



## Quick Start Guide for TESLA 4000-SV 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-SV 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](#)
  - HyperTerminal (or equivalent Terminal Emulation Application)
- c. Install TESLA Control Panel
- d. Install the USB driver (refer to Section 5 in this guide)
- e. Install Null Modem (refer to Section 3 in the user manual)

The TESLA 4000-SV user manual and other documents such as drawings are also available on the [Documents Page](#) of our website.

### 2. PC 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 (optional)
- Windows 7 Professional or Windows 10 Professional

### 3. Unpacking and Connecting the TESLA 4000-SV Recorder

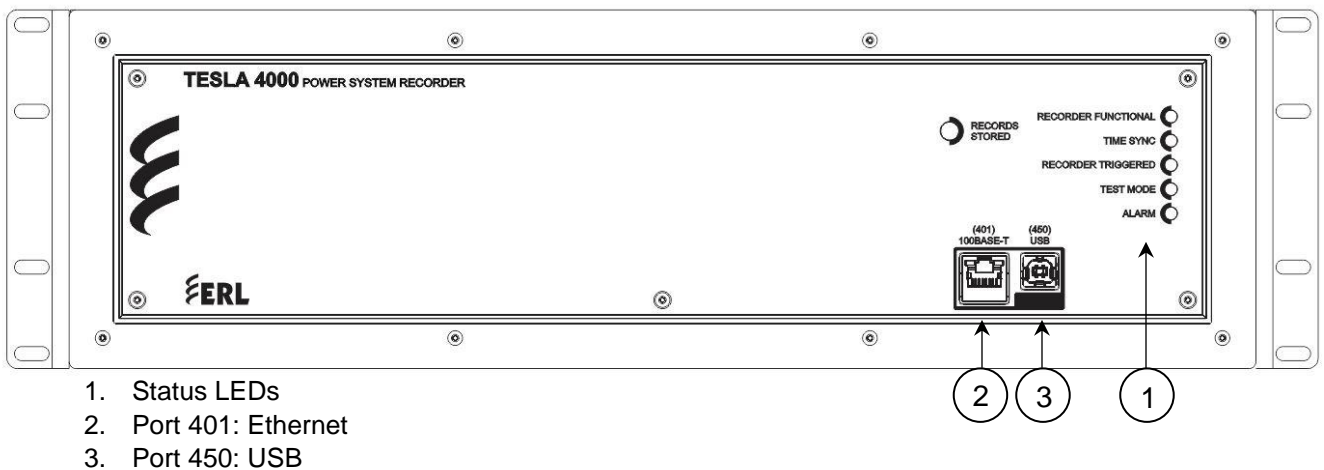
The following items are included in the TESLA 4000-SV shipping box:

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

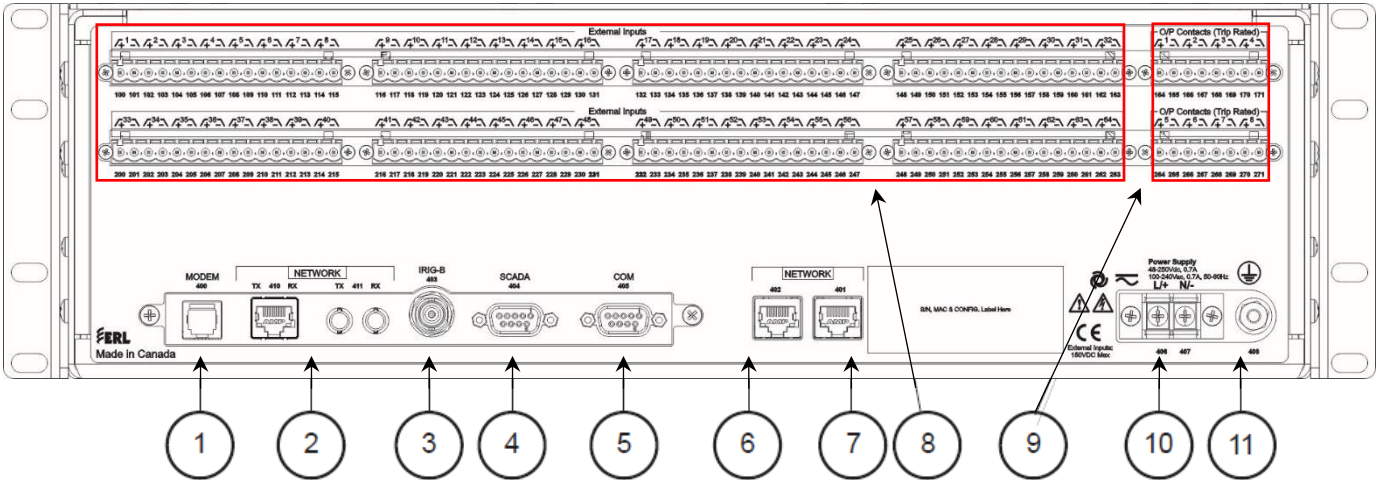
There are no power switches on the recorder. When the power supply is connected, the recorder starts its initialization process.

