POWERTRACK PORTABLE ENERGY RECORDER

PowerTrack Brochure
Portable Energy Recorder

The PowerTrack instrument is a portable energy recorder designed to provide detailed information of a specific electrical feed. Extensive communications capabilities (local & remote) enable fast and accurate information retrieval and the software provides a graphical interface for quick and easy analysis of recorded data.

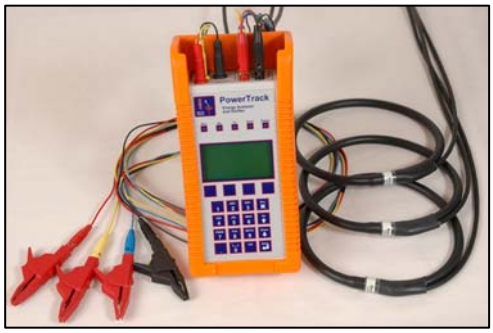
POWERTRACK

- Class 1 Accuracy
- Large Onboard Memory
- Energy Parameter Display
- Software Programmable
- RS232 Comms
- Portable & easy installation

The unit has the following main functions:

- Extensive load profiling, recording per phase and summated parameters
- Display of all instantaneous energy related values on the graphical screen
- Energy Meter and CT verification functionality

Typical Applications



- Costing Analysis – Determine cost centers, identify opportunities for demand control and determine energy consumption patterns
- Load Studies – Determine the capacity of a network, perform load trending, phase balancing, DSM studies
- Power Factor Investigation – Determine the maximum demand and capacitor bank sizes required for unity power factor.
- Generator Investigation – determine peak loads per phase for sizing of Gensets.

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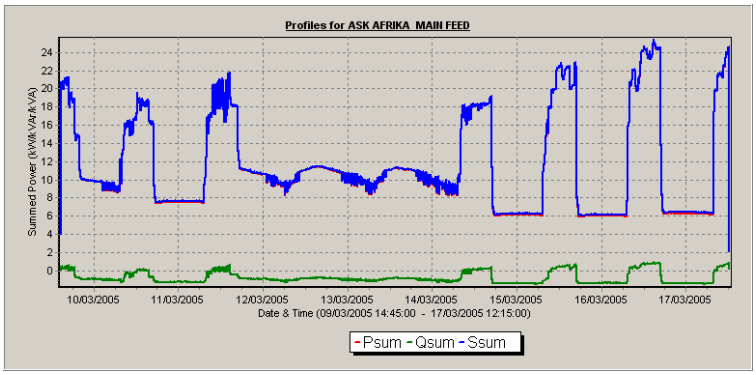
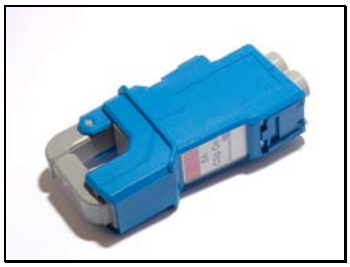
Energy Profile Recording

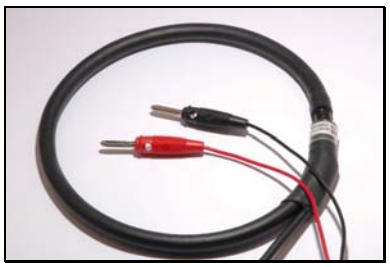
The PowerTrack is suitable for installation at any three-phase (3 Wire/2 Watt or 4 Wire/3 Watt) and single phase supplies. The instrument records all energy parameters at preset averaging intervals ranging from 1 second to 60 minutes on a large onboard flash memory. The 20 key alphanumeric keypad enables the user to edit all the recording parameters as well as selecting the various viewing formats of real-time parameters on-site. The recorded data can be downloaded to any computer where the data are presented in various analytical formats including graphs, statistics and export functions.



Voltage and Current Inputs

The PowerTrack is issued standard with fused voltage leads with crocodile clips and various types of current transducers can be used. The instrument supports 5A, 100A clip-on CT's as well as flexible coils measuring up to 1600A. Specialized coils can also be made to order for larger currents.





