

# ACDC

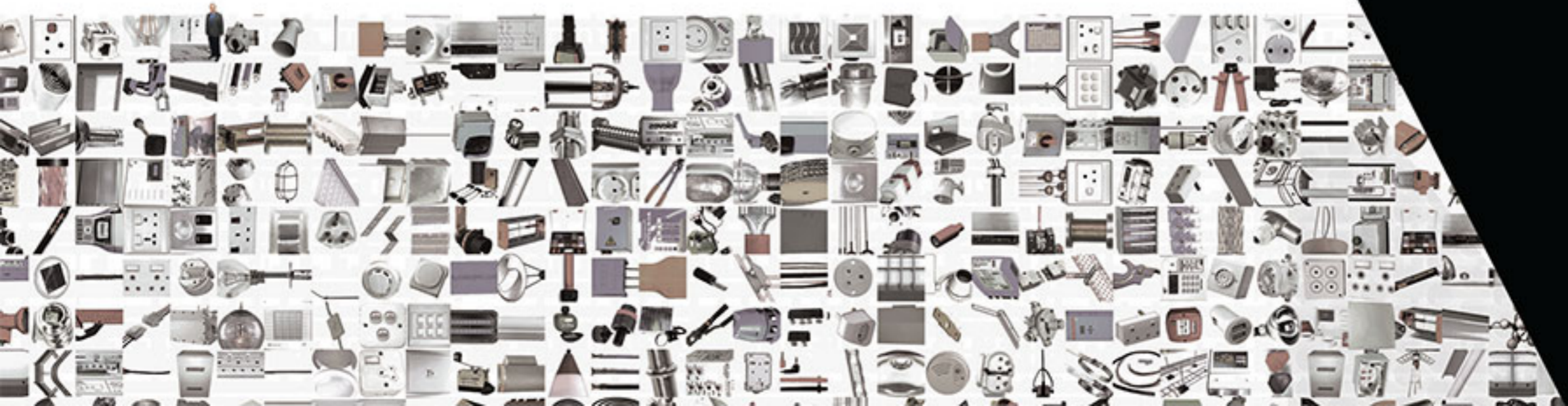
DYNAMICS

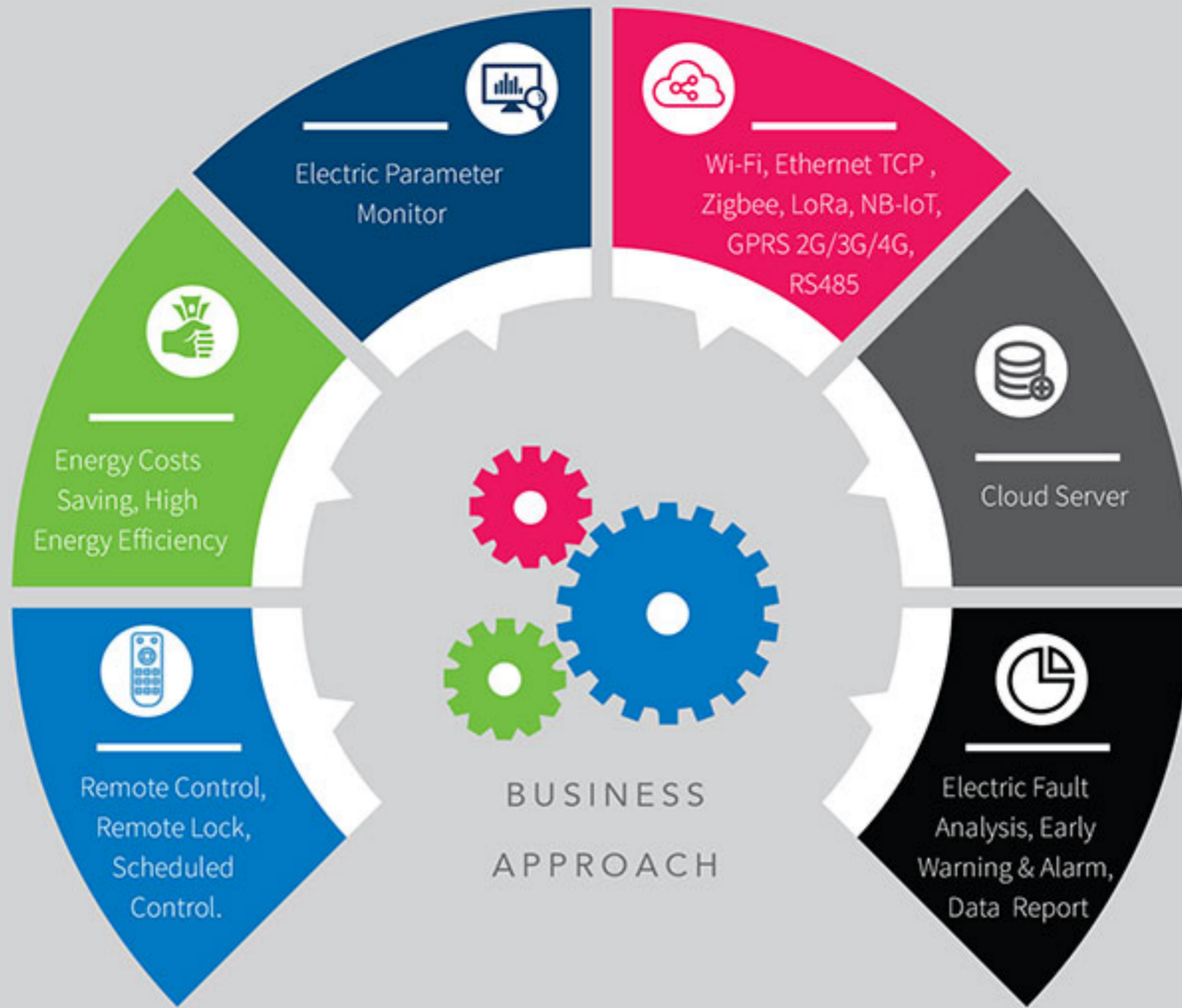
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SMART ELECTRICAL SAFETY SUPERVISION  
& POWER MANAGEMENT SOLUTION



