Energy Management System ◉ Power Meters ◉ Sensors & Process Indicators

Full Range Catalogue

Taiwan's Leading Power Meter Brand

Smart MiT, Easy Link

ADTEK

1990

ADTEK Electronics Co., Ltd. was officially established on July 30th.

2001

ADTEK Technology (Suzhou) Co., Ltd., known as the Suzhou Branch, has been established to cater to Taiwanese customers in the region and to strategically develop the mainland market.

2005

Formally integrating the design specifications compliant with the European Union's Electrical Standards (CE).

2010

Officially integrated the specifications of the US FCC Standards into our designs.

Six reasons for choosing ADTEK

1. MiT Made in Taiwan
2. 1-year Warranty
3. Superior Quality
4. Multiple Certifications
5. Strong Cost / Performance Ratio
6. Extensive Product Range

2017

Launch of the CPM-80 Series Multifunction Power Analyzer.

Launched multifunctioal power meters with wireless communication solutions, including Wi-Fi and NB-IoT.

Expanded our product line to include 12 models, featuring the new multifunction power meters, CPM-12 and CPM-12D.

2019

ADTEK officially became a solution provider for small-scale applications, offering AD-SeeS IoT and EMS monitoring solutions.

2023

ADTEK completed its Greenhouse Gas (GHG) Inventory, reaffirming its commitment to corporate social responsibility.

Officially established offices in Taichung and Kaohsiung to strengthen local service capabilities.

2024

AEM-DRB Multi-Circuit Power Meter achieved ISO 14067 Carbon Footprint Certification.

AD-Cloud-Mate Energy Management System officially launched, supporting smart energy management and net-zero emissions goals.

ADTEK ELECTRONICS CO., LTD., established in 1990 and headquartered in New Taipei City, Taiwan, is an Industrial Taiwanese Power Meter manufacturer with over 30 years of rich experience. Our brand, ADTEK, enjoys widespread recognition in the industry and is acclaimed as one of the largest professional Power Meter brands in Taiwan.

As a company with a comprehensive and diverse product line in the fields of Energy Management and Industrial Automation, ADTEK possesses rapid research and development capabilities, efficient production capacity, and offers a variety of customized services. We have a wealth of successful cases in four major application areas: Industrial Internet of Things (IIoT), Low-carbon energy, Public Construction, and Smart Buildings, with many leading companies in the industry among our clients.

In the international market, ADTEK's business spans over 40 countries, proudly holding the title of Taiwan's leading Power Meter brand in exports. As the preferred partner for advancing Industrial IoT, Renewable Energy, and Energy-Saving Solutions, we are committed to providing our customers with the most outstanding products and services.

Optimize Energy, Empower Sustainability

Achieve Net-Zero with Ease!

AD-Cloud-Mate

Energy Management System-Cloud Version

A Wide Range of Applications

- Monitoring of high-energy-consuming workshops, such as metal heat treatment plants, ceramic plants, etc.
- Substation monitoring in the factory
- Continuous production line
- Electricity charges for rental offices, dormitories and booths
- Energy consumption monitoring of chain stores

Flexible Service Options

- Data retention for three years, with options for five- or ten-year extensions
- Flexible payment options: monthly, quarterly, semi-annually, or annually
- Accounts with overdue payments will be automatically suspended for stable service quality

Diverse and Intelligent Features

- Meter measurement, Free Tag, and IO control to meet various needs
- Choose feature quantities to create a personalized configuration

Reliable Data Protection

- Once an account is canceled, it cannot be reactivated, ensuring data security
- Provides a robust data retention mechanism to guarantee data integrity and long-term availability

AD-Cloud-Mate is a cloud-based energy management system meticulously designed by ADTEK to meet the needs of small and medium-sized enterprises. Utilizing the advanced AD-580 EMS Gateway, it seamlessly integrates ADTEK power meters and third-party Modbus devices. Data is transmitted to the cloud via Ethernet or WiFi, enabling real-time, comprehensive energy monitoring and management for optimized performance and efficiency.

AD-Cloud-Mate

Energy Management System-Cloud Version

Overview

Displays important energy consumption data such as total energy consumption, energy bills, carbon emissions, energy consumption ratio, energy consumption and power of the power system in charts and trend graphs.

Tracking Trend

Up to 5 shifts can be scheduled in a day, and each shift can set a planned value for the energy consumption and power of each meter respectively. When the instant energy consumption or power exceeds the planned value, an alarm event will be generated.

Real Time Data

Each meter or device forms its own data frame, and can sort the number of positions or display frames by itself, which is convenient for observing the data of important equipment.

Energy Analysis

You can select single or multiple devices for analysis, or perform analysis in groups.

User Profile

The main account can create, edit and delete sub-accounts.

Alarm

Each meter or Free Tag parameter can be set as an alarm or prewarning condition, and can also set the time range within which the condition is valid.

Data Management

Data can be exported and deleted by single or multiple devices.

I/O Control

The output control source can be set as conditional judgment, schedule or condition + schedule.

Device Management

Meters or devices can be searched automatically or added manually.

License Management

It can display the information of the license quantity and the quantity in use of the current device function.

AD Cloud Mate

Ethernet / WiFi

Modbus RTU
Modbus TCP

Free Tag For 3rd party Modbus device

Trend Analysis

Trends of parameters such as voltage, current, energy, power and frequency, and Free Tag can be displayed.

You can select single or multiple devices for analysis, or perform analysis in groups.

Cost Analysis

There are two ways to set the electricity tariff : progressive pricing and time of use (TOU).

Choose from up to 19 tariff currencies.

Layout Plan

Create and edit custom graphics for facilities and meter or device installation locations. The position of the icon can be arbitrarily placed by dragging, which conforms to the actual state of the site.

Signal Processing & Display

Multifunction Power Meter - Panel Type

Advanced

CPM-80 Ethernet
Multifunction Power Analyzer

CPM-70 WiFi Ethernet
Multifunction Power Analyzer

Universal

ADP-30 Ethernet
Multifunction Power Meter

CPM-20
Multifunction Power Meter

CPM-12
Multifunction Power Meter

Economical

CPM-10B
Multifunction Power Meter

CM1/ CM2/ CM3-VA
4 Digits Voltage/Current Meter

CS1/ CS2/ CS3-VA
Digital Voltage / Current Meter

Multifunction Power Meter - DIN Rail

AEM-DRB Ethernet
Multi-Circuit Power Meter
(DIN rail)
(24 circuits + 2 main circuits)

AEM-DR WiFi Ethernet
Multi-Circuit Power Meter
(DIN rail)
(5 circuits + modular design)

CPM-12D
Multifunction Power Meter
(DIN rail)

Multifunction Power Meter - DC Type

AEM-DD
Multi-Circuit DC Power Meter
(DIN rail) (5 circuits)

VAW
DC Power Meter

Industrial Process Meter - Panel Type

CM1/CM2-PR
Digital Voltage / Current Meter

CS1/ CS2/ CS3
Digital Voltage / Current Meter

Energy Management System

AD-SeeS-Mate
Energy Management System

AD-Cloud-Mate
Energy Management System
-Cloud Version

Signal Transducer & Converter

CPT
Multifunction Power Transducer

CA / CV
AC Current / Voltage Transducer

CW / CQ
AC Active / Re-active
Power Transducer

AT
Converter & Isolator (17.5mm)

MT
Industrial Signal
Converter - 8 Pin Plug

ST
Multifunction Converter

UC1
Universal Process
Conditioner (22.5mm)

Signal Measuring & Display

US-CTV
Current Transformer
(Split Core)

US-CTS
Current Transformer
(Split Core)

UA-SHT
Current Shunt

TH
Temperature Sensor

HTO
CO / CO2 / Temperature & Humidity
Transmitter

HTA
Temperature / Humidity & PM2.5 /
PM10 Transmitter

PS2
Pressure Transmitter

Communication Interface

AME
RS-485 Ethernet Converter

AD-580
Energy Management Network
Gateway

APPLICATION

SOLUTIONS

Industrial Internet of

Production Environment-Air Quality Monitoring

HTO Temperature & Humidity Transmitter
HTA Temperature / Humidity & PM2.5 / PM10 Transmitter

Production Management-PID Controller

TB Series 4 Digital PID Controller

TH Temperature Sensor

Production Management-Weight Monitoring

A6-SG 6 Digital Weighing Controller

Production Management-Water Treatment

CS2-TM 10 Digital Rate/Batch Counter (Pulse)

Things (IIoT)

Factory Power Quality Monitoring & Energy Management

Factory Power Quality Monitoring

CPM-80 Multifunction Power Analyzer
CPM-70 Multifunction Power Analyzer

Production Line- Power Monitoring & Energy Saving

AEM-DRB Multi-Circuit Power Meter
APM-EMA Multi-Circuit Power Meter

CPT Multifunction Power Transducer

Production Management- Process Control & Monitoring

CM1 Series Process Meter
Frequency meter, counter...etc.
APM Series Remote I/O Module Series

Equipment Status- Motor Monitoring

CPM-10B Multifunction Power Meter
CS1 Digital Voltage / Current Meter
VAW Multifunction DC Power Meter

APPLICATION
SOLUTIONS

Low-Carbon Energy

Power Monitoring

CPM-10B Multifunction Power Meter
CPM-12D Multifunction Power Meter

Frequency Management and Display

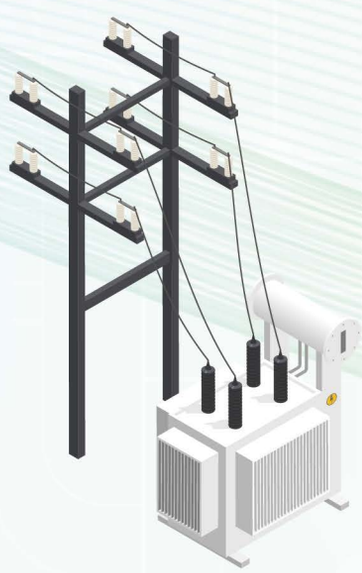
CM1 Series Frequency Meter

CPT Multifunction Power Transducer
CA / CV AC Voltage/Current Converter

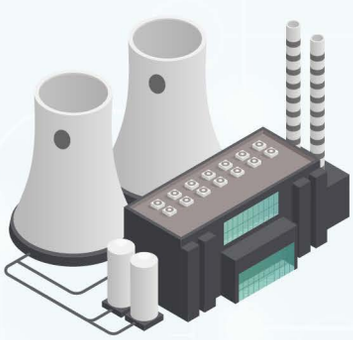
Equipment Temperature Detection

TH Temperature Sensor

Wind Power Station



Power Plant



Solar Power Station

DC/AC Power Monitoring

CPM-10B Multifunction Power Meter
CPM-12D Multifunction Power Meter
VAW Multifunction DC Power Meter
AEM-DD Multi-Circuit DC Power Meter (DIN rail)

