



▲ Optional Blue & Green LEDs, Custom Scales and Descriptors

FB-B50

**50 segments 4-20mA
Loop Powered Bargraph**

**in a 3/32 DIN (1.42"x 5.69") case
fits 6" Edgewise Pointer Meter Cutout**

General Features

- Elegant 4 to 20mA loop powered bargraph.
- Low loop drop of only 4V (red) or 4.7V (blue).
- Needs no external power supply.
- Easy to calibrate with ZERO and SPAN potentiometers.
- Customized faceplates available
- Choice of red or optional green or blue LEDs
- Can be stacked for multiple meter mounting.

Specifications

Full Scale Ranges: 4 to 20mA to read 0 to full scale

Input Impedance:..... Approximately 200 Ω . Loop drop 4V for Red LEDs and 4.7V for Blue LEDs at 4 to 20mA input

Accuracy: Exceeds precision of display

Over-range Indication:..... All bars flash

Temperature Coefficient:..... 200ppm/ $^{\circ}$ C (typical)

Warm Up Time: Instantly reads to specified accuracy

Conversion Rate:..... Display updates 9 times /sec based on average of measurements taken 54 times per second.

Display:..... Fifty 0.20" X 0.06" (5.08mm X 1.52mm) bar segments

Power Supply: Powered from 4 to 20mA signal

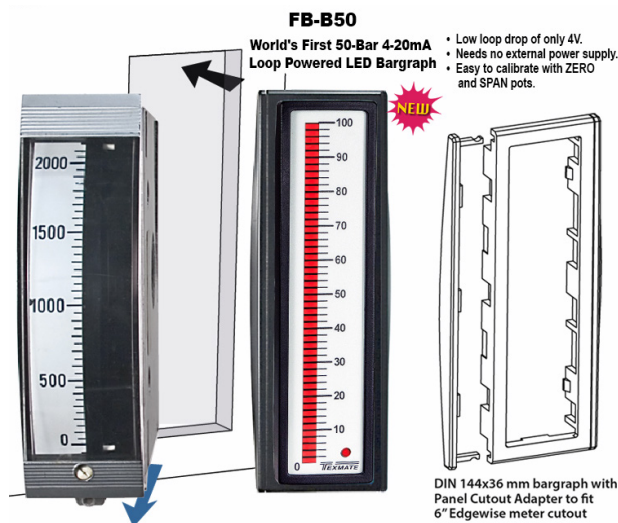
Operating Temperature: -10 $^{\circ}$ C to 60 $^{\circ}$ C

Storage Temperature:..... -20 $^{\circ}$ C to +70 $^{\circ}$ C

Relative Humidity: 95% (non condensing)

Case Dimensions: 3/32 DIN, Bezel: 36x144mm (1.42"x5.69")
Depth behind bezel: (4.64") 117.5 mm
Plus 10 mm (0.39") for Right-angled connector,

Weight: 226.8 gms (8 oz)
408.2 gms (14.4 oz) when packed



Other Loop Powered Meters

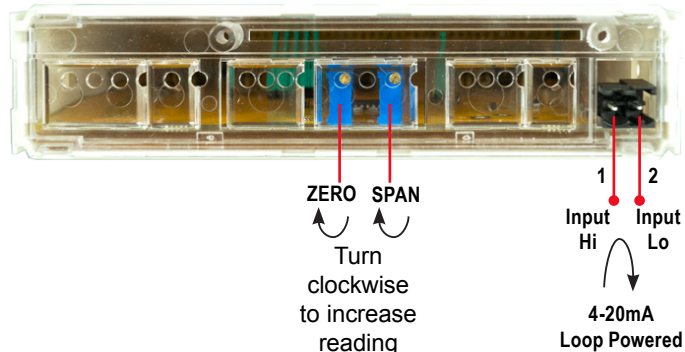
SB-B31.....31 segment Loop Powered Bargraph Meter
MINI-CL4-20.....37x15mm (1.46"x0.59") Case, Loop Powered

SPM-083CL48x21mm (1.89"x0.83") Case, Loop Powered
CM-35XTL0.48" (12mm) LCD 3.5 digit, 70x30mm (2.76"x1.17") case, Loop Powered

