



079	078	077	076	073	072	FUNCTIONS & FEATURES	
•	•	•		•	•	VFD-V & Hz for fundamental V/Hz of most Variable-Frequency-Drives	
•	•	•	•	•	•	Fast measurement updates 5/sec	
•	•	•		•	•	3-5/6 digits 6,000 counts display large LCD	
•	•	•				5mm conductor size Hall-effect 600A DC/AC jaws	
			•	•	•	Omm conductor size Ultra-slim 600A AC jaws	
•	•	•	•	•	•	AmpTip™ Low-current-range calibrated at Jaw-tip for slim-conductors	
•	•	AC	AC	AC	AC	AC+DC, AC True RMS voltage and current functions	
•	•	•	•		•	600VAC/DC input protection on general functions	
•	•	•	•			Auto Power Off	
•	•	•	•	•	•	Data HOLD	
•	•	•	•	•	•	Record MAX/MIN/AVG mode (Auto-ranging)	
•	•	•				Relative mode (Auto-ranging) with DC-Zero mode on DCA, DC+ACA ranges	
•	•					Fast 80ms PEAK-RMS mode to capture in-rush currents	
•	•		•			Back-lighted easy-to-read LCD display	
•	•	•	•		•	Non-Contact EF-Detection (NCV)	
•	•	•	•		•	Probe-Contact EF-Detection for more precise indication of live	
•			•			R 3Φ-Rotation-R for MAINS supply (Probe-contact)	
•						3Φ-Rotation-M (Hi-sensitivity mode) for Motors (Probe-contact)	
•						Type-K temperature -40.0°C to 400°C or -40.0°F to 752°F selectable	
•			•			DCμA ranges 200.0μA to 2000μA (via leads) for HVAC flame sensors	
•	•					DC+ACA ranges 60.00A to 600.0A + AmpTip <sup>™</sup> DC+ACA 60.00A range	
•	•	•				DCA ranges 60.00A to 600.0A + AmpTip <sup>™</sup> DCA 60.00A range	
•	•	•	•	•	•	ACA ranges 60.00A to 600.0A + AmpTip™ ACA 60.00A range	
•	•					DC+ACV range 600.0V	
•	•	•	•		•	DCV range 600.0V	
•	•	•	•	•	•	ACV range 600.0V	
•	•	•	•			Ohm ranges $600.0\Omega$ to $60.00k\Omega$	
•	•		•	•		Cx ranges 200.0µF to 2500µF for start & run motor capacitors	
•	•	•	•	•	•	Diode test & Fast audible Continuity	
•	•	•	•	•		Line-level ACV Frequency 5.00Hz to 999.9Hz	
•	•	•	•	•	•	Soft carrying pouch	
•	•	•	•	•	•	Rugged fire retarded casing with battery access door	
•	•	•	•	•	•	Transient protection 6kV 1.2/50µs lightning surge	
•	•	•	•	•	•	LVD EN61010-1/61010-2-032/61010-2-033 to CAT III 600V & CAT IV 300V	
•	•	•	•	•	•	EMC EN61326-1 (EN55022, EN61000-3-2/-3 & EN61000-4-2/-3/-4/-5/-6/-8/-11)	

# Handy 600Al GAT III 600VI Patented Amplip Jaws & Phase Rotation!

Advanced Safety Compliance with 133 61010+2+022 3rd edition and 133 61010+2+023 1st edition

Investigated, Tested and listed by UL, a global independent safety salance company

BRYMEN

BM079
AmpTipTMJaws
Clamp-on DMM

# AC+DC TRUE RMS MEASUREMENTS (BM079, & 078 ONLY)

For Non-sinusoidal & Complex Waveforms Of Voltages & Currents

#### LVD CAT III 600V & CAT IV 300V

Certified EN61010-2-032, EN61010-2-033, EN61010-1 & Relevant UL Standards On CAT III 600V & CAT IV 300V

