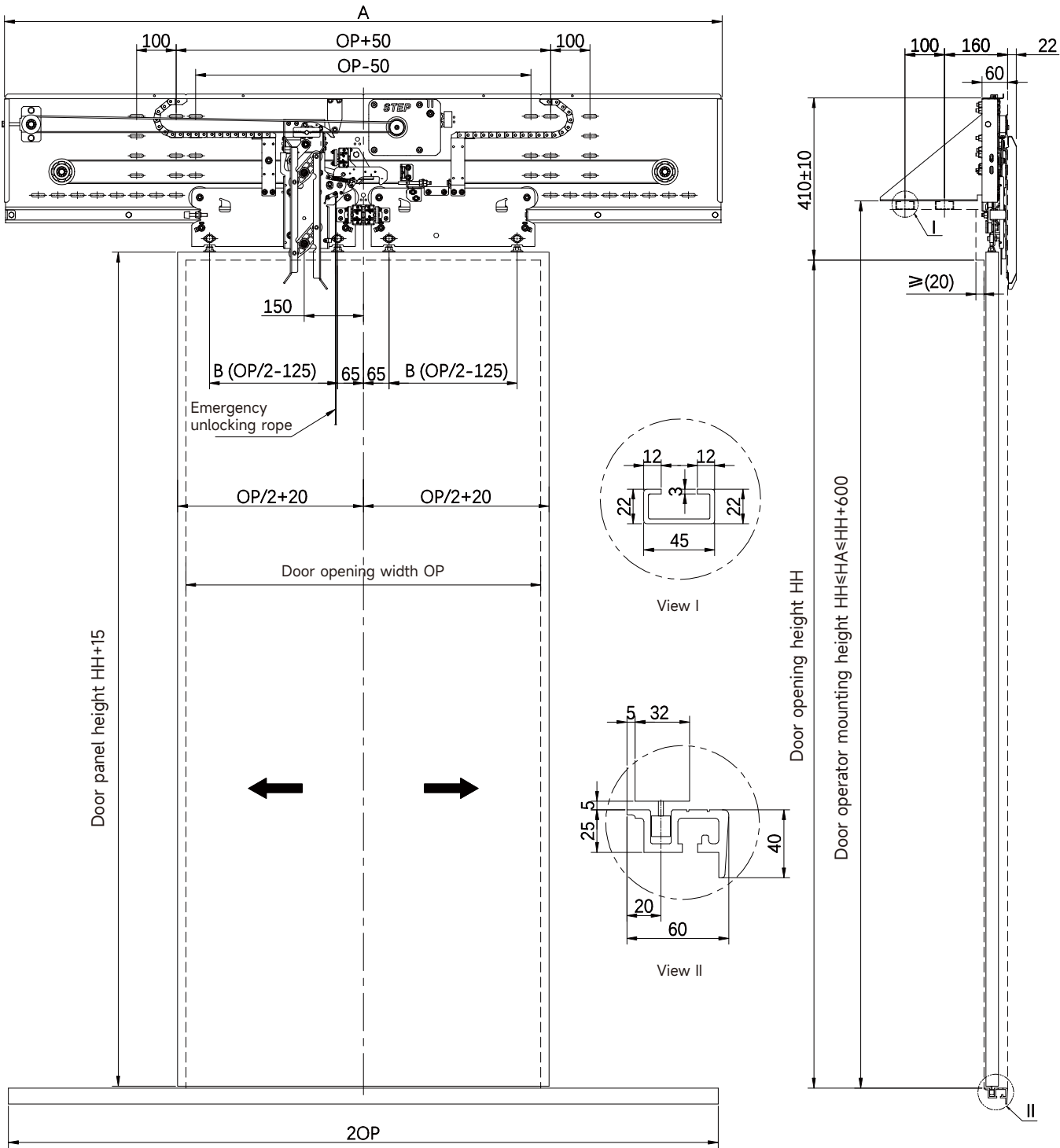
Connect with STEP Elevator Cloud to address chimney effect without trapping

Cooperate with the main control board to improve the start-stop efficiency by 20%

Intelligent silent control, with the noise 30% lower than that of traditional door operator

DMJ09-C2 Two-Panel Center Opening Permanent Magnet Synchronous Door Operator

Dimension drawing of product mounting interface



Product Range

Type	Net opening width (mm)	Net opening height (mm)
C2	600-1200	2000-2400

Technical Parameters

Standard and specification	GB/T 7588.1&2
Elevator speed	Up to 2.5m/s
Landing door linkage	General-purpose Japanese landing door, door lock interface 161
Protection grade	IP20
Sill material	Aluminum sill
Elevator door vane	Integrated car door vane
Shaft environment temperature	-25°C ~ +40°C
Humidity range	< 90%RH at 25°C, < 50%RH at 40°C

Servo Motor Parameters

Motor type	Servo door motor
Rated power	52W
Input voltage range	DC20 ~ 28V
Rated torque	2.0N.m
Protection grade	IP54
Running mode	CAN interface
Maximum towing weight	160 kg
Working temperature	Non-derating at -20°C~50°C, maximum working temperature 65°C

Delivery Type

	Door motor + sill + mounting accessories	Door panel + light curtain
Standard	√	×
Optional	√	√

Parameter List

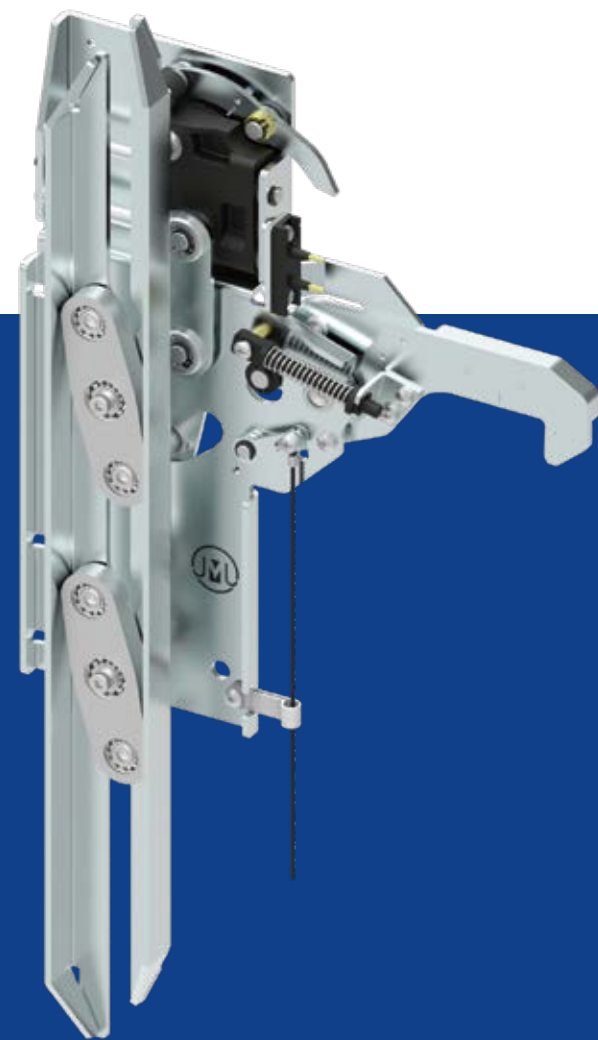
OP	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
A	1250	1350	1420	1520	1620	1720	1820	1920	2020	2120	2220	2320	2420
B	175	200	225	250	275	300	325	350	375	400	425	450	475

Sirius Door Vane

STEP Sirius synchronous door vane with car lock European extension and Japanese internal clamp

All working conditions of STEP Sirius meet EN81, GB/T 7588.1/2; power loss hold, not hitting the door holder

STEP Sirius door vane can drag 160kg moving components and run 3 million times without fault



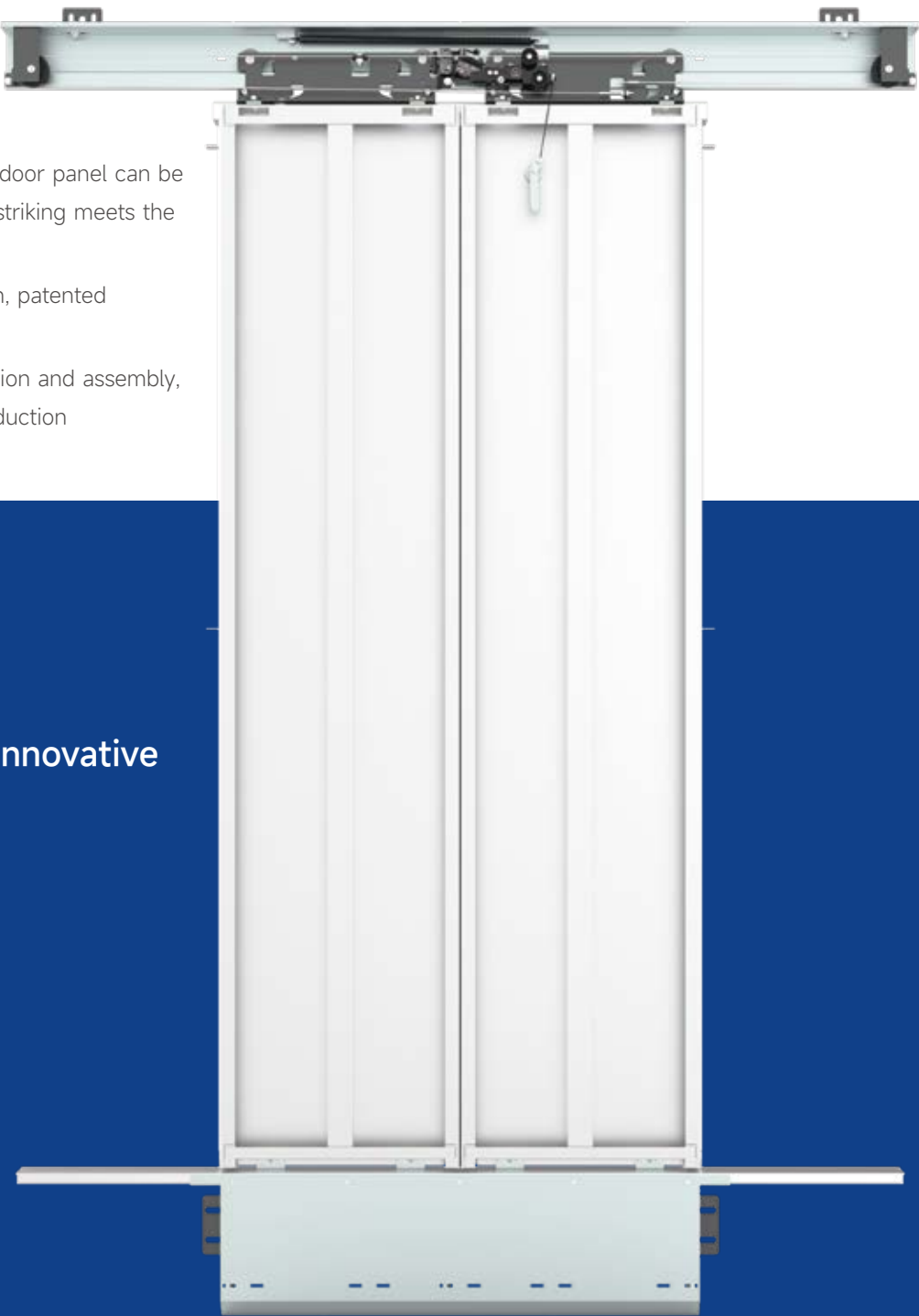
Synchronous external extension door vane



