k-Wattch Portable Energy Monitor

All data exported to Deltrax 5 software and Excel.

k-Wattch represents the best value in electrical demand recording for all single or 3 phase distribution systems. These high accuracy instruments are supplied with a set of clip-on CTs for fast safe and trouble free installation.

k-Wattch can be used as a multi parameter electrical meter to display all line currents and kVA demand, or alternatively connect to a single phase socket for 1Ø or 3Ø measurements of voltage, current, PF, kW & kVA. k-Wattch records all measurements on to its integral USB stick for direct transfer of recorded data to any PC.

Features:

- Small robust handheld meter
- Ideal for instantaneous readings or short term measurement
- Fast safe installation
- Magnetic back for safe and secure fixing
- Automatic set up
- Small easy to fit 32mm CTs
- Records power, voltage, power factor and kWh
- Measures current up to 1000A
- Stores data for up to 6 months via USB flash drive
- 3Ø / 1Ø
- Mains or battery powered
- 7 days battery life

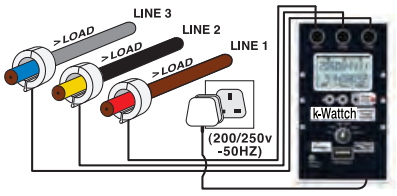
Sold as kit comprising:

- k-Wattch
- Set of 3 32mm CTs
- 2 USB sticks
- Battery charger
- Deltrax 5 data analysis software
- Carry case

Connection options for single and 3 phase use

1. Use k-Wattch 3 phase volt reference conversion from a single phase socket outlet

   k-Wattch Clip-On CT's have sensors capable of identifying the phase of each unarmoured cable. This enables all three voltage vectors to be used in calculation of accurate values of 3 phase kW, PF and kWh, safe and simple installation, no 415v. connection required.



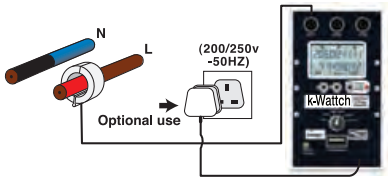
Follow standard safety procedure

Battery on permanent charge

2. Use k-Wattch single phase volt reference from a single phase socket outlet

   Sensed by the connection of only 1 CT k-Wattch may be used with a direct voltage connection or in battery mode using 240v as a nominal voltage reference value.

   Note: k-Wattch is not designed for 2Ø use or 2 wire T circuits.

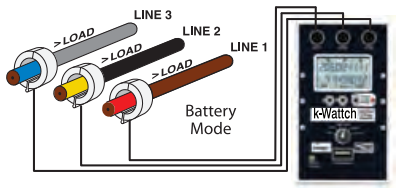


Follow standard safety procedure

Battery on permanent charge via socket

3. Battery only operation measuring current and calculating KVA demand profiles.

   Auto selected when no voltage is connected. The k-Wattch internal battery provides for up to 7 days of operation. kVA is calculated from preset nominal voltage with PF at unity. An invaluable tool for phase balance, demand excursion and other preventive maintenance investigations.

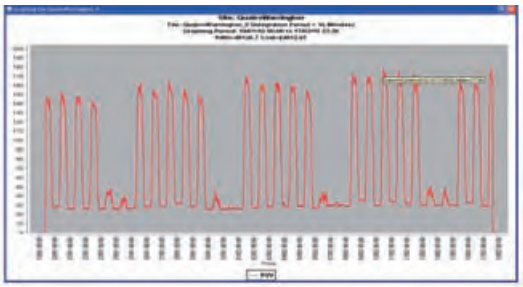


Basic recordings of demand profiles and phase balance

7 days battery life

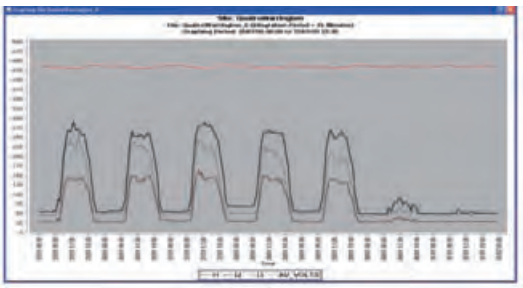
k-Wattch & Deltrax 5

Memory stick recordings can be graphically displayed on a monthly, weekly or daily basis or alternatively processed in Excel format