#### **DIODE TEST**

For Testing Diodes & Rectifiers

#### **FAST AUDIBLE CONTINUITY**

For Quick Open-short Tests On Switches, Fuses, And Wires

#### **REGULAR CURRENT & Hz**

Measures At Jaw Center For Regular Conductors Up To 600 Amps

#### AmpTip™ LOW-CURRENT & Hz

Ergonomically Measures At Jaw Tip For Small-sized Conductors Up To 60 Amps

#### **VFD V & Hz FEATURE**

Measures Fundamental Voltage & Frequency Of Most Variable Frequency Drives

#### **FULLY AUTO-RANGING DMM**

Shortens The Time To Measure And Increases The Ease Of Use

#### **AUTO-POWER-OFF**

**Extends Battery Life** 

#### IN-RUSH PEAK-RMS (BM079, 078, & 076 ONLY)

Captures In-rush Peak RMS Readings At Durations As Short As 80ms

#### RECORD MAX / MIN / AVG

Records Max, Min, & Calculates Avg Readings Over Time. Auto-ranging

# BACKLIGHTED LCD DISPLAY (BM079, 078, & 076 ONLY)

For Easy Viewing In The Dark

#### EMC

Meets EN61326-1:2006 (EN55022, EN61000-3-2/-3 & EN61000-4-2/-3/-4/-5/-6/-8/-11)

### TYPE-K TEMPERATURE (BM079 & 076 ONLY)

Selectable °C And °F Readings; Comes With Bkp60 Bead Probe

# HANDY 35mm AmpTip™ CLAMP JAWS / (30mm FOR ACA ONLY MODELS)

For Large & Small Conductors With AC Or DC+AC TRMS 600A Capability

#### **EF-DETECTION**

Both Non-Contact (NCV) & Single-Probe Voltage Detection For Identifying Live Lines

#### DCµA (BM079 & 076 ONY)

For HVAC Flame Sensors Testing Via Test Probes

#### PHASE ROTATION (BM079 & 076 ONY)

Dual Sensitivity Modes For Both Motors And Supply Systems

#### **CAPACITANCE (EXCEPT BM072)**

2 Auto-ranges Up To 2500μF To Measure Motor Capacitors

#### RESISTANCE

3 Auto-ranges Up To  $60 k\Omega$  Best Resolution  $0.1\Omega$  At  $600\Omega$  Range

#### **ERGONOMIC & STREAMLINE BODY**

Also Comes With A Soft Pouch For Easy Carrying & Protection

#### 1.0% DCV BASIC ACCURACY

DCV Up To 600V; ACV Up To 600V

### RELATIVE ZERO & DC\_ZERO

For Convenient Readings Comparison As Well As DC Jaws Hysteresis Offset

#### DATA HOLD

Freezes The Displaying Reading For Later View

#### **RUGGED & DURABLE**

High-impact Fire-retarded Enclosure With Battery Compartment & Access Door

#### TRANSIENT PROTECTION

12

(I) co

Up To 6kV 1.2/50μs Lightning Surge; More Confidence For Serious Users

#### **GENERAL SPECIFICATIONS**

Display: 3-5/6 digits 6000 counts

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: nominal 0.15 x (specified accuracy)/ °C @(0°C -- 18°C or 28°C -- 40°C), or

otherwise specified Sensing: True RMS

Safety: Double insulation per UL/IEC/EN61010-1 Ed. 3, IEC/EN61010-2-033 Ed. 1, CAN/CSA C22.2 No. 61010-1 Ed. 3, IEC/EN61010-2-032 Ed. 3 & IEC/EN61010-031 Ed. 1.1 to CAT III 600V and CAT IV 300V AC & DC

Transient Protection: 6.0kV (1.2/50µs surge) **Overload Protections:** 

Current & Hz functions via jaws: 600ADC/AAC rms at

<400Hz

Voltage & 3-Phase Rotation functions via terminals: 660VDC / 920VAC rms

Other functions via terminals: 600VDC/VAC rms E.M.C.: Meets EN61326-1:2006 (EN55022,

EN61000-3-2, EN61000-3-3, EN61000-4-2, EN61000-4-3, EN61000-4-4, , EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11):

DCA and DC+ACA Functions, in an RF field of 1V/m: Total Accuracy = Specified Accuracy + 20 digits at around 405MHz

DC<sub>µ</sub>A and Ohm Functions, in an RF field of 1V/m: Total Accuracy = Specified Accuracy + 25 digits Other Functions, in an RF field of 3V/m:

Total Accuracy = Specified Accuracy + 20 digits Power Supply: 1.5V AAA Size battery X 2 Power Consumption: Typical 13mA for Current functions of BM079, BM078 & BM077; 4.3mA for others

Low Battery:

Below approx. 2.85V for Capacitance & Hz Below approx. 2.5V for other functions APO Timing: Idle for 32 minutes

