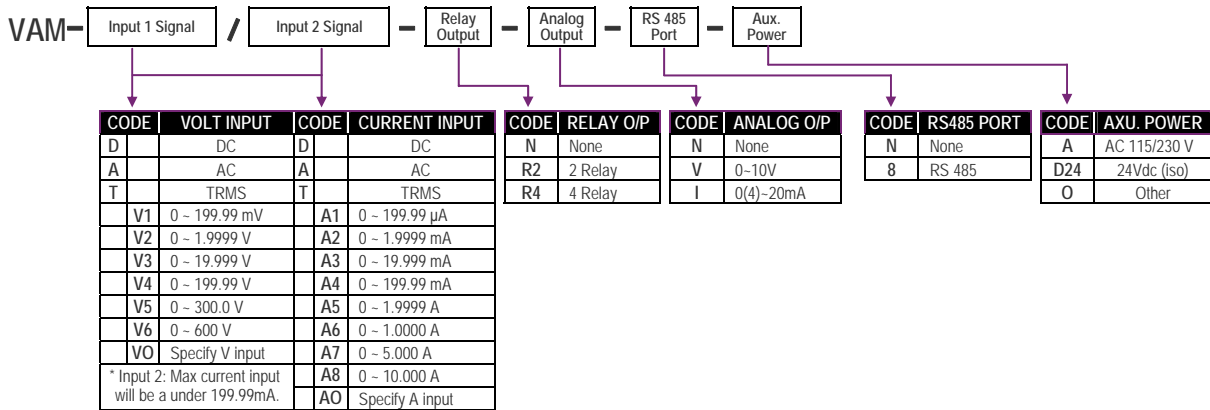


► FEATURES

- Measures & Displays Voltage and Current for DC / AC / TRMS with clear display for both parameters or a calculated value.
- Accuracy: $\pm 0.04\%$; Display range: -19999-99999 with *Math functions :- Addition / Subtraction / Multiplication / Division / high or low*
- Easily programmable via the front panel
- *Options for up to 4 relay outputs and analogue output*
- RS 485 (Modbus RTU) option
- CE Approved



► ORDER CODING



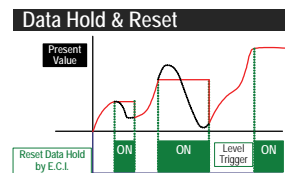
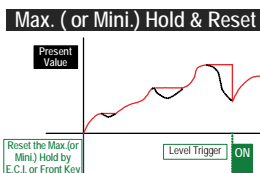
► SPECIFICATION

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	$\geq 1M$ ohm		0-1.9999 A	0.05 ohm
	0-600.0 V	$\geq 1M$ ohm		0-5.000 A	0.02 ohm
			0-10.000 A	0.01 ohm	

* Dual input cab be selected individual in Voltage & Current for DC, AC or TRMS

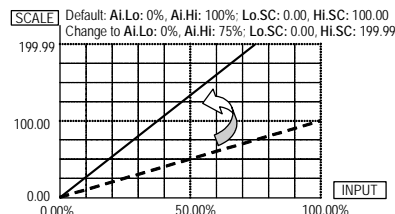
- Calibration: System calibration by front key
- Accuracy: DC: $\leq \pm 0.04\%$ of FS $\pm 1C$;
AC: $\leq \pm 0.1\%$ of FS $\pm 1C$;
- Response time: ≤ 100 msec.(when the AvG = "1")
- Operating
- Programming: 4 keys for Enter(Function) / Shift(Esc) / Up / Down
Up key: increases number / back to previous 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
- Security: 4 digit password
- Lock: 3 function group lock level for None/User Level/ Engineer Level / All(Engineer Level & User Level)
- Display functions
- LED: Measured value: Dual screen, 0.39" red high-brightness LED
Relay output indication: square red LED
RS 485 communication: square green LED
Max. / Mini. Hold: square red LED
- Low Cut function[Lo.Ct.1(2)]: Settable range: -19999-19999 counts
- Average function: AvG :Settable range: 1-99 times
- Digital Filter: d.FILt : Settable range: 0(None)/1-99 times
- Display Range: -19999-99999 by mathematic

- 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
- Mathematic[MATH.1(2)]: *Selectable Addition / Subtraction / Multiplication / Division / High or Low selector*
- Display functions: *Present Value / Maximum Hold / Minimum Hold / Write to display by RS485 command*



Scaling

- Input range function: [Ai1(2).Lo]: 0-100% of input
[Ai1(2).Hi]: 0-100% of input
- Scaling function: [Hi.SC.1(2)] (High scale): -19999-29999
[Lo.SC.1(2)] (Low scale): -19999-29999



