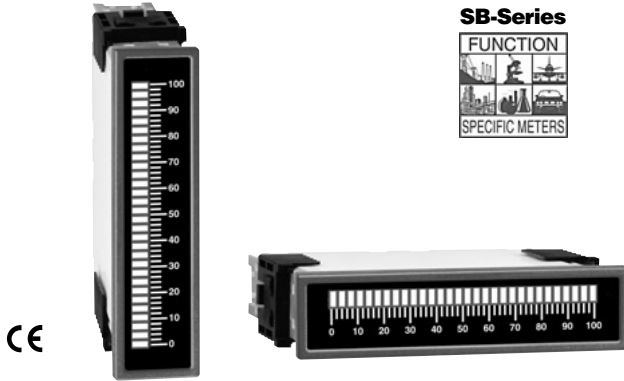




SB-B31

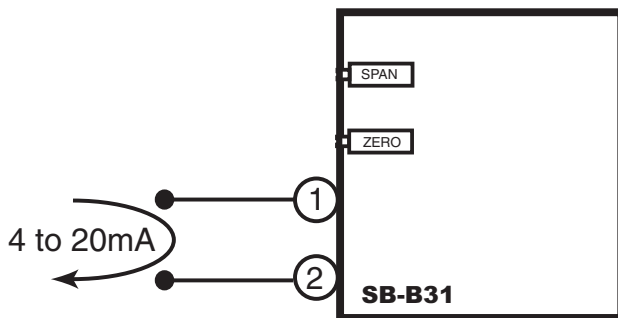
4 to 20mA Loop Powered 31 Segment Bargraph in a 1/16 DIN Case



General Features

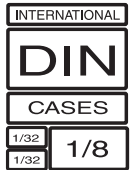
- Elegantly simple 4 to 20mA loop powered bargraph.
- Low loop drop of only 4V.
- Needs no external power supply.
- Choice of red, green or red/green color options.
- Easy to calibrate with ZERO and SPAN potentiometers.
- Customized faceplates available.
- Compact short depth 96 X 24mm case.
- Can be stacked for multiple meter mounting.

Typical Application Connections



Compatibility

The SB-B31 bargraph has a matching DIN case style that is complementary to the Lynx, Leopard and Tiger family of meters. The SB-B31 is the economical solution for displaying 4 to 20mA current loops on a bargraph display.



Specifications

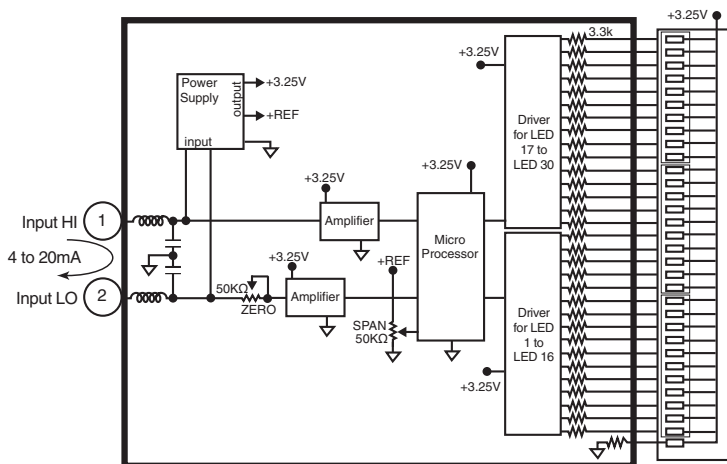
- Input Configuration:**Single ended
- Full Scale Range:**4 to 20mA to read 0 to full scale
- Input Impedance:**Approximately 200Ω
Maximum 4V loop drop at 20mA input
- A/D Converter:**Flash converter
- Accuracy:**1% of full scale
- Temperature Coefficient:**...200ppm/°C (typical)
- Warm Up Time:**.....Instantly reads to specified accuracy
- Conversion Rate:**Instantaneous flash conversion
- Display:**.....Thirty-one 0.20" X 0.06" (5.08mm X 1.52mm) bar segments
- Over-range Indication:**All bars flash
- Power Supply:**.....Powered from 4 to 20mA signal
- Operating Temperature:**...-10°C to 60°C
- Storage Temperature:**.....-20°C to +70°C
- Relative Humidity:**95% (non condensing)
- Case Dimensions:**Bezel: 24X96 mm (0.95" X 3.78")
Depth behind bezel: 56.5 mm (2.23")
Plus 27 mm (1.06") for Push-on connector
or plus 17.5 mm (0.69") for Edge connector
- Weight:**.....90.72 gms (3.2 oz)
136.1 gms (4.8 oz) when packed

