

# LL-230 Loadlogger

FOR LOAD MEASUREMENT AND PROFILING ON DISTRIBUTION CIRCUITS

The LoadLogger is a rugged recording ammeter for non-invasive recording of distribution line currents. Using a hot stick, the LoadLogger clamps onto overhead lines up to 69 kV and can record up to 1000 amps with 1 amp resolution. Up to 66 days of load data can be stored by the LoadLogger and then downloaded to a personal computer where the data is analyzed with LoadSmart® software. The LoadLogger provides continuous load recordings for current versus time load profiling.

## **Applications:**

- Load Growth Studies
- Peak Load Values and Times
- Time of Day Load Fluctuations
- Phase and Load Imbalance on a circuit
- Accurate and Complete input to Distribution System Modeling Programs
- Fuse, Transformer & Equipment Sizing
- Theft of Service Investigations
- Evaluating Circuits for Distribution Automation Projects

## **LoadSmart® 4**

LoadSmart is a powerful tool for analyzing data from the LoadLoggers and Load Profilers. The software allows the user to setup and retrieve data from the recorders.

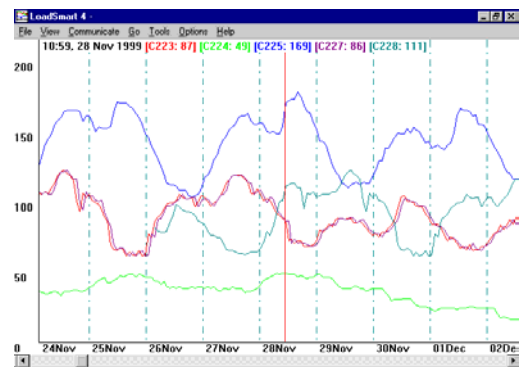
- Compatible with all our LoadLoggers: LL-210, LL-220, LL-230, LL-230A, and LP-260 Load profiler.
- Obtain Maximum & Minimum Values
- Add, subtract, or average time coincident files
- Export to spreadsheet



LL-230 with Display attached

## **Benefits:**

- Non-invasive clamp-on unit
- Voltages up to 69 KV
- Simple to Use
- Lightweight, compact design, Only 5 pounds
- Records up to 1000 Amps with 1 amp resolution.
- Time stamped current profile
- Selectable recording intervals
- Up to 66 days of storage



LoadSmart® 4 Load Profile Graph

**SPECIFICATIONS**

**LL-230A**  
LOADLOGGER

**Conductor Size:** 0.2 to 1.093 inches diameter (Max. 795 MCM). A rubber adapter is used for bare or insulated conductor diameter 0.2 to 0.4 inches.

**Max. Conductor Voltage:** 69 kV

**Current Range:** 0-1000 amps

**Battery Life:**

Lithium: 2-3 years average  
Can be supplemented by a standard 9 V alkaline battery.

**Resolution:** 1 Amp

**Accuracy:** <5% of reading  
Internal Clock Accuracy: One minute per 2 weeks over specified temperature range.

**Operating Temperature Range:** -40°C to +55°C

**Weight:** 5.0 lbs. (2.3 kg) nominal

**Environment:**

Lifetime warranty for water-resistance

**Memory:**

Recording memory is user selectable to stop when full or continuously record on a first-in, first-out basis.

Data storage capacity is determined by averaging interval selected.

Averaging Interval	Maximum Storage
15 min.	66 days
5 min.	22 days
1 min.	4.5 days

**LL-233**

**Computer Interface Adapter**

RS-232 Connector: Standard 9 pin D-type female connector.

**Power:**

120 VAC adapter or 9 V alkaline battery – (220VAC on request)

**Battery Check:** Voltage level factory set to 6.95 V to verify life of lithium battery in LL

**LL-234**  
LCD Module

**Display Type:** Liquid Crystal – Display  
1" high digits

**Update Frequency:** Display is updated every 3 seconds.

**Mounting:** Attached to LoadLogger at the serial interface connector.

**Power Supply:** Operates directly from the LoadLogger's battery.

**Operating Temperature:** 0°C to +40°C

**Dimensions:** 5.84 x 2.5 x 1.3 inches (150mm x 64mm x 34mm) nominal

**LoadLogger Ordering:**

- LL-230 Single Unit
- LL-231 3 Phase Starter Kit (3) LL-230 LoadLoggers, LL-233, LL-234, LoadSmart Software, Carrying case & Manuals
- LL-232 3 Phase Expansion Kit (3) LL-230 LoadLoggers Carrying case & Manuals

**Load Profiler Ordering:**

- LP-260 Single Unit
- LP-261 3 Phase Starter Kit (3) LP-260 Load Profilers LL-233, LoadSmart Software & Manuals
- LP-262 1 Phase Starter Kit (1) LP-260 Load Profiler LL-233, LoadSmart Software & Instruction Manuals
- LP-261 3 Phase Kit (3) LP-260 Loadprofilers

**LP-260**  
LOADPROFILER



The Load Profiler is a rugged, non-invasive digital recording ammeter for simple, cost effective collection of load data on your power circuits. The Load Profiler has the same operating characteristics as the LL-230, but is packaged for use as a hand held ammeter. To monitor and record line currents, clip the split core current transformer (CT) to any conductor up to 700 volts or any insulated cable up to 2" in diameter – even underground distribution cables.

**Specifications:**

Same as LL-230A with the following exceptions:

**Accuracy:** +/- 3% Reading

**Temperature Range:**

-30°C to 55°C up to 800 Amps

-30° to 30°C up to 1000 Amps

(Display operation: 0° to 40°C)

**Cable:** Up to 2" outside diameter

**Dimensions:**

Housings: 3" x 2" x 6"

Cable: 4" Outside Diameter

Cord: 6 feet long

Weight: 1.7 lbs.



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