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ZHEJIANG MULANG ELECTRIC TECHNOLOGY CO., LTD.

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*Our company reserves the right to make changes for product technological progress and upgrades. Any changes will not be notified separately.

*The images and technical instructions in this manual may differ from reality. Please refer to the actual product and user manual for accuracy.

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PRODUCT SELECTION GUIDE

Focusing on manufacturers of low-voltage components and photovoltaic series products

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PRODUCT SELECTION GUIDE

Focusing on manufacturers of low-voltage components and photovoltaic series products

ZHEJIANG MULANG ELECTRIC TECHNOLOGY CO., LTD.

COMPANY PROFILE

Zhejiang Mulang Electric Technology Co., Ltd. is an enterprise engaged in the production, manufacturing, and sales of low-voltage electrical appliances. Its main products include molded case circuit breakers, universal circuit breakers, dual power automatic transfer switches, CPS control and protection switches, intelligent lighting control systems, fire monitors, fire power sensors, mechanical emergency starting devices, surge, low-voltage complete switchgear, and various specifications and models of industrial and building low-voltage electrical appliances.

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and photovoltaic series products

Since its establishment, the company has adhered to the path of independent innovation and technological research and development, adhering to the spirit of dedication and striving for excellence. Establish a team with teamwork, hard work, and the courage to surpass through internal training and external attraction, to provide customers with first-class products and services. The company's professional production of various models and specifications of low-voltage electrical products has won various certificates among peers. Mulang people are determined to keep up with the times, with technology as the banner, technology as the core, marketing as the leader, human resources as the foundation, and the low-voltage electrical industry as the pillar!

CORPORATE CULTURE

Corporate Mission

Make energy more efficient, electrical more intelligent, and ecological more environmentally friendly

Corporate Vision

Become a global leader in intelligent electrical equipment

Corporate Values

Achieving customer success, collaborative progress, creating value, and serving society

Corporate Purpose

To the utmost good and beauty, to strive for excellence, to pursue excellence

Service Tenet

Sincere and pragmatic to always treat every customer with sincerity

Quality Concept

Leading the professional trend, forging brilliant quality

Focusing on manufacturers of low-voltage components and photovoltaic series products

CATALOG

MLM-0420A

4 Road intelligent lighting control module

Green Energy · Industrial Electricity · Rail Transit · Power grid System

Intelligent Lighting Module Series **01**

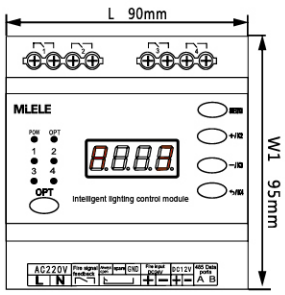
Technical Parameter

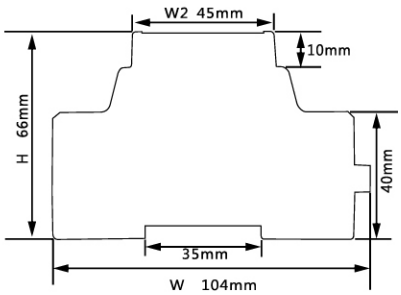
- Model and specification: MLM-0420A
- Working voltage: AC220V/DC12V optional
- Output contact capacity: 20A/250VAC (resistive)
- Output circuit: 4 channels
- Power consumption:<3W
- Communication method: RS485 communication, standard Modbus RTU communication protocol
- Dimensions: 90 * 104 * 66mm

Functional Features

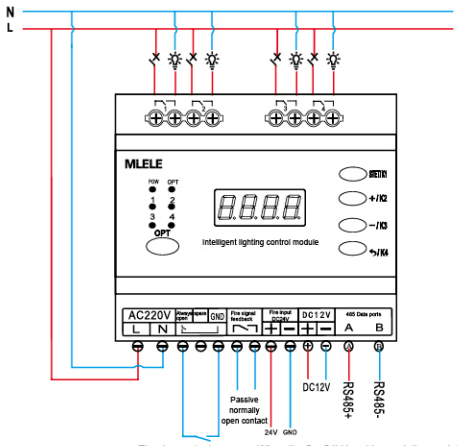
- Digital display;
- The communication address can be set;
- Fire linkage, strong start and strong cut can be set;
- The fully open and fully closed delay can be set;
- The power on mode can be set;
- The power-off memory function can be selected;
- The baud rate can be set;
- Can restore factory settings;
- Remote centralized control and on-site control;
- Emergency manual control;
- Fire signal feedback;
- Background or panel scene settings;
- Display of backend or panel load status;
- Can be equipped with external illumination detection and human infrared microwave induction;
- Wireless control can be added (mobile phone, computer, PAD);
- Can add current detection;
- Standard guide rail installation;

Outline dimension diagram





Wiring diagram



Fire dry contact or external main switch

When the fire 24V input is used, the module is forced to start or cut off. When the 24V is disconnected, the module returns to its original state (fire forced start or cut off can be selected)

MLM-0620A

6 Road intelligent lighting control module

Green Energy · Industrial Electricity · Rail Transit · Power grid System

Intelligent Lighting Module Series **01**

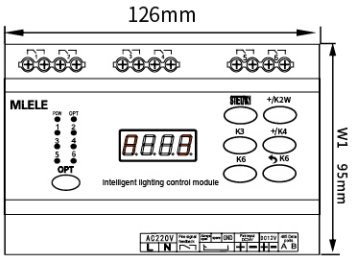
Technical Parameter

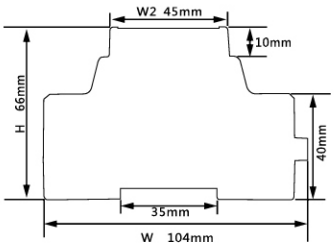
- Model and specification:MLM-0620A
- Working voltage: AC220V/DC12V optional
- Output contact capacity: 20A/250VAC (resistive)
- Output circuit: 6 channels
- Power consumption:<4W
- Communication method: RS485
- communication, standard Modbus RTU communication protocol
- Dimensions: 126 * 104 * 66mm

Functional Features

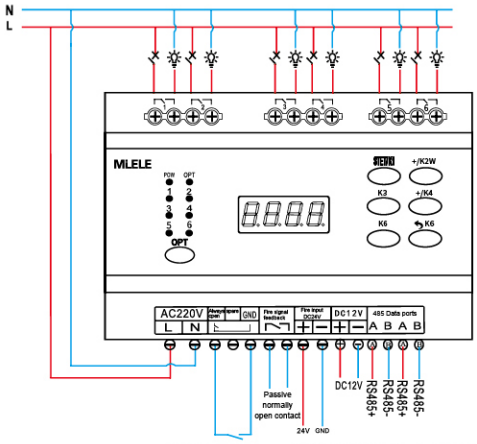
- Digital display;
- The communication address can be set;
- Fire linkage, strong start and strong cut can be set;
- The fully open and fully closed delay can be set;
- The power on mode can be set;
- The power-off memory function can be selected;
- The baud rate can be set;
- Can restore factory settings;
- Remote centralized control and on-site control;
- Emergency manual control;
- Fire signal feedback;
- Background or panel scene settings;
- Display of backend or panel load status;
- Can be equipped with external illumination detection and human infrared microwave induction;
- Wireless control can be added (mobile phone, computer, PAD);
- Can add current detection;
- Standard guide rail installation;

Outline dimension diagram





Wiring diagram



Fire dry contact or external main switch

When the 24V input is used, the module is forced to start or cut off. When the 24V is disconnected, the module returns to its original state (fire forced start or cut off can be selected)

MLM-0820A

8 Road intelligent lighting control module

Green Energy · Industrial Electricity · Rail Transit · Power grid System

Intelligent Lighting Module Series **01**

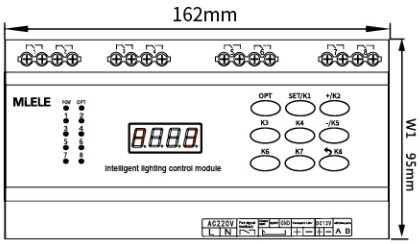
Technical Parameter

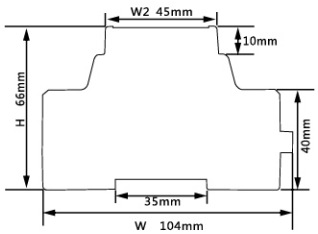
- Model and specification: MLM-0820A
- Working voltage: AC220V/DC12V optional
- Output contact capacity: 20A/250VAC (resistive)
- Output circuit: 8 channels
- Power consumption:<5W
- Communication method: RS485 communication, standard Modbus RTU communication protocol
- Dimensions: 162 * 104 * 66mm

Functional Features

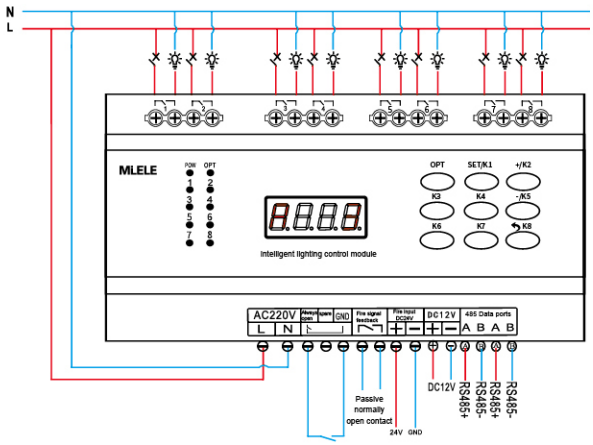
- Digital display;
- The communication address can be set;
- Fire linkage, strong start and strong cut can be set;
- The fully open and fully closed delay can be set;
- The power on mode can be set;
- The power-off memory function can be selected;
- The baud rate can be set;
- Can restore factory settings;
- Remote centralized control and on-site control;
- Emergency manual control;
- Fire signal feedback;
- Background or panel scene settings;
- Display of backend or panel load status;
- Can be equipped with external illumination detection and human infrared microwave induction;
- Wireless control can be added (mobile phone, computer, PAD);
- Can add current detection;
- Standard guide rail installation;

Outline dimension diagram





Wiring diagram



Fire dry contact or external main switch

When the fire 24V input is used, the module is forced to start or cut off. When the 24V is disconnected, the module returns to its original state (fire forced start or cut off can be selected)

MLM-1220A

12 Road intelligent lighting control module

Green Energy · Industrial Electricity · Rail Transit · Power grid System

Intelligent Lighting Module Series **01**

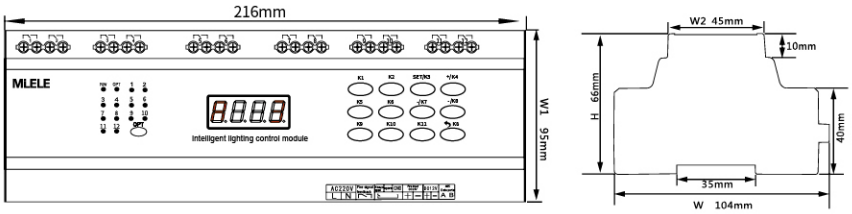
Technical Parameter

- Model and specification: MLM-1220A
- Working voltage: AC220V/DC12V optional
- Output contact capacity: 20A/250VAC (resistive)
- Output circuit: 12 channels
- Power consumption:<6W
- Communication method: RS485 communication, standard Modbus RTU communication protocol
- Dimensions: 216 * 104 * 66mm

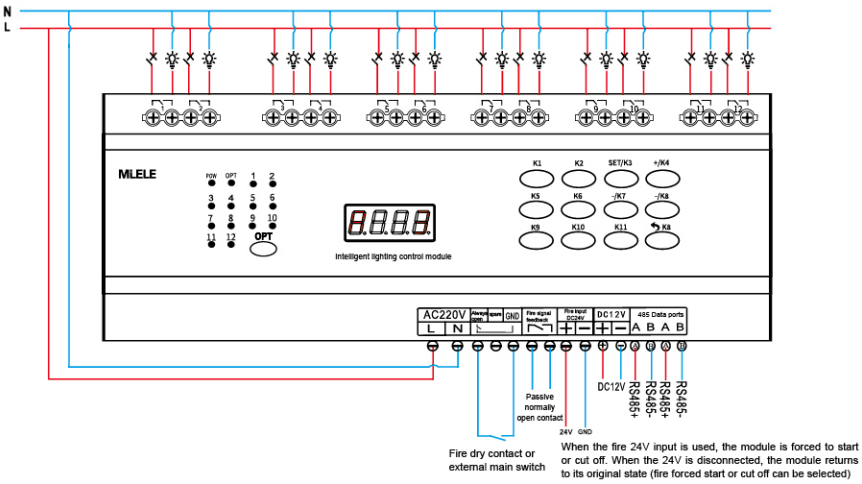
Functional Features

- Digital display;
- The communication address can be set;
- Fire linkage, strong start and strong cut can be set;
- The fully open and fully closed delay can be set;
- The power on mode can be set;
- The power-off memory function can be selected;
- The baud rate can be set;
- Can restore factory settings;
- Remote centralized control and on-site control;
- Emergency manual control;
- Fire signal feedback;
- Background or panel scene settings;
- Display of backend or panel load status;
- Can be equipped with external illumination detection and human infrared microwave induction;
- Wireless control can be added (mobile phone, computer, PAD);
- Can add current detection;
- Standard guide rail installation;

Outline dimension diagram



Wiring diagram



MLM-0420SK

4 Road Intelligent lighting time control module

Technical Parameter

- Model and specification: MLM-0420SK
- Working voltage: AC220V
- Output contact capacity: 20A/250VAC (resistive)
- Output circuit: 4 channels
- Power consumption:<3W
- Communication method: RS485 communication, standard Modbus RTU communication protocol
- Dimensions: 90 * 104 * 66mm

Functional Features

- LCD liquid crystal display;
- Longitude and latitude, astronomical clock control;
- Time control;
- Light control;
- Holiday mode;
- On site manual automatic control;
- Remote centralized control;
- Fire linkage, strong start and strong cut can be set;
- Fire signal feedback;
- The communication address can be set;
- The fully open and fully closed delay can be set;
- The power on mode can be set;
- The baud rate can be set;
- Can restore factory settings;
- Can be supplemented with human infrared microwave induction;
- Wireless control can be added (mobile phone, computer, PAD);
- Can add current detection;
- Standard guide rail installation;

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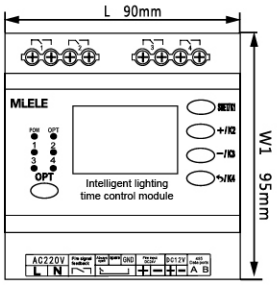
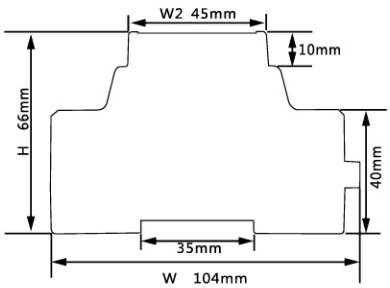
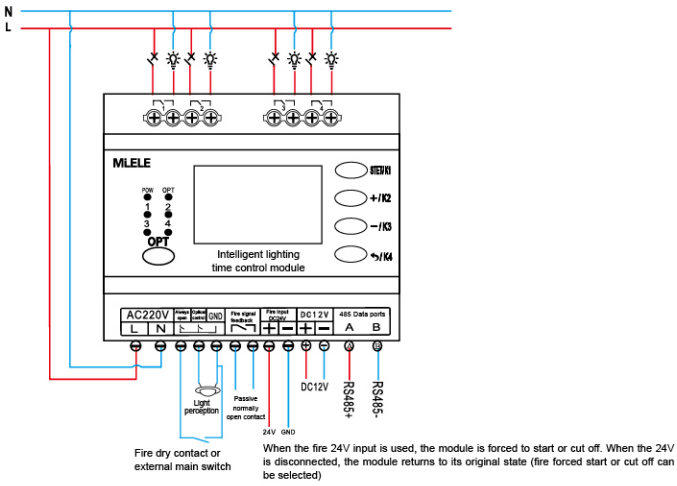
Intelligent Lighting Module Series **01**

