

MODEL 508

± 3½ DIGITS DIGITAL PANEL METER
SINGLE I.C. LOW COST LCD INDUSTRIAL GRADE



FEATURES

- 150 Hours Burn-in
- 100% Tested (3 Times)
- Automatic Zero
- Low Power Consumption
- MTBF ≥ 40,000 Hrs.
- Internal Attenuators
- Lamp Test
- Auto Polarity
- 50mV Input = 1000 Counts For Current Shunts
- Lowest Component Count
- 11 Ranges
- Blank Board Available

DESCRIPTION

Rugged reliability and dependable performance is offered in this low cost industrial grade DPM. The single IC design gives you all these plus low power and clear viewable display. The 50mV version (Option S) is ideal for industry's standard 50mV shunts; at 50mV input the output is 1000 counts with 100% overrange to 2000 counts for 100mV input. Field failure rate below 0.3%.

CAUTION

IMC's DPMs are designed to give you years of service if you follow certain rules common to all DPMs, some of them are:

COMMON MODE VOLTAGE

Is the voltage range between signal-in and power ground, this is not to exceed ±2V PEAK if used in "differential" mode.

ISOLATION VOLTAGE

This is accomplished by using an isolated power supply (such as our 81-3110) to isolated signal inputs up to 1200V RMS from other circuitry.

SPECIFICATIONS @ 25°C

Input Signal Type	Bipolar, Single Ended Differential
Input Bias Current	5 Pico Amps
Input Impedance	1000 Megohms
Conversion Type	Dual Ramp
Common Mode Voltage (CMV)	2 Volts
Display Type	35" Black Segments L.C.D.
Conversion Speed	4 Samples/Second
Drift versus Temperature	±.005%/°C
Warm-up Time	Essentially None
Accuracy and Linearity	±0.05% of F.S. ± digit
Operating Voltage	5, 7-28Vdc, 115/230Vac ±10%
Power Consumption	10mA @ 5Vdc
Output Voltage Available @ 5V Input	-5Vdc ±10% @ 5mA
Operating/Storage Temperature	0 to 50°C/-25 to +80°C
Decimal Points	Externally Selectable

ORDERING INFORMATION

MODEL 508 X X X

Input Range	Zin
0 ... 200mV	1000M
1 ... 2V	1000M
2 ... 20V	10M
3 ... 200V	10M
4 ... 500V	10M
5 ... 2V Ratiometric	1000M
6 ... 200µA	1K
7 ... 2mA	100 ohms
8 ... 20mA	10 ohms
9 ... 200mA	1 ohm
S ... 50mV	1000M

Power
0 ... 5Vdc Req'd
1 ... 115/230Vac (uses
2 ... 7-28 Vdc

Option
0 ... No Option
1 ... Blank Board

Connector(s) Included.

TERMINAL DESCRIPTION

All on "A" side (bottom) of connector.

No. Function	Notes
1. +5Vdc ±5% IN	18mA nominal max 100mV ripple
2. Reference Low(-)	Normally connected to pin 7
5. Lamp Test	Normally connected to pin 10, connect to pin 1 for testing of all segments on display.
6. Reference High(+)	Normally not connected, wiper of F.S. potentiometer, used for ratiometric operation, when ordered.
7. Signal Common	Normally connected to pin 2. Do not connect it to either +5V or digital ground.
8. Signal in Low(-)	Can have a maximum of ±2V with reference to digital ground pin 10. Normally connected to pin 10 for single ended mode.
9. Signal in High(+)	Signal to be measured is applied to pins 8 & 9, 9 being more positive than 8 for positive reading.
10. Digital Ground	Current return for power signal.
11. +8 to 12V IN	Input to voltage regulator for specific models.
12. +5V OUT	Regulator output for specific models (50mA max.)
13. Battery Return	Negative Battery connection for LDC models with this option.
15.-18. Decimal Point	All connected to Ground except desired one to +5V.

For typical connections see page 33