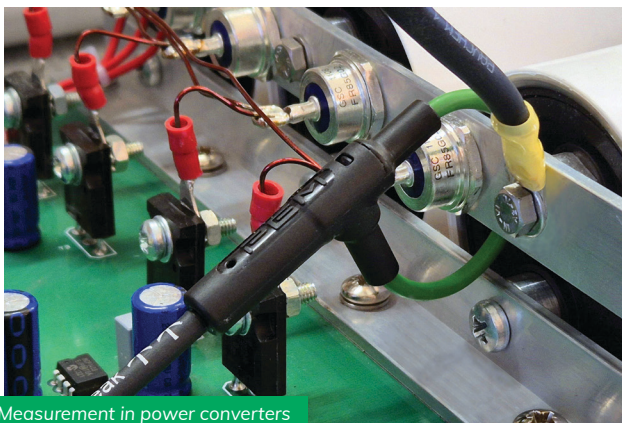


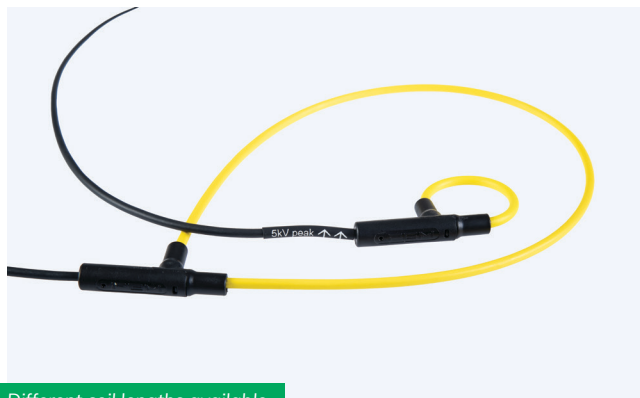
## CWTMini

A wide-band AC current probe with BNC output to connect to most types of oscilloscope or data acquisition devices.

**The CWTMini has a small clip around coil and wide bandwidth making it useful in applications as diverse as power frequency and harmonic current analysis to measuring long duration pulses.** The small coil is offered in two insulation voltages 2kV peak, 3.5mm cross section diameter and 5kV peak, 4.5mm.



Measurement in power converters



Different coil lengths available



### Key Features

- Extended low frequency performance.
- Predictable phase response from Hz to > 100kHz.
- Low droop distortion for measuring longer pulses.
- High frequency operation into MHz.
- Standard coil length (circumference) of **100mm** or **200mm**.  
*Longer coil lengths readily available.*
- Thin coils **3.5mm** cross section diameter for a **2kV pk** insulation and **4.5mm** for a **5kV pk** coil.
- Current ratings from **60A pk** to **300kA pk**.



### Applications

- Power frequency 50/60Hz measurements and higher order harmonics.
- Pulsed currents, and pulsed power measurements with longer duration pulses.
- Measuring small AC currents in the presence of large DC currents (e.g. monitoring capacitor ripple).
- Power converter development and diagnostics.
- Measuring currents in difficult to reach conductors such as tightly packed bus-bars.
- Power quality monitoring in variable speed drives, UPS, power systems or SMPS circuits.

Model	Sensitivity (mV/A)	Peak Current <sup>*1</sup> (A)	Noise <sup>*2</sup> (mVp-p)	Droop (%/ms)	LF (-3dB) (Hz)	Peak di/dt (kA/μs)	HF (-3dB) Bandwidth <sup>*3</sup> (MHz)	
							100mm	200mm
CWTMini/03	100	60	15	6.6	7.0	1.0	10	5.0
CWTMini/06	50	120	15	4.8	5.0	2.0	10	5.0
CWTMini/1	20	300	12	3.6	4.0	2.5	20	15
CWTMini/3	10	600	10	1.8	2.0	5.0	20	15
CWTMini/6	5.0	1.2k	10	0.8	0.9	10	20	15
CWTMini/15	2.0	3.0k	8.0	0.4	0.5	25	20	15
CWTMini/30	1.0	6.0k	7.0	0.25	0.3	40	20	15
CWTMini/60	0.5	12k	5.0	0.2	0.2	40	20	15
CWTMini/150	0.2	30k	5.0	0.1	0.1	40	20	15
CWTMini/300	0.1	60k	5.0	0.05	0.05	40	20	15
CWTMini/600	0.05	120k	5.0	0.03	0.02	40	20	15
CWTMini/1500	0.02	300k	5.0	0.03	0.02	40	20	15

#### di/dt ratings

These are 'Absolute maximum di/dt ratings' and values must not be exceeded.

