



**17717A**

**Features**

- 4 Digit LCD, 9999 Count, Autoranging
- Data Hold, Auto Power Off
- Dual Display KW + HP, KW + PF, KW + KVAR, KVA +  $\phi$ , V + A, A + Hz, V + Hz
- Cable of Diameter upto 43mm / Busbar upto 65mm x 16mm

**Applications**

- Check Current drawn in Motors and Compressors
- Use MAX/MIN/REC in Temperature Mode to Assess Efficiency
- Test Run/Start Capacitors
- Analyze Temperature Data with the Aid of the Time Stamp
- Resistance upto 100M $\Omega$
- Check for Energized Circuits & Balance Loads
- Capture Motor In-Rush Current Readings
- Determine Peak Power Demand Periods
- Ideal for Electrical Audit of Heating, Ventilation & Aircon Systems (HVAC)
- To Identify Low Voltage Control Signal
- To Identify Power Sources
- 1 $\phi$  & 3 $\phi$  (3p3w/3p4w) Power Analyzer
- Evaluate Electrical Contacts
- Verify the Stability of Voltage
- Check Motor Run / Start Capacitor Values
- Check 3 $\phi$  Phase Sequence

Note: Specifications are subject to change.

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1 $\phi$ /3 $\phi$ TRUE Power : (PF > 0.5 or $\theta$ < 60°) (1hp = 0.7457KW)				
Range	Resolution	Accuracy $\pm$ (%rdg + dgts)	Overload Protection	
99.99KW	0.01KW	$\pm$ (5% + 30)	600VAC/	
600.0KW	0.1KW	(50, 60Hz)	1000AAC	
1 $\phi$ /3 $\phi$ HP (1HP = 745.7W) : (PF > 0.5 or $\theta$ < 60°)				
Range	Resolution	Accuracy $\pm$ (%rdg + dgts)	Overload Protection	
99.99HP	0.01HP	$\pm$ (5% + 30)	600VAC/	
800.0HP	0.1HP	(50, 60Hz)	1000AAC	
1 $\phi$ /3 $\phi$ Apparent Power				
Range	Resolution	Accuracy $\pm$ (%rdg + dgts)	Overload Protection	
99.99KVA	0.01KVA	$\pm$ (2.5% + 30)	600VAC/	
600.0KVA	0.1KVA		1000AAC	
1 $\phi$ & 3 $\phi$ Reactive Power : (PF > 0.5 or $\theta$ < 60°)				
Range	Resolution	Accuracy $\pm$ (%rdg + dgts)	Overload Protection	
99.99KVAR	0.01KVAR	$\pm$ (5% + 30dgts)	600V AC/	
600.0KVAR	0.1KVAR	(50, 60Hz)	1000A AC	
3 $\phi$ Phase Sequence Indication				
Range	Frequency Response	Overload Protection		
80V to 480V	(50Hz / 60Hz)	600V		
ACA Inrush Current				
Range	Resolution	Sensitivity	Measurement Time	Overload Protection
99.99A	0.01A	> 5A	100ms	1000A AC
999.9A	0.1A	> 50A		
1 $\phi$ / 3 $\phi$ PF & Phase Angle (50Hz, 60Hz)				
Range	Resolution	Accuracy	Sensitivity	
-60%/0% / 60°	0.1°	$\pm$ 6.0°	ACV > 100V, ACA > 10A	
-0.5/1/+0.5				
Frequency				
Range	Resolution	Accuracy $\pm$ (%rdg + dgts)	Sensitivity	
40Hz/1KHz	0.1Hz	$\pm$ (0.5% + 2)	ACV > 1.2V, ACA > 6A	
AC Current (50Hz to 400Hz) : TRMS				
Range	Resolution	Accuracy $\pm$ (%rdg + dgts)	Sensitivity	Overload Protection
99.99A	0.01A	$\pm$ (2% + 30) (50,60Hz)	0.10A	1000A
999.9A	0.1A	$\pm$ (4% + 30) (40-400Hz)	1.0A	
$\mu$ A TRMS : (AC + DC) (Burden Voltage : 5mV/ $\mu$ A) (50Hz to 400Hz)				
Range	Resolution	Accuracy $\pm$ (%rdg + dgts)	Sensitivity	Overload Protection
99.99 $\mu$ A	0.01 $\mu$ A	$\pm$ (1% + 30)	0.20 $\mu$ A	600V
999.9 $\mu$ A	0.1 $\mu$ A		2.0 $\mu$ A	
AC Voltage (50Hz to 400Hz) : TRMS				
Range	Resolution	Accuracy $\pm$ (%rdg + dgts)	Sensitivity	Overload Protection
999.9mV	0.1mV	$\pm$ (1% + 30) (50,60Hz)	2.0mV	600V
9.999V	0.001V		0.020V	
99.99V	0.01V		0.20V	
600.0V	0.1V	$\pm$ (2% + 30) (40-400Hz)	2V	
Input Impedance : 3M $\Omega$				
DC Voltage				
Range	Resolution	Accuracy $\pm$ (%rdg + dgts)	Sensitivity	Overload Protection
999.9mV	0.1mV	$\pm$ (1% + 30)	2.0mV	600V
9.999V	0.001V		0.020V	
99.99V	0.01V		0.20V	
600.0V	0.1V		2V	
Input Impedance : 3M $\Omega$				
Resistance (Continuity < 40 $\Omega$ on the 999.9 $\Omega$ range)				
Range	Resolution	Accuracy $\pm$ (%rdg + dgts)	Overload Protection	
999.9 $\Omega$	0.1 $\Omega$	$\pm$ (1% + 10)	600V	
9.999K $\Omega$	0.001K $\Omega$			
99.99K $\Omega$	0.01K $\Omega$			
999.9K $\Omega$	0.1K $\Omega$			
M $\Omega$ (Auto Ranging)				
Range	Resolution	Accuracy $\pm$ (%rdg + dgts)	Overload Protection	
9.999M $\Omega$	0.001M $\Omega$	$\pm$ (5% + 10)	600V	
99.99M $\Omega$	0.01M $\Omega$			



