

# DC SIGNAL PROCESS INDICATOR

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

## FEATURE

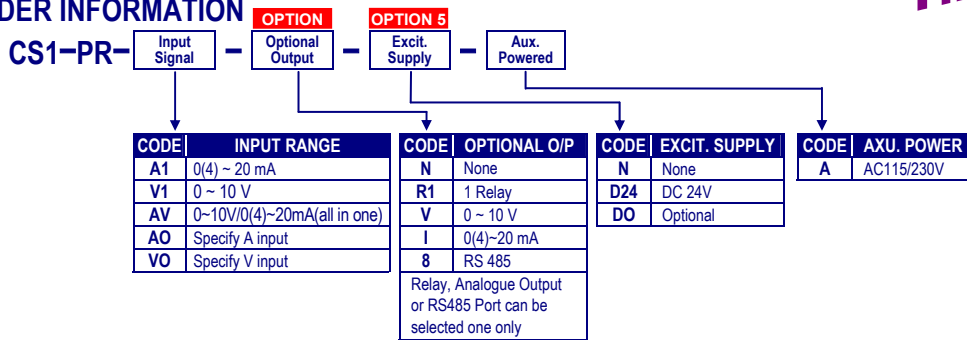
- Measuring linear signal 0~10V / 0(4)~20mA in one controller
- Accuracy:  $\pm 0.04\%$ ; Display range: -19999~29999
- User function, Easily programmable via the front panel
- **1 relay, 1 Analogue output or RS 485 communication port in option with flexible functions**
- CE Approved

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## ORDER INFORMATION



## SPECIFICATION

Measuring Range	Input Impedance	Measuring Range	Input Impedance
<b>Voltage</b> 0 ~ 10 V	$\geq 1M$ ohm	<b>Current</b> 0(4)~20 mA	250 ohm

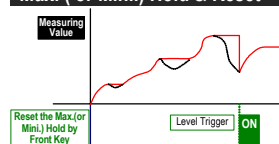
► The Meter can be 0~10V and 0~20mA in one unit, according to connection #11 or #12

- Calibration: System calibration by front key
- Accuracy:  $\leq \pm 0.04\%$  of FS  $\pm 1C$ ;
- Response time:  $\leq 100$  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/Escape 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

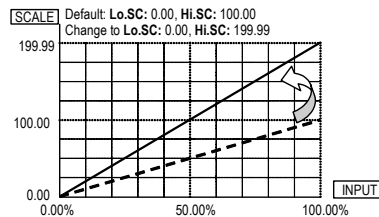
- LED: Measuring value: 0.56" red high-brightness LED  
Relay output indication: square red LED  
RS 485 communication: square orange LED  
Max. / Mini. Hold / PV Hold / Rel. PV : square red LED
- Low Cut function: Low.cut :Settable range:-19999~+19999 counts
- Average function: AvG :Settable range: 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

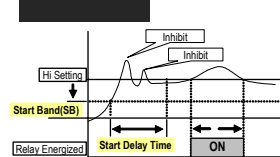
- Scaling function: Hi.SC(High scale): -19999~29999  
Lo.SC(Low scale): -19999~29999
- Decimal point: Settable from 0 / 0.0 / 0.00 / 0.000 / 0.0000



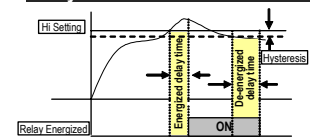
### Control functions(optional)

- 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



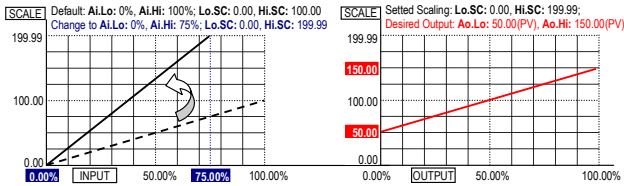
### Energized / De-energized Delay & Hysteresis



### Analogue output(option)

- Accuracy:  $\leq \pm 0.2\%$  of F.S.;
- Ripple:  $\leq \pm 0.1\%$  of F.S.
- Response time:  $\leq 200$  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:  $\geq 1K\Omega$ ;**  
**Current: 0(4)~20mA:  $\leq 600\Omega$**
- Functions: **Ao.Hi(output high): PV Hi vs. output range Hi**  
**Ao.Lo(output range Low): PV Low vs. output range**

C1-01



**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**

- Excitation Supply: DC 24V ± 10%, 30mA
- Power Supply: AC 115/230V ± 10%, 50/60Hz
- Power consumption: 5VA
- Back up memory: By EEPROM

**Environmental**

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

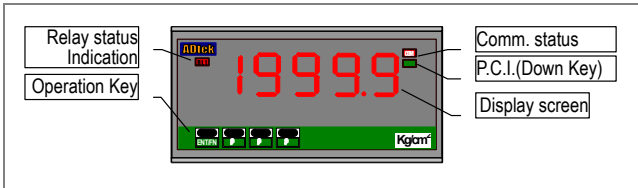
**Electrical safety**

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

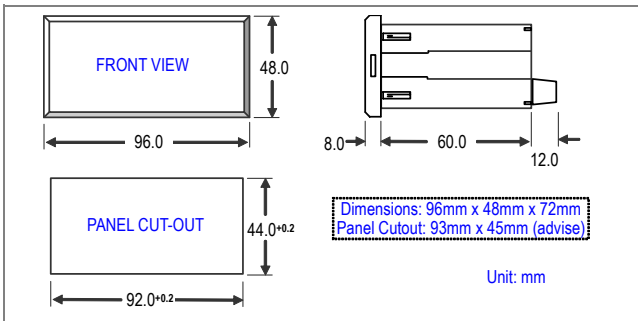
**Mechanical**

- Dimensions: 96mm(W) x 48mm(H) x 72mm(D)  
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

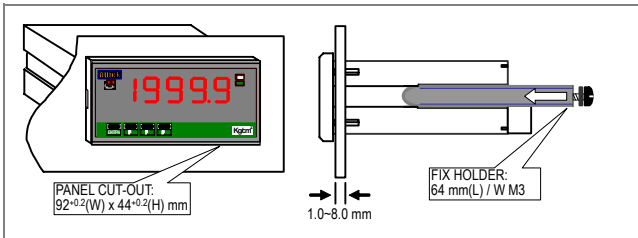
**FRONT PANEL**



**DIMENSIONS**



**INSTALLATION**



**CONNECTION DIAGRAM**

