CM2-VA 4 Digits Voltage/Current Meter

ADTEK

Description

CM2-VA Indicator has been designed in simple operation and 4 digital 20.0mm LED displays with economic cost.

They are can be programmed by buttons that are hidden in front panel

They are also available to option relay output and an analog output or RS485(Modbus RTU Mode) communication

Features

- Measuring AC / DC Voltage 50mV~600V、AC / DC Current 1.999mA~10A
- AC measurement input adopts fast sampling and integration technology, and the displayed value is directly true root mean square(TRMS)
- The operation buttons are built-in to prevent users from arbitrary operation or incorrect setting, which may cause abnormal operation of the equipment
- The display value can be adjusted slightly with the "field measurement signal"
- The output can option relays and analog output or RS485 (Modbus RTU mode)
- Relay function in addition to start delay, active delay, delay off and active hold
- Analog output voltage signal range can be switched (0~10V/0~5V/1 ~5V)
  or current signal range can be switched (0~10mA/0~20mA/4~20mA)
- The analog output signal is free to set the corresponding display range (Span-50%) and can be fine-tuned on-site
- On board terminal design, no quality issue; installation depth is only 73mm

Applications

- Testing Equipments for Volt/Current Measuring
- MCC panel, Machinery, Switch gear... for Voltage or Current Measuring

Ordering Information

CM2 ─ VA — DC/AC | Input Signal — Relay Output — Optional Output — Aux. Powered

CODE		Voltage
D		DC measuring
A		AC measuring(TRMS)
	V1	0 ~ 199.9 mV
	V2	0 ~ 1.999 V
	V3	0 ~ 19.99 V
	V4	0 ~ 199.9 V
	V5	0 ~ 300.0 V
	V6	0 ~ 600.0 V
	VA	0~50 mV
	VB	0~60 mV
	VC	0~100 mV

CODE		Current
D		DC measuring
A		AC measuring(TRMS)
	A2	0 ~ 1.999 mA
	A3	0 ~ 19.99 mA
	A4	0 ~ 199.9 mA
	A5	0 ~ 1.999 A
	A6	0 ~ 1.000 A
	A7	0 ~ 5.000 A
	A8	0 ~ 10.00 A

CODE	Relay Output
N	None
R2	2 Relay

CODE	Option Output
N	None
I	Analog current output: (programmable) (0)4~20mA 0~10mA
V	Analog voltage output: (programmable) 0~10V (0)1~5V
8	RS485(Modbus RTU)

CODE	Aux. Power
ADH	AC 85~264V DC 100~300V
ADL	AC/DC 20~56V

Technical Specification

Input

Measuring Range DC / AC		Input Impedance	Measuring Range DC / AC		Input Impedance
Voltage	0~50/~100 mV	≥5MΩ	Current	0~1.999 mA	100Ω
	0~199.9 mV	≥5MΩ		0~19.99 mA	10Ω
	0~1.999 V	≥1MΩ		0~199.9 mA	1Ω
	0~19.99 V	≥1MΩ		0~1.999 A	0.05Ω
	0~199.9 V	≥1MΩ		0~1.000A	0.1Ω
	0~300.0 V	≥2MΩ		0~5.000 A	0.02Ω
	0~600.0 V	≥3MΩ		0~10.00 A	0.01Ω

Calibration: Digital calibration
A/D converter: 14 bits
Accuracy: DC: ≤± 0.1% of FS ± 1 count
AC: ≤± 0.2% of FS ± 1 count
Sampling rate: 15 times/sec
Response time: ≤ 100 mS.(when Rud = "1")

Display & Function

LED: 3 1/2 digits,0.8" (20.0mm) high-brightness LED
Display range: -1999~+9999

Scaling function: LoSC : -1999~+9999
HiSC : -1999~+9999
Decimal point: dP: 0 / 0.0 / 0.00 / 0.000
Over range Indication: ouFL, when input is over 110% of input range Hi
Under range indication: -ouFL, when input is under LoSC setting value
Max / Mini recording: Maximum and Minimum value storage during power on.
Low cut: -1999~9999 counts

