

BEACON Series

Low Cost Digital Panel Meters

Features

- AC / DC Voltage Inputs (Pos / Neg)
- AC / DC Current Inputs (Pos / Neg)
- AC or DC Supply Voltage
- NEMA 4X / IP65 Front
- Low / High Scaling
- 3^{1/2} Digit Display
- Over-Range Indication
- DC Output to Power Peripherals

Description:

The BEACON series is a bright new addition to KEP's product line. Featuring 3^{1/2} digits of bright RED or GREEN (optional) LED's, these meters outshine the competition by offering DIP switch selection of the most frequently used functions. The new BEACON series focuses on applications needing 3^{1/2} digits of display, showing -1999 to +1999 with switch selectable decimals. With their great flexibility and multiple input ranges, let the BEACON series digital panel meters be your guide.

Specifications:

Display: 3^{1/2} digit, .55" high, 7 segment bright LED. Minus sign displayed when current or voltage is negative. Decimal points inserted before 1st, 2nd, or 3rd least significant digits by DIP switch selection.

Power: Available in 5VDC, 8-24VDC, 115VAC or 230VAC ($\pm 10\%$). 260 mA (DC); 6 VA (AC).

Operating Temperature: +32°F to 130°F (0°C to 60°C)

Storage Temperature: -40°F to 200°F (-40°C to 80°C)

Output Power: (AC powered units only)

18 VDC regulated $\pm 4\%$ @ 50 mA

Input Ranges: (switch/jumper selectable)

<u>AC & DC Volt Meters</u>	<u>AC & DC Current Meters</u>
0-1.999 Volts	0-199.9 μ A
0-19.99 Volts	0-1.999 mA
0-199.9 Volts	0-19.99 mA
0-199.9 mV	0-199.9 mA
	0-1.999 amps (2A Option)

Over-Range Indication: Three least significant digits blank when input is over range.

Max. Voltage on Basic Range: 75 V AC/DC (terminals 4 & 5)

Max. Voltage on Terminal Block: 300 V AC or DC

Max Shunt Currents:

199.9 μ A through 19.99mA- 10 x (max. range current)

199.9mA- 1 amp

1.999 amp- 3 amps

Caution: A fast blow fuse should be installed in series with the current meter in applications where fault currents may exceed maximum allowable current.



Scaling:

Reference Adjust (supplied on all units)

Used to calibrate display to $\pm 30\%$ of STD input.

Span Adjust

Coarse and fine adjust pots offer $\div 1$ to $\div 13$ and when used with the switch selected ranges, offers direct readout of linear transducers.

"0" Offset Adjust

Sets "low" input display at $\pm 50\%$ of span.

Accuracy: (23°C, 85% R.H.)

(Add ± 2 digits to below for negative readings)

DC Volts- $\pm .1\%$ of Reading ± 1 digit

AC Volts- $\pm .1\%$ of Reading ± 3 digits

DC Current

199.9 μ A, 1.999mA, 19.99mA: $\pm .1\%$ of reading ± 1 digit

199.9mA: $\pm .18\%$ of reading ± 1 digit

1.999A: $\pm .1\%$ of reading ± 1 digit

AC Current

199.9 μ A, 1.999mA, 19.99mA: $\pm .1\%$ of reading ± 3 digit

199.9mA: $\pm .15\%$ of reading ± 3 digits

1.999A: $\pm .5\%$ of reading ± 3 digits

Temperature Coefficients:

Current Inputs

DC: ± 100 PPM/ $^{\circ}$ C

(1.999A: ± 200 PPM/ $^{\circ}$ C)

AC: ± 200 PPM/ $^{\circ}$ C

Voltage Inputs

DC: ± 75 PPM/ $^{\circ}$ C

AC: ± 150 PPM/ $^{\circ}$ C

Input Response Time: 1 second

Sample Rate: 3 samples/second

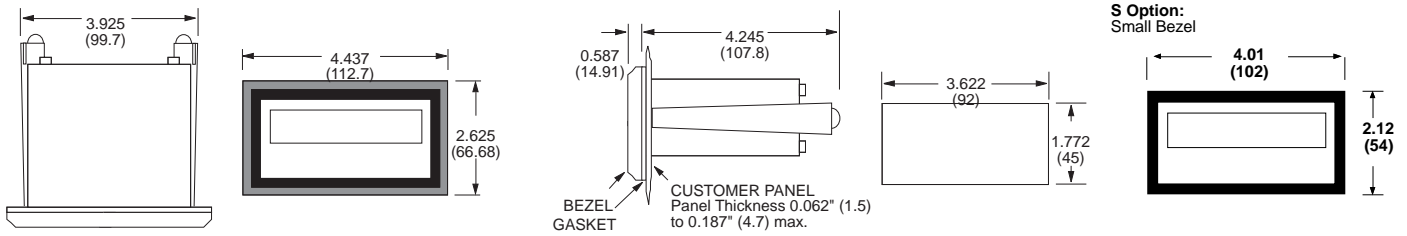
Normal Mode Rejection: 70dB 50/60Hz (DC units only)

