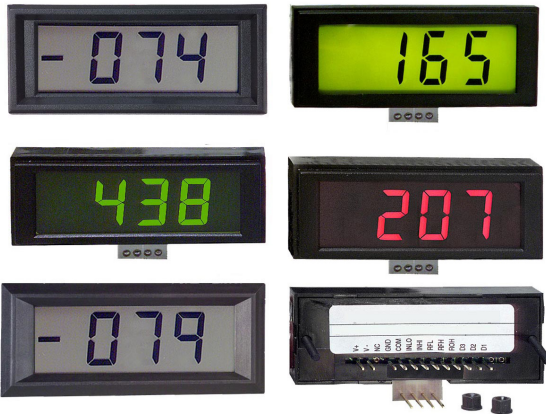


# LCD Digital Panel Meters

Low Cost 3½ Digit LCD Display

## FEATURES

- ▶ Low-cost, high-performance replacement for many OEM DPMs
- ▶ Optional RED or GREEN backlighting
- ▶ Window or surface, bezel or snap-in bezel mount
- ▶ 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
- ▶ 3½ digits with high-contrast LCD
- ▶ Optional loop powered 4-20mA process inputs available (LPI-J1)



## SPECIFICATIONS

### DISPLAY

Digits: 3 ½ digits (±1999 counts)  
 Type: 0.5" (12mm) high-contrast reflective LCD  
 Backlighting: Optional Red Negative (red numbers/black background)  
 Optional Green Negative (green numbers/black background)  
 Optional Green Positive (black numbers/green background)  
 automatic, "-" displayed  
 Decimal Points: 3 position, user-selectable  
 Overrange: three lower order digits blank for inputs >1999 & < -1999

### INPUTS

Ranges: ±200.0 mV, ±2.000 V, ±20.00 VDC  
 Configuration: bipolar & differential  
 Protection: ±350 VDC, (±100 VDC on 200 mV range)  
 Impedance: >10 MΩ, (>1 MΩ on 20 V 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: ±1 VDC  
 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: -10 to 70 °C

### POWER SUPPLY

5V powered: +5 VDC (±5%) at 2.5 mA  
 9V(±5V) powered: +7.2 to +12 V at 180 µA  
 Optional Backlight: +5 VDC at 100 mA typical

### MOUNTING

5W: surface or window mount  
 5B: bezel mount with retaining clips  
 5S: snap-in bezel mount eliminates need for mounting hardware

### CONNECTION

13 pins, 0.025" square on 0.1" centers - pin 3 missing

## ORDERING INFO

### 5S SERIES

PART NUMBER	BACKLIGHT COLOR	METER INPUT	METER POWER	BACKLIGHT POWER
5S0040N	NO BACKLIGHT	200mV	+5VDC	NONE
5S0050N	NO BACKLIGHT	200mV	±5VDC	NONE
5S0090N	NO BACKLIGHT	200mV	9V	NONE
5S0140N	NO BACKLIGHT	2V	+5VDC	NONE
5S0150N	NO BACKLIGHT	2V	±5VDC	NONE
5S0190N	NO BACKLIGHT	2V	9V	NONE
5S0240N	NO BACKLIGHT	20V	+5VDC	NONE
5S0250N	NO BACKLIGHT	20V	±5VDC	NONE

### 5W SERIES

PART NUMBER	BACKLIGHT COLOR	METER INPUT	METER POWER	BACKLIGHT POWER
5W0040	NO BACKLIGHT	200mV	+5VDC	NONE
5W0050	NO BACKLIGHT	200mV	±5VDC	NONE
5W0090	NO BACKLIGHT	200mV	9V	NONE
5W0140	NO BACKLIGHT	2V	+5VDC	NONE
5W0150	NO BACKLIGHT	2V	±5VDC	NONE
5W0190	NO BACKLIGHT	2V	9V	NONE
5W0240	NO BACKLIGHT	20V	+5VDC	NONE
5W0250	NO BACKLIGHT	20V	±5VDC	NONE
5W0290	NO BACKLIGHT	20V	9V	NONE
5W2041	POS GREEN	200mV	+5VDC	5VDC
5W2141	POS GREEN	2V	+5VDC	5VDC
5W4041	NEG GREEN	200mV	+5VDC	5VDC
5W4141	NEG GREEN	2V	+5VDC	5VDC
5W6041	NEG RED	200mV	+5VDC	5VDC
5W6141	NEG RED	2V	+5VDC	5VDC