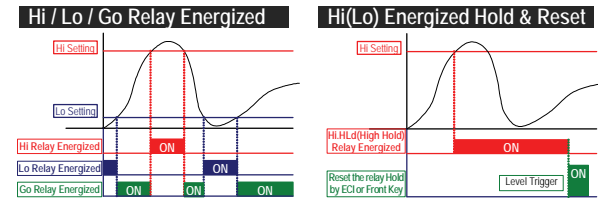
- Decimal point[Pv1(2).dP]: Settable from 0 / 0.0 / 0.00 / 0.000 / 0.0000

Control functions(optional)

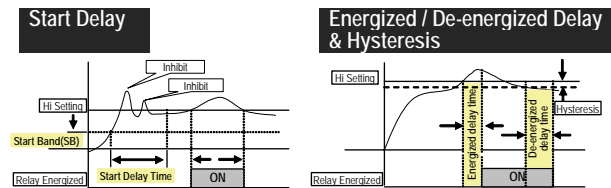
- Control relay: 2 Relays SPDT, 1A/230Vac, 3A/115V
2 Relays SPST, 1A/230Vac, 3A/115V
- Relay Output: *Multi- selection with display 1 & display 2*
Energized levels are compared with set-points:
Hi / Lo / Hi.HLd / Lo.HLd / do / Go-1.2 / Go-2.3
DO function: Energized by RS485 command
Relay Latching : Selectable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

4½ DIGIT *DUAL VOLT/AMPS* with Alarm, A/O, RS485 Options

VAM



- Functions:**
- Start delay / Energized & De-energized delay / Hysteresis
 - Relay Trip Selection[r1(2).SEL]: Multis selection
 - Start band[rY.Sb.1(2)]: 0-9999 counts
 - Start delay time[rY.Sb.1(2)]: 0:00.0-9(M):59.9(S)
 - Energized & De-energized delay time: 0:00.0-9:59.9
 - Hysteresis: 0-5000 counts



- 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: ≤ 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

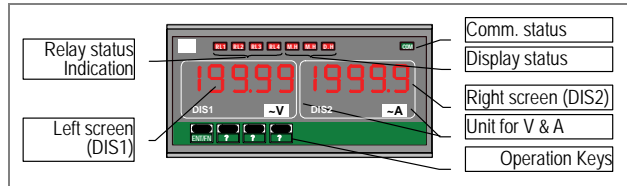
- Power**
- Power Supply: AC 115/230V $\pm 15\%$, 50/60Hz, DC 24V $\pm 10\%$
 - Power consumption: 5VA
 - Back up memory: By EEPROM

- 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)

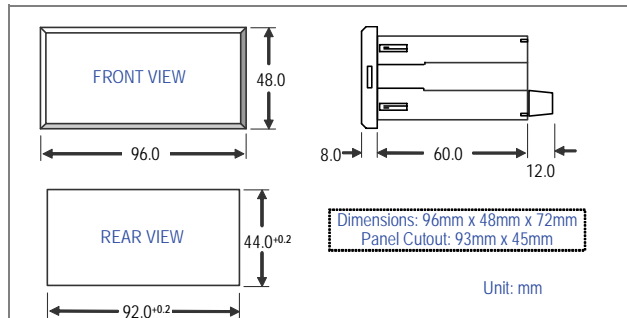
- Electrical safety**
- Dielectric Strength: AC 2.0 KV for 1 min
Between Power / Input 1 / Input 2 / Output / Case
 - Insulation resistance: $\geq 100M$ ohm at 500Vdc
 - Isolation: Between Power / Input / Output
 - EMC: EN61326
 - Safety: EN61010

- Mechanical**
- Dimensions: 96mm(W) x 48mm(H) x 120mm(D)
 - Panel cutout: 93mm(W) x 45mm(H)
 - Case Material: ABS fire-protection (UL 94V-0)
 - Mounting: Panel flush mounting
 - Terminal block: Plastic NYLON 66 (UL 94V-0)
#A1-A3: 20A/300Vac, M3.5, 12-22AWG
Others: 10A 300Vac, M2.6, 16-22AWG
 - Weight: 550g

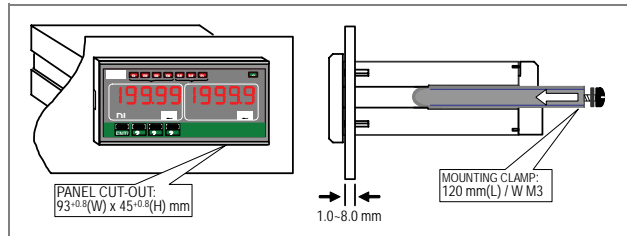
FRONT PANEL



DIMENSIONS



INSTALLATION



CONNECTION DIAGRAM

