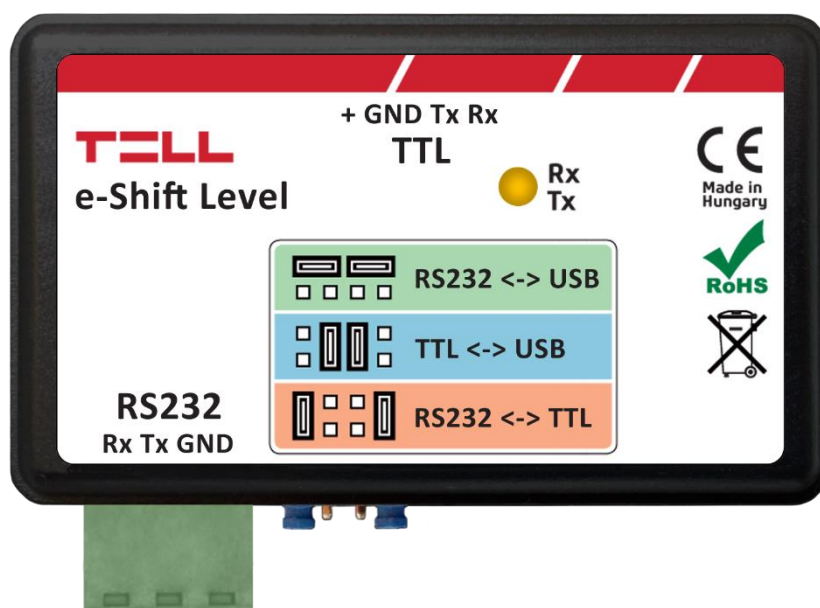


e-Shift Level Level driver interface

INSTALLATION AND APPLICATION GUIDE

Document version 1.0 05.09.2018



1 Functions of the e-Shift Level interface

- TTL/RS232 adapter
- TTL/USB adapter
- RS232/USB adapter

2 General information

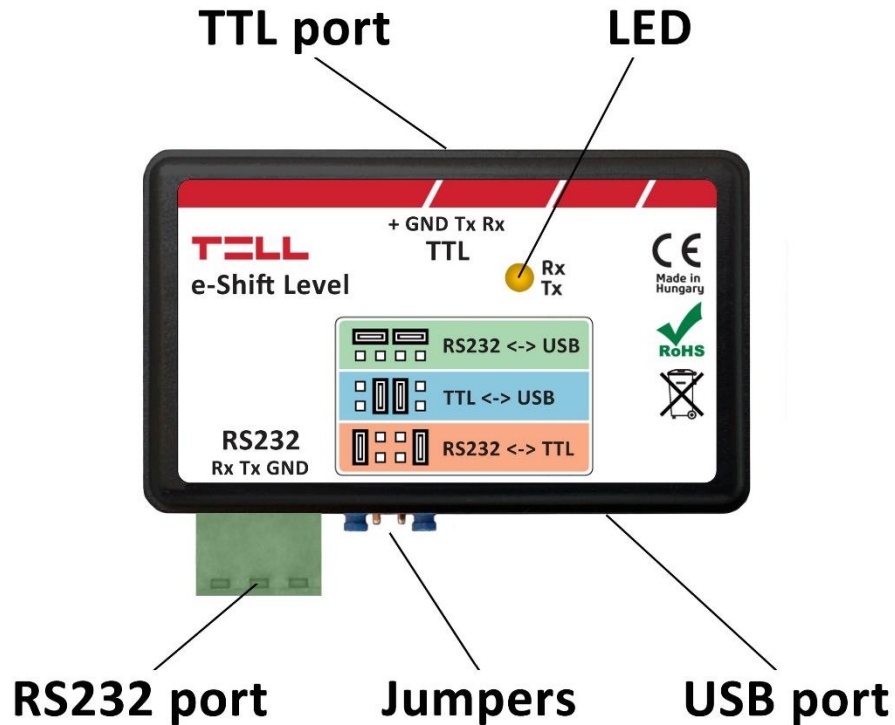
The **e-Shift Level** interface is a multifunction serial port adapter, which makes it possible to adapt a 5V TTL port to RS232 serial port or to USB port, as well as an RS232 serial port to USB port. With the help of this interface you can connect devices which are using a 5V TTL port to a computer via USB, or to other devices provided with an RS232 port. The interface provides bidirectional transparent data transmission between its ports.