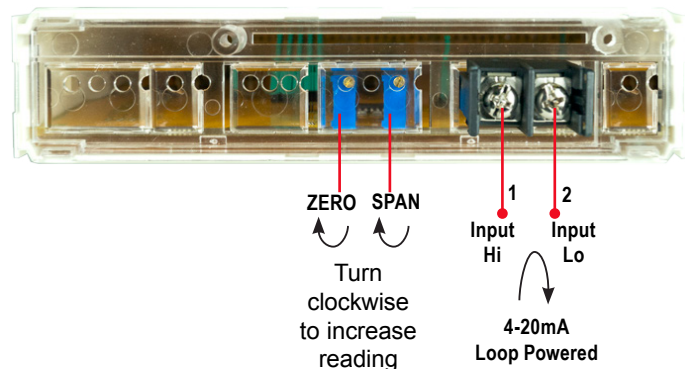
Connector Pinouts

REAR VIEW OF BARGRAPH

Standard Screw Terminal Connector



Optional Terminal Block Connector



Signal Conditioning Components

ZERO

To the Left Front
Turn Clockwise to Increase Reading

ZERO Potentiometer (Pot)

The ZERO pot is to the left of the SPAN pots (as viewed from the back of the meter). Typically it enables the bars to be displayed for $4\text{mA} = 0$.

SPAN

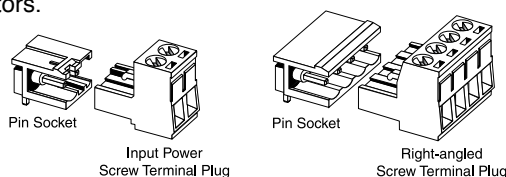
To the Right Front
Turn Clockwise to Increase Reading

SPAN Potentiometer (Pot)

The SPAN pot is on the left side of the signal input. Typical adjustment is 100% of the input signal range of 20mA.

Connectors

This meter uses plug-in type screw terminal connectors for all input and output connections. The power supply connections have a unique plug and socket outline to prevent cross connection. The main board uses standard right-angled connectors.



WARNING: AC and DC input signals and power supply voltages can be hazardous. Do Not connect live wires to screw terminal plugs, and do not insert, remove or handle screw terminal plugs with live wires connected.



Calibration Procedure

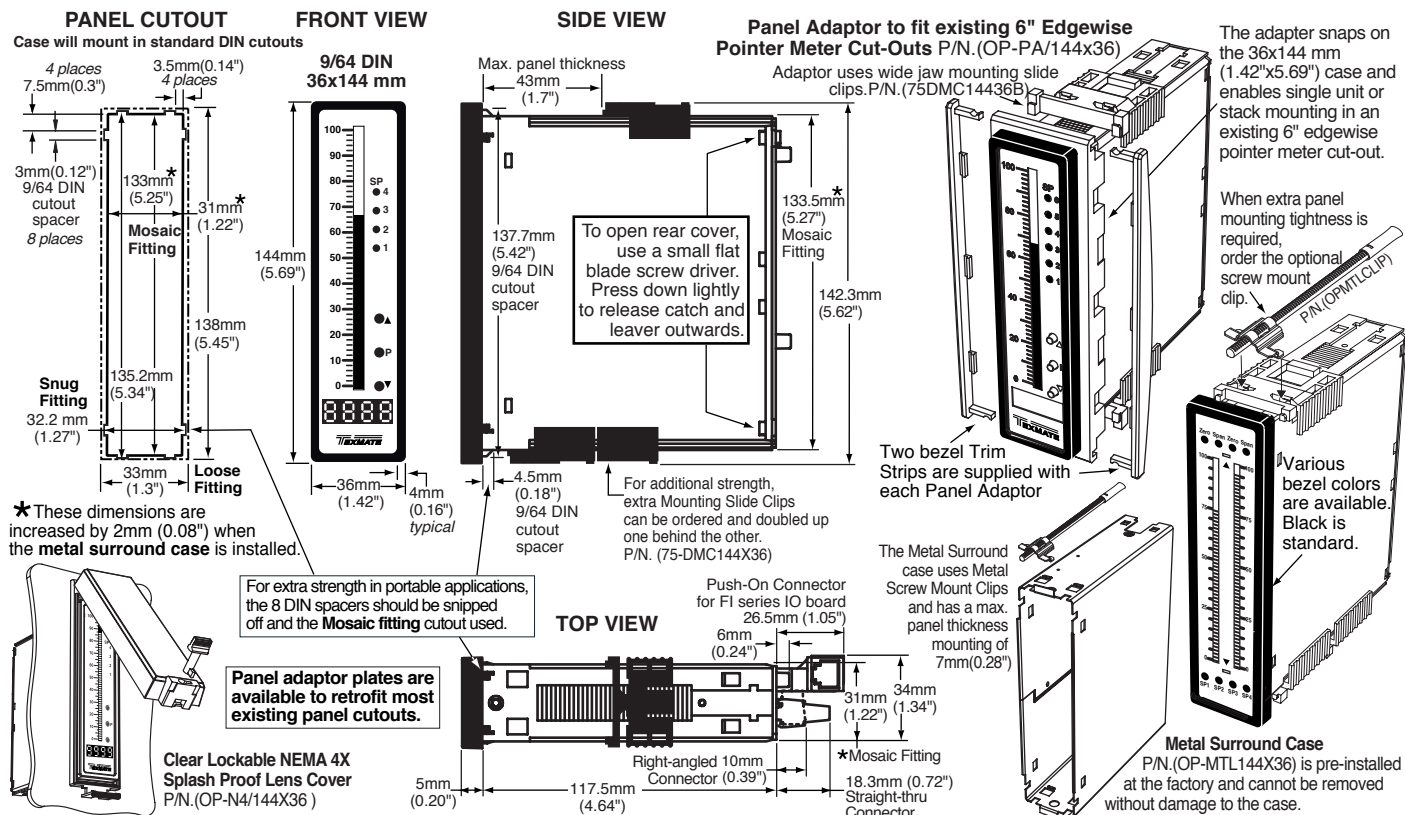
Pin 1 - Current Loop High Input: The 4-20mA current loop is applied to Pin (1) and returned from Pin (2). If reverse polarity is applied no damage will occur; However the meter will not operate (this condition should not be maintained for extended periods). The maximum loop drop is 4V for red LEDs and 4.7V for the blue LEDs..

