

CM3-VA9 3-Phase Voltage/Current meter (4-digit)

DESCRIPTION

CM3-VA for the multi-phase voltage / current meter, display three-phase or three-phase voltage current, buttons to set the display range and anti-jamming design, reliable quality, simple installation, can meet voltage and current requirements of the general measurement ◦

The meter design combined a variety of output options are available: 6 Relay outputs, 3 analog outputs, and a set of RS485 (Modbus RTU mode) communications, please refer to detailed functional specifications portfolio selection table



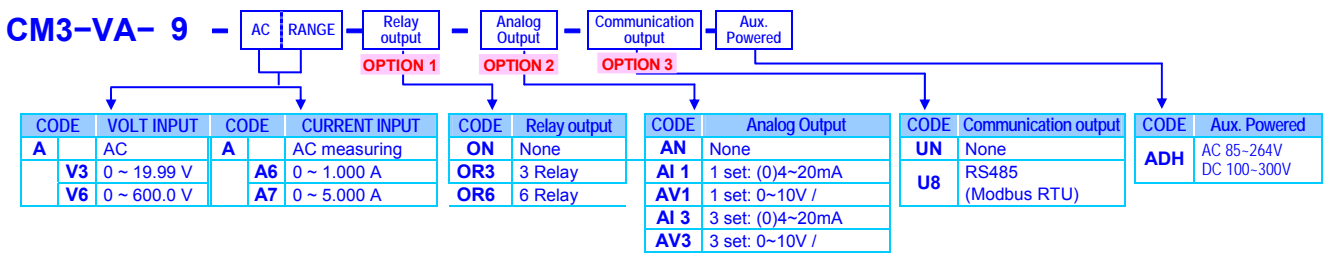
FEATURE

- Measuring AC Voltage 0~19.99V/~600.0V \ AC Current 0~1A/~5A
- Button settings can be set according to the site requirements and alarm mode display range; terminal straight into the design, no poor contact problem
- 96x96 panel size, installation depth of only 78.2mm

APPLICATIONS

- MCC panel, Machinery, Switch gear... for Voltage or Current Measuring...
- Motor control panel, mechanical equipment, such as voltage switch box ... current measurement display

ORDERING INFORMATION



TECHNICAL SPECIFICATION

Input Range

Measuring Range	Input Impedance	Measuring Range	Input Impedance
AC		AC	
Voltage		Current	
0~19.99 V	≥1M ohm	0~1.000 A	0.02 ohm
0~600.0 V	≥2M ohm	0~5.000 A	0.02 ohm

Input Frequency: 45 ~ 65Hz (RMS)

- Calibration:** Digital calibration by front key
- A/D converter:** 12 bits resolution
- Accuracy:** ≤± 0.2% of FS ± 1C
- Sampling rate:** 15 cycles/sec
- Response time:** ≤ 100 msec.(when the $R_{\text{in}} = "1", R_{\text{out}} = "1", dF_{\text{in}} = "1"$) in standard

Display & Functions

- LED:** Numeric: 4 digits, 0.56"(14.2mm) red high-brightness LED splayreen: 6 digits for preset
- Display range:** -1999~9999
- Scaling function:** L5C : Low Scale; Settable range -1999~9999
H 5C : High Scale; Settable range -1999~9999
- Decimal point:** Programmable from 0 / 00 / 000 / 0000
- Over range Indication:** o5FL : when input is over 110% of input range Hi
- Low cut:** L5LUt : Settable range -1999~9999
- Frequency display:** In General Settings classes can view the frequency

Reading Stable Function

- Average:** R5G: Settable range: 1~99 times
- Moving average:** 55G: Settable range: 1~20 times
- Digital filter:** dF 5L: Settable range: 1~99 times

Control Functions(option)

- Relay:** Maximum of 6 groups optional relay
6 set Form-A, 5A/120Vac, 5A/30Vdc

Relay energized mode: Energized levels compare with set-points: OFF / Hi / Lo / Hi.HLd / Lo.HLd / do programmable

Energizing functions: Start delay / Energized & De-energized delay / Energized Latch
Start band(Minimum level for Energizing): 0~9999counts
Start delay time: 0:00.0~9(Minutes):59.9(Second)
Energized delay time: 0:00.0~9(Minutes):59.9(Second)
De-energized delay time: 0:00.0~9(Minutes):59.9(Second)
Hysteresis: 0~5000 counts

Analogue output(option)

- Analogue output:** Maximum of 3 analog outputs optional
- Accuracy:** ≤ ± 0.2% of F.S.; 12 bits DA converter
- Ripple:** ≤ ± 0.1% of F.S.
- Response time:** ≤100 msec. (10~90% of input)
- Isolation:** AC 2.0 KV between input and power
Analog output no isolation
- Output range:** Specify either Voltage or Current output in ordering
Voltage: 0~5V / 0~10V / 1~5V programmable
Current: 0~10mA / 0~20mA / 4~20mA
- Output capability:** Voltage: 0~10V; ≥ 1000Ω;
Current: 4(0)~20mA; ≤ 600Ω max
- Functions:** [R5LS] (output range Low): Settable range Settable range: -1999~9999
[R5HS] (output range high): Settable range: Settable range: -1999~9999
- Digital fine adjust:** [R5P5] Settable range : -1999~1999
[R5Pn] Settable range : -1999~1999

RS 485 Communication(option)

- Protocol:** Modbus RTU mode
- Baud rate:** 1200/2400/4800/9600/19200/38400 programmable
- Data bits:** 8 bits
- Parity:** Even, odd or none (with 1 or 2 stop bit)
- Address:** 1 ~ 255 programmable
- Distance:** 1200M max
- Terminate resistor:** 150Ω.