Type	Abs. Max. peak di/dt	Abs. Max. rms di/dt
CWTMini	40kA/μs	1.0kA/μs

## Output

±6V pk corresponding to 'Peak Current' into  $\geq 100\text{k}\Omega$  (recommended e.g. DC1M $\Omega$  oscilloscope).  
±2V pk, Sensitivity is half the nominal value into 50 $\Omega$ .

## Accuracy

Calibrated to  $\pm 0.2\%$  reading with conductor central in the Rogowski coil loop.  
Conductor position in the coil (for a 2mm dia. conductor) typically  $\pm 2\%$  reading.  
Conductor position in the coil (for a 10mm dia. conductor) typically  $\pm 1\%$  reading.  
Linearity (with current magnitude) 0.05% reading.

## DC offset

±3mV max. at 25°C

## Temperature

Coil and cable -20°C to +1005°C  
Integrator electronics 0°C to +40°C

## Coil voltage

2kV pk (3.5mm thick coil).  
5kV pk (4.5mm thick coil).  
Safe peak working voltage to earth.

## Cable length

1m, 2.5m or 4m (length of cable from coil to electronics).  
**Longer cables are available on request.**

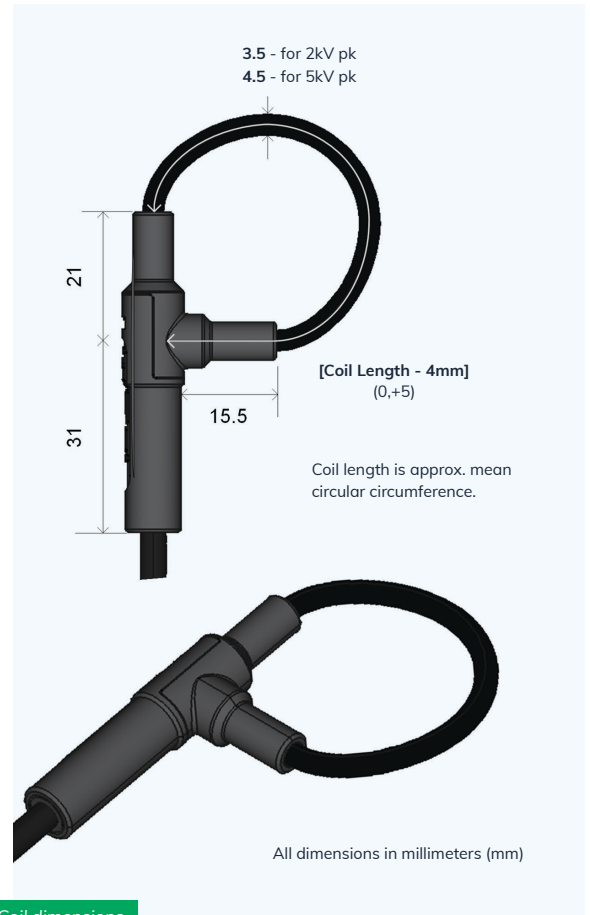
## Coil length

100mm or 200mm  
**Longer coils are available on request.**

## Battery Options

- B Alkaline Batteries** -- 4 x 1.5V AA alkaline batteries, 25 hour life.  
External power adaptor disconnects batteries and powers unit.
- R Rechargeable Batteries** -- 4 x 1.2V NiMH batteries, 10 hour life.  
External power adaptor trickle charges batteries and powers unit

External power adaptor available in **US, EURO, UK & AUS** versions as an optional extra.



1 2 3 4 5 6  
**CWTMini / 06 / R / 1 / 100 / 5**

### Example part codes

#### **CWTMini/06/R/1/100/5**

CWTMini peak current 120A, Rechargeable batteries, 1m cable, 100mm coil, 5kV pk, 4.5mm thick coil.

#### **CWTMini/015/B/1/200/2**

CWTMini peak current 30A, Alkaline batteries, 1m cable, 200mm coil, 2kV pk, 3.5mm thick coil.

### Generating the part code

- 1 **Model**
- 2 **Range**
- 3 **Battery Option**
- 4 **Cable Length (m)**
- 5 **Coil Length (mm)**
- 6 **Insulation (kV)**

#### Included as standard

- ✓ Carry Case
- ✓ Unit Model
- ✓ Batteries (B or R)
- ✓ 0.5m BNC Output Cable
- ✓ Calibration Certificate

#### Optional Extras

- + Longer Cable
- + Longer Coil
- + Power Adaptor (UK, EU, US, AU)



More detailed technical notes, dimensioned drawings, CAD files and quotation request for this product are available online.

# PENI

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