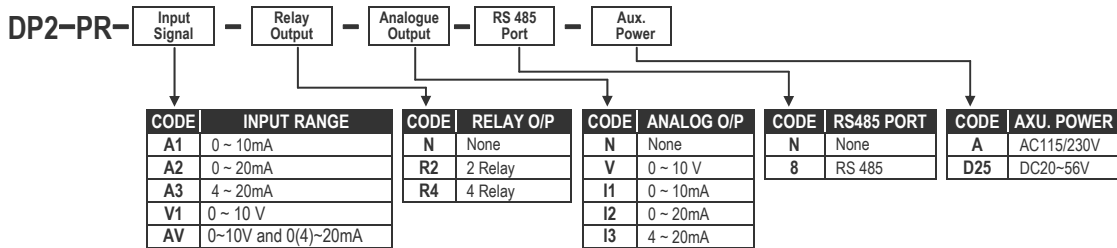


## FEATURES

- Measures and Displays 0~10V / 0~10mA, 0~20mA and 4~20mA
- Accuracy: ± 0.04%; Display range: -19999~29999
- Easily programmable via the front panel
- *Up to 4 relays available with latching and time delay programmable*
- Analogue output and RS 485 Modbus options
- *3 external control inputs for Reset and hold functions*
- CE Approved



## ORDER CODING



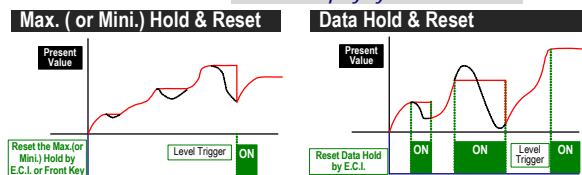
## SPECIFICATION

Measuring Range	Input Impedance	Measuring Range	Input Impedance
Voltage 0 ~ 10 V	≥ 1M ohm	Current 0(4)~20 mA	250 ohm

Calibration: Calibration from front panel  
 Accuracy: ≤ ± 0.04% of FS  
 Response time: ≤ 100 msec. (AvG = "1")

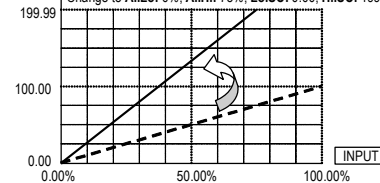
**Operating Programming:** 4 keys for Enter(Function) / Shift(Escape) / Up / Down  
 Up key: increases the number /back to previous function  
 Down key: decreases the number / go to next function  
 Shift/Escape key: moves the flashing digit position / Return to upper level  
 Enter/Fun key: enter the parameters you set or selects programming mode  
 4 keys for Enter(Function) / Shift(Escape) / Up / Down  
 4 digit password  
**Security:** 3 security levels User / Master / None

**Display functions LED:** Measuring value: 0.56" red high-brightness LED  
 Relay output indication: square red LED  
 External control input: square green LED  
 RS 485 communication: square red LED  
 Max. / Mini. Hold: 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*



**Scaling Input range function:** Ai.Lo: 0~100% of input  
 Ai.Hi: 0~100% of input  
**Scaling function:** Hi.SC(High scale): -19999~29999  
 Lo.SC(Low scale): -19999~29999

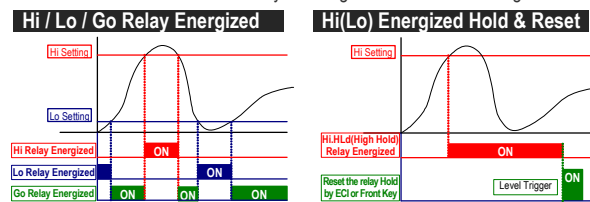
**SCALE:** Default: Ai.Lo: 0%, Ai.Hi: 100%; Lo.SC: 0.00, Hi.SC: 100.00  
 Change to Ai.Lo: 0%, Ai.Hi: 75%; Lo.SC: 0.00, Hi.SC: 199.99



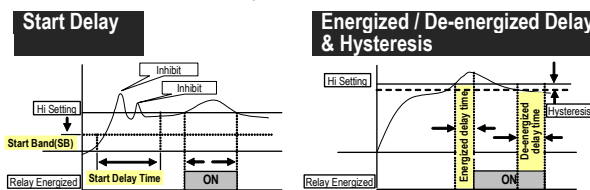
**Decimal point:** Settable from 00000~0.0000

