

# POTENTIOMETER INDICATOR

CS1-PM<sub>(1.0)</sub>

## FEATURE

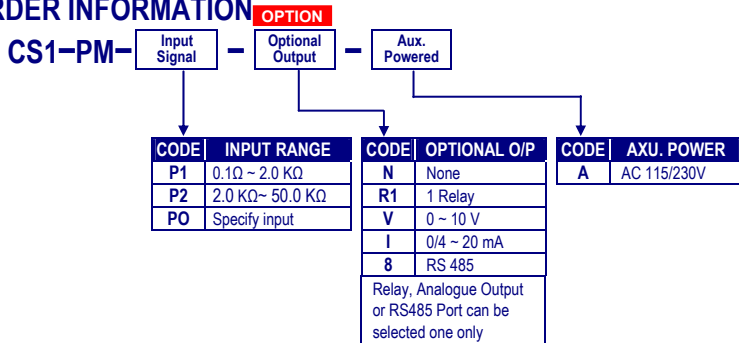
- Measuring potentiometer from 0.1~1.0/~100.0KΩ (3 wired)
- Accuracy: ± 0.04%; Display range: -19999~29999
- User function, Easily programmable via the front panel
- **Field calibration with potentiometer to meet the system requirement**
- **1 relay, 1 Analogue output or RS 485 communication port in option with flexible functions**
- CE Approved



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## ORDER INFORMATION



## SPECIFICATION

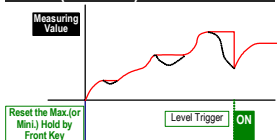
Measuring Range	Input Impedance	Excitation Voltage
0.1Ω ~ 1.0KΩ (3 wired)	≥1M ohm	About 0.2V
1.0 KΩ~ 50.0KΩ (3 wired)	≥1M ohm	About 0.8V

- Calibration: System calibration by front key
- **Field calibration function:** Calibration with field signal input high & low, and field calibration reset without influence factory calibration
- Accuracy: ≤ ± 0.04% of FS ± 1C;
- Response time: ≤ 100 msec.(when the AvG = "1")
- **Operating**
- Operation key: 4 keys for Enter(Function) / Shift(Escape) / Up / Down  
Up key: increase the number / back to previous function  
Down key: decrease the number / go to next function  
Shift/Esc key: move the flash digit position / Return back to upper level  
Enter/Fun key: enter the parameters you set or function select
- Key control input: **Down key can be defined to be Relative PV / PV Hold / Maximum/Minimum reset / Reset for Relay Hold**
- Security function: 4 digits password
- Lock function: 3 function group lock level for None/User Level/ Engineer Level / All(Engineer Level & User Level)

### Display functions

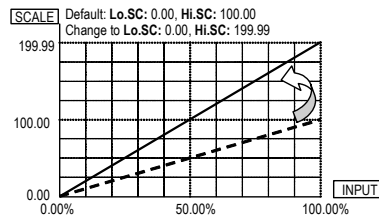
- LED: Measuring value: 0.56" red high-brightness LED  
Relay output indication: square red LED  
RS 485 communication: square orange LED  
Max. / Mini. Hold / PV Hold / Rel. PV : square red LED
- Low Cut function: Low cut :Settable range:-19999~+19999 counts
- Average function: AvG :Settable range: 1~99 times
- Digital Filter function: D.Filt : Settable range: 0(None)/1~99 times
- Over range indication: ovFL, when input is over 120% of input range Hi
- Under range indication: -ovFL, when input is under -120% of input range Lo
- Display functions: **Present Value / Maximum Hold / Minimum Hold / Write to display by RS485 command**

### Max. ( or Mini.) Hold & Reset



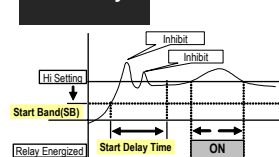
### Scaling

- Scaling function: Hi.SC(High scale): -19999~29999  
Lo.SC(Low scale): -19999~29999

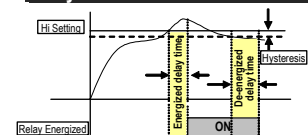


- Decimal point: Settable from 0 / 0.0 / 0.00 / 0.000 / 0.0000
- **Control functions(optional)**
- Control relay: 1 Relay SPDT, 5A/230Vac, 10A/115V
- Relay output: Energized levels compare with set-points:  
**Hi / Lo / Hi hold / Lo hold energize selectable**
- Functions: Start delay / Energized & De-energized delay / Hysteresis  
Start band: 0~9999 counts  
Start delay time: 0:00.0~9(Minutes):59.9(Second)  
**Energized delay time: 9(Minutes):59.9(Second)**  
**De-energized delay time: 9(Minutes):59.9(Second)**  
Hysteresis: 0~5000 counts

