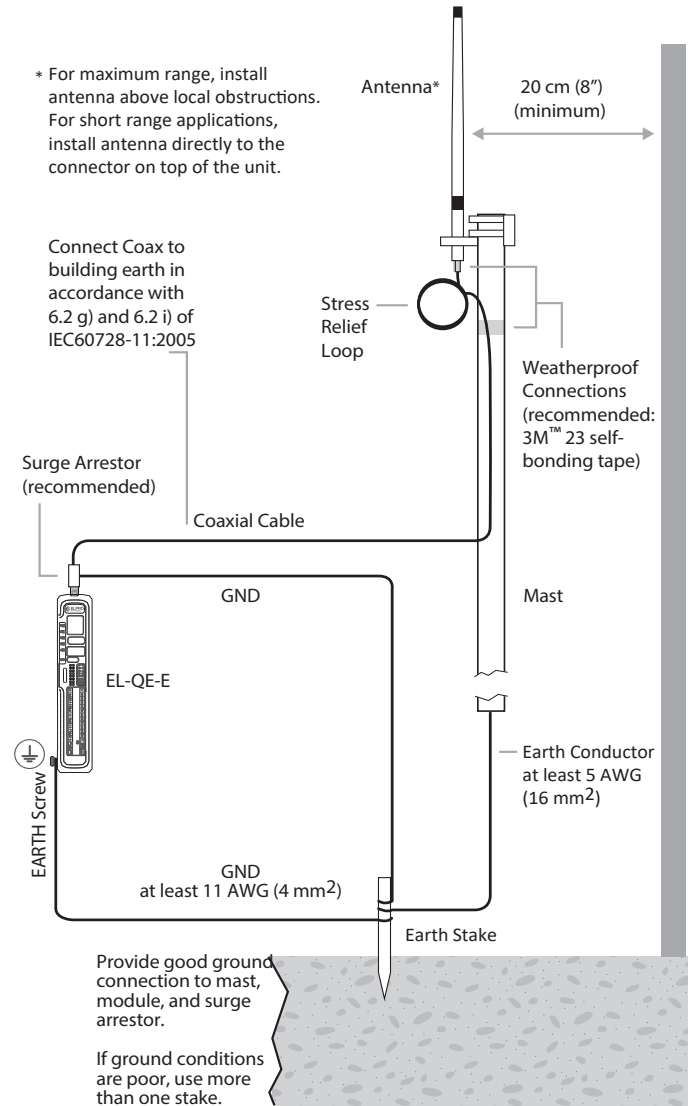




Antenna installation

When selecting an antenna, consider radio proximity. Use Figure 1 as a guide for installing an antenna and attaching it to the EL-QE-E.

Figure 1. Antenna installation



HAZLOC NOTICES

The EL-QE-E is suitable for use in hazardous locations that are rated Class I Division 2, Groups A, B, C, D or Zone 2 Group IIA, IIB, IIC.

The RF coaxial cable must be installed in a metallic conduit, per the US National Electrical Code (NEC) or NFPA.

The EL-QE-E must only be powered from an NEC Class 2 circuit or from a Class 2 power supply.

Internal Switches SW1 to SW6 Do not open the side access panel or operate any internal switches unless the area is known to be non-hazardous.

Specific Conditions of Use (X): The EL-QE-E must be installed in an enclosure that complies with the requirements of IEC60529 for IP54 and meets the enclosure requirements of EN50014 or EN60079-0.

To ensure effective heat dissipation, the EL-QE-E must be installed vertically with at least 25mm clearance on the right side

WARNING - EXPLOSION HAZARD

Do not disconnect equipment while the circuit is live unless the area is known to be free of ignitable concentrations. Substitution of any component may impair suitability for UL Class I Division 2 and for IEC Ex Zone 2.

NOTE

All connections must be SELV <50 Vac and <60Vdc.

