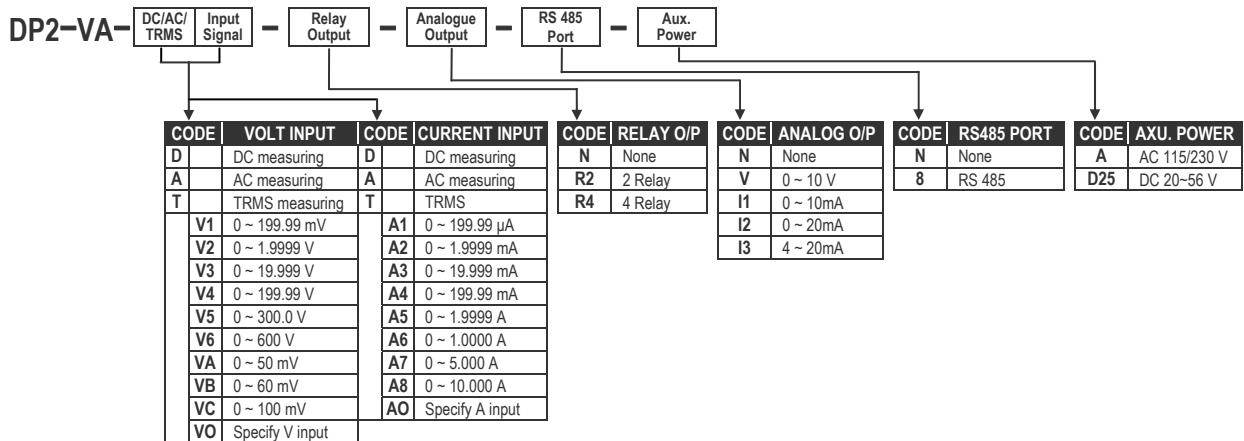


## FEATURES

- Measures & Displays DC / AC / TRMS Voltage or Current
- Accuracy:  $\pm 0.04\%$  or  $\pm 0.1\%$ ; 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 option
- *3 external control inputs for Reset and hold functions*
- CE Approved



## ORDER CODING



## SPECIFICATION

Measuring Range DC / AC / TRMS	Input Impedance	Measuring Range DC / AC / TRMS	Input Impedance
Voltage	0~199.99 mV $\geq 5M$ ohm	Current	0~199.99 $\mu$ A 1K ohm
	0~1.9999 V $\geq 1M$ ohm		0~1.9999 mA 100 ohm
	0~19.999 V $\geq 1M$ ohm		0~19.999 mA 10 ohm
	0~199.99 V $\geq 1M$ ohm		0~199.99 mA 1 ohm
	0~300.0 V $\geq 2M$ ohm		0~1.9999 A 0.05 ohm
	0~600.0 V $\geq 2M$ ohm		0~5.000 A 0.02 ohm
		0~10.000 A 0.01 ohm	

**Calibration:** Pfront keys  
**Accuracy:** DC:  $\leq \pm 0.04\%$  of FS  $\pm 1C$ ;  
 AC:  $\leq \pm 0.1\%$  of FS  $\pm 1C$ ;  
**Response time:**  $\leq 100$  msec. (AvG = "1")

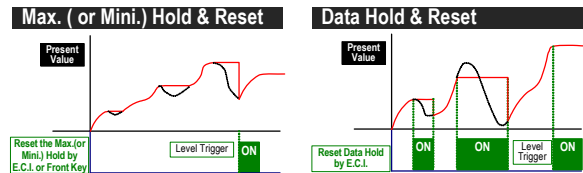
**Operating Programming:**  
 4 keys for Enter(Function) / Shift(Escape) / Up / Down  
 Up key: increases the number /back to previous  
 Down key: decreases the number / go to next  
 Shift/Escape key: moves the flashing digit position / Return to upper level  
 Enter/Fun key: enter the parameters you set or selects programming mode  
 4 keys for Enter(Function) / Shift(Escape) / Up / Down  
 4 digit password

**Security:**  
**Lock:** 3 security levels User / Master / None

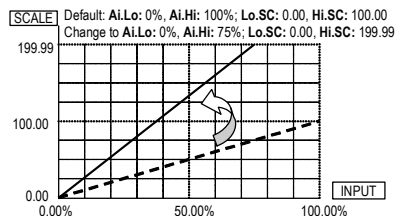
**Display & functions LED:**  
 Measuring value: 0.56" red high-brightness LED  
 Relay output indication: square red LED  
 External control input: square green LED  
 RS 485 communication: square red LED  
 Max. / Mini. Hold: square red LED

**Low Cut function:** Low.cut :Settable range: -19999~19999 counts  
**Average function:** AvG :Settable range: 1~99 times  
**Digital Filter:** 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