### Start Delay



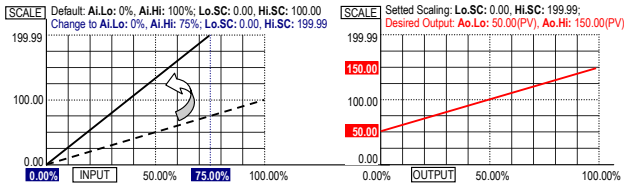
### Energized / De-energized Delay & Hysteresis



### Analogue output(option)

- Accuracy: ≤ ± 0.2% of F.S.;
- Ripple: ≤ ± 0.1% of F.S.
- Response time: ≤ 200 msec. (10~90% of input)
- Isolation: AC 2.0 KV between input and output
- Output range: Specify Voltage or Current  
Voltage: 0~5V / 0~10V / 1~5V selectable  
Current: 0~10mA / 0~20mA / 4~20mA selectable
- **Output Capability:**  
**Voltage: 0~10V; ≥ 1KΩ;**  
**Current: 0(4)~20mA; ≤ 600Ω**
- Functions: **Ao.Hi(output high): PV Hi vs. output range Hi**  
**Ao.Lo(output range Low): PV Low vs. output range Lo**

C1-05



### RS 485 communication(optional)

- Protocol: Modbus RTU mode
- Baud rate: Selectable 2400/4800/9600/19200/38400
- Data bits: Selectable 7 or 8 bit
- Parity: Selectable Even, odd or none (with 1 or 2 stop bit)
- Device no: Settable 1 ~ 255
- Write function: Write to display value from PC's RS485 command

### Power

- Power Supply: AC 115/230V ± 10%, 50/60Hz

- Power consumption: 5.0VA
- Back up memory: By EEPROM

### Environmental

- Operating temperature: 0~60 °C
- Operating relative humi. 20~95 %RH, Non-condensing
- Temperature coefficient: ≤ 100 PPM/°C
- Storage temperature: -10~70 °C
- Enclosure: Front panel: IEC 549 (IP54)

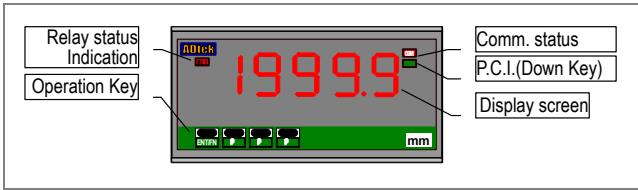
### Electrical safety

- Dielectric Strength: AC 2.0 KV for 1 min  
Between Power / Input / Output / Case  
≥ 100M ohm at 500Vdc
- Insulation resistance: Between Power / Input / Output
- Isolation: EN61326
- EMC: EN61010
- Safety: EN61010

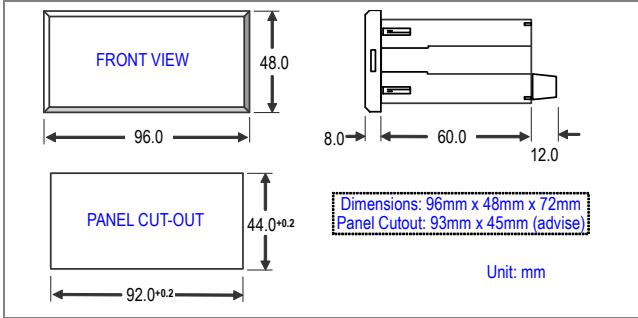
### Mechanical

- Dimensions: 96mm(W) x 48mm(H) x 72mm(D)
- Panel cutout: 92mm(W) x 44mm(H)
- Case Material: ABS fire-protection (UL 94V-0)
- Mounting: Panel flush mounting
- Terminal block: Plastic NYLON 66 (UL 94V-0)  
10A/300Vac, M2.6, 16~22AWG
- Weight: About 350g

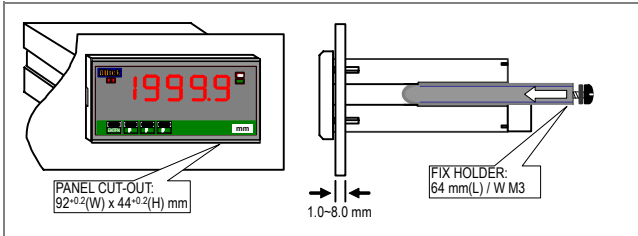
## FRONT PANEL



## DIMENSIONS



## INSTALLATION



## CONNECTION DIAGRAM