17717B

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- Data Hold, Auto Power Off
- Dual Display KW + PF, KVA + φ, KW + HP, KW + KVAR, V + A, A + Hz, V + Hz
- Cable of Diameter upto 43mm / Busbar upto 65mm x 16mm
- 3 Phase Adapter

**Applications**

- Check Current drawn in Motors and Compressors
- Use MAX/MIN/REC in Temperature Mode to Assess Efficiency
- Test Run/Start Capacitors
- Analyze Temperature Data with the Aid of the Time Stamp
- Resistance upto 100MΩ
- Check for Energized Circuits
- Capture Motor In-Rush Current Readings
- Determine Peak Power Demand Periods
- Ideal for Electrical Audit of Heating, Ventilation & Aircon Systems



TRUE Power : (PF > 0.5 or θ < 60°) (1hp = 0.7457KW)			
Range	Resolution	Accuracy ± (%rdg + dgts)	Overload Protection
60.00KW (< 100A)	0.01KW	±(5% + 20) (50, 60Hz)	600VAC/
600.0KW (> 100A)	0.1KW		1000AAC

HP (1HP = 745.7W) : (PF > 0.5 or θ < 60°)			
Range	Resolution	Accuracy ± (%rdg + dgts)	Overload Protection
80.00HP (< 100A)	0.01HP	±(5% + 20) (50, 60Hz)	600VAC/
800.0HP (> 100A)	0.1HP		1000AAC

Apparent Power			
Range	Resolution	Accuracy ± (%rdg + dgts)	Overload Protection
60.00KVA (< 100A)	0.01KVA	±(2.5% + 20)	600VAC/
600.0KVA (> 100A)	0.1KVA		1000AAC