CPT Multifunction Power Transducer
CA / CV AC Voltage/Current Converter

High Voltage Switchgear

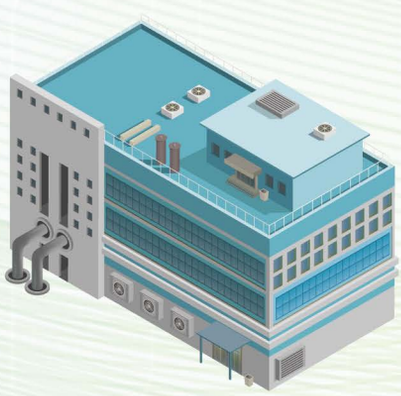
Factory Power Quality Monitoring

CPM-80 Multifunction Power Analyzer
CPM-70 Multifunction Power Analyzer

Substation

Power Quality Monitoring

CPM-80 Multifunction Power Analyzer
CPM-70 Multifunction Power Analyzer



EMS (Energy Management System)

AD-SeeS-Mate/AD-Cloud-Mate
EMS Software Platform

APPLICATION

SOLUTIONS

Public Infrastructure

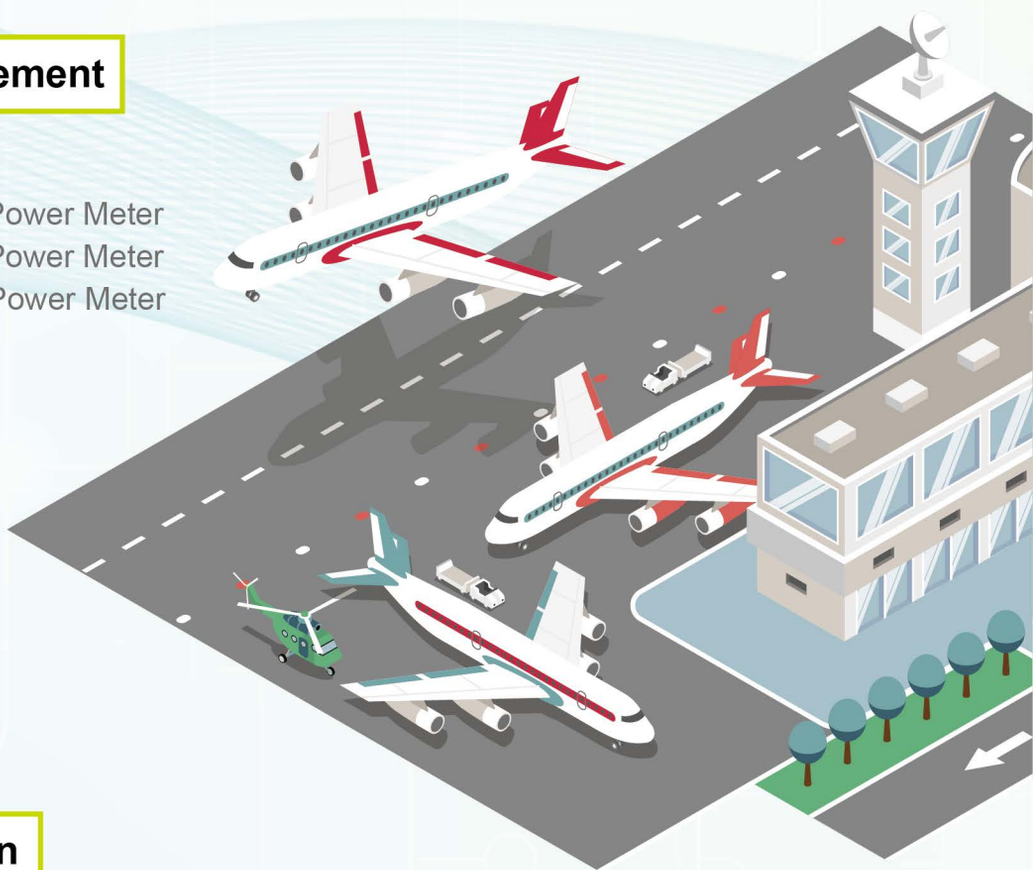
Air Quality Monitoring

HTO Temperature & Humidity Transmitter
HTA Temperature/Humidity & PM2.5/PM10 Transmitter

Lighting Energy Management

Electricity Billing

AEM-DRB Multi-Circuit Power Meter
CPM-12D Multifunction Power Meter
APM-EMA Multi-Circuit Power Meter



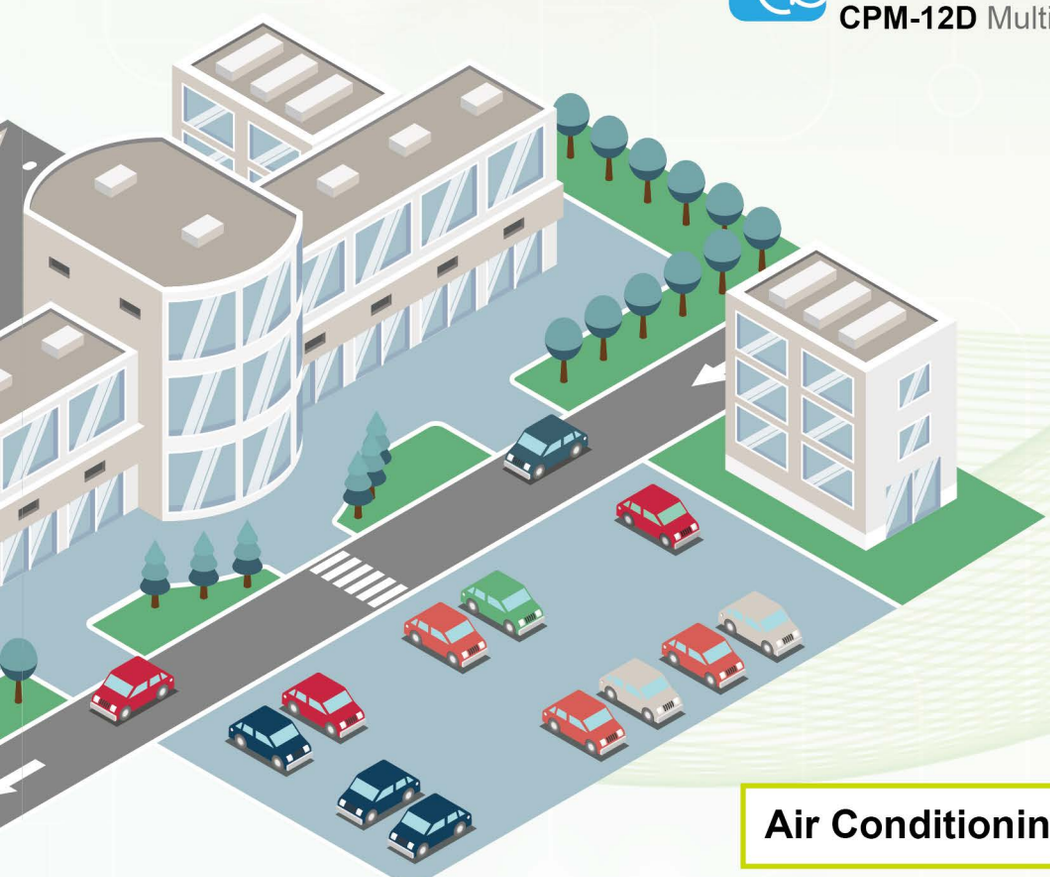
Airport Substation

Power Quality Monitoring

CPM-80 Multifunction Power Analyzer
CPM-70 Multifunction Power Analyzer

Low Voltage Switchgear- Power Monitoring & Management

AEM-DRB Multi-Circuit Power Meter
AEM-DR Multi-Circuit Power Meter (DIN rail)
CPM-12D Multifunction Power Meter



Air Conditioning Supply - Chiller Units

Chiller Units - Energy Efficiency

CPM-12 Multifunction Power Meter
CPM-20 Multifunction Power Meter

Chiller Units Signal Transmission

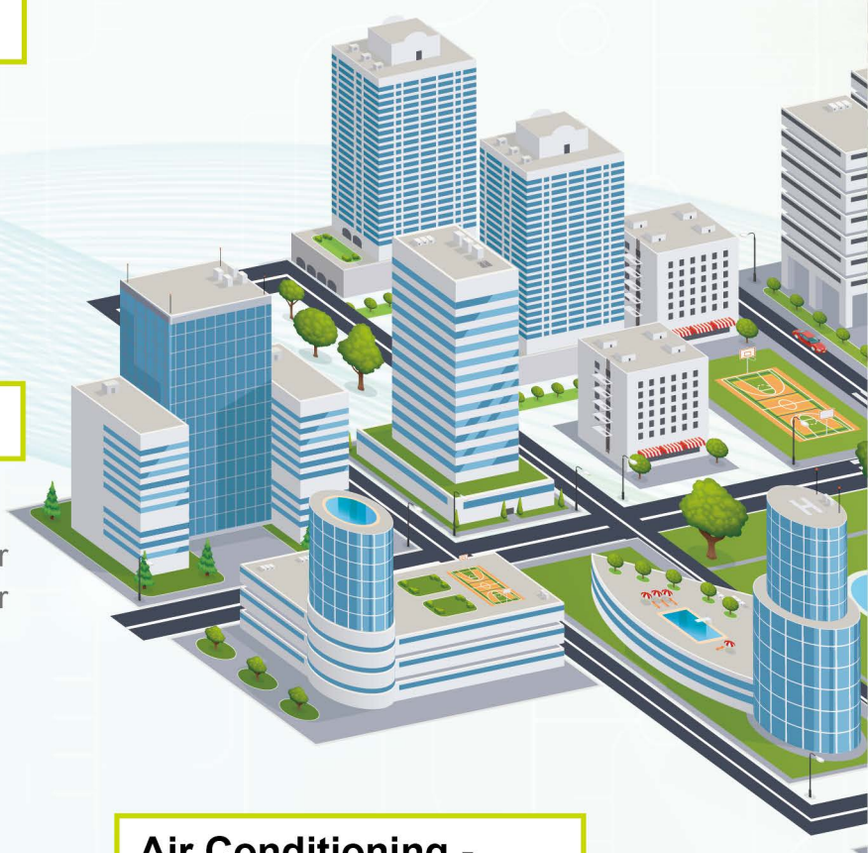
TH Temperature Sensor
PS Pressure Transmitter

APPLICATION
SOLUTIONS

Smart Buildings

EMS (Energy Management System)

AD-SeeS-Mate/AD-Cloud-Mate
EMS Software Platform



Data Center - UPS/Battery Room

Data Center Power Monitoring

CPM-80 Multifunction Power Analyzer
CPM-70 Multifunction Power Analyzer

UPS/Battery Room Power Monitoring

VAW Multifunction DC Power Meter

Multiple Rack Power Monitoring

AEM-DRB Multi-Circuit Power Meter

Data Center Environmental Monitoring

HTO Humidity & Temperature Transmitter
HTA Temperature/Humidity & PM2.5/PM10 Transmitter

