The CWT LF from Power Electronic Measurements Ltd. features an extended low frequency bandwidth.

This enables measurement of:
- small currents at 50/60Hz
- sinusoidal currents with significantly lower phase shift and...
- long pulses of current with significantly lower values of droop than the CWT standard or mini ranges.

The CWT LF can be specified with either a standard or miniature coil.

8kA Capacitor discharge measured by CWT60LF and coaxial shunt - 20ms/div.

**Features**
- Measuring ac currents 1A to 300,000A
- Typical bandwidths from 0.1Hz to 6MHz
- Very low ‘droop’ values
- Thin and flexible, ‘clip-around’ coil - can be specified with either standard or mini coil (see relevant specification sheet for more details)
  - Easy to insert probe in confined spaces
  - Non-intrusive – loading the circuit under test by only a few pH
- Instantaneous ±6V peak to peak output to plug directly into scope, data acquisition equipment, DVM or power recorders
- CE Marked
# PERFORMANCE CHARACTERISTICS

<table>
<thead>
<tr>
<th>Type</th>
<th>Sensitivity (mV/A)</th>
<th>Peak current (kA)</th>
<th>Peak di/dt (kA/µs)</th>
<th>Noise max (mV p-p)</th>
<th>Droop typ. (%)</th>
<th>LF (3dB) bandwidth typ. (Hz) $f_L$</th>
<th>Phase lead at 50Hz typ. (deg)</th>
<th>HF (3dB) bandwidth typ. (MHz) $f_H$</th>
<th>Cable Length 100mm</th>
<th>Cable Length 200mm</th>
</tr>
</thead>
</table>
## Standard Coils

| CWT63LF | 100.0 | 0.06 | 0.4 | 15.0 | 4.6 | 5.1 | 8.3 | 6.5 | 3.0 |
| CWT66LF | 50.0  | 0.12 | 0.8 | 15.0 | 2.3 | 2.6 | 4.2 | 6.5 | 3.0 |
| CWT11LF | 20.0  | 0.3  | 2.0 | 15.0 | 1.0 | 1.0 | 1.8 | 6.5 | 3.0 |
| CWT3LF  | 10.0  | 0.6  | 4.0 | 15.0 | 0.5 | 0.55| 0.85| 6.5 | 3.0 |
| CWT6LF  | 5.0   | 1.2  | 8.0 | 15.0 | 0.25| 0.27| 0.45| 6.5 | 3.0 |
| CWT15LF | 2.0   | 3.0  | 11.0| 15.0 | 0.1 | 0.11| 0.18| 6.5 | 3.0 |
| CWT30LF | 1.0   | 6.0  | 11.0| 15.0 | 0.05| 0.055| 0.09| 6.5 | 3.0 |
| CWT660LF| 0.5   | 12.0 | 11.0| 5.0  | 0.007| 0.008| 0.012| 6.5 | 3.0 |
| CWT1500LF| 0.02 | 300.0| 11.0| 4.0  | 0.007| 0.008| 0.012| 10.0| 5.0 |

*1. Distributed around the $f_L$ (3dB) bandwidth.  
*2. For 2.5m cable length. Contact PEM for values of $f_H$ for other coil and cable lengths

## TYPICAL ACCURACY

Traceable calibration to ±0.2% with conductor central in the loop
Variation with conductor position in the coil loop typically ±1% for STANDARD COILS
Variation with conductor position in the coil loop typically ±2% for MINIATURE COILS

## TYPICAL LINEARITY

±0.05% (Full Scale)

## ABSOLUTE MAXIMUM

<table>
<thead>
<tr>
<th>VALUES OF $\frac{di}{dt}$ (kA/µs)</th>
<th>(Standard coil) PEAK 11.0</th>
<th>RMS 0.8 @ 70°C</th>
<th>(Miniature coil) PEAK 14.0</th>
<th>RMS 0.85 @ 70°C</th>
<th>(value must not be exceeded)</th>
</tr>
</thead>
</table>

(Further information available on request)

## COIL AND CABLE

Please refer to CWT and CWT Mini specification sheets for details about
- Coil length/Peak coil insulation voltage
- Cable length between Rogowski coil and integrator

## INTEGRATOR

### POWER SUPPLY

- **B** Battery 4 x AA (1.5V standard alkaline batteries)  
  2.1/2.5mm socket for 12 to 24V (±10%) DC input  
  **-plus**
  Typical life 70hrs  
  Battery inoperative with DC supply present

- **R** Rechargeable battery 4 x AA (rechargeable NiMH batteries)  
  2.1/2.5mm socket for 12 to 24V (±10%) DC input  
  **-plus**
  Recharge time 40hrs, Typical life 30hrs  
  Battery is charged whenever DC supply present

### INTEGRATOR BOX DIMENSIONS

H = 183mm, W = 93mm, D = 32mm

### OUTPUT SOCKET

BNC (output impedance 50Ω - unit supplied with 0.5m BNC / BNC coaxial cable)

### MIN. OUTPUT LOADING

100Ω (for rated accuracy)

### TEMPERATURE RANGE

0°C to 40°C

## ORDERING

<table>
<thead>
<tr>
<th>Type + Power supply</th>
<th>Cable Length</th>
<th>Coil Circumference</th>
<th>Insulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>CWT30LF R</td>
<td>4</td>
<td>100 M</td>
<td>2</td>
</tr>
</tbody>
</table>

If you have any queries regarding the CWT or require specifications outside our standard ranges please do not hesitate to contact us.

Mar 2018