Pin 2 - Current Loop Low Return: The 4-20mA current loop is returned from Pin (2). At 4mA the bargraph has no segment will be on, except the power indicator LED will be on. At 20mA the bargraph has all segments ON. The maximum loop drop is 4V for red LED and 4.7V for the blue LEDs.



CAUTION - ELECTRICAL SHOCK HAZARD All internal parts of the meter may be at the same electrical potential as the input signal and power supply. Do not reposition the signal conditioning components when input voltages are applied. When measuring dangerously high input voltages, extreme care must be taken to insulate the connector pins as well as all metal parts of the meter. A suitable high voltage warning notice should be affixed to those meters where there is any possibility that the meter could be removed from its case, or the internal components accessed, concurrent with the existence of a high voltage input signal.

144x36mm Case Dimensions and Panel Cutouts



Ordering Information

Part Number	Description
►BASIC MODEL NUMBER Includes plug in type screw terminals, standard display and standard power supply unless optional versions are ordered.	
FB-B50	50 segments 4-20mA Loop Powered Bargraph Meter

►DISPLAY

STANDARD Red LED Bar, 0.1" x 50 segment

VG	Green LED bars, 0.1" x 50 segments, Vertical
VB	Blue LED bars, 0.1" x 50 segments, Vertical
HR	Red LED bars, 0.1" x 50 segments, Horizontal
HG	Green LED bars, 0.1" x 50 segments, Horizontal
HB	Blue LED bars, 0.1" x 50 segments, Horizontal

Part Number . Description

►SPECIAL OPTIONS (Specify Inputs & Req. Reading)

TB-02	Two Pin Terminal Block Signal Input Connector
Z-DESCRIPTOR	Produce Custom Meter Descriptor
ART-FS1	Produce and install custom faceplate per meter
ART-NRC-DEC	One time charge for custom faceplate design with an assigned serial number. (per serial number)

►ACCESSORIES

75-DBZ144X36	Black bezel for 144x36mm Case
75-DMC14436B	Side Slide Brackets-Wide opening (2 pc)
75-DMC144X36	Side Slide Brackets-stand. (2 pc) - extra set
93-PLUG2P-DR	Extra Screw Terminal Conn., 2 Pin Plug
DN.CAS144X36	Complete 144x36mm Case with bezel
OP-MTL144X36	Metal Surround Case, includes screw mounting clips
OP-MTLCLIP	Screw Mounting Clips (2 pc) - to screw tighten slide brackets
OP-N4/144X36	144x36mm clear lockable front cover-NEMA 4X, splash proof
OP-PA/144X36	Panel Adaptor for 144x36mm from 6 inch cutout
75-DTP144X36	Panel Cut-Out Trim Plate Set (2 pieces)

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