 **matismart**  
*AIoT Electric*





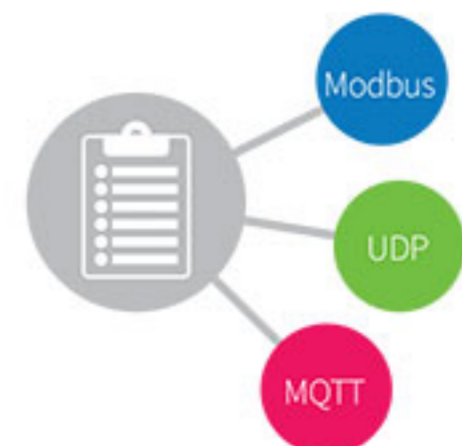
FEATURES

FULL PROTECTION	SMART METERING	SMART MONITORING	SMART CONTROL	SMART TIMER	CURRENT & POWER LIMITED
Overload, short circuit, earth leakage, surge protection, over/under voltage, arcing fault, phase loss, unbalance, high temperature.	All line including main line and sub-lines have metering function, the accuracy is class 1.	Real-Time monitoring: Current, Voltage, Residual Current, Power and Temperature	Remote control by wired or wireless communication.	Scheduling any working scenario in APP and Software platform.	The power and current can be limited through the App or Software platform.

COMMUNICATION



PROTOCOL

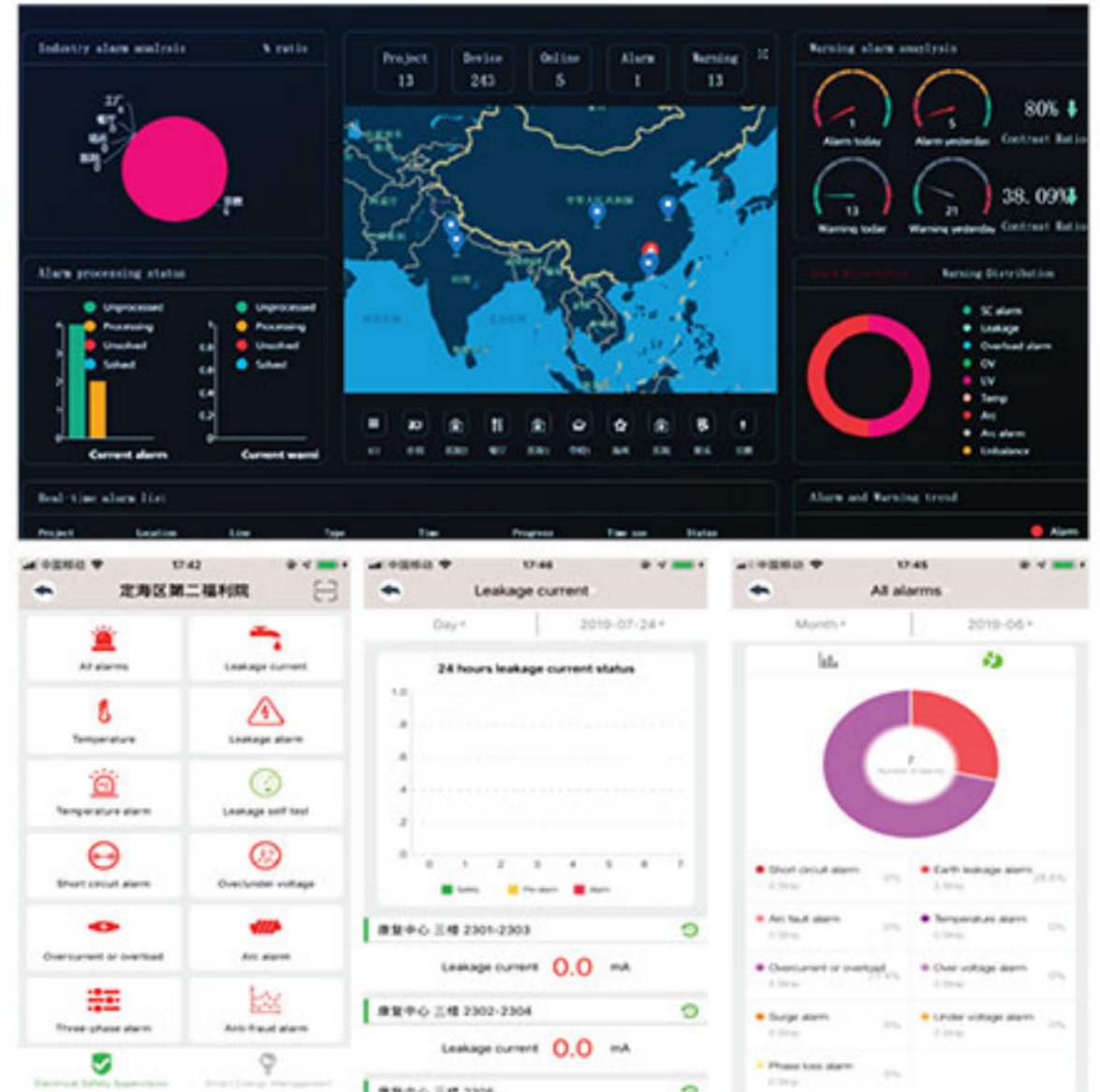


## BENEFITS

### SMART ELECTRIC SAFETY SUPERVISION

Continuous monitoring of electrical parameters makes it possible to detect electrical faults early and trigger warnings and alarms before any unforeseen events or fault occur.

