

Description

CM2-PR Process Meter has been designed in simple operation and 4 digital 20mm LED display with economic cost.

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

They are also available to option 2 relay output and an analog output or RS485(Modbus RTU Mode) communication.



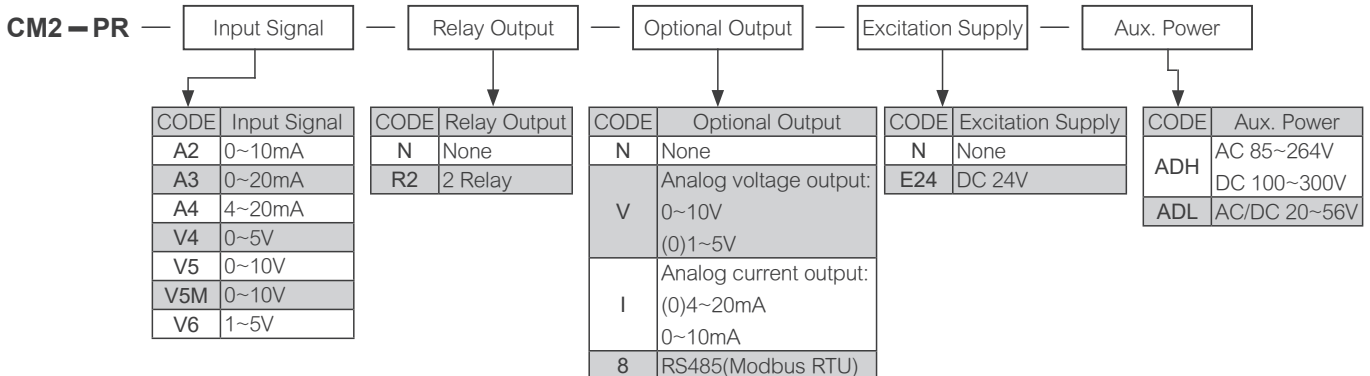
Features

- Measuring 0(1)~5V/0~10V, 0~10mA/0(4)~20mA
- Optional DC24V excitation power for 2 wire sensor
- 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 72mm

Applications

- 2 wire sensing transducers as like as pressure, level and so on...
- Process alarm or communication for data collection

Ordering Information



Technical Specification

Input

Voltage Input Range	Input Impedance	Current Input Range	Input Impedance
0~5V	≥1MΩ	0~10mA	250Ω
1~5V	≥1MΩ	0~20mA	250Ω
0~10V(CODE:V5)	≥100KΩ	4~20mA	250Ω
0~10V(CODE:V5M)	≥1MΩ		

Calibration: Digital calibration
 A/D converter: 14 bits
 Accuracy: ±0.1% of FS±1 count
 Sampling rate: 15 times/sec
 Response time: ≤ 100 mS(when R₀ = "1")

Display & Function

LED: 4 digits,0.8" (20.0mm) high-brightness LED
 Display range: -1999~+9999
 Scaling function: L_{0.5E}: Low Scale : -1999~+9999
 H_{.5E}: High Scale : -1999~+9999
 Decimal point: dP: 0 / 0.0 / 0.00 / 0.000
 Over range Indication: o_uF_L: when input is over 110% of input range
 Hi
 Under range indication: -o_uF_L: when input is under L_{0.5E} value
 Max / Mini recording: Maximum and Minimum value storage during running
 Low cut: -1999~+9999 counts



Reading Stable

Average: $\overline{R_{avg}}$: Settable range: 1~99 times
 Moving average: $\overline{R_{MA}}$: Settable range: 1~99 times
 Digital filter: $\overline{R_{DF}}$: Settable range: 1~99 times

Control Function(option)

