INSTRUMENTS FOR ENERGY & POWER MANAGEMENT

SOLAR POWER

Multifunction DC Power Analyzer VAW

Data Logger DL1S

Isolated Converter AT

POWER PLANT

Multifunciton Power Analyzer CPM-80/CPM-70

Multifunction Power transducer CPT

Isolated Converter AT

Power Transducer CA33/CA12

OPERATING SOFTWARE

SUBSTATION

Multifunction Power Transducer CPT

Data Logger DL1S

Multifunction Power Transducer CA33-CA12

BUILDINGS

SUBSTATION

PUBLIC FACILITIES

INDUSTRIAL-MANUFACTURING & PROCESSING

SMART HOME HOME AUTOMATION

Air Conditioning System

Sensing Transducers T&H, Pressure, CO, CO2, PM2.5, VOC, BTU

Multi-function Power meter

CPM-80

CPM-70

CPM-20

Lighting Utility

10 Digits Energy Meter MWH-10A

Split Core Current Transformer US-CTS

Multi-channel Power Meter AEM-DRA

Wireless Temp. Meter WTM-100

Split Core Current Transformer US-CTA

Manufacturing Facility

Multi-function Power Meter CPM-10/CPM-20

Multi-channel Power Meter AEM-DRA

Multi-channel Power Meter AEM-DR

CHANG SHUAN ELECTRONICS CO., LTD.

4F-18, No.14, Line 609, Sec. 5, Chung-Shin Rd., San-Chung Dist.,
New Taipei City, 24159, Taiwan
TEL: +886-2-2995-3100 FAX: +886-2-2995-3101
Website: www.adtek.com.tw

ADTEK

MADE IN TAIWAN

NEW

CPM-80 SERIES POWER ANALYZER

- Single phase/ 3-phase parameters:
  V, A, P, Q, S, PF, Hz, W, Watt-Hr, Var, Var-Hr
- 2~63rd THD
- Waveform capture (128 points x 3 cycles)
- 4DI, 2DO, 2RO
- Automatic wiring detection and correction
- TOU , Cost, CO2 emission
- 2MB Memory
- Multi communication Ports (RS485, Zigbee, Ethernet)

Applications

1. Power Quality Analysis Monitoring of High/Low Voltage Switchboard
2. Plant Automation Monitoring

NEW

CPM-70 SERIES MULTIFUNCTION POWER METER

- Single phase/ 3-phase parameters:
  V, A, P, Q, S, PF, Hz, W, Watt-Hr, Var, Var-Hr
- 2~31st THD
- 4DI, 2RO
- RS485 Modbus Communication
- TOU , Cost, CO2 emission
- 2MB Memory

Applications

1. Power monitoring of Motor Control Switchboard
2. Distribution Power Monitoring
3. Energy Management and Electricity Cost Allocation System
4. Power Quality Analyis

CPM-20 SERIES ECONOMIC TYPE MULTIFUNCITON POWER METER

- Single phase/ 3-phase parameters:
  V, A, PF, Q, S, PF, Hz, W, Watt-Hr, Var, Var-Hr
- 2~31st THD
- Demand, DI, DO
- Cost, CO2 emission
- Max/Min statistical logging
- RS485 Modbus Communication

Applications

1. Power Monitoring of Motor Control Switchboard
2. Distribution Power Monitoring
3. Energy Management and Electricity Cost Allocation System
4. Power Consumption Monitoring of Mechanical Equipment

CPM-10 ECONOMIC TYPE MULTIFUNCTION POWER METER

- Single phase/ 3-phase parameters:
  V, A, PF, Q, S, PF, Hz, W, Watt-Hr, Var, Var-Hr
- SPDT Relay Output with 3 set points
- RS485, Pulse Output, Analogue Output

Applications

1. Power Monitoring of Motor Control Switchboard
2. Distribution Power Monitoring
3. Energy Management and Electricity Cost Allocation System
4. Power Consumption Monitoring of Mechanical Equipment