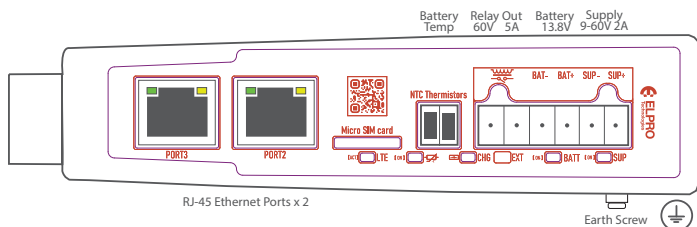
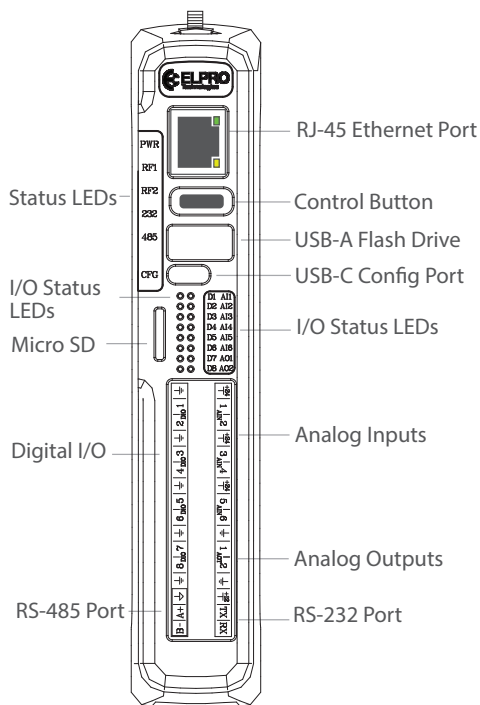
Connecting to the module for configuration

- Download and install either USB Driver or configuration application "CConfig" from ELPRO website
- <https://elprotech.com/resourcehub-category/software/>
- Connect to PC using supplied USB-C cable
 - For 1.5A USB-C port the module can be powered from USB-C
 - For USB-A port you need to power the module separately.
- Connect to the device at 192.168.111.1
- The PC will be automatically assigned a DHCP IP address

Username: admin

Password: admin

The following illustrations show the ports on the EL-QE-E



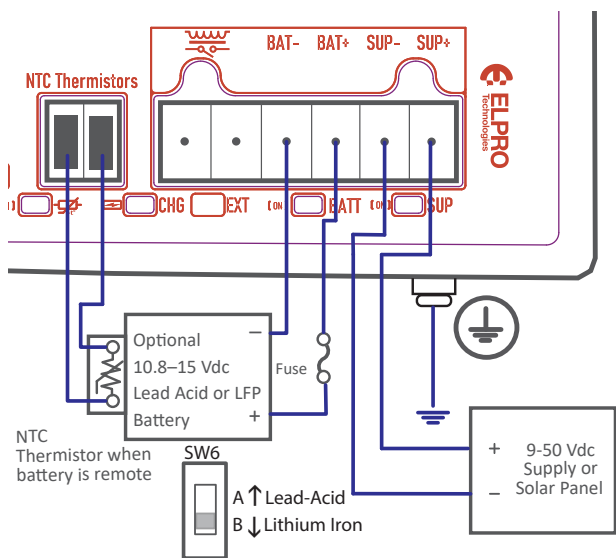
Power supply wiring

The “BAT-” and “SUP-“ terminals are connected internally to the ground terminals and to the module enclosure.

Connect the Earth Screw terminal on the rear of the module left side to ground for surge protection. Torque to 0.5-0.6Nm.

Connect SUP- and SUP+ terminals to main supply or solar input.

Connect BAT- and BAT+ terminals to a 13.8V battery for back-up supply.



Battery Temperature Monitoring

The EL-QE module monitors the temperature and disables battery charging at low temperatures. An internal temperature sensor can be used when the battery is located close to the EL-QE module.

For applications where the battery is remote from the module, connect an NTC themistor to the Battery Temp Sense.

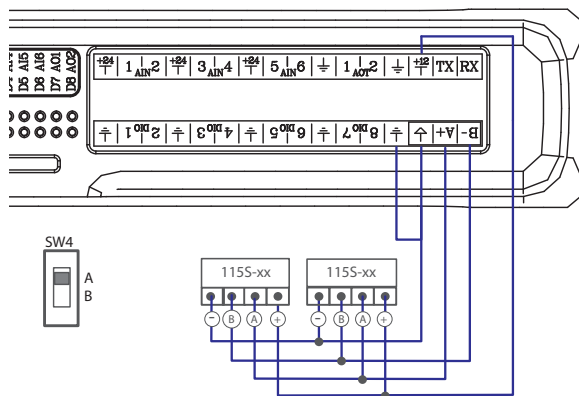
Recommended type: Vishay NTCLE400E3103H.

