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DESCRIPTION

Model 828S panel ammeters are instruments that allow direct connection to an external shunt for readout and control constant currents up to 2000A. Configuring the input and scaling the display for a specific shunt is available by opening the case and changing resistor as shown next page.

Available options include analog or digital outputs and setpoint control which is programmable by either hidden or visible presets.

One selector provides adjustable time delay or hysteresis to limit relay action.

Fully configured at the factory, the following items remain accessible of reconfiguration:

- The input option (input sensitivity, signal amplitude, gain).
- Preset values and alarm operating modes. Time delay (0 to 15 seconds) or hysteresis levels (0 to 10 counts of L.S.D.).
- The output option for the type of signal and its range.
- Zero, span adjustments and decimal point location.

SELECTION GUIDE

BCD (OE)

828	S	Z	Y	C	X	
						Silkscreen unit
PRESET / RELAY						SCALE
Sin preset	0				1	20A (19.99)
1 visible preset	1				2	50A (50.0)
2 visible preset	2				3	100A (100.0)
1 hidden preset	5				4	200A (199.9)
2 hidden presets	6				5	500A (500)
					6	1000A (1000)
					7	2000A (2000)

INPUT					9	Upon request
Shunt/60mV		5				
Shunt/100mV		6				
Upon request		9				OUTPUT
				0		None
				1		RS 232C
SUPPLY POWER				2		
115V 50/60Hz			1	3		0-10V/0-1V
230V 50/60Hz			2	4		0-20mA/4-20mA
12V DC isolated			4	5		RS 232/20mA
24V 50/60Hz			7	6		BCD (OC)
24V DC isolated			8	8		1mV/count

ORDERING EXAMPLE

8282 5244 E11: DC ammeter for external shunt
 Supply power: 230V AC (50/60Hz)
 Input: shunt/60mV. Scale: 200A
 Output: 4-20mA. Unit: A DC

SPECIFICATIONS

INPUT SIGNAL

- Configuration differential asymmetrical
- Max allowable voltage $\pm 5V$ DC
- Input impedance 1Mohm
- Input sensitivity 60mV or 100mV (other values on request)
- 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 5W nominal

ACCURACY

- Resolution 0.05% F.S.
- Maximum error 0.10% F.S. ± 1 digit

DISPLAY

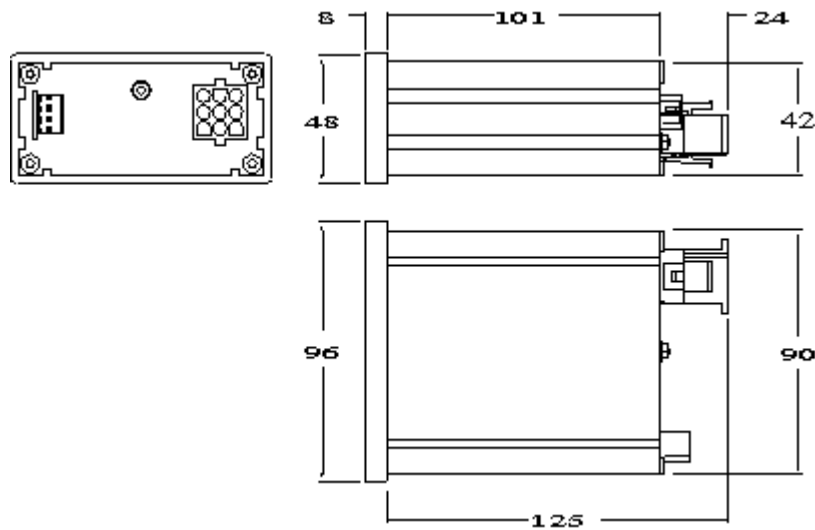
- Type red LED (0.56") 14 mm. high
- Polarity automatic ($\pm$) sign
- Overrange 1999. (3 L.S.D. blanked)

- Reading rate 4 per second

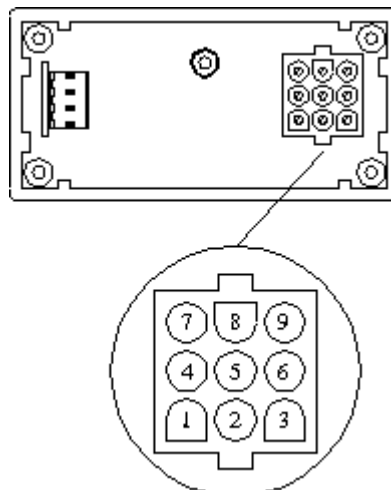
ENVIROMENTALS

- Operating temperature 0° to 50°C
- Storage temperature -25° to +85°C
- Relative humidity max. 95% (non condensing)
- Weight 380g
- Dimensions 96x48x110mm. (s/DIN 43700)
- Case material 94 V-0 UL-rated polycarbonate