- Reducing the electrical fault and avoiding untimely trip by more than 60%
- Makes electricity safer and smarter
- Monitors warning and alarm processing status
- Monitors the position of each project
- Warning and alarm information contrast and analysis daily and monthly
- Warning and alarm notice sent through app or sms
- Warning and alarm information exported in excel for record



### SMART ENERGY EFFICIENCY MANAGEMENT

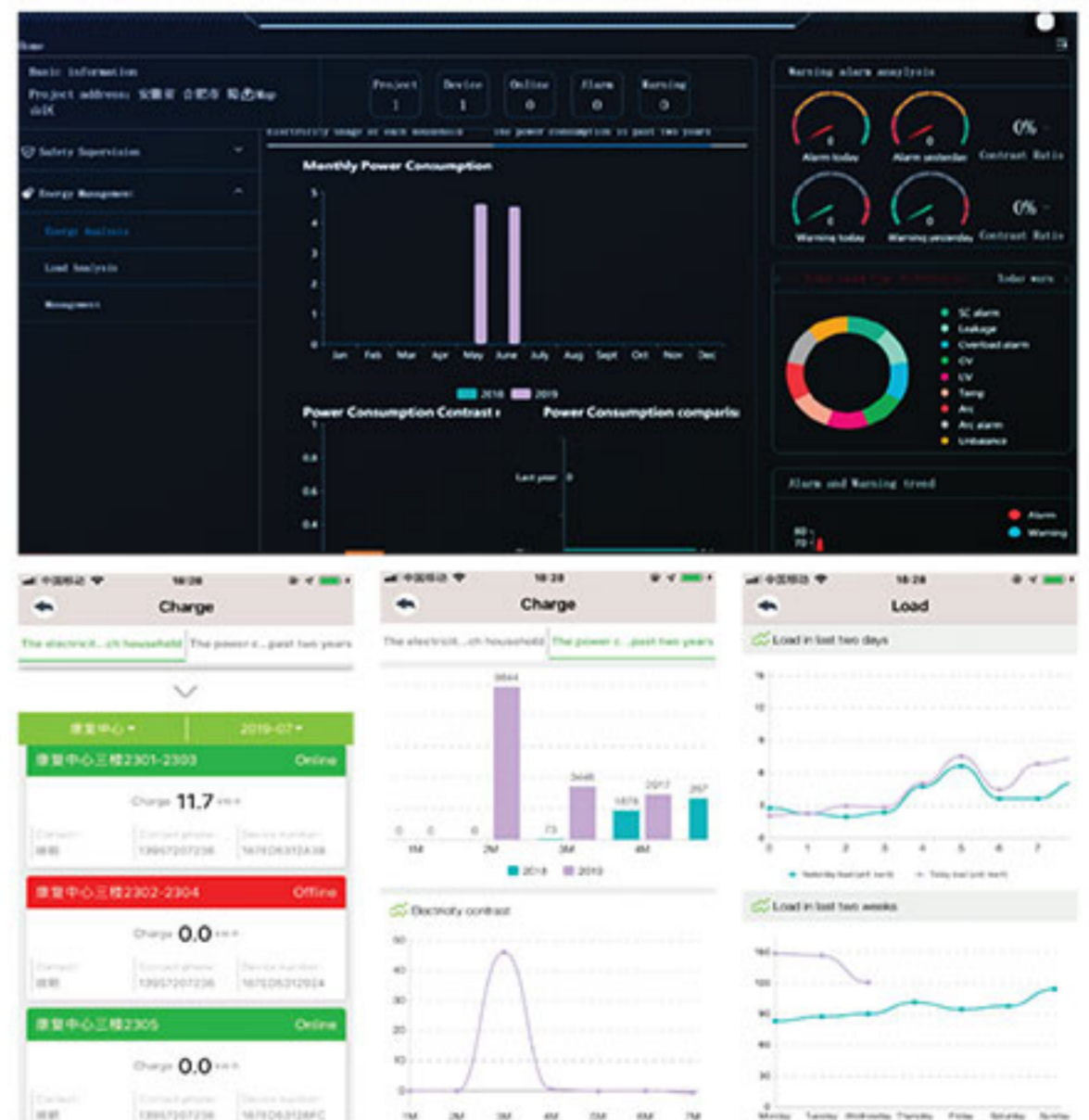
Energy efficiency can be a strong factor of competitiveness on the global market. Matismart offers:

- Metering of each load
- Better management of the energy cost center
- Energy saving above 30%
- Replacement of old technology with updated efficient solutions
- Employees' awareness of responsible use of energy
- Power consumption data contrast and analysis
- One monitoring system for all subsidiaries

### SMART CONTROL

Smart control makes life easier

- Remote control
- Remote lock and unlock
- Scheduled control
- Auto recloser



SOLUTIONS



APP MONITORING & MANAGEMENT

CLOUD CONNECTION

Configure | Control | Monitor from anywhere, any time

LOAD MONITORING

voltage | current | power | KVA | kWh  
electrical | process parameters  
detects failures automatically

INTEGRATED INSTRUMENTATION

Electricity | Gas | Water

SAVE ENERGY

Spend less on energy bills, manpower & maintenance

CUSTOMIZE

Dashboard | Reports | Screens

GET ALERTED!