NEW

AEM-DRA SEIRES MULTI-CIRCUIT POWER METER

- Single phase 24 circuits / 3-phase 8 circuits' parameters:
  V, A, PF, Q, S, PF, Hz, W, Watt-Hr, Var, Var-Hr
- 2 communication Ports:
  1st Port: RS485 Modbus RTU
  2nd Port: RS485/LonWorks/Profibus/BACnet/Zigbee/Ethernet
- 128 x 64 dot-matrix LCM
- 2~31st Individual Harmonic, demands & TOU
- 2MB Memory
- DIN-rail mounting

Applications

1. Rental Building Electricity Charging Management
2. Booth Electricity Charging Management
3. Market/Vender/Stand Electricity Charging Management
4. Rental Apartment Electricity Charging Management
5. Distributed Generation Electricity Charging Management
6. Dormitory Electricity Charging Management

MWH-10A 10 DIGITS WATT & WATT-HR ENERGY METER

- Dual display: 10 digits Watt-Hr, 4 2/3 digits Watt
- 1 Relay Output, 1 Analogue Output,1 Pulse Output
- RS485 Modbus Communication

Applications

1. Electricity Charging System
2. Power Consumption Monitoring and Controlling
3. Power Distribution System
4. Automatic Energy Management System of Intelligent Building
5. Power Testing Equipment

AEM-DR SERIES MULTI-CIRCUIT POWER METER (W/ PATENT)

- Single phase 5 circuits / 3-phase 2 circuits parameters: V, A, PF, Q, S, PF, Hz, W, Watt-Hr, Var, Var-Hr
- Multi-circuit
- RS485 Modbus Communication
- DIN-Rail mounting
- 1MB Memory
- Modular Expansion Design

Applications

1. Rental Building Electricity Charging Management
2. Booth Electricity Charging Management
3. Market/Vender/Stand Electricity Charging Management
4. Rental Apartment Electricity Charging Management
5. Distributed Generation Electricity Charging Management
6. Dormitory Electricity Charging Management
7. Trailer Coach Electricity Charging Management

VAW MULTIFUNCTION DC POWER METER

- Measure DC voltage, DC current, DC power, DC energy and Run Hour
- Direct measure DC voltage up to 600V
- 4 RO, 1AO, 1 Pulse Output, 2 DI, DO
- RS485 Modbus Communication

Applications

1. Solar and Wind Energy Systems
2. DC Energy Management Systems
3. Industrial DC Control Systems
4. UPS Systems Monitoring
5. Power Consumption Testing of Portable Electronic Devices

CPT MULTIFUNCTION POWER TRANDCUER

- Single phase/ 3-phase parameters: V, A, W, PF, Hz, VAR, Watt-Hr, Var-Hr
- 2 Pulse Outputs, 4 Analogue Outputs, Relay Output
- Free software for configuration
- Class 0.2
- RS485 Modbus Communication
- IEC 60688

Applications

1. Power Plant/ Substation Automatic Control System
2. Power Distribution Motor Control Monitoring
3. Energy Consumption Monitoring and Control for Mechanical Equipment
4. Automatic Energy Management System for Intelligent Building
5. Power Testing Equipment

WTM-100 WIRELESS TEMPERATURE METER

- Reliable, stable and easy to setup
- 24 hours online real-time monitoring
- Wireless transmission, suport up to 12 sets of wireless temperature sensors
- RS485 Modbus Communication

Applications

1. High voltage switch boxes and copperhead contacts, high voltage cable connectors, and dry-type transformers
2. Temperature monitoring for low voltage, high current cabinets and other equipment

SENSING TRANSDUCERS

- Temp. & Humidity Converter
- T&H, CO, CO2, PM2.5, VOC Sensor
- Temperature Transducer
- Pressure Transducer
- Level Sensor
- Carbon Monoxide
- Split Core Current Transformer
- Power Supply
- Photo-electric sensor
- Proximity Switch
- Encoder
- Carbon dioxide