Air Conditioning - Water Chiller Systems

Energy-Saving Solutions for Water Chillers

CPM-12 Multifunction Power Meter
CPM-20 Multifunction Power Meter

Chiller Process Signal Transmitter

TH Temperature Sensor
PS Pressure Transmitter

Solar Power Station

DC & AC Power Monitoring

CPM-10B Multifunction Power Meter
CPM-12D Multifunction Power Meter
VAW Multifunction DC Power Meter
AEM-DD Multi-Loop Power Meter (DC)

CPT Multifunction Power Transducer
CA / CV AC Current / Voltage Transducer

Air Quality Monitoring

HTO Humidity & Temperature Transmitter
HTA Temperature/Humidity & PM2.5/PM10 Transmitter

Shopping Mall Energy Management

Time-of-Use (TOU) Billing

AEM-DRB Multi-Circuit Power Meter
CPM-70 Multifunction Power Analyzer

Lighting Power Management

Billing by Time-of-Use (TOU) Function

AEM-DRB Multi-Circuit Power Meter
CPM-12D Multifunction Power Meter
APM-EMA Multi-Circuit Power Meter

Panel Mounting

Advanced Series

CPM-80 Series

Multifunction Power Analyzer

- High sampling rate: 256 points / cycle
- Energy accuracy: 0.2S (IEC62053-22:2003)
- True RMS Measurement
- Power Quality Event Record (Instantaneous Voltage Sag / Swell Event Time stamp)
- 3.5 "TFT LCD color screen and four quadrant display
- 1 Modbus port standard
- Optional second communication port : Ethernet or Modbus (Slave or Master)
- High individual harmonic measurement (up to 63rd harmonic)
- With phase angle, power demand, Time of Use (TOU), CO_2 emissions, electricity cost calculation
- Up to 48 alarm parameters with data logging for analysis
- 4MB internal flash memory
- Up to 8 digital inputs, 4 relay outputs, 2 analog outputs, 2 pulse outputs
- Easy installation with auto-calibration function
- Certifications: FCC, CE, EMC, LVD; CMET (UL certification ongoing)
- An optional screen protector is available for purchase to enhance the screen's dust and water resistance to IP66.

Applications:

◎ Suitable for complex power system environments
◎ Ideal for factory automation applications
◎ Measurement of main panels and distribution panels
◎ Long-duration data logging for power quality analysis

CPM-70 Series

Multifunction Power Analyzer

- Sampling rate: 128 points / cycle
- Energy Accuracy: 0.5S (IEC62053-22:2003)
- Individual harmonic measurement (2nd to 31st harmonics)
- Includes power demand, Time of Use (TOU), CO_2 emissions
- Provides 34 types of alarm parameter measurements
- Maximum/minimum value recording function
- Up to 4 digital inputs, 2 relay outputs, 1 digital output
- 1 Modbus port as standard
- 2MB internal flash memory
- Dielectric strength greater than 2kV
- Easy to install with auto-calibration function
- Certifications: FCC, CE, EMC, LVD
- Mean Time Between Failures (MTBF) reliability exceeding 60,000 hours
- Standard configuration includes 1 RS-485 Modbus RTU interface, with an optional addition of 1 Ethernet or WiFi communication interface (Modbus TCP).
- An optional screen protector is available for purchase to enhance the screen's dust and water resistance to IP66.

Applications:

◎ Motor control panel / Power measurement
◎ Main panel, sub-panel, power parameter management
◎ Time of Use (TOU) function
◎ Power quality analysis

Universal Series

CPM-20 Series

Multifunction Power Meter

- Sampling rate: 128 points / cycle
- Energy Accuracy: 0.5%
- Includes power demand and CO_2 emissions calculation
- Provides 33 types of alarm parameter measurements
- Maximum/minimum value recording
- Up to 2 digital inputs and 2 digital outputs
- 1 Modbus port as standard
- Dielectric strength greater than 2kV
- Certifications: FCC, CE, EMC, LVD
- Mean Time Between Failures (MTBF) reliability exceeding 60,000 hours

Applications:

◎ Power system, sub-panel, power parameter measurement
◎ Electromechanical equipment electricity consumption monitoring
◎ Time of Use (TOU) calculation
◎ High CPI (Cost Performance Index) value

CPM-12 Series

Multifunction Power Meter

- Sampling rate: 128 points / cycle
- Energy Accuracy: 1%
- Includes total harmonic, import/export power measurement, and CO_2 emissions calculation
- Provides 32 types of alarm parameter measurements
- Maximum/minimum value recording
- Easy to install with auto-calibration function
- Optional: 1 pulse output or Modbus port
- Dielectric strength greater than 2kV
- Certifications: FCC, CE, EMC, LVD
- Mean Time Between Failures (MTBF) reliability exceeding 60,000 hours
- An optional screen protector is available for purchase to enhance the screen's dust and water resistance to IP66.

Applications:

◎ Motor control panel / Power monitoring
◎ Power consumption monitoring and control
◎ Distribution panel system
◎ Smart Building Automation / Energy Management System

Economic Series

CPM-10B Series

Multifunction Power Meter

- Supports balanced/unbalanced power systems (3P3W, 3P4W, 1P2W, 1P3W)
- Features a unique dual-window display (10 digits + 4 digits)
- Energy Accuracy: 0.5%
- Provides 1 relay / 1 analog output
- Optional : 1 pulse output, 1 Modbus (RS485)
- Provide 25 alarm parameter measurements
- Compact size, compliant with standard DIN size (96 x 48 mm)
- Certifications: CE, EMC, LVD
- Mean Time Between Failures (MTBF) reliability of over 60,000 hours

Applications:

◎ Motor control panel / Power monitoring
◎ Power consumption monitoring and control
◎ Distribution panel system
◎ Smart Building Automation / Energy Management System
◎ Power test equipment

DIN Rail

AEM-DRB Series

Multi-Circuit Power Meter

8 Three-Phase Loops +
2 Main Circuits

- DIN Rail mounting and with clamp-on CT measurement for space-saving and time-efficient installation
- 30-loop design for current input measurement: 6 loops for main circuits; 24 loops for branch circuits
- Flexible phase wiring configuration: Each set of three current terminals can be configured as 1P2W, 1P3W, 3P3W, or 3P4W, allowing load measurement adjustments based on the main circuit's phase wiring
- THD and 31st HD measurement capability for each loop, enabling effective power quality monitoring in precision manufacturing and semiconductor industries
- Optional 7" or larger colorful touch screen (HMI) to meet on-site operational needs
- Designed to meet CE and CAT II standards

Applications:

◎ Rental buildings / apartment
◎ Street shops / workshops
◎ Dormitories / exhibiition booths
◎ Ideal for distributed electricity management

AEM-DR Series

Multi-Loop Power Meter

5 Single-Phase Loops
/ 1 Main Circuit

- Supports 5 single-phase loop power measurements measurement (3P3W, 3P4W, 1P2W, 1P3W)
- Compact DIN-rail installation: 54 x 81 mm (without relay module)
- 34 alarm parameter measurements with maximum/minimum value recording
- Energy accuracy : 0.5%
- 1 Modbus port included as standard
- Optional extension module: 5 relay outputs
- Additional modules available by request: WiFi or Ethernet
- Dielectric strength exceeding 2 kV
- Mean Time Between Failures (MTBF) reliability of over 60,000 hours
- Certifications: FCC, CE, EMC, & LV

Applications:

◎ Suites, shopping malls, and dormitory electricity billing
◎ Main panels, distribution panels, and power demand measurement
◎ Long-duration data logging for power quality analysis
◎ Electricity consumption monitoring for electromechanical equipment
◎ Ideal for limited space applications

CPM-12D Series

Multifunction Power Meter

- Sampling rate: 128 points/cycle
- Energy accuracy: 1.0%
- True RMS Measurement
- 2MB internal flash memory
- Supports 36 types of alarm parameter measurements
- Features power demand monitoring, data logging, Time-of-Use (TOU) function, and CO_2 emissions calculation
- 1 Modbus port included as standard
- Built-in pulse output
- Dielectric strength exceeding 2 kV

Applications:

◎ Energy management system
◎ Factory automation
◎ Intelligent power panels
◎ Industrial automation
◎ Power grid automation
◎ Community power monitoring
◎ Intelligent green buildings

AEM-DD Series

Multi-Loop Power Meter - DC

- Supports 5 single-phase loop power measurements
- Simple DIN-rail installation, compact size: 54 x 81 mm (without relay module)
- Provides 11 types of parameter measurements with maximum/minimum value recording
- Energy accuracy: 0.5%
- Dual-line display with 6-digit values simultaneously
- 1MB internal flash memory
- 1 Modbus port as default
- Optional: Extension module with 5 relay outputs
- Dielectric strength exceeding 2 kV
- FCC, CE, EMC, and LVD certified
- Mean Time Between Failures (MTBF) reliability exceeding 60,000 hours

Applications:

◎ Suitable for DC power systems
◎ Multi-Loop DC power parameter measurement
◎ Electromechanical equipment electricity consumption monitoring
◎ DC power measurement systems
◎ Upgrading or maintaining legacy systems
◎ Solar power, wind power systems, and energy storage/Measurement of DC system parameters

VAW Series

Multifunction DC Power Meter

- Provides DC voltage, current, and power parameter measurements, along with operation time calculation
- Unique dual-window display (10 digits + 5 digits)
- Energy Accuracy: 0.1%
- Supports bidirectional energy measurement
- Sampling rate: 15 points per second
- Response time: less than 100 milliseconds
- Optional: 4 relay outputs, 2 external control inputs, 1 analog output, 1 Modbus (RS485 communication)
- Relays can be set to trigger alarms for multiple power parameters
- Dielectric strength exceeding 2 kV
- EMC & LVD certified

Applications:

◎ Solar & wind power systems
◎ DC power measurement systems
◎ Battery Energy Storage monitoring
◎ Measurement and testing equipment
◎ Portable 3C devices

ADP-30 Series

Multifunction Power Analyzer

- Measuring 1P2W/1P3W/3P3W/3P4W system and the setting is programmable.
- Measuring balance unbalance loading system, including power parameters such as voltage, current, frequency, power factor, active power, reactive power, apparent power and energy.
- Ethernet Modbus TCP is optional for the second communication. And the dual-port design and daisy-chaining capability remove need for additional switches.
- Measuring voltage and current up to 31th individual harmonic, and can maintain power stabilty, and moreover, to avoid risk of equipment malfunctiion.
- Standard with time of use (TOU) function, which can perform power consumption with differential statistics according to the electricity consumption period.
- CE and FCC certified, with UL certification in progress.

Applications:

◎ Energy monitoring for motor control panel
◎ Energy management and power cost allocation
◎ Energy monitoring for distribution board
◎ Analysis of energy quality

Embracing smart energy


for a sustainable future.

Energy Management Software

Composed of Web server, Software, Network Gateways and Power Meter. It's also available through Free Tag connecting with water, temperature, air, pressure, vibration and other sensor data.