Ensure up time instant sms & e-mail

BETTER ANALYSIS

Improved insight dashboards | charts | matrix

WIDE REPORT RANGE

Support a wide range of file formats such as Excel & Pdf



# APPLICATIONS



Commercial Buildings



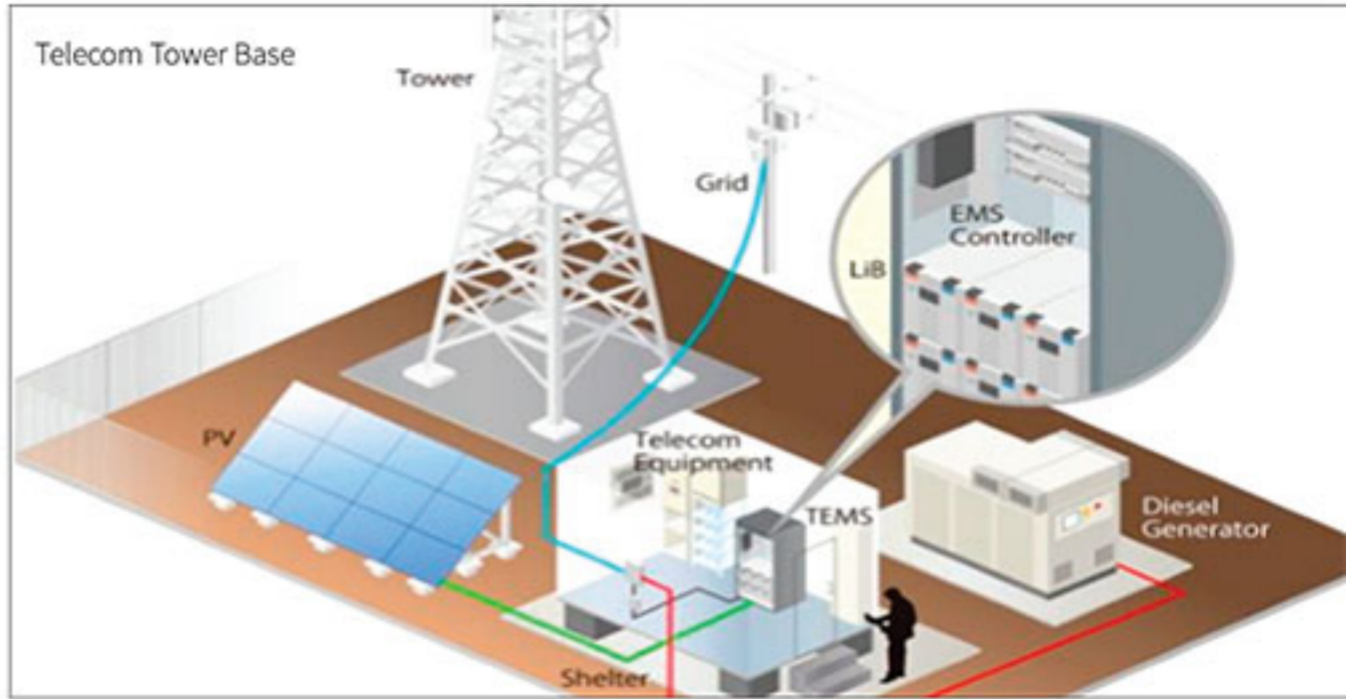
Residential Buildings



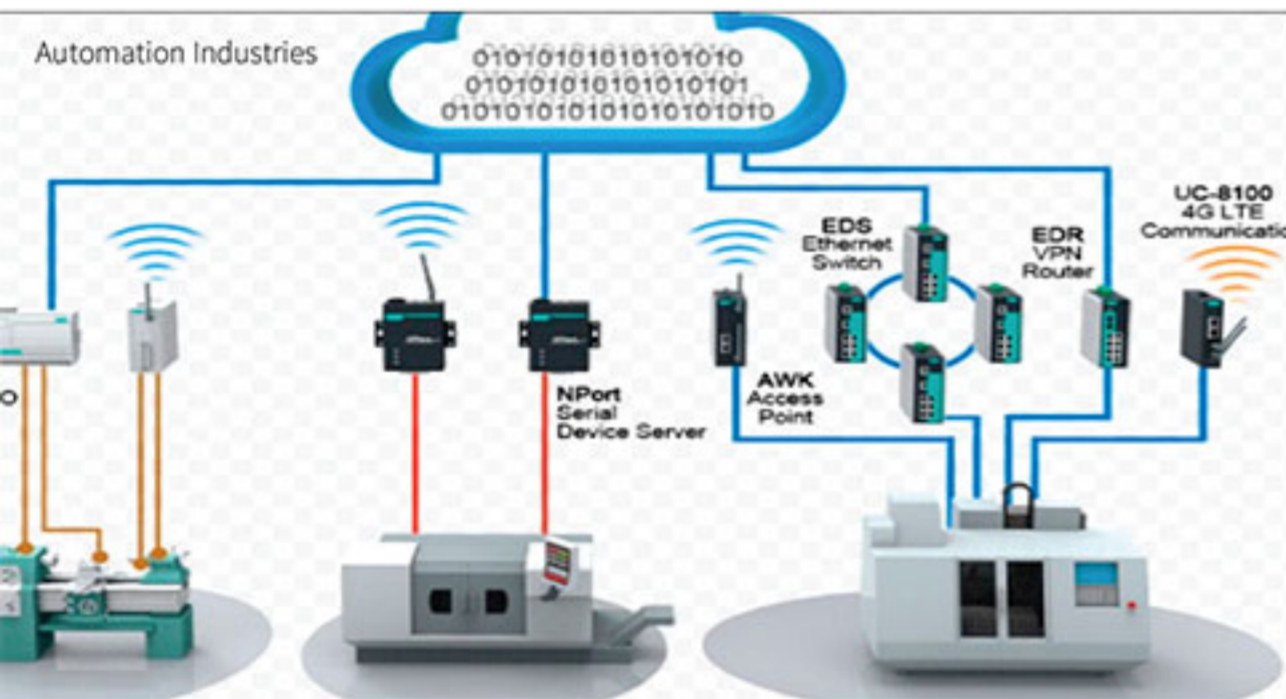
Industries



Utility Management Systems



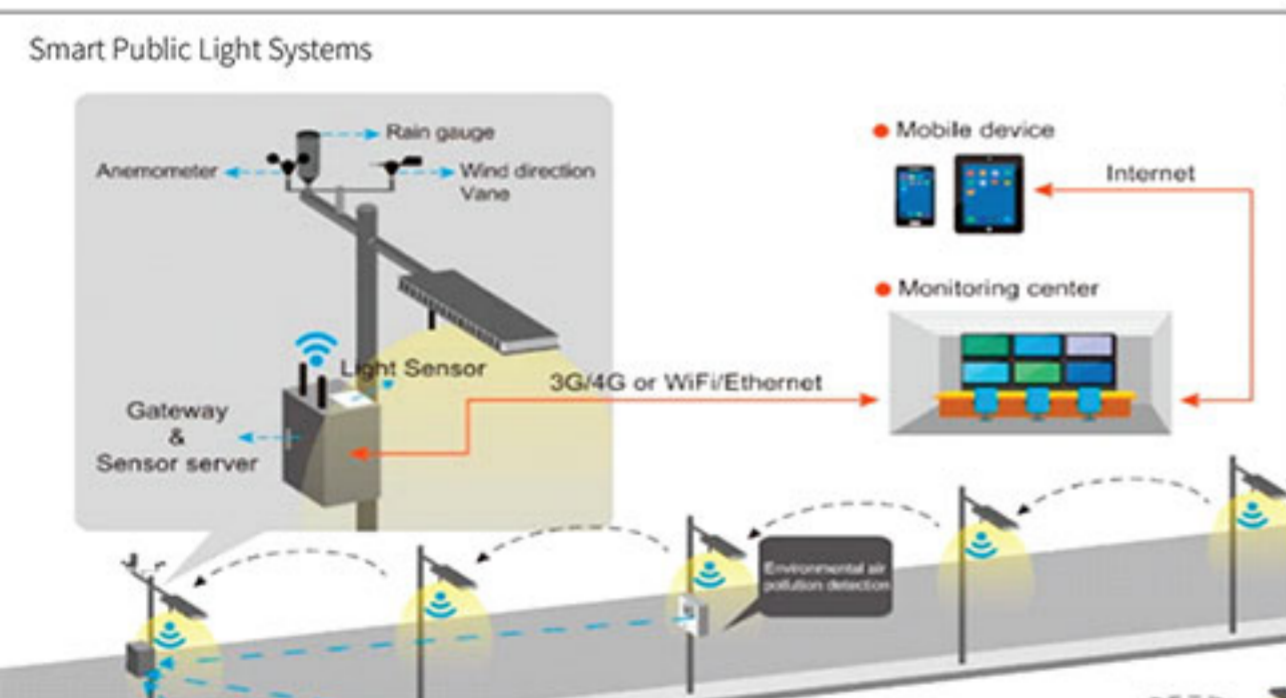
Telecom Tower Base



Automation Industries



Smart Communities



Smart Public Light Systems



Electric Vehicle Charging Stations



Data Management Systems



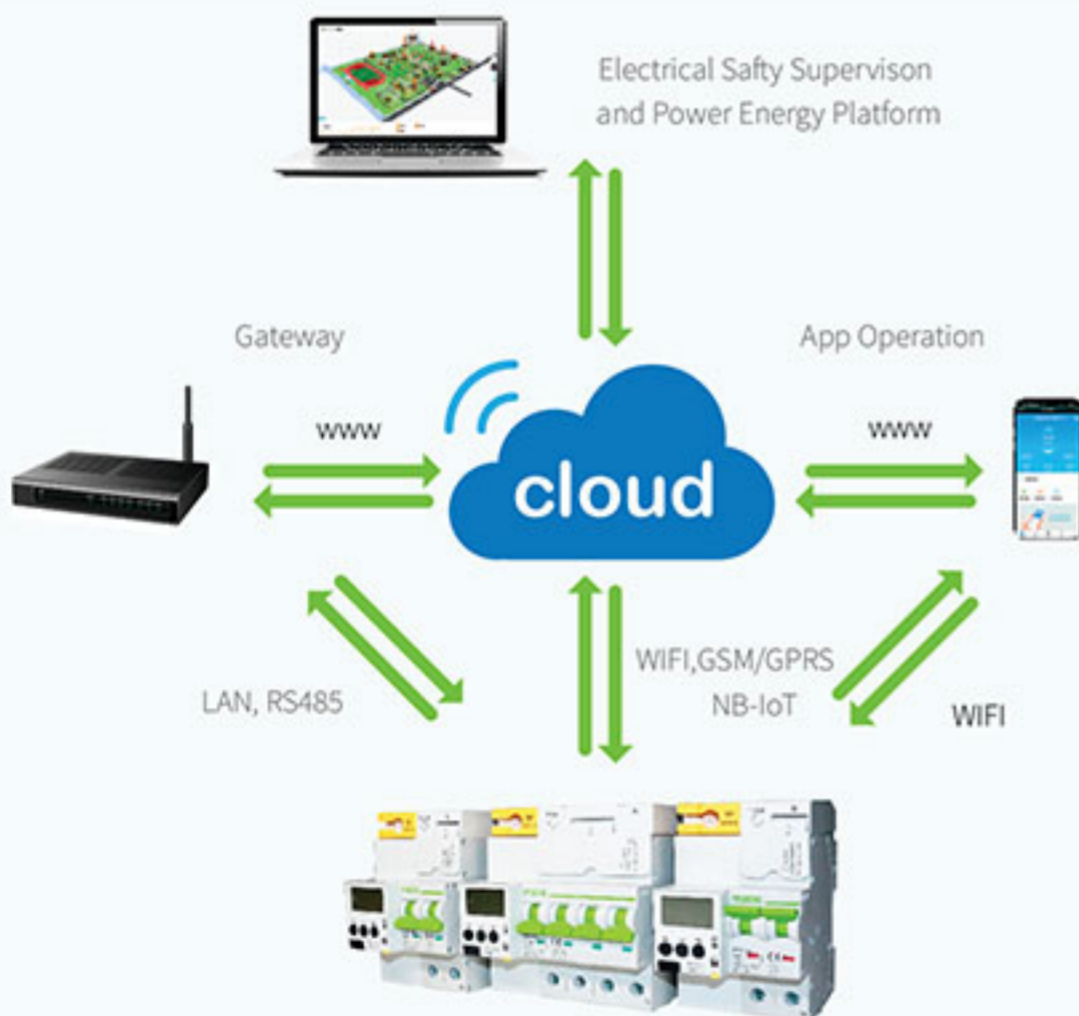
Transportation

MTS3 SMART IOT BREAKER



A smart electric safety supervision and power management system. Includes both hardware and software, which integrates the latest advanced technologies such as AI, Big Data, IoT and cloud computing. The system raises a pre-alarm before reporting a failure. Features: Online power management, real-time power efficiency monitoring, real-time monitoring of electrical circuit parameters (voltage, current, power KWH, etc) which identifies where energy savings are required. Save money on power bills through collected data and consumption analysis.

