

BM061, BM062, BM063 & BM065 GENERAL SPECIFICATION

Display : 3-3/4 digits 4000 counts LCD display
Update Rate : 3 per second nominal
Polarity : Automatic
Low Battery : Below approx. 2.4V
Operating Temperature : 0°C to 40°C
Relative Humidity : Maximum relative humidity 80% for temperature up to 31°C decreasing linearly to 50% relative humidity at 40°C
Altitude : Operating below 2000m
Storage Temperature : -20°C to 60°C, < 80% R.H. (with battery removed)
Temperature Coefficient : nominal 0.15 x (specified accuracy)/°C @ (0°C -18°C or 28°C -40°C), or otherwise specified
Sensing :
 BM062 & BM065 : True RMS sensing
 BM061 & BM063 : Average sensing
Safety : Meets IEC61010-1 2nd Ed., EN61010-1 2nd Ed., UL61010-1 2nd Ed., IEC61010-2-032,

EN61010-2-032, UL61010B-2-032
 Measurement Category : III 600 Volts ac & dc
Transient protection : 6.5kV (1.2/50µs surge)
Pollution degree : 2
E.M.C. : Meets Meets EN61326-1:2006 (EN55022, EN61000-3-2, EN61000-3-3, EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11)
 In an RF field of 3V/m:
 Capacitance function is not specified
 Other function ranges:
 Total Accuracy = Specified Accuracy + 50 digits
 Performance above 3V/m is not specified
Overload Protections :
 Clamp-on jaws : DC/AC 400A rms continuous + & COM terminals (all functions) : 600VDC/VAC rms
Power Supply : standard 1.5V AAA Size (NEDA 24A or IEC LR03) battery X 2
Power Consumption :

DCA & ACA : 11mA typical
 Other functions : 2.9mA typical
APO Timing : Idle for 30 minutes
APO Consumption :
 BM061 & BM063 : 10µA typical
 BM062 & BM065 : 190µA typical
Dimension : L188 X W63 X H40 mm
Weight : 218 gm approx
Jaw opening & Conductor diameter : 30 mm max
Special features : Backlighted display (BM062 & BM065 only); Display Hold; PEAK-rms MAX HOLD
Accessories : Test leads (pair), batteries installed, user's manual, soft carrying pouch, Bkp60 banana plug K-type thermocouple x 1 (BM063 & BM065 only)
Optional Accessories : Bkb32 banana pins to K-type socket plug adapter (BM063 & BM065 only)

ELECTRICAL SPECIFICATION

Accuracy is ± (% reading digits + number of digits) or otherwise specified, at 23 °C ± 5 °C & less than 75% R.H.

True RMS Model BM065 & BM062 ACV & ACA clamp-on accuracies are specified from 5% to 100% of range or otherwise specified. Maximum Crest Factor are as specified below, and with frequency spectrums, besides fundamentals, fall within the meter specified AC bandwidth for non-sinusoidal waveforms. Fundamentals are specified at 50Hz and 60Hz.

DC Voltage

| RANGE | Accuracy |
|------------------------|-----------|
| 400.0mV | 0.3% + 3d |
| 4.000V, 40.00V, 400.0V | 0.5% + 3d |
| 600.0V | 1.0% + 4d |

NMRR : >50dB @ 50/60Hz
 CMRR : >120dB @ DC, 50/60Hz, Rs=1kΩ
 Input Impedance: 10MΩ, 30pF nominal
 (1000MΩ for 400mV range)

AC Voltage

| RANGE | Accuracy |
|------------------------|-----------|
| 50Hz ~ 60Hz | |
| 4.000V, 40.00V, 400.0V | 1.0% + 4d |
| 60Hz ~ 500Hz | |
| 4.000V, 40.00V, 400.0V | 1.5% + 4d |
| 50Hz ~ 500Hz | |
| 600.0V | 2.0% + 4d |