### 5B SERIES

PART NUMBER	BACKLIGHT COLOR	METER INPUT	METER POWER	BACKLIGHT POWER
5B0040	NO BACKLIGHT	200mV	+5VDC	NONE
5B0050	NO BACKLIGHT	200mV	±5VDC	NONE
5B0090	NO BACKLIGHT	200mV	9V	NONE
5B0140	NO BACKLIGHT	2V	+5VDC	NONE
5B0150	NO BACKLIGHT	2V	±5VDC	NONE
5B0190	NO BACKLIGHT	2V	9V	NONE
5B0240	NO BACKLIGHT	20V	+5VDC	NONE
5B0250	NO BACKLIGHT	20V	±5VDC	NONE
5B0290	NO BACKLIGHT	20V	9V	NONE
5B2041	POS GREEN	200mV	+5VDC	5VDC
5B2141	POS GREEN	2V	+5VDC	5VDC
5B4041	NEG GREEN	200mV	+5VDC	5VDC
5B4141	NEG GREEN	2V	+5VDC	5VDC
5B6041	NEG RED	200mV	+5VDC	5VDC
5B6141	NEG RED	2V	+5VDC	5VDC

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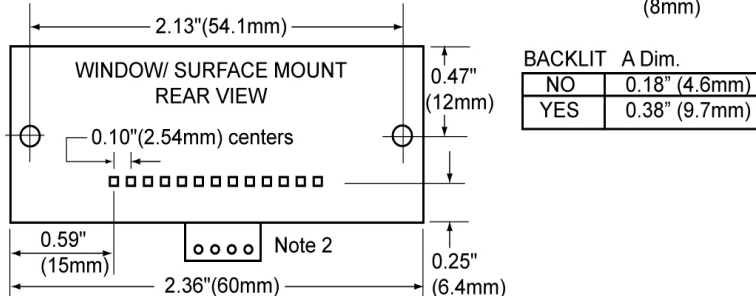
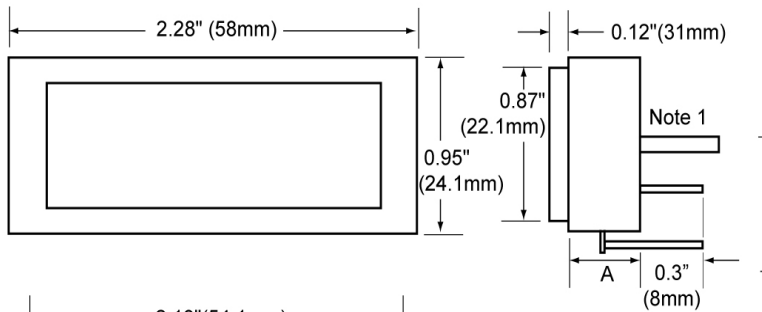
# Specifications Installation and Operating Instructions

# LCD Digital Panel Meters

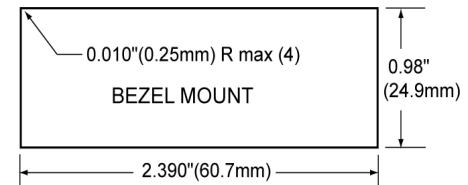
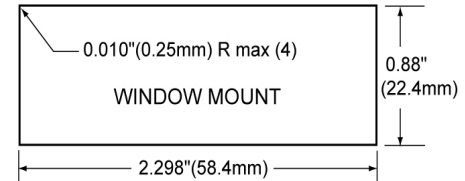
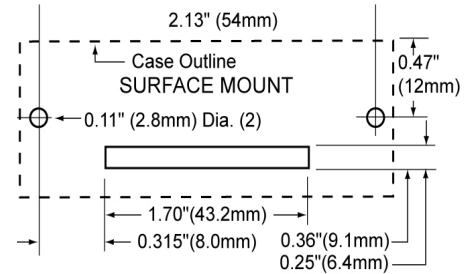
Low Cost 3½ Digit LCD Display