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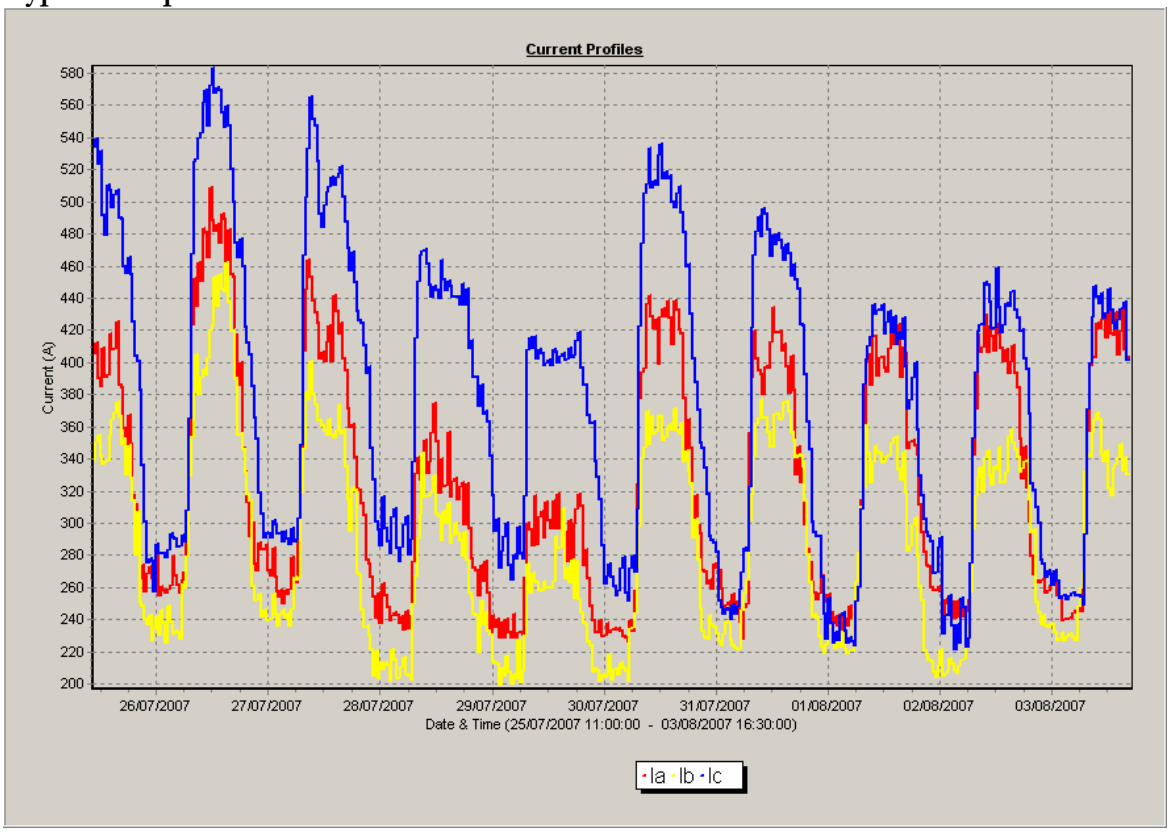
Software Functionality

The PowerTrack software incorporates various graphical and analytical functions for quick and easy analysis of recorded data. Extensive zooming capabilities and multiple export functions allows for sensible and presentable reporting of recorded data.

