

PRO EM235 Quick Start Manual

This guide instructs the user on installation, wiring, configuring and operating the EM235 multi-meter. This guide does not substitute the full user manual or the detailed safety instructions. To download the manual and other related material, please visit our website: www.satec-global.com.



Warning! Only a licensed electrician may perform the installation and wiring of the EM235.



Figure 1: EM235 front panel

INSTALLATION

The PRO EM235 is designed exclusively for installation on DIN-rail.

Please note to leave room for future expansion: when installing a basic unit (without modules), it is recommended to maintain a minimal gap of 30-100mm to the right of the unit, allowing future installation of additional detachable SATEC modules (figure 5; depending on number of added modules, 17.8mm each).

Use a flathead screwdriver to dislodge the unit from the rail by inserting the screw-driver into the slit in the latch, pushing the latch downwards. To install the unit push the latch back upwards.



Figure 2:
Opening the latch

ELECTRICAL CONNECTIONS

The following steps (Figure 3) correspond with a low-voltage three phase network:

1. Make sure all power sources are disconnected.
2. Make sure that your designated power supply corresponds with the unit's rating.
3. Connect the power supply (bottom-left of front panel) via 12 AWG wires and a designated circuit breaker.
4. Standard external current transformers: connect the CT's (14 AWG minimum) "+" pole to the device's **I1+** current input (unit's bottom right of front panel, as in figure 3) and the "-" pole to the adjacent **I1-** current input. Repeat this for the following two phases, **I2** and **I3**. Verify proper polarity in your connections in accordance with the arrow printed on the external CTs.
"HACS" CTs: connect the red/white wire to the "+" terminal and the black/orange (colors vary according to the CT model) wire to the "-" terminal.
5. Connect the voltage measurement inputs (22-12 AWG; bottom-center of front panel).
6. Connect the com wire (26-12 AWG, shielded) to COM1 (RS485, top-left of front panel).
7. Power-on the unit.

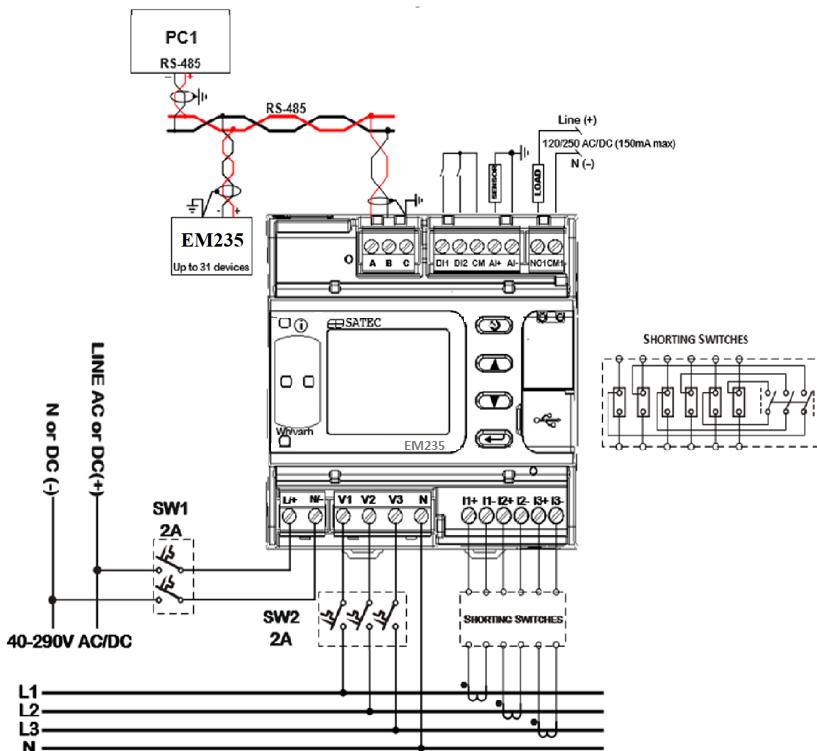


Figure 3: Typical wye installation

BASIC CONFIGURATION AND OPERATION

The PRO EM235 is operated via the LCD display, 2 LEDs and 4 pushbuttons (figure 1: front panel).