Synchronous inside clamp door vane

Sirius Landing Door

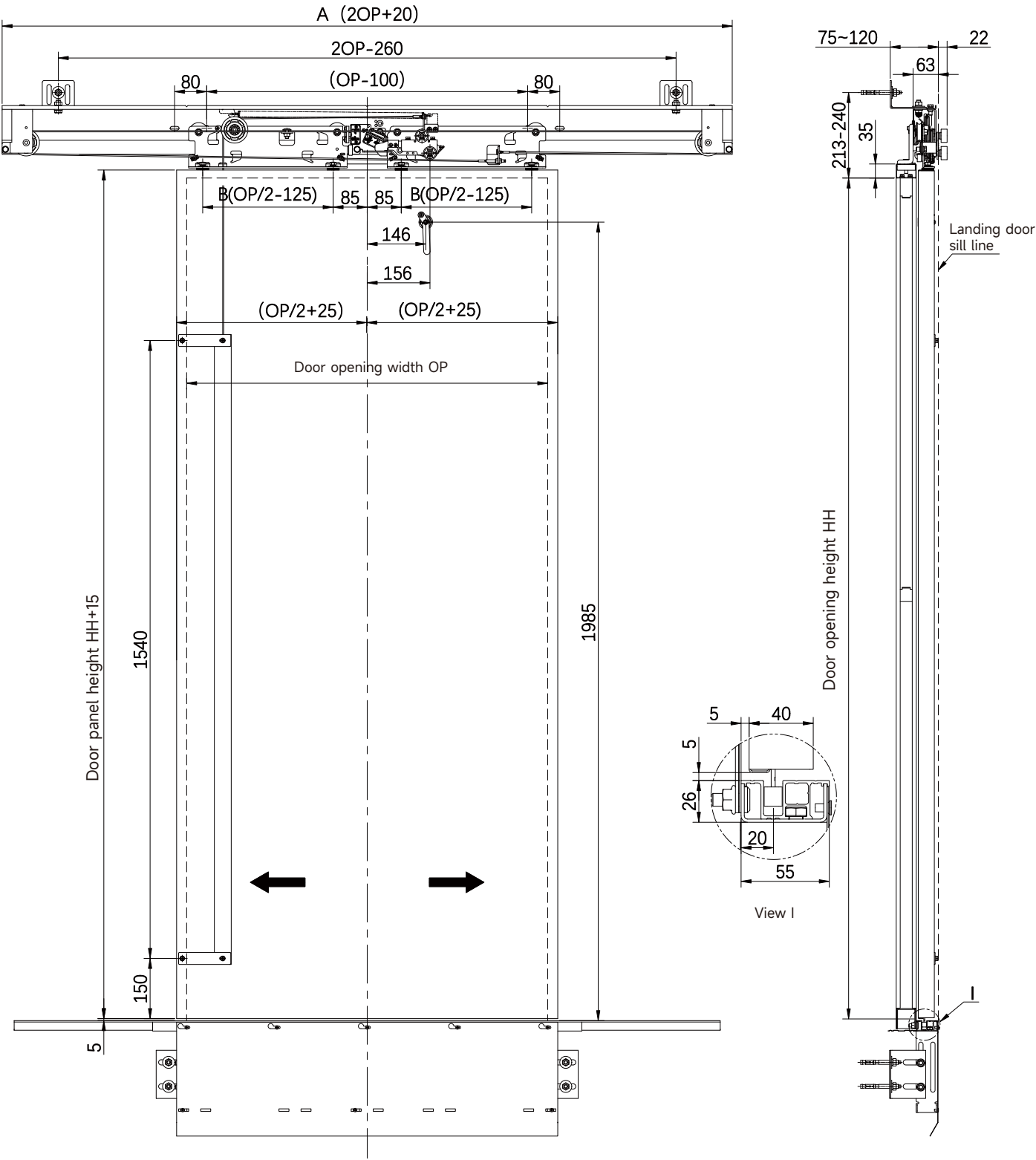
The 1.0mm four-sided bending door panel can be configured, and the pendulum striking meets the national standard
Patented sill, multiple protection, patented landing door, integrated design
Modular design, simple production and assembly, shared technology for joint production



Cost-saving and innovative

DCM05-C2 Two-Panel Center Opening Landing Door Device

Dimension drawing of product mounting interface



Product Range

Type	Net opening width (mm)	Net opening height (mm)
C2	600-1200	2000-2400

Technical Parameters

Standard and specification	GB/T 7588.1&2
Protection grade	IP20
Self-closing mode	Closing spring/heavy hammer
Sill load	640kg
Shaft environment temperature	-25°C ~ +40°C
Humidity range	< 90%RH at 25°C, < 50%RH at 40°C

Delivery Type

	Landing door device + sill assembly + mounting accessories	Door panel + door pocket
Standard	√	×
Optional	√	√

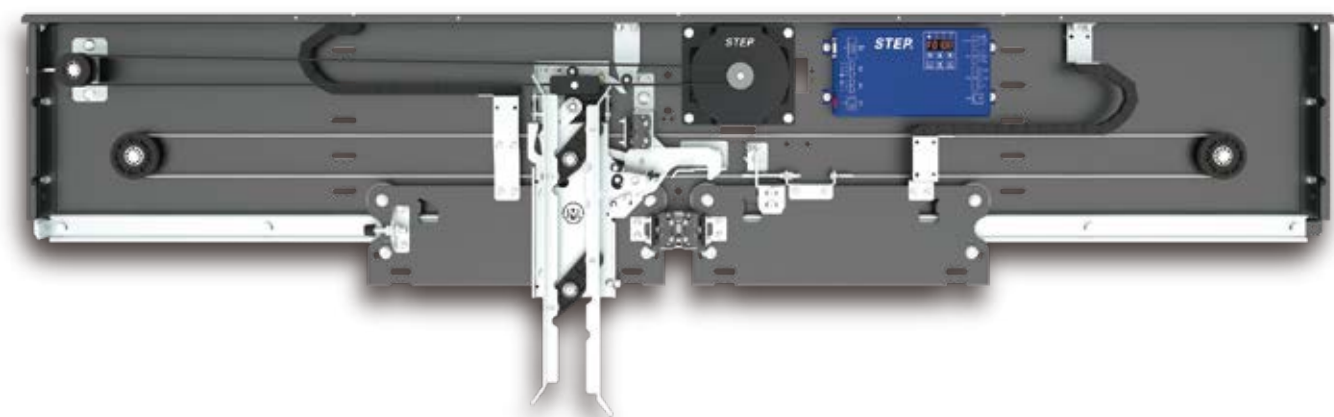
Sill Type

Standard aluminum sill assembly

Parameter List

OP	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
A	1220	1320	1420	1520	1620	1720	1820	1920	2020	2120	2220	2320	2420
B	175	200	225	250	275	300	325	350	375	400	425	450	475

Transformed Platform of STEP Sirius Door Operator



Door operator thickness 60mm

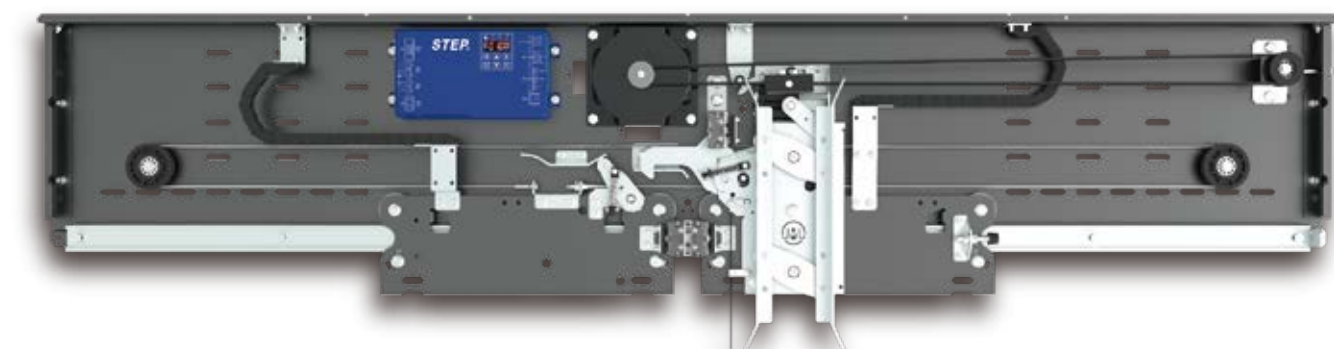
Suitable for transformation of all brands of mainstream door operators

