AEM-DD Multi-circuit DC power meter(DIN rail)

Description

Provide high accuracy DC power measurement, display and remote communication of five loops (V, A, P, Kwh). 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 a RS485 serial , 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. Moreover, its ultra compact size DIN-rail mounting makes itself mountable in virtually any panel, enclosure or indoor Cabinet.

Feature

- Metering parameters of Voltage, Current, Active Power, Energy (Watt-Hr) of DC power system
- 2-line display both with 6 digits, able to view the name and value of the parameter at the same time
- Modular Expansion Design, able to correspond to different parameters individually
- Relay output with Start Delay, Hysteresis, Energized, and de-energized delay functions
- With RS485 serial as standard for remote controlling relay output
- Standard DIN-Rail mounting
- CE Approved
- Embedded 1MB flash memory for Data-Logging
- With 20 words variables in Modbus address for acquiring the demand measurement at cost

ORDERING INFORMATION

AEM-DD - Connection - CT Input - Voltage - Relay output - Communication output - AUX. POWER

CODE	Wiring
5	five loops

CODE	Hall CT
V	0~±4Vdc

CODE	Voltage Range
V1	10~100Vdc

CODE	Relay output
ON	NONE
OR5	5 Relay

CODE	Comm.
U8	RS485

CODE	AUX. POWER
ADH	AC 85~264V DC 100~300V
ADL	DC 20~56V

TECHNICALSPECIFICATION

Measurement and Wiring

Input	Voltage	Current
DC	10~100Vdc	Depend on external Hall CT

Accuracy & Resolutions

PARAMETERS	ACCURACY	RESOLUTION	DISPLAY
Voltage	0.2%	0.1V	0~9999
Current	0.2%	0.001A	0~9999
Active Power	0.3% of FS+0.3% of Rdg	0.1W	-32768~32767
Active Energy	0.5%	0.1kWh	0~999999

Measurement: True RMS measuring
Display refresh: 0.5 Sec
Wiring: 1P2W
Input range: Voltage: direct Input ≤ 100V
CT Primary setting: 1~9999A
Max. input withstand:
Voltage:
1.2 X Rated voltage continuous
Current:
Clamp CT Specification 1.2X Rate current continuous

Communication function

Port: RS-485
Protocol: Modbus RTU Mode
Address: 1~247
Baud rate: 1200 / 2400 / 4800 / 9600 / 19200 / 38400 bps
Parity check: N81 / N82 / O81 / E81
Wire distance: 1200M max
Terminal resistance:150Ω
Variable Communication address:
Customizing from 0100h to 0113h, 20 address parameters

Recording

Memory: Internal 1MB
Capability: Depends, i.e. saving up to 100,000 records with recording kWh parameter only.
Recording interval: 1~32767
Time units: Second, minute, hour, day

Display

LCD backlight : 2-line, 6 digits for each.
Upper line: 6.5mm high
bottom line: 9.6mm high
Comm. status indication: With Communication status display icon
Parameter indication : show parameters and channels in words
Alarm status indication: R1~R5 with Relay status display icon

Relay Output Module: AEM-OR5 (Option)

Remote Control: 5 relay outputs which can be control via communication directly
Alert Management:
Set point: 5 set points can corresponding individually to each relay output
Relay output: R1&R2 FORM-A, R3~R5 FORM-A Common mode
1A/230Vac, 3A/115V
Relay parameter corresponding:
Selected from various power parameters
Relay mode: Hi / Lo / Hi.HLd / Lo.HLd / RO / OFF
Energizing functions: Start delay/ Energize time delay & de-energize time delay/ Hysteresis/ Energized Latch
Start band: 0~9999 counts
Start delay: 0:00.0~9(Minutes):59.9(Second)
Energize time delay:
0:00.0~9(Minutes):59.9(Second)
De-energize time delay:
0:00.0~9(Minutes):59.9(Second)
Hysteresis: 0~9999counts