When powered on, the device will default to displaying voltages, for basic setup back up (<- button) to the home screen navigate with arrows to “setup” (select with ✓), enter default password (“9”) and select (“apply”). Open “general setup” to reveal “basic setup” for configuration. See screenshot sequence in figure 4, below.

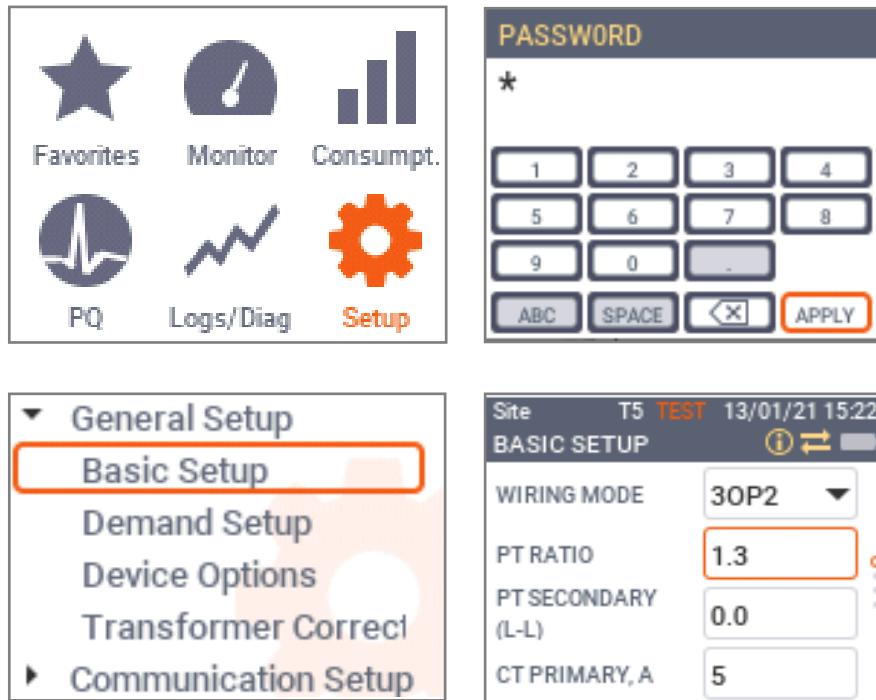


Figure 4: Screenshot sequence for basic setup

CONNECTING OPTIONAL SATEC MODULES

1. **DO NOT HOT-SWAP.** When adding/removing modules, make sure the unit is disconnected from power supply
2. Remove cover (sticker on right side of unit) to reveal port
3. Attach the module tightly and tighten the clips
4. Power on the unit

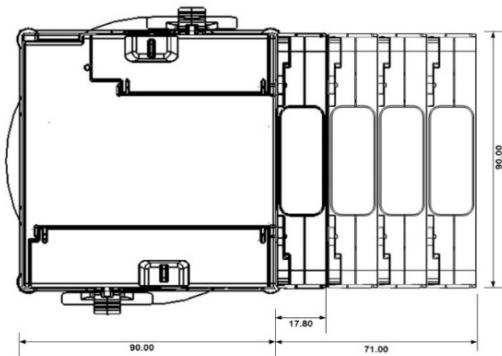


Figure 5: module expansion, front panel view

GENERAL INFORMATION AND SYSTEM DEFAULTS

1. Default password: 9
2. Default IP: 192.168.0.203 (ETH1)
3. Default current mode (HACS model): Alternating Current (AC)
4. Default serial com settings (RS485): 19,200 Baud rate; address = 1
5. For convenient configuration please use SATEC's PAS engineering software, connecting your PC to the USB port (type C) at the right side of the front panel)
To download PAS (free): www.satec-global.com/power-analysis-software
make sure to update .exe file with the most recent update available on webpage