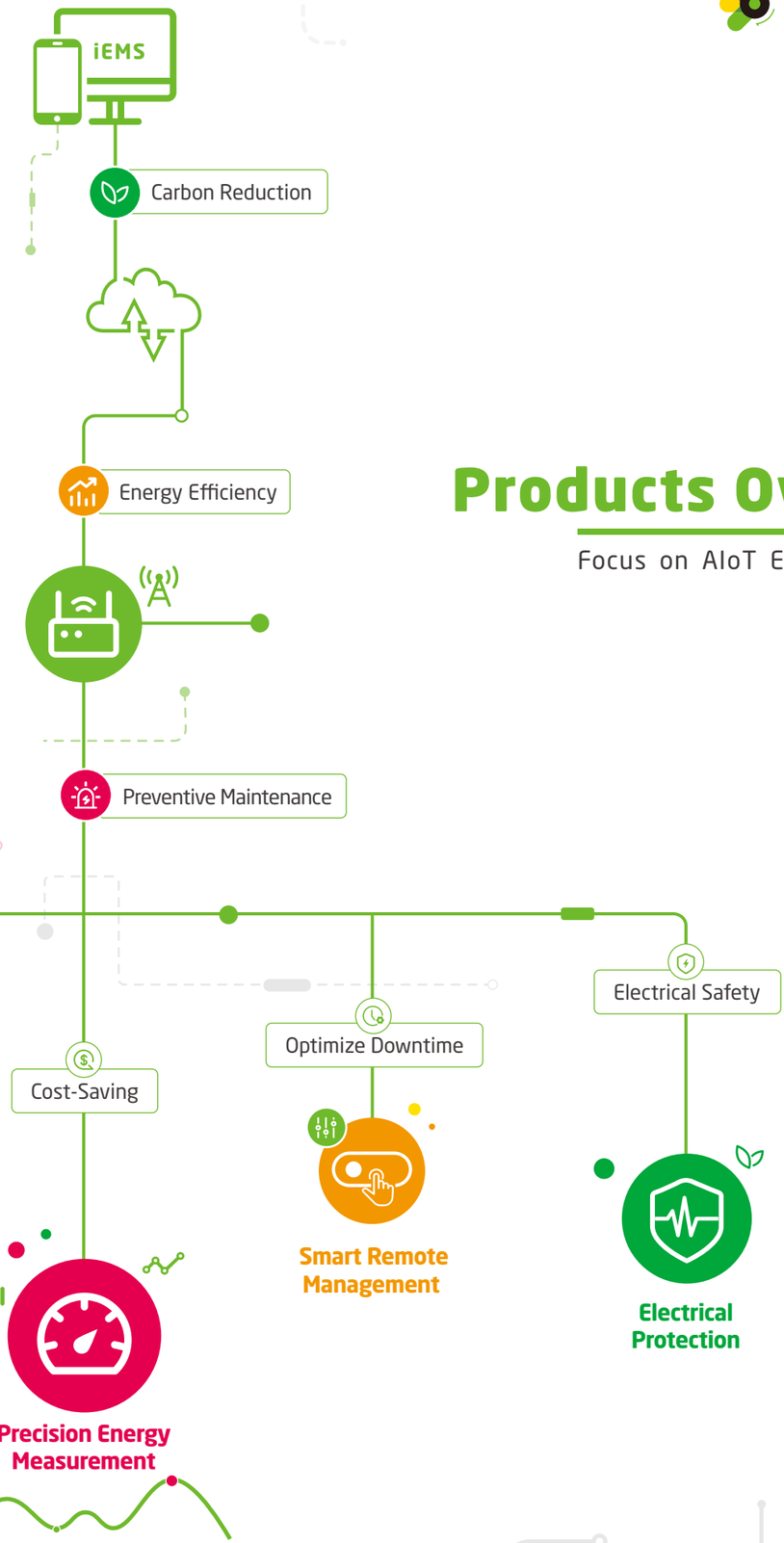
matismart
AIoT Electric

Smarter Electric, **Safer** Efficiency!



Products Overview

Focus on AIoT Electrical Solutions

SHANGHAI MATIS ELECTRIC CO., LTD

info@matismart.com
www.matismart.com
+86 15801814653
+65 83770773
Room 318-320, No.83, West Huanghu Road, Pudong, Shanghai, China 201306

Website

YouTube

CONTENTS

01 About Matismart 01

02 Enertrek Multi-Circuit Power Monitoring System 03

03 Power Meter Products 09

04 Re-closer & Remote Control Devices 17

05 Smart MCBs & MCCBs 27

06 Smart Gateways 31

07 Tuya Connected Devices 33

08 Specified Products for Telecom Tower Base Stations 35

09 Traditional Breakers 37

10 Industry Solutions 39

Smarter Electric, Safer Efficiency!

Data Center | Commercial Buildings | Industrial Manufacturing | Residential

matismart
AIoT Electric

About Matismart

Pioneering AIoT solutions provider

Shanghai Matis Electric Co., Ltd.

Matismart is a leading global technology innovator in advanced AIoT electric solutions. Our core strength is rooted in a deep commitment to R&D and solidified by proprietary, vertically integrated manufacturing capabilities (our own factory), allowing us to deliver reliable, end-to-end systems that redefine electrical safety and energy management.



Smarter Electric, Safer Efficiency!

MISSION
Creating safer and smarter electricity for human being.

VISION
Creating safer and smarter electricity for human being.

CORE VALUE
Sincere, Innovation, Teamwork, Concentration.

We provide customized EMS solutions that seamlessly blend sophisticated smart hardware with powerful cloud-based software platforms. This integration ensures comprehensive safety protection while enabling continuous real-time energy efficiency optimization, allowing clients to instantly identify and correct inefficiencies and drastically reduce waste.

Furthermore, we developed a versatile remote-controlled switchgears to help people achieve more safety and higher efficiency

Smarter Electric, Safer Efficiency! Matismart is engineered to create a tangible strategic impact across diverse, demanding sectors. We deliver tailored, customized industry solutions for environments where power resilience is mission-critical, including data centers, telecom, Industry 4.0, IoT, smart buildings, infrastructure, smart homes, etc. By empowering these sectors to achieve ultimate efficiency, cut costs, and minimize their carbon footprint, Matismart stands as the strategic partner driving the global transition toward a smarter, safer, and inherently sustainable electrical future.



Our Factory



Our R&D Team

We Start with Innovation

25+
Copyrights

50+
Patents



We Are Your Certified Choice



We Build Trusted Relationships

Schneider Electric · AMERICAN TOWER · viettel · SUNWODA ENERGY · HUAWEI · CHINT ELECTRICS · SUNGROW Clean power for all · Star Charge · DELTA · INOVANCE · AUO · HIKVISION



matismart
AIoT Electric

Enertrek Multi-Circuit Power Monitoring System Application Diagram

MQTT

4G/WiFi/Ethernet/3 in 1

Cloud

iEMS
Software
Platform

Display Panel

RS485

Smart Gateway

WiFi 4G

Voltage Unit

G30 C20 C30 V10

RS485

Energy Sensor (1~4P, Up to 63A, Class 0.5)

MT53RS+MCB(1P~4P)

MT53RI+MCB(1P~4P)

Energy Meter Energy Analyzer

E10: Up to 600A
Class 0.5
E31: Up to 10000A
Class 0.5

E10 E10 E31
(with THD)

DIO Module AIO Module

DIO 4/2 DIO 4/2 DIO 4/2 DIO 4/2 AIO 2/2

IO Control

IO Control

IO Control

IO Control

IO Control

CTA 5A/2.5mA

CTO Ø16-46mm 200-800A

CTF Ø50-300mm 800-10000A

Fixed CT

MCCB

ACB

MTM5M

Motor

Motor Operator

MCCB+MO3-160

Frequency converter

Temperature sensor

Humidity sensor

Smoke sensor

Current sensor

●●●

Three-Phase Multifunction Meter
(with PQ Measurement)

PEM3353-A
(with CT, Class 0.5S)

PEM3553-A
(with Rogowski Coil, Class 0.5S)

Multi-Circuit Multifunction Meter
(with PQ Measurement)

MPM4410-A

- 4 x 3 phase
- Web server
- Ethernet/ Modbus TCP
- Class 0.5S

Power Meter
(Ordinary Type)

SEM2250 & SEM3250
(Up to 80A, Class 1.0)