APO Consumption: 5µA typical

Dimension (LxWxH): 223 x 76 x 37mm for BM079, BM078 & BM077; 217 x 76 x 37mm for BM076, BM073 & BM072

Weight: 234gm for BM079, BM078 & BM077; 186gm for BM076, BM073 & BM072

Jaw opening & Conductor diameter:

(BM079 & BM076 only)

35mm max for BM079, BM078 & BM077 30mm max for BM076, BM073 & BM072

Accessories: Test lead set, User's manual, Soft carrying pouch, Bkp60 banana plug K-type thermocouple (BM079 & BM076 only), Alligator Clip set (BM079 & BM076 only) Optional purchase accessories: BKB32 banana plug to type-K socket plug adaptor (BM079 & BM076 only) **Special Features:** AmpTip™ low-current range; MAX/MIN/AVG Recording mode; Display Hold; EF-Detection (NCV); Backlighted LCD (BM079, BM078 & BM076 only); 80ms Peak-RMS mode for inrush current (BM079, BM078 & BM076 only); Relative-Zero (BM079, BM078 & BM076 only), 3-Phase Rotation detection

#### **Electrical Specifications**

Accuracy is  $\pm$ (% reading digits + number of digits) or otherwise specified, at 23°C  $\pm$  5°C.

Maximum Crest Factor < 2.5 : 1 at full scale & < 5 : 1 at half scale or otherwise specified, and with frequency spectrum not exceeding the specified frequency bandwidth for non-sinusoidal waveforms

RANGE	Accuracy	
600.0V	1.0% + 5d	

Input Impedance: 10MΩ, 100 pF nominal

#### AC Voltage (with Digital Low-Pass Filter)

RANGE	Accuracy	
50Hz ~ 60Hz		_
600.0V	1.0% + 5d	

Input Impedance: 10MΩ, 100 pF nominal

#### DC+AC Voltage (with Digital Low-Pass Filter) (BM079 & BM078 Only)

RANGE	Accuracy	
DC, 50Hz ~ 60Hz		
600.0V	1.2% + 7d	

Input Impedance: 10MΩ, 100 pF nominal

#### PEAK-rms (ACV & ACA of BM079, BM078 & BM076 only)

Response: 80ms to > 90%

#### **Audible Continuity Tester**

Audible Threshold: At between  $10\Omega$  and  $250\Omega$ Response time: 32ms approx.

#### Ohm

RANGE	Accuracy
600.0Ω, $6.000$ K $Ω$ , $60.00$ K $Ω$	1.0% + 5d

Open Circuit Voltage: 1.0VDC typical

#### Capacitance (BM079, BM078, BM076 & BM073 only)

RANGE	Accuracy 1)
200.0μF, 2500μF	2.0% + 4d

1)Accuracies with film capacitor or better

#### **Diode Tester**

RANGE	Accuracy		
2.000V	1.5% + 5d		

Test Current: 0.3mA typically

Open Circuit Voltage: < 3.5VDC typically

#### Temperature (BM079 & BM076 only)

RANGE	Accuracy
-40.0 °C ~ 99.9 °C	1.0% + 0.8°C
100 °C ~ 400 °C	1.0% + 1°C
-40.0 °F ~ 211.8 °F	1.0% + 1.5°F
212 °F ~752 °F	1.0% + 2°F

K-type thermocouple range & accuracy not included

#### DCμA (BM079 & BM076 only)

RANGE	Accuracy	Burden Voltage
200.0μΑ, 2000μΑ	1.0% + 5d	3.5mV/μA

#### AmpTip™ clamp-on ACA

RANGE	Accuracy 1) 2) 3) 4)		
DC, 50Hz ~ 60Hz			
60.00A 1.5% + 5d			

Induced error from adjacent current-carrying conductor:

<sup>2)</sup>Specified with Relative Zero △ mode applied to offset the non-zero residual readings, if any 3)Add 10d to the specified accuracy @ < 4A 4)For BM076, BM073 & BM072, unspecified @ <0.2A

### AmpTip™ clamp-on DCA (BM079, BM078 & BM077

omy,			
	RANGE	Accuracy 1) 2) 3)	
ı	60.00A	2.0% + 5d	

<sup>1)</sup>Induced error from adjacent current-carrying conductor: <0.01A/A

3)Add 10d to the specified accuracy @ < 4A

#### AmpTip™ clamp-on DC+ACA (BM079 & BM078 only)

range of the state				
RANGE	Accuracy 1) 2) 3)			
DC, 50Hz ~ 60Hz				
60.00A	2.0% + 7d			

