

BM805, BM806, & BM807 GENERAL SPECIFICATIONS

Display : 3-3/4 digits 4000 counts LCD display
Polarity : Automatic
Update Rate : 3 per second nominal
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 : Average sensing for BM805 & BM806. True RMS for BM807
Safety : Meets IEC61010-1(1995), EN61010-1(1995), UL3111-1(1994) to terminals:
 V/R : Category III 600 Volts ac and dc, and Category II 1000 Volts ac and dc
 A : Category II 250 Volts ac and 150 Volts dc

mA/μA : Category II 250 Volts ac and 150 Volts dc
Transient protection : 6.5kV (1.2/50μs surge)
Pollution degree : 2
E.M.C. : Meets EN61326(1997, 1998/A1), EN61000-4-2(1995), and EN61000-4-3(1996)
 In an RF field of 3V/m:
 Capacitance function is not specified
 AC 4.000V range: Total Accuracy = Specified Accuracy + 700 digits
 AC 400.0μA range: Total Accuracy = Specified Accuracy + 300 digits
 Other function ranges: Total Accuracy = Specified Accuracy + 40 digits
 Performance above 3V/m is not specified
Overload Protections :
 μA & mA : 0.5A/250V Fuse;
 A : 15A/250V Fuse;
 V : 1050Vrms, 1450Vpeak;
 Ω, & Others : 600VDC/VAC rms

Power Supply : 1.5V AAA Size (NEDA 24A or IEC LR03) battery X 2
Power Consumption : 3.2 mA typical
Low Battery : Below approx. 2.4V
Sleep Mode Timing : Idle for 30 minutes
Sleep Mode Consumption : 300μA typical for BM805 & BM806; 360μA typical for BM807
Dimension: L186mm X W87mm X H35.5mm; L198mm X W97mm X H55mm with holster
Weight: 296 gm; 396 gm with holster
Special Features : 30ms Max Hold; Data Hold; Relative zero mode; Beep-Jack™ input warning; Back-lighted display (BM807 only)
Accessories : Test leads (pair), batteries installed, user's manual
Optional Accessories : Banana plug type-K bead probe Bkp60 (BM806 & BM807 only), Banana pins to type-K socket plug adapter Bkb32 (BM806 & BM807 only)

BM805, BM806, & BM807 ELECTRICAL SPECIFICATIONS

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

¹⁾ Model BM807 True RMS accuracy of ACV & ACA is specified from 5 % (10% for AC400.0mV range) to 100 % of range, or otherwise specified. Maximum Crest Factor < 1.75 : 1 at full scale & < 3.5 : 1 at half scale, and with frequency components within the specified frequency bandwidth for non-sinusoidal waveforms

DC Voltage

RANGE	Accuracy
400.0 mV	0.3% + 4d
4.000V, 40.00V, 400.0V	0.5% + 3d
1000V	1.0% + 4d

NMRR : >50dB @ 50/60Hz
 CMRR : >120dB @ DC, 50/60Hz, Rs=1kΩ
 Input Impedance : 10MΩ, 30pF nominal
 (1000MΩ for 400.0mV range)

AC Voltage

RANGE	Accuracy ¹⁾
50Hz -- 500Hz	
400.0mV*	4.0% + 5d
4.000V, 40.00V, 400.0V	1.5% + 5d
1000V	4.0% + 5d

CMRR : >60dB @ DC to 60Hz, Rs=1kΩ
 Input Impedance : 10MΩ, 30pF nominal
 (1000MΩ for 400.0mV range)
 *Selection by RANGE button manually

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

DC Current

RANGE	Accuracy	Burden Voltage
400.0μA	2.0% + 5d	0.15mV/μA
4000μA	1.2% + 3d	0.15mV/μA
40.00mA	2.0% + 5d	3.3mV/mA
400.0mA	1.2% + 3d	3.3mV/mA
4.000A	2.0% + 5d	0.03V/A
10.00A*	1.2% + 3d	0.03V/A

*10A continuous, 20A for 30 second max with 5 minutes cool down interval

AC Current

RANGE	Accuracy ¹⁾	Burden Voltage
50Hz -- 500Hz		
400.0μA	2.0% + 6d	0.15mV/μA
4000μA	1.5% + 4d	0.15mV/μA
40.00mA	2.0% + 6d	3.3mV/mA
400.0mA	1.7% + 4d	3.3mV/mA
4.000A	2.0% + 6d	0.03V/A
10.00A*	1.8% + 4d	0.03V/A

*10A continuous, 20A for 30 second max with 5 minutes cool down interval

Hz Frequency

RANGE	Accuracy
5.000Hz, 50.00Hz, 500.0Hz, 5.000kHz, 50.00kHz, 500.0kHz, 1.000MHz	0.5%+4d

Operating input voltage : < 20VAC rms.
 Input Signal : Sine wave, or Square wave with duty cycle > 40% & < 70%

Sensitivity :
 5Hz -- 100kHz : > 1.3Vp;
 100kHz -- 500kHz : > 2.2Vp;
 500kHz -- 1MHz : > 4.2Vp
 Update Rate : 2 per second nominal

Capacitance

RANGE*	Accuracy**
500.0nF, 5.000μF, 50.00μF, 500.0μF, 3000μF	3.5%*** + 6d

*Additional 50.00nF range accuracy is not specified
 **Accuracies with film capacitor or better
 ***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

Diode Tester

Open Circuit Voltage	Test Current (Typical)
< 1.6 VDC	0.25mA

Type-K Temperature (BM806 & BM807)

RANGE	Accuracy*
-20 °C TO 300 °C	2% + 3 °C
-4 °F TO 572 °F	2% + 6 °F

*Type-K thermocouple range & accuracy not included

Audible Continuity Tester

Audible threshold : between 20Ω and 120Ω.



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