Door vanes are available in two standard structures

Japanese internal clamp and European extension

Open CAN communication

The door operator data can meet government IoT regulatory requirements



Right door vane design

Suitable for transformation of specific brands of door operators

Focus on door operator transformation

Professional custom and universal match

Focus on door operator transformation

Simple survey, just upload four photos

Focus on door operator transformation

Easy to install, one person can replace the door operator

Compact ultra-thin “body”
Ultra-thin door operator
transformation platform



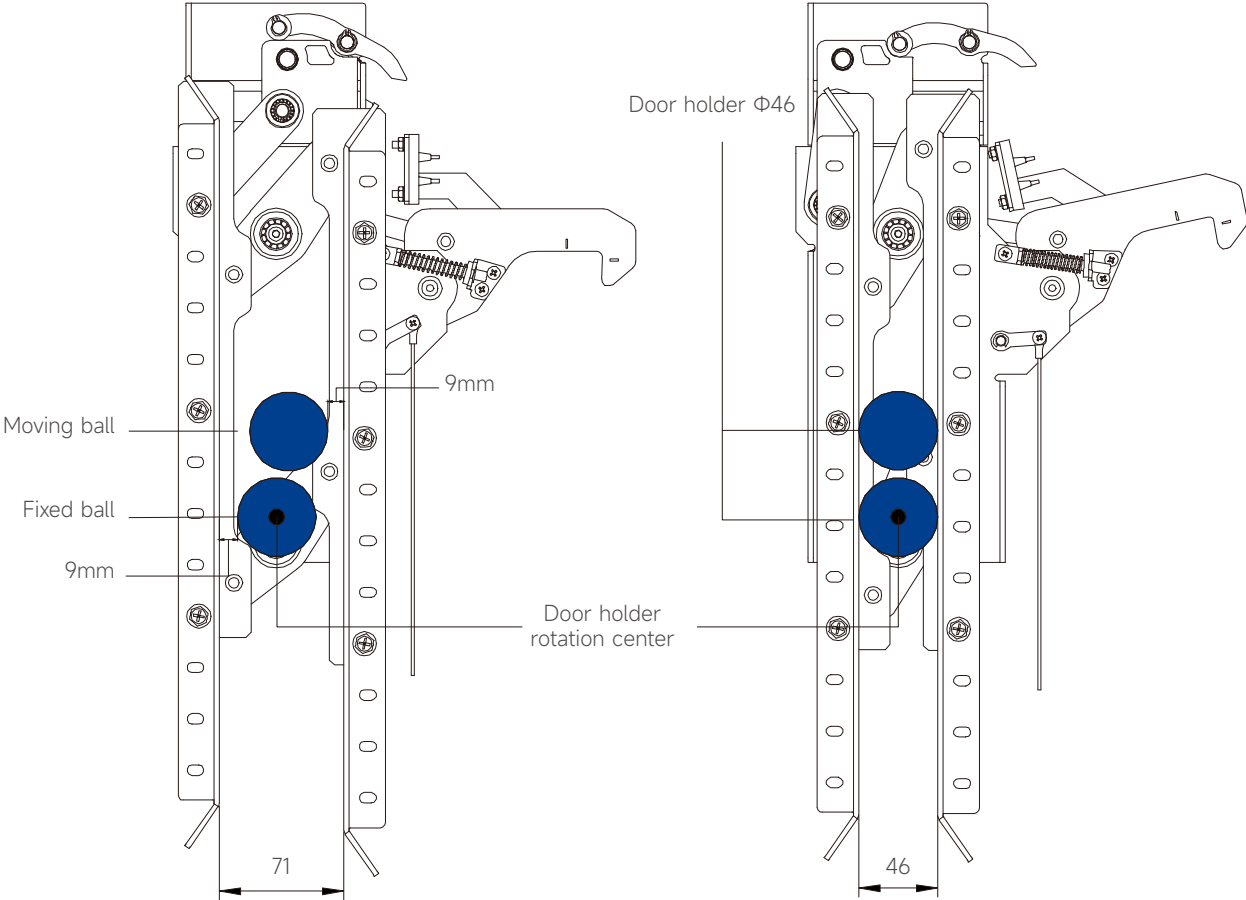
60mm

Transformed Door Vanes of STEP Sirius Door Operators

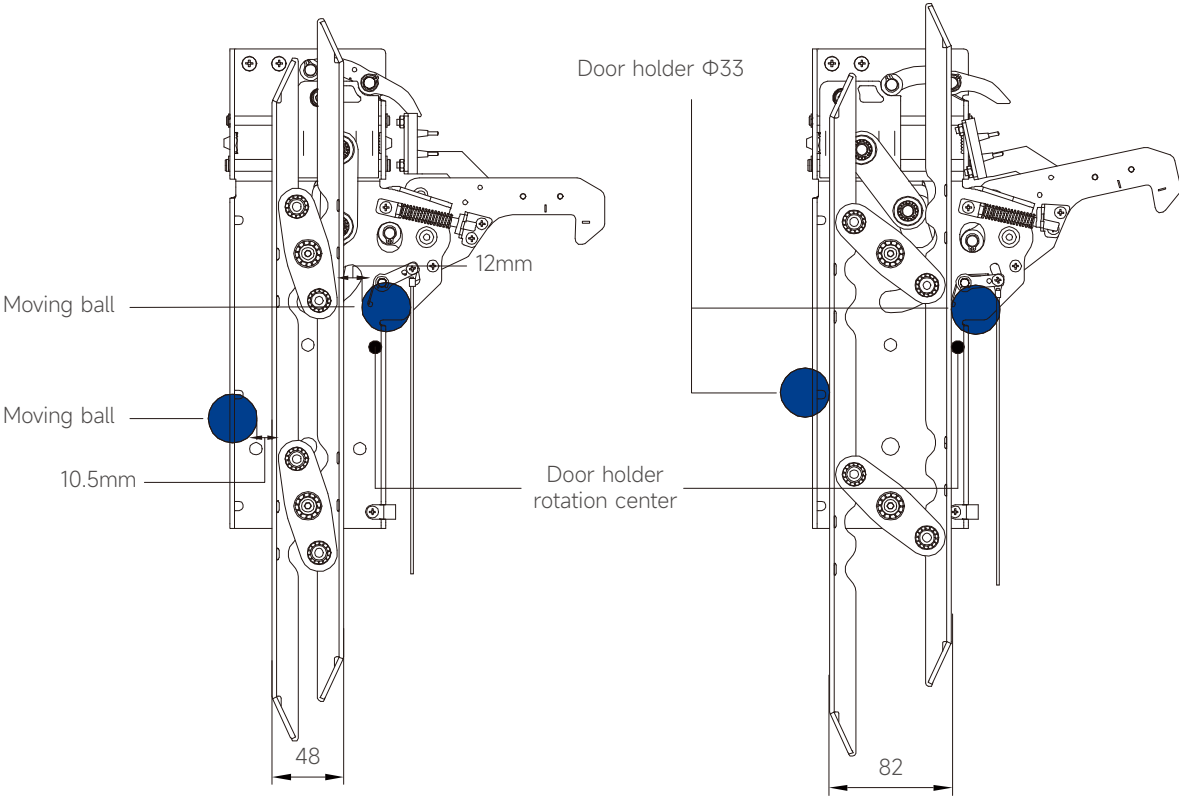
Synchronous door vane with car lock for transformation

STEP has the Japanese internal clamp, the European extension and major customer customized door vane series for transformation

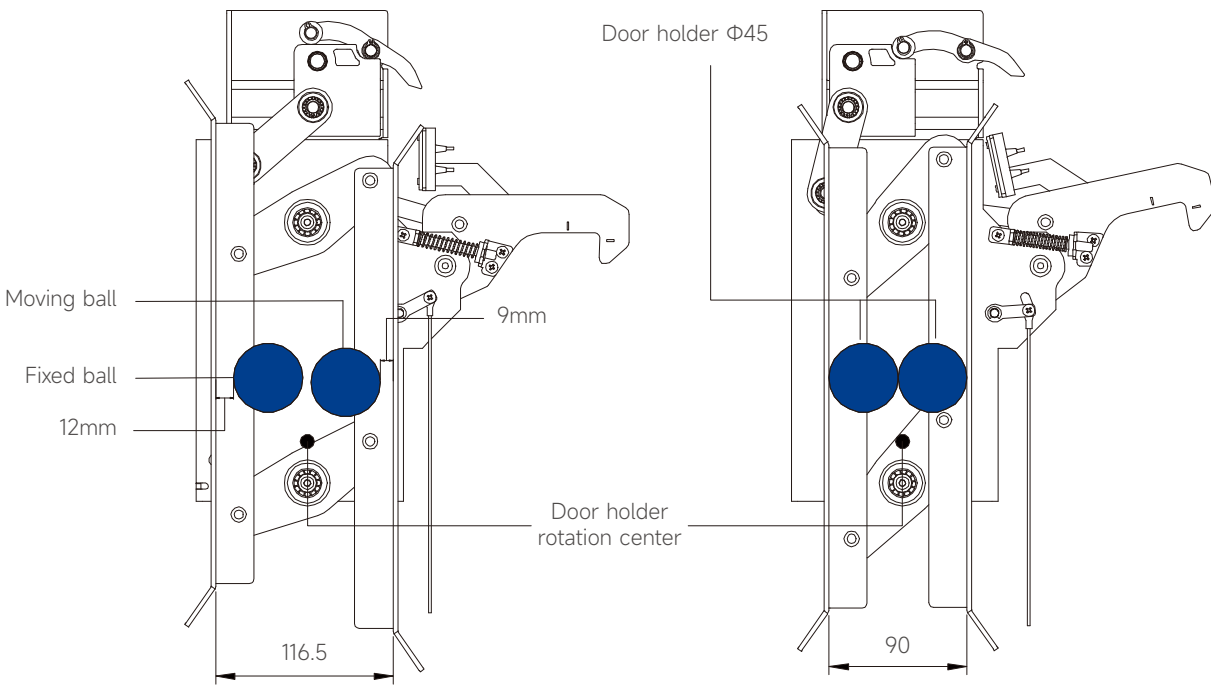
Japanese Mainstream Universal Door Vane DMD02-NJ-GZ01