AD-SeeS-Mate
Energy Management System

AD-Cloud-Mate
Energy Management System -Cloud Version

Signal Processing and Display

Multifunction Power Meter - Panel Type

Advanced

AFM-8A Ethernet
High Performance Power Analyzer

CPM-80 Ethernet
Multifunction Power Analyzer

Universal

CPM-70 WiFi Ethernet
Multifunction Power Analyzer

CPM-20
Multifunction Power Meter

CPM-12
Multifunction Power Meter

Economical

CPM-10B
Multifunction Power Meter

Communication Interface

AME
RS-485 Ethernet Converter

AD-580
Energy Management Network Gateway

Multifunction Power Meter - DC Type

AEM-DD
Multi-Circuit DC Power Meter (DIN Rail) (5 Circuits)

VAW
DC Power Meter

Multifunction Power Meter - DIN Rail

APM-EMA
Multi-Circuit Power Meter (Up to 18 single phase or 6 three-phase circuit power input)

AEM-DRB Ethernet
Multi-Circuit Power Meter (DIN Rail) (24 Circuits + 2 Main Circuits)

AEM-DR WiFi Ethernet
Multi-Circuit Power Meter (DIN Rail) (5 Circuits + Modular Design)

CPM-12D
Multifunction Power Meter (DIN Rail)

Industrial Process Meter - Panel Type

CS1
Digital Voltage / Current Meter

CS2
Digital Voltage / Current Meter

CS3
Digital Voltage / Current Meter

CM1
Frequency Meter

CM2
Digits Voltage / Current Meter

CM3
3 Phases Voltage / Current Meter

A6
Process Meter

Signal Transducer & Converter

APM
Remote I/O Module series

UC1
Universal Process Conditioner (22.5mm)

AT
Converter & Isolator(17.5mm)

MT
Industrial Signal Converter - 8 Pin Plug

ST
Multifunction Converter

Signal Measuring & Sensing

US-CTV
Current Transformer (Split Core)

US-HCT
Hall Current Transformer (Split Core)

US-CTS
Current Transformer (Split Core)

UA-SHT
Current Shunt

US-RC
Rogowski Coil

WSA
Duct Type Wind Speed Sensor

TH
Temperature Sensors

TS
Temperature Sensors

PS2
Pressure Transmitter

DPW
Differential Pressure Transducer

HTA
Temperature / Humidity & PM2.5 / PM10 Transmitter

HTO
CO / CO2 / Temperature & Humidity Transmitter

FFZ
Ultrasonic Flow Meter

FEC
Electromagnetic Flow Meter

CPT
Multifunction Power Transducer

CA / CV / CF
AC Current / Voltage Transducer

CW / CQ
AC Active / Re-active Power Transducer

CPF
Power Factor Transducer

Industry 4.0 Factory Data Monitoring Solution

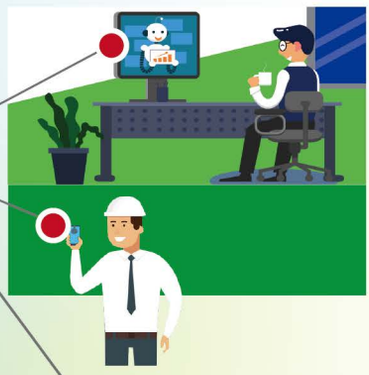
Energy Management Software

AD-SeeS-Mate
Energy Management System (PC)

AD-Cloud-Mate
Energy Management System-Cloud Version

Designed for power monitoring in factories.

System Composition:Includes Web server, software, network gateways, and power meter. Supports Free Tag integration for monitoring water, temperature, air, pressure, vibration, and other sensor data.



Signal Processing and Display

Power Monitoring of Factories and Production Lines

CPM-70
Ethernet
Multifunction Power Analyzer
Demand Monitoring & Harmonic Detection

AEM-DRB
Ethernet
Multi-Circuit Power Meter (DIN rail)
Centralized monitoring of multiple circuits with TOU (Time-of-Use) functionality

APM
Remote I/O Module series
Provide fine liability and maintenance efficiency so as to optimize industrial measurement and monitoring.

Equipment Power Monitoring, ideal for motor equipment

CPM-12D
Multifunction Power Meter (DIN rail)
Power consumption monitoring with abnormal alarm notifications

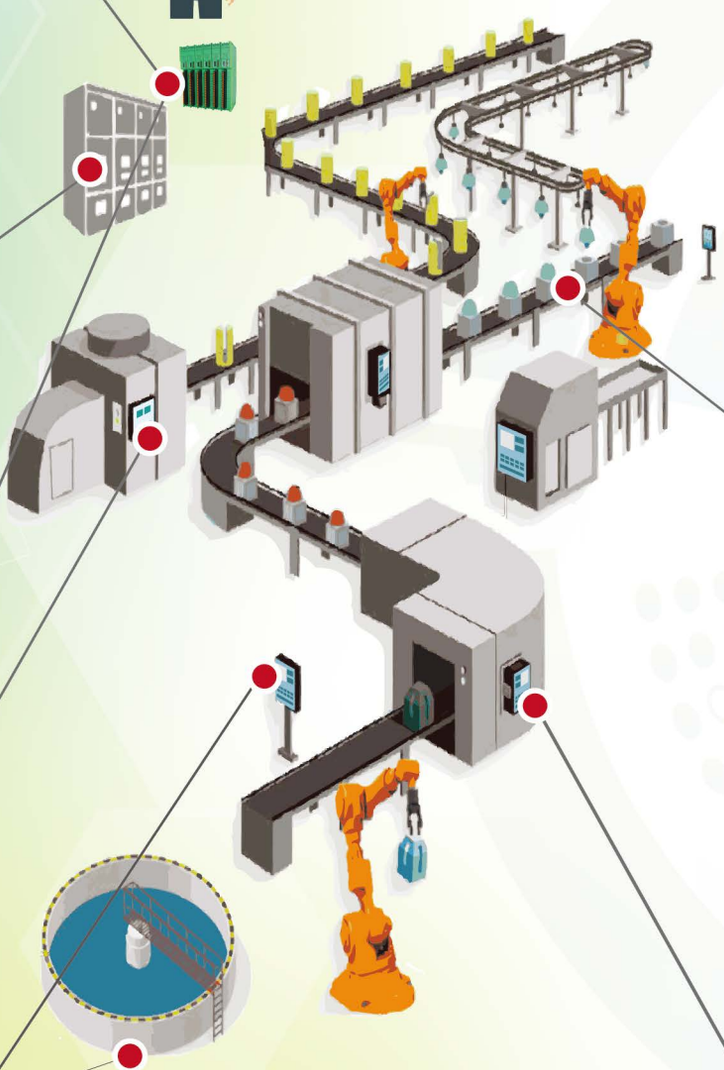
CS1/2/3- VA
Digits Voltage/ Current Meter
Voltage and current monitoring and display

CPM-10B
Multifunction Power Meter
Motor control and panel power monitoring

Production Signal Monitoring and Control

CM1/2/3 Series
Preset Counter
Monitoring of various process signals, including DC process signals (0-10V, 4-20 mA), temperature, tachometer/linear speed, length, counting, and position

TC
4 Digital PID Controller
PID process control



Signal Measuring & Sensing

Production Environment Monitoring - Air Conditioning System

WSA
Duct Type Wind Speed Sensor
HVAC air monitoring for environmental control and C/R (Clean Room) applications

HTO
Temperature& Humidity Transmitter
Monitoring and display of indoor temperature, humidity, CO, and CO_2 levels

HTA
Temperature/Humidity & PM2.5/PM10 Transmitter
Monitoring and display of indoor temperature, humidity, PM2.5, PM10

DPA
Air Differential Pressure Transmitter
Measurement of pressure and air flow for building pressurization and air flow control

Production Process Unit Monitoring

TH/TS
Temperature Sensors/Transmitters

PS2/DPW
Pressure/Differential Pressure Transmitters

BTU/ FEC/FFZ
Flow/Heating Meters

SP/PE
Proximity/Photoelectric Sensors

Signal Transduce & Convert

UC1
Universal Process Conditioner (22.5mm)
Converts DC process signals (0-10V, 4-20mA), thermocouples (TC), and Pt100Ω to analog output

AT
Converter/Isolator
Supports voltage/current, frequency, process signals (0-10V, 4-20mA, etc.), load cell (mV/V), potentiometer (0-Ω), temperature (TC / Pt100Ω), and electrical resistance signals (Ω)

CPT
Multifunction Power Transducer

Smart Building Monitoring Solution

Energy Management Software

AD-SeeS-Mate
Energy Management System (PC)

AD-Cloud-Mate
Energy Management System-Cloud Version

Comprehensive energy management solution for large buildings, covering commercial areas, offices, shopping malls, and more. Includes data collection via Free Tag for variables such as electricity, water, and temperature. Helps manage and monitor energy, ventilation, and more

Signal Processing and Display

Energy Storage, Renewable DC Power Systems Monitoring

CPM-80 Ethernet
Multifunction Power Analyzer

Monitors power quality for energy, utility, and renewable power systems

AEM-DD
Multi-Circuit DC Power Meter (DIN rail)

Monitors energy usage and supports renewable systems

User Shared Billing System

AEM-DRB Ethernet
Multi-Circuit Power Meter (DIN rail)

Provides centralized management for multi-circuit power consumption & time-of-use (TOU) monitoring

AEM-DR WiFi Ethernet
Multi-Circuit Power Meter (DIN rail)
(5 circuits + modular design)

Monitors area-based power consumption with wireless Wi-Fi data transmission

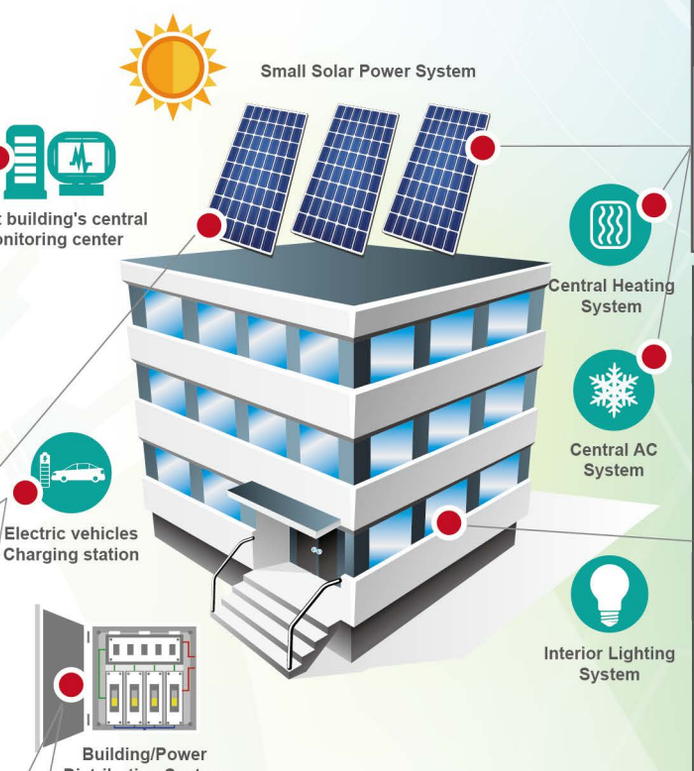
Distribution Panels Power Monitoring

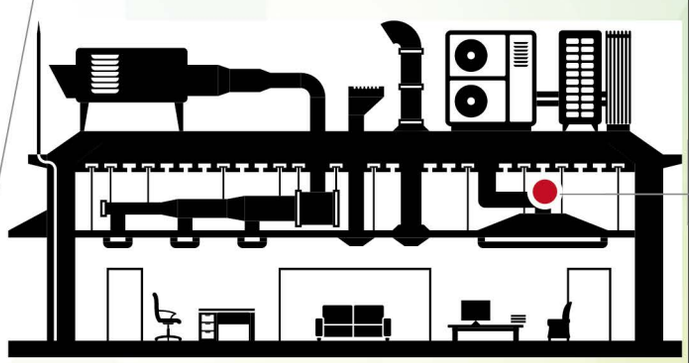
CPM-20
Multifunction Power Meter

Facilitates comprehensive power monitoring for distribution panels

CPM-10B
Multifunction Power Meter

Provides accurate power monitoring for various panel applications





Signal Processing and Display

Equipment & System Monitoring

CS1/2/3 Series
4 2/3-Digits Voltage/ Current Meter

Measures and displays solar power system frequency, voltage, current, and general AC systems