CMRR: >60dB @ DC to 60Hz, Rs=1kΩ
 Input Impedance: 2MΩ, 30pF nominal
 TRMS Model BM062 & BM065 Crest Factor:
 < 2 : 1 at full scale & < 4 : 1 at half scale

ACA Current (Clamp-on)

| RANGE | Accuracy ^{1) 2)} |
|---------------------------|---------------------------|
| 400.0A | |
| 40Hz ~ 60Hz @ 0 ~ 50A | 1.0% + 6d |
| 60Hz ~ 400Hz @ 0 ~ 50A | 1.5% + 5d |
| 40Hz ~ 60Hz @ 50A ~ 200A | 1.5% + 5d |
| 60Hz ~ 200Hz @ 50A ~ 200A | 2.0% + 5d |
| 40Hz ~ 60Hz @ 200A ~ 300A | 2.0% + 5d |
| 40Hz ~ 60Hz @ 300A ~ 400A | 2.5% + 5d |

¹⁾Induced error from adjacent current-carrying conductor: < 0.01A/A
 TRMS Model BM062 & BM065 Crest Factor:
 < 1.8 : 1 at full scale & < 3.6 : 1 at half scale

DCA Current (Clamp-on)

| RANGE | Accuracy ^{1) 2)} |
|-----------------|---------------------------|
| 400.0A | |
| 0 ~ 50.0A | 1.0% + 4d |
| 50.0A ~ 200.0A | 1.5% + 5d |
| 200.0A ~ 300.0A | 2.0% + 5d |
| 300.0A ~ 400.0A | 2.5% + 5d |

¹⁾Induced error from adjacent current-carrying conductor: < 0.01A/A
²⁾Relative Zero Δ mode is applied to offset the non-zero residual readings, if any

Audible Continuity Tester

Audible threshold: between 10Ω and 120Ω.
 Range: 400.0Ω; Accuracy: 1.5%+8d
 Open Circuit Voltage : 0.4VDC typical

Ohms

| RANGE | Accuracy |
|---------------------------|-----------|
| 400.0Ω | 0.8% + 6d |
| 4.000kΩ, 40.00kΩ, 400.0kΩ | 0.6% + 4d |
| 4.000MΩ | 1.0% + 4d |
| 40.00MΩ | 2.0% + 4d |

Open Circuit Voltage : 0.4VDC typical

Diode Tester

Test current: 0.4mA typical
 Open Circuit Voltage : < 1.6VDC typical

Capacitance

| RANGE ¹⁾ | Accuracy ^{2) 3)} |
|---|---------------------------|
| 500.0nF, 5.000µF, 50.00µF, 500.0µF, 3000µF, | 3.5%+6d |

¹⁾Additional 50.00nF range accuracy is not specified
²⁾Accuracies with film capacitor or better
³⁾Specified with battery voltage above 2.8V (approximately half full battery).
 Accuracy decreases gradually to 12% at low battery warning voltage of approximately 2.4V

Hz Frequency

| Function | Sensitivity (Sine Wave) | Range |
|----------|-------------------------|--------------|
| 400.0mV | 350mV | 10Hz ~ 1kHz |
| 4.000V | 3.2V | 5Hz ~ 20kHz |
| 40.00V | 25V | 5Hz ~ 100kHz |
| 400.0V | 100V | 5Hz ~ 100kHz |
| 600V | 410V | 5Hz ~ 5kHz |
| DCA/ACA | Unspecified | |

Display counts: 5000
 Maximum resolution: 0.001Hz
 Accuracy: 0.5%+4d

Type-K Temperature (BM063 & BM065 only)

| RANGE | Accuracy |
|----------------|----------|
| -20°C ~ 300°C | 2% + 3d |
| 300°C ~ 537°C | 3% + 3d |
| -4°F ~ 572°F | 2% + 6d |
| 572°F ~ 1000°F | 3% + 6d |

Type-K thermocouple range & accuracy not included

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