



BN-35

5VDC Compact Meter
3 1/2 Digit with 0.56" LED
in a 1/16 DIN Case



5VDC Powered, DC Volts Selectable from 200mV / 2V / 20V.

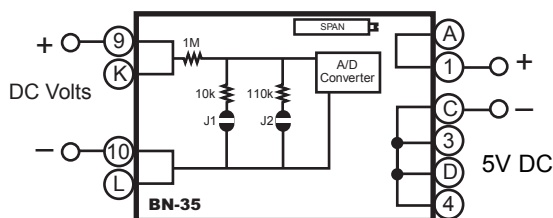
General Features

The BN-35 is a low cost pin f or pin functional replacement f or the Newport model 215, with many more features. It is a 3 1/2 digit voltmeter in a compact 96x24mm case with non-isolated 5VDC power. Another version of the BN-35, the BN-35I with internally isolated 9V, 12V, 15V or 24VDC power, is also available. The case has a short depth of just 2.83 inches (72mm) behind the panel.

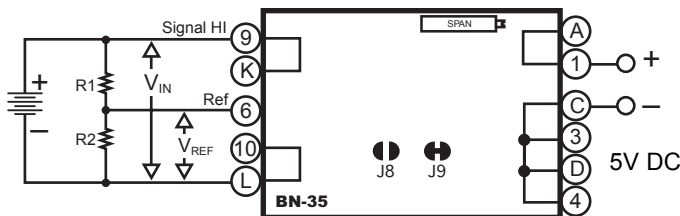
The meter has four user-selectable ranges of 200mV, 2V, 20V and 200V. The BN-35 may also be calibrated at the factory for these ranges or specially scaled for other ranges (see Ordering Information below). Provision to offset the zero is also available as an option for 4-20mA signals.

Typical Application Connections

DC Volts Single-ended measurement



Ratiometric Voltmeter with external reference.



For using the BN-35 as a ratiometric voltmeter with an external reference, open J8 and close J9 jumpers.

$$\text{Meter display} = \frac{V_{IN}}{V_{REF}} \times 1000$$

If Signal Low is common to the 5VDC Power Ground, remove resistor R307 and replace it with a jumper (i.e. short the resistor R307).

Compatibility

The BN-Series have a matching DIN case style that is complementary to the Lynx, Leopard and Tiger family of meters. BN-Meters are the OEM's choice for economical switchboard and process indication. For economy, each model is dedicated to a specific application and designed for quick and easy installation.