Signal Measuring/ Sensing

Temperature Detection of Solar Power System

TH/TS
Temperature Sensing/Transmission

Detects temperature in solar power systems and HVAC systems

Building Air Quality Monitoring - AC System (Indoor)

HTO
Temperature & Humidity CO/CO_2 Transmitter

Monitors indoor temperature, humidity, and CO/CO_2 levels for improved air quality

HTA
Temperature/Humidity & PM2.5/PM10 Transmitter

Monitoring and display of indoor temperature, humidity, PM2.5, PM10

Building Air Quality Monitoring – Indoor AC System Central Piping and Equipment

DPA
Air Differential Pressure Transmitter

Measurement of the accurate pressure and air flow for building pressurization and air flow control

WSA
Duct Type Wind Speed Sensor

HVAC air monitoring with central AC system

PS2/DPW
Pressure/Differential Pressure Transmitter

Used in monitoring pneumatic, AC, hydraulic, and compressor systems

BTU/ FEC/FFZ
Flow/Heating Meter

Monitors flow in water and heating systems for energy efficiency

Solar Power, Wind Power and ESS Energy Storage Systems

Signal Processing and Display

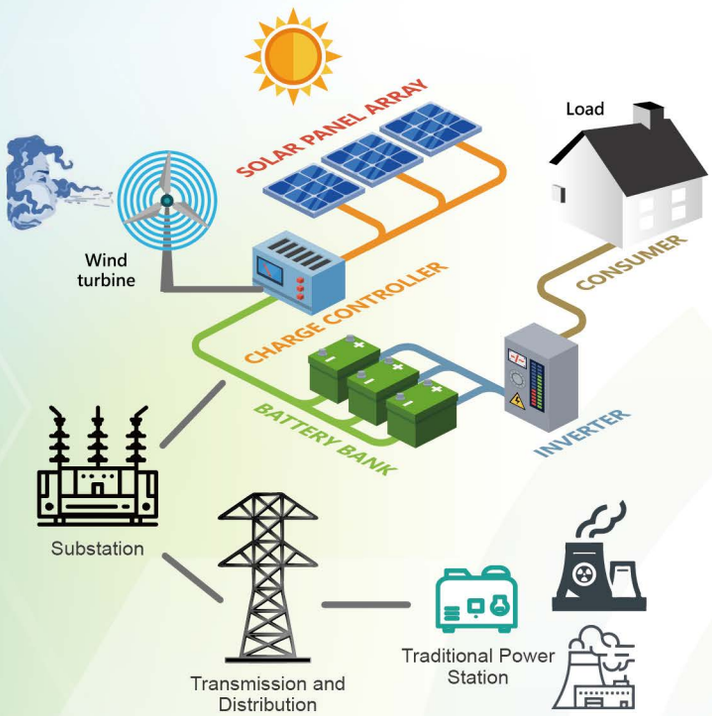
CPM-80 Ethernet
Multifunction Power Analyzer Meter
Power quality monitoring for energy storage, renewable energy, utility power, and generation systems

AEM-DD
Multi-Circuit DC Power Meter (DIN rail)
Power monitoring for energy storage and renewable energy systems

AEM-DR WiFi Ethernet
Multi-Circuit Power Meter (5 circuits + modular design)
Power monitoring in each area with wireless data transmission

CPM-20
Multifunction Power Meter
Bi-directional power monitoring

CS1/2/3 Series
Digits Voltage/Current Meter
Displays solar power system frequency, temperature, voltage/current, and more



Signal Measuring/ Sensing

Solar Power System Monitoring

TH/TS
Temperature Sensing/Transmission

AC/DC Power Measurement

UA-SHT
Current Shunt

US-CTV
Current Transformer (Split Core)

Signal Transduce & Convert

CPT
Multifunction Power Transducer
Converts power parameters (RO/ AO/ PO), displays data, and supports remote communication for voltage/current/power/energy monitoring

Water Treatment Equipment Monitoring Program

Energy Management Software

AD-SeeS-Mate
Energy Management System (PC)

AD-Cloud-Mate
Energy Management System-Cloud Version

Factory equipment energy monitoring, with Free Tag for tracking water, temperature, air pressure, and sensor data

Signal Processing and Display

Water Treatment Equipment Monitoring

CM1/2/3 Series
Digits Voltage/Current Meter
Measurement and display of analog signals (0-10V, 4-20mA, etc.) Like flow rate, liquid level, temperature, pressure, voltage and current.

CPM-12D
Multifunction Power Meter (DIN rail)
Power monitoring with TOU functionality

Signal Measuring/ Sensing

PS2/DPW
Pressure/Differential Pressure Transmitter
Monitors pneumatic compressors, AC systems, hydraulic pumps, and more

BTU/ FEC/FFZ
Flow/Heat Meters
Monitors flow and heating for pumps and motor systems

Signal Transduce & Convert

UC1
Universal Process Conditioner (22.5mm)

AT
AT Series Converter/ Isolator (17.5mm)
Converts various process signals (0-10V, 4-20mA, etc.) to analog output

Battery Production Equipment Monitoring Solution

Energy Management Software

AD-SeeS-Mate
Energy Management System (PC)

AD-Cloud-Mate
Energy Management System-Cloud Version

Designed for factory power monitoring

Signal Transduce & Convert

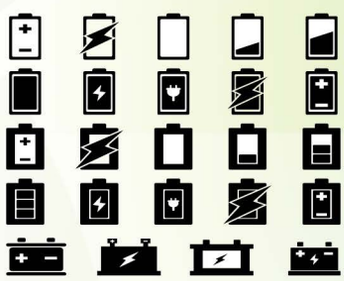
CPT
Multifunction Power Transducer

Conversion (RO/AO/PO) of power parameters (voltage/current/power/energy/power factor...)
-Supports display and remote communication (Modbus RTU)

Signal Measuring Sensing

UA-SHT
Current Shunt

US-CTV
Current Transformer (Split Core)



Signal Processing and Display

AEM-DRB Ethernet
Multi-Circuit Power Meter (DIN rail)
Centralized monitoring of multi circuits & TOU

CPM-12D
Multifunction Power Meter
Energy consumption monitoring with TOU and abnormal alarm

CPM-20
Multifunction Power Meter
Bi-directional power monitoring

AEM-DD
Multi-Circuit DC Power Meter (5 Circuits)
DC power system and energy storage battery monitoring

CS1/2、CM1/2 Series
Digits Voltage / Current Meter / Preset Meter
Displays voltage, current, weight, and temperature measurements

Plastic Extrusion Machine Monitoring Solution

Energy Management Software

AD-SeeS-Mate
Energy Management System (PC)

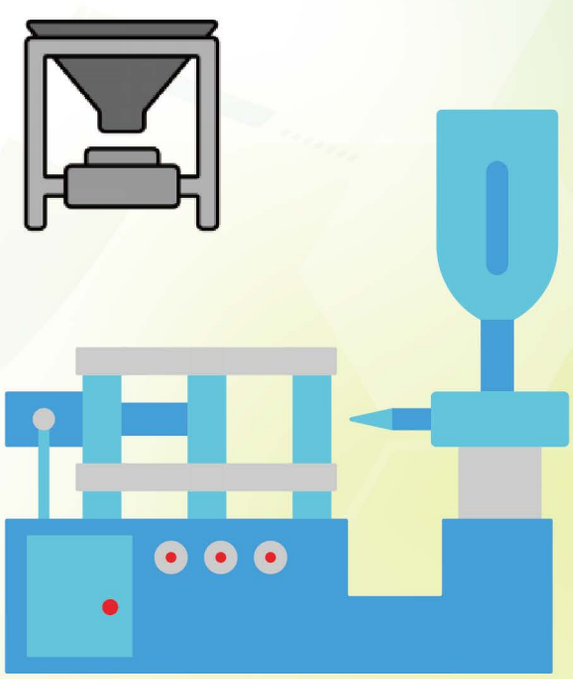
AD-Cloud-Mate
Energy Management System-Cloud Version

Designed for factory power monitoring

Signal Transduce & Convert

UC1
Universal Process Conditioner (22.5mm)
Converts DC process signals (0-10V, 4-20mA, TC, PT100Ω) to analog output

AT
Converter / Isolator (17.5mm)
Converts signals for voltage, current, frequency (0-10V, 4-20mA), and supports temperature and resistance input (e.g., thermocouples, PT100)



Signal Measuring/ Sensing

TH/TS
Temperature Sensors / Transmitters

PS2/DPW
Pressure/Differential Pressure Transmitter

Signal Processing and Display

CPM-12D
Multifunction Power Meter (DIN rail)
Energy consumption monitoring with abnormal alarm

CS1/2/3- VA
4 2/3 Digits Voltage/ Current Meter
Voltage and current monitoring

CM1/2/3 Series
Preset Meter
Monitors DC process signals (0-10V, 4-20mA), temperature, speed, and position

TC
4-Digit PID Controller
Process control of PID in extrusion machinery

APM Series

Remote I/O Module series

APM Series remote I/O module is primarily designed for use in data collection and discrete system. APM series modules provide fine liability and maintenance efficiency so as to optimize industrial measurement and monitoring.

For metering functional signals, such as, temperature, voltage, current, and power parameter of AC/DC. In addition, various modules for digital input and output are available to integrate into system according to user's needs.

Standard with RS-485 Modbus RTU communication interface, and Ethernet or WiFi Modbus RTU communication is optional to be added to the existed network.

The multi-loops and compact design of modules maximizes the space use and achieves high-density metering loops. APM series modules with LED indication are able to make intelligent monitoring and troubleshooting. And the Push-in termination design could save time for wiring and maintaining.