Outline dimension diagram





Wiring diagram



MLM-0620SK

6 Road Intelligent lighting time control module

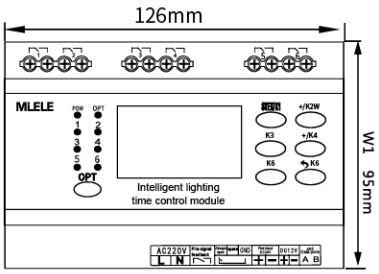
Technical Parameter

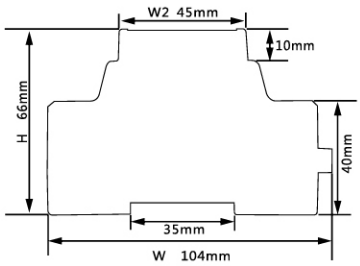
- Model and specification: MLM-0620SK
- Working voltage: AC220V
- Output contact capacity: 20A/250VAC (resistive)
- Output circuit: 6 channels
- Power consumption:<4W
- Communication method: RS485 communication, standard Modbus RTU communication protocol
- Dimensions: 126 * 104 * 66mm

Functional Features

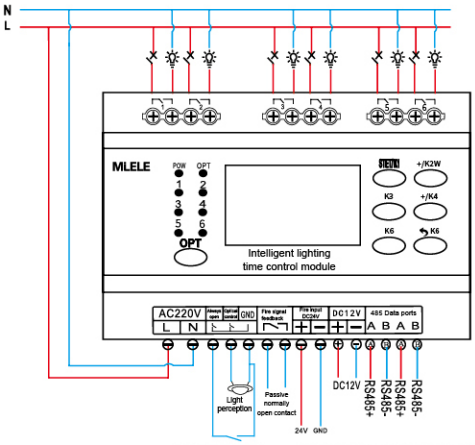
- LCD liquid crystal display;
- Longitude and latitude, astronomical clock control;
- Time control;
- Light control;
- Holiday mode;
- On site manual automatic control;
- Remote centralized control;
- Fire linkage, strong start and strong cut can be set;
- Fire signal feedback;
- The communication address can be set;
- The fully open and fully closed delay can be set;
- The power on mode can be set;
- The baud rate can be set;
- Can restore factory settings;
- Can be supplemented with human infrared microwave induction;
- Wireless control can be added (mobile phone, computer, PAD);
- Can add current detection;
- Standard guide rail installation;

Outline dimension diagram





Wiring diagram



Fire dry contact or external main switch

When the fire 24V input is used, the module is forced to start or cut off. When the 24V is disconnected, the module returns to its original state (fire forced start or cut off can be selected)

MLM-0820SK

8 Road Intelligent lighting time control module

Green Energy · Industrial Electricity · Rail Transit · Power grid System

Intelligent Lighting Module Series **01**

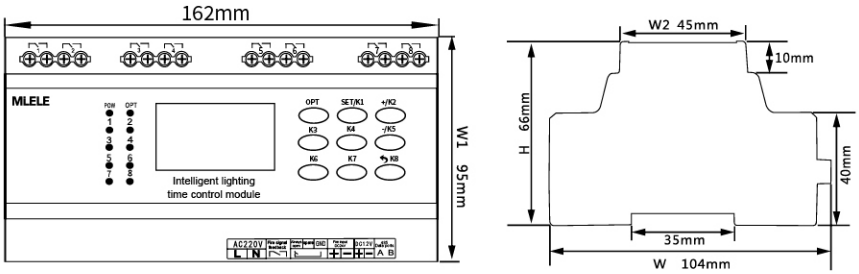
Technical Parameter

- Model and specification: MLM-0820SK
- Working voltage: AC220V
- Output contact capacity: 20A/250VAC (resistive)
- Output circuit: 8 channels
- Power consumption:<5W
- Communication method: RS485 communication, standard Modbus RTU communication protocol
- Dimensions: 162 * 104 * 66mm

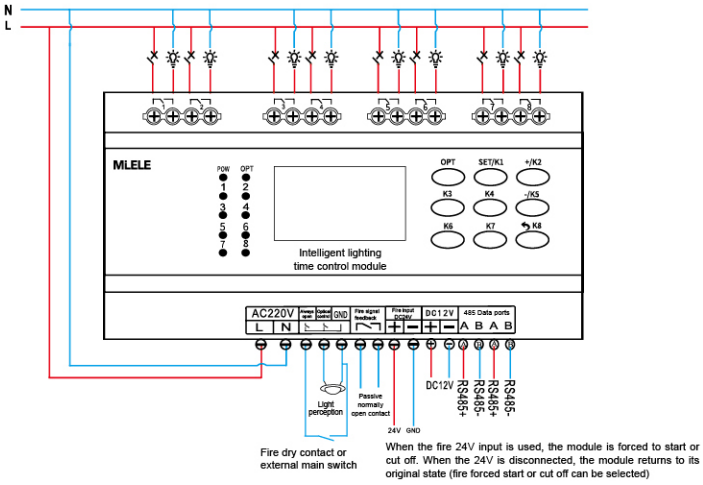
Functional Features

- LCD liquid crystal display;
- Longitude and latitude, astronomical clock control;
- Time control;
- Light control;
- Holiday mode;
- On site manual automatic control;
- Remote centralized control;
- Fire linkage, strong start and strong cut can be set;
- Fire signal feedback;
- The communication address can be set;
- The fully open and fully closed delay can be set;
- The power on mode can be set;
- The baud rate can be set;
- Can restore factory settings;
- Can be supplemented with human infrared microwave induction;
- Wireless control can be added (mobile phone, computer, PAD);
- Can add current detection;
- Standard guide rail installation;

Outline dimension diagram

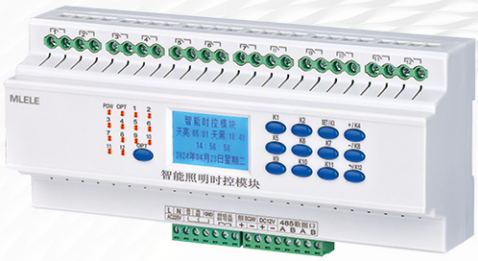


Wiring diagram



MLM-1220SK

12 Road Intelligent lighting time control module



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Intelligent Lighting Module Series **01**

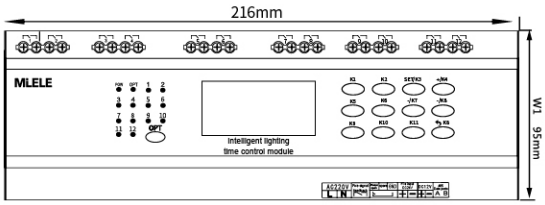
Technical Parameter

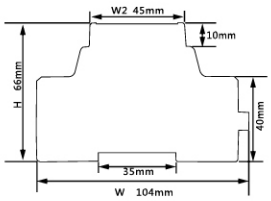
- Model and specification: MLM-1220SK
- Working voltage: AC220V
- Output contact capacity: 20A/250VAC (resistive)
- Output circuit: 12 channels
- Power consumption:<6W
- Communication method: RS485 communication, standard Modbus RTU communication protocol
- Dimensions: 216 * 104 * 66mm

Functional Features

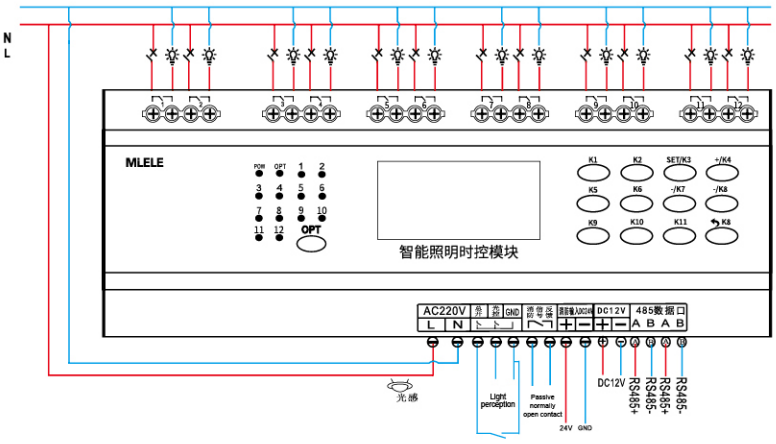
- LCD liquid crystal display;
- Longitude and latitude, astronomical clock control;
- Time control;
- Light control;
- Holiday mode;
- On site manual automatic control;
- Remote centralized control;
- Fire linkage, strong start and strong cut can be set;
- Fire signal feedback;
- The communication address can be set;
- The fully open and fully closed delay can be set;
- The power on mode can be set;
- The baud rate can be set;
- Can restore factory settings;
- Can be supplemented with human infrared microwave induction;
- Wireless control can be added (mobile phone, computer, PAD);
- Can add current detection;
- Standard guide rail installation;

Outline dimension diagram





Wiring diagram



Fire dry contact or external main switch

When the fire 24V input is used, the module is forced to start or cut off. When the 24V is disconnected, the module returns to its original state (fire forced start or cut off can be selected)

MLM-0402TG

Controllable silicon intelligent dimming module

Technical Parameter

- Model and specification: MLM-0402TG
- Working voltage: AC220V
- Working environment: -10~55 ℃ , humidity:<90%
- Output circuit: 4 channels, each with 500W (resistive)
- Dimensions: 216 * 104 * 66mm
- Installation method: 35mm standard guide rail installation

Functional Features

- Support dimming of controllable silicon dimming lamps;
- Each circuit has low-end limit, high-end limit, and maximum limit to adapt to different loads;
- RS485 communication bus;
- Support module body dimming;
- Support fire linkage;

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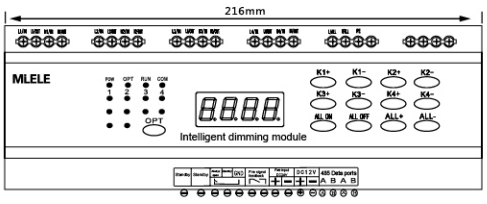
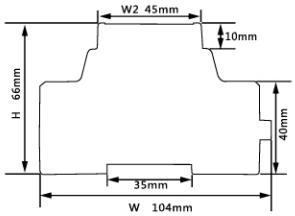
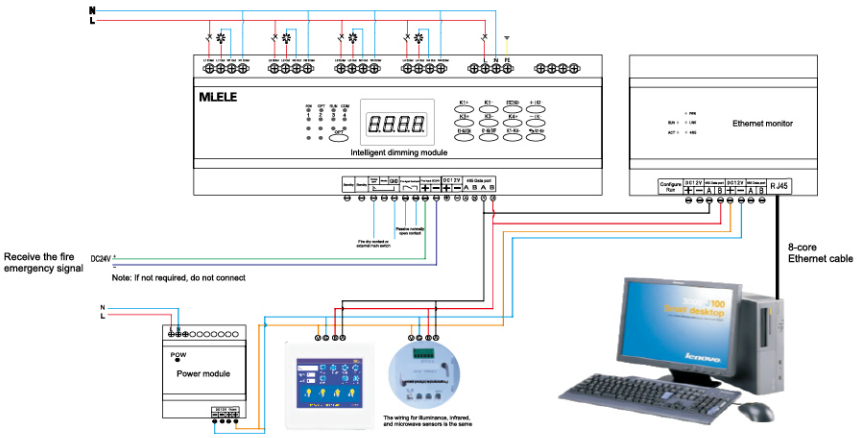
Intelligent Lighting Module Series **01**

Outline dimension diagram





Wiring diagram



Note: The four dimming circuits and the working power supply must be in phase

MLM-0401TG

Intelligent dimming module

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Intelligent Lighting Module Series **01**

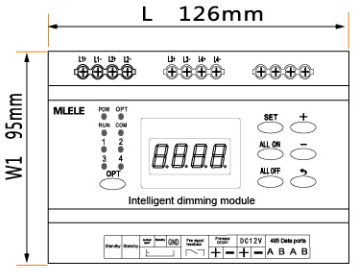
Technical Parameter

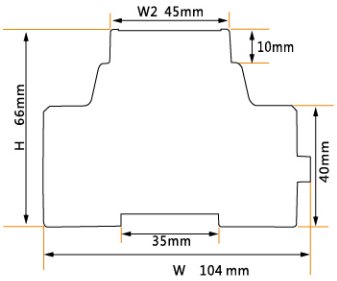
- Model and specification: MLM-0401TG
- Working voltage: DC12V
- Working environment:-10~55℃ ,humidity:<90%
- Output signal: 0-10V
- Output current: 4 * 40mA current
- Dimensions: 126 * 104 * 66mm
- Installation method: 35mm standard guide rail installation

Functional Features

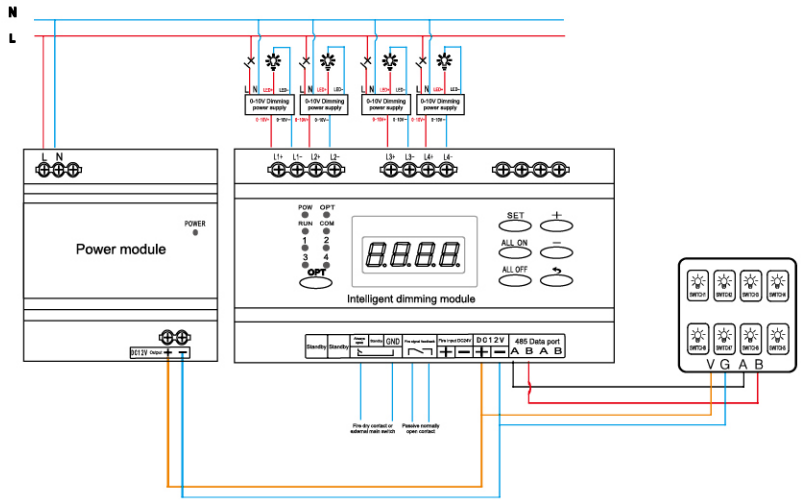
- Coordinate with 0-10V dimming driver to dim the dimming lamps;
- Provide 4 channels of 0-10V dimming signals;
- Can set the dimming brightness values for each circuit;
- RS485 communication bus;
- Support module body dimming;
- Support fire linkage;

Outline dimension diagram





Wiring diagram



MLM-02CL

Curtain control module

Green Energy · Industrial Electricity · Rail Transit · Power grid System

Intelligent Lighting Module Series **01**

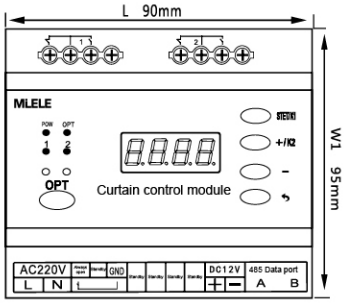
Technical Parameter

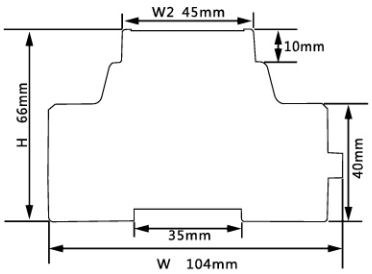
- Model and specification: MLM-02CL
- Working voltage: AC220V
- Output contact capacity: 20A/250VAC (resistive)
- Output circuit: 2 channels
- Power consumption:<3W
- Communication method: RS485 communication, standard Modbus RTU communication protocol
- Dimensions: 90 * 104 * 66mm