European Mainstream Universal Door Vane DMD02-WZ-GZ01



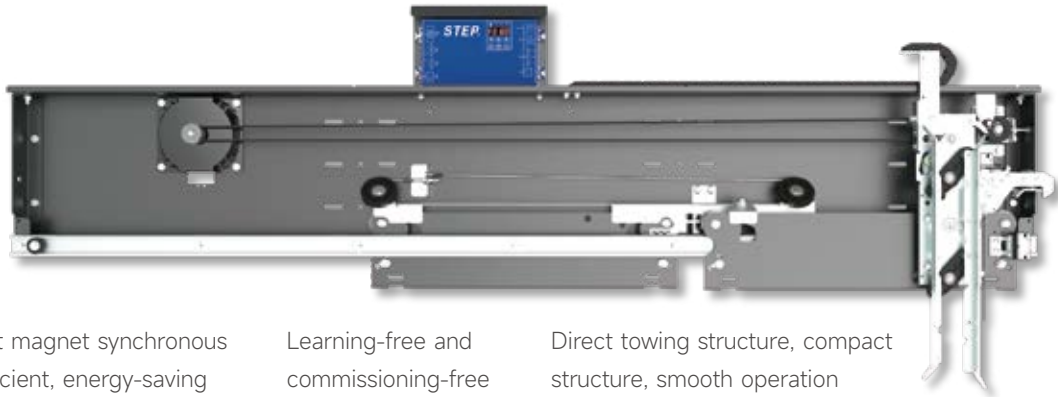
Major Customer Customized Door Vane DMD02-NJ-RL01



Sirius Side-opening Door Operator

DMJ01-T2

Two-Panel Side Opening Permanent Magnet Synchronous Door Operator

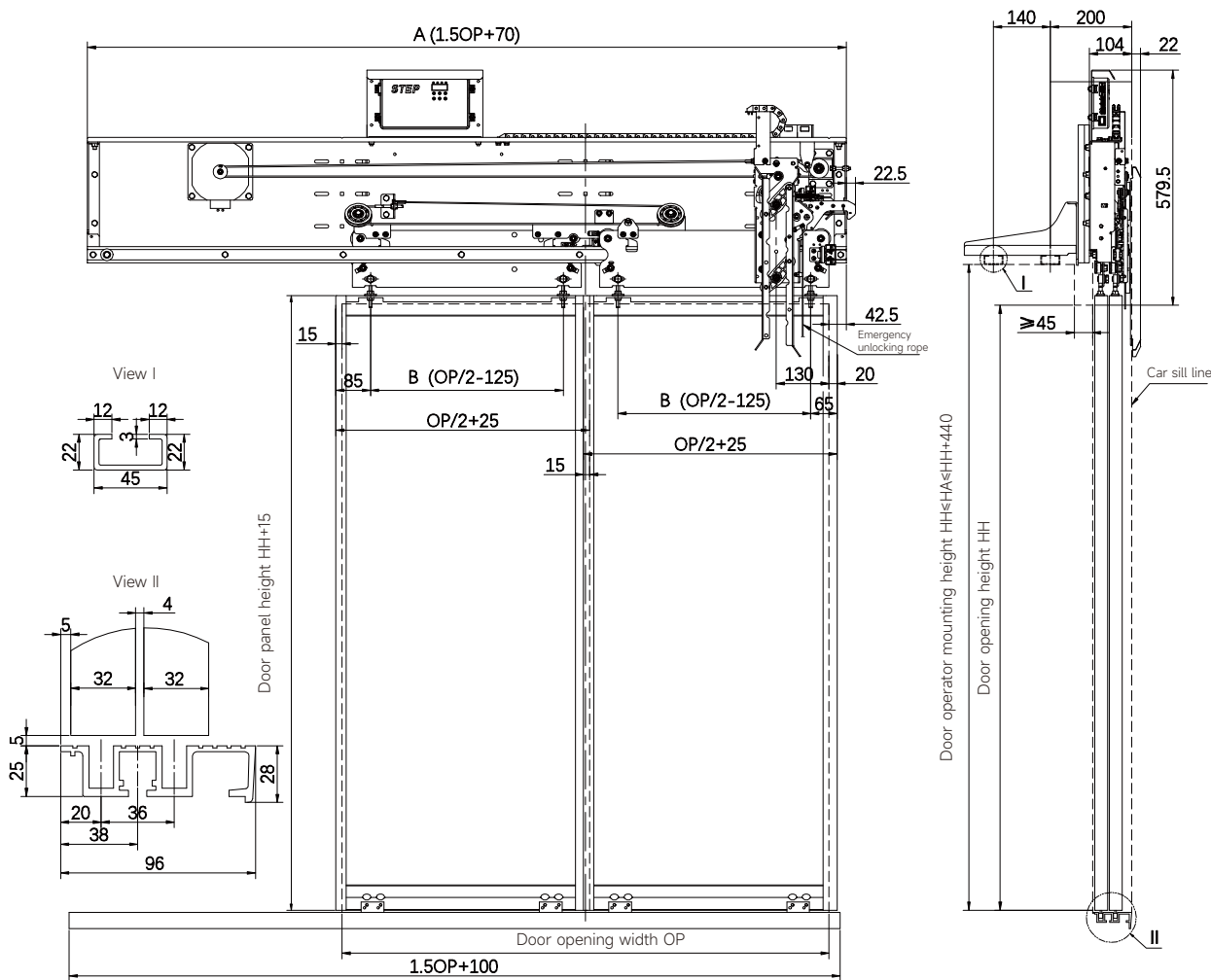


Permanent magnet synchronous motor, efficient, energy-saving and environmentally friendly

Learning-free and commissioning-free

Direct towing structure, compact structure, smooth operation

Dimension drawing of product mounting interface



Product Range

Type	Net opening width (mm)	Net opening height (mm)
T2	700-1400	2000-2400

Technical Parameters

Standard and specification	GB/T 7588.1&2
Elevator speed	Up to 2.5m/s
Landing door linkage	Optional European or Japanese door lock interface
Protection grade	IP20
Sill material	Aluminum sill
Elevator door vane	Integrated car door vane
Shaft environment temperature	-25°C~+40°C
Humidity range	< 90%RH at 25°C, < 50%RH at 40°C

Door Motor Parameters

Motor type	Permanent magnet synchronous door motor
Rated power	105W
Rated torque	2.0N.m
Protection grade	IP54
Maximum towing weight	160 kg

Controller Parameters

Power	200W
Input voltage range	AC180V~AC260V
Working frequency	50Hz±5%, 60Hz±5%
Protection grade	IP20
Running mode	CAN or I/O interface
Controller mounting position	Top

Delivery Type

	Door motor + sill + mounting accessories	Door panel + light curtain
Standard	√	×
Optional	√	√

Parameter List

OP	700	800	900	1000	1100	1200	1300	1400
A	1120	1270	1420	1570	1720	1870	2020	2170
B	225	275	325	375	425	475	525	575
C	600	700	800	900	1000	1100	1200	1300