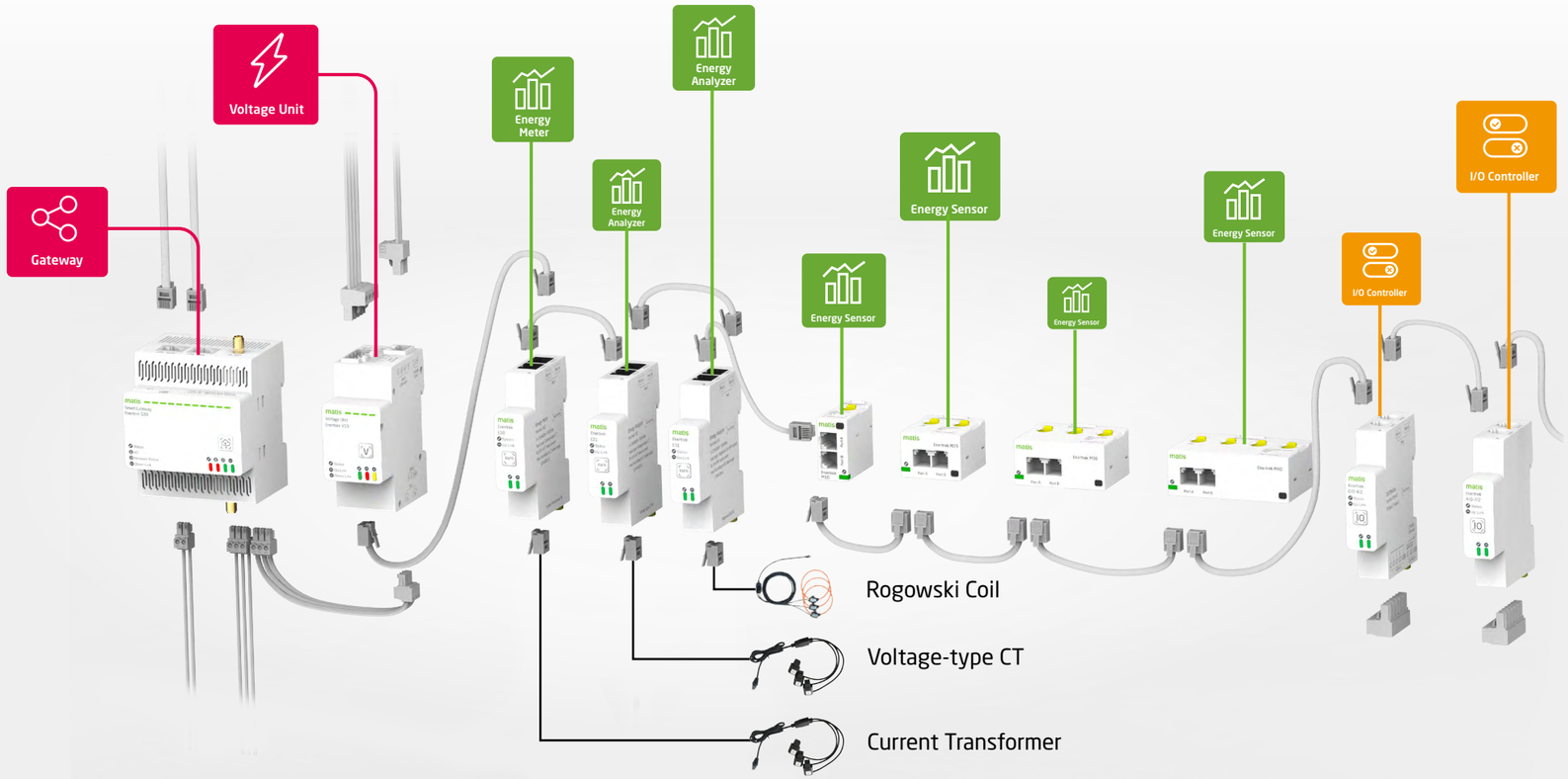
Multifunction Smart Metering MCB

MT61GP 2P/4P
(Up to 80A Class 1.0)

RS485

matismart
AIoT Electric

Enertrek Multi-Circuit Power Measuring and Monitoring System



Applications

- Data Center
- Industrial Power Distribution
- Commercial Building Power Monitoring

75% Space Reduction

10% Energy Savings

3X Maintenance Efficiency

50% Faster Installation

System Features

Dynamic Scalability
Supports over 20 circuits, adjust monitoring modules based on load requirements.

Automatic Address Recognition
Automatically detects and assigns a unique address to new devices on the main bus, eliminating the need for manual setup.

Zero-downtime Installation
Allows for hot-swappable installation without shutting down the system, ensuring continuous and uninterrupted operation.

Seamless Communication
Supports MQTT, Modbus-TCP, SNMP 2.0 and other protocols, enabling seamless integration into various energy management systems.

Modular Design & Easy Installation
Adopts a modular design with RJ12 plug-and-play connection, simplifying installation and reducing labor costs.

Accurate Real-time Monitoring
High-precision measurement of voltage, current, power, and harmonics. Metering accuracy is Class 0.5.

Intelligent Safety & Proactive Monitoring
Ensures stable and safe power distribution with real-time fault detection, smart energy analysis, and proactive alarms to boost reliability.

matismart
AIoT Electric

Main Components of Enertrek System

1 Data Acquisition & Remote Access to Measurement Data



Connectivity:
4G /Ethernet / Wi-Fi
Protocols:
MQTT/ Modbus-TCP / SNMP 2.0

Smart Gateway
Enertrek G30



iEMS Software Platform

2 Voltage Acquisition Module & Local Display



Each V10 supports connecting 20 modules

Enertrek V10



Display Panel Enertrek D10



Config. Software Enertrek Version

3 Enertrek M & E: Current Acquisition for AC Measurement



Metering Accuracy: Class 0.5
1-4P 63A

Energy Sensor
Enertrek M10/ M20/ M30/ M40



Metering Accuracy:
Class 0.5 (single module)
Class 1.0 (with CT)
3P up to 10000A

Energy Meter & Analyzer
Enertrek E10 (ordinary)
Enertrek E21&E31 (with THD)

4 Split-core Current Transformer (C / V) & Rogowski Coil



Metering Accuracy
Class 0.5

CTO (Current or Voltage Type)
Ø16-46mm
200-800A



Metering Accuracy
Class 0.5

CTF
Ø50-300mm
800-10000A



Metering Accuracy
Class 0.5

CTA
5A/2.5mA

5 Enertrek IO: Analog & Digital Input/Output Module



4 Input, 2 Output

DIO Module
DIO-4/2



2 Input, 2 Output

AIO Module
AXIO-2/2

Enertrek Can Connect to Any Device That Supports The Modbus Communication Protocol

1 Remote Controlled MCB



MT53RS+MCB (1-4P)
(RS485)



MT53RI+MCB (1-4P)
(IO)

2 Power Meters

Three-Phase Multifunction Meter
(with PQ Measurement)



PEM3353-A
(with CT, Class 0.5S, RS485)



PEM3553-A
(with Rogowski Coil, Class 0.5S, RS485)

Power Meter
(Ordinary Type)



SEM2250
(Up to 80A, Class 1.0, RS485)



SEM3250
(Up to 80A, Class 1.0, RS485)

Multi-Circuit Multifunction Meter
(with PQ Measurement)



MPM4000
(with CT or Rogowski Coil, Class 0.5S, RS485&Ethernet)

3 Smart MCB & MCCB & ACB



MT61GP 2P/4P
(Up to 80A, Class 1.0)



MTM5M 2P/4P
(Up to 630A, Class 1.0)

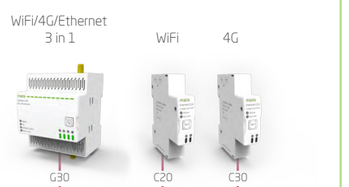


ACB

matismart
AIoT Electric

Power Meter Family - Precise Power Measurement & Monitoring for Diverse Applications

Smart Gateway



RS485

MQTT

Enertrek Multi-Circuit (20+)Scalable Meter Modules

Scalable Meter Modules 20+

Enertrek E10
Energy Meter
- Up to 600A
- Class 0.5

Enertrek V10
Voltage Unit
- Up to 20 sub-module
- Voltage Accuracy 0.2%
- Panel-mounted
- Local screen control



CTO
Split-core Current Transformer(C)
- φ16-46mm
- 200-800A

CTA
Split-core Current Transformer(C)
- 5A/2.5A



Enertrek E31
Energy Analyzer
- Up to 10000A
Class 0.5

CTF
Rogowski Coil Current Sensor
- φ 50mm - 300mm
- Up to 600A



Enertrek M10~40
Energy Sensor
- 1-4P
- Up to 63A
- Class 0.5
- Fits all MCBs
- RJ12 connector
- Integrated temperature detection



RS485

Multi-Circuit Multifunction Meter
(with PQ Measurement)



MPM4410-A
- 4 x 3 phase
- Class 0.5S
- Non-intrusive Installation via RJ45
- Power quality measurement
- 6-tariff metering
- RS485(Modbus-RTU) ,
- Ethernet(Modbus-TCP)
- demand measurement,
- max/min value, alarm

iEMS Software Platform



MQTT

WiFi-Connected Power Monitoring Sensors



BPM3500
- 3 phase
- Up to 250A
- Class 1.0
- Wi-Fi / Zigbee / Modbus communication

BPM3110 & BPM1110
- 3 phase & 1 phase
- Maximum current is 63A
- Class 1.0



Power Meter
(Ordinary Type)

SEM2250
- Bi-directional metering
- RS485 Modbus_RTU
- DIN rail 35mm
- A directly connected 80A
- Class 1.0





SEM3250
- Bi-directional metering
- RS485 Modbus_RTU
- DIN rail 35mm
- A directly connected 80A
- Class 1.0

Multifunction Smart Metering MCB



MT61GP/GR
- 2P/4P
- UP to 80A
- Auto-recloser+Meter+Breaker +Protection+control
- ALL IN ONE
- Bidirectional Metering
- RS485 Modbus &MQTT
- Class 1.0

RS485

Three-Phase Multifunction Meter
(with PQ Measurement)

PEM 3353 & 3553
- Class 0.5S
- Power quality measurement
- Non-intrusive connection via RJ12
- RS485 (Modbus-RTU) plus DI/DO
- 6-tariff metering
- Demand measurement, alarm
- 2.0-inch TFT screen





Industrial Application

Commercial Applicaiton

Residential Applicaiton

matismart
AIoT Electric

Enertrek Current Modules



- **Versatile Measurement**
  Monitors lower current (up to 63A) and high current (up to 10kA with CTs)
- **High Accuracy**
  Accuracy class 0.5, supports THD and harmonic analysis up to the 63rd for Advanced Module E31.
- **Modular & Compact**
  Start at a compact 18mm width.
- **Comprehensive Data**
  Measures energy (±kWh, ±kvarh), total power (P, Q, S), power factor, and per-phase power.
- **Robust Connectivity**
  Modbus RTU protocol via RJ12 interface.
- **Multi-Tariff & Alarms**
  Supports up to 5 tariffs. Alarms for overcurrent, overload, and harmonics.



