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## DESCRIPTION

Model 822 panel ammeters are specific instruments that allow direct connection to external current transformer or shunt rating /5A, /1A or /60mV, /100mV for readout RMS values of sinusoidal signals up to 2000A. They are simple, low-cost indicators, without output or setpoint option. Taking out the frontal lens provides access to decimal point location and to span adjustment with a margin of 20%. The zero adjust is automatic. Fully factory-set, it is possible to modify later the scale by changing the value of an internal resistor as shown next page. Power and signal connection is made via a 6-pin MAT-N-LOK AMP connector located at the rear of the unit.

## SELECTION GUIDE

| <b>8220</b>         | <b>Z</b> | <b>Y</b> | <b>0</b> | <b>X</b> |
|---------------------|----------|----------|----------|----------|
| <b>SUPPLY POWER</b> |          |          |          |          |
| TRANSFORMER/1A      | 1        |          |          |          |
| TRANSFORMER/5A      | 2        |          |          |          |
| SHUNT/60mV          | 5        |          |          |          |
| SHUNT/100mV         | 6        |          |          |          |
| <b>SUPPLY POWER</b> |          |          |          |          |
| 115V 50/60Hz        |          | 1        |          |          |
| 230V 50/60Hz        |          | 2        |          |          |
| 12V DC ISOLATED     |          | 4        |          |          |
| 24V 50/60Hz         |          | 7        |          |          |
| 24V DC ISOLATED     |          | 8        |          |          |
| <b>SCALE</b>        |          |          |          |          |
| 20A (19.99)         |          |          |          | 1        |
| 50A (50.0)          |          |          |          | 2        |
| 100A (100.0)        |          |          |          | 3        |
| 200A (199.9)        |          |          |          | 4        |
| 500A (500)          |          |          |          | 5        |
| 1000A (1000)        |          |          |          | 6        |

|                          |                          |                          |                          |                          |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 2000A (1999)             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 7                        |
| UPON REQUEST             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 9                        |
| <b>SILKSCREENED UNIT</b> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

## ORDERING EXAMPLE

**8220 2204 E07** : AC ammeter Series 800 Supply  
 power: 230V AC (50/60Hz) Scale: 199.9A.  
 Input: transfo/5A Format: 96x48mm. Unit: A AC

## SPECIFICATIONS

### INPUT SIGNAL

- Configuration differential asymmetrical
- Frequency margin 40 to 500Hz
- Max allowable voltage  $V_{max}(IN)$
- Max allowable current  $I_{máx}(IN)$
- Input impedance  $Z(IN)$

| Input                       | trafo/5A           | trafo/1A          | shunt/mV           |
|-----------------------------|--------------------|-------------------|--------------------|
| <b>V<sub>max</sub> (IN)</b> | -                  | -                 | 50V<br>(250V/1min) |
| <b>I<sub>max</sub> (IN)</b> | 7.5A<br>(10A/1min) | 1.5A<br>(2A/1min) | -                  |
| <b>Z (IN)</b>               | 0.01ohm            | 0.1ohm            | 1Mohm              |

- Common mode max. voltage (signal/power) :
- AC Voltage 1000V DC or 1500V ACpp
- DC Voltage  $\pm 400V$  DC

### POWER

- Supply voltages
  - AC (50/60Hz) 24, 115, 230V AC
  - DC (isolated) 12, 24V DC
- Maximum isolation 1000V DC or 1500V ACpp
- Consumption 3W nominal

