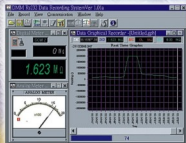


# Perfect Balance Of Price & Performance !



**BM200 Series**  
**Practical DMM**

**BRYMEN**<sup>®</sup>

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



**BM201**



**BM202**



**BS20X**



**BC20X**

| BM202 | BM201 | FUNCTION & FEATURE  |
|-------|-------|---|
| ●     | ●     | OPTICAL ISOLATED RS232 PC INTERFACE CAPABILITY                |
| ●     | ●     | SOFTWARE FOR WIN 95/98 (OPTIONAL PURCHASE)                    |
| ●     | ●     | WIRELESS ELECTRIC FIELD (EF) DETECTION                        |
| ●     |       | K-TYPE TEMPERATURE -20°C TO 300°C                             |
| ●     |       | FREQUENCY 30Hz TO 200kHz                                      |
| ●     |       | CAPACITANCE 1pF TO 25 $\mu$ F                                 |
| ●     | ●     | 0.5% BASIC ACCURACY   |
| ●     | ●     | FAST MEASUREMENTS   |
| ●     | ●     | FULLY AUTO-RANGING  |
| ●     | ●     | RELATIVE ZERO MODE  |
| ●     | ●     | AUDIBLE CONTINUITY  |
| ●     | ●     | AUTO POWER OFF  |
| ●     | ●     | DATA HOLD   |
| ●     | ●     | DIODE TEST  |
| ●     | ●     | DCA 0.1 $\mu$ A TO 20A  |
| ●     | ●     | ACA 0.1 $\mu$ A TO 20A  |
| ●     | ●     | ACV 0.1mV TO 750V   |
| ●     | ●     | DCV 0.1mV TO 1000V  |
| ●     | ●     | OHM 0.1 $\Omega$ TO 25M $\Omega$                              |
| ●     | ●     | PROTECTIVE HOLSTER  |
| ●     | ●     | FIRE RETARDED CASE  |
| ●     | ●     | SPLASH PROOF CONSTRUCTION                                     |
| ●     | ●     | LARGE EASY TO READ LCD DISPLAY                                |
| ●     | ●     | TRANSIENT PROTECTION UP TO 6.5kV 1.2/50 $\mu$ S SURGE         |
| ●     | ●     | LVD MEETS EN61010-1 CAT II 1kVDC/750VAC & CAT III 600VAC/DC   |
| ●     | ●     | EMC MEETS EN55022/A1 CLASS B, EN50082-1, IEC801-2, & IEC801-3 |

# An Affordable All Purpose Field Service Tool ... Now Can Also Work With Your Computer!



**WIRELESS ELECTRIC FIELD (EF) DETECTION**  
DETECTS LIVE LINE VOLTAGE WITHOUT TOUCHING  
IDEAL FOR DISTINGUISHING LIVE OR EARTH CONNECTION,  
AND DETECTS ELECTRIC FIELD RADIATION  
(FROM COMPUTER MONITOR ETC)

**0.5% BASIC ACCURACY**  
WITH LARGE EASY TO READ DISPLAY

**AUTO POWER OFF (APO)**  
TO EXTEND BATTERY LIFE

**FAST MEASUREMENTS**  
DATA UPDATES 3 TIMES / SEC

**FREQUENCY**  
WITH DUTY CYCLE READINGS

**RELATIVE ZERO MODE**  
FOR CONVENIENT READINGS  
COMPARISON & OFFSET

**DATA HOLD**  
FREEZES THE DISPLAYING  
READING FOR LATER USE

**K-TYPE TEMPERATURE**  
°C (OR OPTIONAL °F)  
MEASUREMENTS

**TRANSIENT PROTECTION**  
UP TO 6.5kV 1.250µs SURGE,  
MORE CONFIDENCE FOR USERS

**SPLASH PROOF CONSTRUCTION**  
FOR HARSH ENVIRONMENT

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

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

**FIRE RETARDED CASE**  
FOR REINFORCED SAFETY

**RS232 PC INTERFACE CAPABILITY**  
OPTICAL ISOLATED CABLE WITH  
DATA RECORDING SYSTEM SOFTWARE  
FOR WIN 95/98 (OPTIONAL PURCHASE)