Energy Meter & Analyzer

E10 (with Current Type CT, without PQ Measurement)
E21 (with Voltage Type CT, with PQ Measurement)
E31 (with Rogowski coil, with PQ Measurement)

- High Current 0-10000A
- Class 0.5
- Three-Phase
- Compatible with split-core CTs and Rogowski coils.
- Automatic CT recognition and verification.



Energy Sensor

M10 / M20 / M30 / M40

- Low Current 0-63A
- Class 0.5
- 1-4P
- Temperature Monitoring

Power Meters with PQ Measurement Capabilities

PEM3000 Multi-Function Power Meter



- **High-Precision Metering**
  Active energy accuracy **0.5S**, voltage accuracy0.2%, and current accuracy±0.1%.
- **Comprehensive PQ Analysis**
  Measures harmonics (up to 50th), phase angle, and unbalance for system health.
- **Effortless RJ12 Install**
  Non-intrusive connection with Rogowski Coils/VCTs via RJ12 interface.
- **Intuitive LCD Interface**
  2.0-inch TFT screen with buttons for local data viewing and configuration.
- **Advanced Management**
  Supports 6-tariff metering, demand measurement, and alarm functions.
- **Robust Connectivity**
  Features RS485 (Modbus-RTU) plus DI/DO for automation.
- **Built for Durability**
  Operates within -20°C to +70°C, IP20-rated for DIN rail mounting.



MPM4000 Multi-Circuit Power Meter

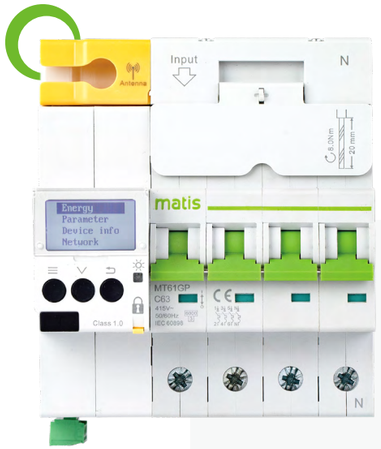
- **Multi-Circuit Metering**
  Up to four three-phase circuits.
- **Fast & Non-intrusive Installation**
  Open-loop Rogowski Coils or VCTs with RJ45 interfaces.
- **High Accuracy**
  Energy accuracy **0.5S**, voltage accuracy 0.2%, current accuracy ±0.1%
- **Comprehensive Monitoring**
  Measures over 250 electrical parameters, including harmonics (up to the 50th), demand, multi-rate energy, and power quality analysis.
- **Advanced Functions**
  Multi-rate metering (up to 6 tariffs), demand measurement, max/min value recording, and digital signal output for alarms.
- **Robust Connectivity**
  Features standard RS485 and Ethernet interfaces, supporting Modbus-RTU and Modbus-TCP.

Multi-Function Smart Metering Breaker
MT61GP / MT61GR

1. All-in-One Smart Metering Breaker
Integrates metering, protection, control, and automatic reclosing into a single device.

2. Advanced Energy Monitoring
- Bidirectional Metering with Class 1 accuracy
- Real-time energy tracking
- Up to 4-tariff metering
- Smart demand management

3. Digital Simulated Circuit Breaker
- Intelligent Overload Thermal Accumulation Protection
- Programmable Short-Circuit Delay Protection
- Digitally implemented via MCU with configurable settings.
- Customizable Tripping Curves via Algorithms



MT61GP
2P / 4P, Up to 80A

4. Redefinable Rated CurrentSmart Auto-Reset Protection
- Detects a wide range of faults: Over/under-voltage, phase loss, power failure, leakage detection, etc.
- Customizable protection: Set your own voltage and current thresholds.
- Automatically restores power after a fault is resolved.



MT61GR
2P / 4P, Up to 80A

5. Remote Control & Reclosing
- Auto-reclosing (current faults & leakage)
- 20 reclosing sequences programmable
- RS485/dry contact control

6. Seamless Communication & Integration
4G/Wi-Fi, Modbus & MQTT

7. Proactive Alerts
Real-time outage/surge/ imbalance notifications

Power Meter with WiFi Connectivity

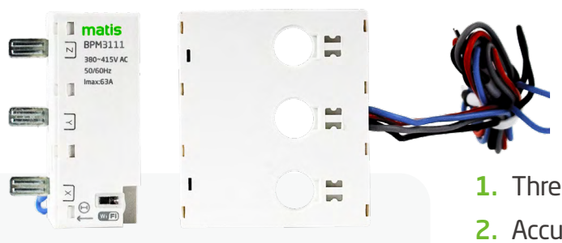
BPM3500 — Energy Monitoring Module with Split core CT

1. Three-phase and multi-circuit single-phase design.
2. Two-way energy metering.
3. Enables dynamic load balancing and PV output limitation.
4. 18mm ultra-thin DIN rail installation.
5. With three built-in open-core CTs.
6. Maximum current is 250A.
7. Accuracy is Class 1.0.
8. Wi-Fi / Zigbee / Modbus communication.



3P, Up to 250A

BPM3100 — Three-phase Compact Smart Energy Monitoring Sensor



3P, Up to 63A

1. Three-phase Design.
2. Accuracy is Class 1.0.
3. Supports Wi-Fi, Zigbee, and BLE communication.
4. Maximum current is 63A.

BPM1100 — Single-phase Compact Smart Energy Monitoring Sensor

1. Single-phase design.
2. Fits above or below breaker.
3. Accuracy is Class 1.0.
4. Supports Wi-Fi, Zigbee, and BLE communication.
5. Maximum current is 63A.



1P, Up to 63A

matismart
AIoT Electric

Ordinary Power Meter



SEM2250

Single-Phase Multifunctional
DIN Rail Meter

2P / 4P, Up to 80A



SEM3250

Three-Phase Multifunctional
DIN Rail Meter

2P / 4P, Up to 80A

1. Measures kWh, kVArh, kW, kVAr, kVA, PF, Hz, dmd, V, A, etc.
2. Bi-directional measures IMP and EXP.
3. One pulse output, active energy pulse.
4. RS485, Modbus_RTU.
5. DIN rail 35mm.
6. 80A directly connected.
7. The product shell and base are welded by ultrasonic waves, cannot be disassembled.
8. Degree of protection according to IEC 60529:IP20.

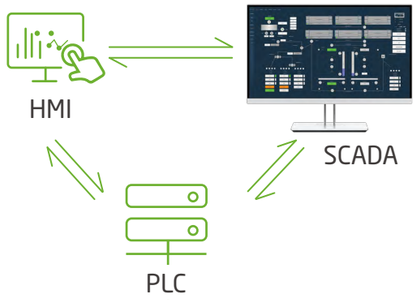
NEXT

Re-closer & Remote Control Devices

matismart
AIoT Electric

Smart Breaker Products Family - Your Remote Control & Smart Protection Solutions

Industrial Application



Smart Metering MCB & MCCB



MT61GP & GR | MT88M | MTM5M

IO Control

Smart Reclosing Device



MT51SD (Insulation Detection Function) | MT84SR (OUPD Function) | MT61SR (OUPD + RCBO Function) | MT5EL

Auto-Reset RCCB & Remote-Controlled MCB



MT51AI+RCCB | MT53AI+RCCB | MT53RI+MCB

Commercial Application



iEMS Software Platform

Cloud

MQTT

4G/WiFi/Ethernet /3 in 1



Smart Gateway

RS485 Control

Smart Metering MCB & MCCB



MTS5 | MT61GP & GR | MT88M | MTM5M

Smart Reclosing Device



MT51SD (Insulation Detection Function) | MT84SR (OUPD Function) | MT61SR (OUPD + RCBO Function) | MT5EL