Functional Features

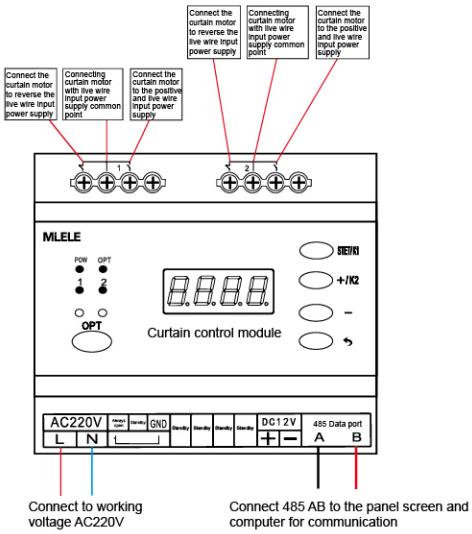
- Digital display;
- The communication address can be set;
- The fully open and fully closed delay can be set;
- The power on mode can be set;
- The power-off memory function can be selected;
- The baud rate can be set;
- Can restore factory settings;
- Remote centralized control and on-site control;
- Emergency manual control;
- Background or panel scene settings;
- Display of backend or panel load status;
- Can be equipped with external illumination detection and human infrared microwave induction;
- Wireless control can be added (mobile phone, computer, PAD);
- Standard guide rail installation;

Outline dimension diagram





Wiring diagram

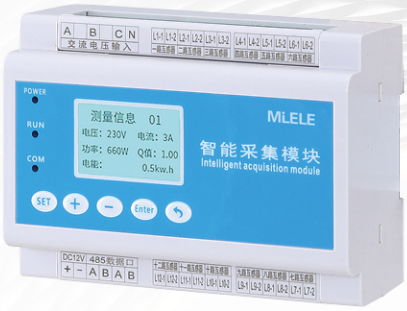


MLM-4DL

Intelligent acquisition module/current detection module

Technical Parameter

- Model and specification: MLM-4DL、
- MLM-6DL、MLM-8DL、MLM-12DL
- Working voltage: DC12V
- Working environment: -10~55°C , humidity:<90%
- Detection circuit: 4 channels, 6 channels, 8 channels, 12 channels
- Dimensions: 130 * 95 * 55mm
- Installation method: 35mm standard guide rail installation



Functional Features

- Multi loop measurement;
- LCD liquid crystal cycle display circuit parameters;
- Can collect parameters such as voltage, current, power, power factor, frequency, and electricity for three-phase or single-phase systems;
- Using professional measurement chips, with good stability and high measurement accuracy;
- RS485 communication bus, standard Modbus RTU communication protocol;

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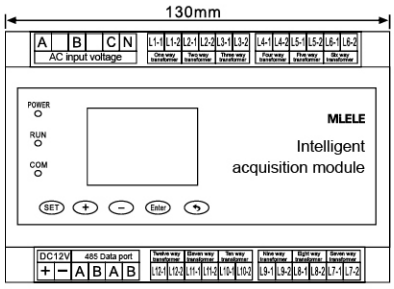
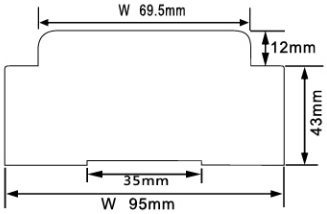
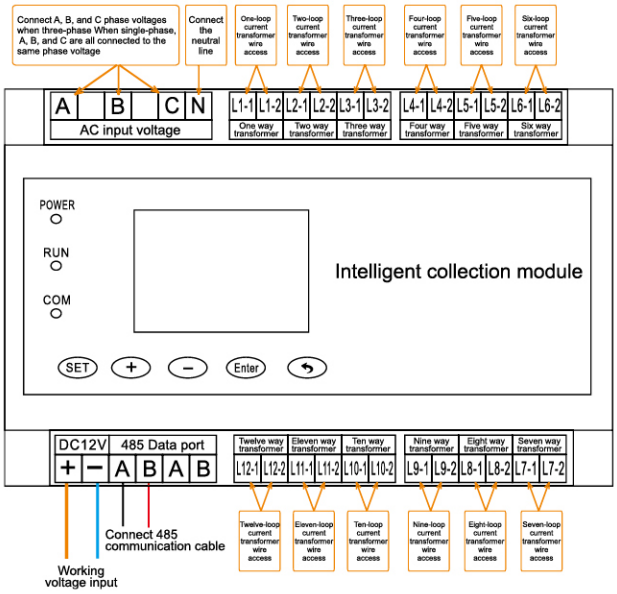
Intelligent Lighting Module Series **01**

Outline dimension diagram





Wiring diagram



Mobile interface

MLM-ASLM

Programmable intelligent touch panel

Technical Parameter

- Model specifications: MLM-ASLM1/2/4/5/6/8/10/12
- Working voltage: DC12V
- Working current: ＜ 1W
- Installation method: Embedded in 86 bottom box installation
- Dimensions: 86 * 86 * 38mm

Functional Features

- 1 key、2 keys、4 keys、5 keys、6 keys、8 keys、10 keys、12 keys;
- LED blue backlight status display;
- Integrated tempered glass panel, waterproof, dustproof, and responsive to movement;
- Dimming settings, scene settings, and management;
- Chinese characters and patterns can be customized according to user requirements;
- RS485 communication;
- The control object can be set;

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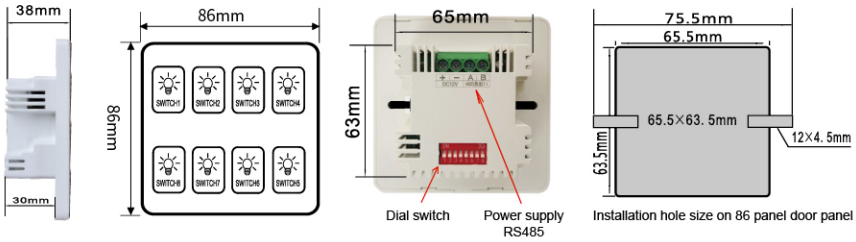
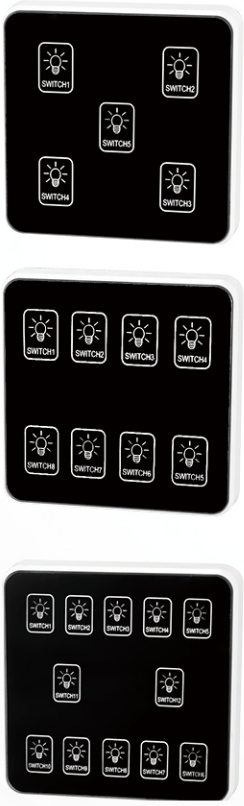
Intelligent Lighting Module Series **01**

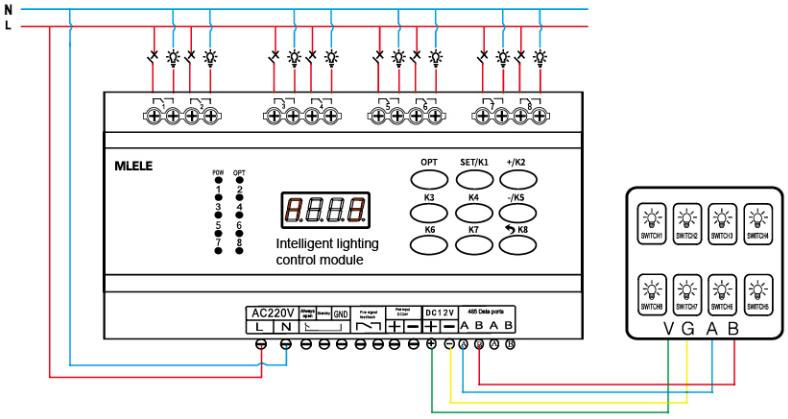
Outline dimension diagram



Outline dimension diagram　　Installation dimension diagram



Wiring diagram



Note: The DC12V output of the module can only be connected to one panel.
The DC output power is low, and connecting multiple panels can damage the module.

MLM-TCPIP
Ethernet monitor

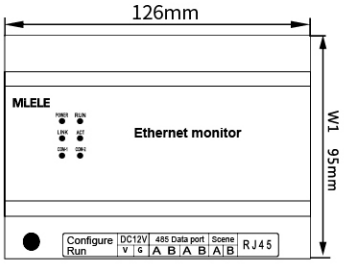
Technical Parameter

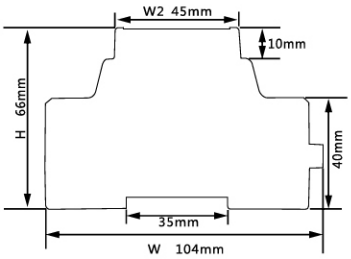
- Model and specification: MLM-TCPIP
- Working voltage: DC12V
- Upstream communication port: RJ45
- Configuration port: RS485 * 2
- Communication speed: 10M/100M
- Dimensions: 126 * 104 * 66mm

Functional Features

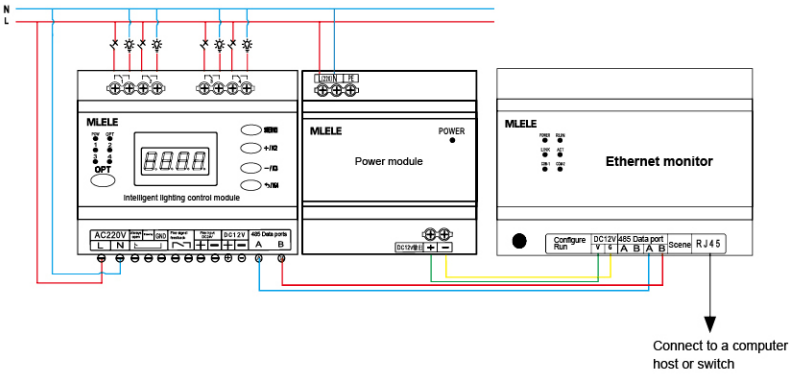
- Supported protocols: Modbus RTU/TCP Client, TCP Server;
- Built in timing controller;
- Manage and control 64 devices;
- Built in dual watchdog function with self checking function;
- Capable of remote programming, management, and data storage;
- Ethernet 10M/100M adaptive;
- 35mm standard DIN rail installation;

Outline dimension diagram





Wiring diagram



MLM-VA(ZXVA)

Fire equipment power monitoring sensor

Technical Parameter

- Model and specification: MLM-VA (ZXVA)
- Working voltage: AC220V or DC24V optional
- Rated power: <0.5W
- Power cord: NH-RVS-2x2.5mm
- Communication line: RVVP2X1.0mm
- Output parameters: 1 passive contact, alarm or control output
- Alarm delay: continuously adjustable from 0 to 60 seconds, can be set on site
- Alarm parameters: undervoltage<85% of rated voltage, overvoltage>110% of rated voltage; Overcurrent 0-1000A can be set on site;
- Dimensions: 90 * 104 * 66mm
- Installation method: Standard 35mm rail installation

Model Meaning

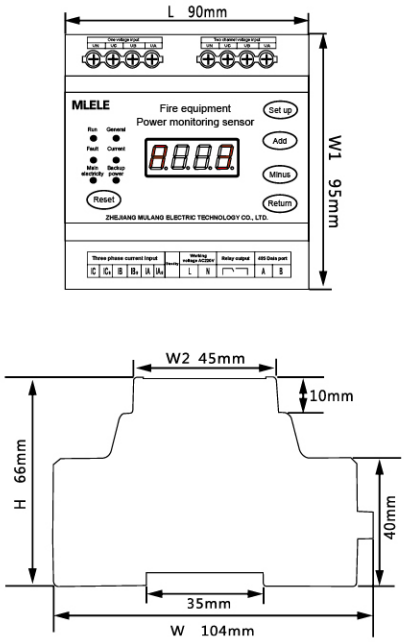
MLM VA S 2 1

- 1 — Current path 1: One current path 0: Monitoring current
- 2 — Number of Voltage Channels 1: One Voltage Channel 2: Two Voltage Channels
- S — Single phase and three-phase S: Three phase D: Single phase
- VA — Current and voltage sensor
- MLM — Enterprise code

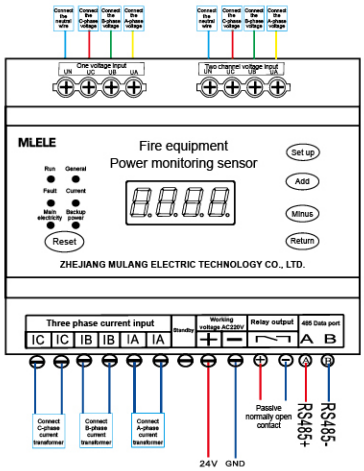
Functional Features

- Meets the requirements of the national GB28184-2011 "Fire Power Monitoring System";
- Monitor the working status of the fire power supply;
- Monitor the overvoltage, undervoltage, and overcurrent of the fire power supply;
- Monitor power interruption and power failure of fire-fighting equipment;
- Adopting DC24V working voltage to ensure system and personal safety;

Outline dimension diagram



Wiring diagram



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Fault Arc Detector Series 02

MLM-AFD

Fault arc monitoring host

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Fault Arc Detector Series **02**

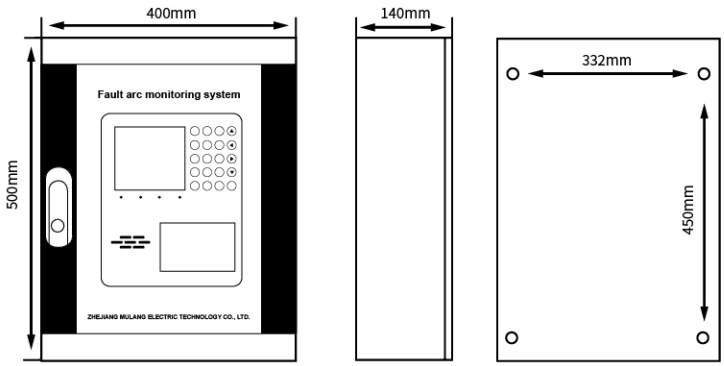
Technical Parameter

- Model and specification: MLM-AFD
- Input power supply: AC220V ± 10% 50Hz
- Input power: 45W
- Communication method: RS485 bus
- Power cord: NH-RVS-2x2.5mm²
- Communication bus: RVVP2x1.0mm²
- Communication distance: Reliable communication of 1200m, exceeding 1200m, sensor capacity can be extended and expanded through regional extensions
- Power supply distance: <500m, exceeding 500m can be extended through regional extension
- Output interface: 1 RS485 interface, connection line <1000m, (extendable) 1 control output, output is connected to a passive normally open point
- Alarm function: sound and light alarm, display alarm address and fault type
- Password function: equipped with operation levels, suitable for different levels of operators to perform graded operations
- Display function: Full Chinese LCD graphic display and LED indication
- Printing function: Micro thermal printer, Chinese character printing (optional)
- Storage alarm records:>5000 records
- Dimensions: 400 * 500 * 140mm

Functional Features

- Complies with the requirements of the national standard GB14287.4-2011 "Electrical Fire Monitoring System Part 4: Fault Arc Detector";
- Flexibly build a high-capacity fault arc monitoring system by connecting with the upper computer, regional extensions, sensors, etc;
- The system adopts an open operating mode, with self-management within the system and one-way transmission of information to the outside world;
- Adopting a distributed power supply method, the detector is powered by itself, effectively ensuring the stability and safety of the system;
- The output circuit can be flexibly expanded through regional extensions to meet the complex and ever-changing requirements of modern buildings;
- Real time monitoring of all detected circuit current, voltage, arc status, and fault information, and transmission of working status and alarm information to the display device;

