### 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: 10MQ, 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: 2MQ, 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      |  |

Dinduced error from adjacent current-carrying conductor: < 0.01A/A</p>

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      |  |

<sup>1)</sup>Induced error from adjacent current-carrying conductor: < 0.01A/A

<sup>2)</sup>Relative Zero  $\Delta$  mode is applied to offset the non-zero residual readings, if any

#### Audible Continuity Tester

Audible threshold: between  $10\Omega$  and  $120\Omega$ . 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,<br>3000μF, | 3.5%+6d       |  |

<sup>1)</sup>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  | Unspecifie              | d            |

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

#### BRYMEN TECHNOLOGY CORPORATION

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