MT61GP SMART IOT BREAKER METER



MT61-GP a smart power meter which includes a hardware-smart metering breaker and software-power energy management platform for utilities and App for end-users. Integrates technologies such as AI, Big Data, IoT and cloud computing.



Effective consumption management, real-time monitoring, on-line payment, fault warning and alarming. Assists utilities to rationally plan energy usage, reduce energy consumption and improve operation environments.

POWER SUPPLY WITH SURGE PROTECTION



- Provides DC power from circuit breaker and communication module
- Provides lightning and surge protection
- Main technical parameters:  
Input Voltage: 100 - 250VAC  
Input Current: 3.5A  
Output Voltage: 12VDC
- Imax for lightning protection: 15kA
- Working with max. 10pcs iRCBO or iMCB

SMART METERING BREAKER - iMCB



- Full Protection: Overload, shor circuit, over/under voltage, arcing fault, phase loss, unbalance, high temperature
- Main Technical Parameter:  
Poles: 1P, 2P, 3P, 4P  
Rated Current (A):  
10, 16, 20, 25, 32, 40, 50, 63, 80  
Breaking Capacity: 6000A  
Curve: B, C, D

SMART METERING BREAKER - iRCBO

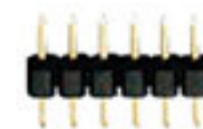


- Full Protection: Earth leakage, overload, short circuit, over/under voltage arcing fault, phase loss, unbalance, high temperature
- Main Technical Parameters:  
Poles: 2P, 4P  
Rated Current (A):  
10, 16, 20, 25, 32, 40, 50, 63, 80  
Rated Residual Current: 30mA  
Curve: C

COMMUNICATION MODULE



- Voltage: 12VDC
- Communication Modes: Wifi, LAN, NB-IoT, GSM/GPRS, Zigbee, LoRa
- Protocol: UDP, TCP/IP, Modbus
- Working with max. 24pcs iRCBO or iMCB



Connection pin

Connection is extremely simple and requires no special tools, all the modules in one row can be connected by connection pins



Flexible flat cable

Flexible flat cable is used for connection of multi-rows in power cabinet.

TECHNICAL SPECIFICATIONS

- Phases: 2P = 2 wires/ 3P = 4 wires
- Current (A): 20, 32, 40, 63, 80
- Curve: B, C, D
- Breaking Capacity: 6000A
- Voltage: 110/220V for
- Accuracy: Class 1
- Active and reactive metering
- Multi-tariff measurements:  
4 tariffs (peak, value, flat & shoulder)
- Data frozen: daily, monthly & quarterly
- Memory: 12 months

WIRED COMMUNICATION



RS485  
Protocol:  
Modbus, MQTT



GPRS 2/3G, LoRa  
NB-IoT, Wifi



### MTM5-EL SMART MCB

A smart electric safety supervision and power management system. Includes both hardware and software, which integrates the latest advanced technologies such as AI, Big Data, IoT and cloud computing. The system can realise pre-alarm before loading failure, online power management, real-time power efficiency monitoring, real-time monitoring of electrical circuit parameter (voltage, current, residual current, etc.) and help identify energy savings and further to save energy cost, through analysis of collected data, power consumption analysis.