Reading Stable Function

Average: AuG: 1~99 times
Moving average: mAuG: 1~99 times
Digital filter: dF iLt: 1~99 times

Relay Output(Option)

Relay contact form: 2 Sets SPDT, 5A/230Vac, 10A/115V
Relay action mode: Hi / Lo / Hi.Hold / Lo.Hold programmable
Relay action function: Start delay / Energized & De-energized delay / Hysteresis / Energized Latch
r.Sb: Start band: 0~9999 counts
r.Sd: Start delay time: 0:00.0~9(m):59.9(s)
r.rd: Energized delay time: 0:00.0~9(m):59.9(s)
r.Fd: Delay off time: 0:00.0~9(m):59.9(s)
r.HY: Hysteresis: 0~5000 counts

Analog Output(Option)

Accuracy: ≤± 0.2% of F.S. ; 12 bits DA converter
Ripple: ≤± 0.1% of F.S.
Response time: ≤100 mS (10~90% of input)
Output range: Voltage: 0~5V / 0~10V / 1~5V programmable
Current: 0~10mA / 0~20mA / 4~20mA programmable
Output capability: Voltage: 0~10V: ≥ 1000Ω;
Current: 4(0)~20mA: ≤ 600Ω max
Scaling: AoLS: Outout Low setting: -1999~9999
AoHS: Outout High setting: -1999~9999
Output fine adjust: AoPro: adjust range: -1999~9999
AoSPn: adjust range: -1999~9999

RS485 Communication(Option)

Protocol: RS485 Modbus RTU mode
Baud rate: 1200/2400/4800/9600/19200/38400
Data bits: 8 bits
Parity: None / Even / Odd
Stop bit: 1 or 2
Address: 1~247
Distance: 1200M max
Terminate resistor: 120~300Ω/0.25W(typical: 150Ω)

Power

Range: ADH: AC 85~264V，DC 100~300V
ADL: AC/DC 20~56V
Power consumption: AC ≤ 10 VA / DC ≤ 5 W
Memory storage: EEPROM

Safety

Isolation: AC 2.0 KV for 1 min, Between Power / Input / Output
Insulation resistance: ≥100MΩ@500Vdc, Between Power / Input / Output

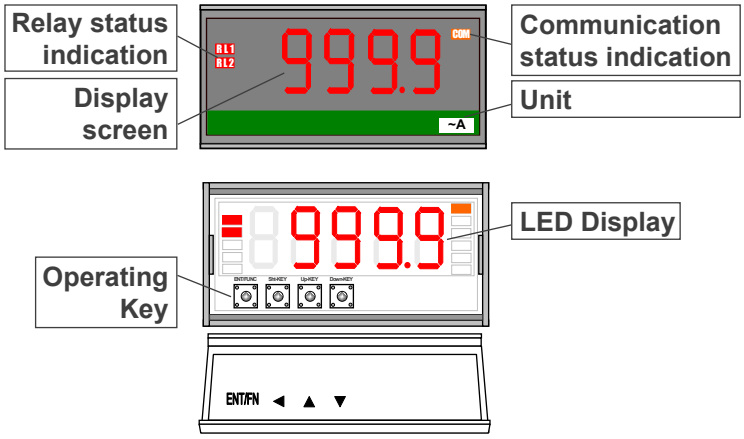
Environmental

Operating temp.: 0~60 ℃
Humidity rating: 20~95 %RH, Non-condensing
Temp. coefficient: ≤100 PPM/℃
Storage Temp.: -10~70 ℃
IP Enclosure: Front panel: IEC 529 (IP52); Housing: IP20