Sirius Side Landing Door Opener

DCM01-T2
Two-Panel Side Opening Landing Door Device



Door lock interface

Optional European or Japanese door lock interface

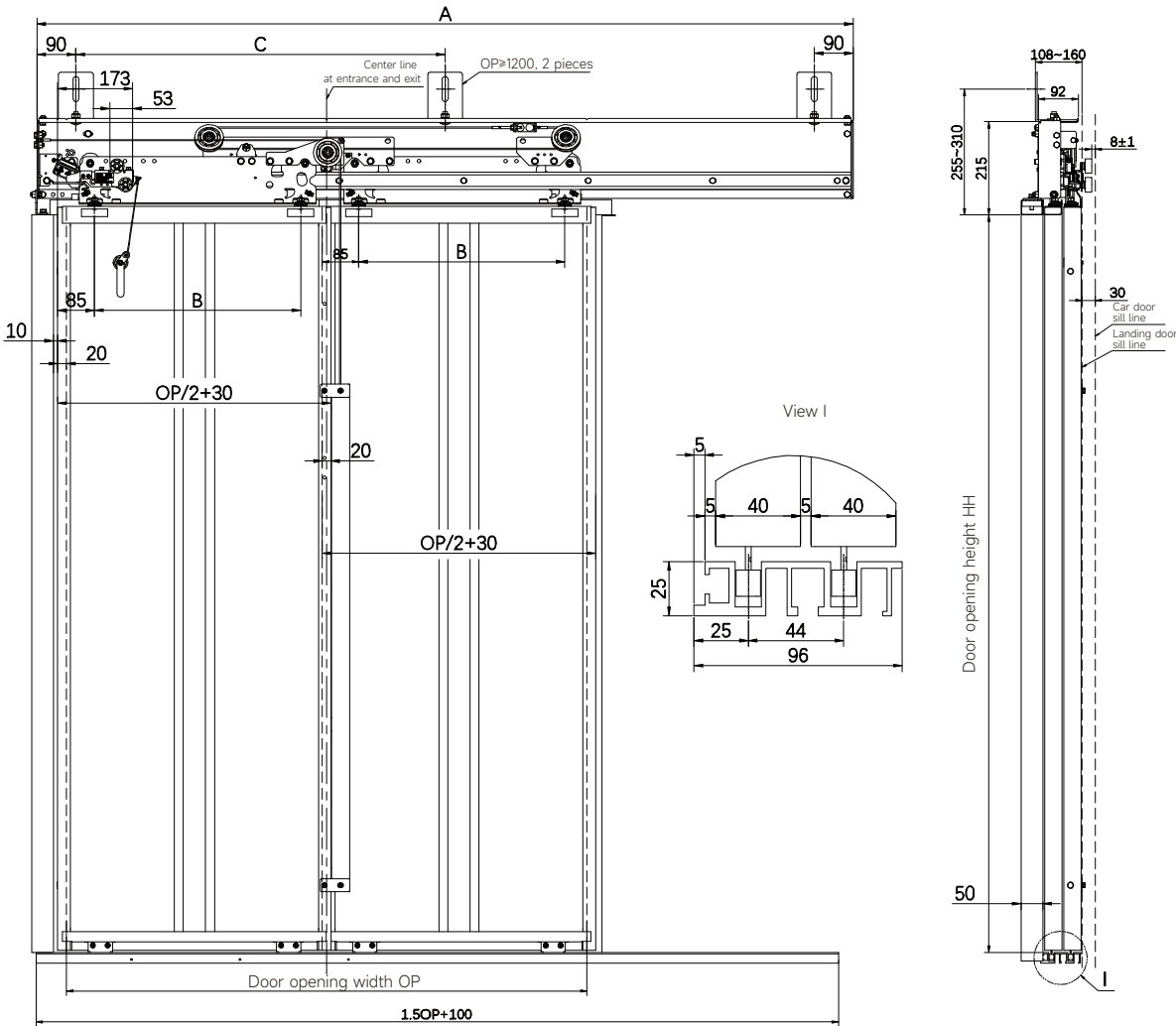
Meet the standard

Strictly meet the requirements of GB/T 7588.1&2

High switch protection grade

Standard door lock switch with protection grade of IP2X, safe and reliable

Dimension drawing of product mounting interface



Product Range

Type	Net opening width (mm)	Net opening height (mm)
T2	700-1400	2000-2400

Technical Parameters

Standard and specification	GB/T 7588.1&2
Protection grade	IP2X
Self-closing mode	Closing spring/heavy hammer
Shaft environment temperature	-25°C~+40°C
Humidity range	< 90%RH at 25°C, < 50%RH at 40°C

Delivery Type

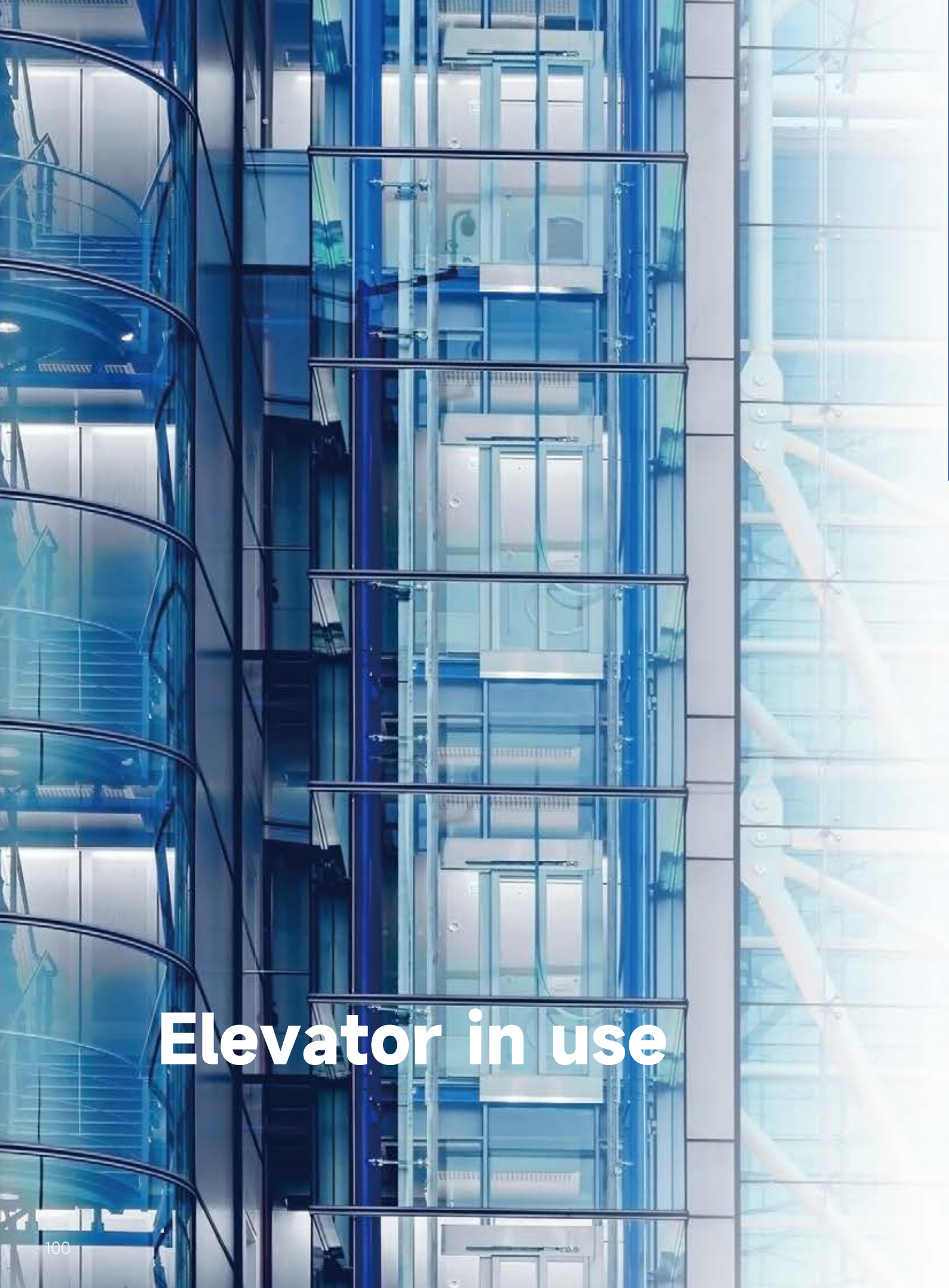
	Landing door device + sill assembly + mounting accessories	Door panel + door pocket
Standard	✓	×
Optional	✓	✓

Sill Type

Standard aluminum sill assembly

Parameter List

OP	700	800	900	1000	1100	1200	1300	1400
A	1132	1282	1432	1582	1732	1882	2032	2182
B	225	275	325	375	425	475	525	575
C	476	551	626	701	776	851	926	1001



Elevator in Use

STEP has always been rooted in the field of elevators in use. Since the first renovation project in 1995, STEP has continuously completed the upgrading, renovation and refresh projects of various elevators in use to provide technical and service support for the continuous good operation of elevators in use.

Remaining true to the original aspiration, STEP, as a largest manufacturer of control systems in the world, will continue to introduce comprehensive, complete and efficient upgrading, renovation and service solutions of elevators in use to create value for users of elevators in use around the world.

- Key renovation projects and application cases over the years:
- Luban Building renovation project
 - Liaoning TV Tower high speed elevator renovation project
 - Malaysia AMBANK renovation project
 - Zhaofeng Building renovation project
 - Special host matching scheme
 - Inverter replacement
 -

MOD200

Suitable for most main engines in the market
Superior speed regulation and control performance

Simple and easy to install and commission
Rich supporting components meet various needs

Technical Indicators

Standard: GB/T 7588.1—2020, TSG T7007—2022, TSG T7001—2023
Power supply: 3-phase, AC380-415V, 50/60Hz
Rated power: 5.5-22kW, 30-37kW, 45-55kW
Rated speed: ≤2.5m/s
Motor type: Synchronous/Asynchronous
Motor Brake: DC110V≤3A, maintaining voltage DC110V/75V/55V optional
Door operator: AC220V frequency conversion door operator
Control Method: Single/Duplex/Group Control
Intercom: Five-party
Illumination: AC220V
Dimension (mm): 1184×420×200(≤22kW), 1500×500×300(30-37kW), 1610×660×480(45-55kW)
Installation: Wall mounted/Ground mounted



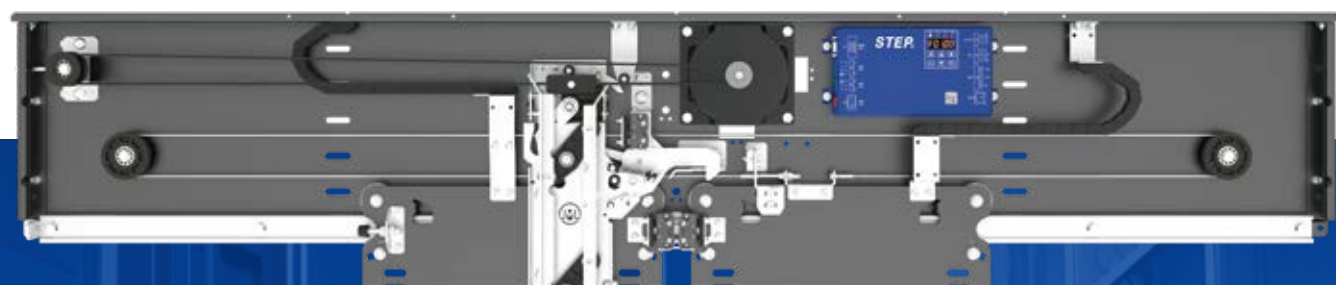
MOD200

Elevator in use



Professional customization
Universal matching

With decades of technology accumulation and multi-brand matching advantages,
focus on the old elevator transformation and renovation