Hall CT Power Supply: CSP-2-003-B15-HC-D36(Option)

Input voltage: 36~72Vdc
Output voltage: ±15Vdc
Output current: ±100mA

Power

Aux Power: ADH: AC85~264Vac, 50/60Hz, DC100~300Vdc
ADL: 20~56Vdc
Power consumption: AC:10VA, DC:4W
Temperature Coefficient: 100 ppm/℃

Operating environment

Operation Temperature & Humidity:
0~60℃; Display 0~60℃/ 0~80%RH, No-condensing
Storage Temperature & Humidity:
-20~70℃/ 0~80%RH, Non condensing

Security

Password: two groups password in 4 digits for "parameter setting" &"reset to zero for WATT"
Parameter setting : Password is able to set
Reset to zero for WATT: password is unable to set
Function Lock: There are 4 options
User Level: User Level lock. User can get into User Level only for checking but unable to change the setting
Programming Level:Programming Level lock. User can get into programming level only for checking but unable to change the setting
ALL: All lock. Lock both User Level & Programming Level. User can get into all level for checking but unable to change the setting
None: No Lock
Parameter storage methods:
F-RAM (Ferroelectric RAM), a random-access memory

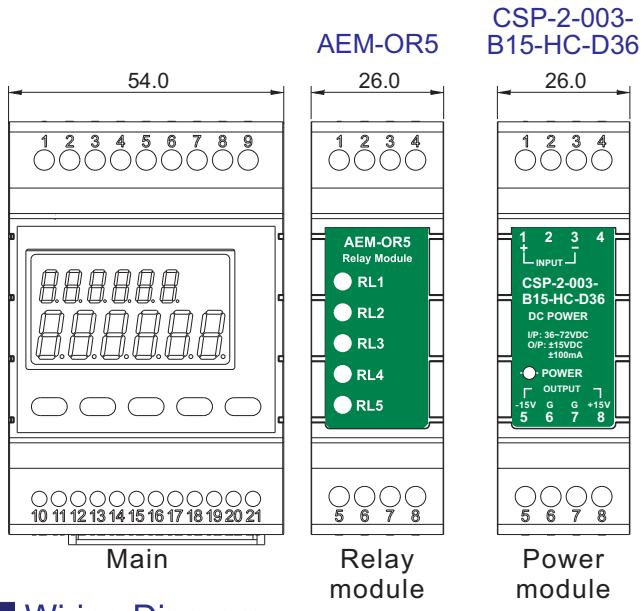
Electrical Safety

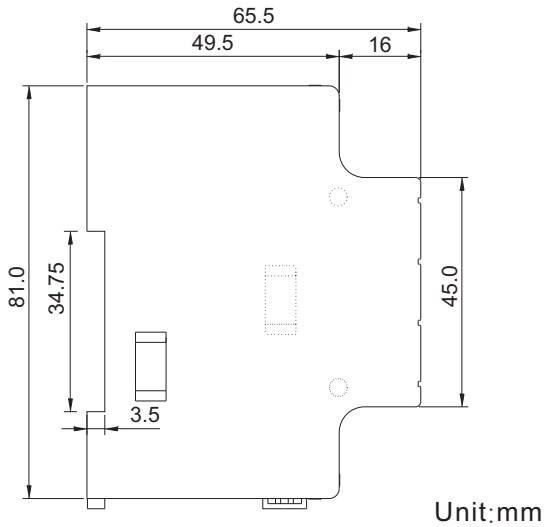
Insulating resistance: ≧100M@500Vdc
Dielectric strength: AC 2KV,1min 50/60Hz, Input/Ouput/Power/Case
EMC: EN61326-1:2006
EN61000-3-2:2006+A1:2009+A2:2009
EN61000-3-3:2008
IEC61000-4-3:2006
IEC61000-4-2:2009
IEC61000-4-4:2004
IEC61000-4-5:2006
IEC61000-4-6:2009
IEC61000-4-11:2004
LVD: EN61010-1:2010
MTBF: $6x10^4$ hours

