

**Up To 45 Function Ranges With Industrial
Reliability At Great Prices !**

30ms Fast Max Hold

& Beep-Jack™

**Warning
Features !**



BM800 Series
Practical Multimeter


BRIGHT PEOPLE'S CHOICE
<http://www.brymen.com.tw>

BM807**BM806****BM805**

BM807	BM806	BM805	FUNCTION & FEATURE
●	●	●	3-3/4 DIGITS 4,000 COUNTS LARGE EASY TO READ LCD DISPLAY
●	●	●	BEEP-JACK™ AUDIBLE WARNING AGAINST IMPROPER PLUG IN
●	●	●	MAX HOLD (30ms RESPONSE TIME)
●	●	●	FAST AUTO-RANGING MEASUREMENTS
●	●	●	0.3% BEST DCV ACCURACY
●	●	●	RELATIVE ZERO MODE
●	●	●	AUTO POWER OFF
●	●	●	DATA HOLD
●			AC TRUE RMS VOLTAGE & CURRENT FUNCTIONS
●			BACK-LIGHTED LARGE EASY TO READ LCD DISPLAY
●	●		TYPE-K TEMPERATURE -20°C TO 300°C
●	●	●	DCV 0.1mV TO 1000V
●	●	●	ACV 0.1mV TO 1000V
●	●	●	DCA 0.1μA TO 20A
●	●	●	ACA 0.1μA TO 20A
●	●	●	OHM 0.1Ω TO 40MΩ
●	●	●	FREQUENCY 5Hz TO 1MHz
●	●	●	CAPACITANCE 100pF TO 3000μF
●	●	●	DIODE TEST
●	●	●	FAST AUDIBLE CONTINUITY
●	●	●	RUGGED FIRE RETARDED CASING
●	●	●	REPLACEABLE AND WASHABLE PROTECTIVE HOLSTER
●	●	●	600V GENERAL PROTECTION ON OHM, CAPACITANCE, ... ETC
●	●	●	TRANSIENT PROTECTION UP TO 6.5kV 1.2/50μs LIGHTNING SURGE
●	●	●	LVD MEETS EN61010-1 CAT II 1kVDC/AC & CAT III 600VAC/DC
●	●	●	EMC EN61326(97/98A1), EN61000-4-2(95), EN61000-4-3(96)

High End Constructions Plus Large LCD Digits !

A Powerful Industrial Quality Tool That Is Versatile & Easy To Use !

Stands 6.5kV Lightning Surge For Measurements In CAT III Locations !

HIGH SPEED AUTO-RANGING
SHORTENS THE TIME TO TEST
AND INCREASES THE EASE OF USE

MULTI-VERSATILITY
UP TO 45 FUNCTION RANGES
WITH PROPRIETARY ASIC TECHNOLOGY

MANUAL-RANGING MODE
AUTO-RANGING WITH MANUAL-RANGING OVERRIDE

LARGE EASY-TO-READ LCD DIGITS
WITH 3/SEC NOMINAL UPDATE RATE

BACKLIGHTED LCD DISPLAY
FOR EASY VIEWING IN THE DARK

TRUE RMS
FOR NON-SINUSOIDAL WAVEFORMS
OF AC VOLTAGE & AC CURRENT

FUNCTION SELECTION
CONVENIENTLY TOGGLE BETWEEN
PRIMARY & SECONDARY FUNCTIONS

RELATIVE ZERO MODE
FOR CONVENIENT READINGS
COMPARISON & OFFSET

CAPACITANCE
UP TO 3000 μ F WITH 600V PROTECTION;
AUTO-RANGING

30ms MAX HOLD
CAPTURES MAXIMUM READINGS
AS SHORT AS 30ms IN DURATION

AUDIBLE CONTINUITY
FOR QUICK OPEN-SHORT TESTS
ON SWITCHES, FUSES, AND WIRES

DATA HOLD
FREEZES THE DISPLAYING
READING FOR LATER VIEW

DIODE TEST
FOR CHECKING DIODES AND RECTIFIERS

TYPE-K TEMPERATURE
SELECTABLE $^{\circ}$ C OR $^{\circ}$ F READINGS

Hz FUNCTION
UP TO 0.001Hz HIGH RESOLUTION
FREQUENCY MEASUREMENT

SLEEP MODE
TO EXTEND BATTERY LIFE

1kV AC VOLTAGE MEASUREMENT
IMPROVED MEASURING CAPABILITIES

EMC
MEETS EN61326(1997, 1998/A1),
EN61000-4-2(1995), & EN61000-4-3(1996)

BEEP-JACK™ AUDIBLE WARNING
BEEPS AGAINST IMPROPER PLUG IN;
DECREASES RISKS OF DAMAGE

TRANSIENT PROTECTION
UP TO 6.5kV 1.2/50 μ s LIGHTNING SURGE;
MORE CONFIDENCE FOR SERIOUS USERS

RUGGED & DURABLE
HIGH-IMPACT FIRE-RETARDED ENCLOSURE
FOR REINFORCED SAFETY & RELIABILITY

LVD CAT III SAFETY
MEETS EN61010-1 & UL3111-1 CAT III

PROTECTIVE HOLSTER
INCREASES PRODUCT DURABILITY;
REPLACEABLE & WASHABLE



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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