

Innovative Dual-Display Multimeters For Electrical Professionals!

Features VFD V/Hz, 5ms Crest Capture, Large Cx,
EF-Detection and Temperature °C/°F!



BM900s Series
Versatile Multimeter



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



BM907s



BM906s




BM905s

907s	906s	905s	FUNCTIONS & FEATURES
●	●	●	3-5/6 digits 6,000 counts + 999 counts dual display
●	●	●	Fully auto-ranging for ease of use
●	●	●	Dual display ACA+Hz and ACV+Hz
●	●	●	Fast measurement updates 5/sec
●	●	●	Relative Zero mode
●	●	●	Auto Power Off
●	●	●	Data HOLD
●	●	●	Diode Test
●	●	●	Fast Audible Continuity
●			Back-Lighted easy to read LCD display
●			AC True RMS voltage and current functions
●	●		Type-k temperature -50°C to 1000 °C and -58°F to 1832°F
●	●	●	Fast 5ms Crest-MAX to capture instantaneous peak V or A signals
●	●	●	VFD-V & Hz for fundamental V/Hz of most Variable Frequency Drives
●	●	●	DCV 5 ranges 600.0mV to 1000V
●	●	●	ACV 5 ranges 600.0mV to 1000V
●	●	●	DCA 6 ranges 600.0μA to 10.00A (20.00A for 30 secs per 5 mins)
●	●	●	ACA 6 ranges 600.0μA to 10.00A (20.00A for 30 secs per 5 mins)
●	●	●	Ohm 6 ranges 600.0Ω to 60.00MΩ
●	●	●	Cx 6 ranges 60.00nF to 3000μF for start & run motor capacitors
●	●	●	Line-level Frequency (dual display) 4 ranges 9.99Hz to 50.0kHz
●	●	●	Logic-level Frequency 6 ranges 5.000Hz to 300.0kHz
●	●	●	Non-Contact EF-Detection (NCV)
●	●	●	Probe-Contact EF-Detection for more precise indication of live
●	●	●	Beep-Jack™ audible & visible input warning against improper plug in
●	●	●	Rugged fire retarded industrial casing with battery access door
●	●	●	Washable and replaceable protective holster
●	●	●	Transient protection 6kV 1.2/50μs lightning surge
●	●	●	1000VAC/DC general (Ohms, Cx ... etc.) input protection
●	●	●	High Energy HBC Fuses Protected 1kV
●	●	●	LVD Meets EN61010-1/61010-2-030/61010-2-033 CAT II 1000V, CAT III 600V & CAT IV 300V
●	●	●	EMC EN61326-1

Measures Variable Frequency Drives V & Hz In Dual Display!

5/s Fast Measurements, Dual Display Convenience, Full Functions for Advanced Users!

And Come With High Technology Affordable Costs For Professionals!