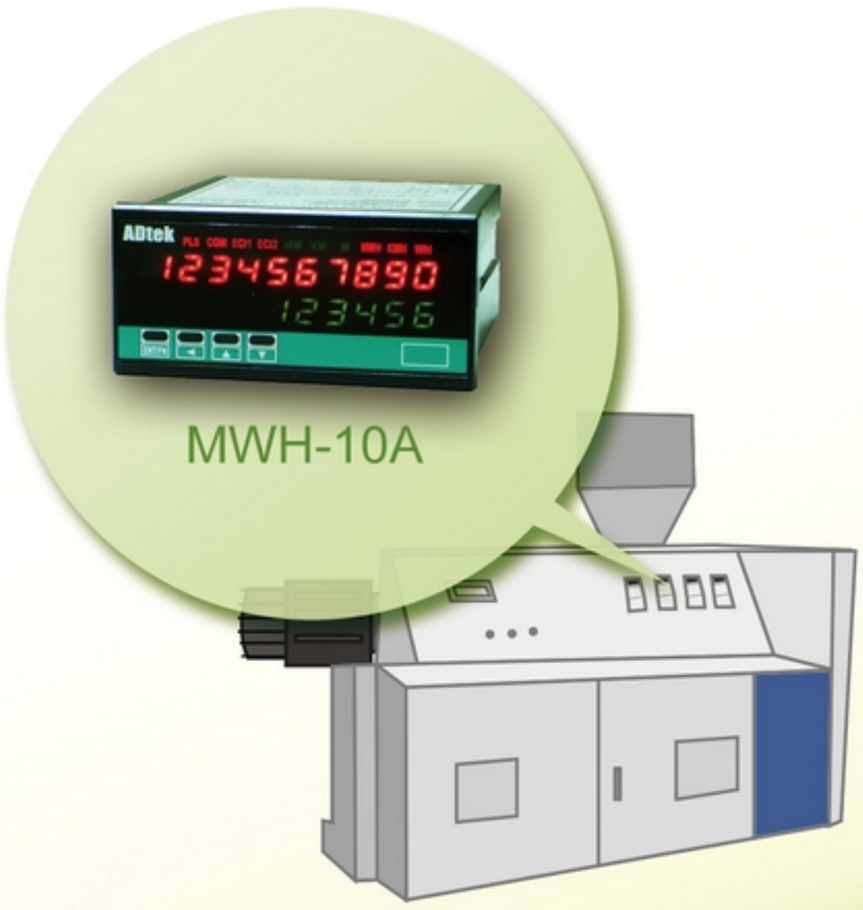
Authorized Distributor

APPLICATION of DL1S DATA LOGGER

Combine the usage of DL1S and CPM-70 for recording the parameters. Chronological record the parameters (VAC, AAC, KW, KWH, PH, HZ, …) and Power quality (1~31st Individual Harmonic, Un-balance, K Factor, Crest Factor,…) in SD card of DL1S from multifunction power meter via a RS485 serial communication port, and providing ADPro software to convert the data into Excel spreadsheets (.xls) for analysis. Along with Split core CT such as US-CTS or US-CTA/ US-CTB for long-term Data-Logging.

APPLICATION of POWER ANALYZER INSTALLED in CONTROL ROOM for POWER CONTROLLING

Utilizing multifunction power meter to measure the power consumption in control room and display parameters of V, A, Hz, P, Q, S, KWH, KVAR and parameters of power quality such as individual harmonic from 2nd to 63rd. All monitored data is available via a RS485 serial communication to PC monitoring and controlling system for data acquisition and analysis in order to improve the power supply system in control room and ensure the equipment operating properly.

