

LCD DIGITAL PANEL METERS

Large, low-cost 3 1/2 Digit LCD Display



No Backlight
Window/Surface Mount (Actual size)



Red Negative
Window Mount (Actual size)

Features:

- Low-cost, high-performance replacement for many OEM DPMs
- Mounting choices:
 - Window mount for custom OEM
 - Surface mount with minimum space behind the panel
- Low power: choice of 180µA (9V, ±5V) or 2.5mA (+5V)
- Space-saving design: only 1" (25 mm) deep
- Occupies less than 2.5 X 1.1 inches of front panel space
- 3 1/2 digits with high-contrast LCD Display

Specifications:

Display:	
Digits:	3 1/2 digits (±1999 counts)
Type:	0.5" (12mm) high-contrast reflective LCD
Polarity:	Automatic, "-" displayed
Decimal Points:	3 position, user selectable
Overload:	Three lower order digits blank for inputs >1999 & <-1999
Hold:	Available OEM option, contact factory
Inputs:	
Ranges:	±200.0mV, ±2.000V, ±20.00V DC
Configuration:	Bipolar & Differential
Protection:	±350V DC, (±100V DC on 200mV range)
Impedance:	>10 Megohm, (>1 Megohm on 20V range)
Performance:	
Accuracy:	±(0.1% + 1 count) typical ±(0.1% + 2 counts) maximum
Conversion Rate:	2.5 per second
Normal Mode Rejection:	>30 db @ 60 Hz
Common Mode Range:	±1V DC
Common Mode Rej.:	>86 dB
Zero Adjustment:	Automatic
Warmup:	10 minutes typical
Temperature Coeff.:	± 100 ppm per °C typical
Environment:	
Operating Range:	0 to 50 °C
Storage Range:	-20 to 70 °C
Power Supply:	
5V powered DPM:	+5V DC (±5%) at 2.5 mA
9V(±5V) powered:	+7.2 to +12 V at 180 uA
Mounting:	
	Surface or Window Mount
Connection:	
	13 pins, 0.025" square on 0.1" centers - pin 3 missing

Ordering Information

MODEL	DESCRIPTION
DK101	3 1/2 digit, 9V power, 200mV Input
DK102	3 1/2 digit, 9V power, 2V Input
DK103	3 1/2 digit, 9V power, 20V Input
DK301	3 1/2 digit, 5V power, 200mV Input
DK302	3 1/2 digit, 5V power, 2V Input
DK303	3 1/2 digit, 5V power, 20V Input
DK311	3 1/2 digit, 9V power, 200mV Input, Pos. GREEN
DK312	3 1/2 digit, 9V power, 2V Input, Pos. GREEN
DK331	3 1/2 digit, 5V power, 200mV Input, Pos. GREEN
DK332	3 1/2 digit, 5V power, 2V Input, Pos. GREEN
DK411	3 1/2 digit, 9V power, 200mV Input, Neg. GREEN
DK412	3 1/2 digit, 9V power, 2V Input, Neg. GREEN
DK431	3 1/2 digit, 5V power, 200mV Input, Neg. GREEN
DK432	3 1/2 digit, 5V power, 2V Input, Neg. GREEN
DK511	3 1/2 digit, 9V power, 200mV Input, Neg. RED
DK512	3 1/2 digit, 9V power, 2V Input, Neg. RED
DK531	3 1/2 digit, 5V power, 200mV Input, Neg. RED
DK532	3 1/2 digit, 5V power, 2V Input, Neg. RED

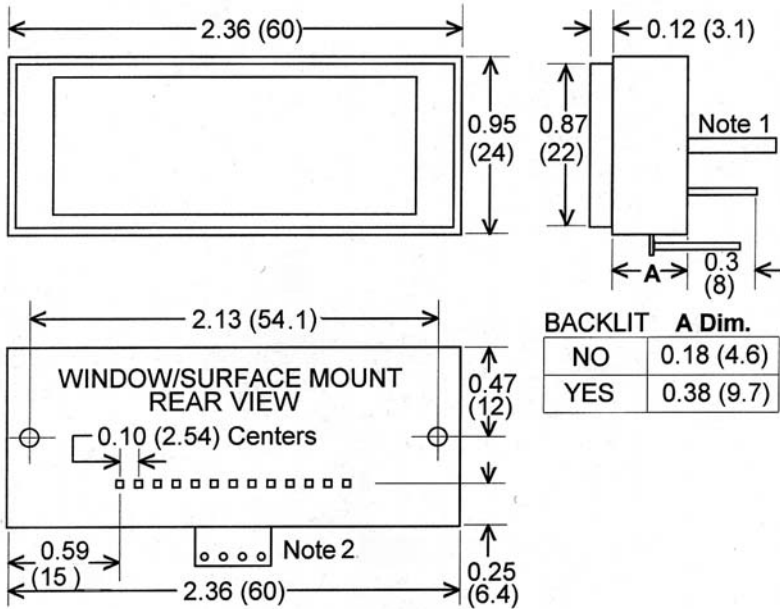
J4C1313 Pin Connector / Wire Assembly
PW2-5Regulated 120V AC to 5V DC Adaptor