FULLY AUTO-RANGING
SHORTENS THE TIME TO MEASURE
AND INCREASES THE EASE OF USE

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

**BACKLIGHTED LCD DISPLAY
(BM907s ONLY)**
FOR EASY VIEWING IN THE DARK

6000 + 999 COUNTS DUAL DISPLAY
SIMULTANEOUS MEASUREMENTS
OF ACA+Hz OR ACV+Hz

LOGIC LEVEL Hz
UP TO 0.001Hz RESOLUTION
LOGIC LEVEL FREQUENCY

5/s FAST MEASUREMENT
DISPLAY UPDATES 5 PER SECOND
NOMINAL FOR FAST CHANGES

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

RELATIVE ZERO MODE
FOR CONVENIENT READINGS
COMPARISON & OFFSET

CAPACITANCE
6 AUTO-RANGES UP TO 3000 μ F
TO MEASURE MOTOR CAPACITORS

5ms CREST-MAX
CAPTURES PEAK SIGNALS OF VOLTS/
AMPS AS SHORT AS 5ms IN DURATION

DIODE TEST
FOR TESTING DIODES & RECTIFIERS

DATA HOLD
FREEZES THE DISPLAYING
READING FOR LATER VIEW

RESISTANCE
6 AUTO-RANGES UP TO 60M Ω

FULL CURRENT RANGES
DCA 6 RANGES TO 10A, 20A FOR 30S
ACA 6 RANGES TO 10A, 20A FOR 30S

EF-DETECTION
BOTH NON-CONTACT (NCV) &
SINGLE-PROBE VOLTAGE DETECTION
FOR IDENTIFYING LIVE LINES

AUTO-POWER-OFF
EXTENDS BATTERY LIFE

**TYPE-K TEMPERATURE
(BM906s & BM907s ONLY)**
SELECTABLE °C AND °F READINGS;
OPTIONAL PURCHASE BKP60 BEAD PROBE

**TRUE RMS MEASUREMENTS
(BM907s ONLY)**
FOR NON-SINUSOIDAL WAVEFORMS
OF AC VOLTAGES & AC CURRENTS

1kV VOLTAGE MEASUREMENT
IMPROVED MEASURING CAPABILITIES
DCV 5 AUTO-RANGES TO 1000V
ACV 5 AUTO-RANGES TO 1000V

TRANSIENT PROTECTION
UP TO 6kV 1.2/50 μ s LIGHTNING SURGE;
MORE CONFIDENCE FOR SERIOUS USERS

LINE LEVEL (DUAL DISPLAY) Hz
MEASURES NOISY LINE LEVEL
VOLTAGE ACV FREQUENCY

LVD MEASUREMENT CATEGORY
MEETS EN61010-1 & UL STANDARDS
CAT II 1kV, CAT III 600V & CAT IV 300V

VFD V & Hz FEATURE
MEASURES FUNDAMENTAL
VOLTAGE & FREQUENCY OF MOST
VARIABLE FREQUENCY DRIVES

EMC DIRECTIVE
MEETS EN61326-1:2013

BEEP-JACK™
AUDIBLE & VISIBLE INPUT WARNING
AGAINST IMPROPER PLUG IN

RUGGED & DURABLE
HIGH-IMPACT FIRE-RETARDED ENCLOSURE
WITH BATTERY COMPARTMENT & ACCESS DOOR

PROTECTIVE HOLSTER
INCREASES PRODUCT DURABILITY;
WASHABLE & REPLACEABLE

GENERAL SPECIFICATIONS

Display: 3-5/6 digits 6000 counts + 3 digits 999 counts dual display LCD
Polarity: Automatic
Update Rate: 5 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
Pollution degree: 2
Storage Temperature: -20°C to 60°C, < 80% R.H. (with battery removed)
Altitude: Operating below 2000m
Temperature Coefficient (T.C.): nominal 0.15 x (specified accuracy) / °C @ (0°C - 18°C or 28°C - 40°C), or otherwise specified
Sensing: Average sensing for BM905s & BM906s; True RMS for BM907s
Safety: 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 1000V, CAT III 600V and CAT IV 300V AC & DC
Transient Protection: 6kV (1.2/50µs surge)
Terminals (to COM) Measurement Category: V / A / mAµA : CAT II 1000V, CAT III 600V and CAT IV 300V AC & DC.
E.M.C. : Meets EN61328-1:2013
 In an RF field of 3V/m:
 Capacitance function is not specified
 Other function ranges:
 Total Accuracy = Specified Accuracy + 100 digits
 Performance above 3V/m is not specified
Overload Protection:
 µA & mA : 0.4A/1000V DC/AC rms, IR 30kA, F fuse
 A : 11A/1000V DC/AC rms, IR 20kA, F fuse
 V : 1100V DC/AC rms
 mV, Ω & others : 1000V DC/AC rms
Power Supply: 1.5V AAA Size battery X 2

Power Consumption: 5.4mA typical
Low Battery: Below approx. 2.4V
APO Timing: Idle for 34 minutes
APO Consumption: 10µA typical
Dimension: L188mm X W87mm X H35.5mm; L198mm X W97mm X H55mm with holster
Weight: 340 gm; 430 gm with holster
Accessories: Test leads (pair), holster, batteries installed, user's manual
Optional Accessories (BM907s & BM906s only):
 Bkp60 banana plug K-type thermocouple, BKB32 banana plug to type-K socket plug adaptor
Special Features: VFD-V & VFD-Hz in Dual Display; Backlighted LCD (BM907s only); 5ms CREST-MAX Capture mode (Peak Hold); Auto-ranging Relative-Zero mode; Display Hold; EF-Detection (NCV); Beep-Jack™ input warning

Electrical Specifications

Accuracy is ±(% reading digits + number of digits) or otherwise specified, at 23°C ± 5°C & less than 75% relative humidity. True RMS BM907s AC voltage & AC current accuracies are specified from 5% to 100% of range or otherwise specified. Maximum Crest Factor <1.65:1 at full scale & < 3.30:1 at half scale, and with frequency components fall within the specified frequency bandwidth for non-sinusoidal waveforms.

DC Voltage

RANGE	Accuracy
60.00 mV	0.6%+3d
600.0mV,	0.3%+3d
6.000V,	1.2%+3d
60.00V	0.6%+3d
600.0V, 1000V	1.0%+3d

Input impedance: 10MΩ, 50 pF nominal

AC Voltage

RANGE	Accuracy
50Hz ~ 500Hz	
60.00 mV	1.3% + 5d
600.0mV,	1.0% + 5d
6.000V	2.0% + 5d
60.00V	1.3% + 5d
600.0V, 1000V	2.0% + 5d

Input impedance: 10MΩ, 50 pF nominal

VFD-Voltage (LPF-ACV)

RANGE	Accuracy ¹⁾
10.0Hz ~ 20.0Hz	
6.000V, 60.00V, 600.0V, 1000V	3.5% + 8d
20.0Hz ~ 200Hz	
6.000V, 60.00V, 600.0V, 1000V	2.5% + 8d
200Hz ~ 400Hz ²⁾	
6.000V, 60.00V, 600.0V, 1000V	7.0% + 8d

