

## Quick Start Guide for TESLA 4000 Power System Recorder

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 TESLA 4000 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 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 [TESLA 4000 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 TESLA 4000 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 power supply to #9, as shown in Figure 2. The wire used for the power supply wiring shall be at least 18 AWG (1.02 mm<sup>2</sup>), 600 V.
2. Ground the TESLA at #10, as shown in Figure 2
3. Analog connections to the TESLA include AC input current/voltage modules, AC/DC input modules and split core CTs. More information is available in Appendix G and Appendix L of the TESLA 4000 User Manual.

*Analog inputs should only be connected to ERLPhase input modules or voltages within the specified range. Applying direct voltages or currents will result in permanent damage to the TESLA.*

### 4. TESLA 4000 front and rear panel layout

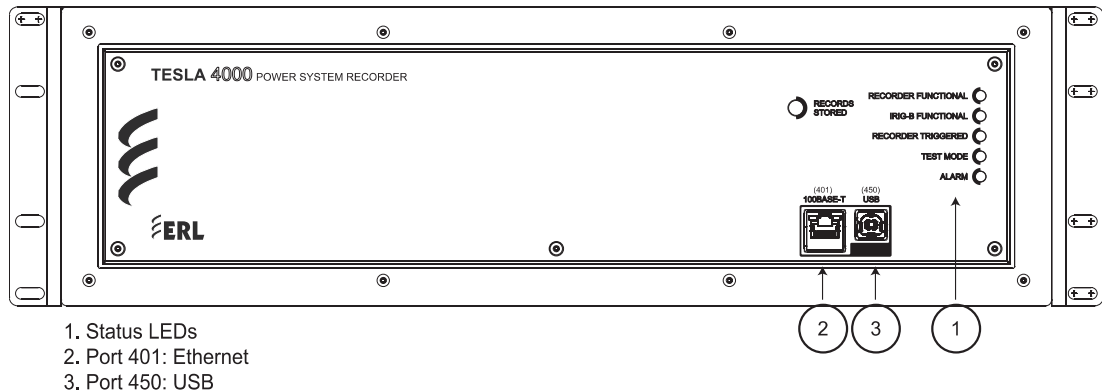
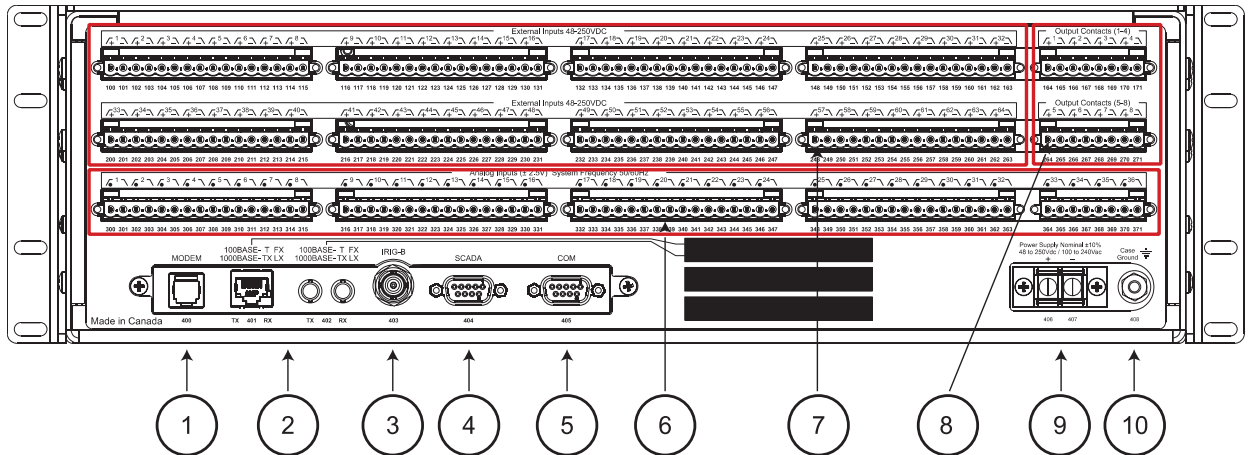


Figure 1 - TESLA 4000 Front Panel



1. Port 400: Internal Modem (option)
2. Ports 401 – 402: 100/1000 Base-T Ethernet Network
3. Port 403: IRIG B External Clock, modulated or unmodulated
4. Port 404: EIA 232 SCADA Communication (DNP 3 and Modbus)
5. Port 405: EIA 232 Serial Connection for PC or an external modem
6. Ports 300 – 347 (18), Ports 300 – 371 (36): Analog Input Channels. Non-isolated.
7. Ports 100 – 163 (18), Ports 100 – 263 (36): External (digital) Channels
8. Ports 164 – 171(18), Ports 164 – 271 (36): Output Contacts
9. Port 406 – 407: Power Supply (40-300 Vdc). Handles 48,125 or 250 Vdc or 120 Vac nominal
10. Port 408: Chassis Ground

**Figure 2 – TESLA 4000 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).

- [Role of input modules](#)
- [Basic communication with TESLA](#)
- [Configuration of TESLA](#)
- [Calibration of TESLA](#)

The Application Notes page also contains a range of other valuable TESLA instructions and descriptions of specific applications.

**For further information and contact Customer Support at:**

[support@erlphase.com](mailto:support@erlphase.com)

**+1 204 477 0591 ext 1**