Only **4 photos** are required for field measurement

Only **2 hours** are required for door operator replacement

Efficiency increase by **20%** in peak hours

Designed by 






60mm

Escalator
control system

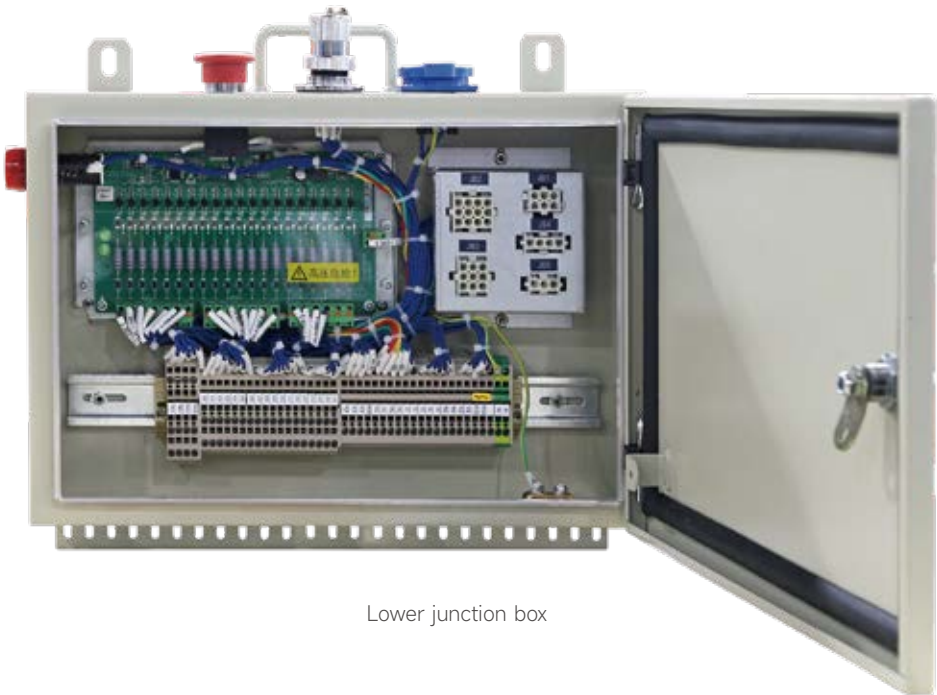
Escalator Control Cabinet

Product Features

Standard: GB16899-2011
Ambient temperature: (-10~+45)°C
External interface type: terminal type/plug-in type (upper and lower connection)
Power supply: 3-phase 380 50/60Hz

Product model	MCP-ESHC300	MCP-ESHC400	MCP-ESHC500	Bus Escalator Control Cabinet
				
Machine room configuration	Upper machine room	Upper machine room	Upper machine room	Upper machine room
Applicable motor type	Three-phase a synchronous star delta	Three-phase asynchronous motor	Three-phase asynchronous motor	Three-phase asynchronous motor
Fixing method	motor	Bolting	Bolting	Hanging board fixation
Applicable brake specification	Bolting	AC110V, 1A/AC220V, 3A	AC110V, 1A/AC220V, 3A	AC110V, 1A/AC220V, 3A
Main control board	AC110V,	ES.01	AS330	ES.01
Driving component law	1A/AC220V, 3A	≤22kW	≤22kW	≤55kW
Dimension (height X width X thickness) mm	ES.01	800×500×250	750×500×230	1000×680×370
Resistor cabinet configuration	≤22kW	External	External	External
Inverter	750×500×230	External		External
Cabinet standard color	Gray			
Contactor relay	Schneider			
Terminal	2.5mm2 and 16mm crimp terminals			2.5mm² and 35mm² crimp terminals
Button	Schneider			
Switching power supply	50W/35W			
Transformer	JBK3 series			
Sensor	Schneider			
Limit switch	Schmersal			

Lower Junction Box/Inspection Box



Lower junction box



Inspection handle



Distribution Box

Cable

Cable category	Cable name	Cable specification	Standard length (mm)	Remarks
Upper and lower connecting cable	Upper and lower connecting cable	RVV26/25*0.75+1*2.0	n	
Upper and lower connecting cable	Main engine power cable	RVV4/4*6	2.5	
	Brake power cable	RVV3/2*0.75+1*2.0	2.5	
	Brake power cable 1	RVV2/2*0.75	2.5	
	Brake power cable 2	RVV2/2*0.75	2.5	
	Main engine temperature detection switch cable	RVV2/2*0.75	2.5	
	Main engine wheel switch cable	RVV2/2*0.75	2.5	
	Brake wear detection switch cable	RVV2/2*0.75	5	
Oil pump cable	Oil pump power cable	RVV2/2*0.75	3	
	Oil level detection switch cable	RVV2/2*0.75	3	
Key switch cable	Upper key/stop button line	RVV5/5*0.75	6	
	Lower key/stop button line	RVV5/5*0.75	6	
Step lighting cable	Upper step lighting cable	RVV2/2*0.75	5	
	Lower step lighting cable	RVV2/2*0.75	5	
Upper safety switch cable	Main drive chain switch	RVV2/2*0.75	3.5	
	Upper left skirt switch	RVV2/2*0.75	6.5	
	Upper right skirt switch	RVV2/2*0.75	6.5	
	Upper step sagging switch	RVV2/2*0.75	7.5	
	Upper left handrail access	RVV2/2*0.75	5	
	Upper right handrail access	RVV2/2*0.75	5	
	Upper left comb switch	RVV2/2*0.75	4	
	Upper right comb switch	RVV2/2*0.75	4	
	Upper left machine room cover plate switch	RVV2/2*0.75	3.5	
	Upper right machine room cover plate switch	RVV2/2*0.75	3.5	
Lower safety switch cable	Lower left step chain switch	RVV2/2*0.75	3.5	
	Lower right step chain switch	RVV2/2*0.75	3.5	
	Lower left skirt switch	RVV2/2*0.75	6	
	Lower right skirt switch	RVV2/2*0.75	6	
	Lower step sagging switch	RVV2/2*0.75	7	
	Lower left handrail access	RVV2/2*0.75	5	
	Lower right handrail access	RVV2/2*0.75	5	
	Lower left comb plate switch	RVV2/2*0.75	5	
	Lower right comb plate switch	RVV2/2*0.75	5	
	Lower left machine room cover plate switch	RVV2/2*0.75	3.5	
	Lower right machine room cover plate switch	RVV2/2*0.75	3.5	
Sensor cable	Main drive detection phase A	RVV3/3*0.75	2	
	Main drive detection phase B	RVV3/3*0.75	2	
	Upper step missing detection	RVV3/3*0.75	2	
	Lower step missing detection	RVV3/3*0.75	2	
	Left handrail speed detection	RVV3/3*0.75	2	
	Right handrail speed detection	RVV3/3*0.75	2	

Cable category	Cable name	Cable specification	Standard length (mm)	Remarks
Additional brake cable	Additional brake switch detection cable	RVV4/4*0.75	4	Optional
	Additional brake power cable	RVV2/2*0.75	4	Optional
Running direction indicating cable	Up running direction indicating cable	RVV3/3*0.75	2	Optional
	Down running direction indicating cable	RVV3/3*0.75	2	Optional
Fault display cable	Up fault display cable	RVV4/2*2*0.75	6	Optional
Fault detection cable	Fault detection cable	RVV4/2*2*0.75	19	Optional

Peripheral Devices/Switches

Sensor

Name	Cable name	Quantity (PC)	Brand	Appearance
Main engine speed measurement	XS218BLNAM12C	2	Schneider	
Handrail speed measurement	XS212BLNAL2C	2	Schneider	
Step deletion detection	XS230BLNAL2C	2	Schneider	

Photoelectric Switch

Product Features

- Made of special IC, with stable performance
- Built-in output short-circuit protection, surge protection and overload protection circuit
- Multifunctional programmable output (NPN/PNP/NO/NC) or relay output
- Short response time, long life and high reliability
- Protection grade IP65(IEC)



Main Control Board

ES.01/B Escalator Main Board

Product Features

- 32-bit high-performance industrial-level controller
- Excellent EMC and ESD performance
- Minimum system design, supporting I/O function extension
- Up and down safety chain fault acquisition boards adopt CAN communication to save cables
- Applied with CAN communication fault display board

Function Description

- Applied to escalators and pavements
- Optional safety circuit fault monitoring system
- Support fault code display
- Support STEP standard hand-held operator



Inverter

AS500S Series Escalator Inverter

Product Features

- High power density, 40% higher than current AS500 inverter of STEP
- Slim design to adapt to the escalator room pit width restrictions
- Support 50°C operating temperature and operation without derating, taking into full account of bus escalator application
- Collect the voltage at the grid side and motor side, making power supply switching smoother
- Automatically adjust the carrier frequency according to the environment temperature and current conditions to improve product reliability
- High performance VF algorithm improves the starting torque performance of the escalator at zero speed and full load
- All built-in EMC components meet IEC61800-3 C2 class
- All built-in brake units for escalator applications reduce customer costs and control cabinet size
- 5.5kW~55kW product series, fully covering the application needs of bus escalators
- Built-in clock can record previous faults

