

### 17 FUNCTIONS 25 RANGES

#### Model 2736

Transient Protection  
6.5kV  
(1.2/50 S surge)

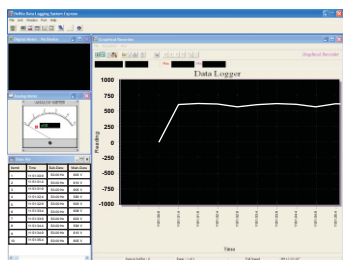


#### SPECIAL FEATURES

- Selectable Power parameters of KW, KVAR & KVA with Total Power Factor in dual-display
- AutoVA (Auto Selection on ACV, DCV or ACA functions)
- THD%-F Function
- Backlight display
- Display Hold; Peak-rms Hold
- PC Interface Capabilities (Optional)

#### GENERAL SPECIFICATION :

- \* **Sensing :** True RMS sensing
- \* **Jaw opening & Conductor diameter :** 45mm max
- \* **Display :**  
Voltage Function : 6000 counts LCD display  
Power, Ohm & Hz functions : 9999 counts LCD display  
ACA clamp-on function : 4000 counts LCD display
- \* **Update Rate :**  
Power function : 2 per second nominal Voltage,  
ACA clamp-on & Ohm functions : 2 per second nominal  
Hz function : 1 per second nominal
- \* **Polarity :** Automatic
- \* **Operating Temperature :** 0°C to 40°C
- \* **Relative Humidity :** Maximum relative humidity 80% for temperature upto 31°C decreasing linearly to 50% relative humidity at 40°C
- \* **Low Battery :** Below approx 2.4V
- \* **Altitude :** Operating below 2000m
- \* **Storage Temperature :** -20°C to 60°C, < 80% R.H. (With battery removed)
- \* **Temperature Coefficient :** nominal 0.15x (specified accuracy) / °C @ (0°C -18°C or 28°C - 40°C), or otherwise specified
- \* **Power supply :** Standard 1.5V AAA Battery x 2.
- \* **Power Consumption :**  
Voltage, ACA, Hz & Power :11mA typical
- \* **Ohm function :** 5.5mA typical
- \* **APO Timing :** Idle for 30 minutes
- \* **APO Consumption :** 4mA typical
- \* **Dimension :** 224(L) x 78(W) x 40(H) mm
- \* **Weight :** approx. 224 gms.



PC Software Screen



Software CD



BA-1XX Cable

BUA-2303 USB to Serial Adapter

BC-100R USB port Cable

#### SAFETY :

- Meets IEC61010-2-032(2002), EN61010-2-032(2002), UL61010B-2-032(2003)
- **Measurement Category :** CAT III 600 Volts AC & DC
- **Pollution degree :** 2
- **E. M. C. :** Meets EN61326(1997, 1998/A1), EN61000-4-2(1995,2000/A2), and EN61000-4-3(2002) In an RF field of 3V/m :  
Total Accuracy = specified Accuracy + 50 digits  
Performance above 3V/m is not specified
- **Overload Protections :**  
ACA Clamp-on jaws : AC 1000A rms continuous  
& COM Terminals : 600VDC / VAC rms

#### ACCESSORIES :

Test leads (pair), batteries installed, user's manual & soft carrying case, banana plug type-K thermocouple.

#### OPTIONAL ACCESSORIES :

PC interface kit ( including BA -1XX Cable, BUA-2303 USB to serial adapter, BC-100R USB port Cable & 2709 Software CD).

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

True RMS ACV & ACA clamp-on accuracies are specified from 5% to 100% of range or otherwise specified. Maximum Crest Factor are as specified below, and with frequency spectrums, besides fundamentals, fall within the meter specified AC bandwidth for non-sinusoidal waveforms. Fundamentals are specified at 50Hz and 60Hz.