- Embedded expanding connecting points inside the modules, actively connect the power supply and the communication ports of the modules in parallel, to provide a more efficient and flexible installation.
- Elastic and simple installation that doesn't have to work in sequential order saves time for equipment maintaining and system expanding.
- DIP switches of front panel make easy setting for communication.
- LED indication for Power, system and importing status provides a convenient way to monitor system operation, troubleshooting and maintaining.
- Push-in terminal block makes wiring work safer, with more liability and less time for cabling.
- Detachable terminal block design allows pre-wired cable, and is able to exchange the module in system without removing the existed wiring so as to optimize system repair and maintenance.
- Single-row termination design and the pin assignment diagram for quickly port matching.
- 17.5mm(w) slim, impact module design allows high-density assembling in a small cabinet or limited space.
- I/O modules could be the isolated block to protect the host from direct damage.
- 18~36 Vdc wide voltage power supply for more flexible application and safety.
- With diverse communication interface for different working request.
- CE certificated.

Applications:

◎ Remote data management
◎ Industrial manufacturing control
◎ Security system
◎ Building automation system
◎ Digital control
◎ Monitoring manufacturing process
◎ Energy management
◎ Public transportation system
◎ Auto-testing system

APM-EMA

Multi-Circuit Power Meter (DIN rail)

The APM-EMA series was designed for multi-circuit power measurement, up to 18 single phase or 6 three-phase circuit power input. Applicable to different types of power circuit makes APM-EMA a valuable option.

Hardware standard built in a RS-485 Modbus RTU communication port and 2MB Flash memory.

Din rail mounting provides easy installation and larger elasticity.

Applications:

◎ System-integrated energy measurement
◎ Identification of “Energy Hogs”
◎ Stabilization of manufacturing processes
◎ Observation and acquisition of energy consumption variables
◎ Monitoring of total harmonic
◎ Reduction in electricity costs
◎ Cost centre allocation

CPM-10B

Multifunction Power Meter

- Support balanced / unbalanced power system (3P3W, 3P4W, 1P2W, 1P3W)
- With unique dual-window display (10 digits + 4 digits)
- Energy Accuracy: 0.5%
- Provides 1 relay / 1 analog output
- Optional : 1 pulse output, 1 Modbus (RS485)
- Provide 25 alarm parameter measurement
- Compact size, complies with standard DIN dimensions (96 x 48 mm)
- CE, EMC, & LVD certification
- Mean time between failure (MTBF) reliability more than 60,000 hours

Applications:

◎ Motor control panel / Power monitoring
◎ Power consumption monitoring and control
◎ Distribution panel system
◎ Smart Building Automation / Energy Management System
◎ Power test equipment

CPM-12D

Multifunction Power Meter

- CPM-12D din rail mounting power meter with high accuracy measurement for single phase and three-phase systems
- Measuring all basic parameters ; V, I, P, Q, kWh, kVarh etc.
- Standard with RS485 Modbus RTU communication port, front LCD display with buttons for programming.
- Auto wiring change (Note) via software
- CE and FCC approved

Applications:

◎ Energy management system ◎ Factory automation ◎ Intelligent power panel
◎ Industrial automation ◎ Power grid automation ◎ Community power monitoring
◎ Intelligent green building

VAW

DC Power Meter

- Measures DC Voltage, Current, Power, Import Energy, and Export Energy
  - 4 relays can be individually programmed for various functions
  - Voltage/Current/Power(kW): Hi / Lo / Hi Latch / Lo Latch energized with Start Delay / Hysteresis / Energized & De-energized Delay functions.
  - Energy(kWh): Energized with N/R/C mode
  - Other applications: DO (Digital output) ◦ Energy(kWh): Gate / Reset
- 2 external control inputs can be individually programmed
  - Voltage/Current/Power(kW): Relative PV (Tare) / PV Hold / Maximum or Minimum Hold
  - Other application: DI(remote monitoring) / Reset for Relay Energized Latch
- Analogue multi-cross selection for Voltage/Current/Power(kW)/Energy output in option
- Pulse output to correspond to energy and RS485 communication port option
- Outside dimensions comply with DIN standard (96 x 48 mm)
- CE Approved & RoHS compliant

Applications:

◎Solar system monitoring ◎Testing equipment

CS1 Series

4 2/3 Digits Voltage Current Meter

- Display Digits: 4 2/3 digits present value (-19999~+29999) or 5 digits (Frequency/Tacho Speed/Linear Speed: 0~99999)
- A/D Conversion Rate: 16-bit resolution (please check the datasheet)
- Measurement Accuracy:
  - CS1-VA: DC: ≤ ± 0.04% of FS ± 1C; AC: ≤ ± 0.1% of FS ± 1C;
  - CS1-PR/SG/RS/TM(analogue) : ≤ ± 0.04% of FS ± 1C
  - CS1-F/RL: ≤ ± 0.05% of FS ± 1C
  - CS1-T: Pt100Ω : ≤ ± 0.1% of FS ± 1C; TC: ≤ ± 0.2% of FS ± 1C;
  - CS1-MC: Accuracy: ≤ ± 0.1% of F.S; Ripple: ≤ ± 0.1% of F.S.
- Sampling Rate: 15 times/sec
- Response Time: ≤ 100 msec.(AVG= "1") (please check the datasheet)
- Type of Measurement Signal: ⊙Voltage/Current ⊙Frequency ⊙DC process signal (0-10V,4-20mA) ⊙DC flow signal (0-10V,4-20mA fowmeter or mV Shunt) ⊙Load Cell (mV/V) ⊙Potentiometer signal (3-wire) ⊙Temperature (Pt100/TC) ⊙Resistance signal (2-wire) ⊙Tacho / Linear speed
- With Excitation Power Supply (please check the datasheet)
- Output (Optional): Choose from 1 relay output/1 analog output/1 RS485 output. Relay output can be configured for Hi/Lo/Hi Hold/Lo Hold/OFF modes, with Start Delay, Hysteresis, Energized Delay, De-energized Delay, and other functions
- Supports On-site Calibration to meet on-site demands
- CE Certification

*1C=1 Count

CS2 Series

4 2/3 Digits Voltage Current Meter

- Display Digits: 4 2/3 digits present value (-19999~+29999) or 5 digits (Frequency/Tacho Speed/Linear Speed: 0~99999) or 6/10 digits (Counting Accumulation/Batch/Instantaneous Value)
- A/D Conversion Rate: 16-bit resolution (please check the datasheet)
- Measurement Accuracy:
  - CS2-VA: DC: ≤ ± 0.04% of FS ± 1C; AC: ≤ ± 0.1% of FS ± 1C;
  - CS2-PR/SG/RS/TM(analogue) : ≤ ± 0.04% of FS ± 1C
  - CS2-F/RL: ≤ ± 0.05% of FS ± 1C
  - CS2-T: Pt100Ω : ≤ ± 0.1% of FS ± 1C; TC: ≤ ± 0.2% of FS ± 1C;
  - CS2-MC (Analog output): Accuracy: ≤ ± 0.1% of F.S; 16 bit DA converter; Ripple: ≤ ± 0.1% of F.S.
- Sampling Rate: 15 times/sec
- Response Time: 100 msec.(AVG= "1") (please check the datasheet)
- Type of Measurement Signal: ⊙Voltage/Current ⊙Frequency ⊙DC process signal (0-10V,4-20mA) ⊙DC flow signal (0-10V,4-20mA fowmeter or mV Shunt) ⊙Potentiometer signal (3-wire) ⊙Temperature (Pt100/TC) ⊙Resistance signal (2-wire) ⊙Tacho / Linear speed ⊙Length-Count- Location (Hz/NPN/PNP/Pulse) ⊙Load Cell (mV/V)
- With Excitation Power Supply (please check the datasheet)
- Input (Standard): 3 external control inputs, programmable individually for Relative PV (Tare/PV Hold/Maximum or Minimum Hold/DI (remote monitoring)/Reset for Relay Energized Latch)
- Output (Optional): Up to 4 relay outputs, 1 analog output, and 1 RS485 output (Modbus RTU). Relay outputs can be programmed for Hi/Lo/Hi Latch/Lo Latch/Go modes, with Start Delay, Hysteresis, Energized, De-energized Delay, and remote control function
- CE Approved & RoHS Certified (CS2-VA)

*1C=1 Count

CS3 Series

4 2/3 Digits Voltage Current Meter

- Display Digits: 4 2/3 digits(-19999 ~+29999), or 5 digits (Frequency/Tacho Speed/Linear Speed: 0~99999)
- A/D Conversion Rate: 16-bit resolution (please check the datasheet)
- Measurement Accuracy: > CS3-VA: AC: ≤ ± 0.04% of FS ± 1C; AC: ≤ ± 0.1% of FS ± 1C; 2A DC/AC: ≤ ± 0.2% of FS ± 1C
  > CS3-PR/SG/RS : ≤ ± 0.04% of FS ± 1C > CS3-RL: ≤ ± 0.05% of FS ± 1C
  > CS3-TR: Pt100 Ω : ≤ ± 0.1% of FS ±1C; > CS3-TC: TC: ≤ ± 0.2% of FS ± 1C;
- Sampling Rate: 15 times/sec
- Response Time: ≤ 100 msec.(AVG= "1") (please check the datasheet)
- Type of Measurement Signal:
  ⊙Voltage/Current ⊙Frequency ⊙DC process signal (0-10V,4-20mA)
  ⊙Potentiometer signal (3-wire) ⊙Temperature (Pt100/TC) ⊙Resistance signal (2-wire)
  ⊙Tacho/Linear speed ⊙Load Cell (mV/V)
- Delicate Size: Only 24 x 48 mm
- Input (Standard): 1 external control input (ECI or DI), programmable individually for hold/ removal of maximum or minimum value, reset for relay, and more
- Output (Optional): Choose up to 2 relay outputs + 1 analog output, or 2 relay outputs + 1 RS485 output (Modbus RTU). Relay outputs can be programmed for Hi/Lo/Hi Latch/Lo Latch modes, with Start Delay, Hysteresis, and Energized & De-energized Delay functions
- Certifications: Meets CE standard and has FCC certification

*1C=1 Count

CM1 Series

Frequency Meter

- Enable to use button to set the display range
- Display Digits: 4 digits
- A/D Conversion Rate: 14-bit resolution (please check the datasheet)
- Measurement Accuracy:
  > CM1-VA: DC: ≤ ± 0.1% of FS ± 1C; AC: ≤ ± 0.2% of FS ± 1C;
  > CM1-F/PR/RL : ≤ ± 0.1% of FS ± 1C
  > CM1-TC: TC: ≤ ± 0.2% of FS ± 1C;
  > CM1-TR: Pt100Ω: ≤ ± 0.2℃ or 0.4℉
  > CM1-CT series (Analog output):
  Accuracy: ± 0.1% of F.S; 12-bit DA converter, Ripple: ≤ ± 0.1% of F.S.
- Sampling Rate: 15 times/sec
- Response Time: ≤ 100 msec.(AVG= "1") (please check the datasheet)
- Type of Measurement Signal:
  ⊙Voltage/Current ⊙Frequency ⊙DC process signal (0-10V,4-20mA)
  ⊙Temperature (Pt100/TC) ⊙Tacho / Linear speed
  ⊙Length-count-location (Hz/NPN/PNP/Pulse)
- With Excitation Power Supply: (please check the datasheet)
- Output (Optional): Choose 1 output from three options: 2 relay outputs/1 analog output/1 RS485. Relay outputs can be programmed for Hi/Lo/Hi Hold/Lo Hold modes, with Start Delay, Hysteresis, and Energized & De-energized Delay functions