PF & Phase Angle (50Hz, 60Hz)			
Range	Resolution	Accuracy	Sensitivity
-60°/0°/+60°	0.1°	± 3.0°	ACV > 100V, ACA > 10A
-0.5/1/+0.5			

Frequency			
Range	Resolution	Accuracy ± (%rdg + dgts)	Sensitivity
40Hz/1KHz	0.1Hz	±(0.5% + 2)	ACV > 1.2V, ACA > 6A

AC Current (50Hz to 400Hz) : TRMS				
Range	Resolution	Accuracy ± (%rdg + dgts)	Sensitivity	Overload Protection
99.99A	0.01A	±(2% + 20) (50,60Hz)	0.10A	1000A
999.9A	0.1A		±(4% + 20) (40-400Hz)	

μA TRMS : (AC + DC) (Burden Voltage : 5mV/μA) (50Hz to 400Hz)				
Range	Resolution	Accuracy ± (%rdg + dgts)	Sensitivity	Overload Protection
99.99μA	0.01μA	±(1% + 20)	0.20μA	600V
999.9μA	0.1μA		2.0μA	

AC Voltage (50Hz to 400Hz) : TRMS				
Range	Resolution	Accuracy ± (%rdg + dgts)	Sensitivity	Overload Protection
999.9mV	0.1mV	±(1% + 20) (50,60Hz) ±(2% + 20) (40-100Hz)	2.0mV	600V
9.999V	0.001V		0.020V	
99.99V	0.01V	±(1% + 20) (50,60Hz) ±(2% + 20) (40-400Hz)	0.20V	
600.0V	0.1V		2V	

Input Impedance : 3MΩ

DC Voltage				
Range	Resolution	Accuracy ± (%rdg + dgts)	Sensitivity	Overload Protection
999.9mV	0.1mV	±(1% + 20)	2.0mV	600V
9.999V	0.001V		0.020V	
99.99V	0.01V		0.20V	
600.0V	0.1V		2V	

Input Impedance : 3MΩ

Resistance (Continuity < 40Ω on the 999.9Ω range)			
Range	Resolution	Accuracy ± (%rdg + dgts)	Overload Protection
999.9Ω	0.1Ω	±(1% + 10)	600V
9.999KΩ	0.001KΩ		
99.99KΩ	0.01KΩ		
999.9KΩ	0.1KΩ		

MΩ			
Range	Resolution	Accuracy ± (%rdg + dgts)	Overload Protection
9.999MΩ	0.001MΩ	±(5% + 10)	600V
99.99MΩ	0.01MΩ		

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Capacitance			
Range	Resolution	Accuracy $\pm$ (%rdg + dgts)	Overload Protection
10.000 $\mu$ F	0.001 $\mu$ F	$\pm(1.5\% + 5)$	600V
100.00 $\mu$ F	0.01 $\mu$ F		
1000.0 $\mu$ F	0.1 $\mu$ F		
7000 $\mu$ F	1 $\mu$ F	$\pm(2.5\% + 15)$	

Diode (Continuity < 40mV)			
Range	Resolution	Accuracy $\pm$ (%rdg + dgts)	Overload Protection
2.000V	0.001V	$\pm(2\% + 1)$	600V

Temperature (K-Type Thermocouple) (Thermocouple is Optional)			
Range	Resolution	Accuracy $\pm$ (%rdg + dgts)	Overload Protection
-50 $^{\circ}$ C to 900 $^{\circ}$ C	0.1 $^{\circ}$ C	$\pm(1\% + 1^{\circ}$ C)	30VAC or 60VDC
-58 $^{\circ}$ F to 1000 $^{\circ}$ F	0.1 $^{\circ}$ F	$\pm(1\% + 2^{\circ}$ F)	