### ACCURACY

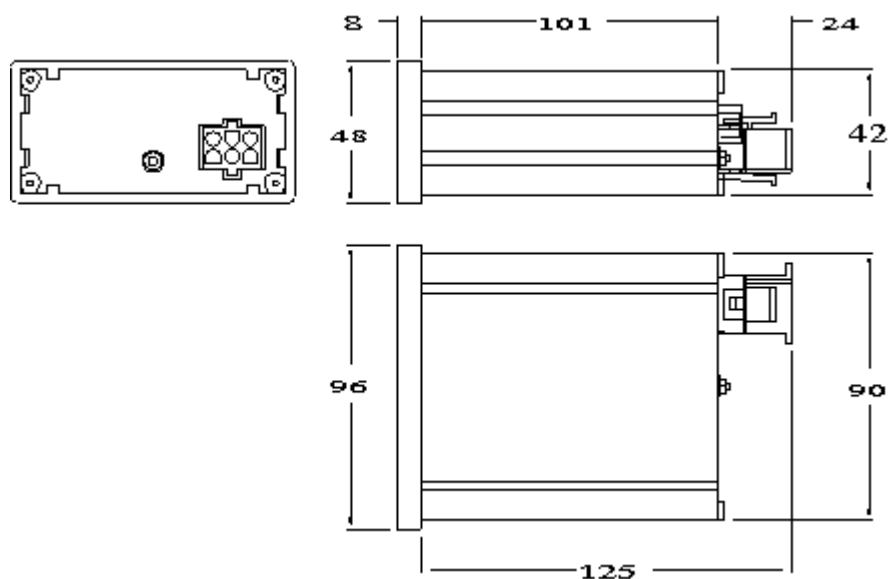
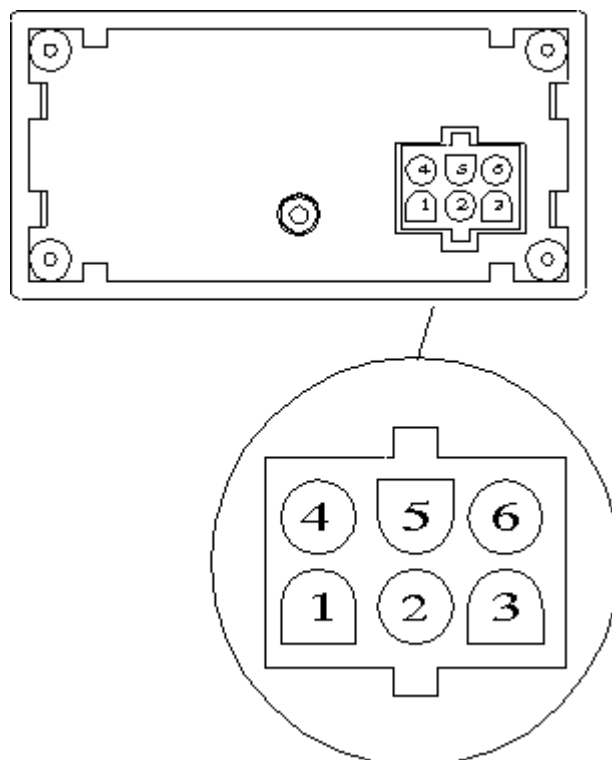
- Resolution 0.05% F.S.
- Max error 0.10% F.S.  $\pm 1$  digit

### DISPLAY

- Type red LED (0.56") 14mm. high
- Overrange 1999. (3 L.S.D. blanked)
- Reading rate 4 per second

**ENVIROMENTAL**

- Operating temperature 0°C to 50°C
- Storage temperature -25°C to +85°C
- Relative humidity 95% max. (non condensing)
- Weight 300g
- Dimensions 96x48x110mm. (s/DIN 43700)
- Case material 94 V-0 UL-rated polycarbonate

**DIMENSIONS (mm)****SIGNAL AND POWER CONNECTION**

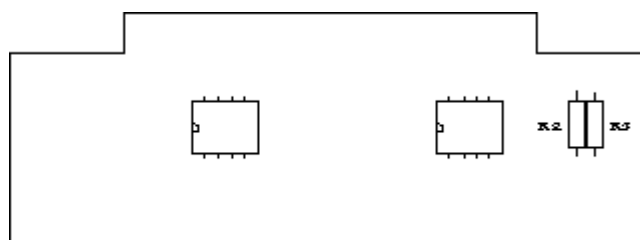
Input signal

PIN 1 Spare  
 PIN 2 AC input signal  
 PIN 3 AC input signal  
 PIN 5 Spare

AC supply power  
 PIN 4 AC HI  
 PIN 6 AC LO (neutral)

DC supply power  
 PIN 4 DC positive (+)  
 PIN 6 DC negative (-)

## SCALING



To change the scale, calculate first the value of the resistor R2 according to the following formula :

