

Quick Start Guide for ERL I/O Expansion IED

In our ongoing efforts to run our business in an environmentally sensitive way, we are encouraging the use of PDF manuals and software downloads, available from our website. For your convenience, links are provided below to all software files to be downloaded.

If you do wish to have a hard copy manual or software on CD, you may request those from our Customer Support team (contact info below).

If you are reading a hard copy of this document, download the soft copy (includes links) from our website's Support/Documents page, in the Quick Start Guide column.

<http://www.erlphase.com/support.php?ID=documents>

1. Downloading the required software and manual

- a. The ERL I/O Expansion IED comes loaded with the requested firmware version. All required software, as well as the release description of the latest firmware version, is available on the [Software page](#) of our website. Contact our Customer Support team for release descriptions of any other firmware version.
- b. Download the following software on your computer:
 - [TESLA Control Panel](#)
 - [USB Driver](#)
 - [ERL 61850 IED Configurator](#) (if needed)
- c. Install the TESLA Control Panel
- d. Install the USB driver
- e. Install Null Modem (refer to Section 3 in the User Manual)

Download the [ERL I/O Expansion User Manual](#). Other documents such as Drawings are also available on the [Documents page](#) of our website.

2. Hardware and operating system requirements

Minimum hardware requirements:

- 1 GHz processor
- 2 GB RAM
- 20 GB available hard disk space
- USB port
- Serial communication port

3. Unpacking and connecting the recorder

The following items are included in the ERL I/O Expansion carton pack:

- USB cable
- Letter of Compliance to ISO 9001:2015 standard
- Letter of Compliance to CE requirements (if requested)

There are no power switches on the recorder. When the power supply is connected, the recorder starts its initialization process.

1. Connect the power supply to #11, as shown in Figure 2. The wire used to connect to the power supply shall be at least 18 AWG (1.02 mm²), 600 V.
2. Ground the I/O Expansion at #12, as shown in Figure 2

4. ERL I/O Expansion front and rear panel layout

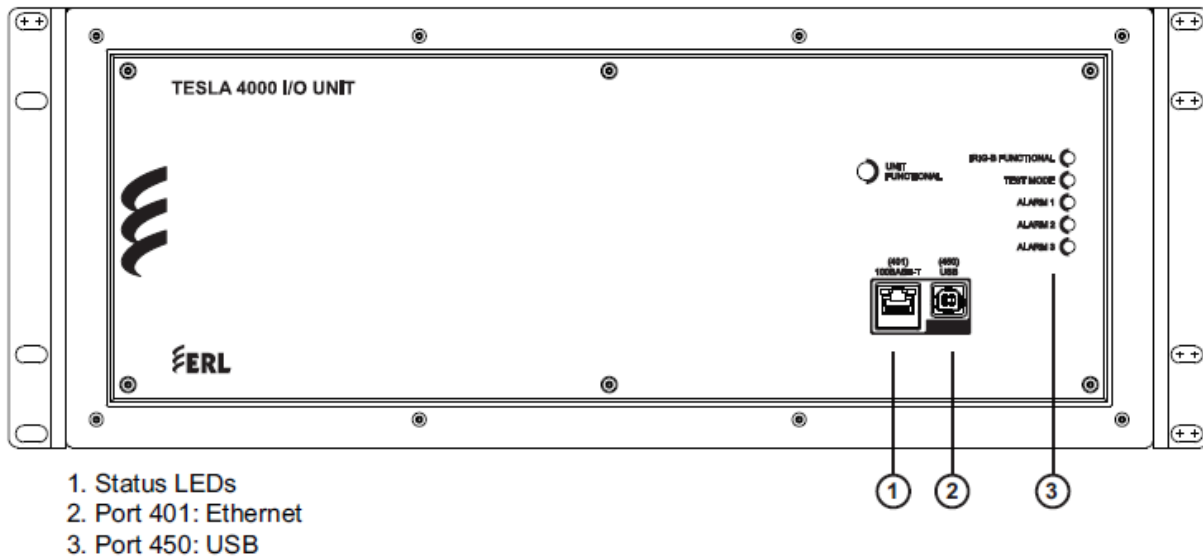
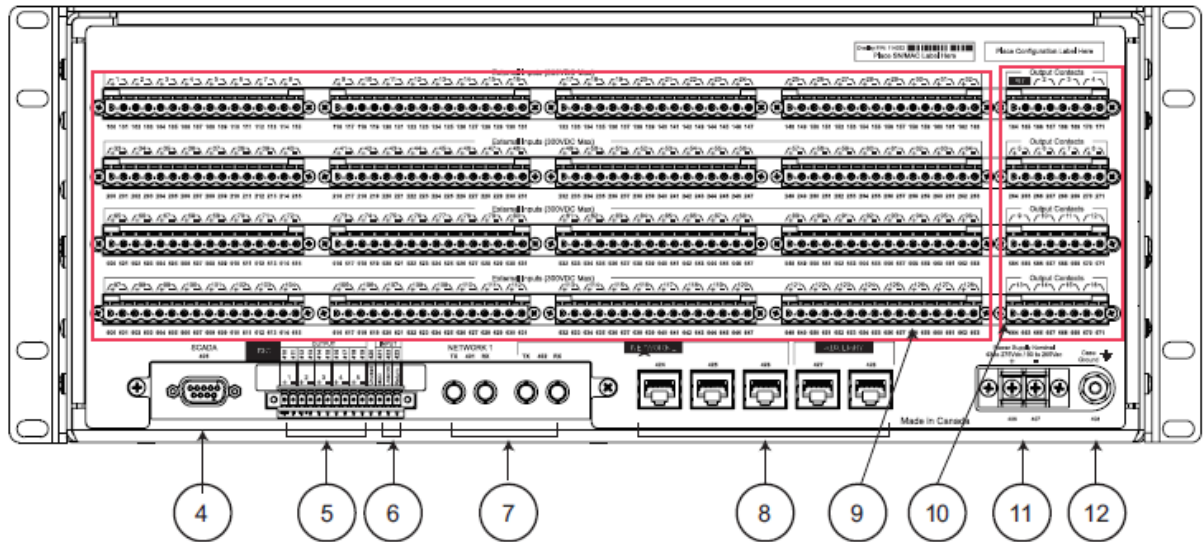


Figure 1 – ERL I/O Expansion Front Panel



4. Port 405: EIA 232 SCADA Communication (DNP 3 and Modbus)
5. Ports 410 - 419: System Sync Clock Output, modulated or unmodulated (depending on source)
6. Ports 421 - 423: IRIG B External Clock, modulated or unmodulated
7. Ports 401 - 402: 100/1000 Base-T Ethernet Network
8. Ports 424 - 428: 100/1000 Base-T Ethernet Network
9. Ports 100 - 163, 200 - 263, 500 - 563 and 600 - 663 (128): External (digital) Input Channels
10. Ports 164 - 171, 264 - 271, 564 - 571 and 664 - 671 (16): Output Contacts
11. Port 406 - 407: Power Supply (40-300 Vdc). Handles 48, 125 or 250 Vdc or 120 Vac nominal
12. Port 408: Chassis Ground

Figure 2 – ERL I/O Expansion Rear Panel

5. Application notes

Refer to the following application notes for help in connecting, configuring and calibration of TESLA. They may be downloaded from the Support section of our website on the [Application Notes page](#) (scroll to the TESLA Instructions section).

- [Basic Instruction to Communicate with TESLA](#)

For further information and contact Customer Support at:

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