*1C=1 Count

CM2 Series

Avanced Process Meter

- Enable to use button to set the display range
- Display Digits: 4 digits (-1999~9999)
- A/D Conversion Rate: 14-bit resolution (please check the datasheet)
- Measurement Accuracy:
  > CM2-VA: DC: ≤ ± 0.1% of FS ± 1C; AC: ≤ ± 0.2% of FS ± 1C;
  > CM2-PR : ≤ ± 0.1% of FS ± 1C
  > CM2-TC: TC: ≤ ± 0.2% of FS ± 1C;
  > CM2-TR: Pt100Ω: ≤ ± 0.2℃ or ± 0.4℉
- Sampling Rate: 15 times/sec
- Response Time: ≤ 100 msec.(AVG= "1") (Please check the datasheet)
- Type of Measurement Signal:
  ⊙Voltage/Current ⊙DC process signal (0-10V,4-20mA) ⊙Temperature (Pt100/TC)
- With excitation power supply (please check the datasheet)
- Output (Optional):

Simultaneous selection of two output sets:
◦ Option 1: 2 relay outputs + 1 analog output (0(1)5V / 010V / 0~10mA / 0(4)~20mA)
◦ Option 2: 2 relay outputs + 1 RS485 output (Modbus RTU)
Both relay outputs can be individually programmed for Hi / Lo / Hi HLd / Lo HLd modes and include features like start delay, hysteresis, and energized/de-energized delay functions.

*1C=1 Count

CM3 Series

3-Phase Preset Meter

- Size: CM3-VA7 (72 x 72 mm), CM3-VA9 (96 x 96 mm)
- Enable to use button to set the display range
- Display Digits: 4 digits (0~9999)
- Measuring True RMS
- A/D Conversion Rate: 12-bit resolution
- Measurement Accuracy:
  > CM3-VA7/9: ≤ ± 0.2% of FS ± 1C
- Sampling Rate: 15 times/sec
- Response Time: ≤100 msec.(AVG= "1")
- Type of Measurement Signal: Voltage/Current
- Output (Optional):

◦ CM3-VA7 can choose 3 outputs simultaneously: 3 relay outputs / 1 analog output / 1 RS485 output
◦ CM3-VA9 can choose 3 outputs simultaneously: 6 relay outputs / 3 analog outputs / 1 RS485 output
All relay outputs can be programmed individually for Hi / Lo / Hi HLd / Lo HLd modes, and have start delay, hysteresis, and energized/de-energized delay functions.

*1C=1 Count

A6 Series

Process Meter

- Enable to use button to set the display category
- Display Digits: 6 digits (-199999~+999999)
- Zero tracking / stable tracking / dynamic jitter functions designed for process sensor
- A/D Conversion Rate: 24-bit resolution
- Measurement Accuracy:
  > A6-PR/SG: ≤ ± 0.1% of FS ± 1C
- Sampling Rate: Configurable from 6.25~100 times/sec
- Type of Measurement Signal:
  ⊙DC 0~5V/0~10V/0(4)~20mA ⊙Load Cell (mV/μV/D)
- Input (Standard): 4 External Control Inputs (ECI) (or calls DI), can be set for several control statuses, like return to zero (Zero), offset deduction (Tare), measurement start/end, measurement value accumulation, and so on.
- Output (Optional): Can choose 4 relay outputs, 1 analog output, and 1 RS485 port (Modbus RTU Mode) simultaneously. A6-PR's relay output can be programmed individually for three modes: HI/OK/LO comparison at all-time/compare in specific time period/compare with triggered signal. It's also available to switch display from peak to holding value for making the independent control system easily. A6-SG's relay outputs can be programmed individually to correspond for three modes: HI/OK/LO comparison at all-time/compare in specific time period/compare with triggered signal. It also has seven optional modes to make independent control system easily: feeding counting/discharging counting/output comparison/zeroing/output comparison in a time period/peak and holding value counting.

*1C=1 Count

UC1

Universal Process Conditioner (22.5mm)

- Programmable Input Signal:
  0~100mV/0~5V/1~5V/0-10V/0~10mA/0~20mA/4~20mA/TC/Pt100
- Programmable Analogue Output: 0~5V/1~5V0~10V/2~10V/0~20mA/4~20mA
- With LCD display, it can display in 4 2/3 digits
- Types of Measurement Signal: ⊙DC Process Signal (0-10V,4-20mA,0-100mV, etc.)
  ⊙Temperature (Pt100/TC)
- Output Accuracy: DC Voltage/Current: ≤ ± 0.04% of FS ± 1C
  TC: ≤ ± 0.2% of FS ± 1C ; Pt100: ≤ ± 0.1% of FS ± 1C
- Response Time: ≤250 ms ; TC: ≤500 ms
- With Excitation Power Supply
- Pluggable Terminal for Easy Wiring
- Output (Optional): Can choose one output among three options: 2 relay outputs / 1 analog output / 1 RS485 output. 2 relay outputs can be programmed individually to correspond for Hi / Lo / Hi HLd / Lo HLd modes, and have start delay, hysteresis, energized & de-energized delay functions, and so on.
- Isolation Between Input, Output, and Power

*1C=1 Count

AT Series

Converter / Isolator Slim Type (17.5mm)

- Output: 0-5V/ 0~10V/1~5V/2~10V/4~20mA/ 0~20mA
- LED Indications for Power, Input, and Output Status
- Types of Measurement Signal:
  ⊙Voltage / Current Input
  ⊙Frequency
  ⊙DC Process Signal (0-10V,4-20mA...etc)
  ⊙Load Cell (mV/V)
  ⊙Potentiometer signal (0-.Ω)
  ⊙Temperature (Pt100/TC)
  ⊙Resistive Signal (.Ω)
- Output Accuracy:
  > AT-VA: AC/ Current: ≤ ± 0.5% of FS ± 1C ;
  DC/ Current: ≤ ± 0.2% of FS ± 1C (or ±0.1%--Optional)
  > AT-PR: ≤ ± 0.2% of FS ± 1C (or ± 0.1%--Optional)
  > AT-TR: Pt100: ≤ ± 0.2% of FS ± 1C (or ± 0.1%--Optional)
  > AT-TC: TC: ≤ ± 0.5% of FS ± 1C;
  Cold-Junction Reference Compensation: 25 ± 10℃, Error ≤ 0.5℃
  > AT-PM: Potentiometer: ± 0.2% of FS ± 1C (or ± 0.1% Optional)
  Detecting Voltage: 0.2 V into 2.0 KΩ or less; 1.0 V into 2.0 KΩ or less
  > AT-RS: Resistance: ≤ ± 0.2% of FS ± 1C (or ± 0.1%--Optional)
  Detecting Current: 1.6 mA
  > AT-SG: Load Cell: ≤ ± 0.2% of FS ± 1C (or ± 0.1%--Optional)
- Response Time:
  > AT-PR , TR; ≤ 250msec (Input 10%~Output 90% of FS)
  > AT-SG , VA (DC); 300msec (Input 10%~Output 90% of FS)
  > AT-VA (AC); ≤ 500msec (Input 10%~Output 90% of FS)
- Output Ripple: ≤ ± 0.1% of FS
- Span Calibration Range: ≤ ± 0.5% of FS ; 2 Group Individually Adjusted
- Zero Calibration Range: ≤ ± 0.5% of FS ; 2 Group Individually Adjusted
- Isolation: AC 2.0kV, Between Input / Output / Working Power
- With Excitation Power Supply
- Output (Standard): Up to two outputs (0-5V/ 0~10V/1~5V/2~10V/4~20mA/0~20mA)

*1C=1 Count

MT Series

Industrial Signal Converter
-8 Pin Plug

- Output can be specified at the time of ordering
- Types of Measurement Signal:
  ⊙Voltage/Current ⊙Frequency ⊙DC Process Signal (0-10V,4-20mA...etc)
  ⊙Load Cell (mV/V) ⊙Potentiometer Signal (0-.Ω) ⊙Temperature (Pt100)
- Output Accuracy: MT-VI/CL/FD/DF/SG/RTD/RT: ≤ ± 0.1% of FS ± 1C
- Response Time:
  > MT-VI/CL/FD/SG/RTD/RT/DA: ≤ 250 ms
  > MT-DF/FF: ≤ 250 ms with one additional pulse cycle
- Output Ripple: ≤ ± 0.1% of FS
- Span Adjustment:
  > MT-VI/CL/FD/SG/RTD/RT: ≤ ± 10% of FS;
  > MT-DF: ≤ ± 50% of FS (Rought uning)/ ≤ ± 1% of FS (Fine tuning);
- Zero Adjustment: MT-VI/CL/FD/DF/SG/RTD/RT: ≤ ± 5% of FS;
- With Excitation Power Supply (Please check the datasheet)

*1C=1 Count

ST Series

Multifunction Converter

- Input range can be programmed and calibrated by panel buttons
- 4 2/3 digits(-19999~29999) ; Frequency: 0~99999
- Types of Measurement Signal:
  ⊙Voltage/Current ⊙DC Process Signal (0-10V,4-20mA...etc) ⊙Load Cell (mV/V)
  ⊙Potentiometer Signal (0-.Ω) ⊙Temperature (Pt100/TC) ⊙Resistive Signal (.Ω)
  ⊙Mathematical Operations
- Output Accuracy:
  > ST-VA: DC Voltage / Current: ≤ ± 0.04% of FS ± 1C;
  AC Voltage / Current: ≤ ± 0.1% of FS ± 1C
  > ST-SG/PR/PM/RS/LC: ≤ ± 0.04% of FS ± 1C; > ST-RL: ≤ ± 0.005% of FS ± 1C
  > ST-T: Pt100: ≤ ± 0.1% of FS ± 1C ; TC; ≤ ± 0.2% of FS ± 1C;
- Sampling Rate: 15 times/sec
- Response Time: ≤ 100 ms (AVG= "1")
- With Excitation Power Supply (Please check the datasheet)
- Input (Standard): Up to 1 set of input (specified range available)
- Output (Optional): Can choose up to 3 relay outputs / 1 relay output + 1 analog output + 1 RS485 output (Modbus RTU). The relay outputs can be programmed individually to correspond for Hi / Lo / Hi HLd / Lo HLd modes
- CE Approved

*1C=1 Count

DPW

Differential Pressure
Transmitter

For differential pressure measurement of indoor liquids and gases, not for explosion-proof applications.
Features :

- Utilizes a diffused silicon sensor with advanced membrane isolation
- Wide range power supply
- Compact and easy to install
- Anti-interference and anti-lightning design
- Reverse polarity protection, Over-Voltage Protection (OVP), Over-Current Protection (OCP)
- 2 ms response time, high accuracy, and high stability
- Measurement Range: 0~2.5 mPa
- Accuracy: 0.25% FS, 0.5% FS
- Measurement Medium: Liquid, gas (compatible with stainless steel)

PS2

Pressure Transmitter

For measuring gauge pressure, compound pressure, and absolute pressure, applied in pneumatic compressors, HVAC, hydraulic systems, pump monitoring, and sewage treatment control systems.

