Specifications

Basic electrical specifications are defined over the temperature range from 18°C to 28°C for a period of one year after calibration. Accuracy is specified as ±[(% of reading] + number of units in least significant digit).

Frequency Range, Fundamental
6-65 Hz and dc

Minimum Input Levels
5V rms or 1A rms

Volts Measurements (True-rms)

Input Range
5.0V to 600V rms (ac + dc)
5.0V to ±933V peak

Basic Accuracy*
- rms (ac + dc): ± (0.5% + 2 digits)
- peak, dc: ± (2% + 3 digits)
- *<15VRms, add 2 digits

Input Impedance
1 MΩ, balanced

Crest Factor
>3.0 below 300V, 1.56 @ 600V

Amps Measurements (True-rms)
(1 mV/A) Isolated Input

Input Range
1.00 mV (A) to 1000 mV rms (A) (ac + dc)
1.0 mV (A) to ±2000 mV (A) peak

Basic Accuracy
- rms (ac+dc): ± (0.5% + 3 digits) + probe specs
- peak, dc: ± (2% + 4 digits) + probe specs

Input Impedance
1 MΩ, balanced

Crest Factor
>3.0 below 600 mV, 2.0 @ 1000 mV

Watts Measurements (Volt-Amps)
(1 mV/A) Isolated Input

Range
0W (VA) to 600 kW (kVA) average
0W (VA) to 2000 kW (kVA) peak

Accuracy (ac + dc)
- Active W (VA): ± (1% + 4 digits) + probe specs

Harmonics Measurement Accuracy
(Cursor Data)
(Harmonic Level > 5% Using Smooth ~20)

Volls
Fundamental to 13th Harmonic:
- ± (2% + 2 digits)
- 13th to 31st Harmonic:
- 13th (+ (2% + 2 digits))
- 31st (+ (8% + 2 digits))

Amps* or Watts
Fundamental to 13th Harmonic:
- ± (3% + 3 digits) + probe specs
- 13th to 31st Harmonic:
- 13th (+ (3% + 3 digits) + probe specs)
- 31st (+ (8% + 3 digits) + probe specs)
- *<20A, add 3 digits

Phase
Fundamental:
- ± (2 degrees) + probe specs
- 2nd to 31st Harmonic:
- 2nd (+ 5 degrees) - 31st (+ 20 degrees)
- + probe specs

Frequency Measurement Accuracy
(Fundamental, 6.0 Hz - 99.9 Hz)
6.0 Hz-99.9 Hz: ±0.3 Hz

General Specifications

Size: 9.2 x 3.9 x 2.5 in (234 x 100 x 64 mm)

Weight: 2.0 lbs (1 kg)

Input Connectors
- Voltage: 2 shrouded banana jacks (4 mm)
- Current Probe: 1 shrouded BNC jack

Battery
Type: 4 Alkaline "C" Cells ANSI/NEDA-14A, IEC-LR14 (supplied)
Operating Time: 48 hours, typical (continuous, without backlight)

Alternate Battery
4 NiCad Cells, customer supplied and externally charged. The tester prevents battery reversal by turning itself off if battery voltage drops below 4.0V dc

Temperature
Operating: 0°C to 50°C (32°F to 122°F)
Storage: -20°C to 60°C (-4°F to 140°F)

Temperature Coefficient
0.1 x specified accuracy per °C
(0°C to 18°C, 28°C to 50°C)

Humidity (noncondensing)
Operating: 0°C to 30°C, 90%
30°C to 40°C, 75%
40°C to 50°C, 45%

Storage: 90%

Altitude
Operating: 10,000 feet (3 km)
Storage: 40,000 feet (12 km)

Shock & Vibration: Per MIL-T-28800, class 3, sinusoidal, nonoperating

For a direct connection to a Fluke Distributor near you
CALL
1-800-79-FLUKE in the U.S.
(1-800-793-5853)
Or your nearest Fluke sales organization

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Other Measurement Specifications

<table>
<thead>
<tr>
<th>Measurement Function</th>
<th>Range/Resolution</th>
<th>Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input Bandwidth: (-0.5 dB)</td>
<td>DC 6 Hz to 2.1 kHz</td>
<td></td>
</tr>
<tr>
<td>Crest Factor (CF): (Using Smooth 20)</td>
<td>1.00 to 5.00</td>
<td>±4%</td>
</tr>
<tr>
<td>Power Factor (PF)</td>
<td>0.00 to 1.00</td>
<td>±0.02</td>
</tr>
<tr>
<td>Displacement Power Factor (DPF)</td>
<td>0.00 to 0.29</td>
<td>Unspecified</td>
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<tr>
<td></td>
<td>0.30 to 0.69</td>
<td>±0.04</td>
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<tr>
<td></td>
<td>0.70 to 0.89</td>
<td>±0.03</td>
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<tr>
<td></td>
<td>0.90 to 1.00</td>
<td>±0.02</td>
</tr>
<tr>
<td>Phase Measurement Range</td>
<td>-170 to 180°</td>
<td></td>
</tr>
<tr>
<td>K-Factor (KF)</td>
<td>1.0 to 30.0</td>
<td>±10%</td>
</tr>
<tr>
<td>Total Harmonic Distortion (THD)</td>
<td>0.0 to 99.9</td>
<td>±(0.03 Reading + 2.0%)</td>
</tr>
<tr>
<td>%THD-F:</td>
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<tr>
<td>%THD-R:</td>
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Recording Measurements

<table>
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<tr>
<th>AC Volts</th>
<th>AC Amps</th>
<th>Watts</th>
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<tbody>
<tr>
<td></td>
<td>Range</td>
<td>Resolution</td>
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<tr>
<td>20V</td>
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<tr>
<td>50V</td>
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<tr>
<td>200V</td>
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<tr>
<td>500V</td>
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<tr>
<td>1 kV</td>
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<tr>
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<tr>
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<td>10 A</td>
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<tr>
<td></td>
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<td>1 kW</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 kW</td>
</tr>
</tbody>
</table>

Electro-Magnetic Compatibility
- RF Susceptibility: EN 50082-1 Commercial Limits
- Drip Proof and Dust Proof Case: Per IEC 529, Section 3; IP 52
- Dust-Protected, Drip Proof

Display
- Type: Super Twisted Liquid Crystal
- Size: 3.0 inch diagonal (76 mm)
- Resolution: 160 W x 128 H pixels
- Contrast: User adjustable
- Backlight: Yellow-green LED

Safety
- Designed for 600V measurements on industrial power distribution circuits.

Overload Protection
- Voltage or Current Probe Input: 600V, maximum
- Surge Protection: 6 kW per IEC 1010-1
- Maximum Voltage Isolation to Earth: 600V from any terminal

Protection Levels
- IEC 1010-1, Pollution Degree 2, Installation Category III, Material Group II, 600V

Protection Class
- Protection Class II as described in IEC 1010-1, Annex H (Double or Reinforced Insulation)