**FULLY AUTORANGING**  
SHORTENS THE TIME TO TEST  
AND INCREASES THE EASE OF USE

**RANGE**  
AUTORANGING WITH MANUAL-  
RANGING OVERRIDE

**FUNCTION SELECTION**  
CONVENIENTLY TOGGLE  
BETWEEN PRIMARY &  
SECONDARY FUNCTIONS

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

**DIODE TEST**  
FOR CHECKING DIODES  
AND RECTIFIERS

**CAPACITANCE**  
AUTORANGING WITH  
600V PROTECTION

**PROTECTIVE HOLSTER**  
INCREASES PRODUCT DURABILITY

**BM202 MULTIMETER (BRYMEN)<sup>®</sup>**  
AUTO RS 232  
-22.02  
Hz. % Rel. Δ Hold  
Select Range EF Hold  
A mA µA K-Temp  
V Ω  
OFF A +  
µA mA COM  
MAX 10A FUSED MAX 0.25A FUSED 750V CAT II 600V CAT III  
Optical Isolated RS232 Interface

## BM201 & BM202 GENERAL SPECIFICATIONS

**Display :** 3-2/3 digits 2500 counts LCD display

**Update Rate :**

Digital Data: 3 per second nominal;

**Low Battery :** Below approx. 2.4V

**Operating Temperature :** 0°C to 35°C, 0-80% R.H.;

35°C to 40°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-40°C), or otherwise specified

**Power Supply :** 1.5V AA Size battery X 2

**Sensing :** Average sensing

**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 1kVDC & 750VAC

**Transient protection :** 6.5kV (1.2/50µs surge)

**E.M.C. :** Meets EN55022(1994/A1; 1995/Class B) and EN55082-1(1992)

**Overload Protections :**

µA & mA : 1A/240V Fuse, IR 10kA;

A : 13A/240V Fuse, IR 10kA;

V : 780Vrms, 1000Vpeak;

mV : 600VDC/VAC rms

Ω & Others : 600VDC/VAC rms

**Power Consumption :** 2 mA

**Dimension :** L150mm X W75mm X H34mm;

L160mm X W82mm X H48mm (with holster)

**Weight :** 252 gm, 345 gm with holster

**Special Features :** Wireless Electric Field (EF) detection; Relative zero mode; Data Hold; RS232 PC computer interface capabilities

**Accessories :** Test leads (pair), holster, battery installed, user's manual

**Optional Accessories :** Bkp60 banana plug K type thermocouple (BM202 only), BR20X PC interface kit (BC20X RS232 optical adapter cable + BS20X RS232 software floppies)

## BM201 & BM202 ELECTRICAL SPECIFICATIONS

ACCURACY IS ± (% READING DIGITS + NUMBER OF DIGITS) OR OTHERWISE SPECIFIED, AT 23°C ± 5°C & LESS THAN 75% R.H.

### DC Voltage

| RANGE                  | Accuracy  |
|------------------------|-----------|
| 250.0 mV               | 0.3% + 4d |
| 2.500V, 25.00V, 250.0V | 0.5% + 2d |
| 1000V                  | 1% + 4d   |

CMRR : >50dB @ 50/60Hz

CMRR : >100dB @ DC, 50/60Hz, Rs=1kΩ

Input Impedance : 10MΩ, 15pF nominal

### AC Voltage

| RANGE          | Accuracy   |
|----------------|------------|
| 50Hz — 500Hz   |            |
| 250.0mV        | 2.0% + 5d* |
| 2.500V         | 1.0% + 3d  |
| 25.00V, 250.0V | 1.3% + 3d  |
| 750V           | 2.2% + 6d  |