Select battery type (LiFePO4 Lithium Iron Phosphate or PbSO4 Lead-Acid) using the switches under the side access panel. Battery charging is disabled when the measured temperature falls below the temperature threshold for the battery.

| Battery Type Selection | Disable Temperature | Thermistor Resistance | SW6 Position |
|------------------------|---------------------|-----------------------|--------------|
| RES | Module Reset | | |
| PbSO4 (Lead-Acid) | -20 °C | 96,500 Ω | A (up) |
| LiFePO4 (Lithium-Iron) | 0 °C | 32,500 Ω | B (down) |

Expansion I/O connection

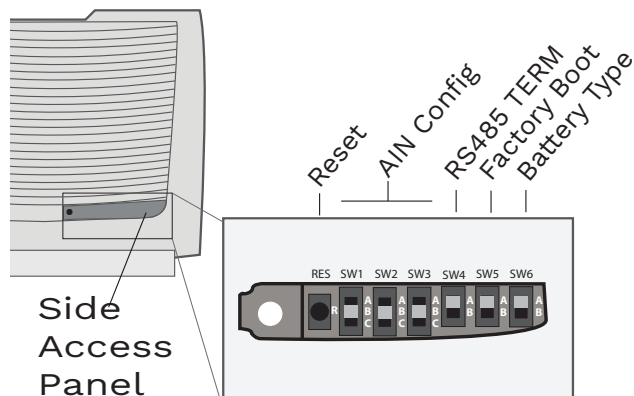
115S Modules connect via the RS-485 connection. The +12V supply connection can also be used to power the 115S modules directly from the EL-QE module.



Configuration switches

Use the Slide switches in the side access panel to select analog input voltage, current, RS-485 termination, Battery type and Module boot settings

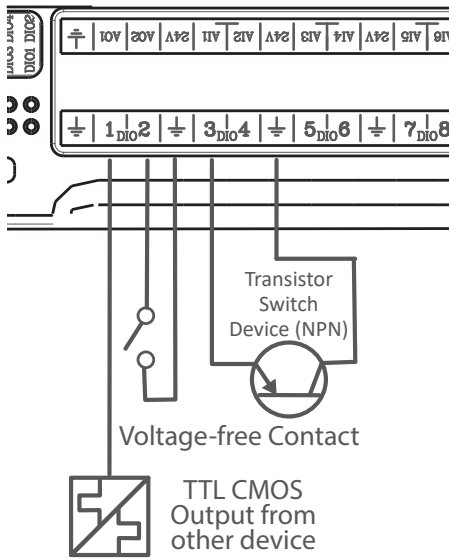
| Switch | DESCRIPTION |
|--------|----------------------------|
| RES | Module Reset |
| SW1 | AI1/2 A - SE Current |
| SW2 | AI3/4 B - Diff Current |
| SW3 | AI5/6 C - SE Voltage |
| SW4 | RS485 Term (Position A) |
| SW5 | Factory Boot (Position B) |
| SW6 | Battery A-PbSo4; B-LiFePo4 |



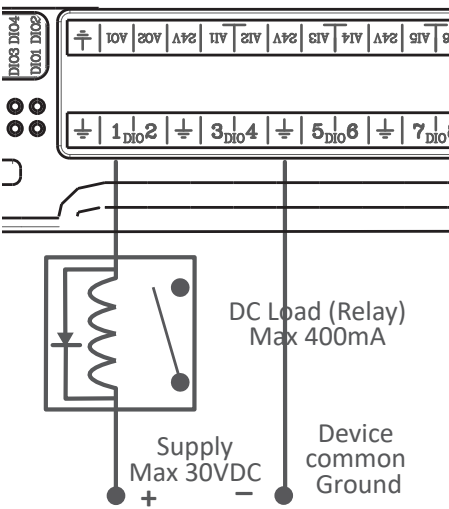
Input and output connections

The digital input/output channels can be wired as inputs or outputs.