Outline dimension diagram



MLM-AFD

Single phase fault arc detector

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Fault Arc Detector Series **02**

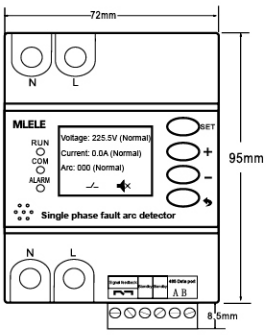
Technical Parameter

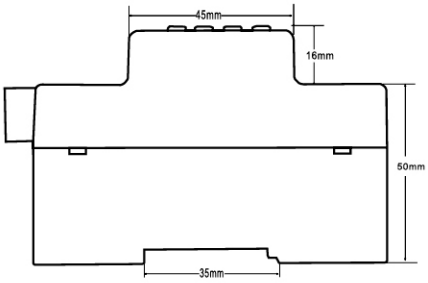
- Model and specification: MLM-AFD
- Working voltage: AC220V
- Working environment: -40~85 ℃ , Humidity:<90%
- Dimensions: 72 * 95 * 66mm
- Installation method: 35mm standard guide rail installation

Functional Features

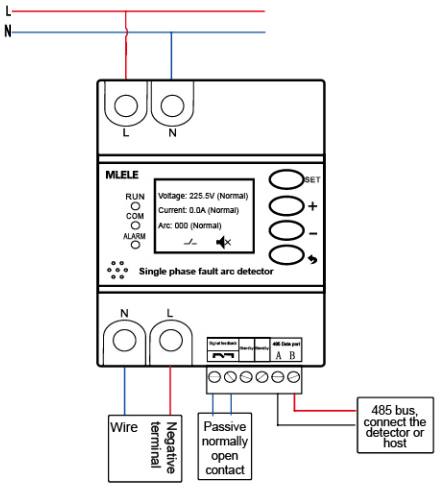
- Arc protection, fault arc alarm for loads below AC63A (current can be set);
- Voltage protection, rated AC230V, overvoltage and undervoltage protection;
- Current protection, rated AC63A and below, overcurrent protection;
- LCD cycle display parameters, protection status display passive normally open contacts, capacity AC250/5A;
- 485 communication, Modbus RTU;
- Event records, the latest 5000 records of the host;

Outline dimension diagram





Wiring diagram



MLM-AFDS

Three phase fault arc detector

Technical Parameter

- Model and specification: MLM-AFDS
- Working voltage: AC220V
- Working environment: Working temperature -10~+55 degrees, relative humidity less than or equal to
- 90%, no condensation
- Dimensions: 126 * 90 * 74mm
- Installation method: 35mm standard guide rail installation

Functional Features

- Arc protection, fault arc alarm for loads below AC63A (current can be set);
- Voltage protection, three-phase rated AC380V, overvoltage and undervoltage protection;
- Current protection, rated AC63A and below, overcurrent protection;
- LCD cycle display parameters, protection status display Passive normally open contact, capacity AC250/5A DC30V/5A (resistive);
- 485 communication, Modbus RTU;
- Event records, the latest 5000 records of the host;

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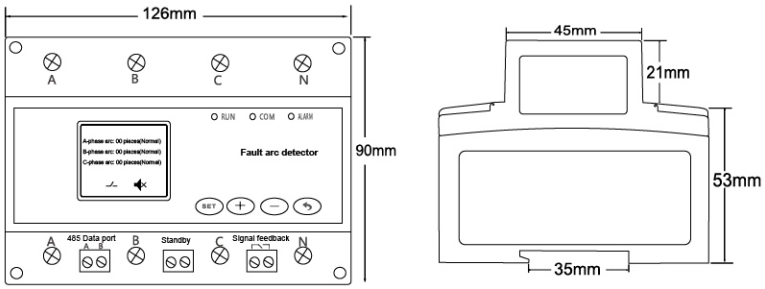
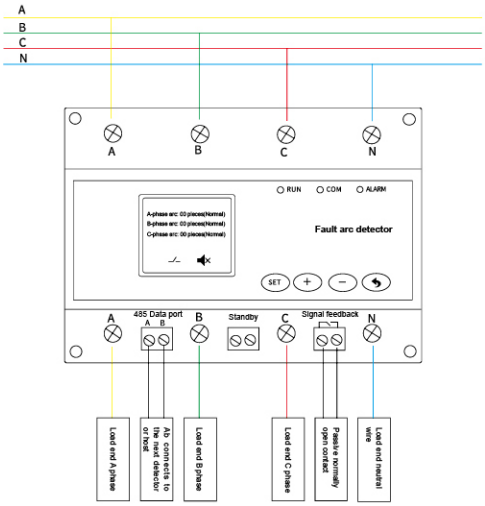
Fault Arc Detector Series **02**

Outline dimension diagram



Wiring diagram



MLM-AFDD

Fault arc protector

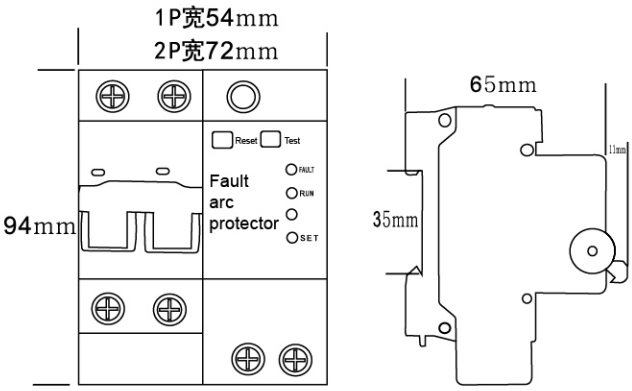
Technical Parameter

- Model specifications: MLM-AFDD/MLM-AFDD (leakage type)
- Rated working current: 1-63A
- Working voltage: AC220V
- Working environment: -23~+55 °C , humidity:<90%
- Dimensions: 1P+N (54 * 94 * 65mm) 2P+N (72 * 94 * 65mm)
- Installation method: 35mm standard guide rail installation

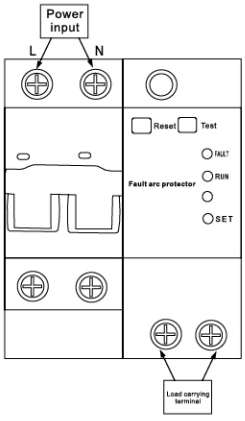
Functional Features

- Arc protection, fault arc cuts off loads below AC63A;
- Current protection, rated AC63A and below, overcurrent protection;
- Rated short-circuit breaking capacity icn (kA): 4.5;
- Protection level: IP20;
- Wiring capacity mm²:1-25;
- Altitude: ≤ 2000m;
- Installation environment: a place without significant vibration and impact;

Outline dimension diagram



Wiring diagram



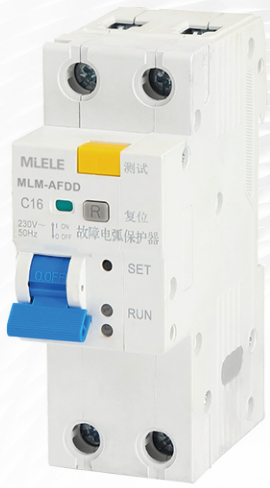
(Leakage type)

Fault Arc Detector Series 02

(Leakage type)

MLM-AFDD

Fault arc protector



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Fault Arc Detector Series **02**

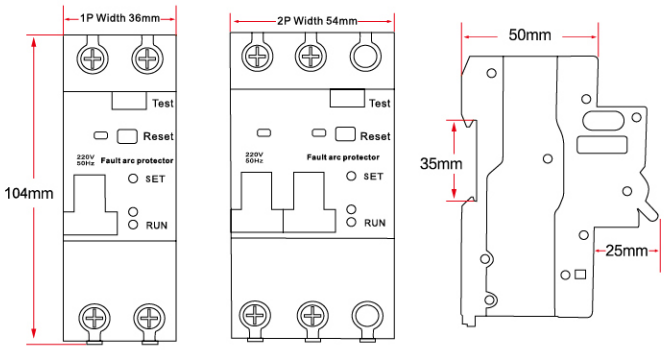
Technical Parameter

- Model and specification: MLM-AFDD
- Rated working current: 1-63A
- Working voltage: AC220V
- Working environment: -23~+55 °C , humidity:<90%
- Dimensions: 1P+N (36 * 104 * 75mm)
- Installation method: 35mm standard guide rail installation

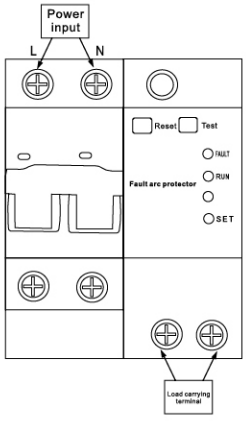
Functional Features

- Arc protection, fault arc cuts off loads below AC63A;
- Current protection, rated AC63A and below, overcurrent protection;
- Rated short-circuit breaking capacity icn (kA): 4.5;
- Protection level: IP20;
- Wiring capacity mm²:1-25;
- Altitude: ≤ 2000m;
- Installation environment: a place without significant vibration and impact;

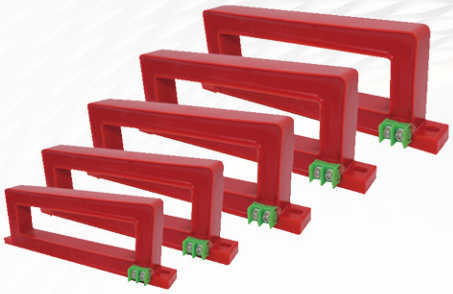
Outline dimension diagram



Wiring diagram



F
Square residual current transformer



Green Energy Industrial Electricity Rail Transit Power grid System

Product Features

- Core structure, flame-retardant epoxy resin casting, good stability
- Using high magnetic conductivity nickel steel or nanocrystals, with good linearity and high sensitivity
- Excellent balance characteristics and strong resistance to electromagnetic field interference

Application Scope

- Electrical fire monitoring, fire prevention and leakage system, smart electricity system, low current grounding system, electromagnetic relay protection, microcomputer protection, smart power, environmental monitoring, etc;

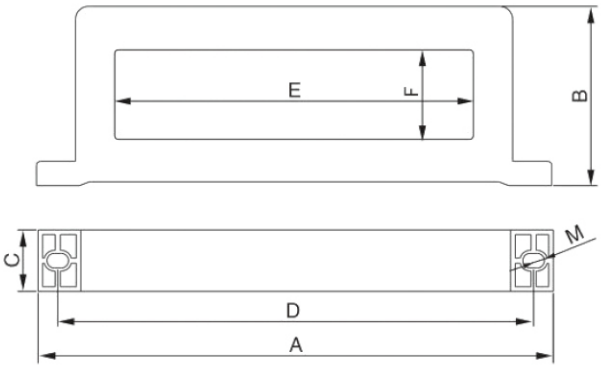
Performance Index

Electrical parameters		Mechanical parameters	
Working frequency	50~400Hz	Shell	ABS， Flame retardant grade 94-V0
Rated input	10mA~5A	Skeleton	PBT
Measuring range	10%In-130%In	Iron core	Nickel steel or nanocrystals
Rated output	0~1V(A or)0~0.25mA	Internal structure	Environmentally friendly epoxy resin casting
Ratio difference	≤±0.1%	Construction plan	Screw fixation
Comparatively inferior	≤±10 Divide	Working temperature	-12℃ ~+45℃
Medium strength	2.5kV/1mA/1min	Ambient temperature	≤85%
Insulation resistance	DC500V/1000MΩ/min	Wiring method	Terminal type/shielded stranded wire 1.5 meters

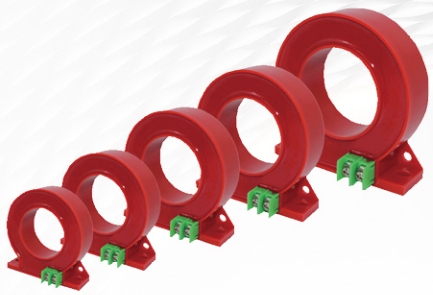
Common specifications and parameters

Model	Main circuit current (A)	Dimensions (mm)						
		A	B	C	D	E	F	M
F-1025	≤100A	156	54	19	142	100	25	¢ 6*8
F-1435	≤250A	204	71	24	188	140	35	¢ 6*8
F-1835	≤400A	246	71	24	230	180	35	¢ 6*8
F-2245	≤630A	282	84	24	266	220	45	¢ 6*8
F-2645	≤800A	327	86	24	311	260	45	¢ 6*8
F-3045	≤1250A	366	86	24	351	300	45	¢ 6*8
F-3445	≤2000A	426	86	24	410	340	45	¢ 6*8
F-4045	≤2500A	486	86	24	470	400	45	¢ 6*8
F-4545	≤3000A	517	86	24	502	450	45	¢ 6*8
Rated primary current: 1A		Rated secondary current: 0.5mA						

Outline dimension diagram



Y
Circular residual current transformer



Green Energy Industrial Electricity Rail Transit Power grid System

Product Features

- Core structure, flame-retardant epoxy resin casting, good stability
- Using high magnetic conductivity nickel steel or nanocrystals, with good linearity and high sensitivity
- Excellent balance characteristics and strong resistance to electromagnetic field interference

Application Scope

- Electrical fire monitoring, fire prevention and leakage system, smart electricity system, low current grounding system, electromagnetic relay protection, microcomputer protection, smart power, environmental monitoring, etc;

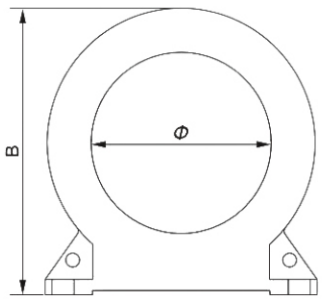
Performance Index

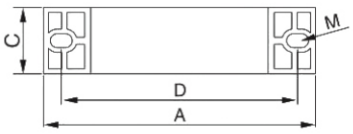
Electrical parameters		Mechanical parameters	
Working frequency	50~400Hz	Shell	ABS， Flame retardant grade 94-V0
Rated input	10mA~5A	Skeleton	PBT
Measuring range	10%In-130%In	Iron core	Nickel steel or nanocrystals
Rated output	0~1V(A or)0~0.25mA	Internal structure	Environmentally friendly epoxy resin casting
Ratio difference	≤±0.1%	Construction plan	Screw fixation
Comparatively inferior	≤±10 Divide	Working temperature	-12℃ ~+45℃
Medium strength	2.5kV/1mA/1min	Ambient temperature	≤85%
Insulation resistance	DC500V/1000MΩ/min	Wiring method	Terminal type/shielded stranded wire 1.5 meters

Common specifications and parameters

Model	Main circuit current (A)	Dimensions (mm)					
		¢	A	B	C	D	M
Y-25	≤63A	25	55	60	21	45	¢ 4*6
Y-45	≤100A	45	79	84	24	66	¢ 5*8
Y-65	≤250A	65	100	104	24	86	¢ 5*8
Y-80	≤400A	80	114	119	26	101	¢ 5*8
Y-100	≤630A	100	136	141	26	114	¢ 5*14
Y-150	≤1000A	150	189	196	27	171	¢ 5*14
Rated primary current: 1A		Rated secondary current: 0.5mA					