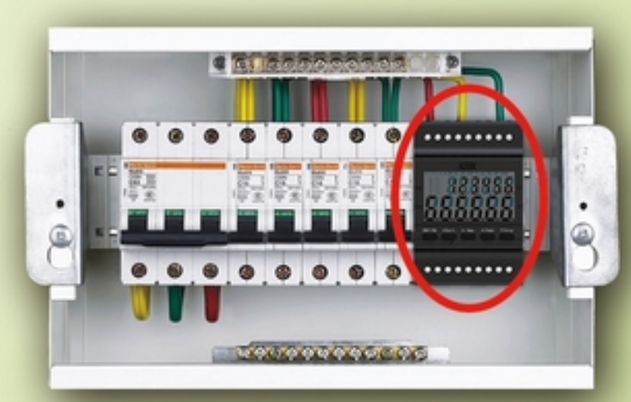


MWH-10A MONITORING THE POWER CONSUMPTION of MECHANICAL EQUIPMENT

Utilizing MWH-10A to measure the power consumption and display parameters of KW & KWH for mechanical equipment as well as acquiring and analyzing all measured data via RS485 communication port running the Modbus RTU protocol in order to diminish the power consumption and CO2 emission, conserve energy and save money.

CHANG SHUAN ELECTRONICS CO.,LTD

4f-18, No.14, Ln. 609, Sec. 5, Chung-Shin Rd.,
San-Chung Dist, New Taipei City, 24159, Taiwan
TEL:+886-2-2995-3100 FAX:+886-2-2995-3101
Website : www.adtek.com.tw

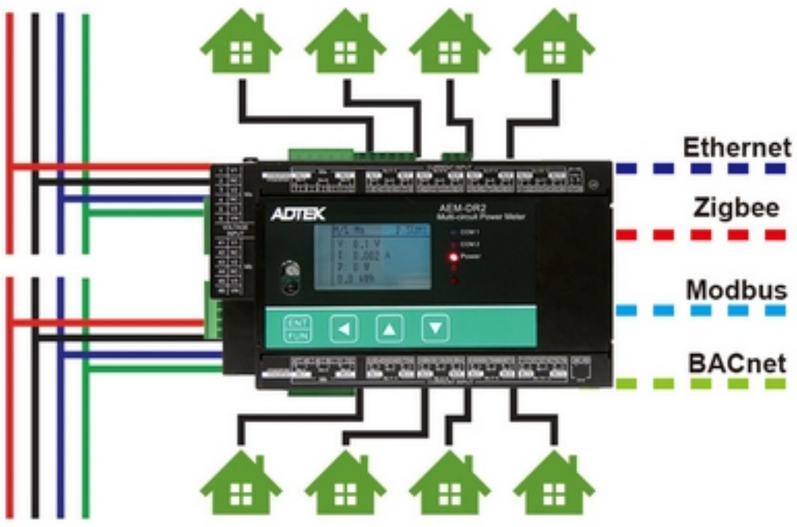


AEM-DR MULTI-CIRCUIT POWER METER

Provide high accuracy measurement of single-phase 5 circuits or 3-phase 2 circuits parameters (V, A, P, Q, S, PF, Hz, KWh). DIN-rail mounting completely fits indoor switchboard installation of European standard. Multi-circuit design and relay output modular expansion design decrease the overall cost and make the functionality more flexible. All monitored data is available via an RS485 serial or a PLC communication for the needs in energy management, alarming, and remote controlling. Embedded flash memory for Data-Logging can avoid any data missing once the communication is interrupted.