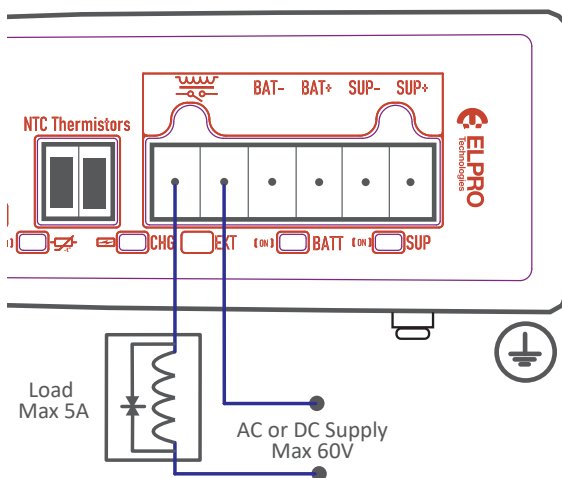
Digital input



Digital output

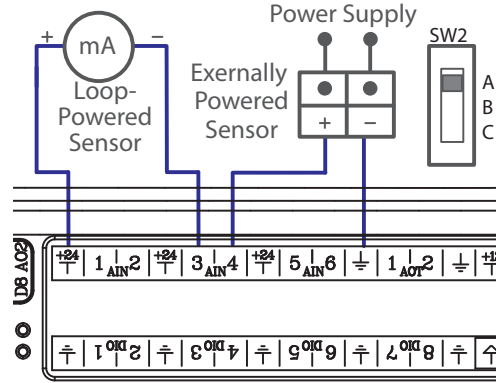


High Current Digital output (BottomPanel)

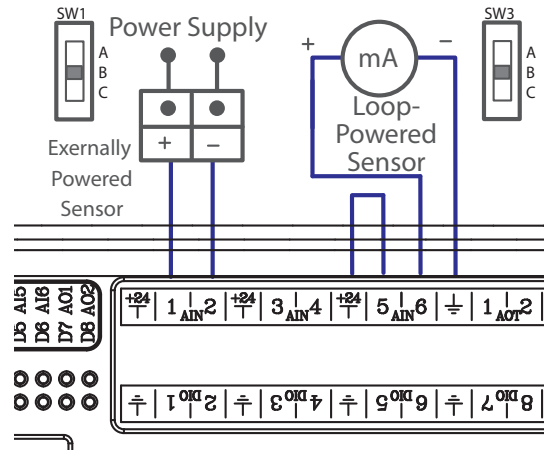


Analog connections

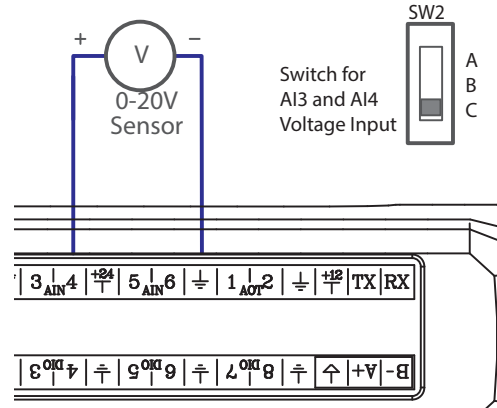
Single-ended current input (Position A)



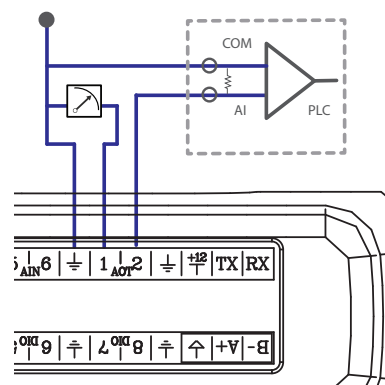
Differential current inputs (Position B)



Single-ended voltage input (Pos C)