Outline dimension diagram





MLM-FJ2

Dual speed fan controller

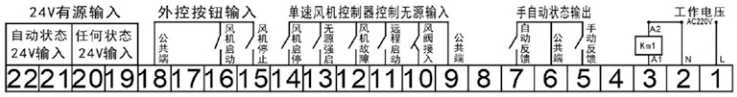
Wiring Diagram

1	Working voltage AC220V, live wire	12	Remote high-speed start stop input
2	Working voltage AC220V, neutral wire	13	Low speed fault signal input
3	1 # Contactor coil control point can be 220V/380V	14	High speed fault signal input
4	2 # Contactor coil control point can be 220V/380V	15	External control fan stops input
5	Manual feedback	16	External control low-speed start input
6	Feedback public end	17	External control high-speed start input
7	Automatic feedback	18	External control button common terminal
8	Passive strong start input, in any state	19	Forced start, DC24 input is valid in any state
9	Control signal common terminal	20	
10	Fire damper input	21	In automatic mode, DC24V input is valid
11	Remote low-speed start stop input	22	

MLM-FJ2

Dual speed fan controller

Wiring Diagram



1	Working voltage AC220V, live wire	12	Fault signal input
2	Working voltage AC220V, neutral wire	13	Passive strong start input, in any state
3	1 # Contactor coil control point can be 220V/380V	14	Remote start stop input, jog start stop
4	Spare terminal	15	External control fan stops input
5	Manual feedback	16	External control fan start input
6	Feedback public end	17	Spare terminal
7	Automatic feedback	18	External control button common terminal
8	Spare terminal	19	Forced start, DC24 input is valid in any state
9	Control signal common terminal	20	
10	Fire damper input	21	In automatic mode, DC24V input is valid
11	Remote low-speed start stop input, closed start, disconnected stop	22	

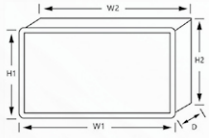
MLM-FK2

One control, two single speed fan controller

Wiring Diagram

1	Working voltage AC220V, live wire	14	1 # Fan forced start (passive) (in any state)
2	Working voltage AC220V, neutral wire	15	2 # Fan forced start (passive) (in any state)
3	1 # Contactor coil control point can be 220V/380V	16	1 # Fan fault protection signal point/normally open and normally closed programmable
4	2 # Contactor coil control point can be 220V/380V	17	2 # Fan fault protection signal point/normally open and normally closed programmable
5	1 # Automatic feedback	18	Control signal common terminal
6		19	1 # fan forced start, in any state,DC24 input is valid
7	2 # Automatic feedback	20	
8		21	2 # fan forced start, DC24 input is valid in any state
9	Control signal common terminal	22	
10	1 # Fire damper input	23	1 # Fan forced start, DC24 input is valid in any state
11	2 # Fire damper input	24	
12	1 # Remote start stop of fan	25	2 # fan forced start, DC24 input is valid in any state
13	2 # Remote start stop of fan	26	

Appearance and opening size



W1 : 156mm H1 : 94mm
W2 : 143mm H2 : 81mm
D : 33mm

Best opening size:
144*82mm

MLM-S11

One in use, one backup water pump controller

Wiring Diagram

1	Working voltage AC220V, live wire	12	Ultra-high water level
2	Working voltage AC220V, neutral wire	13	One pump fault signal input
3	1 # Contactor coil control point can be 220V/380V	14	Two pump fault signal input
4	2 # Contactor coil control point can be 220V/380V	15	External control water pump stops input
5	Manual feedback	16	External control pump start input
6	Feedback public end	17	External control pump 2 start input
7	Automatic feedback	18	External control button common terminal
8	Passive strong start input, in any state	19	Forced start, DC24 input is valid in any state
9	Control signal common terminal	20	
10	Low water level	21	In automatic mode, DC24V input is valid
11	High water level	22	

MLM-S1

Single water pump controller

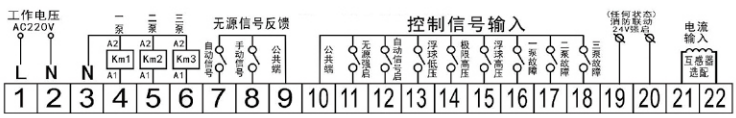
Wiring Diagram

1	Working voltage AC220V, live wire	12	Fault signal input
2	Working voltage AC220V, neutral wire	13	Passive strong start input, in any state
3	1 # Contactor coil control point can be 220V/380V	14	Remote start stop input, jog start stop
4	Spare terminal	15	External control water pump stops input
5	Manual feedback	16	External control water pump start input
6	Feedback public end	17	Spare terminal
7	Automatic feedback	18	External control button common terminal
8	Spare terminal	19	Forced start, DC24 input is valid in any state
9	Control signal common terminal	20	
10	1 # Automatic signal low water level	21	In automatic mode, DC24V input is valid
11	2 # Automatic signal low water level	22	

MLM-S12

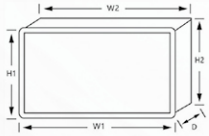
Dual purpose and backup water pump controller

Wiring Diagram



1	Working voltage AC220V, live wire	12	Automatic signal input, connected, to start the water pump
2	Working voltage AC220V, neutral wire	13	Low water level/low pressure input end, start any 2 pumps
3		14	The pressure mode is high pressure stop port
4	1 # contactor coil control point	15	High water level input port, three pumps start simultaneously
5	2 # contactor coil control point	16	1 # pump fault signal input terminal
6	3 # contactor coil control point	17	2 # pump fault signal input terminal
7	Automatic feedback	18	3 # pump fault signal input terminal
8	Manual feedback	19	DC24 input is valid in any state
9	Feedback public end	20	
10	Control signal common terminal	21	Current transformer input port, optional
11	Passive strong start input	22	

Appearance and opening size



W1 : 156mm H1 : 94mm
W2 : 143mm H2 : 81mm
D : 33mm

Best opening size:
144*82mm

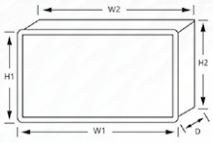
MLM-XSJ

Star delta voltage reducing controller

Wiring Diagram

1	Working voltage AC220V, live wire	12	Remote stop (in automatic mode, jog mode)
2	Working voltage AC220V, neutral wire	13	Remote start (in automatic mode)
3		14	Fan failure point (factory default normally open)
4	Triangle contactor coil control point	15	Fire damper input
5	Star shaped contactor coil control point	16	Passive strong start input
6	Voltage reducing contactor coil control point	17	empty
7	Automatic feedback	18	In any state, DC24 input is valid, Failure to protect due to malfunction
8	Manual feedback	19	
9	Feedback public end	20	In automatic mode, DC24 input is valid
10	Control signal common terminal	21	
11	Remote start (in automatic mode, jog mode)		

Appearance and opening size



W1 : 156mm H1 : 94mm
W2 : 143mm H2 : 81mm
D : 33mm

Best opening size:
144*82mm

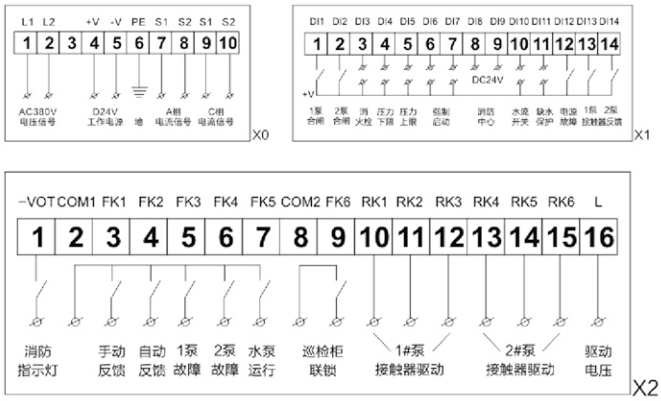
Green Energy · Industrial Electricity · Rail Transit · Power grid System

Fan and water pump controller series **04**

MLM-3000-2XP

Fire pump control equipment

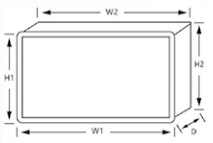
Wiring Diagram



Terminal name		Illustrate
X0		
1	L1	Voltage signal
2	L2	
3	NC	Dead end
4	+V	Working power supply DC24V
5	-V	
6	PE	Grounding terminal
7	S1	A-phase current signal input terminal
8	S2	
9	S1	C-phase current signal input terminal
10	S2	
X1		
1	DI1	1 # Pump Closing Signal Input Terminal
2	DI2	1 # Pump Closing Signal Input Terminal
3	DI3	Fire hydrant signal input terminal
4	DI4	Pressure lower limit input terminal
5	DI5	Pressure upper limit input terminal
6	DI6	The first forced start signal input terminal
7	DI7	Second forced start signal input terminal
8	DI8	Fire center DC24V starting terminal
9	DI9	
10	DI10	Water flow switch signal input terminal

Terminal name		Illustrate
11	DI10	Water shortage protection signal input terminal
12	DI12	Power failure signal input terminal
13	DI13	Signal input terminal of pump contactor # 1
14	DI14	Signal input terminal of pump contactor # 2
X2		
1	-VOUT	Fire indicator light signal terminal DC24V/5A
2	COM1	Feedback signal common terminal
3	FK1	Manual status feedback
4	FK2	Automatic status feedback
5	FK3	1 # Pump Fault Status Feedback
6	FK4	2 # Pump Fault Status Feedback
7	FK5	Feedback on the operation status of the water pump
8	COM2	Interlocking signal of inspection cabinet (normally open type)
9	FK6	
10	RK1	1 # pump contactor coil control terminal Connect according to the application principle diagram
11	RK2	
12	RK3	
13	RK4	2 # pump contactor coil control terminal Connect according to the application principle diagram
14	RK5	
15	RK6	
16	L	Contactor control voltage input terminal

Appearance and opening size



W1 : 300mm H1 : 230mm
W2 : 268mm H2 : 187mm
D : 300mm

Best opening size:
296*188mm

KG316TG
Time Switch

Green Energy · Industrial Electricity · Rail Transit · Power grid System

Time Switch Series 05

Cope Of Application

Suitable for AC 50Hz, rated control power supply voltageAC 220V and below the control circuit, as a delay timing element.

The power supply of various control circuits can be switched on or off at apredetermined time, which is suitable for lamps, neon lights, advertisingsigns, radio and television equipment and various household appliances.

Type Definition

KG 316 T G - □

- Rated voltage Us
- improved
- Time control
- Design sequence number
- Switch

Structure Characteristics

This series of time-control switch adopts eight-bit microprocessor chip, can be directly packaged on PCB board, peripheral use patch components,surface mounting, LCD LCD display, high-power relay output; Compact structure can be mounted on guide rails.

Operational Condition

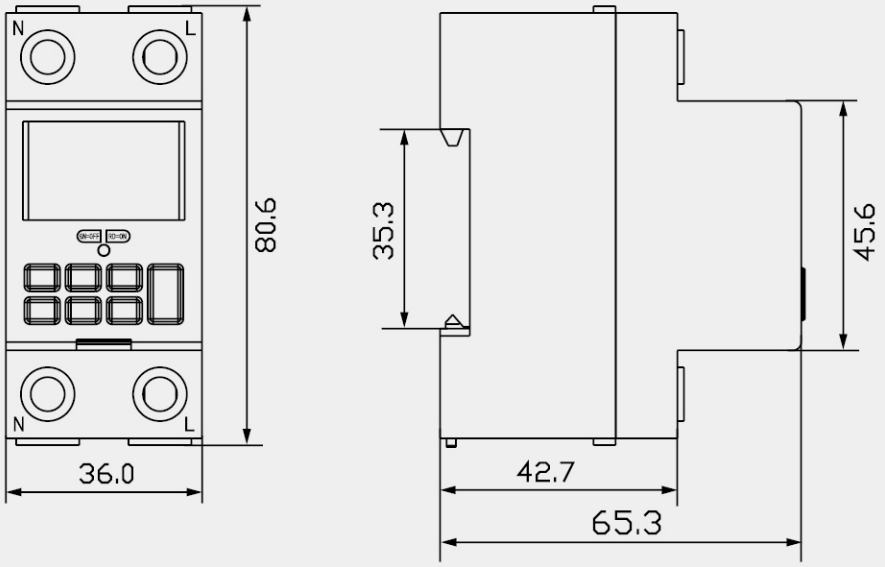
- Use environment: the altitude does not exceed 2000meters;
- The ambient temperature is not higher than +40C and not lower than-5°C ;
- The rated control power supply voltage changes to 85%-110% of the rated voltage;
- In a medium without serious vibration and explosion risk, and there is no gas and dust in the medium sufficient to corrode metal and destroy insula-tion;
- Where rain and snow can't erode.

Technical Characteristics

- Rated insulation voltage Ui:AC 250V
- Rated impulse withstand voltage Uimp: (40A):AC 1.5kV (63A):AC2.5kV
- Rated control power supply voltage Us:AC 220V
- Pollution Level: 3
- Enclosure Protection class:IP20
- 40A Load power: (resistive load:6KW; Inductive load: 1.8KW;Motor load:1.2KW; Lamp load:0.9KW)
  63A Load power: (resistive load:9KW; Inductive load: 2.7KW;Motor load:1.8KW; Lamp load:1.35KW)
- Daily travel time error: less than or equal to ±2 seconds;
- You can set 16 on and 16 off actions per day,
- The switching time can be cycled daily or weekly;
- The maximum time control is 168 hours, the minimum time control is1minute;
- Mechanical life: greater than or equal to 1 million times;
- Electrical life: more than or equal to 100,000 times;
- Coordination with the short circuit protector (SCPD) is enough. The relay should not cause harm to people and equipment under short circuit conditions, and should not be allowed to continue to use before repair or replacement of parts.

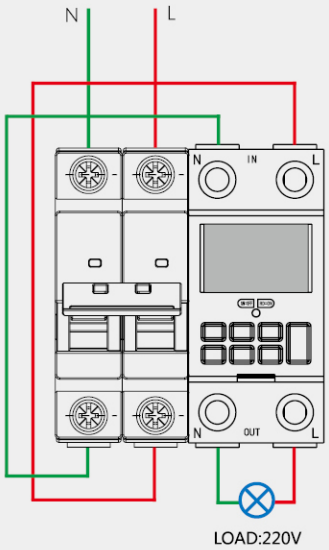
Product outline and installation dimensions

UNIT : (mm)



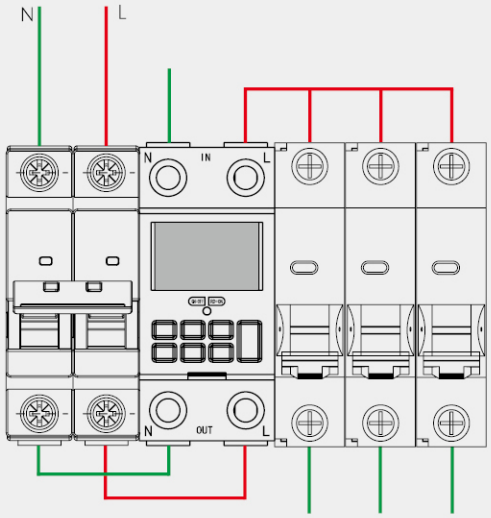
Installation using 35.3mm standard guide rail

INPUT TERMINAL



UPPER INCOMING AND LOWER OUTGOING LINES

INPUT TERMINAL



LOWER INCOMING AND UPPER OUTGOING LINES

Installation Use Operation

- If you do not operate the keyboard for 30 seconds, it will automatically
- lock, and the sign“ ”is displayed in the lower left corner.
- Unlocking: Press the“Cancel/Resume” button 4 times to automatically unlock, and the symbol“ ”disappears.
- After unlocking, press“Calibration Week”, “Calibration Time", and “Calibration Score”to calibrate the time.
- Set the switch time according to the steps in the table below.