- a. Connect Ground at terminal 408, shown as #11 in Figure 2 and Figure 3
- b. Connect the power supply to terminals 406 – 407, shown as #10 in Figure 2 and Figure 3. The wire used for the power supply wiring shall be at least 18 AWG (1.02 mm<sup>2</sup>), 600 V.
- c. There are no analog terminals for TESLA 4000-SV

*Sampled value subscriptions must be configured via the ERL 61850 IED Configurator tool for the TESLA to acquire to analog input data from merging units. Refer to “Sampled Value Setup Requirements” in chapter 18-11 of the user manual.*

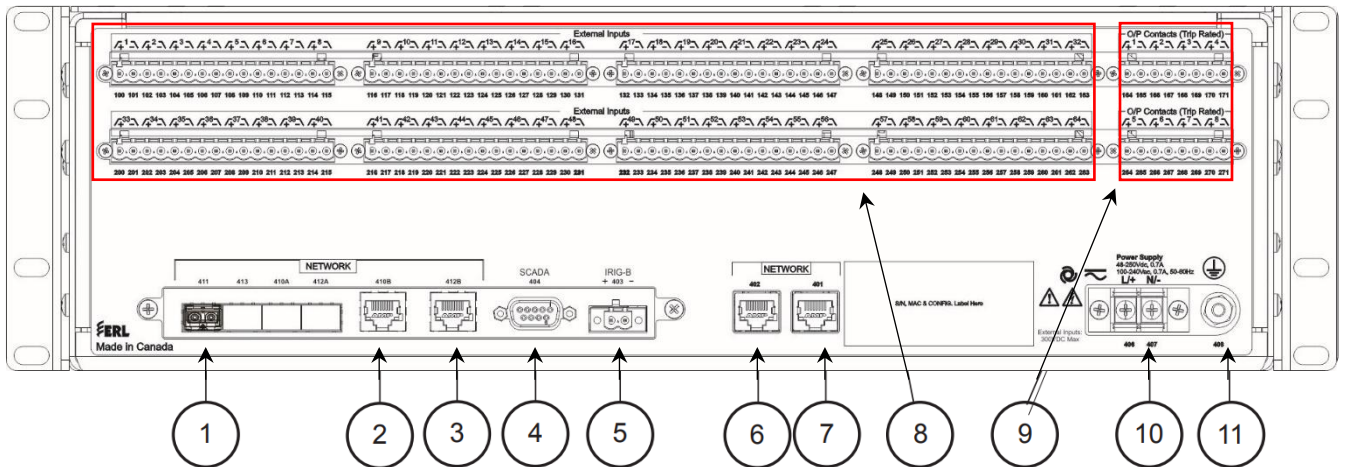


**Figure 1 – TESLA 4000-SV Front Panel**



1. Port 400: Internal Modem (*currently unused*)
2. Ports 410-411: Ethernet Network Ports
3. Port 403: IRIG-B External Clock, modulated or unmodulated
4. Port 404: EIA 232 SCADA Communication (DNP3 or Modbus)(*currently unused*)
5. Port 405: EIA 232 Serial Connection
6. Port 402: 100Base-T Ethernet Network Port for data communication, user interface, IEC 61850 Station Bus and Process Bus
7. Port 401: 100Base-T Ethernet Network Port for data communication, user interface and IEC 61850 Station Bus
8. Ports 100-163, 200-263 : External (digital) Input Channels
9. Ports 164-171, 264-271: Output Contacts
10. Ports 406-407: Power Supply
11. Port 408: Chassis Ground

**Figure 2 – TESLA 4000-SV Rear Panel**



1. Port 411: 100Base-FX Optical Ethernet port
2. Port 410: 100Base-T Copper Ethernet port, redundant with Port 412
3. Port 412: 100Base-T Copper Ethernet port, redundant with Port 410
4. Port 404: SCADA serial port (*currently unused*)
5. Port 403: IRIG-B port
6. Port 402: 100Base-T Copper Ethernet port
7. Port 401: 100Base-T Copper Ethernet port
8. Ports 100-163, 200-263: External Inputs 1-64
9. Ports 164-171, 264-271: Output Contacts 1-8
10. Ports 406-407: Power Supply
11. Port 408: Chassis Ground

**Figure 3 – TESLA 4000-SV Rear Panel (With Redundancy)**

Not all possible ordering configurations are shown in the diagrams above.

## 4. Application Guides

Refer to the following application guide for help in connecting and configuring TESLA. It may be downloaded from the Support section of our website on the [Application Guides page](#) (scroll to the *Configuration* section).

- [TESLA 4000-SV Sampled Values-Based Fault and Disturbance Recording](#)

## 5. Video Tutorials

Watch the following video tutorials to guide software installation and basic communication setup. The videos can be accessed from the Support section of our website on the [Videos page](#) (scroll to the TESLA 4000 video section).

- [Connecting to a TESLA 4000 Using TCP Serial USB](#)
- [TESLA Cybersecurity: Management and Configuration of Role Based Access Control](#)
- [TESLA 4000 Ethernet Connection](#)

The Application Guides and Videos pages also contain a range of other valuable TESLA instructions and descriptions of specific applications.

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

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

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