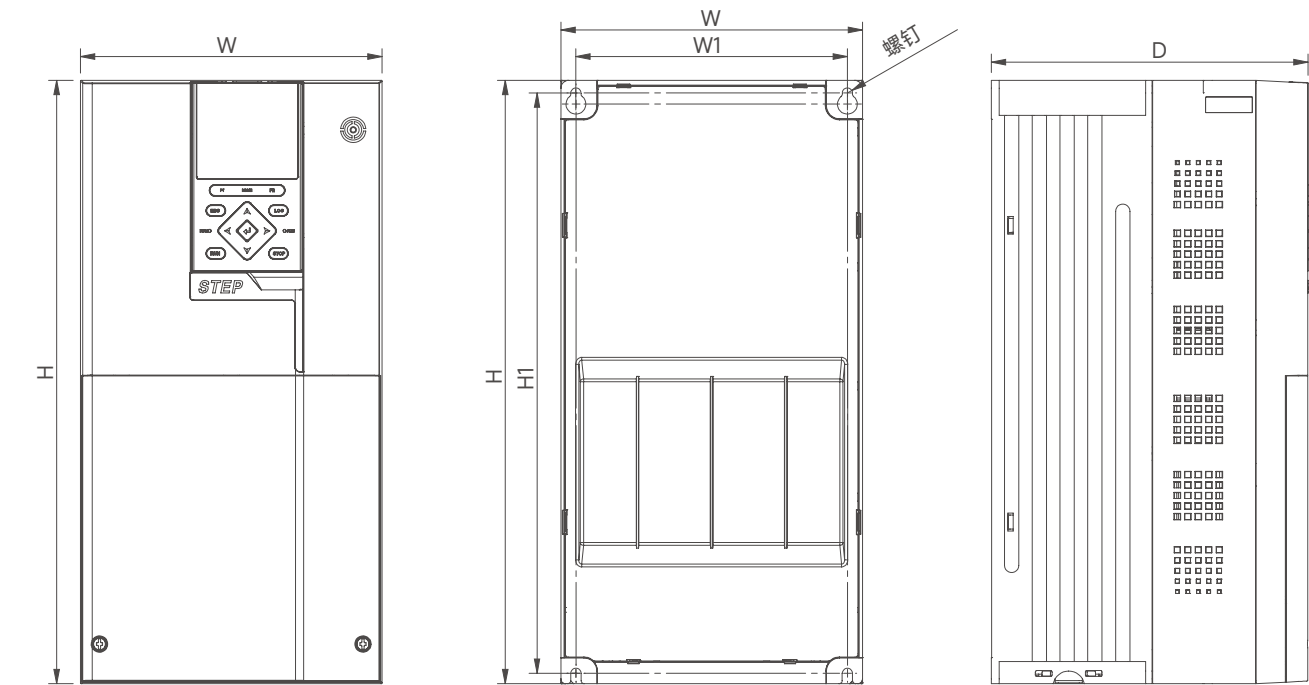


Model AS500S	Rated capacity (kVA)	Rated output current (A)	Adaption motor (kW)
4T05P5	9.2	14	5.5
4T07P5	11.8	18	7.5
4T0011	16.4	25	11
4T0015	20.4	31	15
4T18P5	24.3	37	18.5
4T0022	29.6	45	22
4T0030	40.8	62	30
4T0037	49.3	75	37
4T0045	59.8	91	45
4T0055	73.6	112	55

Product Configuration

- All series built-in brake units
- Optional new national standard EMC Filter
- Base blocking function design
- Support CAN communication and terminal communication

Installation Size and Quality



Voltage class	Power segment division	Overall dimensions	Installation spacing	Screw
		H ×W ×D (mm)	W1×H1(mm)	
Class 400V	5.5-7.5kw	300×120×200	114×288	4-M5
	11-15kw	345×150×200	131×332	4-M5
	18.5-30kw	380×190×200	172×367	4-M5
	37-45kw	590×230×280		4-M6
	55-75kw	758×288×344		4-M6

Integrated Drive Controller

AS330 Series Escalator Integrated Controller

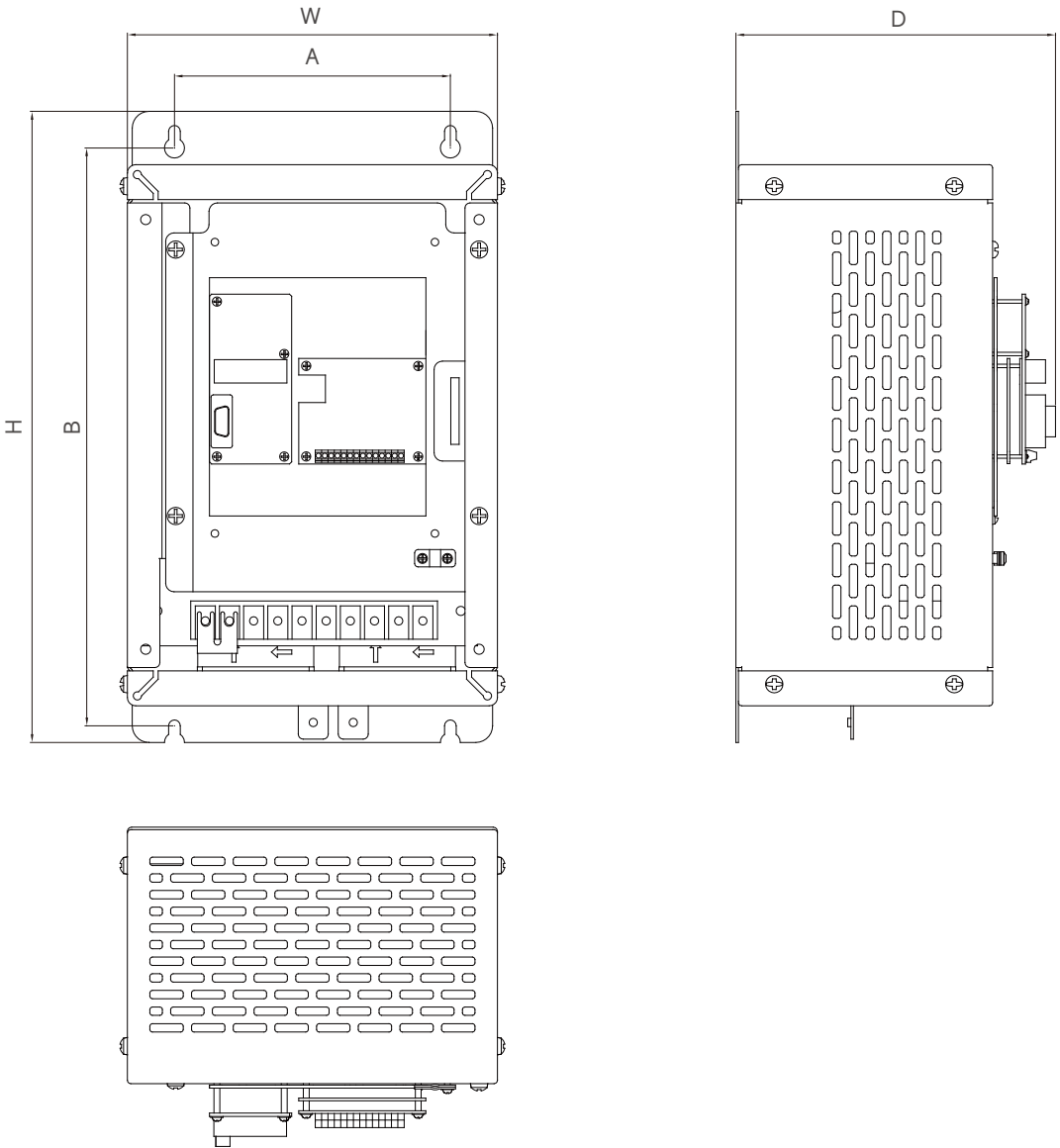
Product Features

- Organic combination of the escalator control and drive
- Dual 32-bit embedded microcontroller processor to jointly complete the escalator operation and motor drive control
- Redundant safety design and double safety protection by control processor and drive processor, to realize the strongest safety protection to the escalator running
- Anti-jamming design exceeds the highest level of industrial design requirements
- The sixth generation new module is used for hardware and the resistance to junction temperature can reach 175°C, making the switching loss lower and the service life longer
- Up and down safety chain fault acquisition boards adopt CAN communication to save cables
- Applied with CAN communication fault display boards



Model AS330	Rated capacity (kVA)	Rated output current (A)	Adaption motor (kW)
4T05P5	8.5	13	5.5
4T07P5	14	18	7.5
4T0011	18	27	11
4T0015	24	34	15
4T18P5	29	41	18.5
4T0022	34	48	22
4T0030	50	65	30
4T0037	61	80	37

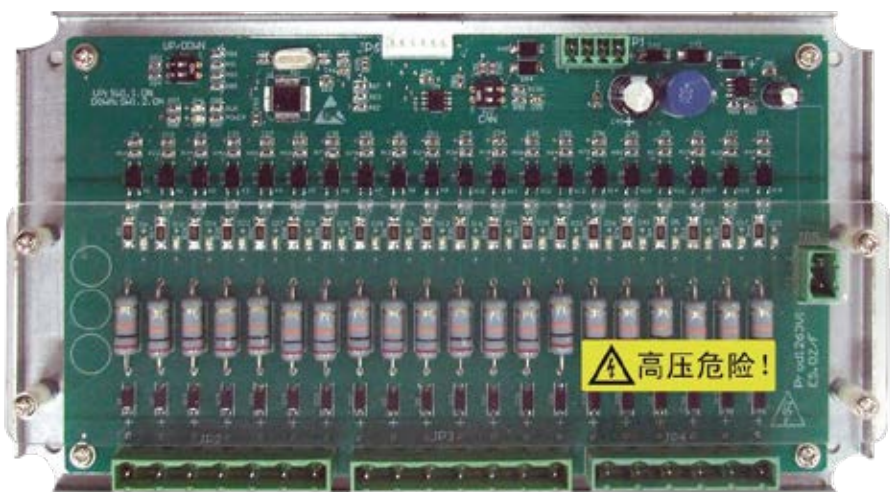
Installation Size and Quality



Model AS330	A (mm)	B (mm)	H (mm)	W (mm)	D (mm)	Installation aperture Φ(mm)	Bolt	Nut	Gasket	Tightening torque (Nm)	Mass (kg)
4T05P5	100	253	265	151	166	5.0	4M4	4M4	4Φ4	2	4.5
4T07P5	165.5	357	379	222	192	7.0	4M6	4M6	4Φ6	3	8.2
4T0011											
4T0015											
4T18P5	165.5	392	414	232	192	7.0	4M6	4M6	4Φ6	3	10.3
4T0022											
4T0030	200	512	530	330	290	9.0	4M8	4M8	4Φ8	6	30
4T0037	200	512	530	330	290	9.0	4M8	4M8	4Φ8	9	30