<sup>1)</sup>Induced error from adjacent current-carrying conductor: <0.01A/A

3)Add 10d to the specified accuracy @ < 4A

#### Regular Clamp-on ACA

RANGE	Accuracy 1) 2) 3)	
50Hz ~ 100Hz		
60.00A 4) 5), 600.0A	1.8% + 5d	
100Hz ~ 400Hz		
60.00A <sup>4) 5)</sup> , 600.0A	2.0% + 5d	

<sup>1)</sup>Induced error from adjacent current-carrying conductor: <0.01A/A

<sup>2)</sup>For Models 079, 078 & 077, Maximum Crest Factor < 2:1 at full scale & < 4:1 at half scale

3)For Models 076, 073 & 072, specified accuracy is for measurements made at the jaw center. When the conductor is not positioned at the jaw center, add 2% to specified accuracy for position errors

4)For Models 079, 078 & 077, add 10d to the specified accuracy @ < 9A

5) For Models 076, 073 & 072, add 10d to specified accuracy @ < 6A, and unspecified @ < 0.2A

### Regular Clamp-on DCA (BM079, BM078 & BM077

	····y		
	RANGE	Accuracy 1) 2)	
ı	60.00A <sup>3)</sup> , 600.0A	2.0% + 5d	

1)Induced error from adjacent current-carrying conductor: <0.01A/A

2)Specified with DC-Zero mode applied to offset the non-zero residual readings, if any 3)Add 10d to the specified accuracy @ < 9A

#### Regular Clamp-on DC+ACA (BM079 & BM078 only)

,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
RANGE	Accuracy 1) 2)	
DC, 50Hz ~ 100Hz		
60.00A <sup>3)</sup> , 600.0A	2.2% + 7d	
100Hz ~ 400Hz		
60.00A 3), 600.0A	2.7% + 7d	

1)Induced error from adjacent current-carrying conductor: < 0.01A/A

2)Specified with DC-Zero mode applied to offset the non-zero residual readings, if any 3)Add 10d to the specified accuracy @ < 9A

#### Hz Line Level Frequency

The Entre Level 1 requestoy		
Function	Sensitivity 1) (Sine RMS)	Range
600V	50V	5.00Hz ~ 999.9Hz
60A (AmpTip™)	40A	50.00Hz ~ 400.0Hz
60A, 600A	40A	50.00Hz ~ 400.0Hz

Accuracy: 1%+5d

1)DC-bias, if any, not more than 50% of Sine RMS

#### 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 ~ 600V)		

Indication: Bar-graph segments & audible beep tones proportional to the field strength

Detection Frequency: 50/60Hz

Detection Antenna: Inside the top side of the stationary

Probe-Contact EF-Detection: For more precise indication of live wires, such as distinguishing between live and ground connections, use one single probe to test via terminal COM for direct contact EF-Detection with best sensitivity.

#### **BRYMEN TECHNOLOGY CORPORATION**

http://www.brymen.com

Copyright © MMXIII B.T.C. All rights reserved Specifications subject to change without notice

<sup>2)</sup>Specified with DC-Zero mode applied to offset the non-zero residual readings, if any

<sup>2)</sup>Specified with DC-Zero mode applied to offset the non-zero residual readings, if any

### **X-ON Electronics**

Largest Supplier of Electrical and Electronic Components

Click to view similar products for Clamp Multimeters & Accessories category:

Click to view products by Brymen manufacturer:

Other Similar products are found below:

I800 FLUKE 1630-2 ZAPDUMOD-03 ZARKMS-01-99 UT233 TESTO 770-3 0590 7703 AX-3550 AX-M266C BM079 BM089 BM157 BM162 BM197 KEW2210R FLUKE 80I-110S FLUKE I200 FLUKE I200S FLUKE I3000FLEX-24 FLUKE I310S FLUKE I400 CIE600 TESTO 770-2 0590 7702 34194A KEW2433R KEW8112 FLUKE 772 380976-K MA3110 MA440 MA443 MA445 FLUKE-374 FC TA74 AMP-320 CM55 CM46 I200 ACD-6 PRO FLUKE-1630-2FC I410 CM44 CM42 FLK-A3000 FC FLUKE-376 FC ACD-14-PRO MA610 F201 F205 MA193 (250 MM) DIGIFLEX 4000A 350MM