Common Mode Rejection: 110dB DC or 50/60Hz (DC units only)

Case: Plastic case, NEMA 4X/IP65 front panel

Weight: 2 lbs.

Dimensions:



Switch S1 Functions:

- S1-1 Decimal Point XXX.X
- S1-2 Decimal Point XX.XX
- S1-3 Decimal Point X.XXX
- S1-4 Input Range 0-199.9 mV (Current Inputs)
- S1-5 Input Range 0-1.999 V
- S1-6 Input Range 0-19.99 V
- S1-7 Input Range 0-199.9 V
- S1-8 Current Shunt 0-199.9 μ A
- S1-9 Current Shunt 0-1.999 mA
(Current Shunt 0-19.99 mA: Jumper A)
(Current Shunt 0-199.9 mA: Jumper B)
(Current Shunt 0-1.999 A: Jumper C) (2A Option)
- S1-10 ON: DC input
OFF: AC input

Switch S2 Functions:

- S2-1 ON: "0" Low Input
OFF: Non "0" Input (Adj. P2)
- S2-2 ON: Non STD Input Range (Adj. P3 & P4)
OFF: STD Input Range
- S2-3 ON: AC Input
OFF: DC Input
- S2-4 ON: AC Input
OFF: DC Input

Potentiometer Function:

- P1: Display High Adj. (Ref)
- P2: Non "0" Input Adj. ("0" Offset) (S2-1 Must be OFF)
- P3: Non STD Input Adj. (Span) (Coarse) (S2-2 Must be ON)
- P4: Non STD Input Adj. (Span) (Fine) (S2-2 Must be ON)

Terminal Designations:

- P1 DISPLAY HIGH Adj. (ref)
- P2 NON "0" INPUT adj. ("0" offset)
- P3 NON STANDARD INPUT COARSE Adj. (span)
- P4 NON STANDARD INPUT FINE Adj. (span)

- 1• V/I HIGH INPUT
- 2• V/I HIGH INPUT COMMON
- 3• +18 VDC OUT (+DC POWER IN)
- 4• -DC OUT (-DC POWER IN)
- 5• EARTH GROUND
- 6• AC POWER
- 7• AC POWER

How To Order

Example BC 1 DX G

BEACON

Power:

- 1= 5VDC
- 2= 8-24VDC (DC ranges jumper selectable)
- 4= 115VAC } All ranges
- 5= 230VAC } jumper selectable

Input:

- DS=DC Volt/Current display STD Input (no scaling)
- D0=DC Volt/Current scale from "0" only
- DX=DC Volt/Current scale with "0" offset
- A0=AC or DC Volt/Current scale from "0" only
- AX=AC or DC Volt/Current scale with "0" offset

Options:

- G= Green LED's
- S= Small Bezel (2.12" H x 4.01" W)
- 2A= 0 - 1.999 A input option
- 5A= 0 - 5 Amp input option

Accessories:

- BCAL1 = Descriptor Labels: %, °F, °C, Hz, kHz, RPS, V DC, mA DC, mV DC, V AC, mA AC, mV AC, μ A DC, A AC, A DC
- BCAL2 = Descriptor Labels: ft/sec, ft/min, ft/hr, ft³/sec, ft³/min, ft³/hr, GPM, GPH, RPM, in/sec, in/min, in/hr, lb/sec, lb/min, lb/hr
- BCAL3 = Descriptor Labels: L/sec, L/min, L/hr, m³/sec, m³/min, m³/hr, m/sec, m/min, m/hr, kpa, bar, kg, lb, PSI, kW
- BCR2A =External .1 Ω 1% 5W shunt (0 - 1.999 A)
- BCSCALE = Custom Scaling (Specify with each unit, see below)

Example: Input IDC 0.004 0.020
Display 10.0 150.0

Where:

- IDC = DC Current, IAC = AC Current
- VDC = DC Voltage, VAC = AC Voltage
- Low Range 0.004 = 4 mA
- High Range 0.020 = 20 mA
- Low Display = 10.0
- High Display = 150.0