NEW

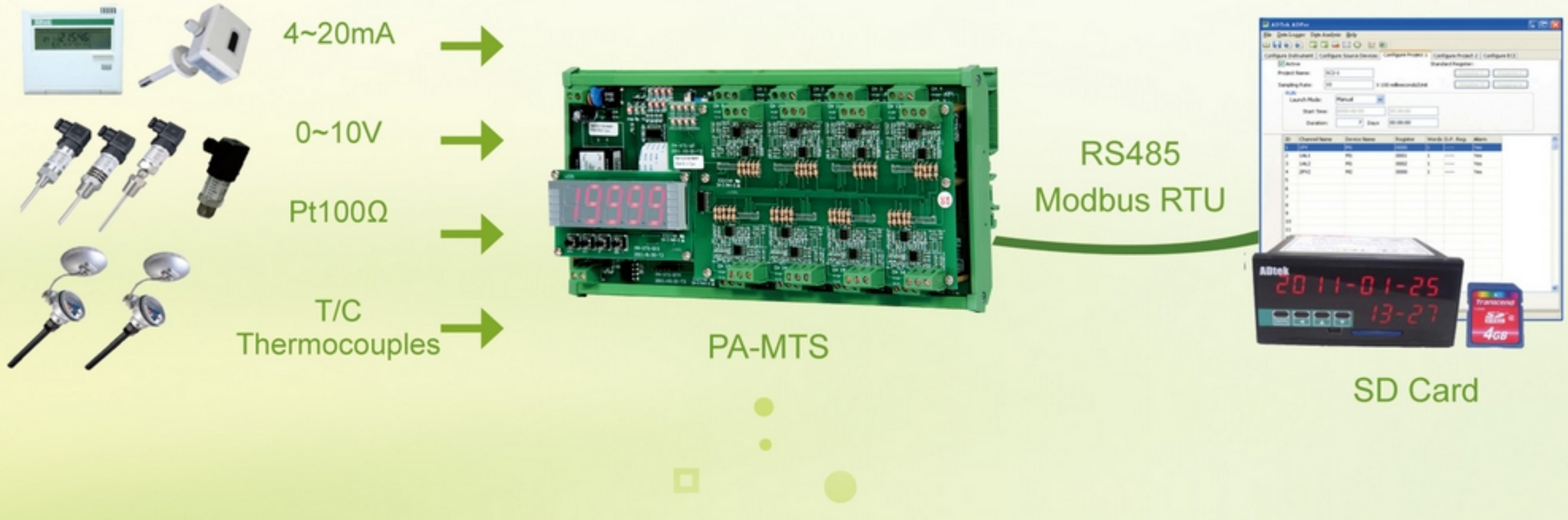
AEM-DRA SEIRES MULTI-CIRCUIT POWER METER



Provide two main circuits, single-phase 24 circuits or three-phase 8 circuits' parameter measuring. Diverse selection of circuits and wiring makes DIN-rail mounted AEM-DRA more flexible, easy-to install, and can be applied to various power measurements and monitoring applications. Equip with standard communication interface of RS485 (Modbus RTU Mode), input & output interface, display, data-logging, and optional second communication interface for Modbus, Lonworks, Profitbus, BACnet, Ethernet and Zigbee.

DATA ACQUISITION

Provide 8/16 channels multiple inputs converting to RS485 communication for centralized data acquisition of testing equipment, mechanical controlling equipment and cold storage equipment.