STEP	KEY	SET CONTENT
1	Press the“TMG” key	Enter the timed start setting display “$_{on}$1”
2	Press the“D+” key	Set the time to open on a certain day or day or every day of the week
3	Press the "H+" and "M+" buttons respectively	Set the time for automatic opening
4	Press the“TMG” key	Entering the timed shutdown setting display “1$_{off}$ ”
5	Press the“D+” key	Enter the scheduled start setting and display settings. Set the time for this shutdown to be on a certain day or day of the week
6	Press the "H+" and "M+" buttons respectively	Set an automatic shutdown time
7	Repeat the process from 1 to 6	Set the switch time for the remaining 2-16 times. If timing is not required, make it display :"--:--"
8	Press the “CLK” key	End timing setting and return to clock running state
9	Press the “A/M” key	End the timing setting, return to the clock running state, point the switch flag to the "off" position, and then adjust to the "automatic" position

Precautions For Operation

- To prevent contact heating under strong current, it is necessary to tighten the screws on the wire post during wiring.
- It is strictly prohibited to install or disassemble products with electricity.
- If you do not use it for a long time and press the “time calibration”and “minute calibration” buttons for 3 seconds, you will enter a sleep state; Release the sleep state, press and hold the“Cancel/Resume” button for 5 seconds, and re-enter use (note: In the sleep state, all the original set data is cleared, and after restarting, it enters the factory state).
- For equipment that may cause significant economic losses or personal safety, it is important to design with sufficient margin for technical characteristics and performance values, and safety facilities such as double circuit protection should be used.

Common fault

- The time control switch after power on operation is not working proper-ly. Check whether the time control switch period setting meets the required requirements, and whether the week setting is set in the "automatic"position.
- When the time control switch reaches the set time, the output indicator light is on, but the relay does not switch.
  Check if the power supply voltage is too low.
- Burnt products
  Check if the power supply exceeds the rated power supply voltage of the product and if the power cord is connected incorrectly.
- Troubleshooting
  When a product malfunctions, the first step is to quickly disconnect the power supply, connect the wires correctly according to the wiring diagram,check the wiring is correct, and then follow the operating precautions. If the product itself has quality issues, please contact your local distribution company or our company.

KG316T
Time Control Switch

Scope of application

Suitable for use as a delay timing component in control circuits with AC 50/60Hz voltage of 380V and below. The power supply of various control circuits can be turned on or off at predetermined times, suitable for street lamps, neon lights, advertising sign lights, broadcasting and television equipment, and various household appliances.

Type Definition

KG 316 T - □

- □ — Rated control power supply voltage Us
- T — Time control
- 316 — Design Number
- KG — switch

Normal working conditions

- Environment: altitude not more than 2000 meters;
- Ambient temperature: not higher than +40°C and not lower than -5°C;
- The voltage range of rated control power supply is 85%-110%;
- Rated voltage: in the medium without serious vibration and explosion hazard, and there is no gas and dust in the medium that is sufficient to corrode the metal and destroy the insulation; In places where rain and snow can't hit.

Structure

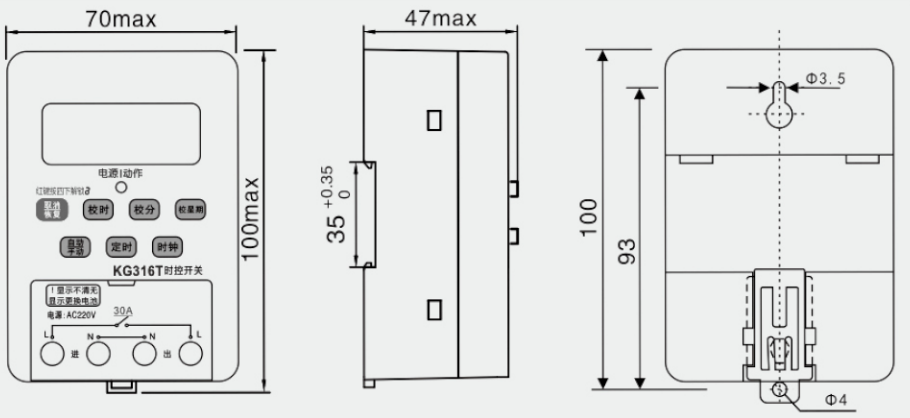
This time control switch adopts an eight position microprocessor chip, directly packaged on the PCB board, with surface mount components on the periphery, an LCD display screen, and a replaceable high-power relay output battery.

Technical characteristics

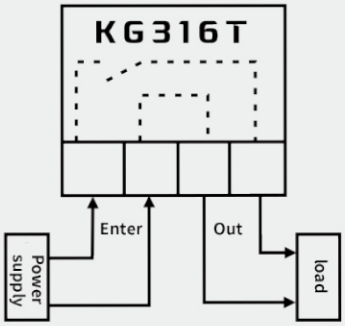
- Rated insulation voltage Ui: AC380V
- Rated impulse withstand voltage Uimp : AC1. 5kV
- Rated control power supply voltage Us: AC50/60Hz: 220V, 380V
- Pollution level: 3
- Enclosure protection level: IP50
- Load power (resistive load: 6KW; Inductive load: 1.8KW; Motor load: 1.2KW; Lamp load: 0.9KW)
- Daily time error: less than or equal to ±2 seconds;
- 16 times of on, 16 times of off action can be set every day;
- The switching time can be cycled by day or week;
- The maximum time is 168 hours, and the minimum time is 1 minute;
- Mechanical life: greater than or equal to 1 million times;
- Electric life: greater than or equal to 100,000 times;
- Coordination with short circuit protector (SCPD), that is, the relay should not cause harm to people and equipment under short circuit conditions, and it is not allowed to continue to be used until the parts are repaired or replaced.

Product outline, installation dimension and wiring diagram

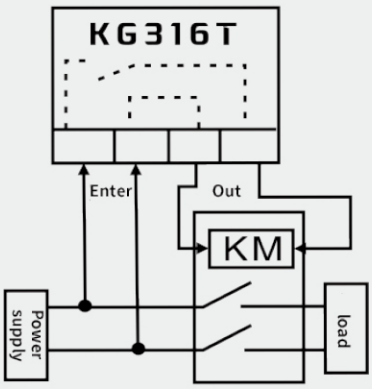
Unit: (mm)



Appearance and installation hole size (or using 35mm standard guide rail installation)



Directly control the load wiring diagram



Connect the AC contactor to control the load wiring diagram

Intelligent overvoltage & undervoltage & overcurrent protection device

Green Energy Industrial Electricity Rail Transit Power grid System

Intelligent Protector Series 06

Application

The multifunctional overvoltage/undervoltage/overcurrent intelligent protector is a comprehensive intelligent protector that integrates overvoltage protection, undervoltage protection, and overcurrent protection. When any overvoltage, undervoltage, or overcurrent fault occurs in a circuit, this product can instantly cut off the power supply to avoid unnecessary damage to electrical equipment.

When the circuit returns to normal, the protector can automatically restore power supply. The overvoltage value, undervoltage value, and overcurrent value of this product can be set independently, and the corresponding parameters can be adjusted according to the local actual situation. Widely used in home furnishings, shopping malls, schools, factories, etc.

Product Features

- The product is a new generation of intelligent overvoltage/undervoltage/overcurrent protection device designed and produced in full compliance with enterprise standards.
- Automatically cut off the circuit when overvoltage, undervoltage,or overcurrent faults occur in the circuit; When the voltage or current of the line returns to normal, it will automatically reset and connect the line after a self set delay time, without the need for manual operation.
- When transient or transient overvoltage occurs in the line, the protector does not produce false operation.
- When the voltage of the line is unstable or suddenly loses power and then suddenly calls due to faults such as loose contacts,the protector will not immediately connect the line. This delay time can be set by the user according to local conditions.
- The line voltage should not exceed 330VAC at its highest to prevent damage to the product due to high power supply voltage.If a high power supply is required for specific occasions, please contact the manufacturer.

Normal use conditions

- Surrounding air temperature
  a. The upper limit value shall not exceed+40 ℃ .
  b. The lower limit value shall not be lower than -5 ℃ .
  c. The average value within 24 hours shall not exceed+30 ℃ .
  d. Extreme operating temperature -10 ℃ ~+50 ℃ .
- Altitude
  The altitude of the installation site shall not exceed 2000 meters.
- Atmospheric conditions
  a. When the ambient air temperature is+35 ℃ , the relative humidity of the air does not exceed 50%, can have higher relative humidity at lower temperatures.
  b. When the monthly average minimum temperature of the wettest month is 20℃ , the monthly average relative humidity The degree is 90%.
  c. We have taken into account the condensation that occurs on the surface of the product due to temperature changes.
- Pollution level
  The pollution level used by the protector is level 3.
- Installation category
  The installation category is Class II and III.

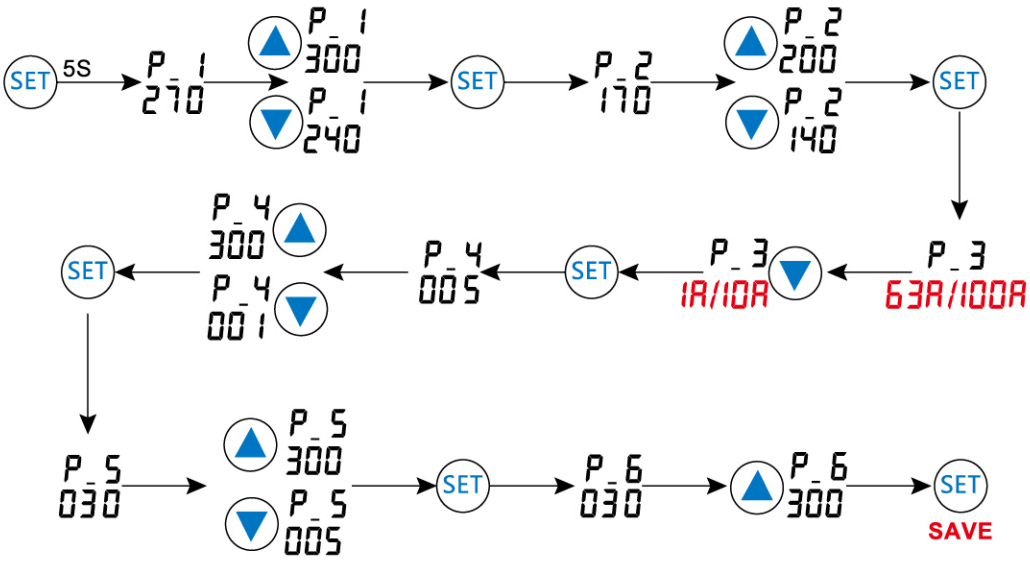
- Installation conditions

  a. The protector can be installed vertically or horizontally inside the cabinet, and special requirements must be met Special orders.

  b. It should be installed in a medium without explosion risk, and there should be no sufficient corrosion in the medium Gas and conductive dust that corrode metals and damage insulation.

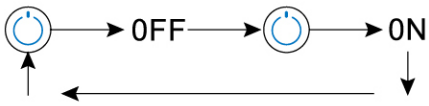
  c. It should be installed in a place without rain or snow invasion.

Product Settings



Note: If the keyboard is longer than 60 seconds at any position before saving, the operating system willabandon all settings and restart.

1、ON/OFF



2、Voltage Calibration

Connect the input terminal to a voltage of 220V, and press and hold the ▲ ▼ buttons to display a voltage of 220V flashing.
Release the up and down buttons and press and hold the settings button to turn the settings menu page and save the data, completing the voltage calibration.

3、Factory Reset

SET ▲ ▼ Enter the setting state and press the up and down keys to restore factory settings

Note

After the protector is installed, the user can connect it, and select the wire cross-section that meets the standard according to the size of the current set by the protector. Note that the inlet and outlet wires of the protector cannot be connected incorrectly to avoid product damage or failure to power on.

Users should follow relevant regulations and pay attention to the following items when conducting various operations or experiments to ensure correct and safe use of the product.

Connect the input and output terminals correctly according to the product identification. (The load current should be less than the protection current value of the product)

The neutral wire N must not be connected incorrectly and must be reliably wired, otherwise the protector cannot function properly.

Before connecting to the power supply, please carefully check whether the wiring is correct, whether the load size matches the current protection value of the product, and whether the wiring screws are tightened, otherwise the product will be damaged.

After the product is powered on, do not touch live parts to avoid electric shock.

This product needs to be combined with a micro circuit breaker to provide short circuit protection. Otherwise, if there is a short circuit at the input or load end of the product, it will not be able to provide load limiting protection.

Due to the automatic reset function of the product, after the protection and action of the product, the old load (electrical appliances) should be immediately removed and the circuit should be checked. Otherwise, the product will frequently connect and disconnect the load, and ultimately burn out the product or electrical circuit due to long-term frequent overload connection and disconnection.

Products that are not used for a long time should pay attention to moisture and dust prevention. Before use, the product should be debugged according to the above content, and can only be put into operation after it is normal.

This product has no isolation function. Please disconnect the front circuit breaker switch when repairing the circuit.

This product has a zero line (N line) that can be directly connected without any disconnection function!

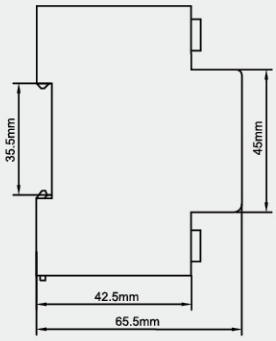
This product has no high current short circuit breaking capacity. Please install small circuit breakers such as DZ47 and C65 at the front of the line for overcurrent protection.

