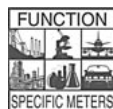




BN-Series



BN-35I

24VDC Panel Meter
3 1/2 Digit 0.56" LED
in a 1/16 DIN Case



Isolated Power LED Voltmeter in a Compact DIN 96x24mm Case.

General Features

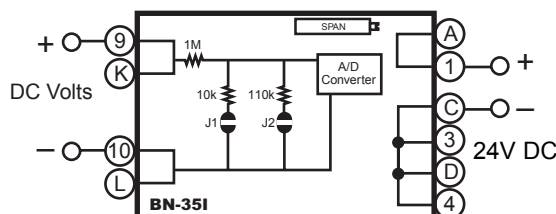
The BN-35I is a low cost pin for pin functional replacement for the Newport model 215, with many more features. It is a 3 1/2 digit voltmeter in a compact 96x24mm case with an internal isolated power supply. 5V, 12V, 15V or 24VDC power options are available. The case has a short depth of just 2.83 inches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

The meter has four user-selectable ranges of 200mV, 2V, 20V and 200V. The BN-35I 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.

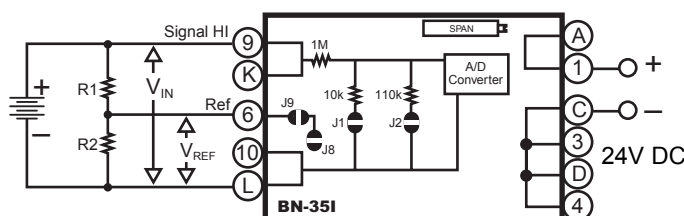
The display is shipped standard with red LEDs, but green LEDs or super bright LEDs for high ambient light environments are also offered. Display Segment Test, Display Blank and Hold Reading are standard features.

Typical Application Connections

DC Volts Single-ended measurement



Ratiometric Voltmeter with external reference.



For using the BN-35I 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 24VDC 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

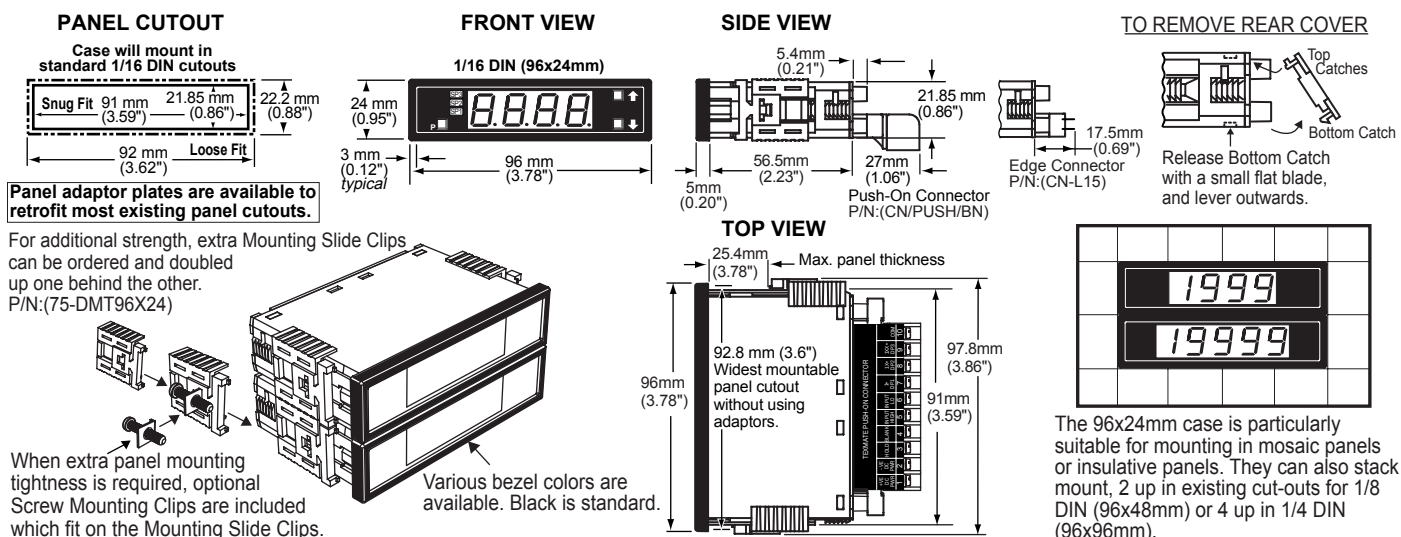
Input Configuration:	True differential
Full Scale Ranges:	±199.9mVDC ±1.999VDC (standard) ±19.99VDC ±199.9VDC
Input Impedance:	Exceeds 100MΩ on 200mV, 2V ranges. 1MΩ other ranges.
Input Protection:	±100V AC/DC for 200mV, 2V and 20V ranges. ±250VAC/DC for 200V range
Conversion Rate:	3 readings per second
Common Mode:	80dB at DC
Normal Mode:	60dB at 50/60Hz for 200mV and 2V ranges.
Common mode voltage:	100VDC between Signal Low and the Power Ground
Accuracy:	± (0.05% of reading + 1 digit)
Tem. Coefficient:	5ppm/°C in ratiometric mode 50ppm/°C in 200mV / 2V ranges
Maximum Resolution:	100μV in 200mV range.
Zero Stability:	Autozeroed. 0.1 counts per °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:	24VDC @ 90mA standard 5VDC @ 200mA; 12VDC @ 160mA; 15VDC @ 120mA; depending on option
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 250I 4 to 20mA Isolated 24V DC 3.5 digit

BN-40BCD Parallel or Multiplex BCD, 4.0 digit, 5V DC Powered
BN-45 0.2/20/200V DC ranges, 4.5 digit, 5V DC Powered
BN 45I 2/20/200V DC ranges, Isolated 24V DC 3.5 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-35I	3.5 digit, Isolated 24V Power, 0.2/2/20/200V DC
► 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
► POWER SUPPLY	
STANDARD.....	100/120 or 200/240VAC User selectable
V0-ISO/PS-09	Isolated 9V DC
V0-ISO/PS-12	Isolated 12V DC
V0-ISO/PS-15	Isolated 15V DC
► SPECIAL OPTIONS (Specify Inputs or Outputs & 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

VRC-4/20Range change for BN-45I, 4 to 20mA
 CB-FS35Non-Std Range and Scale Changes, 3.5 Digit Meters
 CB-FS45Non-Std Range and Scale Changes, 4.5 Digit Meters

Special Options and Accessories

Part Number	Description
► ACCESSORIES (Specify Serial # for Custom Artwork Installation)	
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

Many other options and accessories are available. See full price list for more details.
 Prices subject to change without notice.

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