Auto-Reset RCCB & Remote-Controlled MCB



MT51AS+RCCB | MT53AS+RCCB | MT53RS / MT53RV / MT53RST +MCB

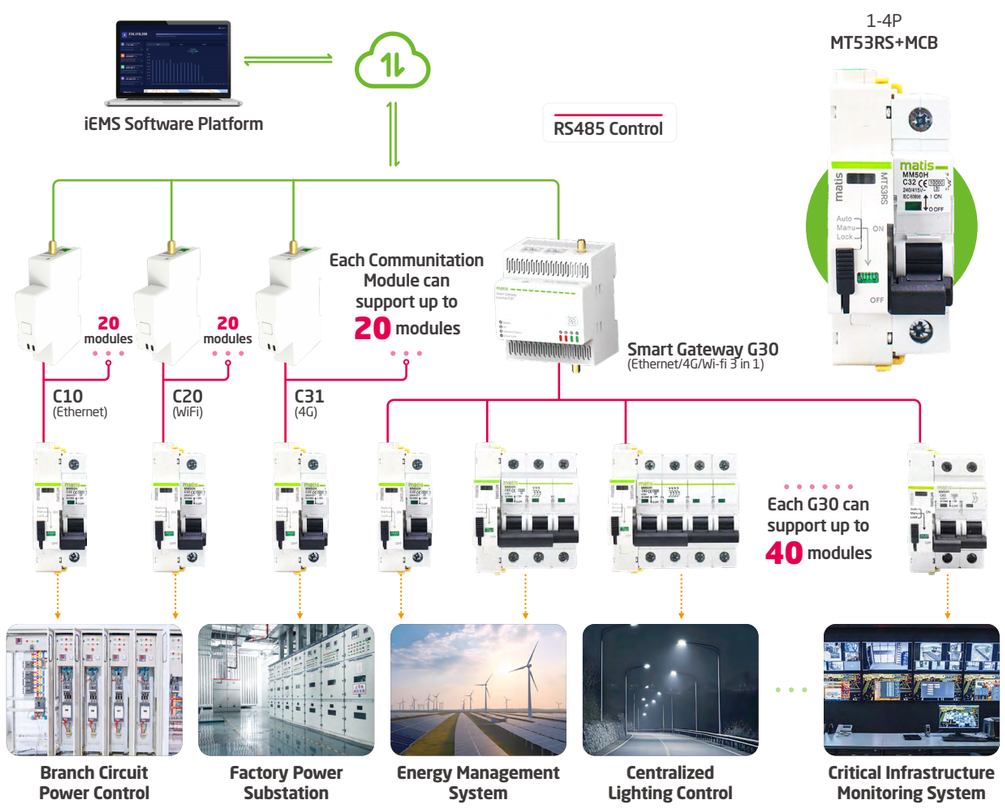
matismart
AIoT Electric

The Remote Control Auxiliary for MCBs

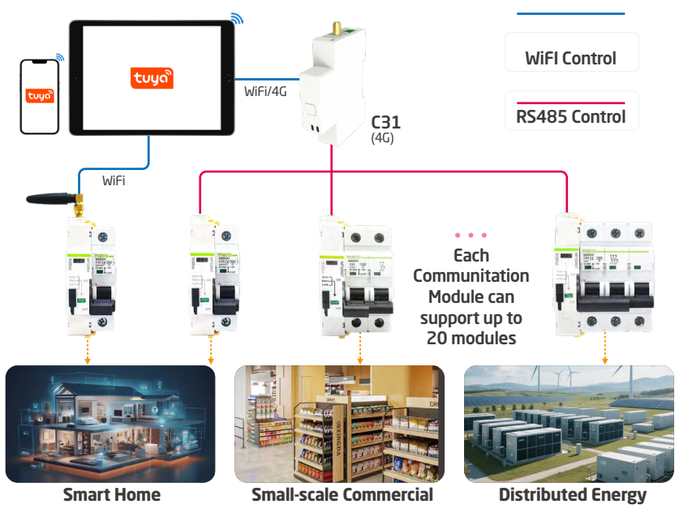
MT53RS/ 53RW / 53RI + MCB

- **Universal Compatibility**
  Can be coupled with branded breakers from Matismart/ Schneider/ Chint/ Hager/ Eaton, etc.
- **Three Optional Remote Control Methods**
  RS485 Control by MT53RS
  IO Control by MT53RI
  WiFi Control by MT53RW
- **Auxiliary Status Output Optional**
- **Dry Contact Output**
- **Space-saving 18 mm Design without Breaker**

Remote Control Diagram via RS485 MT53RS + MCB



Remote Control Diagram via WiFi MT53RW+ MCB

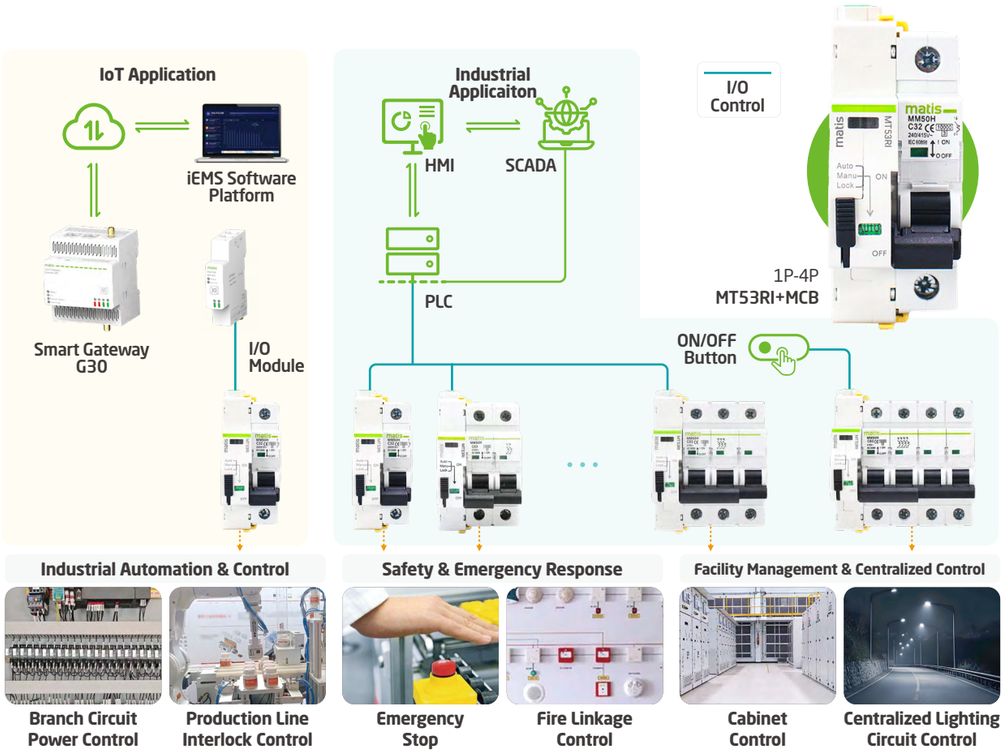




MT53RST+MCB
1-4P

MT53RW+MCB
1-4P

Remote Control Diagram via IO MT53RI+ MCB



The Remote Control Auxiliary for MCBs

Mission-Critical Systems Solution | **MT53RI + MCB + OF/SD Modules**

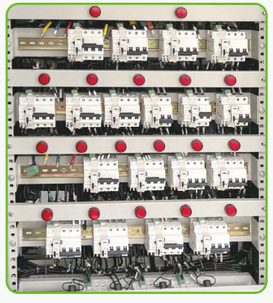
- **Dual-protection & Enhanced Safety**
  Overload + Short-circuit Detection + Fail-Safe Design.
- **Real-time Remote Control**
  Seamlessly control MCBs with digital IO signals for instant, hardwired PLC/SCADA integration.
- **Smart Diagnostics**
  Operators know why a trip occurred (fault vs. manual) and whether power was restored.
- **Automated Alerts**
  OF/SD contacts send instant alerts, eliminating the need for physical inspections.
- **Cost & Time Savings**
  Fewer site visits, reduced labor, and uninterrupted operations.

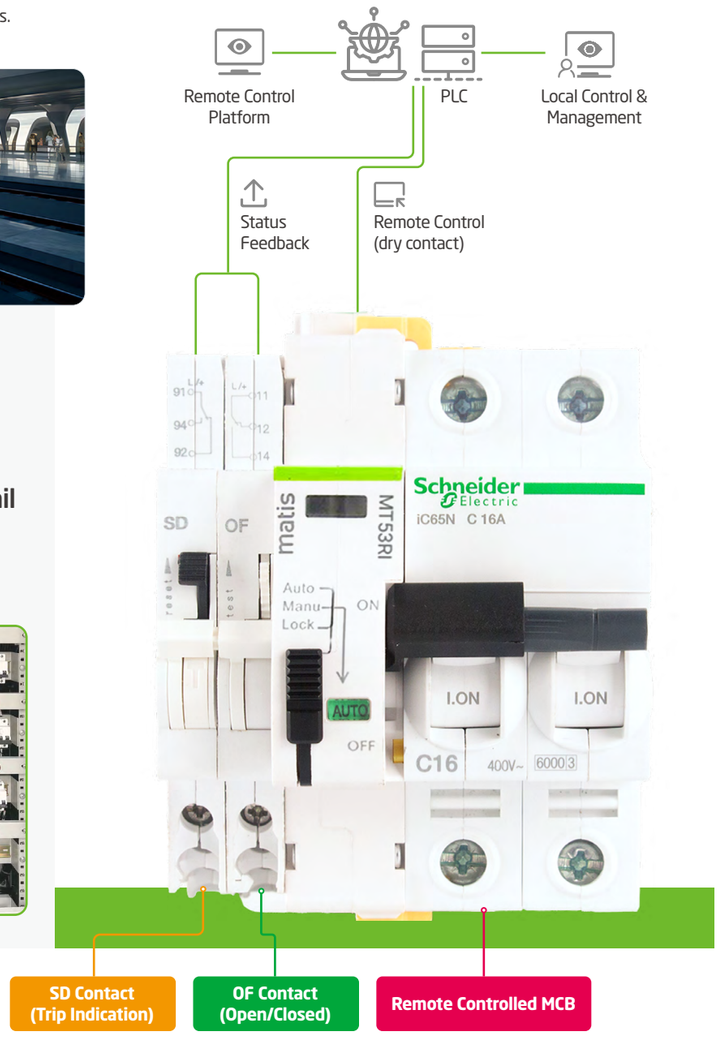




Distribution Cabinet for High-Speed Rail

Internal Panel





The Remote Control Auxiliary for MCBs

OUPD (Over and Under Voltage Protect Device) | **MT53RV + MCB**



1-2P

1. Self-reset with overvoltage and undervoltage protection
2. Supports RS485 Control Method.
3. Can be coupled with branded breakers from Matismart/ Schneider/ Chint/ Hager/ Eaton, etc.