DIMENSIONS (mm)



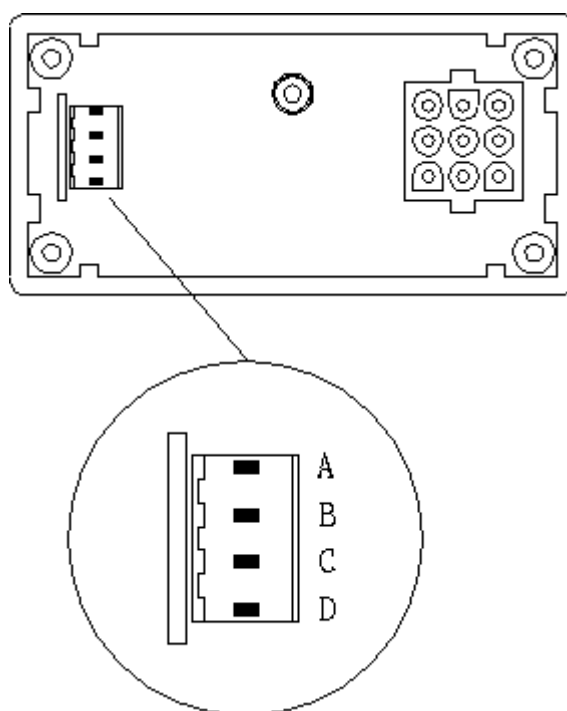
POWER CONNECTION



AC POWER	
PIN 7	Red AC (HI)
PIN 9	Red AC (NEUTRAL)

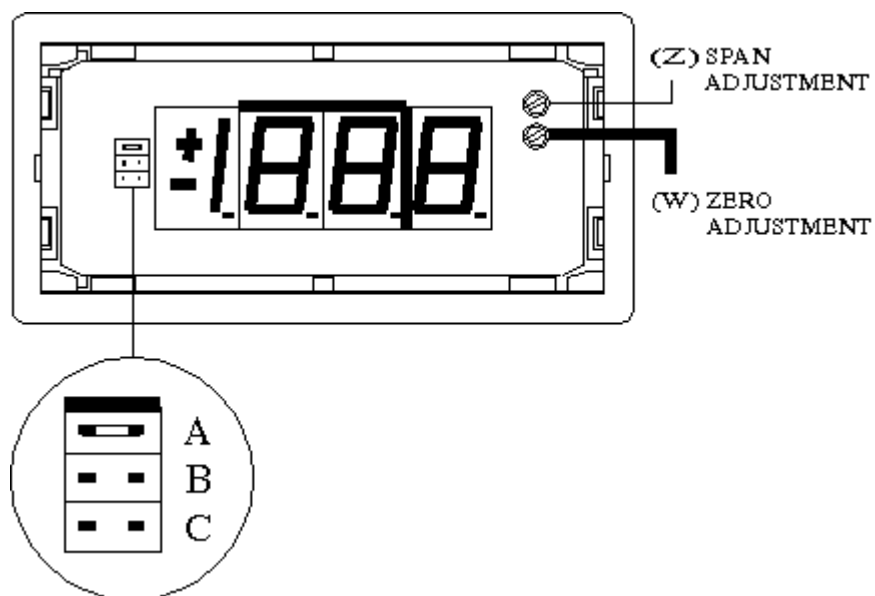
DC POWER	
PIN 7	Positive DC (+)
PIN 9	Negative DC (-)

SIGNAL CONNECTION



SIGNAL CONNECTION	
PIN A	Input signal(-)
PIN B	Spare
PIN C	Spare
PIN D	Input signal(+)