Control relay: 2 Relay, SPDT, 5A/230Vac, 10A/115V
 Relay energized mode: Hi / Lo / Hi.Hold / Lo.Hold programmable
 Energizing function: Start delay / Energized & De-energized delay / Hysteresis / Energized Latch
 Start band: 0~9999 counts
 Start delay time: 0:00.0~9(m):59.9(s)
 Energized delay time: 0:00.0~9(m):59.9(s)
 De-energized delay time: 0:00.0~9(m):59.9(s)
 Hysteresis: 0~5000 counts

Analog Output

Accuracy: $\leq \pm 0.2\%$ of F.S.; 12 bits DA converter
 Ripple: $\leq \pm 0.1\%$ of F.S.
 Response time: ≤ 100 mS (10~90% of output)
 Output range: Voltage: 0~5V / 0~10V / 1~5V
 Current: 0~10mA / 0~20mA / 4~20mA
 Output capability: Voltage: 0~10V: $\geq 1000\Omega$
 Current: 4(0)~20mA $\leq 600\Omega$ max
 Scaling: R_{OH5} : Output High setting: -1999~9999
 R_{OL5} : Output Low setting: -1999~9999
 Digital fine adjust: R_{ADJ} : adjust range: -1999~9999
 R_{SPN} : adjust range: -1999~9999
 R_{FLR} : NONE / ZERO / SPAN / BOTH

RS485 Communication

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: 120~300 Ω /0.25W(typical: 150 Ω)

Power

Power supply: ADH: AC 85~264V, DC 100~300V
 ADL: AC/DC 20~56V
 Excitation Power: DC24V, 30mA(Max)
 Power Consumption: AC: ≤ 2.5 VA
 Memory Storage: EEPROM

Electrical Safety

Dielectric strength: AC 2.0 KV for 1 min,
 Between Power / Input / Output / Case
 Insulation resistance: $\geq 100M\Omega$ @500Vdc,
 Between Power / Input / Output / Case

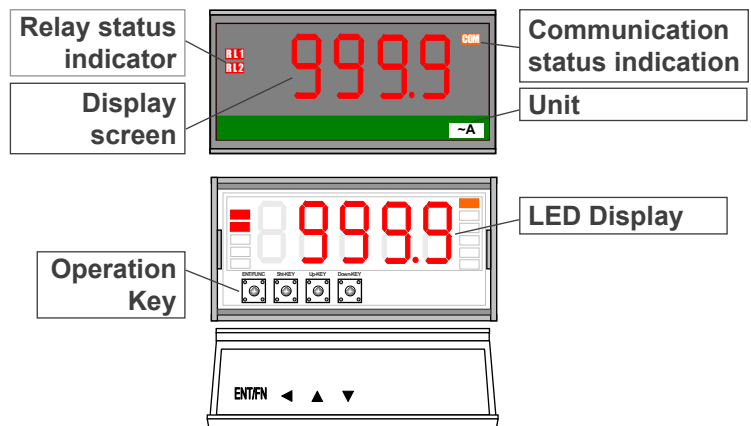
Environmental Characteristics

Operating Temp.: 0~60 °C
 Humidity rating: 20~95 %RH, Non-condensing
 Temp. coefficient: ≤ 100 PPM/°C
 Storage Temp.: -10~70 °C
 Enclosure: Front panel: IEC 549 (IP54); Housing: IP20

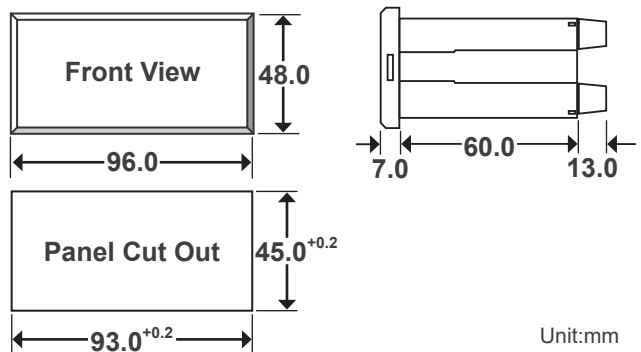
Mechanical

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 flush mounting
 Terminal block: Plastic NYLON 66 (UL 94V-0)
 22~14AWG / 0.5~2.0mm²
 Screw Torque Value: M3.5 / 12kgf.cm(Max)
 Weight: 210g