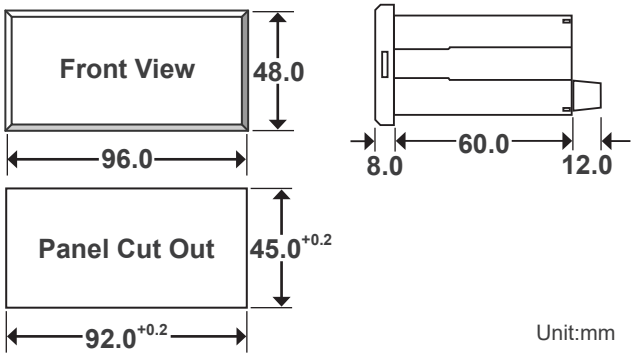
Mechanical

Dimensions: 96mm(W) x 48mm(H) x 80mm(L)
Panel cutout: 93mm(W) x 45mm(H)
Case material: ABS fire-resistance (UL 94V-0)
Mounting: Panel mounting
Terminal block: Plastic NYLON 66 (UL 94V-0)
22~14AWG / 0.5~2.0mm^2
Screw Torque Value：M3.5 / 12kgf.cm(Max)
Weight: 210g

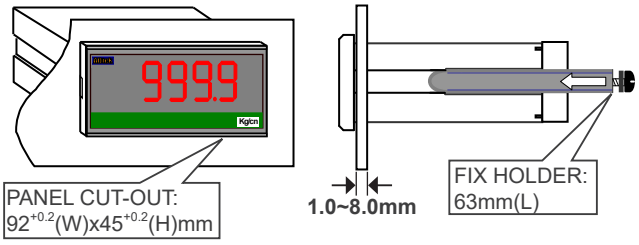
Front Panel



Dimensions

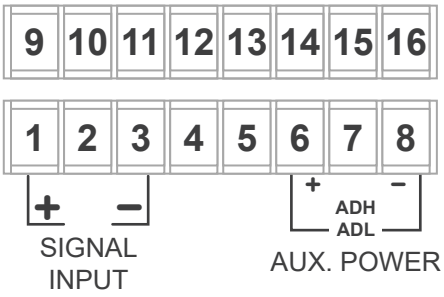


Installation



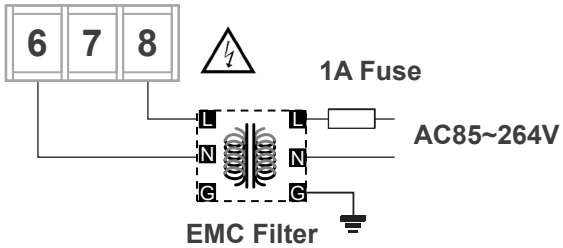
Pin Assignment

Terminal blocks:
20A/300Vac, M3.5, 0.5~2.0mm²(22~14AWG)

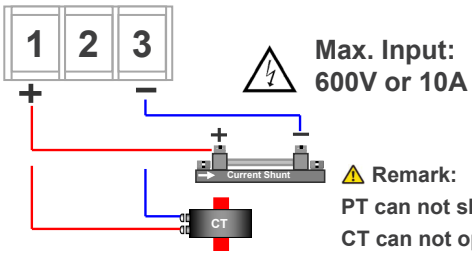


Please check the voltage of power supplied first, and then connect to the specified terminals. It is recommended that power supplied to the meter be protected by a fuse or circuit breaker.

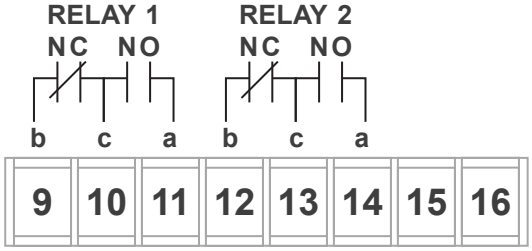
Power Connection



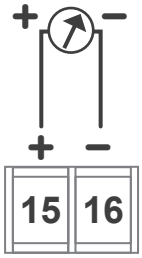
Input Connection



Relay Output



Analog Output



RS485 Communication Port