SETUP AND CALIBRATION

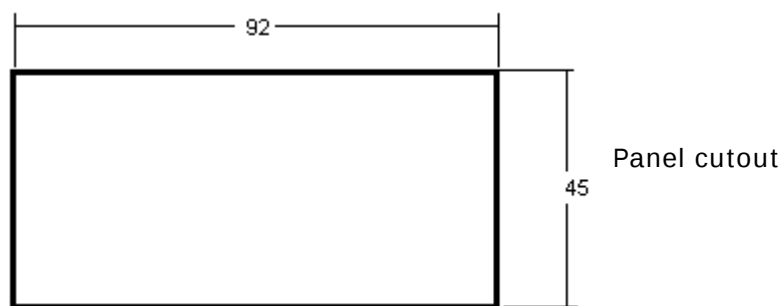


Jumper	Display
A	1.999
B	19.99
C	199.9
None	1999

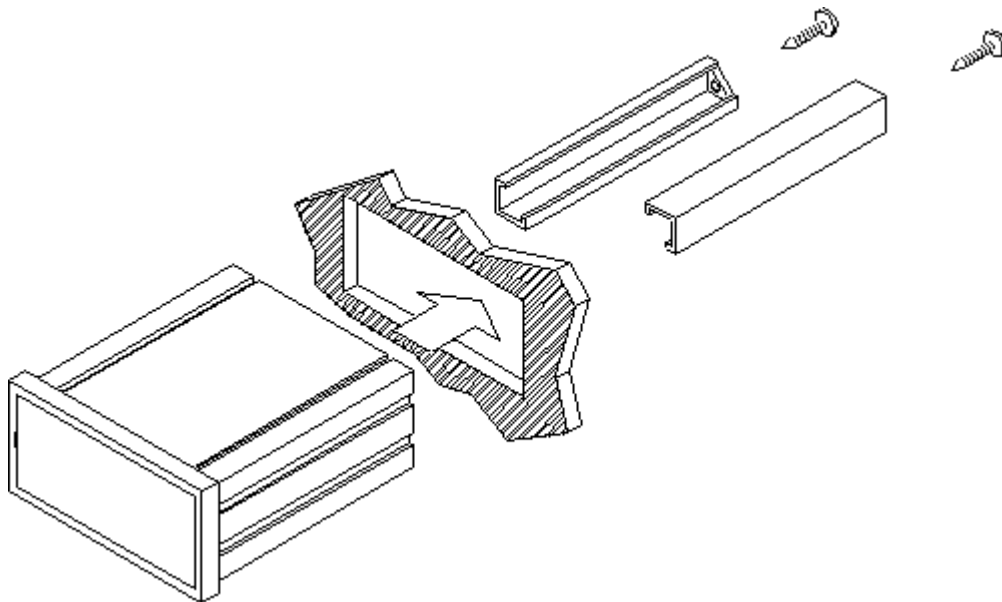
The zero and span adjustment is made via the potentiometers (W) and (Z) respectively, located to the upper, right side of the display. Turning clockwise increases the display readout.

The zero adjustment margin is ± 3 counts.
The span adjustment margin is $\pm 20\%$ of F.S.

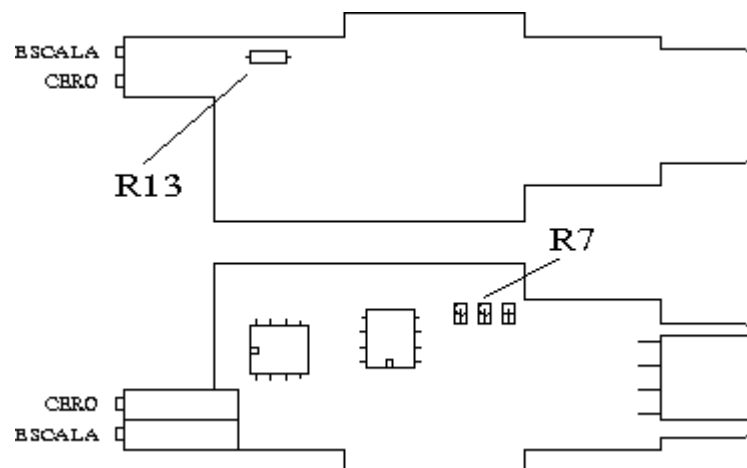
MOUNTING



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



SCALING



Input configuration Value of R7 for standard inputs : Shunt/60mV --- $R7 = 2800 \text{ ohm}$ Shunt/100mV -- $R7 = 4750 \text{ ohm}$ For non-standard input sensitivities, determine the value of R7 by the following formula : **$R7 \text{ (ohm)} = (100000 * mV) / (2200 - mV)$**

Scale configuration Calculate the value of R13 by the formula: **$R13 \text{ (ohm)} = (115000 / VD) - 660$** where VD is the display value disregarding the decimal point. Example ; for the 200A range (199.9), VD = 1999.

EXAMPLE OF CONFIGURATION It is required to connect a shunt rated 80mV for a display span of 50A (shunt ratio: 50A/80mV) $R7 \text{ (ohm)} = (100000 * 80) / (2200 - 80) = 3k7$ For 50A, the display value is 50.0 and VD = 500 $R13$

= $(1155000 / 500) - 660 = 1650$ ohm Plug in the jumper C to locate the decimal point.

Warranty:

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