Example for practical use: programming of alarm control panels provided with a TTL port by computer locally via USB, or remotely over the Internet via a TELL communicator.

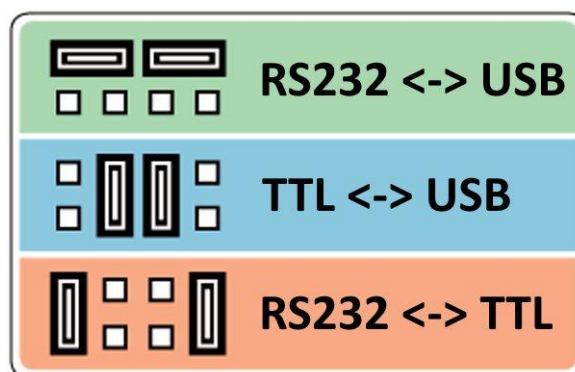
3 Connections and setup

The level driver interface has 3 ports:

- **RS232:** RS232 serial port provided with a terminal block (Rx, Tx, GND)
- **USB:** USB port provided with a USB-B socket
- **TTL:** 5V TTL port provided with a 4-pin JST connector (Rx, Tx, GND, +)



The direction of data transfer between the ports can be selected using the jumpers, i.e. the data transfer can be achieved between any two ports, thus the interface can also be used as an RS232/USB adapter. The figure below shows the jumper configurations for data transfer directions.



For using the product with alarm control panels, prepared link cables are available (e.g. for Paradox, Premier), which connect to the TTL port.

4 LED signals

Permanent red	The interface is powered up through one of its ports (normal operation state)
Flashing green	Data transfer is in progress

5 USB port

The USB port of the **e-Shift Level** interface uses an FTDI chip, therefore usage of the USB port requires installation of FTDI drivers. In case that the computer's operating system does not install the necessary drivers automatically upon connecting the interface to USB, downloading and installing the drivers is necessary.

The latest drivers are available on the website below:

<http://www.ftdichip.com/Drivers/D2XX.htm>

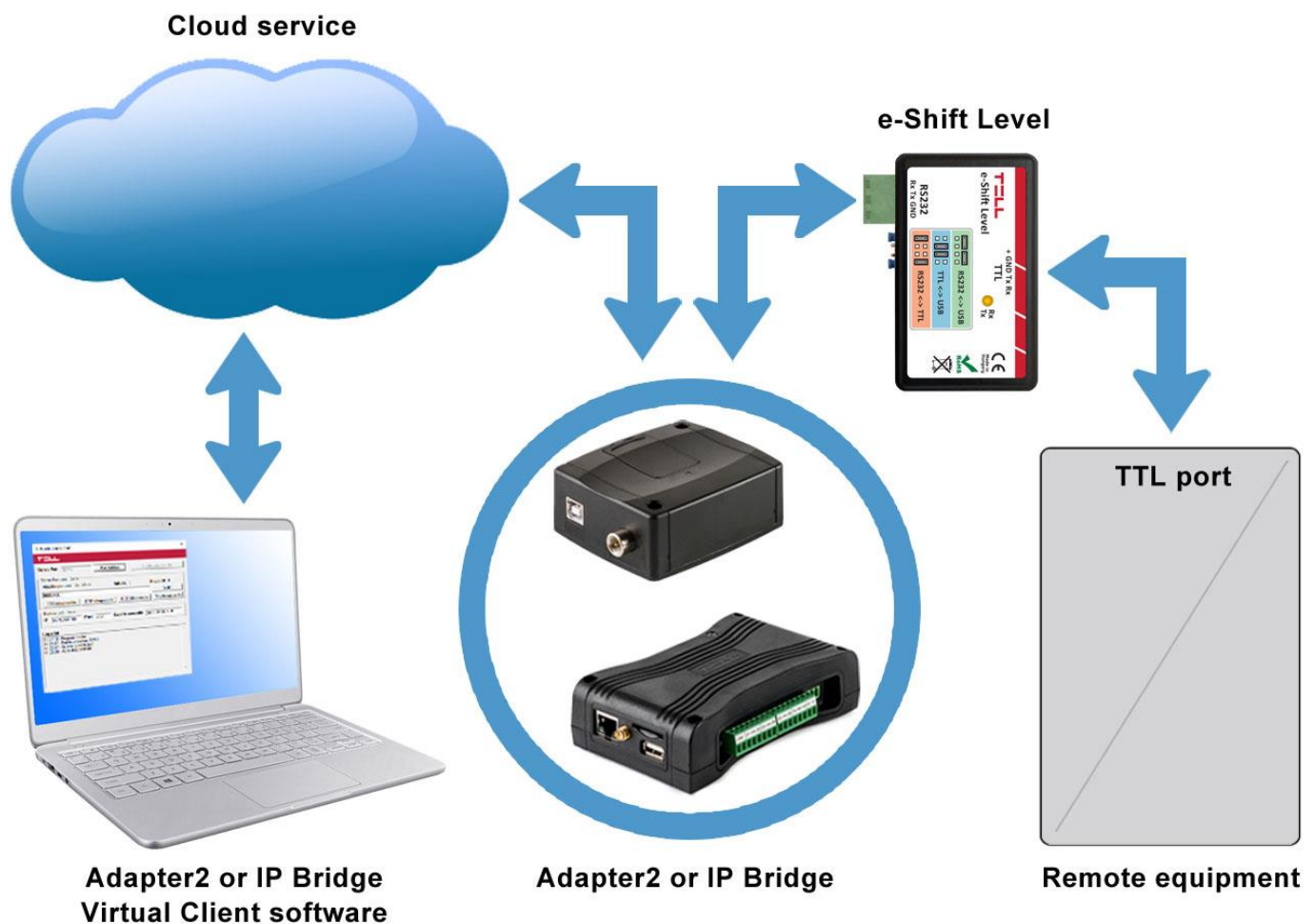
Installing the drivers:

- Disconnect the interface from USB if already connected.
- Open and install the downloaded drivers by following the instruction in the setup wizard.
- Connect the interface to USB and wait until the operating system completes the driver installation and indicates that the device is ready for use.

6 Remote access of devices provided with a TTL port via the Internet

The **e-Shift Level** interface can be used for remote programming via the Internet of alarm control panels or other devices or equipment provided with a TTL port, if you connect the interface to a **TELL Adapter2** or an **IP Bridge** device.

The Internet connection between the remote device or equipment and the computer, through the **e-Shift Level** interface, is ensured by the **Adapter2** (or **IP Bridge**) device and the **Adapter2** (or **IP Bridge**) **Virtual Client** software. For this, the serial port of the **Adapter2** (or **IP Bridge**) device should be connected to the TTL port of the given device or equipment through the **e-Shift Level** interface, and then data can be sent to and received from the device or equipment on the PC through the virtual serial port created by the **Adapter2** (or **IP Bridge**) **Virtual Client** software. The overview of the system can be seen in the figure below.