Other Signal Powered Meters

- CM-35XT**3.5 digit LCD, Loop Powered, 4-20mA (1.0.0.0.0)
- CM-35XTL**3.5 digit LCD, 1 Volt Drop, Loop Powered, 4-20mA (1.0.0.0.0)
- SD-50X**5 Digit 4-20 mA Loop Powered
- SD-50XTOT**Loop Powered Totalizer

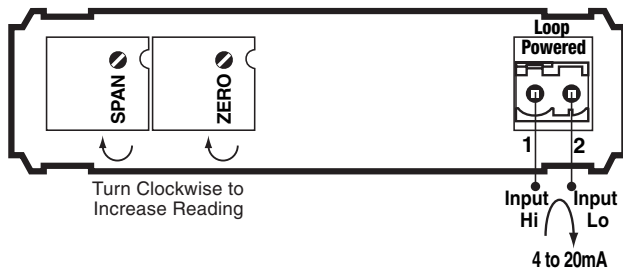
- SD-50XTOTSQ**Loop Powered Totalizer with Square Root Function
- SP-35X**3.5 digit LCD, Signal Powered by DC voltage
- SP-35XMV**3.5 digit LCD DCMV Input, 10-100VDC or 18-36VAC Pwr
- SP-35XRMS**3.5 digit LCD, VAC RMS Signal Pwr, 15.0-199.9VAC/DC

Functional Diagram



Connector Pinouts

REAR VIEW OF CASE AND CONNECTOR

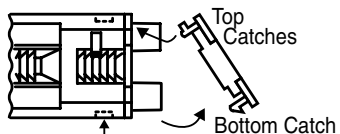


Connectors are supplied by Texmate with the bargraph.

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.

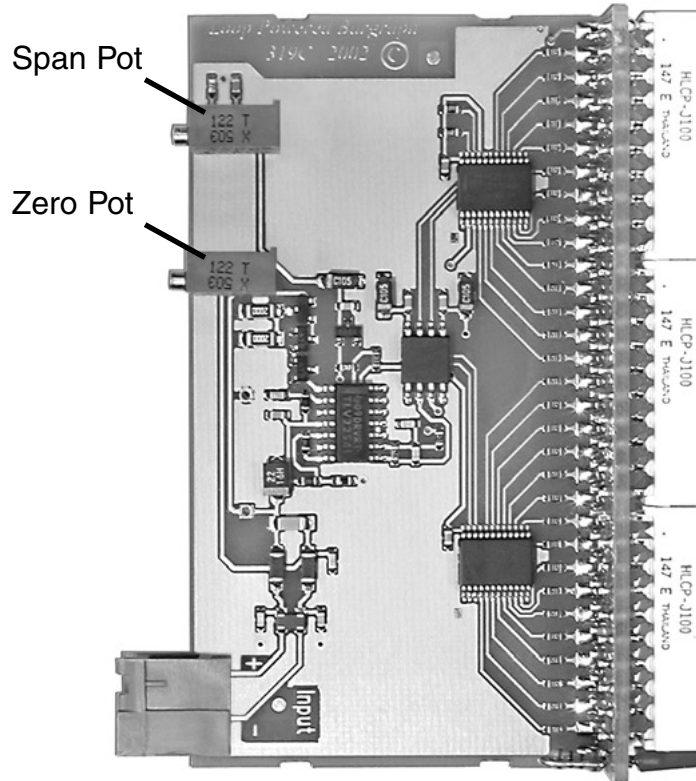
Pin 2 - Current Loop Low Return: The 4-20mA current loop is returned from Pin (2). At 4mA the bargraph has one segment ON. At 20mA the bargraph has all segments ON. The maximum loop drop is 4V.

