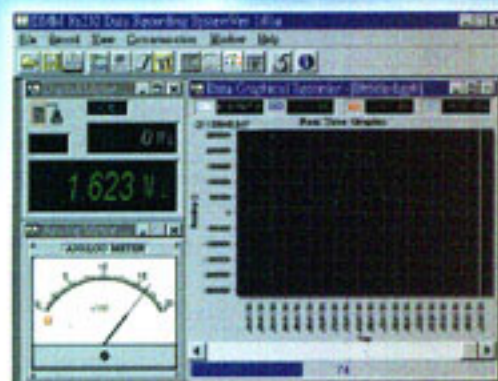


Double Features, Half The Prices !



BM810 Series
Professional DMM



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

Higher performance & Lower price are just the beginning...

We practically rewrote the books on Accuracy, Safety, Reliability, and is User friendly

FULLY AUTORANGING

SHORTENS THE TIME TO TEST
AND INCREASES THE EASE OF USE

CREST (PEAK HOLD)

CAPTURES INSTANTANEOUS PEAK
READINGS AS SHORT AS 5ms IN DURATION

MAX-MIN RECORD

RECORD MAX, MIN, MAX-MIN
READINGS, AUTORANGING

BACKLIGHTED LCD DISPLAY

FOR EASY VIEWING IN THE DARK

FUNCTION SELECTION

CONVENIENTLY TOGGLE BETWEEN
PRIMARY & SECONDARY FUNCTIONS

RANGE

AUTORANGING WITH MANUAL-
RANGING OVERRIDE

AUDIBLE CONTINUITY

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

DIODE TEST

FOR CHECKING DIODES AND RECTIFIERS

PLUS 50mV LOW VOLTAGE RANGE

UP TO 0.01mV RESOLUTION

1kV AC VOLTAGE MEASUREMENT

IMPROVED MEASURING CAPABILITIES

HBC FUSE PROTECTED

HIGH BREAKING CAPACITY 240V
CERAMIC FUSE PROTECTED
(1kV FOR X-VERSION)

FIRE RETARDED CASE

FOR REINFORCED SAFETY

SPLASH PROOF CONSTRUCTION

FOR HARSH ENVIRONMENT

PROTECTIVE HOLSTER

INCREASES PRODUCT DURABILITY

TRUE RMS

MEASURES TRUE VALUE
REGARDLESS OF WAVEFORMS

RS232 PC INTERFACE CAPABILITY

OPTICAL ISOLATED CABLE WITH
DATA RECORDING SYSTEM SOFTWARE
FOR WIN 95/98 (OPTIONAL PURCHASE)

0.08% HIGH BASIC ACCURACY

WITH LARGE EASY TO READ DISPLAY

AUTO POWER OFF (APO)

TO EXTEND BATTERY LIFE

FAST MEASUREMENTS

DATA UPDATES 5 TIMES / SEC

RELATIVE ZERO MODE

FOR CONVENIENT READINGS
COMPARISON & OFFSET

ZOOM ANALOG POINTER

5 TIMES THE RESOLUTION TO
DETECT SMALL SIGNAL TRENDS,
UPDATES 60 TIMES PER SECOND

Hz FUNCTION

FREQUENCY MEASUREMENT

DATA HOLD

FREEZES THE DISPLAYING
READING FOR LATER VIEW

PLUS 50Ω LOW OHM RANGE

UP TO 0.01mΩ RESOLUTION,
AUTO TEST LEADS CALIBRATION

K-TYPE TEMPERATURE

SELECTABLE °C OR °F
MEASUREMENTS

CAPACITANCE

AUTORANGING UP TO 9999μF WITH
600V PROTECTION (1kV FOR X-VERSION)

