Conext™ Battery Monitor Quick Start Guide
865-1080-01
http://isol.schneider-electric.com

A Introduction

The Conext Battery Monitor is a meter for 24 V & 48 V batteries designed for use in off-grid power systems as a wallpanel/DIN-rail mount device. It features a local display to selectively show the voltage, current, consumed amp-hours, remaining capacity, and remaining hours. The Battery Monitor connects with other Xanbus devices such as Inverters, Solar Charge Controllers, Automatic Gen Start & System Control Panel via Xanbus ports to provide accurate information about the state of the connected battery. The Battery Monitor is wired to the battery through two ports, an analog signal port and BTS (Battery Temperature Sensor).

B Inside the Box

Pre-scaler board
Not shown: battery sense cable (9.8 ft / 3m)

Battery Temperature Sensor (BTS)

Battery shunt (500A/50mV)

DIN rail clip

Modbus connector

USB 2.0 A to Mini-B Cable

Network terminator

Pre-scaler cable (orange) (15 ft / 4.5m)

C Features

Navigation buttons

Mini-USB port

Outer bezel (removable)

Xanbus port

BTS port

Battery analog signal port (orange)

RS485-Modbus port

Standby/reset button

LCD display screen

Not shown: battery sense cable (9.8 ft / 3m)

D Mounting Templates

D1 PANEL MOUNTING TEMPLATE

D2 WALL MOUNTING TEMPLATE

MOUNTING

TERMINATING

TEMPLATE

90mm

82mm

2.32”

2.36”

39mm

59mm

82mm

60mm

2.36”

2.32”

Not shown: network terminator

Cut this area only if access to ports will be unavailable from the rear side after installation.
Install the Pre-Scaler board onto a wall with two screws (not included), as shown below. Choose a location that is near the battery and easily accessible.

NOTE: Ensure that terminals are covered after installation and wiring steps are completed.

Use the two screws provided to secure the shunt to your chosen location, as shown below. The maximum allowable distance between the Battery Monitor and the shunt is 30m.

Install the battery shunt as close as possible to your battery location near the negative terminal, using the screws included with the shunt. If possible, install the shunt inside your battery enclosure.

NOTE: Ensure that terminals are covered after installation and wiring steps are completed.

Use the two screws provided to secure the shunt to your chosen location, as shown below. The maximum allowable distance between the Battery Monitor and the shunt is 30m.
**Conext™ Battery Monitor**  
865-1080-01  
http://solar.schneider-electric.com

### Cable Connections

**To wire the Battery Monitor:**
- Connect the battery sense cable wires to the battery terminals, as shown above.
- Wire the battery shunt to the battery, as shown above.
- Install 2A (313/3AG) fuses as close to the battery terminals as possible, as shown above.

**Cable Connections Diagram**

- **Pre-scaler board**
- **Battery shunt**
- **Battery sense cable**

**Twisted pair**

1. **V+ (Red wire)**
2. **V– (Black wire)**
3. **Vm+ (Brown wire)**
4. **Vm (Grey wire)**
5. **Va2- (Yellow wire)**
6. **Va1+ (Orange wire)**
7. **I+ (Blue wire)**
8. **– (Electrolyte wire)**

**NOTE:** Place the shunt as close to the battery negative terminal as possible.

**Battery shunt**

- **2A (313/3AG) fuse**
- **2x 2A (313/3AG) fuse**

**CTW Switchgear**

**To XW+ PDP, mini-PDP, or XW**

**To Battery shunt and batteries**

**To Xanbus network**

**Battery enclosure**

**SYSTEM**

**BATTERY**

**Battery sense cable**

**Twisted pair**

1. **V+ (Red wire)**
2. **V– (Black wire)**
3. **Vm+ (Brown wire)**
4. **Vm (Grey wire)**
5. **Va2- (Yellow wire)**
6. **Va1+ (Orange wire)**
7. **I+ (Blue wire)**
8. **– (Electrolyte wire)**

**NOTE:** Place the shunt as close to the battery negative terminal as possible.

**Battery shunt**

- **2A (313/3AG) fuse**
- **2x 2A (313/3AG) fuse**

### Synchronize

**SYNCHRONIZE**

Hold the **<** and **>** buttons until **SYNCHRONIZE** flashes on the display screen.

