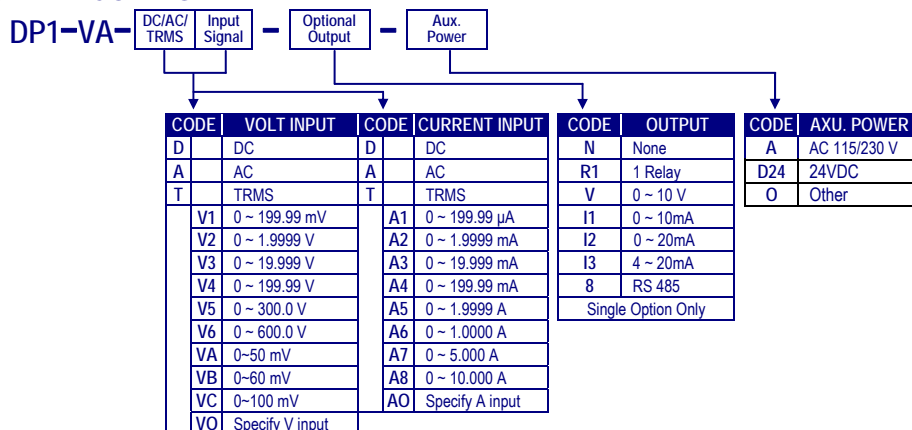


▶ FEATURES

- 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
- **1 Relay, 1 Analogue output or RS 485 communication**
- 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 μ 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: Calibration from front panel
 Accuracy: DC: $\pm 0.04\%$ of FS $\pm 1C$;
 AC: $\pm 0.1\%$ of FS $\pm 1C$;
 ≤ 100 msec.(AvG = "1")

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

Programmable key: Down key can be programmed to be Present Value (PV), PV Hold, / Max-Min value reset / or Relay reset if alarm is configured as latching

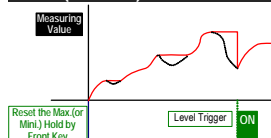
Security :
 Lock: 4 digit password
 3 security levels User / Master / None

Display functions

LED: Measured value: 0.56" red high-brightness LED
 Relay output indication: square red LED
 RS 485 communication: square orange LED
 Max. / Mini. Hold: square red LED

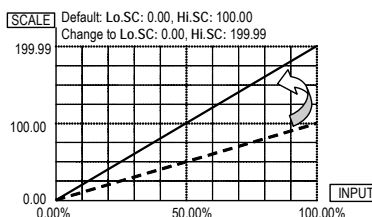
Low Cut function: Low.cut :Settable range: -19999~19999 counts
 Average function: AvG :Settable range: 1~99 times
 Digital Filter: D.FiLT : Settable range: 0(None)/1~99 times
 Over range indication: ovFL, when input is over 120% of input range Hi
 Under range indication: -ovFL, when input is under -120% of input range Lo
 Display functions: **Present Value / Maximum Hold / Minimum Hold / Write to display by RS485 command**

Max. (or Mini.) Hold & Reset



Scaling

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

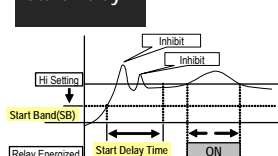


Decimal point: Settable from 0 / 0.0 / 0.00 / 0.000 / 0.0000

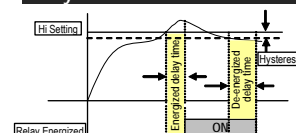
Control functions (optional)

Control relay: 1 Relay SPDT, 5A/230Vac, 10A/115V
 Relay output: Energized levels are compared with set-points:
 Hi / Lo / Hi hold / Lo hold (latching) selectable
 Start delay / Energized & De-energized delay / Hysteresis
 Functions: 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

Start Delay



Energized / De-energized Delay & Hysteresis

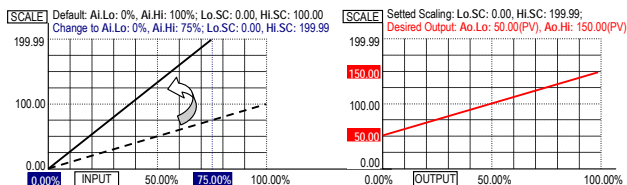


4½ Digit *VOLTS / AMPS* with Alarm, A/O, RS485 Options

DP1-VA

Analogue output(option)

Accuracy: $\leq \pm 0.1\%$ of F.S.;
 Ripple: $\leq \pm 0.1\%$ 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
 Voltage: 0~10V: $\geq 1K\Omega$;
 Current: 0(4)~20mA: $\geq 600\Omega$



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 $\pm 15\%$, 50/60Hz, DC 24V $\pm 10\%$,
 Power consumption: 5VA
 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)

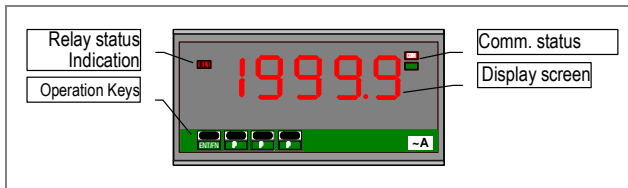
Electrical

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

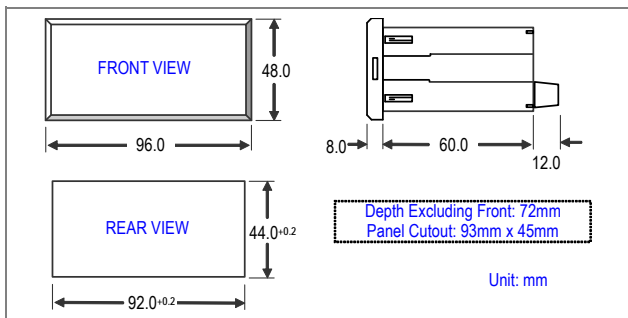
Mechanical

Dimensions: 96mm(W) x 48mm(H) x 72mm(D)
 Panel cutout: 93mm(W) x 45mm(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
 Others: 10A 300Vac, M2.6, 16~22AWG
 Weight: About 350g

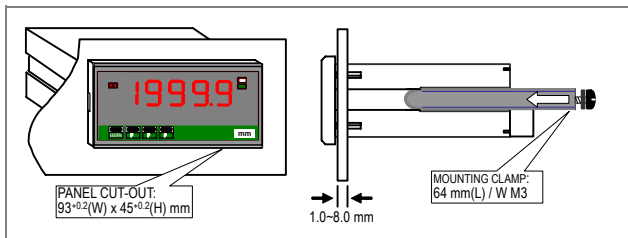
FRONT PANEL



DIMENSIONS



INSTALLATION



CONNECTION DIAGRAM