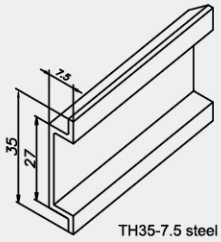
Main technical parameters

Product Name	MULTIFUNCTIONAL OVERVOLTAGE/UNDERVOLTAGE/ OVERCURRENT INTELLIGENT PROTECTOR
Number of product poles	1P+N, 3P+N
Rated working voltage	AC220V、AC230V
Rated working current	1A-63A, 10A-100A adjustable (default 63A or 100A)
Rated operating frequency	50Hz/60Hz
Undervoltage action cut-off value	140V-200V adjustable (default 170V)
Overvoltage action cut-off value	240V-300V adjustable (default 270V)
Overcurrent action cut-off value	63A: 1A~63A adjustable (default 63A); 100A: 10A~100A adjustable (default 100A)
Power on and power off delay time	5-300s adjustable (default to 30s)
Power on delay time	1~300s adjustable (default 5s)
Reset delay time after overcurrent protection	30~300s adjustable (default to 30s)
Product overcurrent delay time	6s (If the overcurrent time exceeds this time, it will be confirmed as overcurrent and protected)
Electrical and mechanical life	More than 100000 times
Installation method	Standard guide rail installation

Product size

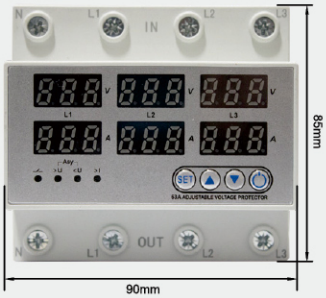
1P+N 63A

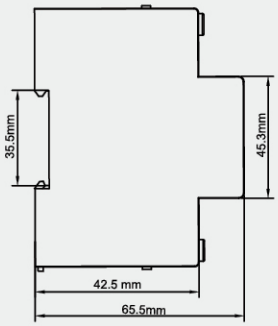


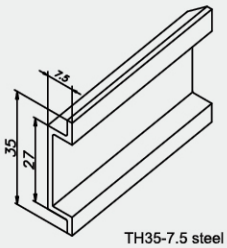


TH35-7.5 steel installation rail

3P+N 63A

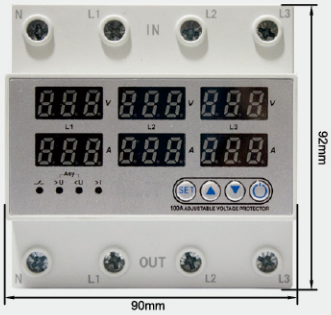


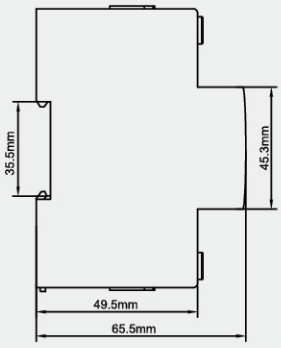


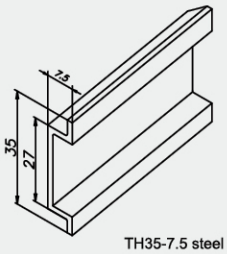


TH35-7.5 steel installation rail

3P+N 100A



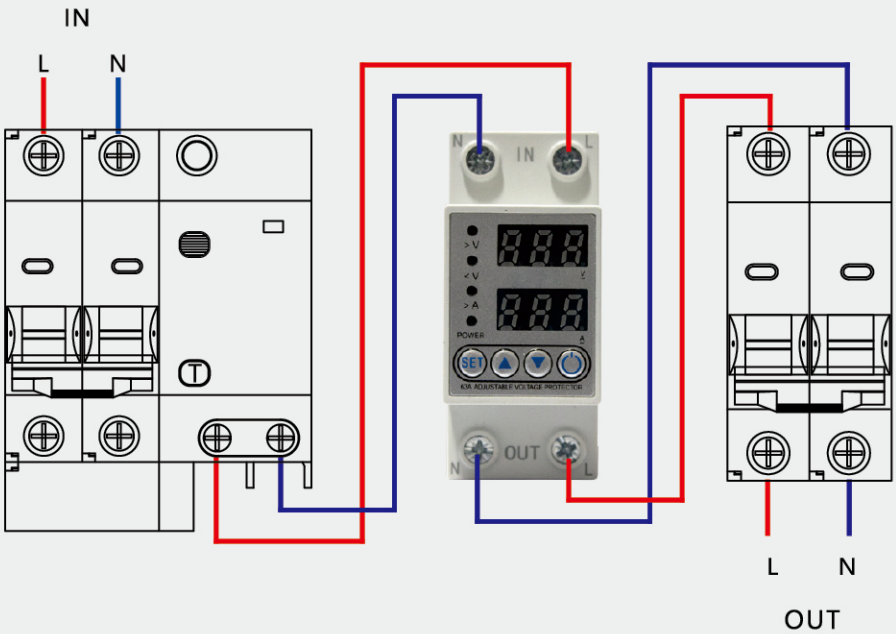


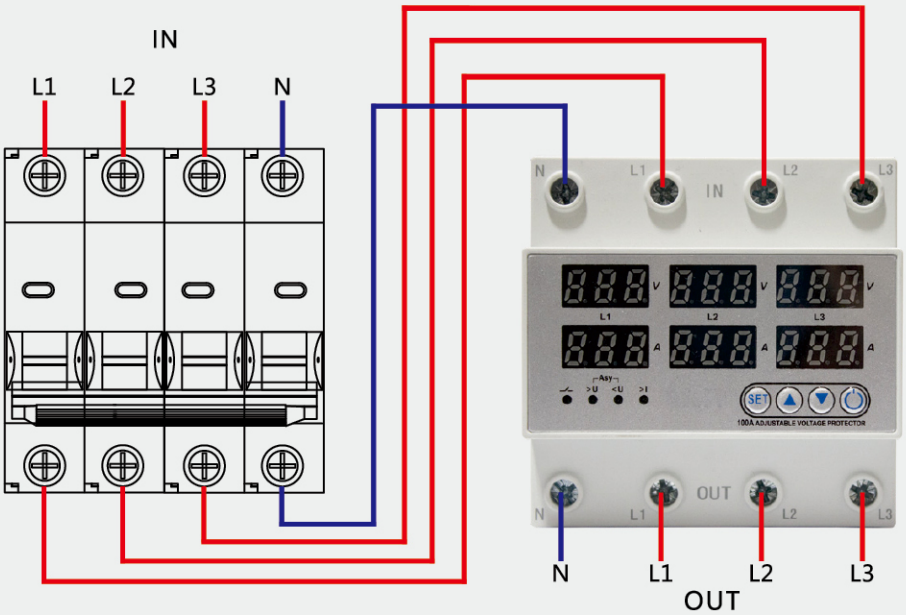


TH35-7.5 steel installation rail

Product wiring diagram

Wiring diagram





When used for electrical maintenance and installation, it is necessary to ensure that the operators hold electrical operation qualifications and take necessary power outage and insulation protection measures.

WIFI

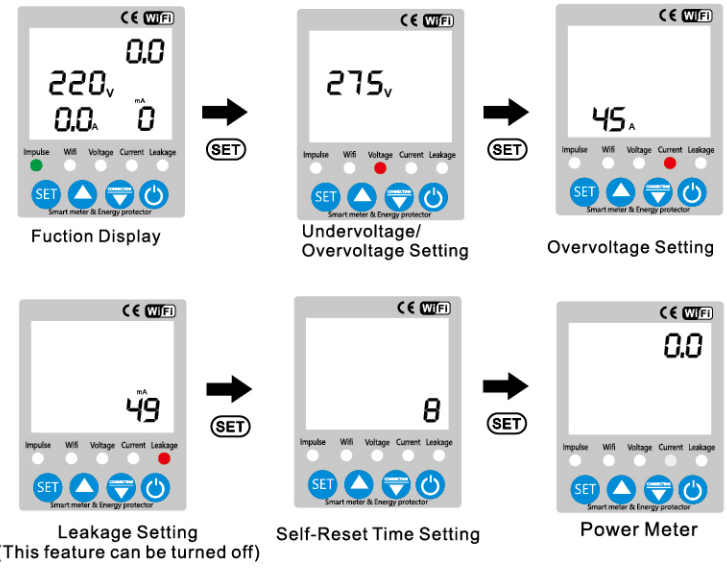
Intelligent leakage protection switch

Function

- Remote control at anytime from anywhere
- Schedule/Timer/loop timer
- Energy monitoring
- Under voltage protection 150V-190V(adjustable) (default: 170V)
- Over voltage proteciton 250V-300V(adjustable) (default: 270)
- Over current protection 1A-63A(adjustable) (default: 63A)
- Electric leakage protection:10-99mA
- Preset current/voltage threshold values by app, Once the real-time/current/voltage reaches the threshold values, The connected electrical appliances will be automatically turned off

Technical Parameters

- Rated supply Voltage:AC 220V
- Operation Voltage Range:AC80V-400V(single phase)
- Rated Frequency;50/60Hz
- Electric Current(>A)setting range:1-63A
- Overvoltage (>U) setting range:250-300V (adiustable)
- Undervoltage(<U) setting range:150-190V (adjustable)
- Electric Leakage Protection:10-100mA(This feature can be turned off)
- Error:2%
- >U and <U trip delay:0.5s
- Reset/Start Delay:5s-90s
- Voltage Measurement Accuracy:I%(Not exceeding 1% of the overall range)
- Rated Insulation Voltage:400V
- Output Contact:1NO
- Altitude:≤2000m
- Operating Temperature:(-30°C ^70°C Power Display Range:0-99999.9kw/h



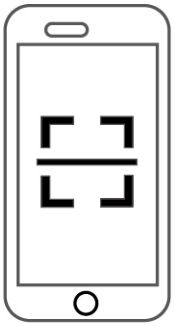
Parameter Settings

1.Click SET to view each data

2. Press SET for 5 seconds to enter setup mode,and then press SET to select , press ▲ and ▼ key to adiust the set

Network Connection

Press ▼ for 5 seconds until the WiFI indicator blinks quickly to enter the network connection



Yuya APP
Download Link

- Scan the QR code upside with mobile QR code scanning tool. or search"Tuya smar"at mobile application market to download and install APP.
- Connect home Wi-Fi on your mobile phone and start "Tuya smart" APP.
- Follow the instruction in the APP to register/log in APP account and add new device.
- After finishing adding new device, you can use APP to control your device conveniently.
- APP is based on actual released version.

Network Settings

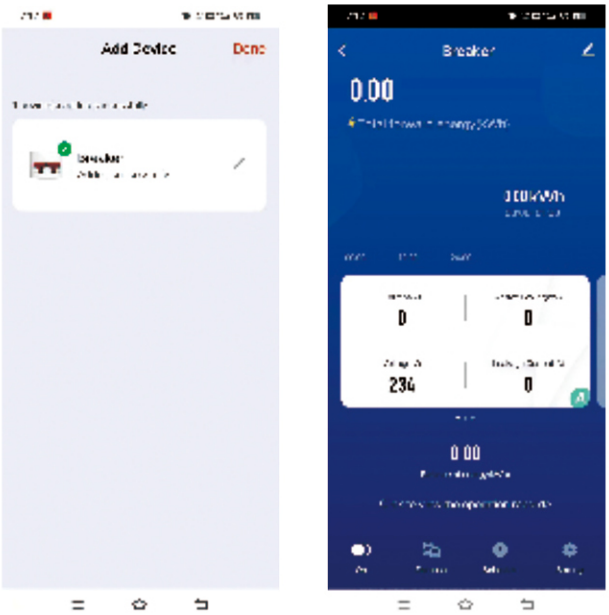
Start"Tuya smart" APP and log in. At the first page, select family at the top left corner and then click"+"on the top right corner to enter the device addition setting page.

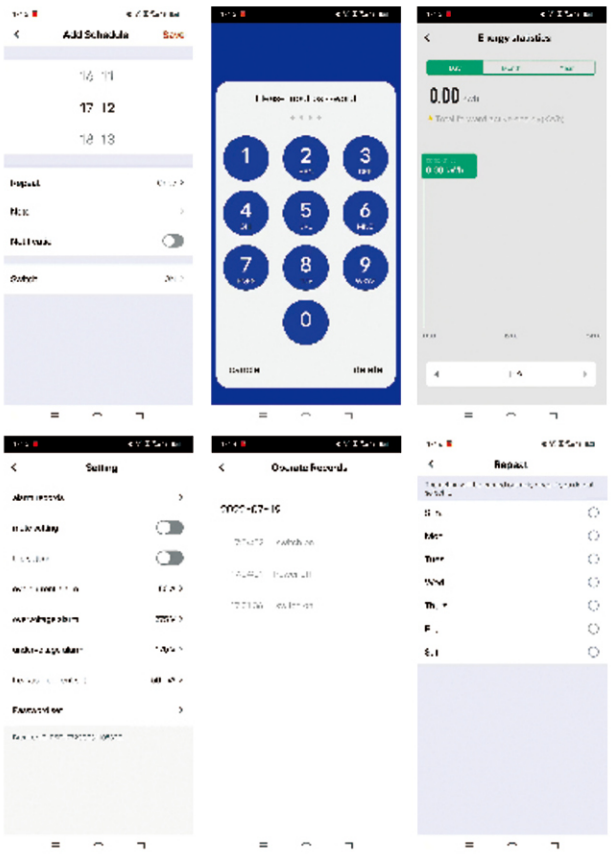
Click "all device" and find out the "Energy" item to select. Turn the power on of the power meter and press ▼ Key for 5 seconds till the network indicator fashes rapidly, click "confirming the indicator is flash rapidly" Button.

Input the password of connected Wi-Fi,Only supports 2.4G wireless network, 5G wireless network is not supported. Existence of Chinese Characters in Wi-Fi name and password in currently not supported, it may cause the APP fails to add new device.

Click"Confirm"and wait for connection. When finish connection and add device successfully,you can set the installation room of the device.

Switch button and central power button can control the power on/off of the device.





WIFI
Rail type switch

Main Function

- Remote control
- Voice control
- Timing
- Countdown
- Loop timing
- Real-time monitoring of electricity consumption

Main Data Parameter

- Protocol: WiFi(Default)
- Rated operating voltage range: 90-300V
- Control Type: Remote control, Manual
- Poles description: 1P+N(N Pole Pass-through)
- Customization:SigMesh/ZigBee
- Model selection:Non-metering Type
  Metering Type

Non-metering Type LED Indicator Description

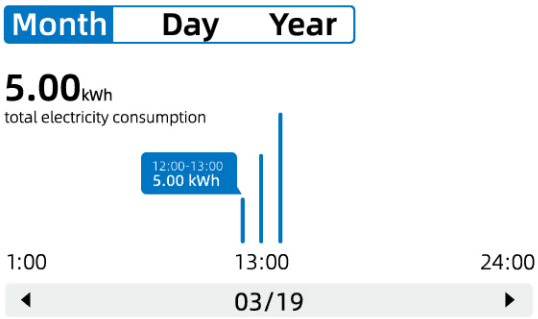
- The LED indicator show a steady blue light to indicate that the switch in ON status.
- The LED indicator show a light out to indicate that the switch in OFF status.
- The LED indicator show blue flashing to indicate that switch in paring model.

Metering Type LED Indicator Description

- The LED indicator shows a steady blue light to indicate that the network connection is successful.
- The LED indicator shows blue flashing slowly, indicating that the product in pairing model.
- The LED indicator shows a light out, indicating that the device is off-grid model.
- The Button indicator shows a light up to indicate that the switch is OFF.
- The Button indicator shows a light out to indicate that the switch is ON.

Live View

Can monitor the current, voltage, and power of the load equ-ipment in real time, and can also record the power consumption of the year, month day, hour, and different time neriods, helping users to check the power consumption of load equipment more clearly. Setting the switch status of the equipment in different scenarios, and remotely monitor the real-time situation of the load electrical appliances.



Real-time monitoring electricity consumption.

Configuration steps

First Step:

To connect the wire from the up-per of the WiFi Din Rail Switch,the live wire connect to the Lpole, and the neutral wire connect to the N pole, please make sure that the wiring is correct and strong WiFi signal.

Configuration steps

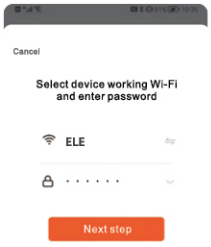
Second step:
Turn on the Bluetooth and WiFi of the mobile phone, open the APP, and then long press the"power" button, wait for about 5-10 seconds, the LED indicator will flash blue light slowly.

Configuration steps

Third step:
Waiting for a while after graphics is displayed the APP or click the "+" in the upper right corner, then choose the "Add Device" button to wait discovering devices, then click "Add"button.

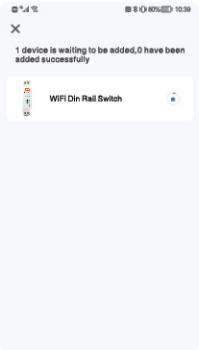
Configuration steps

Fourth step:
Enter the wifi account password and click next step, wait for the switch to connect the network.



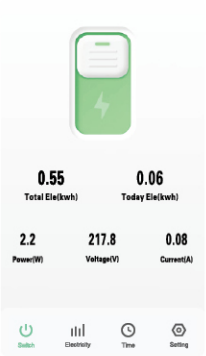
Configuration steps

Fifth step :
The switch is connected to the network.