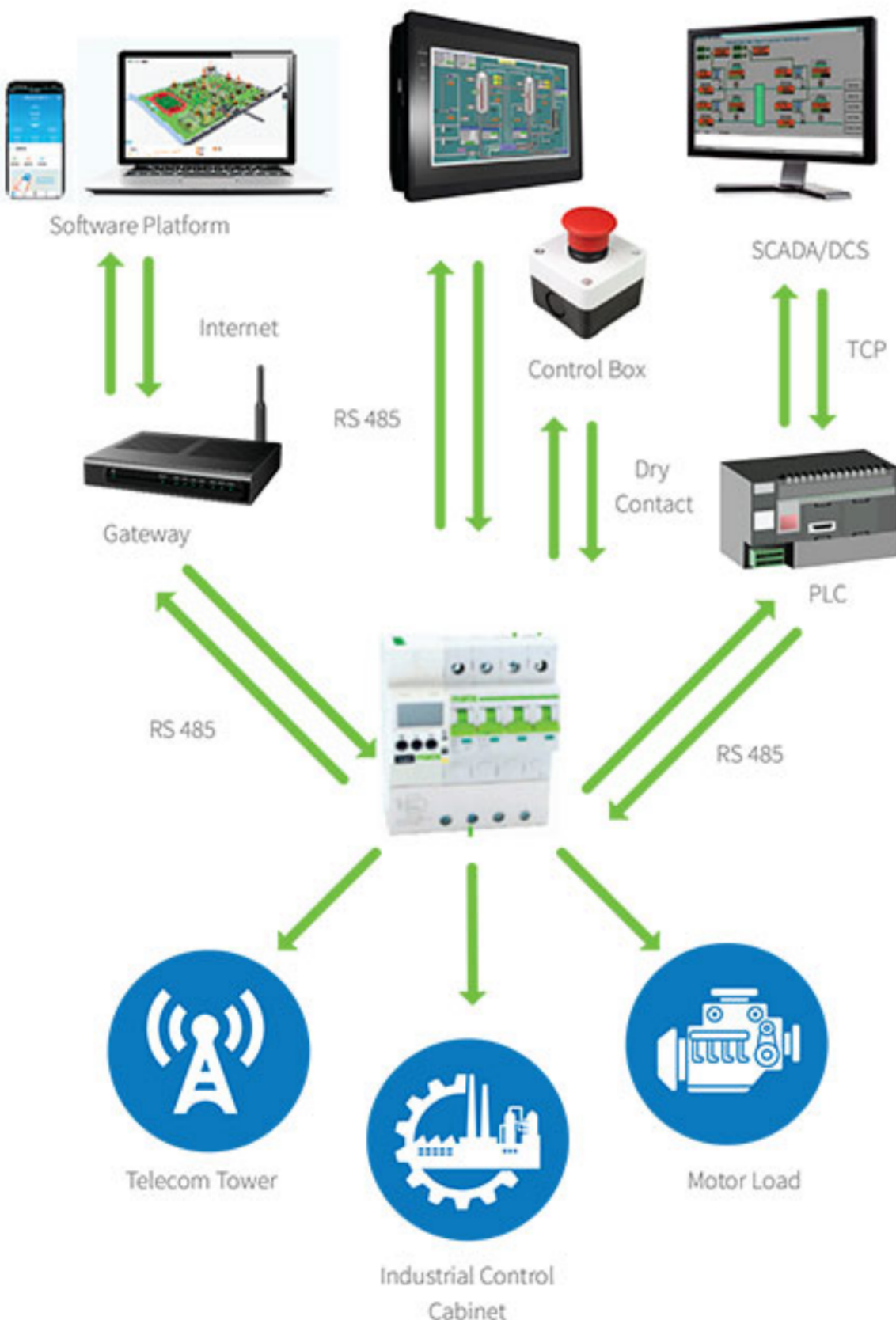
### TECHNICAL SPECIFICATIONS

- Phases: 3P, 4 wires
- Current (A): 125, 250, 400, 630
- Voltage: 380/400V
- Accuracy: Class 1
- Active & reactive metering
- Multi anti-tamper functions
- Multi-tariff measurements: 4 tariffs ( Peak, value, flat & shoulder)
- Data frozen: daily, monthly and quarterly
- Memory: 12 months of monthly data frozen data

#### WIRED COMMUNICATION



#### WIRELESS COMMUNICATION



### MT61 SMART RECLOSER

MT61SR is a smart breaker with earth leakage protection and reclosed after an ultimately tripping of the circuit breaker after the device/electrical circuit check.

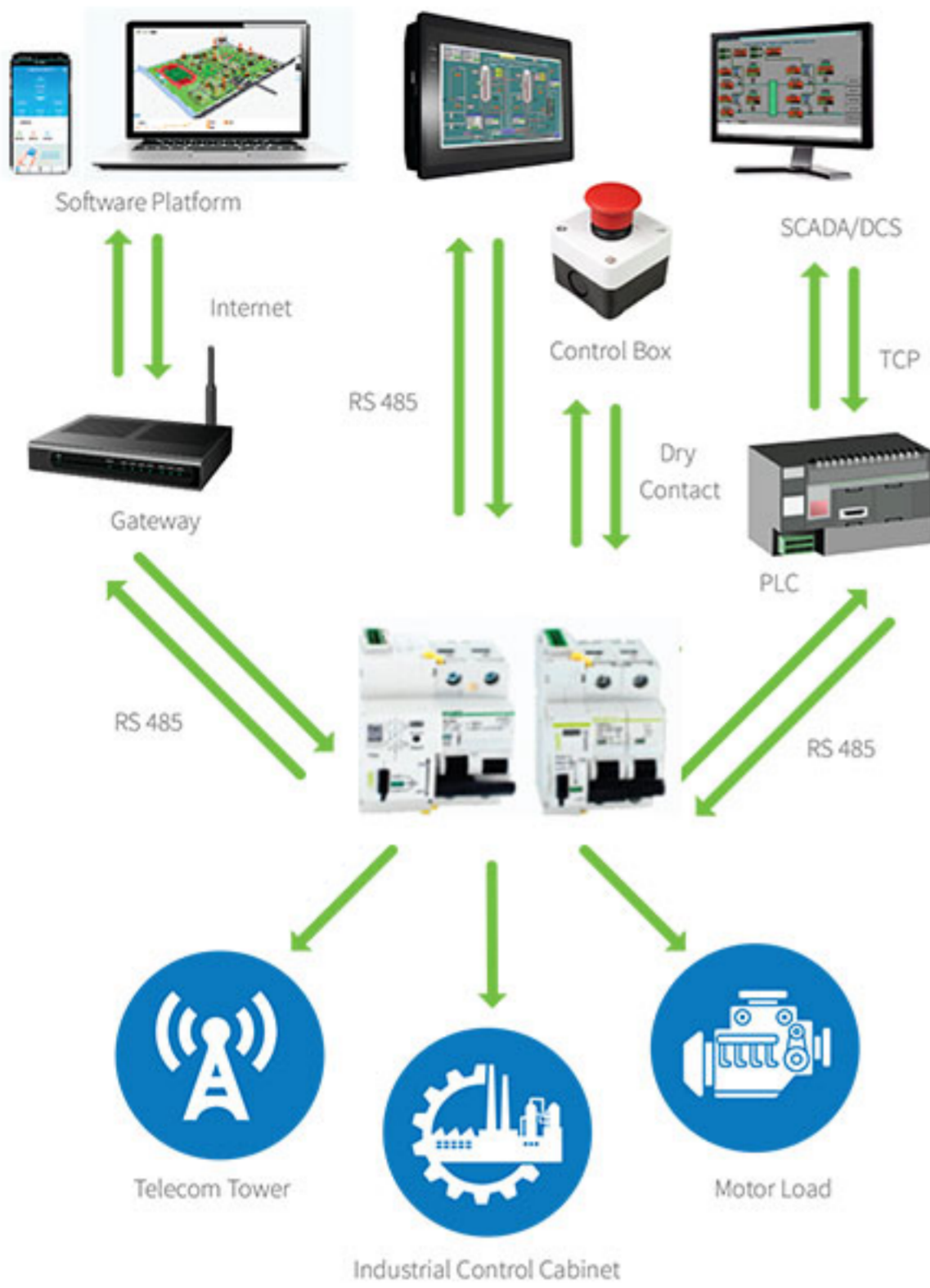
If a fault is logged, the device sets itself on block condition and signals the fault by means of the front LED indicator. Furthermore, the device integrated multi-protections, fault checking, auto-reclosing and communication together in one. With integration into industry control/SCADA, it may realize remote control, voltage and leakage current monitoring, over/under voltage protection value and leakage current value and delay time setting, historic record and events checking.