Input impedance: 10MΩ, 50 pF nominal

¹⁾Not specified for fundamental frequency > 400Hz

²⁾Accuracy linearly decreases from 2.5% + 8d @ 200Hz to 7.0% + 8d @ 400Hz

Crest-MAX Capture (V & A only)

Accuracy: Specified accuracy plus 250 digits for changes > 5ms in duration

Ohm

RANGE	Accuracy
600.0Ω	0.8%+8d
6.000KΩ, 60.00KΩ, 600.0KΩ	0.6%+4d
6.000MΩ	1.5%+5d
60.00MΩ	2.5%+5d

Open Circuit Voltage: 0.45VDC typical

Audible Continuity Tester

Audible Threshold:
 between 10Ω and 120Ω
 Response time: <32ms

Capacitance

RANGE	Accuracy ¹⁾
60.00nF ²⁾ , 600.0nF, 6.000µF,	2.0%+5d
60.00µF, 600.0µF ²⁾	3.5%+5d
3000µF ³⁾	4.0%+5d

¹⁾Accuracies with film capacitor or better

²⁾Accuracy unspecified

³⁾T.C.: 0.25 x specified accuracy / °C @ 0 ~ 18 °C, 28 ~ 40 °C

Diode Tester

RANGE: 1.000V
 Test Current: 0.2mA typical
 Open Circuit Voltage: < 1.8VDC typical

DC Current

RANGE	Accuracy	Burden Voltage
600.0µA	1.2% + 5d	0.25mV/µA
6000µA	1.0% + 3d	0.25mV/µA
60.00mA	2.0% + 5d	4.0mV/mA
600.0mA	1.5% + 3d	4.0mV/mA
6.000A	1.5% + 5d	0.045V/A
10.00A ¹⁾	1.2% + 3d	0.045V/A

¹⁾10A continuous, >10A to 20A for 30 seconds max with 5 minutes cool down interval

AC Current

RANGE	Accuracy ¹⁾	Burden Voltage
50Hz ~ 500Hz		
600.0µA	2.0% + 6d	0.25mV/µA
6000µA	1.5% + 5d	0.25mV/µA
60.00mA	2.5% + 6d	4.0mV/mA
600.0mA	2.1% + 5d	4.0mV/mA
6.000A	2.0% + 6d	0.045V/A
10.00A ¹⁾	1.8% + 5d	0.045V/A

¹⁾10A continuous, >10A to 20A for 30 seconds max with 5 minutes cool down interval

Temperature (BM906s & BM907s only)

RANGE	Accuracy
-50 °C ~ 1000 °C	1% + 3d
-58 °F ~ 1832 °F	1% + 6d

K type thermocouple range & accuracy not included

Hz Logic Level Frequency

RANGE	Accuracy ¹⁾
5.000Hz ~ 300.0KHz	0.2%+4d

¹⁾Accuracy is specified at < 20VAC rms

Input Signal : Square wave with duty cycle > 40% & < 70%, or Sine wave

Sensitivity:

5Hz~20Hz : > 1Vrms Sine wave;
 20Hz~300kHz : > 2.6Vp; or 1.9Vrms Sine wave

Hz Line Level Frequency (Dual Display)

AC Range	Sensitivity (Sine RMS)	Range
600mV	0.1V	10Hz~100kHz
6V	0.6V	10Hz~10kHz
60V	6V	10Hz~50kHz
600V	60V	10Hz~50kHz
1000V	600V	45Hz~10kHz
VFD 6V	0.6V~2.1V ¹⁾	10Hz~400Hz
VFD 60V	6V~21V ¹⁾	10Hz~400Hz
VFD 600V	60V~210V ¹⁾	10Hz~400Hz
600µA	60µA	10Hz~10kHz
6000µA	600µA	10Hz~10kHz
60mA	6mA	10Hz~10kHz
600mA	60mA	10Hz~10kHz
6A	0.6A	20Hz~3kHz
10A	6A	20Hz~3kHz

Accuracy: 0.2%+4d

¹⁾VFD sensitivity linearly decreases from 10% F.S. @ 200Hz to 35% F.S. @ 400Hz

Non-Contact EF-Detection

Typical Voltage	Bar-Graph Indication
20V (tolerance: 10V ~ 36V)	-
55V (tolerance: 23V ~ 83V)	--
110V (tolerance: 59V ~ 165V)	---
220V (tolerance: 124V ~ 330V)	----
440V (tolerance: 250V & 1000V)	-----

Indication: Bar-graph segments & audible beep tones

proportional to the field strength

Detection Frequency: 50/60Hz

Detection Antenna: Top end of the meter

Probe-Contact EF-Detection: For more precise indication of live wires, such as distinguishing between live and ground connections, use the Red (+) test probe for direct contact measurement



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