Photovoltaic Grid-Connected Types | **MT53PV + MCB**



1-2P

1. When a PV over/under-voltage event occurs, the circuit will delay opening.
2. It will reclose automatically once the voltage returns to normal.
3. An under-voltage trip will open the circuit and it will not re-engage.

matismart
AIoT Electric

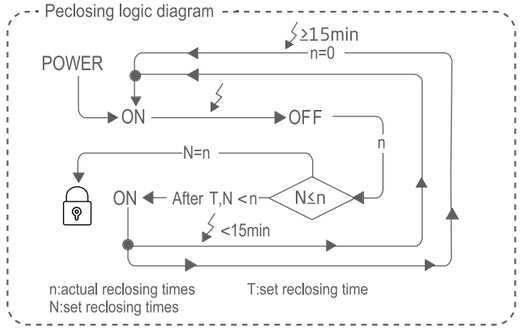
Auto-Reset RCCB: Overcoming Nuisance RCD Tripping for Reliable and Safe Systems

Programmable Types | MT51AI / 51AS + RCCB

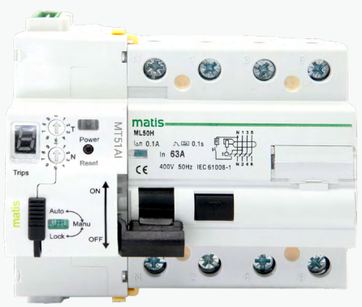


2P / 4P

MT51AS RS485 Control



1. **Programmable Re-closing Attempts and Delays**
   Reclosing Delay adjustable from 0-180s.
   Reclosing Times 0-9 attempts adjustable.
2. **Universal Compatibility**
   Can be coupled with branded breakers from Matismart/ Schneider/ Chint/ Hager/ Eaton, etc.
3. **Customizable and Extensible**
   Within a 36mm width, it accommodates more customized PCB boards, enabling expanded functionalities.
4. **Two Optional Remote Control Methods**
   RS485 Control with MT51AS
   IO Control with MT51AI
5. **Auxiliary Status Output Optional**

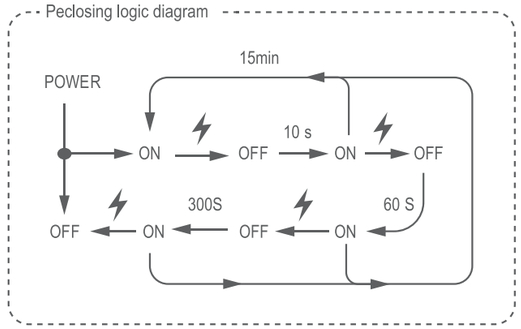


2P / 4P

MT51AI I/O Control

Auto-Reset RCCB: Overcoming Nuisance RCD Tripping for Reliable and Safe Systems

Compact Types | MT53AI / 53AS / 53AW + RCCB





2P / 4P

MT53AI I/O Control



2P / 4P

MT53AS RS485 Control



2P / 4P

MT53AW WiFi Control

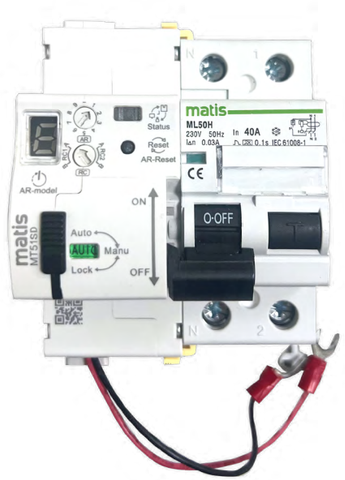
1. **Three Re-closing Attempts andDelays**
   Fixed delays that increase with each failed attempt (e.g., 10s, 30s, 60s).
2. **Universal Compatibility**
   Can be coupled with branded breakers from Matismart/ Schneider/ Chint/ Hager/ Eaton, etc.
3. **Three Optional Remote Control Methods**
   RS485 Control with MT53AS
   IO Control with MT53AI
   WiFi Control with MT53AW
4. **Auxiliary Status Output Optional**
5. **Space-saving 18mm Design without Coupled Breaker**

matismart
AIoT Electric

Smart Auto-Reclosing Devices with Advanced Functions

MT51SD + RCCB — Auto-Reset RCCB with Insulation Detection

1. **Advanced Insulation Detection**
   - Mandatory insulation diagnostics prior to any reclosing operation (remote/ auto).
   - Leakage current detection every 2 minutes.
   - Differential response < 8 kΩ then do not self-reclosing.
   - Differential response > 16 kΩ then do Self-reclosing.
2. **Programmable Re-closing Attempts and Delays**
   - Reclosing Delay adjustable from 0-180s.
   - Reclosing Times 0-9 attempts adjustable.
3. **Universal Compatibility**
   Can be coupled with branded breakers from Matismart/ Schneider/ Chint/ Hager/ Eaton, etc.
4. **Customizable and Extensible**
   Within a 36mm width, it accommodates more customized PCB boards, enabling expanded functionalities.
5. **Two Remote Control Methods in One Device**
   Supports both RS485 and IO Control by MT51SD
6. **Auxiliary Status Output Optional**



2P / 4P

MT84SR — Specially Designed for Hager Circuit Breakers

1. **Automatically recloses a tripped breaker with a fixed 5s-20s-60s program.**
2. **Built-in self-resetting over/under-voltage protection and trip fault identification.**
3. **Remote control via RS485/Modbus-RTU and dry contact /IO.**
4. **Three working modes for adaptability, including automatic and manual control.**
5. **27mm width without circular breakers and fits 1P to 4P breakers.**



1-4P, Up to 63A

6. **Supports a padlock attachment for local lockout, ensuring safe on-site operations.**

Smart Auto-Reclosing Devices with Advanced Functions

MT61SR — OUPD + RCBO



2P / 4P, Up to 125A

1. **Auto-reclosing (current faults & leakage)**
2. **Programmable re-closing attempts and delays**
3. **RS485/dry contact control**
4. **Features self-resetting over-voltage, under-voltage and leakage protection.**
5. **Automatically restores power after a fault is resolved.**
6. **Front panel features an LCD screen and LED light, indicates the working status of the product.**

MTM5EL — Smart Reclosing MCCB

1. **Integrated Leakage & Overload Protection**
   Combines earth leakage protection (adjustable sensitivity: 30mA-1000mA) with standard MCCB over current protection (Overload, Short-Circuit, Earth Leakage, Auto-reclose, Phase Loss, Over voltage and Under voltage) in a single device.
2. **Intelligent Self-Reclosing Function:**
   Automatically attempts to restore power after a trip event due to transient faults (e.g., temporary leakage or overcurrent). Features a programmable reclosing sequence (e.g., number of attempts, time delays), minimizing downtime and eliminating the need for manual resetting.



3P+N, Up to 630A

3. **Remote Monitoring & Control**
   - Supports RS485 / IO / WiFi Control with standard protocols (Modbus-RTU & Modbus-TCP), enabling integration into smart energy management systems.
   - Allows for remote status monitoring, parameter configuration, and control (open/close) via software platforms or apps.
4. **Enhanced Safety & Flexibility**
   - Offers manual lockout function to prevent automatic reclosing during maintenance, ensuring personnel safety.
   - Provides flexible installation and configuration to adapt to various application requirements.

matismart
AIoT Electric

Smart MCBs & MCCBs

MT61GP/GR All in One Multi-Funciton Smart MCB

Integrates metering, protection, control, and automatic reclosing into a single device.

1. Advanced Energy Monitoring
- Bidirectional Metering with Class 1 accuracy
- Real-time energy tracking
- 4-rate multi-tariff
- Smart demand management

2. Smart Auto-Reset Protection
- Detects a wide range of faults including over/under-voltage, phase loss, power failure, leakage detection, etc.
- Customizable protection: Set your own voltage and current thresholds.
- Automatically restores power after a fault is resolved.



2P / 4P, Up to 80A

3. Digital Simulated Circuit Breaker
- Intelligent Overload Thermal Accumulation Protection
- Programmable Short-Circuit Delay Protection
- Digitally implemented via MCU with configurable settings.
- Customizable Tripping Curves via Algorithms
- Redefinable Rated Current

4. Remote Control & Reclosing
- Auto-reclosing (current faults & leakage)
- 20 reclosing sequences programmable
- RS485/dry contact control

5. Seamless Communication & Integration
4G/Wi-Fi, Modbus & MQTT

6. Proactive Alerts
Real-time outage/surge/ imbalance notifications

MTS5 Smart Circuit Breaker



1-4P, Up to 63A

1. Comprehensive Digital Protection
Software-based safeguards against overvoltage, undervoltage, phase loss, current imbalance, and over-temperature, with adjustable leakage protection (on LE models).

2. Integrated Measurement & Monitoring
Provides full power metering and real-time data visualization for intelligent load management.

3. Flexible Control & Automation
Supports advanced logic like remote and timing control for applications such as smart street lighting.

4. Seamless IoT Connectivity
Easily integrates into monitoring platforms via standard Modbus and MQTT protocols or a dedicated Smart Gateway.

5. Smart Grid Adaptability
Designed to meet the complex needs of modern smart grids and distributed power sources with flexible, reliable solutions.

MT88M All-in-One Multi-function Smart MCCB

Combines protection, metering, monitoring, control, and device management in a single device, eliminating the need for separate components and simplifying system design.

1. Core Processing & Display
- 32-bit ARM microprocessor for real-time intelligent control.
- LCD display (Chinese/English) with a user-friendly interface.
- Real-time display of residual current, 3-phase voltage, and load current.

2. Advanced Protection
- Residual current protection with online setting and reclosing.
- Automatic gear adjustment for residual current monitoring.
- Electronic tripping with long/short-delay and instantaneous protection.
- High breaking capacity for reliable short-circuit protection.
- Over/under-voltage, phase/neutral loss protection.

3. Measurement & Metering
- Class 1.0 metering accuracy (0.05In - 1.2In).
- Real-time measurement of active/reactive/apparent power, power factor, etc.
- 3-phase active power accumulation.



3P+N, Up to 800A



4. Configuration & Diagnostics
- Online modification of protection parameters.
- Identifies, displays, and stores trip types.
- Optional modes: time control, cost control.

5. Communication & Remote Functions
- Supports remote signaling, measuring, control, and regulation (yx, yc, yk, yt).
- HPLC pluggable modules & micro-power Bluetooth.
- Auto-identifies DL/T645 and Modbus protocols.
- Online remote firmware upgrades.

6. Optional Feature
- Real-time terminal block temperature monitoring (optional).

matismart
AIoT Electric

Smart MCBs & MCCBs

MTM5M Compact All-in-One Multi-function Smart MCCB

1. 1. Core Protection and Safety

- Comprehensive Protection: Features a three-stage electronic trip system (long-delay, short-delay, instantaneous), ensuring reliable short-circuit and overload protection independent of supply voltage.
- Leakage/Earth Fault: Integrated Residual Current Protection for enhanced safety and fire prevention.
- Adjustable Grid Protection: Integrates over-voltage, under-voltage, phase loss, and neutral loss protection; parameters are adjustable online.
- Specialized Generation Features: Offers optional passive islanding protection and power quality monitoring (three-phase imbalance), crucial for distributed generation systems.