EMC

MEETS EN55022/A1 CLASS B,
EN50082-1, IEC801-2, IEC801-3

TRANSIENT PROTECTION

UP TO 6.5kV 1.2/50μs LIGHTNING SURGE,
MORE CONFIDENCE FOR SERIOUS USERS

LVD

MEETS EN61010-1 CAT III
11.5mm BASIC CREEPAGE & CLEARANCE



BM817

BM815

BM812

BM811



BM817 (BM817X)	BM815 (BM815X)	BM812 (BM812X)	BM811 (BM811X)	FUNCTION & FEATURE
•	•	•	•	OPTICAL ISOLATED RS232 PC INTERFACE CAPABILITY
•	•	•	•	SOFTWARE FOR WIN 95/98 (OPTIONAL PURCHASE)
•	•			RECORD MAX, MIN, MAX-MIN READINGS, AUTO-RANGING
•	•			CREST (PEAK HOLD) MAX, MIN, MAX-MIN READINGS
•	•	•	•	BACK-LIGHTED LARGE EASY TO READ LCD DISPLAY
•	•			K-TYPE TEMPERATURE -50°C TO 1000°C
•	•	•	•	CAPACITANCE 10pF TO 9999 μ F
•	•	•	•	FREQUENCY 5Hz TO 125kHz
•	•	•	•	OHM 0.01 Ω TO 50M Ω
•	•	•	•	DCV 0.01mV TO 1000V
•	•	•	•	ACV 0.01mV TO 1000V
•	•	•	•	DCA 0.1 μ A TO 20A
•	•	•	•	ACA 0.1 μ A TO 20A
•	•	•	•	DIODE TEST
•	•	•	•	DATA HOLD
•		•		TRUE RMS
•	•	•	•	AUTO POWER OFF
•	•	•	•	FULLY AUTO-RANGING
•	•			RELATIVE ZERO MODE
•	•	•	•	FIRE RETARDED CASE
•	•	•	•	PROTECTIVE HOLSTER
•	•	•	•	FAST MEASUREMENT 5/SEC
•	•	•	•	0.08% HIGH BASIC ACCURACY
•	•			ZOOM MODE ANALOG POINTER
•	•	•	•	SPLASH PROOF CONSTRUCTION
•	•	•	•	FAST AUDIBLE CONTINUITY < 100 μ s
•	•	•	•	AUTO LEADS RESISTANCE CALIBRATION
•	•	•	•	600V INPUT PROTECTION (1kV FOR X-VERSION)
•	•	•	•	A INPUT 240V HBC FUSE PROTECTED (1kV FOR X-VERSION)
•	•	•	•	LVD MEETS EN61010-1 CAT II 1kVAC/DC & CAT III 600VAC/DC
•	•	•	•	TRANSIENT PROTECTION UP TO 6.5kV 1.2/50 μ s LIGHTNING SURGE
•	•	•	•	EMC MEETS EN55022/A1 CLASS B, EN50082-1, IEC801-2, & IEC801-3

BM811 (BM811X), BM812 (BM812X), BM815 (BM815X), & BM817 (BM817X) GENERAL SPECIFICATIONS

Display : 3-5/6 digits 5000 counts LCD display
Update Rate :
Digital Data: 5 per second nominal;
52 Segments Bar graph: 60 per second nominal
Low Battery: Below approx. 7V
Operating Temperature : 0°C to 35°C, 0-80% R.H.;
35°C to 50°C, 0-70% R.H.
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 -50°C), or otherwise specified
Power Supply : Single standard 9V battery;
NEDA1604, JIS006P or IEC6F22
Sensing : True RMS for BM812 (BM812X) & BM817 (BM817X), and average sensing for BM811 (BM811X) & BM815 (BM815X)
APO Timing : Idle for 17 minutes

Safety : Meets EN61010-1, UL3111-1, CSA C22.2 NO.1010-1, and IEC1010-1 CAT III for 600V DC & AC, and CAT II for 1kV DC & AC
Transient protection : 6.5kV (1.2/50µs surge)
E.M.C. : Meets EN55022(1994/A1; 1995/Class B) and EN50082-1(1992)
Overload Protections :
µA & mA : 1A/240V Fuse, IR 10kA;
(1A/600V Fuse, IR 10kA for X-Version);
A : 13A/240V Fuse, IR 10kA;
(15A/1kV Fuse, IR 100kA for X-Version);
V : 1050Vrms, 1450Vpeak;
(1050Vrms, 1450Vpeak for X-Version);
mV : 600VDC/VAC rms
(1050Vrms, 1450Vpeak for X-Version);
Ω & Others : 600VDC/VAC rms
(1050Vrms, 1450Vpeak for X-Version);
Power Consumption : 2.6 mA
Dimension : L186mm X W87mm X H35.5mm;
L198mm X W97mm X H55mm with holster

Weight : 340 gm; 430 gm with holster
Special Features :
For all models:
Data Hold; Backlighted display;
For BM815 (BM815X) & BM817 (BM817X) only:
Record MAX, MIN, MAX-MIN readings; Crest (Instantaneous Peak hold) MAX, MIN, MAX-MIN readings; Relative zero mode; Zoom mode analog pointer
Accessories : Test leads (pair), holster, battery installed, user's manual, Bkp60 banana plug K type thermocouple [BM815 (BM815X) & BM817 (BM817X) only]
Optional Accessories : BR81X PC interface kit (BC81X RS232 optical adapter cable + BS81X RS232 software floppies)
Optional X-version models : General protection up to 1kV for BM811X, BM812X, BM815X, & BM817X is designed for extra heavy duty use