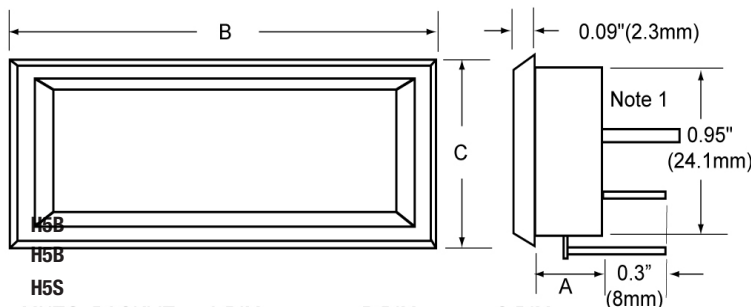
## WINDOW/SURFACE MOUNT DIMENSIONS



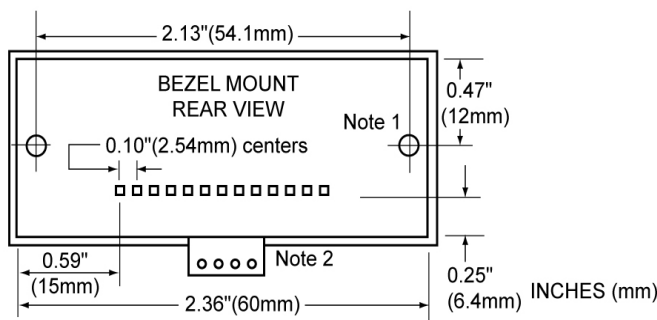
## PANEL CUTOUTS



## BEZEL MOUNT DIMENSIONS



MNTG	BACKLIT	A DIM.	B DIM.	C DIM.
5B	NO	0.33" (8.4mm)	2.45" (62.2mm)	1.03" (26.2mm)
5B	YES	0.52" (13.2mm)	2.45" (62.2mm)	1.03" (26.2mm)
5S	NO	0.45" (11.4mm)	2.51" (63.8mm)	1.10" (28mm)



### NOTES:

- Mounting studs (2) are #2-56, length 0.5 (13) min. Snap in Bezel Mount does not have mounting studs.
- Backlight Option is on 0.50" (12.4mm) wide X 0.22" (5.4mm) high tab.

## WIRING CONNECTIONS

### PIN # PIN NAME DESCRIPTION

1	V+	POSITIVE SUPPLY CONNECTION
2	V-	NEGATIVE SUPPLY CONNECTION
3	NC	NO PIN
4	GND	NEG PWR FOR +5V DPMS
5	COM	ANALOG COMMON
6	INLO	DISPLAY INPUTS: DISPLAY IS NEGATIVE
7	INH1	IF INHI IS LOWER THAN INLO
8	RFL (CLK)	NEGATIVE REFERENCE INPUT
9	RFH	POSITIVE REFERENCE INPUT
10	RDH	INTERNAL REFERENCE OUTPUT
11	D3	DECIMAL POINT = 1XX.X*
12	D2	DECIMAL POINT = 1X.XX*
13	D1	DECIMAL POINT = 1.XXX*

\*CONNECT TO PIN 1

## ORDERING INFO CONTINUED

### ACCESSORIES

J1C4	4 Pin Connector / Wire Assembly
J1C13	13 Pin Connector / Wire Assembly
PW2-5	Regulated 120V AC to 5V DC Power Supply
PW2-12	Regulated 120V AC to 12V DC Power Supply
CVC	Calibrator