2. Precise Metering and Data Monitoring

- Monitoring Terminal: Functions as a high-precision power quality monitoring terminal, not just a switch.
- Superior Accuracy: Current/voltage accuracy up to 0.5s class; active/reactive power accuracy up to Class 1.
- Multi-Parameter Measurement: Provides real-time display of three-phase voltage, load current, various powers, and power factor.
- Advanced PQ Analysis: Monitors demand limits, current mutations/interruptions, and harmonic content/waveform distortion.
- Fault Logging: Identifies, stores, and allows query of various trip types for efficient troubleshooting.

3. Intelligent Control and Automation

- High Automation: Utilizes advanced hardware and software for a high degree of automation.
- Intelligent Core: Employs a high-performance 32-bit ARM microprocessor for smart control.
- Fast Auto-Reclosing: Includes an automatic reclosing function with a rapid closing time of ≤2s.
- Remote Maintenance: Supports online remote upgrades, simplifying future maintenance and feature updates.



2P / 4P, Up to 630A

4. Flexible Communication and Interaction

- Protocol Compatibility: Supports and auto-recognizes both DL/T645 and Modbus protocols for easy integration.
- "Four Remotes" Capability: Enables comprehensive remote management via remote signaling, measurement, control, and adjustment.
- Multiple Modules: Can be equipped with a pluggable HPLC module and low-power Bluetooth for flexible connectivity.
- User Interface: Features an LCD display in both Chinese and English for intuitive operation.

MTM5EL Smart Reclosing MCCB



3P+N, Up to 630A

1. Integrated Leakage & Overload Protection

Combines earth leakage protection (adjustable sensitivity: 30mA-1000mA) with standard MCCB over current protection (Overload, Short-Circuit, Earth Leakage, Auto-reclose, Phase Loss, Over voltage and Under voltage) in a single device.

2. Intelligent Self-Reclosing Function:

Automatically attempts to restore power after a trip event due to transient faults (e.g., temporary leakage or overcurrent). Features a programmable reclosing sequence (e.g., number of attempts, time delays), minimizing downtime and eliminating the need for manual resetting.

3. Remote Monitoring & Control

- Supports RS485 / IO / WiFi Control with standard protocols (Modbus-RTU & Modbus-TCP), enabling integration into smart energy management systems.
- Allows for remote status monitoring, parameter configuration, and control (open/close) via software platforms or apps.

4. Enhanced Safety & Flexibility

- Offers manual lockout function to prevent automatic reclosing during maintenance, ensuring personnel safety.
- Provides flexible installation and configuration to adapt to various application requirements.

MTM03 Motor Operator for MCCBs

1. Broad Compatibility

Compatible with various MCCBs from Matismart/ ABB/ Schneider/ Chint/ Hager/ Eaton, supporting long-distance closing and opening operations for breakers from 63A to 1250A.

2. Optimal Performance

Designed with low power consumption, a wide voltage range, and offers a long life with a fast response time.

3. Universal Design

Features complete voltage specifications and is universally compatible with both AC and DC systems.

4. IO control

Can be controlled in automatic mode by IO port (wet contact) of PLC or button.



matismart
AIoT Electric

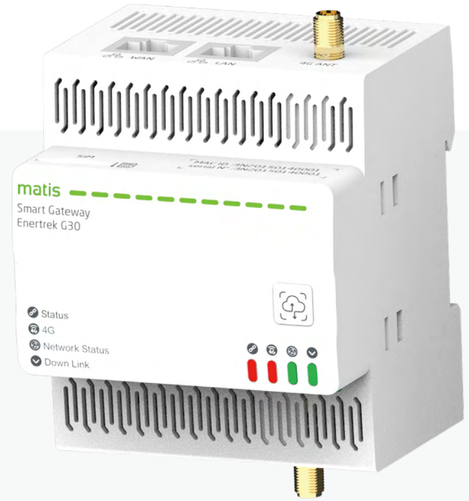
Smart Gateways

G30 WiFi & 4G & Ethernet 3 in 1 Smart Gateway

1. **Multi-Protocol Compatibility**
Seamlessly integrates with a wide range of devices and platforms, supporting protocols like MQTT, Modbus, SNMP 2.0, and IEC104 for reliable data transmission.

2. **Flexible Integration**
Offers broad compatibility, seamlessly integrating with Enertrek devices and other third-party equipment that supports the Modbus protocol.

3. **Abundant Interfaces**
Features 2x RS485 ports, 2x Ethernet ports, 4G, and Wi-Fi to meet diverse connectivity needs and provide ample room for future system expansion.



G10 Ethernet / WiFi

G20 Ethernet / 4G

G30 Ethernet / 4G / WiFi

4. **Built-in Web Service**
An integrated Web Service and browser-based interface simplify device management, network configuration, and status monitoring, ensuring efficient remote management across all operating systems.

5. **Offline Data Storage**
Automatically stores data locally during network outages and uploads it upon restoration, guaranteeing data integrity.

6. **Flexible Global Deployment**
Supports both local and remote deployment models, providing stable and reliable service anywhere in the world.

Versatile Connectivity
4G/ Wi-fi/ Ethernet

Multi-Protocol Engine
Modbus & MOTT

Powerful Data Collection

C10/C20/C30 Communication Modules

1. **Flexible Connectivity**
Support different uplink communication methods to suit various deployment needs.

2. **Wide Compatibility**
Compatible with multiple RS485 protocols and can connect with up to 20-25 Matismart devices. Support downlink protocols like MQTT and MODBUS-TCP for seamless integration with platforms.

3. **Smart & Autonomous Functions**
Feature local computing and local storage capabilities, which help in calculating relevant data and storing information during network outages.



C10 Ethernet

C20 WiFi

C30 4G

C31/C32 Communication Modules for Tuya APP



4. **Robust & Safe Design**
Wide voltage design, supporting AC 100V-240V, and a low power consumption of ≤15W. Isolated power supply to ensure safety.

5. **Compact & Easy to Install**
Small and beautiful, designed to be installed in a standard household electrical box or on a DIN-rail. Also uses an external antenna to ensure a good signal.

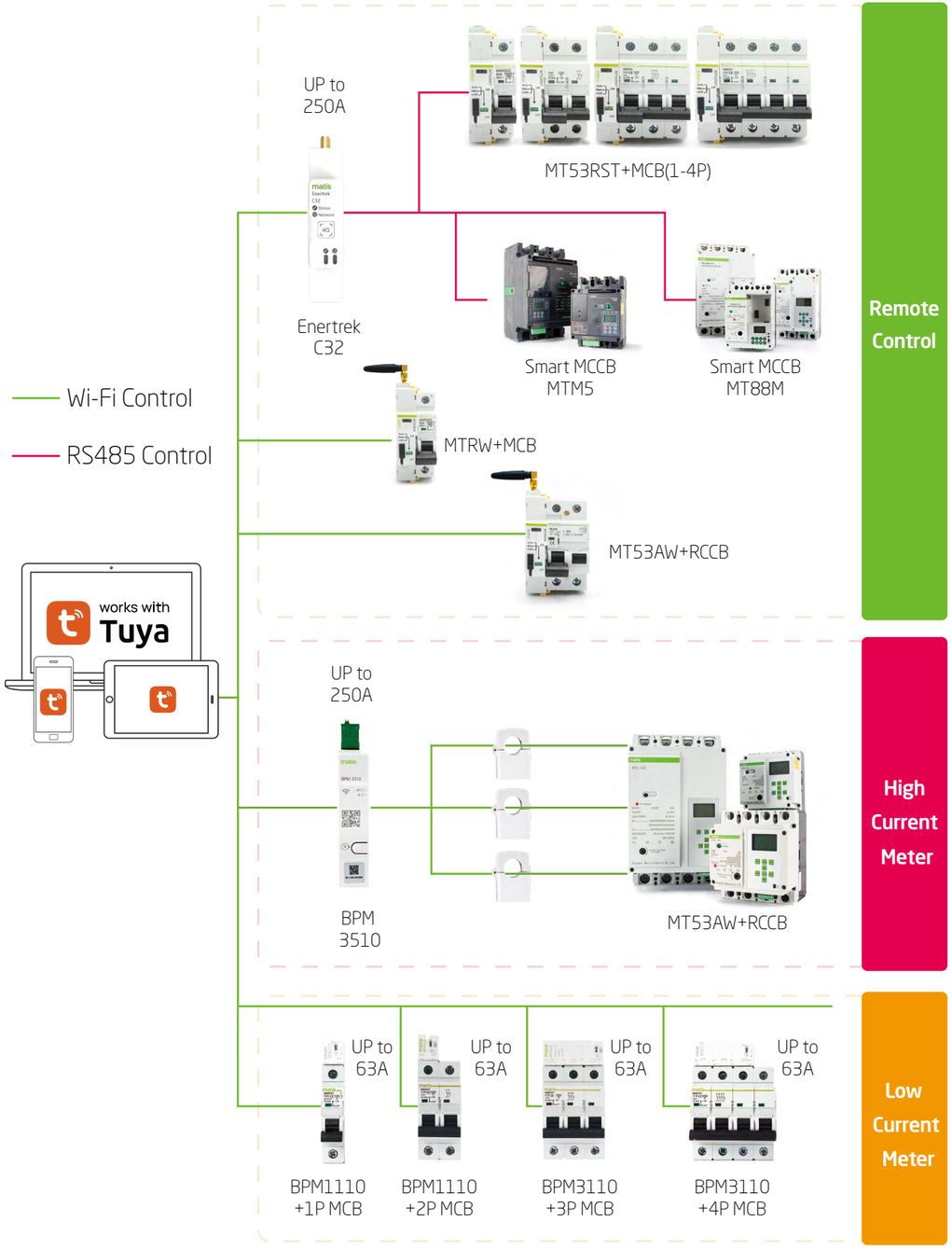


C31 4G / Tuya APP
Each C31 can support up to 20 devices

C32 4G / Tuya APP
Each C32 can support up to 1 devices

matismart
AIoT Electric

Tuya Connected Devices



1 Communication Modules



C31 C32

2 Power Meter with WiFi Connectivity



BPM3510 BPM3110 BPM1110

3 Smart MCCBs (Needs Communication Modules)



MT5EL MT88M MTM5M

4 Remote Controlled MCBs



Built-in WiFi
| MT53RW + MCB



Needs Communication Modules
| MT53RST+ MCB

5 Auto-Reset RCCB



Built-in WiFi
| MT53RW + RCCB

Specified Products for Telecom Tower Base Stations

1 DCDU

Smart DCDU 1U (IPDU-1U10)