Power

Power supply: AC 85~264V / DC 100~300V;
Power consumption: Display only: 6 VA(AC) + 3W(DC)
 Plus 3 relay and 1 analog transmission output:
 14VA(AC), 4W(DC)
Back up memory: EEPROM

Electrical Safety

Dielectric strength: AC 2.0 KV for 1 min, Between Power / Input /
Insulation resistance: ≥100M ohm at 500Vdc, Between Power / Input /
 Output
Isolation: Between Power / Input / Relay, Analogue or
EMC: EN 55011:2002; EN 61326:2003
Safety(LVD): EN 61010-1:2001

Environmental

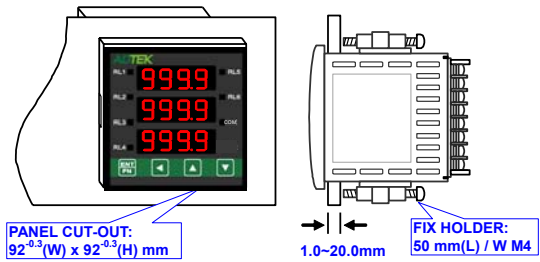
Operating temp.: 0~60 °C
Operating humidity: 20~95 %RH, Non-condensing
Temp. coefficient: ≤ 100 PPM/°C
Storage temp.: -10~70 °C
Enclosure: Front panel: IEC 549 (IP52); Housing: IP20
Vibration test: 1~800Hz, 3.175g2/Hz

Mechanical

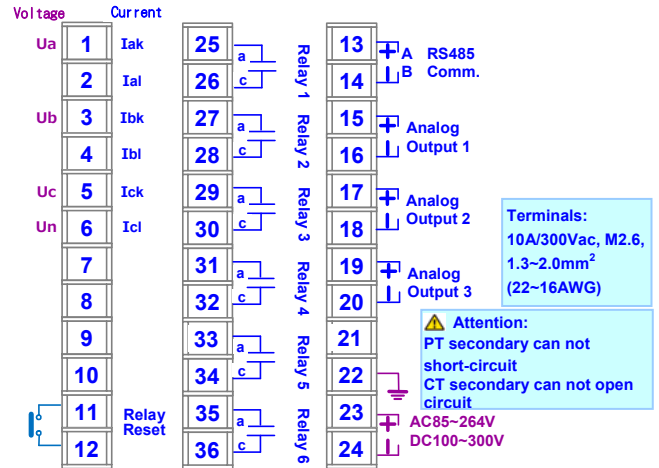
Dimensions: 96mm(W) x 96mm(H) x 78.2mm(D)
Panel cutout: 92mm(W) x 92mm(H)
Case material: ABS fire-resistance (UL 94V-0)
Mounting: Panel flush mounting
Terminal block: Plastic NYLON 66 (UL 94V-0);
 10A/300Vac, M2.6, 1.3mm²~2.0mm² (22~16AWG)
Weight: Max. 345g

INSTALLATION

The meter should be installed in a location that does not exceed the maximum operating temperature and provides good air circulation.



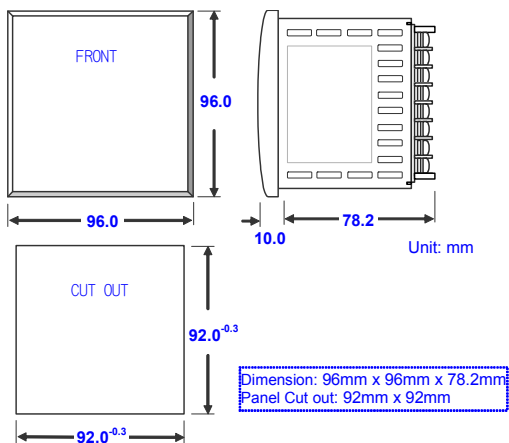
CONNECTION DIAGRAM



Front Panel

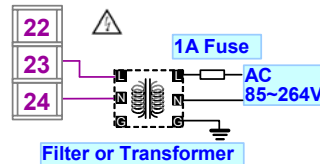


DIMENSIONS

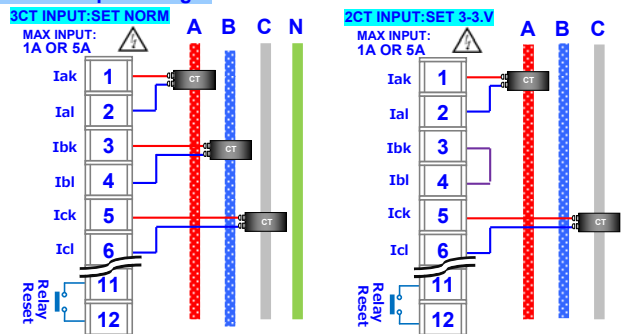


Please check the voltage of power supplied first, and then connect to the specified terminals. It is recommended that power supplied to the meter be protected by a fuse or circuit breaker. ⚠️ Wiring subject to change, please follow the wiring diagram on the meter wiring.

Power Supply



Current input wiring



Voltage input wiring