**ACA CURRENT (Clamp-on)**

Range	Resolution	Accuracy <sup>1)2)</sup>
50Hz / 60Hz		
40.00 A	0.01 A	± (1.0%rdg + 5dpts)
400.0 A	0.1 A	
1000 A	1 A	
45Hz ~ 500Hz		
40.00 A	0.01 A	± (2.0%rdg + 5dpts)
400.0 A	0.1 A	
1000 A	1 A	
500Hz ~ 3.1kHz		
40.00 A	0.01 A	± (2.5%rdg + 5dpts)
400.0 A	0.1 A	
1000 A	1 A	

**ACV AutoVA™ Threshold :** 1A AC (40Hz ~ 500Hz only) nominal  
**Crest Factor :** <2.5 :1at full scale & <5.0 :1 at half scale for 40.00A & 400.0A ranges

<1.4 : 1 at full scale & <2.8 : 1 at half scale for 1000A range.

<sup>1)</sup> Induced error from adjacent current carrying conductor : <0.06A/A

<sup>2)</sup> Specified accuracy is from 1% to 100% of range and for measurements made at the jaw center. When the conductor is not positioned at the jaw center, position errors introduced are:  
 Add 1% to specified accuracy for measurements made WITHIN jaw marking lines (away from jaw Opening)  
 Add 4% to specified accuracy for measurements made BEYOND jaw marking lines (toward jaws Opening)

**SINGLE-PHASE & 3-PHASE BALANCED-LOAD POWER**

Range	Accuracy <sup>1)2)3)</sup>		
<b>0 ~ 600.0kVA</b>	<b>F ~ 10<sup>th</sup></b>	<b>11<sup>th</sup> ~ 45<sup>th</sup></b>	<b>46<sup>th</sup> ~ 51<sup>st</sup></b>
<b>@ PF = 0.99 ~ 0.1</b>	2.0%+6d	3.5%+6d	5.5%+6d
Range	Accuracy <sup>1)2)4)</sup>		
<b>0 ~ 600.0kW / kVAR</b>	<b>F ~ 10<sup>th</sup></b>	<b>11<sup>th</sup> ~ 25<sup>th</sup></b>	<b>26<sup>th</sup> ~ 45<sup>th</sup></b>
<b>@ PF = 0.98 ~ 0.70</b>	2.0%+6d	3.5%+6d	4.5%+6d
<b>@ PF = 0.70~0.50</b>	3.0%+6d		10%+6d
<b>@ PF = 0.50~0.30</b>		4.5%+6d	
<b>@ PF = 0.30~0.20</b>		10%+6d	15%+6d

<sup>1)</sup> Specified accuracy is for ACA clamp measurement at the center of jaws.

When the conductor is not positioned at the jaw center, position errors introduced are :

Add 1% to specified accuracy for ACA measurements made WITHIN jaw marking lines (away from jaw opening)  
 Accuracy is not specified for ACA measurement made BEYOND jaw Marking lines (toward jaws opening)

<sup>2)</sup> Add 4d to specified accuracy for 3-Phase Balanced-load Power measurements.

<sup>3)</sup> Add 1% to specified accuracy @ ACA fundamental <6A or ACV fundamental <90V. Accuracy is not specified @ ACA fundamental < 1A or ACV Fundamental <30V

<sup>4)</sup> Add 1% to specified accuracy @ ACA fundamental <6A or ACV fundamental < 90V. Accuracy is not specified @ ACA fundamental < 2A or ACV fundamental <50V

**FREQUENCY**

Range	Resolution	Accuracy
5Hz~500Hz	0.01Hz~0.1Hz	±(0.5%rdg + 4dpts)

Sensitivity (Sine RMS)

- 40A range : > 4A
- 400A range : > 40A
- 1000A range: >400A
- 600V range : >30V

**AC VOLTAGE**

Range	Resolution	Accuracy
50Hz / 60Hz		
600.0V	0.1V	±(0.5%rdg + 5dpts)
45Hz ~ 500Hz		
600.0V	0.1V	±(1.5%rdg + 5dpts)
500Hz ~ 3.1kHz		
600.0V	0.1V	±(2.5%rdg + 5dpts)