- 1U 19 inches, DC48V
- Input current Max 300A,
- Output current 6*63A, 1*125A
- Input/output current customization available
- RS485 Modbus-RTU,Ethernet Modbus-TCP, 4G, SNMP 2.0





Smart DCDU 3U (IPDU-3U10)

- 3U 19 inches, DC48V
- Input current Max 300A,
- Output current 6*6 300A,
- Output current 8*63A, 2*125A
- Input/output current customization available
- RS485 Modbus-RTU,Ethernet Modbus-TCP, 4G, SNMP 2.0

Ordinary DCDU (DCDU-12B)

- 1U 19 inches, DC48V
- Input current Max160A,
- Output current 7*30A, 3*50A



2 Key Components for DC System in Telecom Tower Base Stations

Remote Controlled MCB (3U)



MT53RS+1P MCB (DC48V)

Smart MCB 1U (DC48V)



MS1UE-63DC/125DC

- 63A 1P
- D Curve
- DC48V
- Metering Accuracy Class 1.0
- Remote Control

Multi-Circuit Power Monitoring Devices



Voltage Unit - Entertrek V10 (DC48V)

- RS485 Modbus-RTU
- Each V10 can support up to 20* M10.
- Voltage Accuracy 0.2%



Energy Sensor- Enertrek M10 (DC48V)

- RS485 Modbus-RTU
- 61A 1P
- Metering Accuracy Class 0.5

3 Key Components for AC System in Telecom Tower Base Stations

Smart MCBs & MCCBs



MT61GP



MT88M



MTM5M

Smart Auto-Reset RCBO



MT61SR



MTM5EL

Auto-Reset RCCB



MT51AI + RCCB



MT51AS + RCCB



MT53AI + RCCB



MT51AS + RCCB

4 Battery Monitoring Device (BMS)



MT99BT

- Monitor battery string voltage, charge and discharge current
- Calculate battery string SOC
- Auto-balancing
- Auto-sensing for the battery sensor's ID address
- Setpoint alarming (upper limit/lower limit)
- Data collecting
- RS485 (Modbus-RTU) & Ethernet (TCP or SNMP)
- Check battery string status: equalizing, discharging, floating charge, stand by and abnormal status

matismart
AIoT Electric

Traditional Breakers

1 MCB



MM50H
(1-4P, 63A)



MB60
(1-4P, 63A)



MM50 DC
(1-4P, 63A)



MM90
(1-4P, 125A)

2 RCCB



ML50H Type A & Type AC
(2P/4P, 100A)



ML60B Type B
(2P/4P, 100A)

3 RCBO



MR50 & MR050
(1-4P, 63A)



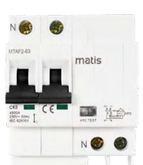
MR060
(1P, 32A)

