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### 1. PREPARING FOR INSTALLATION

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- Check the package, by default, it includes a Sentry unit, IR fused leads (5), a set of plugs, a pack of ferrules, a 10P plug with temperature sensors and CT cable.
- Current transducer, check the window size for your application. [Split-core available if needed.]
- Prepare fused leads for sampling if not ordered from BatteryDAQ.  
Check tab washer quantity and size if not already on battery posts.
- Calculate and prepare wire/cable from Sentry unit to battery terminals. (20 AWG Multi-conductor cable is recommended.) Pre-make the harness set in shop if possible.
- Active Ethernet port/drop, close to each battery cabinet/bank. (Power outlet is not needed.)
- Choose computer(s) with Windows 7, 8 or 10 pro 64-bit OS. (XP is no longer supported.)

### 2. SOFTWARE

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- Install Microsoft SQL Express 2008 or 2012 database. (64-bit. All goes with default. Windows authentication. Add Current User)
- Install Battery Analyzer software. (setup.exe, run as administrator)
- Run Battery Analyzer, add equipment, set IP and MID to a remote demo site for a test.
- Record IR baseline, close/restart Battery Analyzer to verify database installation.
- With a Sentry unit connected to Ethernet/Internet, set correct server IP and MID to Battery Analyzer software until you get data/temperature.

### 3. INSTALLATION/WIRING

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- Disconnect battery string from UPS.
- Locate/secure the Sentry unit close to batteries such as the top of battery cabinet.
- Label each battery with number, #1 is from the positive (+) bus, go with circuit connection sequence.
- Install tab washers (if not pre-installed) and fused leads to batteries.
- Wire from Sentry unit to leads, organize cable professionally to ensure long-term reliability.
- Plug the 5P IR connector to power on Sentry unit. [Unit is powered by battery bank through this plug.]  
With HMI to check voltage and verify wiring connections.
- Check current zero point, adjust current offset (calibration setting) with HMI if needed.
- Connect battery string back to UPS.

### 4. COMMISSION

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- Verify battery string voltage, ambient/pilot temperature. Calibrate T with HMI if needed.
- Verify Internal Resistance value, it shall be in the range as specified for the battery type/model. The first set of IR data may take about 15 minutes for 40 batteries.
- With HMI, check alarm settings for the unit. Verify/Change:
  - 1) String Float V High/Low (cover boost charge if not wish to have alarm for boost, Discharge V Low.
  - 2) Voltage limits (Float High/Low, Discharge Low) for cell/battery.
  - 3) Resistance High/Low. (The IR high is about 50% higher than average, low is about half of average.)  
If there is alarm, find out the reason and correct it.
- Check alarm settings for Battery Analyzer software, export a set of data, and fill commission form.

**This checklist does not include tools, procedures and safety cautions for battery installation.**