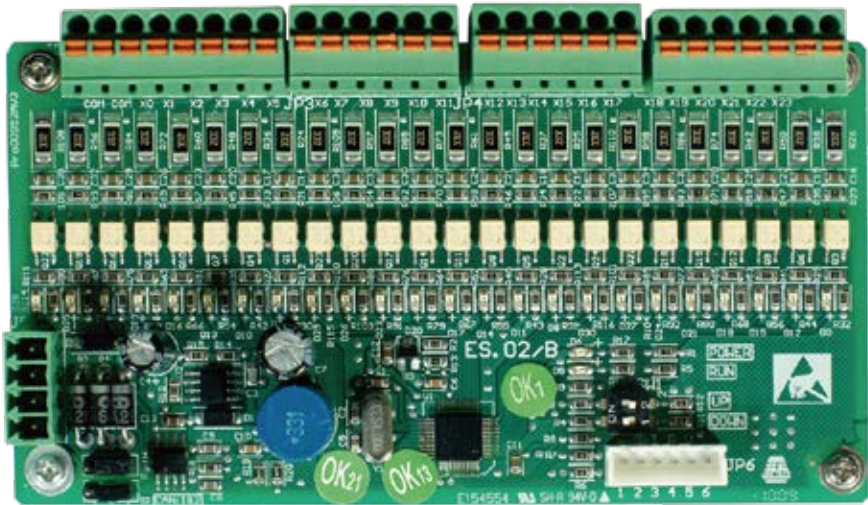
Auxiliary Board

ES.02/F Safety Chain Monitoring Board



AC110, high voltage detection

ES.02/B Safety Chain Monitoring Board



DC24, low voltage detection

Function Description

Monitoring the switch state of the up and down safety chains of the escalator, such as: switching states of upper control cabinet scram button, middle inclined scram button, upper left side comb teeth board switch, upper right side comb teeth panel switch, main drive chain rupture, etc. When any switch fails, through the CAN communication and main board communication, protect action can be realized. Safety up and down chain fault acquisition boards also communicate through CAN, which can greatly save the cables.

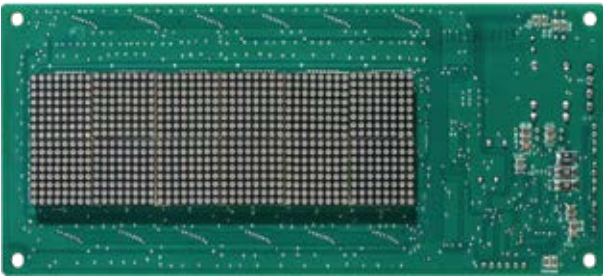
ES.03/A Extension Board



ES.03/C Monitoring Board



SM.04HG/A Escalator Fault Display Board (can be displayed in Chinese)



Function Description

Connected to the main board through the CAN communication; display the running direction in normal state; display the escalator fault code in fault state, in both Chinese and English.

SM.04HG/B Escalator Fault Display Board



Function Description

Connected to the main board through the CAN communication; display the running direction in normal state; display the escalator fault code in fault state

ES.11/A Safety Monitoring Board



Function Description

- Passed the certification of programmable electronic (PESSRAE) safety related system.
- Dual 32-bit CPU, dual-circuit power redundancy design, which is safer
- Can use hand-held operator SM.08/G for commissioning
- Multi-circuit redundant safety monitoring (host speed detection, cascade loss detection, handrail belt speed)
- Superior safety self-detection function
- Good EMC electronic compatibility
- Systematic solution, compatible with all kinds of systems, such as PLC, computer board and integration
- Configure STEP escalator control products for better performance

ES.11-B1 Safety Monitoring Board



Function Description

- Passed the certification of programmable electronic (PESSRAE) safety related system.
- Can use hand-held operator SM.08/G for commissioning
- Multi-circuit redundant safety monitoring (host speed detection, cascade loss detection, handrail belt speed)
- Through the organic combination with the main controller, it can better improve the safety of the system and the convenience of commissioning
- Applicable to dual-drive main engine configuration
- 30% reduction in size from ES.11/A

Elevator cable

Shanghai STEP Cable Technology Co., Ltd.

Shanghai STEP Cable Technology Co., Ltd., a national high-tech enterprise, was founded in 2003. Since its establishment, the company has been deeply engaged in the elevator cable market, and has a number of special elevator cable production lines and professional complete sets of self-developed equipment. The company focuses on the talent reserve and has complete R&D personnel in the whole industrial chain and a number of industry-leading technology patents.

As a wholly-owned subsidiary of STEP, the company is mainly engaged in cable and wire harness processing business and is committed to becoming a high-quality elevator provider.

In recent years, the company is committed to the R&D, production and sales of cables used in special occasions such as elevators and solar energy. The company actively introduces advanced technology and equipment and selects high-quality and environmentally friendly cable raw materials. The products are exported to Southeast Asia, the Middle East, Europe and other places.

Number of employees: 200

Factory area: 20000m²

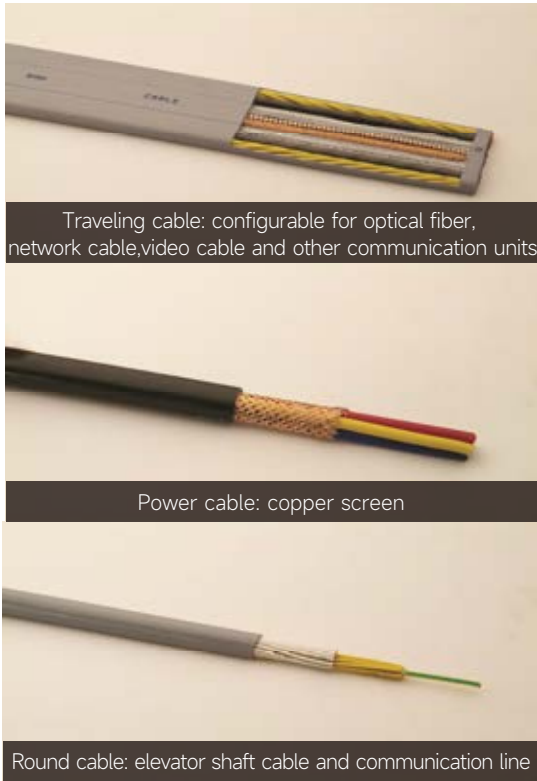
Main products: LSOH traveling cable, elevator shaft cable, photovoltaic cable, wind energy cable, pre-wire processing and inverter cable, etc.

Processing services: Customize the elevator cable and prewire processing for the whole elevator factory contract; provide OEM services for well-known cable groups.

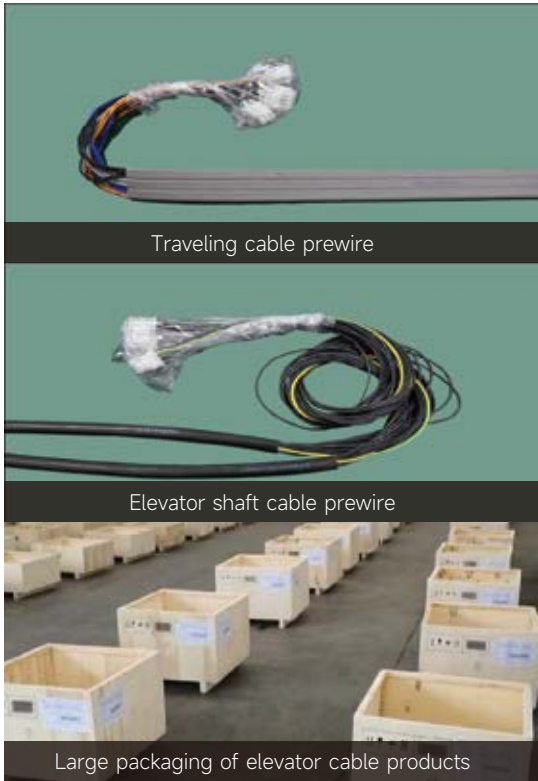


Main Business

Cable manufacturing



Wiring harness manufacturing



Testing Equipment



Elevator Components

Power Outage Emergency Rescue Device

Function Description

- Advanced intelligent IC control, precise timing and easy maintenance
- A variety of protection functions, such as low voltage alarm, low voltage shutdown and output short circuit protection
- Multi-power optional, covering 5.5-37kW



Elevator Air Conditioning

Function Description

- No-condensate design, condensate planned treatment to effectively eliminate water overflow and provide anti-overflow protection
- Small and exquisite appearance, novel design, compact structure and integrated design
- 360° surrounding air supply, automatic constant temperature, energy saving
- Hidden UV lamp inside the machine, with a sterilization rate of more than 90%



Elevator Light Curtain

Function Description

- No-condensate design, condensate planned treatment to effectively eliminate water overflow and provide anti-overflow protection
- Small and exquisite appearance, novel design, compact structure and integrated design
- 360° surrounding air supply, automatic constant temperature, energy saving
- Hidden UV lamp inside the machine, with a sterilization rate of more than 90%



Elevator Encoder

Function Description

- Excellent optical device and structure design to ensure high output accuracy
- Output differential sine-cosine voltage signal and support high frequency division and multiplication
- High positioning accuracy, strong universality and easy installation