**NOTE:** Before synchronizing the Battery Monitor to a state of charge of 100%, charge the batteries completely and allow the batteries to remain in float state for two hours or longer after first installation.

### Menu Navigation

**NAVIGATION BUTTONS**

Use the navigation buttons on the Conext Battery Monitor to scroll through menu screens, check battery status and change configuration settings.

- **<** (Left)
- **OK**
- **>** (Right)

**MAIN MENU**

Enter the Main menu by holding **<** for three seconds, until **MAIN MENU** appears on the display screen. From the Main menu, you can navigate to different menus, including the Function menu (see Function Menu, below).

**For information about other menus, see the Conext Battery Monitor Owner’s Guide available at https://solar.schneider-electric.com/product/conext-battery-monitor.**

**FUNCTION MENU**

From the Main menu, enter the Function menu by pressing **>** twice, until **FUNC** appears on the display screen.

- **<** and **>** buttons to browse through the different Functions. Press **<** to view the selected Function value.
- **<** and **>** to change the value. Press **>** again to return to the Function menu.

**DISPLAY MODE**

Access the Display Mode from any menu item by pressing **<** for three seconds. This will save any Function value changes to internal memory. When no navigation buttons are pressed for 90 seconds while operating in the Function menu, the Battery Monitor will automatically return to the Display Mode without saving any Function value changes.
The Conext System Control Panel (SCP) provides remote configuration and monitoring capability for the Battery Monitor and all other Xanbus-enabled devices in the network.

### Conext SCP Battery Monitor menu

- **Battery**
  - 37.4V / 37.7V
  - 4.84V
  - 19200 Ah
  - Time Remaining: 65.6 m
  - State of Charge: 75%

- **Statistics**
  - AH Removed: -150 Ah
  - Battery Temp: 28°C
  - Time Remaining: 03:56:00 h/m
  - State of Charge: 75%

- **Advanced Settings**
  - **Modbus Settings**
    - **Address**: 001
    - **Base Rate**: 119200
    - **Part (Length)**: 0
    - **Parity**: Even
    - **Stop Bits**: 1
    - **Weight**: 16V
    - **Supply Voltage**: 200A
    - **Supply Current**: 500A / 50mV
    - **Fixed Voltage**: 52.8V
    - **Discharge Floor**: 50%
    - **Self-Discharge**: 3.0%
    - **Shunt mV**: 50mV
    - **Nominal Temp**: 25°C
    - **Discharge Rate**: 20h

### Conext™ Battery Monitor

#### Configuration using the Conext System Control Panel

- **Modbus Settings**
  - **Address**: 001
  - **Base Rate**: 119200
  - **Parity**: Even
  - **Stop Bits**: 1
  - **Weight**: 16V
  - **Supply Voltage**: 200A
  - **Supply Current**: 500A / 50mV
  - **Fixed Voltage**: 52.8V
  - **Discharge Floor**: 50%
  - **Self-Discharge**: 3.0%
  - **Shunt mV**: 50mV
  - **Nominal Temp**: 25°C
  - **Discharge Rate**: 20h

#### Technical Specifications

- **Resolution**
  - Voltage: 0 to 70 (+0.1 V)
  - Current: 0 to 2000 / 20 to 9999A (+0.5 A / +1A)
  - Time: 0 to 24hrs / 24..240hrs (+1 minute / +1hr)
  - Temperature: -20 to +50°C (+0.5°C)

- **Accuracy**
  - Voltage Measurement: +/- 0.3%
  - Current Measurement: +/- 0.4%

- **Connections**
  - Battery charger's float voltage, which is the last stage of the charging process.
  - The discharge rate is the current at which the battery manufacturer rates batteries.
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- **Nominal Temperature**: 25°C
- **Discharge Rate**: 20h
- **Self-Discharge**: 3.0%