### Control functions

**Relay:** 2 Relays SPDT, 5A/230Vac, 10A/115V  
 2 Relays SPST, 1A/230Vac, 3A/115V  
**Relay Output:** Energized levels are compared with set-points:  
 Hi / Lo / Hi.HLd / Lo.HLd / do / Go-1.2 / Go-2.3  
 DO function: Energized by RS485 command  
 Relay Latching : Selectable Low or High Hold



**Functions:** Start delay / Energized & De-energized delay / Hysteresis  
 Start band: 0~9999 counts  
 Start delay time: 0:00.0~9(Minutes):59.9(Seconds)  
 Energized delay time: 9(Minutes):59.9(Seconds)  
 De-energized delay time: 9(Minutes):59.9(Seconds)  
 Hysteresis: 0~5000 counts



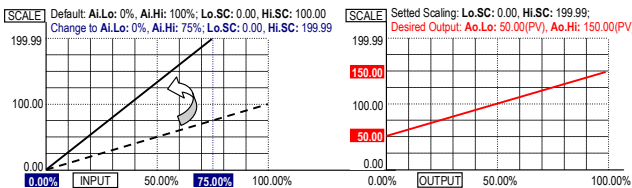
**External Control Input (ECI) Input mode:** 3 inputs, Contact or open collect input  
**Functions:** *Relative PV / PV Hold / Reset Max or Mini. Hold / DI / Reset for Relay Latch*  
*De-bounce time: 5 ~ 255 x 8mseconds*

# 4½ Digit 4~20mA with Alarm, A/O, RS485 Options

## DP2-PR

### Analogue output(option)

- Accuracy:**  $\leq \pm 0.1\%$  of F.S.; 16 bits AD converter  
**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 Drive:** Voltage: 0~10V:  $\geq 10000\Omega$ ;  
 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 Lo*  
*Ao.LLM(output High Limit):*  
 0.00~110.00% of output High



### RS 485 communication(optional)

- Protocol:** Modbus RTU mode  
 Baud rate: 1200/2400/4800/9600/19200/38400  
 Data bits: 7 or 8 bit  
 Parity: Even, odd or none (with 1 or 2 stop bit)  
 Device no: 1 ~ 255  
**Write function:** Write to display value from PC's RS485 command

### Power

- Excitation Supply:** DC 24V/30mA maximum  
**Power Supply:** AC 115/230V  $\pm 15\%$ , 50/60Hz  
**Optional: DC20~56V**

### 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:**  $\leq 100$  PPM/°C  
**Storage temperature:** -10~70 °C  
**Enclosure:** Front panel: IEC 549 (IP54)

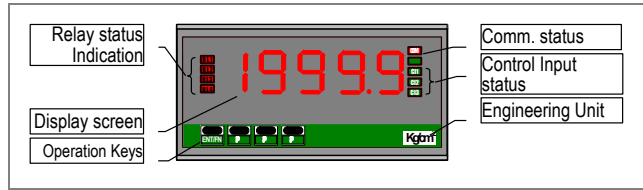
### Electrical safety

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

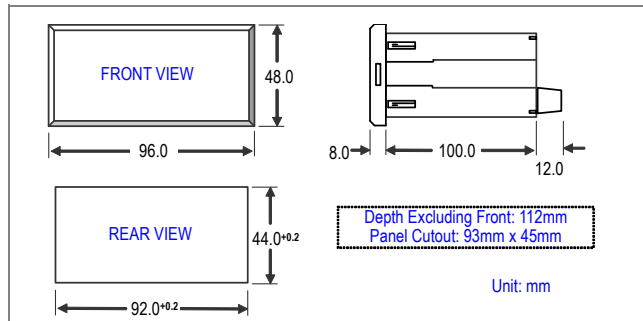
### Mechanical

- Dimensions:** 96mm(W) x 48mm(H) x 120mm(D)  
**Panel cutout:** 92mm(W) x 44mm(H)  
**Case Materiel:** 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:** 550g

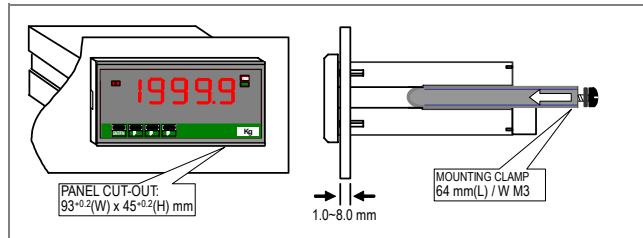
### FRONT PANEL



### DIMENSIONS



### INSTALLATION



### CONNECTION DIAGRAM