Features :

- Digital temperature compensation and nonlinear correction
- High sensitivity, high precision, high stability
- Full temperature compensation with excellent electrical performance and long-term stability
- Integrated spin-welded plug and housing for stability and waterproofing, preventing loosening of standard threads
- Multiple signal outputs to convert the measured medium's pressure into 4~20 mA, 0~10 VDC analog signals, or RS485 digital signals
- Equipped with an RS485 communication interface, allowing the monitoring system to easily read the measured values
- Laser-welded housing for high reliability, long lifespan, and stable long-term performance

Specifications:

- Measurement Range: Relative Pressure: 1~100 bar ; Absolute Pressure: 0~1/~2bar
- Overload Range: 2 x measuring range ● Burst Pressure: 3x measuring range
- Output Signal: 2 wired: 4~20mA; 3 wired: 0~10V or 0(1)~5V; 4 wired: RS-485
- Accuracy :
  - Linear: ≤ ± 0.5% FS ◦ Hysteresis: ≤ ± 0.2% FS ◦ Zero Electric Output: < 50mV
  - Zero Thermal Drift: ≤ ± 0.03% FS/°C ◦ Zero Adjustment: ≤ 10% of FS
  - Full Scale Adjustment: ≤ 10% of FS
- Response Time: ≤ 1 msec ● Power Supply: 10~36 Vdc
- Vibration Resistance: 10gRMS, (20~2000)Hz ● Shock Resistance: 100g, 11ms
- Housing Material: Body: Stainless Steel 304; Thread: Stainless Steel 316
- Sensing Element: Diffused Silicon Sensor
- Pressure Connection:
  - External Thread: NPT 1/4", 3/8", 1/2" ◦ PT 1/4", 3/8", 1/2"
  - Electrical Connection: DIN Connector 43650-A
- Compatible with 2-Wire Field Indicator
  - Display: 0~9999 (Programmable) ◦ Alarm Output (Optional): 2 points; Open-collector
  - Connection: DIN Connector 43650-A ◦ Power Consumption: ≤ 4.5V, 3mA

TH

Temperature Sensors

For temperature sensing, available in several types:

Specifications:

- Thermocouple: K, E, J, T, B, R, S Type
- Thermal Resistance: Pt100 Ohm
- Includes adjustable/fixed screw type, adjustable/fixed flange type, economical type, economical spring type, and round terminal type.
- Tube Diameter: Options of 3.2, 4.8, 5.0, 6.4, 8.0, 9.5, 12.7, 15.0, 17.0 mm or for dedicated MR type
- Connection: 1/4",3/8", 1/2" NPT & PT male; 5.0 Kg/ cm² adjustment connection or flange available
- Insulation Resistance: 1000MΩ / 500Vdc
- Material:
  - Tube Connection: Stainless Steel 316
  - Connection Tube: Stainless Steel
  - Head: Aluminum case
  - Sensor: Options of SUS304, SUS316, Teflon (outer coating), Teflon (whole), ceramics, and titanium tube

TS

Temperature Transmitters

Features :

- Wide Selection of Input Options
- Low Output Ripple
- High Stability & Low Cost

Specifications:

- Accuracy:
  - RTD (Pt100): ± 0.15% of FSO ; Thermocouples (K, J, E, T): ± 0.3% of FSO
- Span Adjustment: ≤ 10% of FSO
- Zero Adjustment: ≤ 5% of FSO
- Output Ripple: ≤ 0.3% of FSO
- Response Time: ≤ 300 msec.
- Power Supply: Loop Power DC 16 ~ 36V
- Open Circuit Protection: Upscale ≥ 22mA
- Operating Temperature: 0~60°C; Temperature Coefficient: ≤ 100 PPM/°C
- Cold Junction Compensation: 25±10°C, error ≤ 0.5°C
- Material:
  - Tube Connection: Stainless steel 316
  - Head: Aluminum case
  - Tube Diameter: Options of 3.2, 4.8, 6.3, 6.4, 8.0, 9.5, 12.75 mm
  - Connection: 1/4", 3/8", 1/2" NPT or PT male. Sliding connection or flange available
  - Thermo-Well: Options of 1/4", 3/8", 1/2" NPT or PT male; flange available

LS

Level Transmitter

Level Transmitter (Immersion)

Ideal for liquid level measurement, suitable for open tanks, rivers, and similar applications. The sensor can be placed at the bottom of the liquid to detect water levels from low to high limits. It can also be used across multiple liquid storage environments such as drinking water systems, drilling operations, wastewater treatment plants, large tank containers, rivers, lakes, and more.

Features

- Stainless steel shell with a durable 28mm outer diameter, designed for easy installation
- Triple sealing process ensures rigorous and reliable protection
- High accuracy, high stability, and cost-effective
- Equipped with a signal isolation amplifier to reduce interference
- PTFE breathable cable for enhanced durability

DPA

Air Differential Pressure Transmitter

- Equipped with analog output or RS-485 Modbus for analog input module and the communication for new systems.
- Measurement range: lower range: 0 ~ ±50pa; upper range: 0 ~ ±10,000pa
- Able to set the pressure range by setting the dip switches.
- Models with analog output mode can distinguish three measurement ranges: -1000~+1000pa / -10000~+10000pa / -100~+100pa range selection, each range can be switched between 3~4 measurement ranges.
- Static accuracy: ±1.0%FS (normal temperature)
- Equipped with temperature compensation (-10~60°C)
- Various different pressure units.
- Able to go with/without display.
- Auto-zero point adjustment for pressure difference.
- Set the response time by setting the dip switches (0.5S~4S).
- Separate installation of plastic board and the transmitter

HTO

Temperature & Humidity Transmitter

Suitable for office buildings, medical institutions, libraries, laboratories, plant factories, department stores and other public spaces to measure temperature, humidity, CO, and CO_2 in daily indoor environments. Featuring a three-color LCD display screen, it provides real-time data needed for a comfortable environment.
(If the alarm value is exceeded, the LCD will turn red)

- Measurement Range:
  - Temperature: -50°C~100°C
    Can be set via USB console port. Initial value is 0°C to 50°C.
  - Humidity: 0% RH to 100% RH
  - CO: 0~100 / 0~300 / or 0~500 ppm
  - CO_2: 0~2000 / 0~5000 / or 0~10,000 ppm
- Measurement Accuracy:
  - Temperature: ±0.4°C (25°C)
  - Humidity: ±3% RH (10 to 90% RH at 25°C)
  - CO: ±10 ppm
  - CO_2: ±70 ppm
- Analog Output Load Impedance: 4~20mA ≤500Ω / 0~10V ≥600Ω
- Analog Output Resolution: 15 bits
- Communication Output Option: RS485 Modbus RTU (with indicator light)
- Dimensions:
  - Wall Mount Type: Length 135 mm x Width 85 mm x Height 40 mm
  - Duct and Remote Probe Type: Length 123 mm x Width 119 mm x Height 47 mm (Tube: 168 mm)
- Housing Material: ABS (Housing), PC (Tube)
- Power Supply: DC 24V ± 20 %

HTA

Temperature/Humidity & PM2.5/PM10 Transmitter

- Output options: up to 1 set of RS-485 Modbus RTU Communicaiton and 1 set of Analog selection
- Baud rate: 9600, 19200, 38400, 57600, 115200 bps
- RS-485 transmission format: N81, N82, E81, O81
- RS-485 address: 1~255
- RS-485 output response time: <200ms
- Temperature and humidity / air visual compensation deviation values can be corrected through the RS-485 communication system and buttons.
- Use laser scattering principle sensors for PM2.5 and PM10
- Temperature / Humidity sensing element : CMOS sensor
- Analog output options: up to 1 set of 4~20mA or 0~10V output with a specified PM sensor (4 selections)
- LCD with 3 backlight colors to indicate concentration levels of PM2.5 or PM10, and the backlight can be factory specified.
- 3 colors of LCD backlight for corresponding spec: green, blue, orange
- Application of HVAC building environmental ventilation and air-conditioning equipment / medical institutions / library / laboratory / air-conditioned clean room / breeding farm / department store and hotel / cinema and mass rapid transit / remote real-time monitoring / parking garage / indoor air purification system, etc.

Industry 4.0 Application Architecture

ADTEK : Bridging IT & OT

Cloud Management & IoT Visual Data Platform

Energy Management Software

Energy Management System -Cloud Version

Energy Management System (PC)

Sophos Cloud Architecture

Server-Based (MQTT)

Edge Computing

Ethernet (TCP/IP), WiFi···

Data Transmission (OT-IT)

Modbus, Ethernet,NB-IoT, WiFi... Wired/Wireless

Communication Interface

AD-580
Energy Management Network Gateway

AD-680
Energy Management Network Gateway

AME
RS-485 Ethernet Converter

NB-IoT
WiFi
Ethernet

Analog Signal: 0-10V / 4-20mA

RS485 / WiFi... Communication

Measurement & Sensing (OT)

Signal Processing & Display

Signal Transduce & Convert

Signal Sensing

CS/CM 1/2/3
Process Meters (Display/Setting/Control)

APM
Remote I/O Module series

AT
Signal Isolation Converter

UC1

CPM Series

AEM Series (multi-circuit) APM-EMA
Multi-Circuits AC/DC Power Meters (DIN Rail installation)

(Meter input signal support 333mV)

Temperature / Humidity / Pressure / Liquid level / CO / CO2 / PM2.5 / VOC / Differential Pressure / Load Cell / Rational & Linear speed

Current Transformer (CT)

Optimizing Energy Efficiency for Tomorrow's World

BEMS
AEM-DRB CPM-12D
Building Energy Management System

FEMS
CPM-80 APM-EMA
Factory Energy Management System

EVSE
CPM-12D MWH
Electric Vehicle Supply Equipment

BESS
CPM-80 AFM-8A
Battery Energy Storage System

SEGS
AEM-DD CS1
Solar Energy Generating System

HEMS
ACS-13 AEM-DR APM-EMA
Home Energy Management System

AD Cloud Mate

Energy Management System (EMS)

- Supports up to 250 gateways per EMS software
- Connects up to 30 meters per gateway

Industrial Internet of Things (IIoT) | Low-Carbon Energy | Public Infrastructure | Smart Buildings

Beyond Expectations,
Creating Endless Possibilities

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Argentina, Brazil, Chile, Peru,
Dominican Republic, El Salvador,
Bolivia, Guatemala

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South Africa, Nigeria, Congo, Zimbabwe