CMRR : >60dB @ DC to 60Hz, Rs=1kΩ

Input Impedance : 10MΩ, 15pF nominal

\*Specified from 50mV

### DC Current

| RANGE   | Accuracy  | Burden Voltage |
|---------|-----------|----------------|
| 250.0µA | 1.5% + 6d | 0.15mV/µA      |
| 2500µA  | 0.8% + 3d | 0.15mV/µA      |
| 25.00mA | 2.0% + 6d | 3.3mV/mA       |
| 250.0mA | 1.3% + 3d | 3.3mV/mA       |
| 2.500A  | 2.0% + 6d | 0.03V/A        |
| 10.00A* | 1.5% + 5d | 0.03V/A        |

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

### AC Current

| RANGE        | Accuracy | Burden Voltage |
|--------------|----------|----------------|
| 50Hz — 500Hz |          |                |
| 250.0µA      | 2.0%+4d  | 0.15mV/µA      |
| 2500µA       | 1.0%+4d  | 0.15mV/µA      |
| 25.00mA      | 2.5%+4d  | 3.3mV/mA       |
| 250.0mA      | 1.5%+4d  | 3.3mV/mA       |
| 2.500A       | 2.5%+5d  | 0.03V/A        |
| 10.00A*      | 2.5%+5d  | 0.03V/A        |

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

### Diode Tester

| Open Circuit Voltage | Test Current (Typical) |
|----------------------|------------------------|
| < 1.8 VDC            | 1mA                    |

### Ohms

| RANGE            | Accuracy  |
|------------------|-----------|
| 250.0Ω           | 0.6% + 8d |
| 2.500kΩ          | 0.4% + 5d |
| 25.00kΩ, 250.0kΩ | 0.4% + 2d |
| 2.500MΩ          |           |
| 25.00MΩ          | 1.0% + 4d |

Open Circuit Voltage : < 0.4VDC

### Temperature °C (BM202 standard version)

| RANGE           | Accuracy* |
|-----------------|-----------|
| -20°C TO 300 °C | 3°C + 3d  |

\*K type thermocouple range & accuracy not included

### Temperature °F (BM202 optional version)

| RANGE          | Accuracy* |
|----------------|-----------|
| -4°F TO 572 °F | 6°F + 6d  |

\*K type thermocouple range & accuracy not included

### Frequency (BM202 only)

| Function | Sensitivity (Sine RMS) | Range         |
|----------|------------------------|---------------|
| 250mV    | 3V                     | 30Hz - 30kHz  |
| 2.5V     | 4V                     | 30Hz - 30kHz  |
| 25V      | 10V                    | 30Hz - 30kHz  |
| 250V     | 80V                    | 30Hz - 30kHz  |
| 1000V    | 550V                   | 30Hz - 1kHz   |
| Ω        | 500mV                  | 30Hz - 200kHz |
| µA       | 900µA                  | 30Hz - 30kHz  |
| mA       | 120mA                  | 30Hz - 30kHz  |
| A        | 7A                     | 30Hz - 1kHz   |

Accuracy: 0.05%+4d

### Audible Continuity Tester

Audible threshold : between 20Ω and 150Ω.

### Wireless Electric Field (EF) Detection

| Typical Voltage | Bar graph indication |
|-----------------|----------------------|
| 30V to 150V     | -                    |
| 60V to 300V     | --                   |
| 100V to 480V    | ---                  |
| 300V to 700V    | ----                 |
| above 500V      | -----                |

Indication: Bar graph segments & audible beeper tone proportional to the field strength

Detection frequency: 50/60Hz

Detection antenna: Top side of the meter (Measurement can also be made through the + input terminal with single test lead for live line polarity detection)

### Capacitance (BM202 only)

| RANGE   | Accuracy*    |
|---------|--------------|
| 2.500nF | 6.0% + 45d** |
| 25.00nF | 2.8% + 4d    |
| 250.0nF | 1.0% + 4d    |
| 2.500µF | 1.5% + 4d    |
| 25.00µF | 2.0% + 4d    |

\*Accuracies with film capacitor or better

\*\*Specified from 0.25nF



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P/N BMC 9811

PRINTED IN TAIWAN

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