C-TON Industries • PO Box 10129 • Bedford, NH, 03110 • USA
 03110-0129

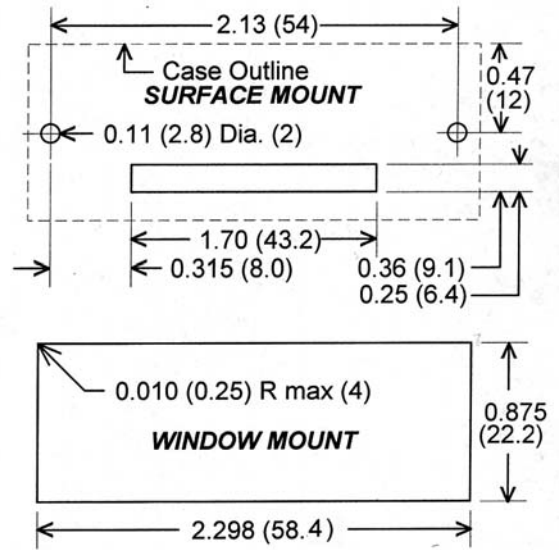
Dimensions

WINDOW/SURFACE MOUNT DIMENSIONS



BACKLIT	A Dim.
NO	0.18 (4.6)
YES	0.38 (9.7)

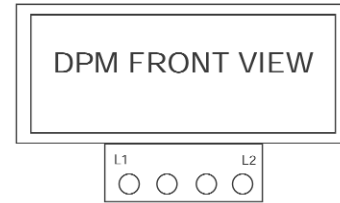
PANEL CUTOUTS



Wiring

CONNECTION DESCRIPTION

PIN#	13-PIN	DESCRIPTION
1	V+	POSITIVE DPM PWR SUPPLY
2	V-	NEG PWR FOR 9V OR +/-5V DPMS
3	NC	NO PIN
4	TST	NEG/GRD FOR +5V DPMS
5	COM	ANALOG COMMON
6	INLO	NEGATIVE INPUT SIGNAL
7	INHI	POSITIVE INPUT SIGNAL
8	RFL	NEGATIVE REFERENCE INPUT
9	RFH	POSITIVE REFERENCE INPUT
10	ROH	INTERNAL REFERENCE OUTPUT
11	D3	1.XXX DECIMAL POINT
12	D2	1X.XX DECIMAL POINT
13	D1	1XX.X DECIMAL POINT



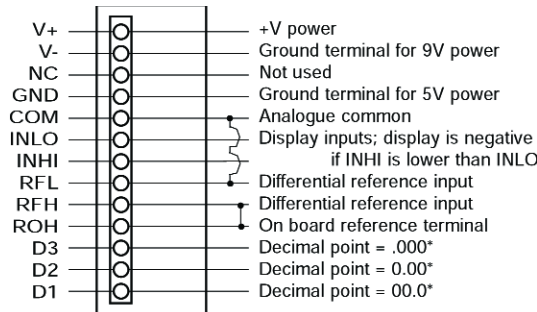
BACKLIGHT POWER CONNECTIONS
(OPTIONAL) Solder on front tab.

BACKLIGHT COLOR	POSITIVE (+)	NEGATIVE (-)
GREEN	L1	L2
RED	L2	L1

NOTES:

1. Check DPM P/N for correct voltage.
2. The backlight power is separate from the DPM power. To reduce noise, the returns of the supplies should be connected together.

WIRING DIAGRAM



The common-mode voltage between inlo and power supply must be less than ±2Vdc.

*Connect to V+ to activate.

- For +5V operation connect GND to INLO
- For 9V operation connect COMMON & RFL to INLO