4 AFDD







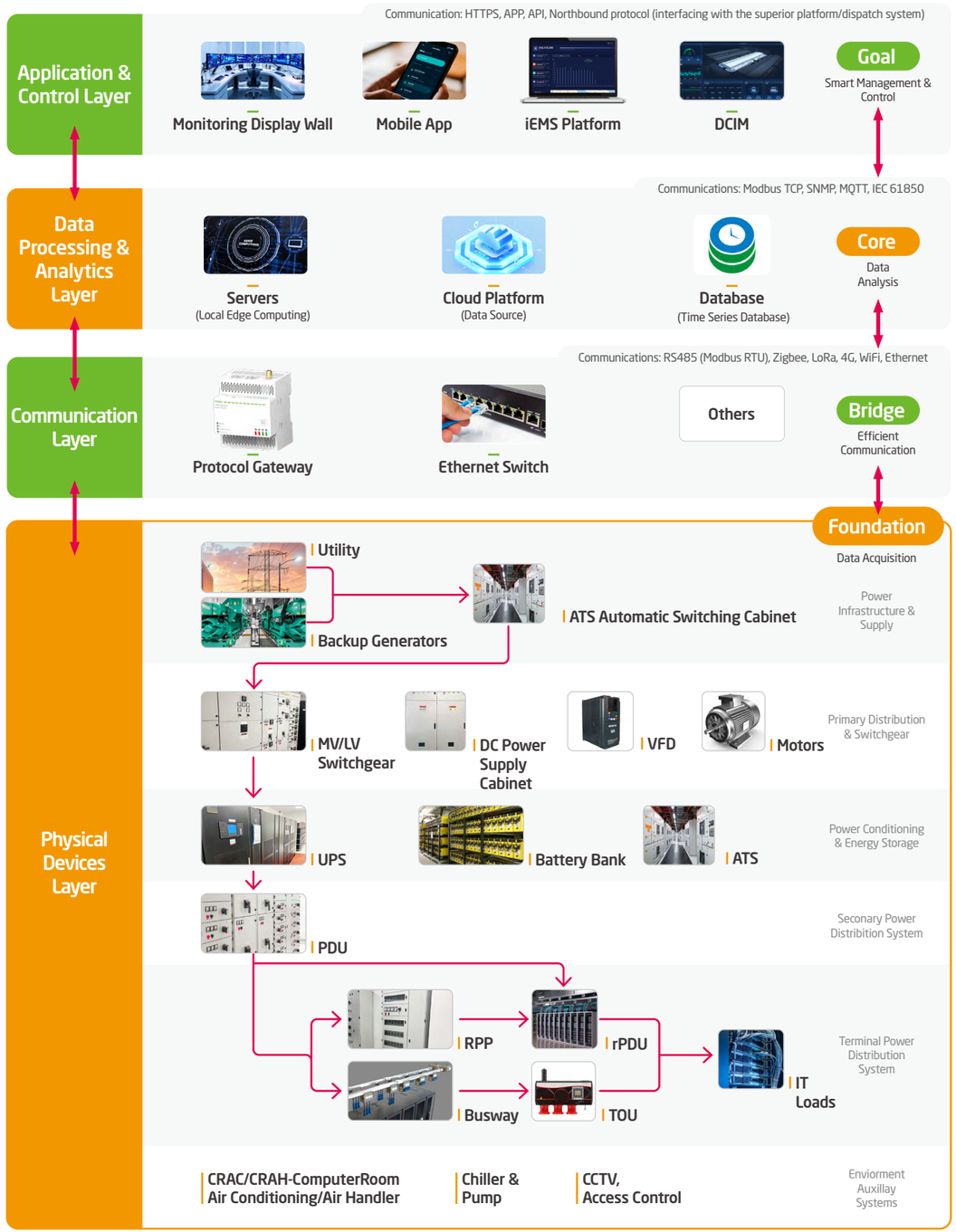


NEXT
Industry Solutions

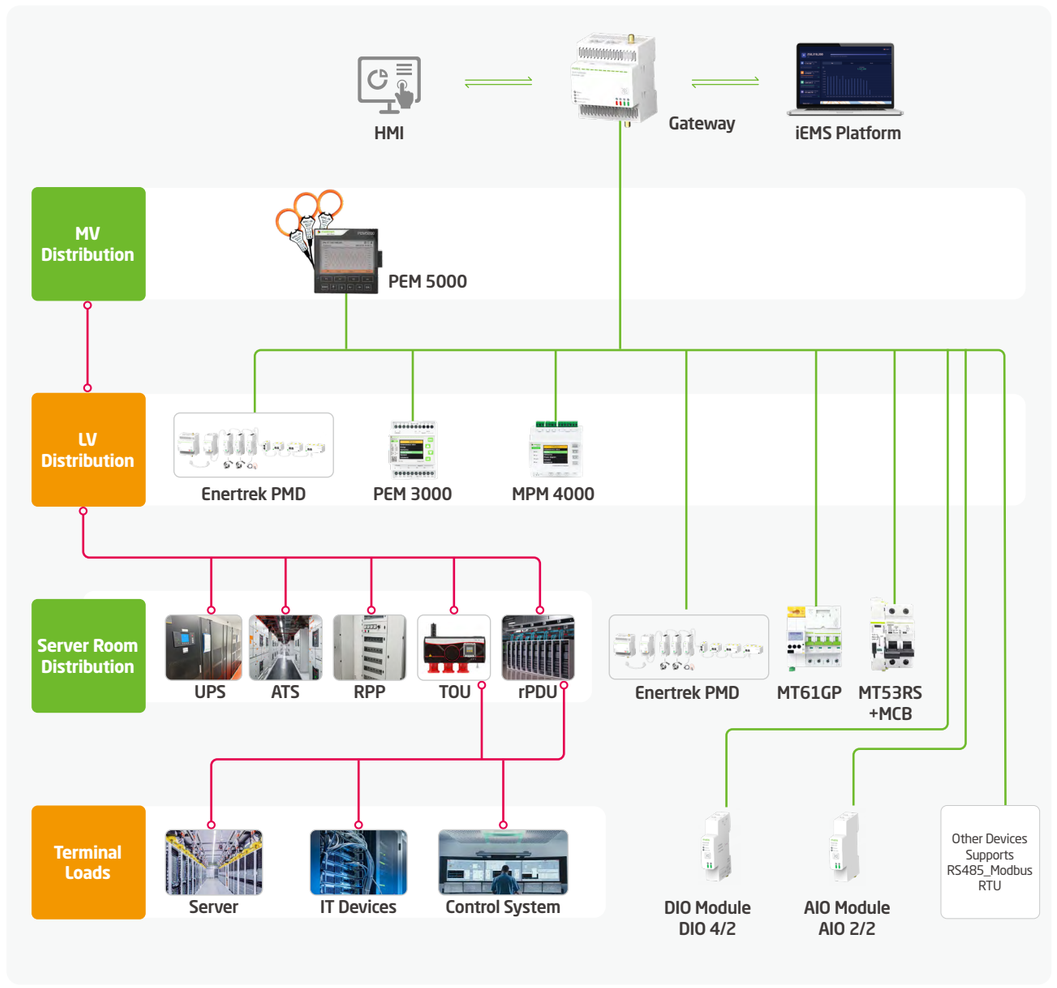
matismart
AIoT Electric

Expertise Exemplified From a Universe of Solutions: Spotlight on Data Centers

Data Center Power Distribution Architecture



Product Deployment Across The Data Center Power Distribution



Visibility, Control, Optimization, Sustainability.

Precision PUE Calculation & Energy Efficiency Optimization

- High-Density Circuit Monitoring
- Real-time Power Consumption Analytics
- Provides Quantifiable Metrics

Enhanced Reliability & Predictive Fault Warning

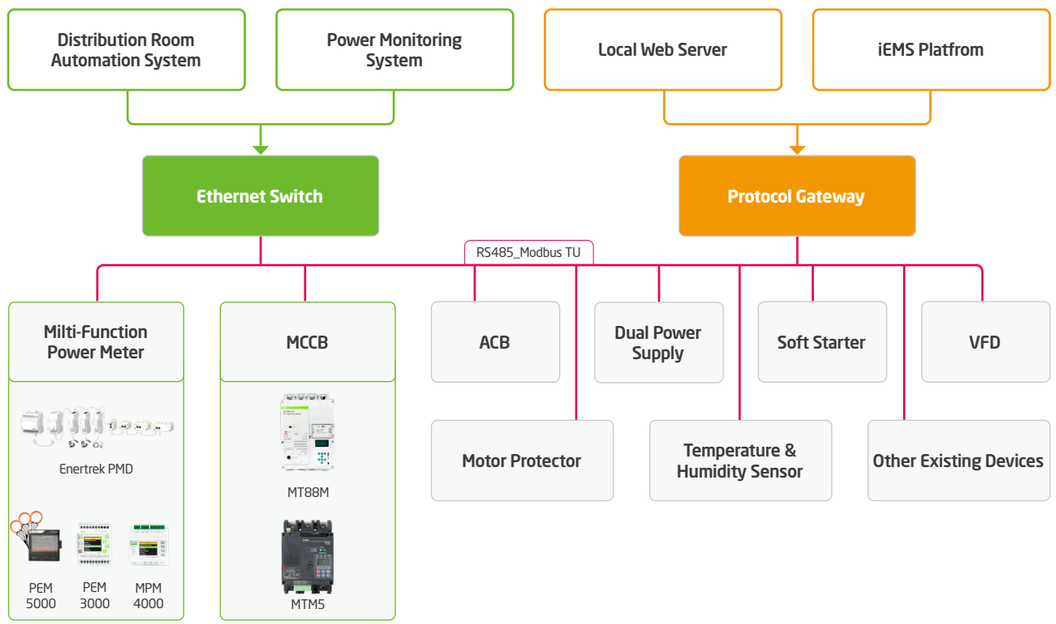
- Anomaly Detection in Power Parameters
- Preventive Maintenance
- Integrated Environmental Monitoring

Capacity Planning & Operational Cost Control

- Cabinet-Level Capacity Management
- Accurate Usage-Based Billing
- Optimized Capital Expenditure
- Flexible Scalability

matismart
AIoT Electric

Solution for MV/LV Distribution Cabinet



Solution for Scalable Busway Distribution Architecture



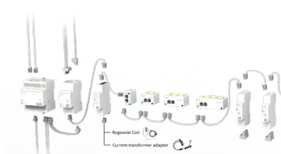
1. Feeder Box

- Enertrek modules embedded: to achieve real-time monitoring of main busbar's current, voltage, power, power factor, harmonics, etc.
- Support energy consumption statistics and equipment health diagnosis
- Provide alarms for over-current, over-voltage, and abnormal power quality



3. Main Control Box

- Collect all data from tap-off and feeder boxes
- Enertrek modules connect to main control box via RS485/TCP, and centrally upload data to DCIM/BMS
- Realize end-to-end digital monitoring of the busbar system



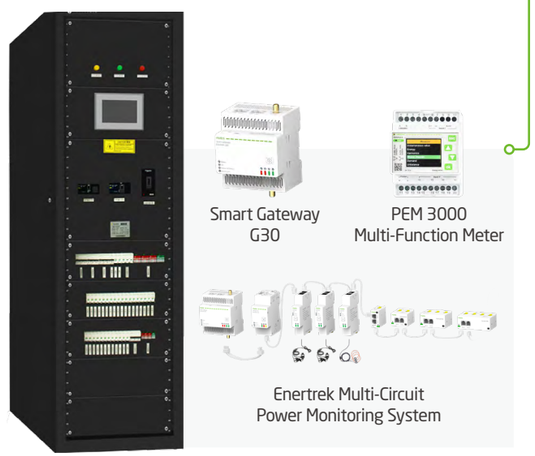
Enertrek Multi-Circuit Power Monitoring System

2. Tap-off Box

- Precisely monitor energy consumption of each cabinet's branch circuits
- Support single and multi-circuit current monitoring with various CTs (flexible, split-core, 5A)
- Used for sub-metering for tenants and load balancing analysis

Solution for Traditional RPP Distribution Architecture





Smart Gateway G30

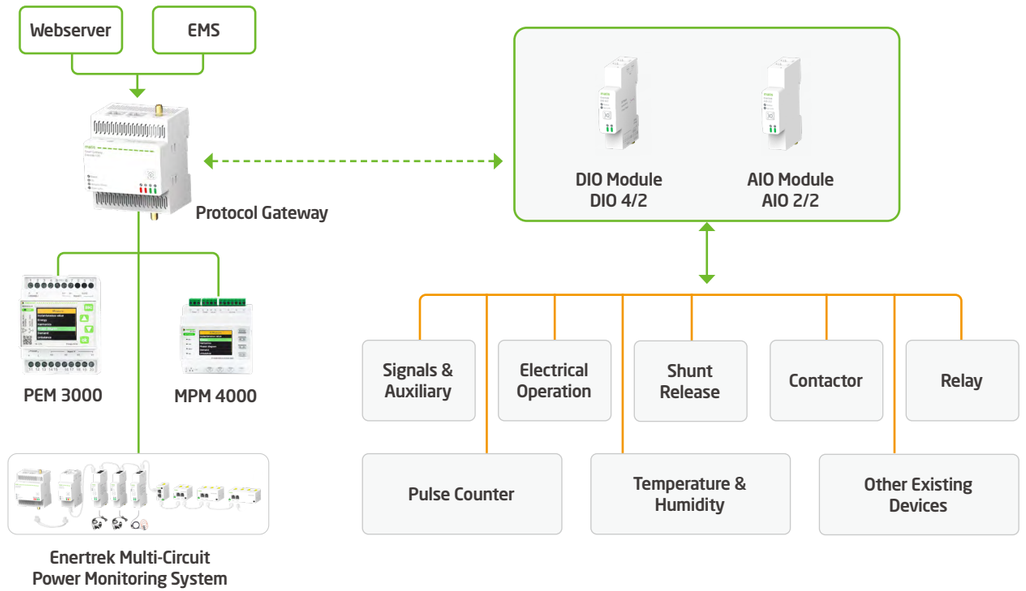
PEM 3000 Multi-Function Meter

Enertrek Multi-Circuit Power Monitoring System

1. Flexible Multi-Circuit Energy Consumption Monitoring System
2. Convenient for retrofitting existing facilities.
3. Easy commissioning using an integrated web server.
4. AC/DC measurement CMS system that doesn't take up extra space.
5. Scalable, flexible busbar wiring.
6. Adding or replacing devices with zero-downtime.

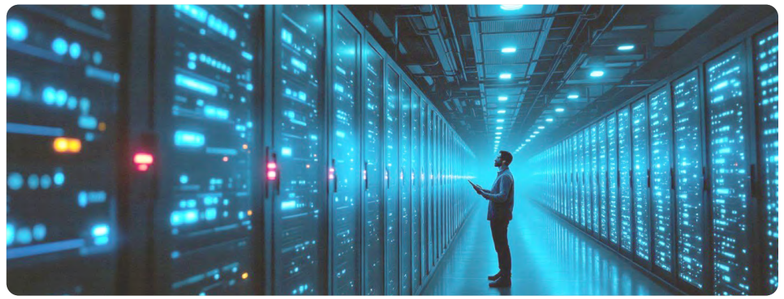
Solution for Digital DCIM

Comprehensive control over water, gas, heat, and electricity.



matismart
AIoT Electric

A Broader Spectrum of Our Expertise



Data Center



Telecom



Industrial



Building



Infrastructure



Energy



Smart Home

Smarter Electric, Safer Efficiency!

Need a Tailored Industry Solution?
Contact Us for Details!

info@matismart.com +86 15801814653

Learn More

Website

Facebook YouTube LinkedIn Instagram TikTok