Mechanical

Case material: PC fireproof
Mounting: DIN rail
Wire terminal:Voltage input:
AWG: 28~12 / 0.2~2.5mm^2
Screw Torque Value:
M2. 5 / 5.202kgf.cm (Max)
Current input:
AWG: 28~14 / 0.2~1.5mm^2
Screw Torque Value:
M2 / 2 .04kgf.cm (Max)
Weight: AEM-DD: 185g, AEM-OR5: 75g, CSP-2-003-B15-HC-D36: 55g

Dimension

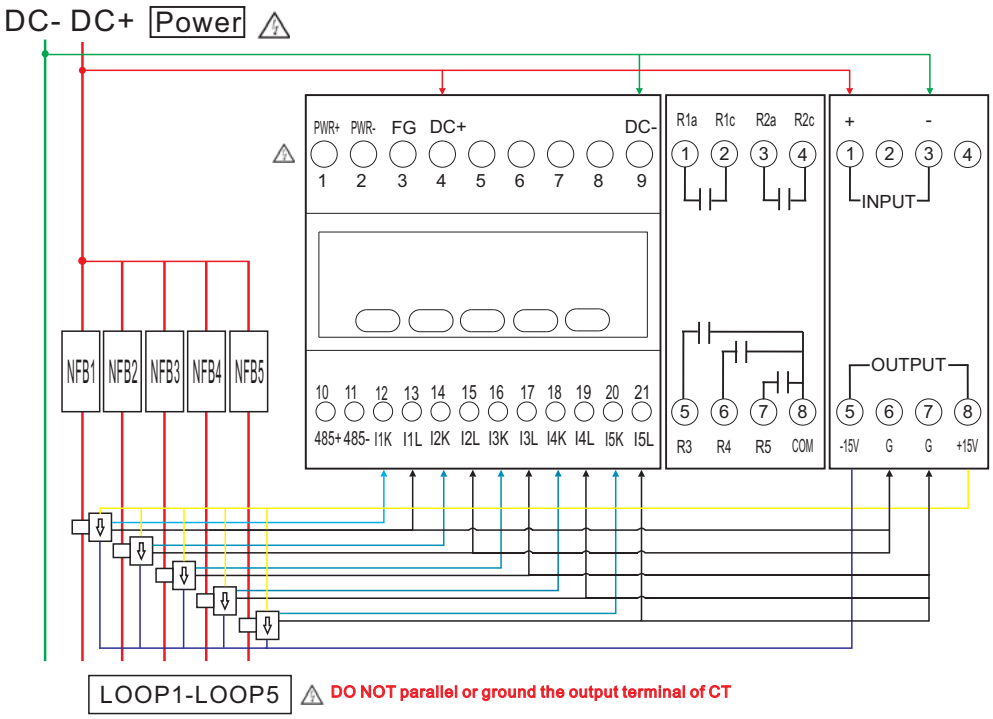




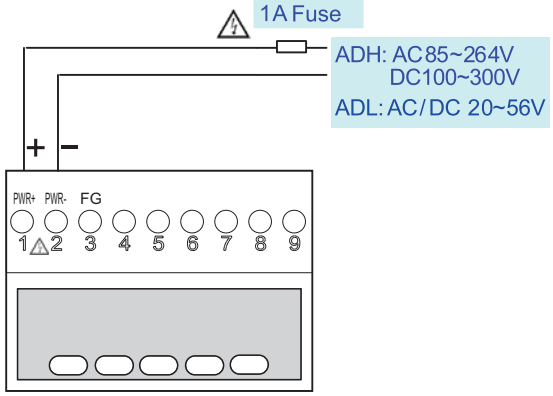
Unit:mm

Wiring Diagram

DC
5 Loop



Power Supply



RS485 Communication Port