DL1S Data Logger

ADTEK
MADE IN TAIWAN

MEASUREING/INPUT	MODEL					
A/B DIVISIONS	**POWER SYSTEM APPLICATION**					
VOLTAGE CURRENT	Meters	CSMS-321	CSN-VA	CM1-VA		
		CS1-VA	CS2-VA	CS3-VA		
		VAM	A6-VA			
	Transducer	CA/CV-12	CA/CV-33	2A/2V	2C	
		MT-VI	NT-VA	AT-VA	ST-VA	
FREQUENCY	Meters	CSN-F	CM1-F	CS1-F	CS2-F	
	Transducer	CF	MT-FD	ST-RL		
WATT VAR	Meters	MW-5A	MWH-10A		VAW	
	Transducer	CW/CQ	CWQ	2W/2Q		
		CWHW	CQHQ	CWH/CQH	CWQH	
Power Factor Phase Angle	Meters	MPF-5A				
	Transducer	CPF/CPA				
Amp-Hr	Meters	CS2-TM				
	Transducer	MT-DF				
Multifuction Measurement	Meters	VAW	CPM-10	CPM-20 multifunction power meter	CPM-70/80 multifunction power meter	AEM-DR/AEM-DRA multi-circuit power meter
	Transducer	CPT multifunction power trandcuer				
A/B DIVISIONS	**ACCESSORY IN POWER SYSTEM**					
Current	Accessory	UA-SHT	UA-CTR	UA-CTS		
		US-CTS	US-CTA	US-CTB		
C/D DIVISIONS	**PROCESS CONTROL APPLICATION**					
Process (0~10V/4~20mA)	Meters	CSMS	CSN-PR	CM1-PR	TB	TC
		CS1-PR	CS2-PR	CS2-TM	CS3-PR	VAM
		A6-PR				
	Converters	MT-VI	MT-CL	NT-VA	ST-PR	ST-LC
		AT-PR	SD-PR	SD-CL	PA-MTS	
Temperature (RTD / TC)	Meters	CSMS	CSN-T	CST-321M	CST-321S	
		TB	TC	CS1-T	CS2-T	VAM
	Converters	MT-RTD	MT-TC	NT-TR	NT-TC	
		AT-TR	AT-TC	ST-T	PA-MTS	
		SD-T	TT	TTX	TT-D	
Strain Guage/Load Cell (mV/V)	Meters	CSN-SG				
		CS1-SG	CS2-SG	CS3-SG	A6-SG	A7-SG
	Converters	MT-SG	NT-SG	AT-SG		
		ST-SG	ST-LC			
Potentio-Meter (Potentiometer-3 wire)	Meters	CSN-PM				
		CS1-PM	CS2-PM	CS3-PM	VAM	
	Converters	MT-RT	NT-PM	AT-PM	ST-PM	ST-LC
Resistance (Resistance-2 wire)	Meters	CSN-RS				
		CS1-RS	CS2-RS	CS3-RS		
	Converters	MT-RT	NT-RS	AT-RS	ST-RS	ST-LC
AMP-Hr./Totalizar/ Batch/Rate (mA/V; Pulse)	Meters	CSN-H	CM1-CT			
		CS1-RL	CS2-RL	CS2-TM	CS2-CT	CS2-MC
	Converters	MT-FD	MT-DF	MT-FF	ST-RL	
RPM/Linearly Speed (Pulse)	Meters	CSN-H	CM1-RL			
		CS1-RL	CS2-RL	CS2-TM	CS3-RL	
	Converters	MT-FD	MT-FF	ST-RL		
Counter/Length (Pulse)	Meters	CM1-CT	CS2-CT	CS2-MC	CS2-TM	
	Converters	MT-FF				
E DIVISIONS	**SENSING TRANSDUCERS APPLICATION**					
Sensing Transducers	Temperature	TH	TS	TR	HTS	HTP
	Humidity	HTS	HTP			
	Pressure	PS	PU/PD			
	Level Sensor	LS				
	Flow Meter	WS				
	Air Quality	CO/CO2	PM2.5	VOC	BTU	
	Strain Guage	LCA	LCB	LCS	LCW	
	RPM/SPEED	SP1	SP2	PE1	PE3	ED1
	Limit/Safety	PE2				
	DIN-Rail DC Power Supply	CSP-2	CSP-3			
	Accessory	CFI				
F DIVISIONS	**RECORD**					
Data-logger	Meters	DL1S	ADPro software			
G DIVISIONS	**NETWORK CONVERTERS**					
NETWORK converter	ETHERNET	PL-SNET	PL-TNET	PL-DNET	PL-ANET	PL-RNET
NETWORK converter	RS232/422/485	PL-STS	PL-STU	PL-DTS	PL-ATS	PL-RTS
		PA-MTS				