Specifications

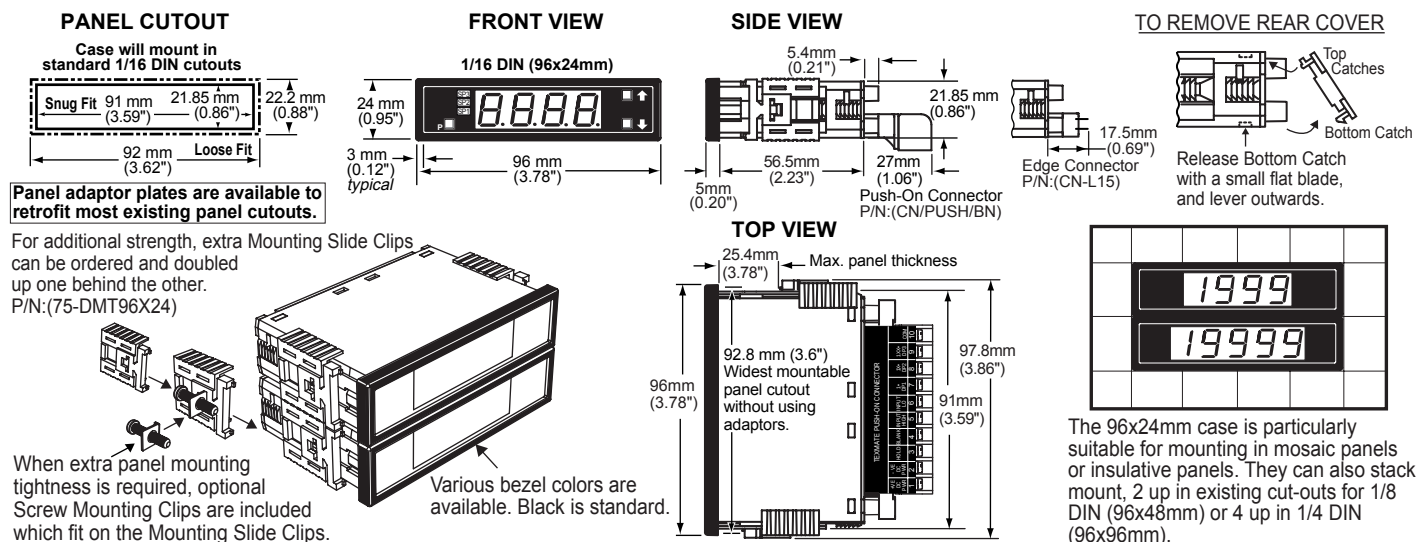
- Input Configuration:** True differential
- Full Scale Ranges:** $\pm 199.9\text{mVDC}$ $\pm 1.999\text{VDC}$ (standard)
..... $\pm 19.99\text{VDC}$ $\pm 199.9\text{VDC}$
- Input Impedance:** Exceeds $100\text{M}\Omega$ on 200mV, 2V ranges.
..... $1\text{M}\Omega$ other ranges.
- Input Protection:** $\pm 100\text{V AC/DC}$ for 200mV, 2V and 20V ranges.
..... $\pm 250\text{VAC/DC}$ for 200V range
- Conversion Rate:** 3 readings per second
- Common Mode Rejection:** 80dB at DC
- Normal Mode Rejection:** 60dB at 50/60Hz for 200mV and 2V ranges.
- Common Mode Voltage:** -1V to +2VDC
- Accuracy:** $\pm (0.05\% \text{ of reading} + 1 \text{ digit})$
- Temperature Coefficient:** 5ppm/ $^{\circ}\text{C}$ in ratiometric mode 50ppm/ $^{\circ}\text{C}$ in 200mV / 2V ranges
- Maximum resolution:** 100 μV in 200mV range.
- Zero Stability:** Autozeroed. 0.1 counts per $^{\circ}\text{C}$
- Display:** 0.56" high red LEDs. Display Hold, Blank and Test provided.
- Overrange Indication:** The most significant digit "1" is displayed with all the other digits blanked.
- Power Supply:** 5VDC @ 200mA.
- Operating Temperature:** 0°C to 60°C
- Storage Temperature:** -40°C to 85°C
- Relative humidity:** 95% (non condensing)
- Case Dimensions:** Bezel: 96X24 mm (3.62" X 0.95")
..... Depth behind bezel: 56.5 mm (2.23")
..... Plus 27 mm (1.06") for Push-On connector
..... or plus 17.5 mm (0.68") for Edge connector
- Weight:** 85 gms (3 oz)
..... 125 gms (4.4 oz) when packed

BN-Series, For Those Applications Where Space Is A Premium

BN-35 0.2/2/20/200V DC ranges, 3.5 digit, 5V DC Powered
BN-35BCD Parallel or Multiplex BCD, 3.5 digit, 5V DC Powered
BN-35CI 4 to 20mA Isolated 24V DC 3.5 digit

BN-40BCD Parallel or Multiplex BCD, 4.0 digit, 5V DC Powered
BN-45 0.2/2/20/200V DC ranges, 4.5 digit, 5V DC Powered
BN-45CI 2/20/200V DC ranges, Isolated 24V DC 4.5 digit

BN Case Dimensions and Panel Cutouts



Ordering Information

Standard Options for this Model Number

Part Number	Description
► BASIC MODEL NUMBER	Includes standard display and standard power supply unless optional versions are ordered.
BN-35	.0.2/2/20/200V DC ranges, 3.5 digit, 5V DC Powered

► DISPLAY

STANDARD	Red LEDs, 0.56 inch high
BN-GREEN	Green LED, 0.56 inch high
BN-BRIGHT	Super bright Red LEDs, 0.56 inch high

Special Options and Accessories

Part Number	Description
► SPECIAL OPTIONS (Specify Inputs & Req. Reading)	
HD-CHANGE	Range change from the standard input as shown in BOLD type
V0-50K	Zero offset potentiometer 50k
VRC-DPM	Range change for BN-35/BN-35I listed ranges
CB-FS35	Non-Std Range and Scale Changes, 3.5 Digit Meters

► ACCESSORIES

CN-L15	PCB Edge Connector, Solder Type, Dual Row 15 Pins
CN-PUSH/BN	BN Series Push-on Screw Terminal Block Connector
75-DMTC96X24	Side Slide Brackets, extra set (96x24mm only)
75-DBBZ96X24	Black Bezel for 96x24mm Case, BN and AM series
DN.CAS96X24	Din Case 96 X 24 Short Depth with Bezel

Prices subject to change without notice.

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