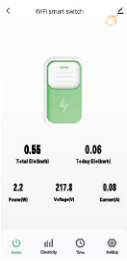
Configuration steps

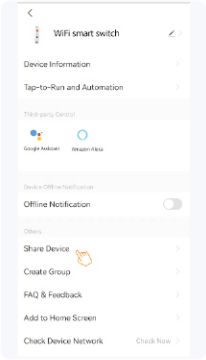
Sixth step:
After the successful connection,the LED indicator will be changed from blue slow flashing to blue steady light.



Decice sharing

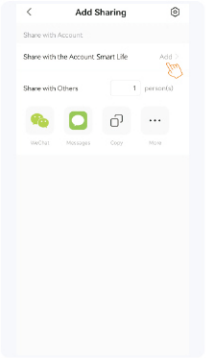
First step:



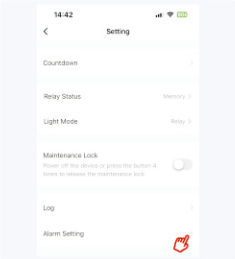


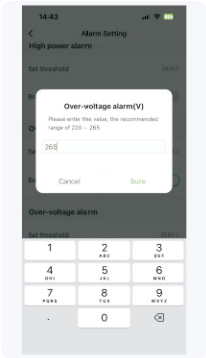
Decice sharing

Second step:
Click on "share with the Account Smart Life" to type the account you want to share.



Alarm setting





Three phase intelligent reclosing protector

Green Energy Industrial Electricity Rail Transit Power grid System

Overview

The MLM-G80A three-phase four wire overvoltage and undervoltage current limiting protector is currently available in the market A new generation of home appliance protection device developed by the Electric Condition Institute.

Control circuit selection Assembled with imported components, produced using modular standards for performance Excellent and reliable.

Capable of being positive under abnormal voltage,current,and phase sequence conditions Work regularly.

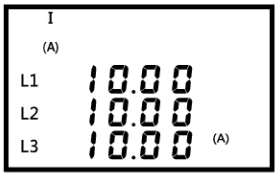
When the mains voltage and current exceed the action threshold of the protector,When the phase sequence is disordered and the voltage and current are unbalanced, the protector can quickly Reliably cut off the circuit to protect electrical equipment and personal safety.

When the mains voltage returns to normal, the protector can automatically connect to the power supply Restore power supply, automatic implementation of local functions,no need for personnel operation.

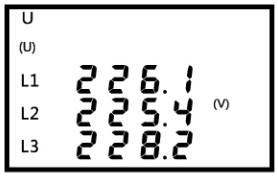
Main Functions

1.Overvoltage protection,undervoltage protection,overload protection, undercurrent protection, delay protection Time protection, voltage imbalance protection, current imbalance protection,shortage Phase protection and phase sequence protection,each parameter can be set with action threshold and on/off.

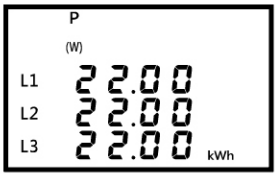
2.The backlight display shows no action for 180 seconds,and the relay is disconnected with a red backlight,Normal white backlight Press the up and down buttons to switch and display the voltage, current,and power of the three phases Power factor, frequency.



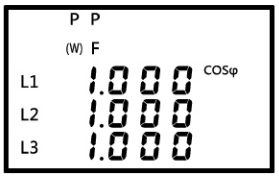
Real time current



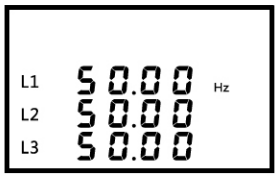
Real time voltage



Real time power



Real time power factor



Real time frequency

Fault record

Record overvoltage,undervoltage, overload, low current protection,voltage imbalance,Current imbalance and phase sequence protection.

Note:GraffitiApp Record

WIFI indicator status

1 flash indicates waiting for WIFI signal to be detected

2 slow flashes indicate WIFI offline status

3 long lights indicate that WIFI is connected

Function settings

Long pressand hold the setting button to enter the setting status display setting page, flashing the set data bits

Set the content of this bit through the up and down buttons

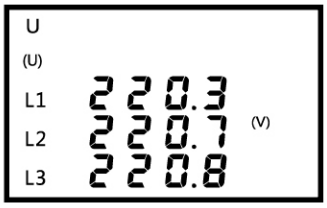
Short press the setting key to switch the setting bit

Short press OK to confirm the settings on this page and jump to the next settings page

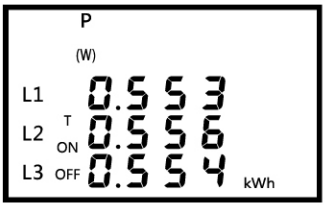
Long press OK to exit the setting state and save the settings

Display the "Voltage"interface: Long press and hold to configure WIFI, and switch the display to EPS(Combined active power),long press and hold to clear the power, and display the"Frequency Interface"Restore factory configuration.

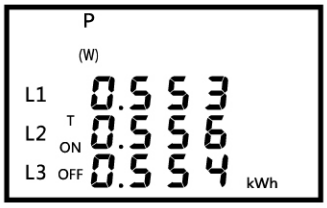
1.Press the up and down buttons to switch and display the voltage, current, and power of the three phases Power factor, frequency.



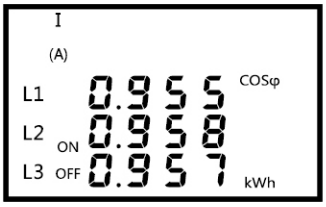
phase voltage



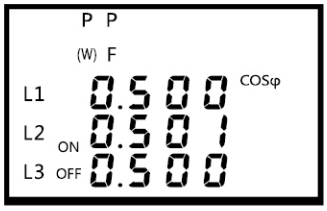
three-phase current



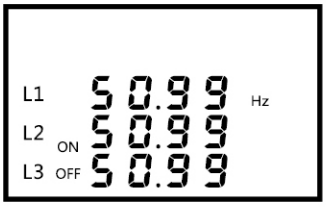
Three phase active power



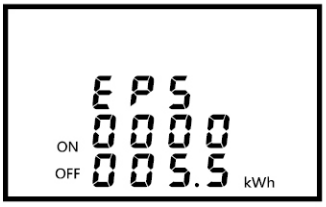
Three phase reactive power



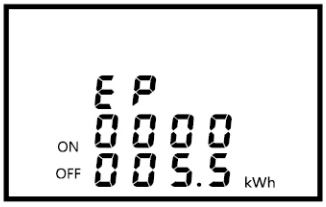
Three phase power factor



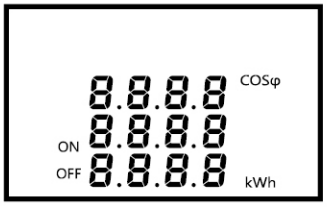
Three phase frequency



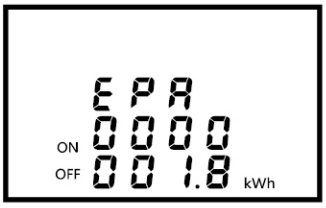
Active combined electricity quantity



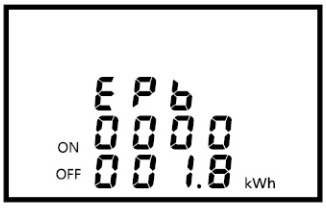
Active forward electric quantity



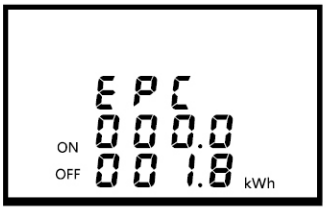
Active reverse electric quantity



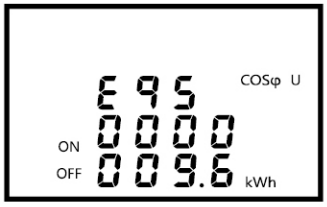
Active A-phase electric quantity



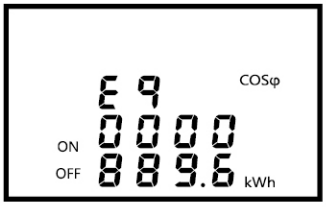
Active phase B electric quantity



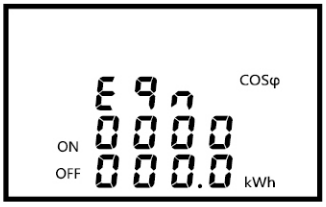
Active C-phase electric quantity



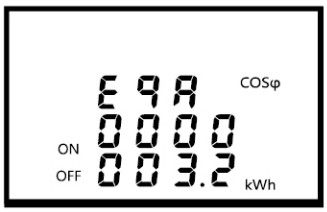
Combined reactive power consumption



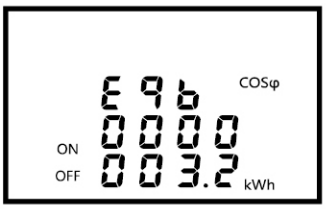
Reactive forward charge



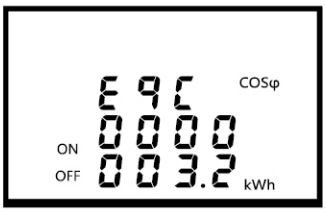
Reactive reverse energy



Reactive phase A electric quantity



Reactive phase B electric quantity



Reactive C-phase electric quantity

Fault record

Record overvoltage, undervoltage, overload, low current protection,voltage imbalance,Current imbalance and phase sequence protection.
Note:Graffiti App Record

WIFI indicator status

1 flash indicates waiting for WIFI signal to be detected
2 slow flashes indicate WFI offline status
3 long lights indicate that WIFI is connected

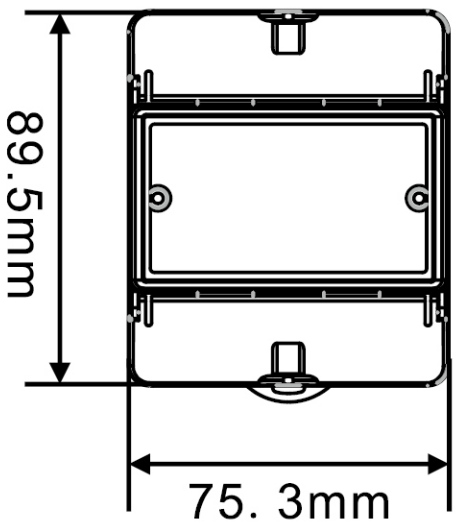
Installation and usage conditions

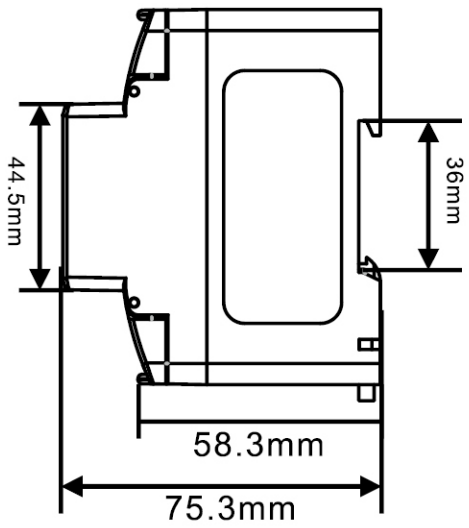
1.Temperature:-20℃ ~60℃
2.Humidity:<85%
3.Altitude: not exceeding 2000m
4.Pollution level: Level 3
5.Modular design for exterior design and guide rail instalation
6.Wiring capacity:Insulated copper wire of 35 square millimeters and below.

Precautions

1.This product has no isolation function.Please disconnect the front stage when repairing the circuit Circuit breaker switch.
2.The zero line (N line) of this product is directly connected without disconnection function.
3.The protector must be wired according to the markings and must not be connected incorrectly.
4. Although this product has limited current protection function,it cannot replace circuit breakers.
Please install circuit breakers such as DZ47 and C65 at the front end of the line Short circuit protection.
5.Before use, please tighten the clamp screw to prevent poor contact and Damaged product.

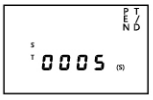
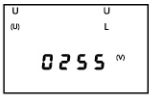
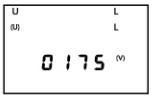
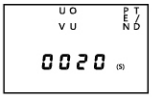
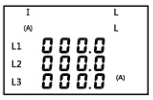
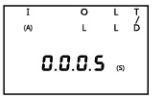
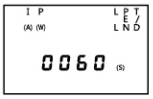
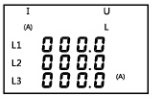
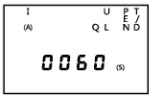
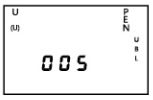
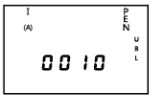
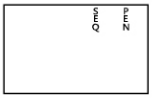
Installation wiring and dimensions





Guarantee period

Within 12 months from the date of production, if there are any product quality issues, and The strip is intact, and our factory will provide free replacement.Within 36 months,there are products available If there is a quality issue and the seal is intact, our factory will provide free repair.

Function	Set parameter range	Factory default settings	Function Description
Protection delay	----(hand movement)0000-9999second(s)	5second	Power on delay protection for sudden power outage Instantaneous overvoltage or excessive surge in electrical protection. 
Upper voltage limit	60V-300V	275V	The maximum voltage limit is set to 300V,for example: set to 300V The above voltage, after saving the data,is also 300V(Can be set in separate phases) 
Lower voltage limit	60V-300V	175V	The minimum voltage limit is set to 60V, such as setting 60V to Lower the voltage, and after saving the data, it is also 60V. (Can be set in separate phases) 
Under voltage and over voltage Protection delay	----(hand movement)0000-9999second(s)	20second	Voltage above or below the set value, protection The device automatically switches off when the voltage returns;to normal Close after setting the delay time 
Lower current limit	0.0-60A	0.0A	For example,set the lower current limit of 10A and the working power If the current is lower than 10A, the delay time will be set Inner pull brake.(Can be set in separate phases) 
----Represented as: manual recovery 0000 Represented as: immediate recovery			
Current overload Lower limit delay	0000-9999second(s)	5second	For example, if the lower limit of the current is set, the overload delay will be 5 seconds,and if the working current is lower than the set value,the delay will be 5 seconds to pull the switch. 
Current overload Lower limit delay	0000-9999second(s)	20second	For example,set the current lower limit protection to delay for 20 seconds,and after the working current is normal,close it after delaying for 20 seconds at the set value. 
Upper limit of current	0.1-80A	80A	For example, if the upper limit of the current is set to 80A, if the working current exceeds 80A,the switch will be opened within the set delay time.(Can be set in separate phases) 
Current overload Upper limit delay	0000-9999second(s)	5second	For example, if the upper limit of the current is set, the overload will delay for 5 seconds, and if the working current is higher than the set value,it will delay for 5 seconds to pull the switch. 
Upper limit of current Protection delay	0000-9999second(s)	60second	For example,set the current limit protection to delay for 60 seconds,and after the working current is normal, close it after a delay of 60 seconds at the set value. 
Uneven voltage Balance protection%	On/off 0000-9999%	On	The highest and lowest values of ABC phase voltage exceed Set the%value to immediately switch off. 
Current unevenness Balance protection%	On/off 0000-9999%	On	The highest and lowest values of ABC phase current exceed Set the% value to immediately switch off. 
Phase-sequence protecion	On/off	On	If there is any phase error in the ABC phase sequence, immediately switch off. 

How to add device to app

1.Use Your smart phone to scan QR codes,or search"smart Life""Tuya Smart"app in Google play or APP store to download and install

Smart Life

Tuya Smart

2.Create an account with your mobile number

3.Connect you mobile to your wi-fi router. Click"+" in the upper right conner of homepage or click "Add device"then select breaker "Switch module (Wi-Fi)"from "Energy",long press WIFI button for 5 seconds after see quick flash, open app to pair