Analog output



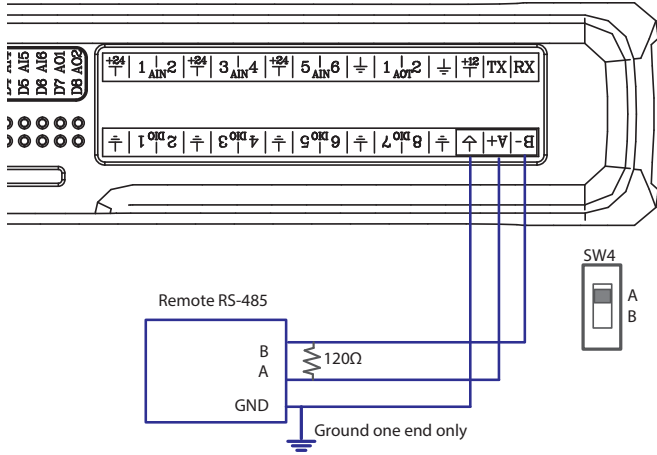
RS-485 serial connection

The RS-485 port is isolated for long cable runs.

The three terminals: A+, B-, and COM are isolated to 60V.

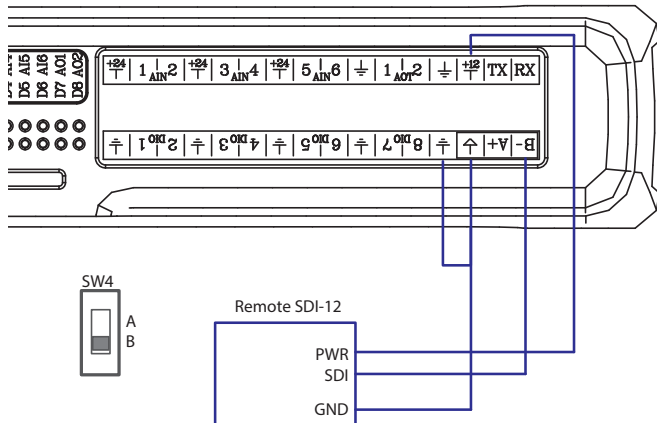
An on-board RS-485 terminating resistor provides line termination for long runs. Switch SW4 to position "A" to enable line termination.

Enable terminating resistors at far end of the RS-485 cable.



SDI-12 on RS-485 port

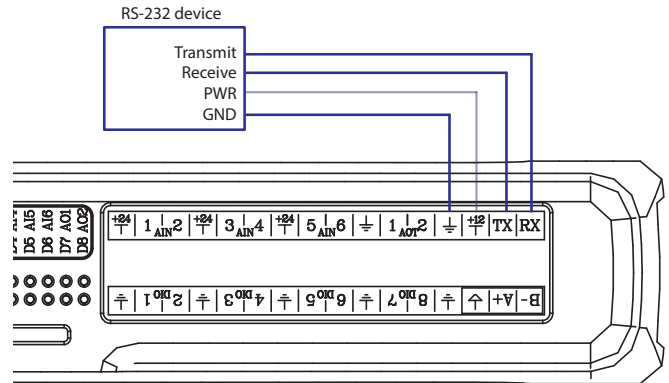
SDI-12 devices connect to the B- pin of the RS-485 connector. Leave A+ pin unconnected. You can use the +12 supply to power SDI-12 devices.



RS-232 serial connection

The RS-232 port supports 3-wire connection with rates up to 230,400 baud.

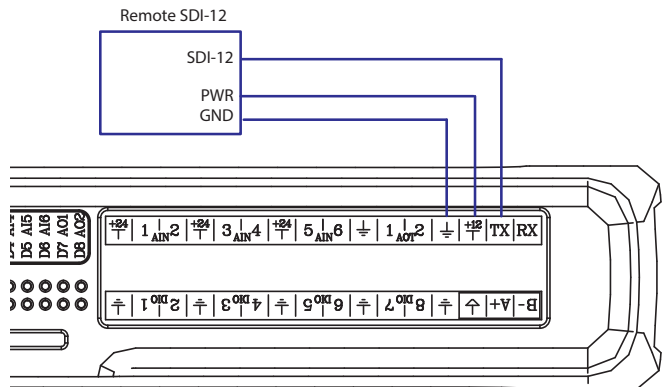
You can use the +12 supply to power devices up to 500mA.



SDI-12 on RS-232 port

SDI-12 devices connect to the TX pin of the RS-232 connector. Leave RX pin unconnected. You can use the +12 supply to power SDI-12 devices.

Note: SDI-12 mode must be enabled in device configuration.



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