**Decimal point:** Settable from 0 / 0.0 / 0.00 / 0.000 / 0.0000

### Control functions

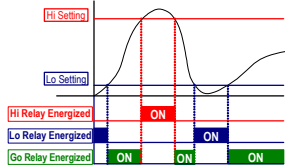
**Relay:** 2 Relays SPDT, 5A/230Vac, 10A/115V  
 2 Relays SPST, 1A/230Vac, 3A/115V  
**Relay Output:** Energized levels compare with set-points:  
 Hi / Lo / Hi.HLd / Lo.HLd / do / Go-1.2 / Go-2.3  
 DO function: Energized by RS485 command  
 Relay Latching : Selectable Low or High Hold  
*4 memory banks with settings for all relay functions, and selectable by 3 External Control Inputs(E.C.I.) or front programming keys*

**Memory function:**

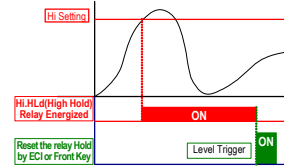
# 4½ Digit **VOLTS / AMPS** with Alarm, A/O, RS485 Options

## DP2-VA

### Hi / Lo / Go Relay Energized

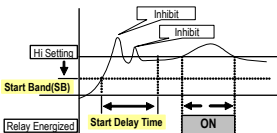


### Hi(Lo) Energized Hold & Reset

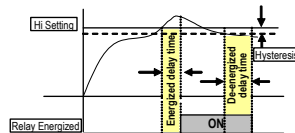


**Functions:** Start delay / Energized & De-energized delay / Hysteresis  
 Start band: 0~9999 counts  
 Start delay time: 0:00.0~9(Minutes):59.9(Second)  
**Energized delay time: 9(Minutes):59.9(Second)**  
**De-energized delay time: 9(Minutes):59.9(Second)**  
 Hysteresis: 0~5000 counts

### Start Delay



### Energized / De-energized Delay & Hysteresis

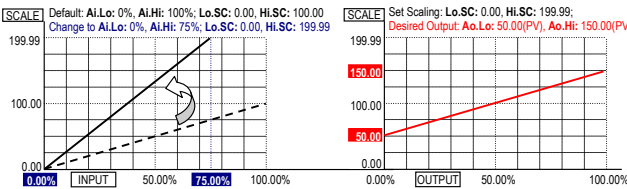


### External Control Inputs (ECI)

**Input mode:** 3 inputs, Contact or open collect input  
**Functions:** Present Value / PV Hold / Reset Max or Mini. Hold / DI  
 Reset latched relay  
 De-bounce time: 5 ~255 x 8mseconds

### 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  
**Ao.Hi(output high): PV Hi vs. output range Hi**  
**Ao.Lo(output range Low): PV Low vs. output range Lo**  
**Ao.LM(output High Limit): 0.00~110.00% of output High**



### 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:** Setable 1 ~ 255  
**Write function:** Write to display value from PC's RS485 command

### Power

**Power Supply:** AC 115/230V  $\pm 15\%$ , 50/60Hz  
**Optional: DC20~56V**

**Power consumption:** 5VA  
**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)

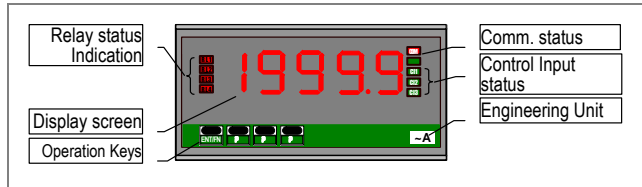
### Electrical safety

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

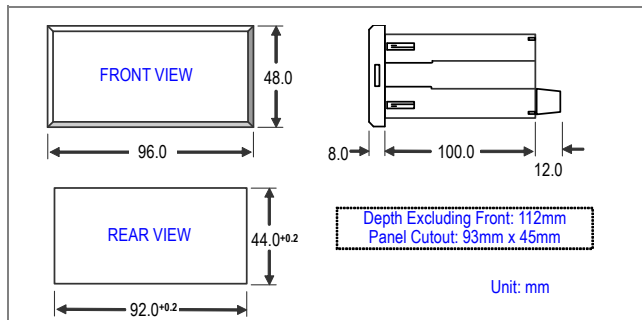
### Mechanical

**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)  
 #A1~A3(current input): 20A/300Vac, M3.5, 12~22AWG  
 Others: 10A 300Vac, M2.6, 16~22AWG  
**Weight:** 550g

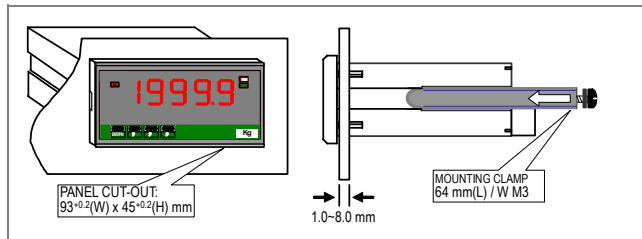
### FRONT PANEL



### DIMENSIONS



### INSTALLATION



### CONNECTION DIAGRAM