TO REMOVE REAR COVER



Release Bottom Catch with a small flat blade, and lever outwards.

Component Layout



Signal Conditioning Components

SPAN Potentiometer (Pot)
The 15 turn SPAN Pot is on the left side (as viewed from the back of the meter). Typical adjustment is 100% of the input signal range.
Turn Clockwise to Increase Reading

ZERO Potentiometer (Pot)
The ZERO Pot is to the right side (as viewed from the back of the meter). It enables the Digital Display Span to be offset 50% of the input signal range.
Turn Clockwise to Increase Reading

Calibration Procedure

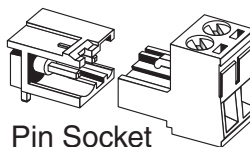
Apply an input of 4mA. Adjust the ZERO pot until the extreme left or bottom LED is ON. Apply 20mA input. Adjust the SPAN pot until all LEDs are ON. The bargraph is now calibrated.

Power Supply

The SB-B31 Bargraph is powered from the 4 to 20mA input signal. NO EXTERNAL POWER SUPPLY IS REQUIRED. The maximum loop drop is 4V.

Connector

Input Power Screw Terminal Plug



Part Number:
93-PLUG2P-DP

Pin Socket

Case Dimensions and Panel Cutouts

PANEL CUTOUT

Case will mount in standard 1/16 DIN cutouts

Panel adaptor plates are available to retrofit most existing panel cutouts.

For additional strength, extra Mounting Slide Clips can be ordered and doubled up one behind the other. P/N:(75-DMT96X24)

When extra panel mounting tightness is required, optional Screw Mounting Clips are included which fit on the Mounting Slide Clips.

Various bezel colors are available. Black is standard.

FRONT VIEW

1/16 DIN (96x24mm)

SIDE VIEW

5.4mm (0.21")
21.85mm (0.86")
56.5mm (2.23")
27mm (1.06")
5mm (0.20")
Push-On Connector P/N:(CN/PUSH/BN)

TO REMOVE REAR COVER

Top Catches
Bottom Catch
Release Bottom Catch with a small flat blade, and lever outwards.

TOP VIEW

25.4mm (3.78") Max. panel thickness
96mm (3.78")
92.8mm (3.6") Widest mountable panel cutout without using adaptors.
97.8mm (3.86")
91mm (3.59")

The 96x24mm case is particularly suitable for mounting in mosaic panels or insulative panels. They can also stack mount, 2 up in existing cut-outs for 1/8 DIN (96x48mm) or 4 up in 1/4 DIN (96x96mm).

Ordering Information

Standard Options for this Model Number

Part Number . . .DescriptionList

► BASIC MODEL NUMBER

SB-B31Red 31 Seg. Bargraph, 4-20mA Loop Powered \$75

► DISPLAY

SB-VERT/RED . .Vertical Red (standard) N/C
 SB-HORZ/RED . .Horizontal Red LED option \$10
 SB-VERT/GRN . .Vertical Green LED option \$10
 SB-HORZ/GRN . .Horizontal Green LED option \$10
 SB-MULTIRed, green or amber LEDs (10 seg. increments) \$10

Special Options and Accessories

Part Number . . .DescriptionList

► ACCESSORIES

75-DMTC96X24 . . Side Slide Brackets, extra set (96x24mm only) \$2
 75-DBBZ96X24 . . Black Bezel for 96x24mm Case, BN and AM series \$2
 DN.CAS96X24 . . Din Case 96 X 24 Short Depth Plus Accessories \$20
 93-PLUG2P-DP . . Extra Screw Terminal Conn., 2 Pin Power Plug \$2
 OP-MTLCLIP Screw Mounting Clips (2 pc) to screw tighten slide brackets \$6
 75-DTP96X24 Black Metal Trim Plate (96x24mm Case) 1 Meter \$6
 75-DTP2X9624 Black Metal Trim Plate (96x24mm Case) 2 Meters \$6
 75-DTP3X9624 Black Metal Trim Plate (96x24mm Case) 3 Meters \$6

Prices subject to change without notice.

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