The CWT Ultra-mini has an extremely thin, clip-around Rogowski coil of typically 1.6mm cross-section. Such a thin coil enables currents to be measured in the most difficult to reach parts of a power electronic converter with negligible disruption to the circuit under test.

**Applications**
- Switching current waveforms in power electronic circuits, for example
  - in MOSFET or IGBT devices as small as TO-220 or TO-47
  - in bond wires in power devices
  - to measure power losses in semiconductors
  - monitoring currents in small inductors, capacitors, snubber circuits, etc
- Measuring small AC currents in the presence of large DC currents (e.g. monitoring capacitor ripple)
- Power converter development and diagnostics
- Measuring high frequency sinusoidal, pulsed or transient currents
- Measuring high order harmonics

**Key features**
- Expanded operating temperature range -40°C to +125°C
- Extended (-3dB) bandwidth from a few Hz to 30MHz
- Current ratings from 30Apk to 6000Apk
- Improved peak di/dt capabilities up to 70kA/μs
- 1.7mm (max) cross section, flexible, clip-around coil
- ±6V into 1MΩ, and 50Ω drive capability
- Loads the circuit under test by only a few pH
- Positional accuracy typically ±2%

This latest release of the CWT Ultra-mini has improved:
- high frequency (-3dB) bandwidth of 30MHz
- operating temperature range of -40°C to +125°C

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**Pulsed current:**
100Apk, 21μs

**Ch1-CWT (300A)**

**Ch2-Co-ax shunt 2GHz**

**Timebase 4μs/div**

**Expanded rising edge:**
10 to 90% is 42ns

**Predictable time delay**
**Timebase 40ns/div**

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**CWT UM coil through the legs of a TO-220 device**
### Key features

1. **Coil length** (circumference) 80mm - longer coils available on request.
2. **Coil cross-section** (thickness) 1.7mm (max).
3. **Cable length** 1m (connecting cable coil to integrator) - longer cables available on request.
4. **Battery options**
   - **B-Standard**: 4 x AA 1.5V alkaline batteries. Lifetime typically 25 hours.
   - **R-Rechargeable**: 4 x AA 1.2V NiMH batteries. Lifetime typically 10 hours.
   - External adaptor charges batteries and powers unit.
5. **Socket for external power adaptor** (adaptor available from PEM as an option)
6. **Electronics enclosure**. Dimensions H=183mm, W=93mm, D=32mm.
7. **Output BNC socket**. Supplied with 0.5m BNC:BNC cable.

More detailed technical notes for this product are available at [www.pemuk.com](http://www.pemuk.com

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### Generating the part code

E.g. CWT

<table>
<thead>
<tr>
<th>Range</th>
<th>Model</th>
<th>Power option</th>
<th>Cable length (m)</th>
<th>Coil length (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>UM</td>
<td>015</td>
<td>R</td>
<td>1</td>
<td>80</td>
</tr>
</tbody>
</table>

CWT Ultra-mini, peak current 30A, rechargeable battery, 1m cable, 80mm coil.

If you have any queries regarding the CWT or require specifications outside our standard ranges please contact us.

www.pemuk.com

February 2020