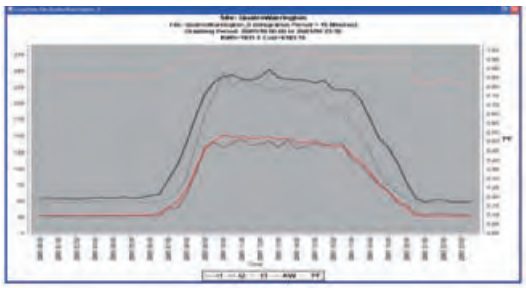
Monthly kW & kVA plot

A typical recording profile of month may be matched to utility billing dates. It will show any repeating pattern of demand excursions and base load variations. The kWh total influences the energy saving targets.



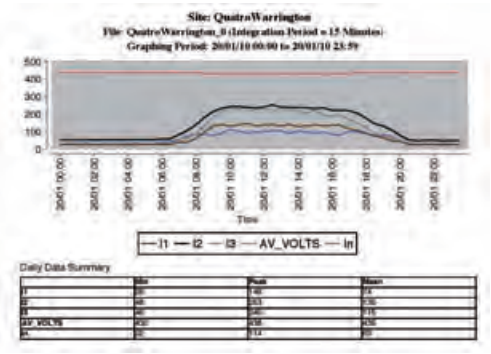
Weekly Parameter plot

Rogue demands, line current imbalance, wasteful night and weekend base loads are easily highlighted. Check for potential benefits from any kWh tariff change.



Daily Multi-plot

Plot all or any Line Current, kW, kVA, system Voltage or PF parameters plus a tabulation of integration period values essential for maintenance and task profiling.



Report Preparation plot

This facility condenses the monthly, weekly or daily profile on to 1 or 2 pages. Monthly and weekly profiles include a tabulation of timed values for peak and mean demand and kWh consumption values.

Operational Specifications & Facilities

ELECTRICAL	
Current Input	Clip-on hinged CT's type KW32. plug terminated leads
CT Input lead	Dual colour coded 1.5m screened lead length
CT Amps Range	CT range selectable to 100, 200, 500, 1000A Ip.
CT Jaw Capacity	32mm ID, for use on non-armoured phase cables
CT Insulation	2.5kV for 1 minute
Voltage Input	1Ø 200/250v 50 Hz., for both 1Ø & 3Ø (V-Trac) operation
Voltage lead	3 pole 300v safety socket on 2m lead to 1Ø fused plug
Voltage Nominal	1Ø 240v, 3Ø 415v auto selected V.Ref.in battery mode
Consumption	Operation and trickle charge 3W max, fusing 3A
BATTERY	Rechargeable nickel metal hydride
Battery life	7 days operation without any mains or external charge
Charge source	Integral trickle charge when mains lead connected
External charge	12vdc charger, extends battery mode operation indefinitely
Charge rate	4 hours to full charge with external charger
Charge Indication	Battery Mode only: External charger – Red/Green LED Symbolic LCD display on switch on
STANDARDS	
Calibration, Safety	IEC 1036 and IEC 61010-1 , 300v CAPIII
EMC	EN55022: 1994. EN50082 Pt.1 1992

MEMORY	
USB Memory Stick	Approved type 2GB capacity,
Integration Period	Sampling rate 1k/sec, fixed 15min integration (averaging)
Synchronisation	Auto Sync on hour and quarter hour via internal clock
Data Transfer	Direct upload via any USB port on PC running Deltrax 5
Auto Data Stack	New date and time stamped data stacked on end of any previously uploaded data for the same recording exercise
DISPLAY	
Instantaneous	Page 1: Phase Currents, System Volts and PF and kW
Cumulative	Page 2: kWh consumption, Peak and Mean kVA
ACCURACY	At 25'C for PF -0.7 – unity
Clip-on CT's	Calibration ≦ +/-1% of reading at 10% IP & 100% Ip
VTrac	Calibration ≦ +/- 1% ; voltage amplitude balance ≦ 4v
Instrument	Typical +/- 2% of reading over 10%-100% of range
CONSTRUCTION	
Material	ABS case, Neoprene boot with panel fixture magnet
Climatic	Operation -10'C - +50'C, 95% (nc) IP30 protection
k-Wattch Dimensions	210x115x60mm. Case 345x292x120mm. Weight 3kg