Front Panel

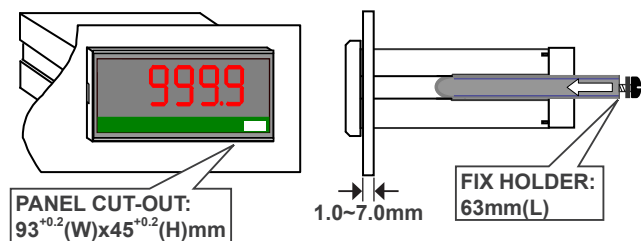


Dimension



Installation

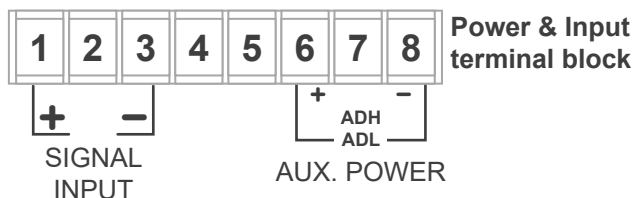
The meter should be installed in a location that does not exceed the maximum operating temperature and provides good air circulation.



Pin Assignment

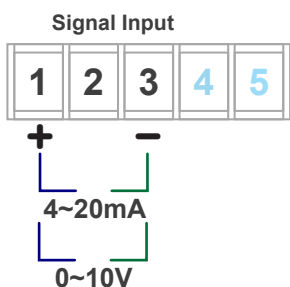
Terminal blocks:

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

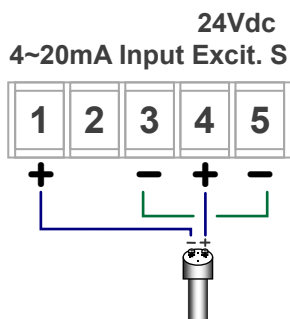


Please check the voltage of power supplied first, and then connect to the specified terminals. It is recommended that power supplied to the meter be protected by a fuse or circuit breaker.

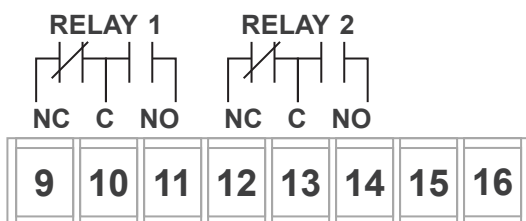
Signal Input



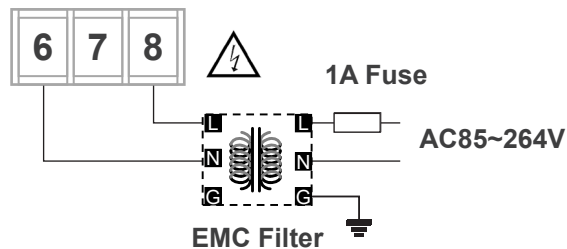
2 wire sensor Input Connection



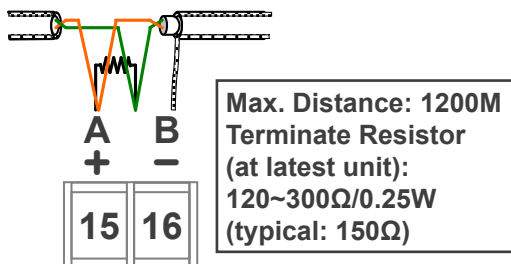
Relay Output



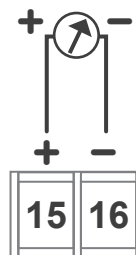
Power Connection



RS485 Communication Port



Analog Output



CM2-PR