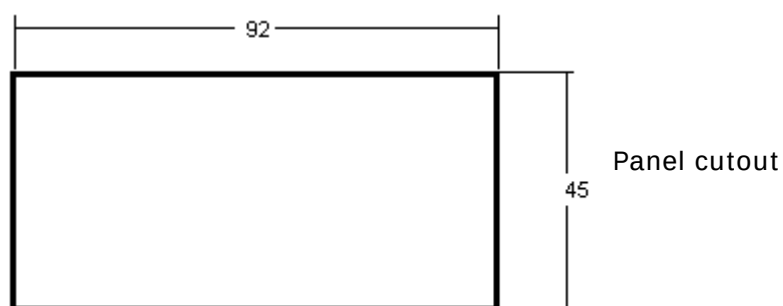
$$R3 = 100\text{kohm}$$

$$R2 (\text{kohm}) = R3 / (N - 1)$$

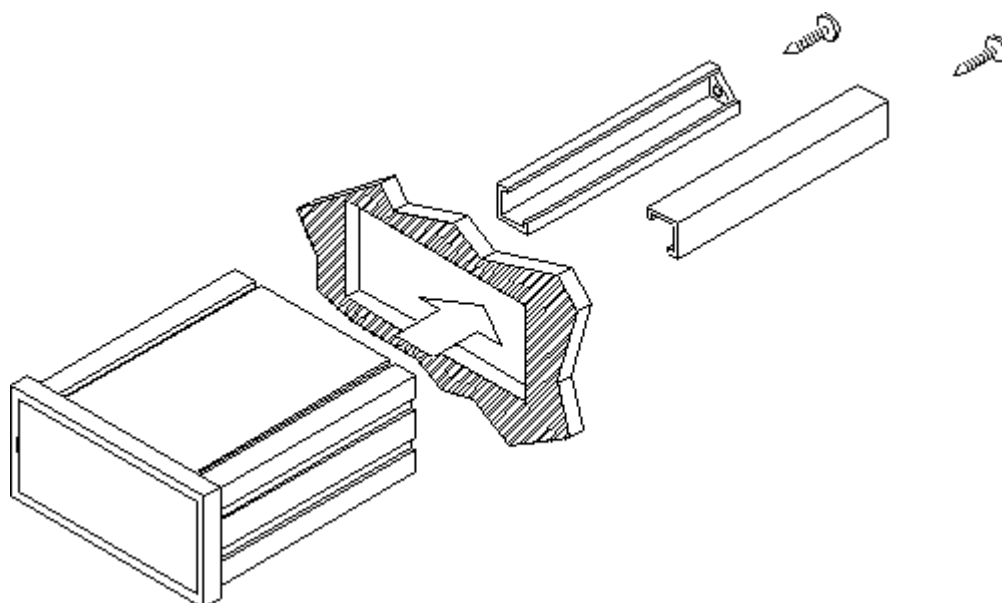
where:

$N = VD/60$  (for input shunt/60mV)  
 $N = VD/50$  (for input transfo/5A)  
 $N = VD/100$  (for transfo/1A, shunt/100mV)  
 VD = display value disregarding decimal point.  
 Example; for the 200A range (199.9) ;  
 VD = 1999

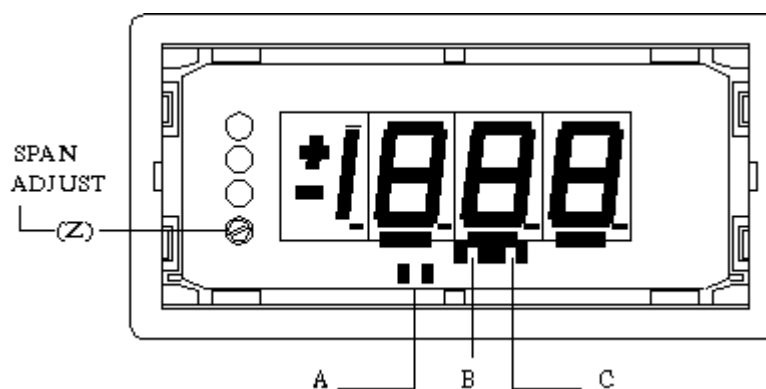
## MOUNTING



Min. thickness: 0.8mm  
 Max. thickness: 10mm



## SETUP AND CALIBRATION

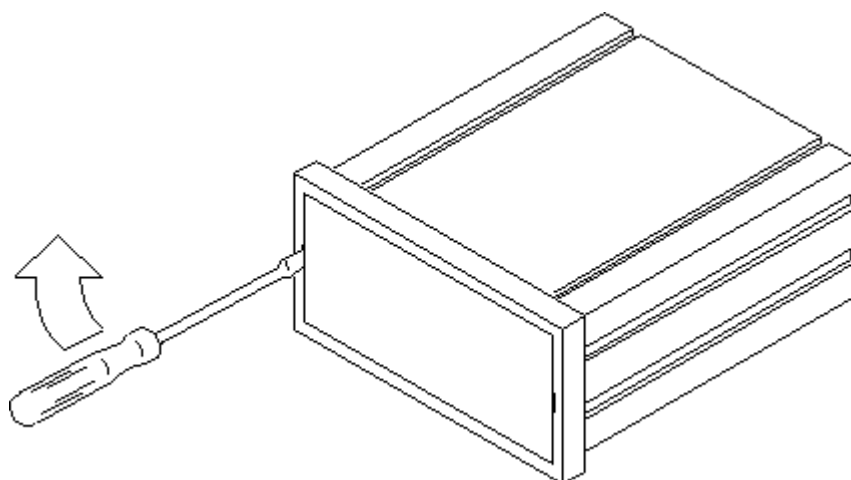


| Jumper | Display |
|--------|---------|
| A      | 1.999   |
| B      | 19.99   |
| C      | 199.9   |
| None   | 1999    |

The **span adjustment** is made by the potentiometer (Z) located to the left, lower side of the display. Turning clockwise increases the display reading. The adjust margin is  $\pm 20\%$  of F.S.

The **zero adjustment** is automatic.

## ACCESS TO CALIBRATION



Remove lens by placing an appropriate sized screwdriver in the slot and pushing laterally as it is shown in the figure until the lips disengage. For further configuration unscrew the rear nut to take the circuits out from the front of the case.

To reinstall lens, insert it completely from one side and press from the other until it is fitted.

**Warranty:**

Press the icon to see it.



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