BM811 (BM811X), BM812 (BM812X), BM815 (BM815X), & BM817 (BM817X) ELECTRICAL SPECIFICATIONS

ACCURACY IS ± (% READING DIGITS + NUMBER OF DIGITS) OR OTHERWISE SPECIFIED, AT 23°C ± 5°C & LESS THAN 75% R.H.
True RMS models BM812 (BM812X) & BM817 (BM817X) ACV & ACA accuracies are specified from 5% to 100% of range or otherwise specified, Crest Factor <3:1 at full scale & <6:1 at half scale, and with frequency component within the specified frequency bandwidth

DC Voltage

RANGE	Accuracy
50.00 mV	0.12% + 2d
500.0 mV	0.06% + 2d
5.000V, 50.00V, 500.0V, 1000V	0.08% + 2d

NMRR : >60dB @ 50/60Hz
CMRR : >120dB @ DC, 50/60Hz, Rs=1kΩ
Input Impedance : 10MΩ, 16pF nominal (44pF nominal for 50mV & 500mV ranges)

AC Voltage

RANGE	Accuracy
50Hz — 60Hz	
50.00mV, 500.0mV, 5.000V, 50.00V, 500.0V, 1000V	0.5% + 3d
40Hz — 500Hz	
50.00mV, 500.0mV, 5.000V, 50.00V, 500.0V	0.8% + 3d
1000V	1.0% + 4d
1000V	1.2% + 4d
Up to 20kHz	
50.00mV, 500.0mV, 5.000V, 50.00V, 500.0V	0.5dB**
1000V	3dB**
1000V	Unspec'd

CMRR : >60dB @ DC to 60Hz, Rs=1kΩ
Input Impedance : 10MΩ, 16pF nominal (44pF nominal for 50mV & 500mV ranges)

DC Current

RANGE	Accuracy	Burden Voltage
500.0µA	0.2% + 4d	0.15mV/µA
5000µA		0.15mV/µA
50.00mA		3.3mV/mA
500.0mA		3.3mV/mA
5.000A		0.03V/A
10.00A*		0.03V/A

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

AC Current

RANGE	Accuracy	Burden Voltage
50Hz — 60Hz		
500.0µA	0.6%+3d	0.15mV/µA
5000µA		0.15mV/µA
50.00mA		3.3mV/mA
500.0mA	1.0%+3d	3.3mV/mA
5.000A	0.6%+3d	0.03V/A
10.00A*		0.03V/A
40Hz — 1kHz		
500.0µA	0.8%+4d	0.15mV/µA
5000µA	0.8%+4d	0.15mV/µA
50.00mA	0.8%+4d	3.3mV/mA
500.0mA	1.0%+4d	3.3mV/mA
5.000A	0.8%+4d	0.03V/A
10.00A*	0.8%+4d	0.03V/A

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

Ohms

RANGE	Accuracy
50.00Ω	0.2% + 6d
500.0Ω	0.1% + 3d
5.000kΩ, 50.00kΩ, 500.0kΩ	0.1% + 2d
5.000MΩ	0.4% + 3d
50.00MΩ	1.5% + 5d

Open Circuit Voltage : < 1.3VDC (< 3VDC for 50kΩ & 500kΩ ranges)

Temperature (°C & °F)

RANGE	BM815 (X)	BM817 (X)
	Accuracy*	
-50 °C TO 1000 °C	0.3% + 3d	

*K type thermocouple range & accuracy not included

Frequency

Function	Sensitivity (Sine RMS)	Range
mV	300mV	5Hz - 125kHz
5V	2V	5Hz - 125kHz
50V	20V	5Hz - 20kHz
500V	80V	5Hz - 1kHz
1000V	300V	5Hz - 1kHz
Ω, Cx, diode	300mV	5Hz - 125kHz
µA, mA, A	10% F.S.	5Hz - 125kHz

Accuracy: 0.01% + 2d

Capacitance

RANGE	Accuracy*
50.00nF	0.8% + 3d
500.0nF	0.8% + 3d
5.000µF	1.0% + 3d
50.00µF	2.0% + 3d
500.0µF	3.5% + 5d
9999µF	5.0% + 5d

*Accuracies with film capacitor or better

Diode Tester

Range	Accuracy	Test Current (Typical)	Open Circuit Voltage
2.000V	1%+1d	0.8mA	< 3.5 VDC

Audible Continuity Tester

Audible threshold : between 20kΩ and 120kΩ.
Response time < 100µs

