



Bus-Bar upto
16mm x 65mm

Cable upto
43mm Diameter

3510PHW

Features

- 4 Digit LCD, 9999 Count, Autoranging
- 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 100M Ω
- 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 $\theta < 60^\circ$) (1hp = 0.7457KW)			
Range	Resolution	Accuracy \pm (%rdg + dgts)	Overload Protection
60.00KW (<100A)	0.01KW	\pm (5% + 20)	600VAC/
600.0KW (>100A)	0.1KW	(50, 60Hz)	1000AAC

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

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

PF & Phase Angle (50Hz, 60Hz)			
Range	Resolution	Accuracy	Sensitivity
-60°/0°/+60°	0.1°	\pm 3.0°	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% + 20) (50,60Hz)	0.10A	1000A
999.9A	0.1A	\pm (4% + 20) (40-400Hz)	1.0A	

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

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

Input Impedance : 3M Ω

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

Input Impedance : 3M Ω

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

M Ω			
Range	Resolution	Accuracy \pm (%rdg + dgts)	Overload Protection
9.999M Ω	0.001M Ω	\pm (5% + 10)	600V
99.99M Ω	0.01M Ω		

Capacitance			
Range	Resolution	Accuracy ±(%rdg + dgts)	Overload Protection
10.000μF	0.001μF	±(1.5% + 5)	600V
100.00μF	0.01μF		
1000.0μF	0.1μF		
7000μF	1μF	±(2.5% + 15)	

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

Temperature (K-Type Thermocouple) (Thermocouple is Optional)			
Range	Resolution	Accuracy ±(%rdg + dgts)	Overload Protection
-50°C to 900°C	0.1°C	±(1% + 1°C)	30VAC or 60VDC
-58°F to 1000°F	0.1°F	±(1% + 2°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°C to 50°C (32°F to 122°F)
RH < 80%
- Storage Temperature and Humidity** : -10°C to 60°C (14°F to 140°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>1φ 2W System</p> <p>KW, HP, PF, φ, KVAR, KVA</p>	<p>3φ 3W Balanced System</p> <p>3φ Values = 3 x Displayed Value for KW, HP, KVAR & KVA</p>	<p>3φ 3W Unbalanced System</p> <p>Measured Value = KW1, HP1 & KVAR1</p> <p>Measured Value = KW2,a HP2 & KVAR2</p> <p>3φ Values = (KW1+KW2) or (HP1+HP2) or (KVAR1 + KVAR2)</p> <p>3φ PF = $\text{Cos}[\tan^{-1} \sqrt{3(KW1-KW2) / (KW1 + KW2)}]$</p>
<p>3φ 4W Balanced System</p> <p>3φ Values = 3 x Displayed Value for KW, HP, KVAR & KVA</p>	<p>3φ 4W Unbalanced System</p> <p>Measured Value = KW1, HP1, KVAR1 & KVA1</p>	<p>3φ 4W Unbalanced System</p> <p>Measured Value = KW2, HP2, KVAR2 & KVA2</p> <p>Measured Value = KW3, HP3, KVAR3 & KVA3</p> <p>3φ Values = (KW1+KW2+KW3) or (HP1+HP2+HP3) or (KVAR1+KVAR2+KVAR3) or (KVA1+KVA2+KVA3)</p> <p>3φ PF = $KW_T / \sqrt{KW_T^2 + KVAR_T^2}$ or KW_T / KVA_T</p>