

# DC VOLTMETER & AMMETER

## AP-244A

### \*BCD Output(Optional)



### ■ Features

- 5V, 24VDC(Isolated)
- Bright LED, 8mm(Red)
- 2V to 200V Measurement
- BCD Output(option)

### ■ DC Voltage Measurement

| Model      | Range                 | Maximum Resolution       | Input Impedance | Input Protection  |
|------------|-----------------------|--------------------------|-----------------|-------------------|
| AP-244A-11 | $\pm 199.99\text{mV}$ | $10\text{ }\mu\text{V}$  | 100M            | $\pm 100\text{V}$ |
| AP-244A-12 | $\pm 1.9999\text{V}$  | $100\text{ }\mu\text{V}$ | 100M            | $\pm 100\text{V}$ |
| AP-244A-13 | $\pm 19.999\text{V}$  | 1mV                      | 1M              | $\pm 250\text{V}$ |
| AP-244A-14 | $\pm 199.99\text{V}$  | 10mV                     | 1M              | $\pm 250\text{V}$ |

Accuracy:  $\pm 0.03\%$  rdg  $\pm 1$  digit ( $20\pm 5^\circ\text{C}$ )

### ■ Specifications

Input Configuration: Single ended  
 Input Bias Current: 100pA (Typ.)  
 Conversion Rate: 2.5/sec, 12.5(50Hz), 15(60Hz)/sec  
 Normal Mode Rejection: NMR50dB(50/60Hz)  
 Display: LED 8mm 4 1/2 digit  
 Polarity: A "-" is displayed automatically  
 Decimal Point: Settable to any digit position  
 Overrange Indication: When input exceeds the maximum display, 0000 flashes  
 Power Supply: 5VDC  $\pm 5\%$ , 24VDC  $\pm 20\%$   
 Operating Temp.:  $0\sim 50^\circ\text{C}$ , 35 to 85%RH  
 Power Consumption: 120mA at 5VDC (Max.)  
 30mA at 24VDC (Max.)  
 Dimensions: 24(H)  $\times$  48(W)  $\times$  87(D)mm Din size  
 Weight: 50g  
 Dielectric Strength: Between input(Lo) terminal and mounted plate, AC1500V/1 min.  
 Between input(Lo) terminal and power supply(OV), 500VDC/1 min.

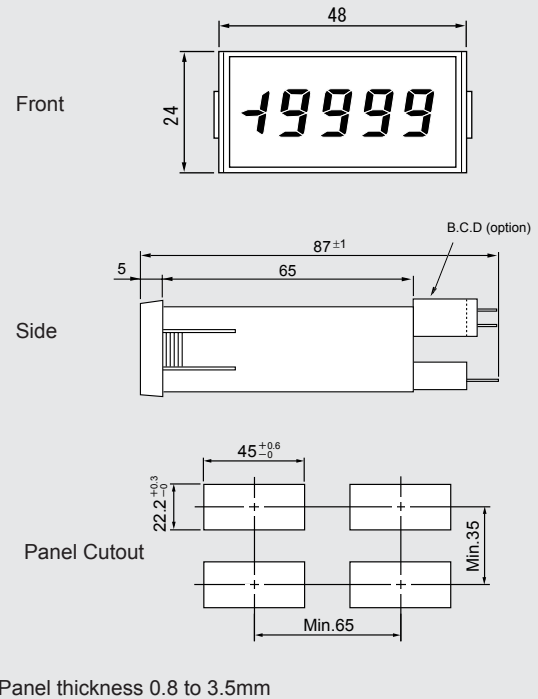
### ■ BCD Data Output(Isolated from input(Lo))

· At Open collector  
 Measured data: Negative logic transistor "ON" at logic "1"  
 Polarity signal: Transistor "ON" at plus input  
 "OVER" signal: Transistor "ON" at overflow input  
 Printing command signal: Transistor "ON" during a period of approx. 100 to 200ms at every measurement completion  
 Transistor output capacity: Applied voltage, 30V max  
 current, 10mA max  
 Saturated output voltage less than 1.2V at 10mA  
 · AT TTL level  
 Measured data: Tri-state parallel BCD positive logic latch output  
 Polarity signal: "1" level at plus input  
 "OVER" signal: "1" level at overflow input  
 Printing command signal: A positive pulse of approx 100 to 200ms at every measurement completion  
 Each signal of the above: TTL level Fanout=2  
 \* Each signal of the above can be changed to negative logic

### ■ Ordering Code

AP-244A-□□-□□-□□  
 Type of BCD { 1. none  
 2. TTL  
 3. Open collector  
 Output { 1. none  
 2. BCD (2.5/sec)  
 6. BCD (12.5/sec)  
 7. BCD (15/sec)  
 Power Supply { 3. 5 to 12VDC  
 4. 12 to 24VDC  
 Range { 11 1V  
 14 2A

### ■ Dimensions



### ■ Connection Diagram