**CMRR :** > 60dB @ DC to 60Hz, Rs=1k

**Input Impedance :** 2M , 30pF nominal

**Crest Factor :** < 2.3 : 1 at full scale & < 4.6 : 1 at half scale

**ACV AutoVA™ Threshold :** 30VAC (40Hz ~ 500Hz only) nominal

**DC VOLTAGE**

Range	Resolution	Accuracy
600.0V	0.1V	±(0.5%rdg + 5dpts)

**NMRR :** >50dB @ 50 to 60Hz

**CMRR :** >120dB @ DC, 50 / 60Hz, Rs=1k

**Input Impedance:** 2M , 30pF nominal

**DCV AutoVA™ Threshold :** 2.4VDC nominal

**TOTAL POWER FACTOR (PF)**

Range	Accuracy <sup>1)</sup>	
0.10 ~ 0.99	F ~ 21 <sup>st</sup>	22 <sup>nd</sup> ~51 <sup>st</sup>
	3d	5d

Specified accuracy @ ACA

fundamental > 2A;

ACV fundamental > 50V

**A-lags-V Indication :**

LCD annunciator "A-lags-V" turns on to indicate an inductive circuit, or Current lags Voltage V (i.e., Phase-shift angle φ is "+").

A-lags-V Indication is specified at 50/60Hz fundamental without the presence of harmonics, and at ACV > 90V, ACA > 9A and PF < 0.95

**THD%-F**

Range	Harmonic order	Accuracy <sup>1)</sup>
0.0% ~ 50.0%	Fundamental	1.5% + 6d
	2nd ~ 3rd	7% + 6d
	4th ~ 21st	2.5% + 6d <sup>2)3)</sup>
	22nd ~ 51st	10% + 10d <sup>4)</sup>
50.0% ~ 100%	2nd ~ 3rd	Unspecified
	4th ~ 21st	2.5% + 6d <sup>5)6)</sup>
	22nd ~ 51st	10% + 10d <sup>4)</sup>
100% ~ 450% <sup>7)</sup>	2nd ~ 3rd	Unspecified
	4th ~ 21st	7% + 6d <sup>2)4)</sup>
	22nd ~ 51st	Unspecified

**THD%-F is defined as :** (Total Harmonic RMS / Fundamental RMS) x 100%

<sup>1)</sup> Accuracy specified @ fundamental ≥ 70V & Total RMS ≤ 600V for ACV THD%-F, fundamental ≥ 6A & Total RMS ≤ 1000A for ACA THD%-F, and Crest Factors @ :

<2.5 for 600V Range

<2.5 for 40A Range

< 3.0 for 400A Range

< 1.6 for 1000A Range

<sup>2)</sup> Add 4d to specified accuracy @ 40A Range

<sup>3)</sup> Add 4.5% to specified accuracy @ 1000A range

<sup>4)</sup> Unspecified @ 1000A range

<sup>5)</sup> Add 1% + 4d to specified accuracy @40A Range

<sup>6)</sup> Add 4.5% to specified accuracy @ 400A - 750A:

Unspecified @ > 750A

<sup>7)</sup> -150% for 600V Range.

**TEMPERATURE**

Range	Accuracy <sup>1)</sup>
-50°C ~ 300°C	2% rdg + 3°C
-58°F ~ 572°F	2% rdg + 6°F

Type K-thermocouple range & accuracy not specified.

<sup>1)</sup> specified accuracy plus 3°C @

-20°C ~ 50°C

or 6°F @ -4°F ~ -58°F)

**RESISTANCE**

Range	Resolution	Accuracy
999.9	0.1	±(1.0%rdg+6dpts)

**Open Circuit Voltage :** 0.4VDC typical

**AUDIBLE CONTINUITY TESTER**

<b>Audible threshold</b>	between 10 and 300
<b>Response time</b>	250ms

**PEAK-rms HOLD (ACA & ACV Only)**

<b>Response</b>	65 ms to >90%
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**All Specifications are subject to change without prior notice**