**General Specifications**

- Numerical Dual Display** : 4 Digit 9999 Count LCD
- Low Battery Indication** : is displayed
- Power Source** : 9V Battery x 1
- Battery Life** : 32 hours approx.
- Sampling Rate** : 2.5 times/sec. (on KW, KVA, HP)
- Operating Temperature and Humidity** : 0 $^{\circ}$ C to 50 $^{\circ}$ C (32 $^{\circ}$ F to 122 $^{\circ}$ F)  
RH < 80%
- Storage Temperature and Humidity** : -10 $^{\circ}$ C to 60 $^{\circ}$ C (14 $^{\circ}$ F to 140 $^{\circ}$ F)  
RH < 70%
- Dimensions** : 247 x 90 x 40mm
- Weight** : 425gms Including Battery (approx.)
- Jaw Opening** : Cable Dia 43mm (max.)  
Bus Bar 16mm x 65mm
- Accessories** : Carrying Case, Battery (installed),  
One Pair of Alligator Clip Test Lead,  
3 Phase Adapter & Instruction Manual

**Usage**

<p><b>1<math>\phi</math> 2W System</b></p> <p style="text-align: center;">KW, HP, PF, <math>\phi</math>, KVAR, KVA</p>	<p><b>3<math>\phi</math> 3W Balanced System</b></p> <p style="text-align: center;">3<math>\phi</math> Values = 3 x Displayed Value for KW, HP, KVAR &amp; KVA</p>	<p><b>3<math>\phi</math> 3W Unbalanced System</b></p> <p style="text-align: center;">Measured Value = KW1, HP1 &amp; KVAR1</p> <p style="text-align: center;">Measured Value = KW2,a HP2 &amp; KVAR2</p> <div style="border: 1px solid black; padding: 5px; text-align: center;"> <p>3<math>\phi</math> Values = (KW1+KW2) or (HP1+HP2) or (KVAR1+KVAR2) 3<math>\phi</math> PF = <math>\text{Cos}[\tan^{-1} \sqrt{3(KW1-KW2)} / (KW1+KW2)]</math></p> </div>
<p><b>3<math>\phi</math> 4W Balanced System</b></p> <p style="text-align: center;">3<math>\phi</math> Values = 3 x Displayed Value for KW, HP, KVAR &amp; KVA</p>	<p><b>3<math>\phi</math> 4W Unbalanced System</b></p> <p style="text-align: center;">Measured Value = KW1, HP1, KVAR1 &amp; KVA1</p> <p style="text-align: center;">Measured Value = KW2, HP2, KVAR2 &amp; KVA2</p> <p style="text-align: center;">Measured Value = KW3, HP3, KVAR3 &amp; KVA3</p> <div style="border: 1px solid black; padding: 5px; text-align: center;"> <p>3<math>\phi</math> Values = (KW1+KW2+KW3) or (HP1+HP2+HP3) or (KVAR1+KVAR2+KVAR3) or (KVA1+KVA2+KVA3) 3<math>\phi</math> PF = <math>\text{KW}_i / \sqrt{\text{KW}_i^2 + \text{KVAR}_i^2}</math> or <math>\text{KW}_i / \text{KVA}_i</math></p> </div>	

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**Features :**

- 3 $\phi$  W, 3 $\phi$ 3W, 3 $\phi$  Balanced, 1 $\phi$ 2W, 1 $\phi$ 3W
- AC + DC 2000 KW (3 $\phi$ ), 1200 KW (1 $\phi$ )
- Dual display KW + PF, KVA + KVAR, V+A, V+Hz, A+Hz
- Phase Angle Measurement ( $\pm 90^\circ$ ), Phase Sequence Indication (R,S,T)
- AC 600V, DC 800V, 2000A,
- Power Factor
- AC/DC Auto Detection
- TRMS Values
- Memory of 4 records
- Auto Range Selection
- Conductor Size : Cable  $\phi$  55mm. (approx.) Bus Bar 65 (D) x 24 (W) mm

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