

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

30ms Fast Max Hold

& Beep-Jack™

Warning Features !



BM800s Series
Practical Multimeter



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



BM807s



BM806s



BM805s

| BM807s | BM806s | BM805s | FUNCTION & FEATURE |
|--------|--------|--------|---|
| ● | ● | ● | 3-3/4 DIGITS 4,000 COUNTS LARGE EASY TO READ LCD DISPLAY |
| ● | ● | ● | 0.5% BASIC DCV ACCURACY |
| ● | ● | ● | FAST MEASUREMENTS, 3/SEC |
| ● | | | TRUE RMS AC VOLTAGE & CURRENT |
| ● | ● | ● | JACK BEEP AUDIBLE WARNING AGAINST IMPROPER PLUG IN |
| ● | | | BACK-LIGHTED LARGE EASY TO READ LCD DISPLAY |
| ● | ● | ● | FULLY AUTO-RANGING |
| ● | ● | ● | RELATIVE ZERO MODE |
| ● | ● | ● | AUTO POWER OFF |
| ● | ● | ● | MAX HOLD (30ms RESPONSE TIME) |
| ● | ● | ● | DATA HOLD |
| ● | ● | ● | DCV 0.1mV TO 1000V |
| ● | ● | ● | ACV 0.1mV TO 1000V |
| ● | ● | ● | DCA 0.1μA TO 10A (>10A ~ 20A for 30 seconds) |
| ● | ● | ● | ACA 0.1μA TO 10A (>10A ~ 20A for 30 seconds) |
| ● | ● | ● | OHM 0.1Ω TO 40MΩ |
| ● | ● | ● | FREQUENCY 30Hz TO 4MHz |
| ● | ● | ● | CAPACITANCE 10pF TO 3000μF |
| ● | ● | | K-TYPE TEMPERATURE -20°C TO 300°C |
| ● | ● | ● | DIODE TEST |
| ● | ● | ● | FAST AUDIBLE CONTINUITY |
| ● | ● | ● | FIRE RETARDED CASE |
| ● | ● | ● | SPLASH PROOF CONSTRUCTION |
| ● | ● | ● | REPLACEABLE AND WASHABLE PROTECTIVE HOLSTER |
| ● | ● | ● | 1000V GENERAL (OHM, CAPACITANCE...e.g.) INPUT PROTECTION |
| ● | ● | ● | TRANSIENT PROTECTION UP TO 6.5kV 1.2/50μs LIGHTNING SURGE |
| ● | ● | ● | LVD MEETS EN61010-1 CAT II 1000V & CAT III 600V |
| ● | ● | ● | EMC MEETS EN61326-1 |

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

DIODE TEST
FOR CHECKING DIODES AND RECTIFIERS

DATA HOLD
FREEZES THE DISPLAYING
READING FOR LATER VIEW

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

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
EN61326-1: 2013

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
MEETS EN61010-1 THIRD EDITION
CAT II 1000V & CAT III 600V

PROTECTIVE HOLSTER
INCREASES PRODUCT DURABILITY;
REPLACEABLE & WASHABLE



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
Pollution degree : 2
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 BM805s & BM806s. True RMS for BM807s
Safety : The meter protection rating, against the users, is double insulation per IEC/UL/EN61010-1 Ed. 3.0, IEC/EN61010-2-030 Ed. 1.0, IEC/EN61010-2-033 Ed. 1.0, IEC/UL/EN61010-031 Ed. 1.1 and CAN/CSA-C22.2 No. 61010-1-12 Ed. 3.0 to Category II 1000 Volts, CAT III 600Volts and

CAT IV 300Volts AC & DC.
Terminals (to COM) measurement category :
V / A / mA/μA : Category II 1000V, CAT III 600V and CAT IV 300V AC & DC.
Overload Protections :
μA & mA : 0.4A/1000V DC/AC rms, IR 30kA @ 1000V DC/AC rms
A : 11A/1000V DC/AC rms, IR 20kA @ 1000V DC/AC rms
V : 1100V DC/AC rms
Hz, Ohm & others : 1000V DC/AC rms
Transient protection : 6kV (1.2/50μs surge)
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
E.M.C. : Meets EN61326-1:2013
 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
Sleep Mode Timing : Idle for 30 minutes
Sleep Mode Consumption : 300μA typical for Models 805s & 806s; 360μA typical for Model 807s
Dimension : L186mm X W87mm X H35.5mm; L198mm X W97mm X H55mm with holster
Weight : 296 gm; 396 gm with holster
Special Features : 25ms Max Hold; Data Hold; Relative zero mode; Beep-jack™ input warning; Back-lighted display (BM807s only)
Accessories : Test leads (pair), batteries installed, user's manual
Optional Accessories : Banana plug type-K bead probe Bkp60 x 1 (BM806s & BM807s only), Banana pins to type-K socket plug adapter Bkb32 (BM806s & BM807s only)

Electrical Specifications

Accuracy is ±(% reading digits + number of digits) or otherwise specified, at 23°C ± 5°C & less than 75% R.H.
 1)BM807s 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 |

Input Impedance : 10MΩ, 30pF nominal
 (1000MΩ for 400.0mV range)

AC Voltage

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

Input Impedance: 10MΩ, 30pF nominal

*Selection by RANGE button manually, and is specified from AC 10mV (AC 40mV for True RMS Model 807s) and up

Max Hold (Voltage & Current)

Specified accuracy ± 50 digits for changes > 25ms in duration

Diode Tester

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

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, >10A ~ 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, >10A ~ 20A for 30 second max with 5 minutes cool down interval

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

Audible Continuity Tester

Audible threshold : between 10Ω and 120Ω

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

Type-K Temperature (BM806s & BM807s)

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

*Type-K thermocouple range & accuracy not included

Accuracies assume meter interior and the ambient have reached the same temperature (isothermal stage) for a correct junction voltage compensation. Allow enough settling time for a significant change of ambient temperature. It can take up to an hour for changes > 5°C.

Hz Frequency

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

*Additional 5.000Hz range accuracy & sensitivity are not specified

**Accuracy is specified at < 20VAC rms
 Input Signal : Square wave with duty cycle > 40% & < 70%; or Sine wave Vrms AC

Sensitivity :

10Hz–20Hz : > Sine 0.9Vrms;
 20Hz–500kHz : > 2.6Vp; or Sine 1.9Vrms;

500kHz–1MHz : > 4.2Vp; or Sine 3Vrms

Update Rate : 2 per second nominal

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