The MT61SR smart recloser can be used to carry out the following operations:

- Automatically reclosing
- Select a predefined reclosing program to ensure the safety and availability of installations, depending on the type of installation
- Padlock the automatic recloser

#### WIRED COMMUNICATION





## AUTO RECLOSER

The MT51 & MT53 automatic recloser are designed to automatically reclose the associated protective device after it has tripped. The insulation reclosing mode is used in case of high-sensitivity protection functions, so that the unit is only reclosed when the error that tripped it is resolved. The timed reclosing mode is adopted in the case of lower sensitivities in electrical complex installations, in order to guarantee the continuity of the electric supply. The unit has a locking system that determines the operation in manual or automatic mode (reclosing system enabled). The MT51RA/SA and MT53RA/SA automatic recloser devices are used in conjunction with MCB MM50H, RCBO MR50-32, RCB050-40, RCCB ML50H. The MT51RB/SB automatic recloser device is used in conjunction with Schneider's Actic9 MCB, RCCB, RCBO range.

## TECHNICAL SPECIFICATIONS

To be used in conjunction with MCB, RCCB, RCBO. The device can offer overload, short circuit, eart leakage protection and remote control function. MT51RB/SB can be used in conjunction with Schneider's Arti Range: MCB, RCCB, RCBOs. MT51RA/SA and MT53 can only be used in conjunction with Matis MCB, RCCB and RCBO.

### WIRED COMMUNICATION



RS485  
Protocol: Modbus

## PV AUTO RECLOSER

MT66-PV automatic reclosing breaker is designed for distributed grid-connected PV system specially, it can monitor the real time voltage of power from PV, the device will switch off or reclose automatically based on the voltage status from PV side.

## TECHNICAL SPECIFICATIONS

- Phases: 1P, 2 wires and 3P, 4 wires
- Current (A): 20, 40, 63, 80, 100, 125
- Voltage: 230/400A

NUMBER	POWER VOLTAGE FROM PV	INITIAL STATUS	AUTO MODE	AUTO MODE	CONT HOLDING TIME OF VOLTAGE
1	185V<=U<=285V	open	close	open	10 seconds
2	175V<=U<=290V	close	close	close	keeping initial status
3	U<175V	close	open	open	10 seconds
4	U<185V	open	open	open	keeping initial status
5	U<290V	close	open	open	10 seconds
6	U<285V	open	open	open	keeping initial status
7	U<45V (No Voltage)	close	open	close	10 seconds
8	Loss Phase (Only for 3 Phase and 4 Wires)	open	open	open	keeping initial status
9	Loss Phase (Only for 3 Phase and 4 Wires)	close	open	close	10 seconds



## FEATURES

- Smart power management for home or commercial properties, via app or software platform
- Real-Time consumption information, alarms and safety information
- Historical consumption data for up to 12 months (consumption, voltage and current fluctuations, load fluctuations)
- Remote control of specific circuits or the entire installation
- Over & Under voltage alarms & over voltage protection
- Arc Fault Alarm built in
- Over temperature protection and alarms

## INCLUDES THE FOLLOWING MODULES

Power supply x 1, Communication module x 1, Circuit breakers (Depending on application) , RCBO (Earth leakage Protection) x 1

## SOFTWARE PLATFORM FEATURES

- Electrical Safety Supervision - Monitoring of electrical circuit parameters in real time
- Device Location and Status shown on map
- Early warning of developing issues and alarms for faults
- Power management - energy flows and costs for the entire installation are available for analysis. Instantaneous and historical data can be used to effect improvements in efficiency and cost reduction.



### 6kA Earth Leakage Relay With Overload Protection RCBO - 30mA, AC Type, C-Curve

AMPS	2 POLE CODE - 3M WIDE	4 POLE CODE - 5M WIDE
32A	MTS3-R2AC30C32	MTS3-R4AC30C32
63A	MTS3-R2AC30C63	MTS3-R4AC30C63
80A	MTS3-R2AC30C80	MTS3-R4AC30C80

### 6kA Motorized Circuit Breaker C Curve (Din Modules 1M = 17.5mm)

AMPS	1 POLE CODE 1.5M WIDE	2 POLE CODE 2.5M WIDE	3 POLE CODE 4M WIDE	4 POLE CODE 5M WIDE
10A	MTS3-M1C10	-	-	-
20A	MTS3-M1C20	MTS3-M2C20	-	-
32A	MTS3-M1C32	MTS3-M2C32	MTS3-M3C32	MTS3-M4C32
40A	MTS3-M1C40	MTS3-M2C40	MTS3-M3C40	MTS3-M4C40
63A	MTS3-M1C63	MTS3-M2C63	MTS3-M3C63	MTS3-M4C63
80A	MTS3-M1C80	MTS3-M2C80	MTS3-M3C80	MTS3-M4C80

### Communication Modules - Supports up to 32 devices (RCBO & MCB)

CODE	DESCRIPTION
MTS3-CWF	Ethernet Gateway, WIFI or Wired Networks
MTS3-CRS	RS485 Serial Communication Gateway
MTS3-CZB	Zigbee Communication Gateway
MTS3-CG2	GPRS-2G Cellular Communication Gateway

### Accessories

CODE	DESCRIPTION
MTS3-P6	6-Pin Connector for Adjacent Devices
MTS3-CT100	6-Pin Connection Cable for Separated Devices 100mm
MTS3-CT200	6-Pin Connection Cable for Separated Devices 200mm

### Power Supply Module c/w Surge Protection

CODE	INPUT	OUTPUT VOLTAGE	OUTPUT CURRENT	IN	IMAX	DISPLAY
MTS3-P25N	100-260VAC	12VDC	2,5A	10kA	15kA	N
MTS3-P25D	100-260VAC	12VDC	2,5A	10kA	15kA	Y

Class II Surge Protection. Can power up to 10 devices (RCBO & MCB)

## SMARTPHONE APPLICATION FEATURES



App home screen. iTimer allows scheduled to be set for applications eg: pool pumps & geysers.



View status of smart circuit breaker including temperature, current, voltage, power and leakage current (for RCBO).



View current and historical consumption data in text or graphical format by Day / Week / Month.



Do a remote earthleakage test or schedule the unit to test and report automatically at set times.



View a log of all alarms and status reports.



Master switch to power down an entire installation.

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