Typical Graph



Graphical Statistics

Information	Parameter	Date & Time	Value	Unit
Description	Main Supply			
Feeder	Feeder 1			
Graph Statistics	Recording Start	25/07/2007 11:00:00		
	Recording End	03/08/2007 16:30:00		
Phase Voltage	Phase A Maximum Va	01/08/2007 05:00:00	246.5	V
	Phase B Maximum Vb	01/08/2007 05:00:00	249.3	V
	Phase C Maximum Vc	01/08/2007 05:00:00	248.0	V
Line Voltage	Phase AB Maximum Vab	01/08/2007 05:00:00	429.4	V
	Phase BC Maximum Vbc	01/08/2007 05:00:00	430.7	V
	Phase CA Maximum Vca	01/08/2007 05:00:00	428.3	V

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Current	Phase A Maximum Ia	26/07/2007 12:00:00	508.9	A
	Phase B Maximum Ib	26/07/2007 15:30:00	462.0	A
	Phase C Maximum Ic	26/07/2007 12:30:00	583.3	A
Active Power	Phase A Maximum	26/07/2007 12:00:00	119.336	kW
	Phase B Maximum	26/07/2007 15:30:00	107.671	kW
	Phase C Maximum	26/07/2007 12:30:00	138.846	kW
Reactive Power	Phase A Maximum	27/07/2007 16:30:00	28.544	kVAr
	Phase B Maximum	27/07/2007 17:00:00	29.601	kVAr
	Phase C Maximum	27/07/2007 11:30:00	21.575	kVAr
Apparent Power	Phase A Maximum	26/07/2007 12:00:00	122.443	kVA
	Phase B Maximum	26/07/2007 15:30:00	110.815	kVA
	Phase C Maximum	26/07/2007 12:30:00	140.399	kVA
Maximum Demand kW	Active Power	26/07/2007 12:00:00	354.296	kW
	Apparent Power		362.599	kVA
	Reactive Power		77.152	kVAr
	Power Factor		0.977	
Maximum Demand kVA	Apparent Power	26/07/2007 12:00:00	362.599	kVA
	Active Power		354.296	kW
	Reactive Power		77.152	kVAr
	Power Factor		0.977	
Energy	Import Active Energy		50943.600	kWh
	Export Active Energy		0.000	kWh
	Inductive Reactive Energy		12824.200	kVArh
	Capacitive Reactive Energy		0.000	kVArh
Load Factor kW	(Avg kW)/(Max kW)		0.650	
Load Factor kVA	(Avg kVA)/(Max kVA)		0.650	

Technical Information

General Specifications	
Dimensions	120x80x240mm
Voltage input Range	85V ac - 260V ac (Phase to Neutral)
Current Probes Supported	5A Clip-On
	100A Clip-On
	Flexible Passive Current Probe (1600/800/400/200A)
Communication Interface	1 x RS232 Port
Communication Protocol	Modbus RTU
Accuracy	Class 1

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Clock Accuracy	Accurate to ±1 Minute/Year (0°C to +40°C)
Keypad	20 Key Alphanumeric
Power Consumption	3.5 VA
Expected data retention	Minimum 5 years

Display	
Type of Display	128 x 64 Graphical LCD with backlight & contrast control
Instantaneous Displayed Values	Line Current (Per Phase)
	Phase Voltage (4Wire/3Watt Only)
	Line Voltage
	kW (Per Phase & Summed)
	kVA (Per Phase & Summed)
	kVar (Per Phase & Summed)
	Power Factor (Per Phase & Summed)
	Frequency
Measuring Method	3Watt/4Wire or 2Watt/3Wire

Profile Recording	
Memory Capacity	4 MB
Memory Type	Non Volatile Flash
Parameters Recorded	V, I, kW, kVA, kVar and Power factor (Per phase & Summed)
Recording Intervals	1, 2, 5, 10, 15, 30, 60 Second(s) or Minute(s)
Recording Method	Average over recording period
Recording Buffer	Continuous buffer (FIFO)
Typical Recording Time	22 Hours 45 Minutes @ 1 Second
	9 Days 11 Hours 35 Minutes @ 10 Seconds
	8 Weeks @ 1 Minute
	2 Years 17 Weeks @ 15 Minutes

Onboard Statistics and Month End Data	
Voltage	Highest and Lowest Voltage
Current	Highest Current
Energy (Meter Grand Totals)	Active Energy Import
	Active Energy Export
	Reactive Energy Capacitive
	Reactive Energy Inductive

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