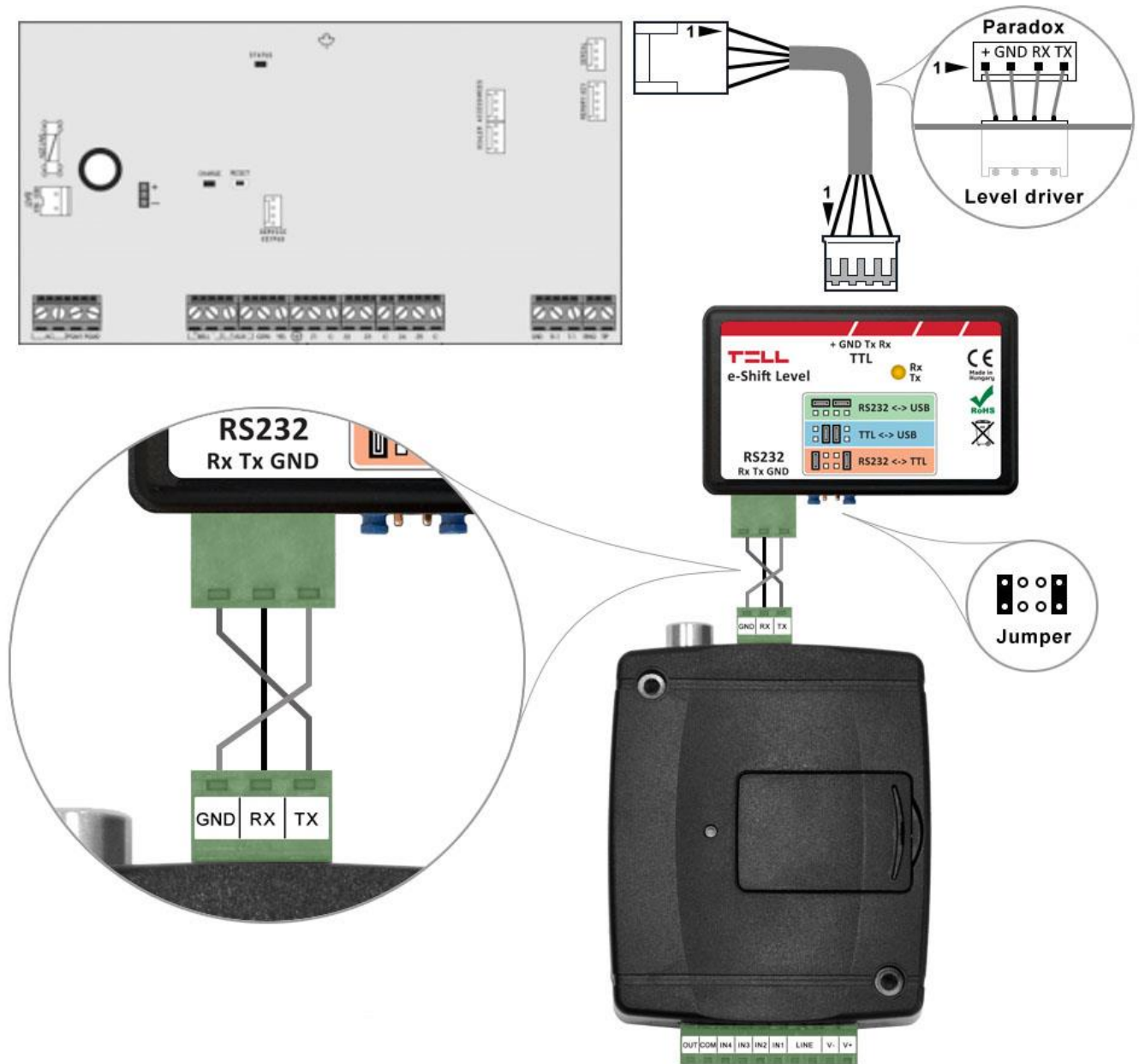
Detailed information about remote programming of alarm control panels and other devices you can find in the user's manual of the **Adapter2**.

Attention! When using the **Adapter2** device, transparent serial data transfer works through cloud service only. Therefore, in order to use this function it is necessary for the device to be connected to the cloud server.

Attention! Please take into account that data transfer through the serial port of the **Adapter2** may generate high data traffic, which increases the data traffic of the SIM card installed into the device.

7 Connecting to Paradox alarm systems

7.1 Wiring in case of using the Adapter2 communicator

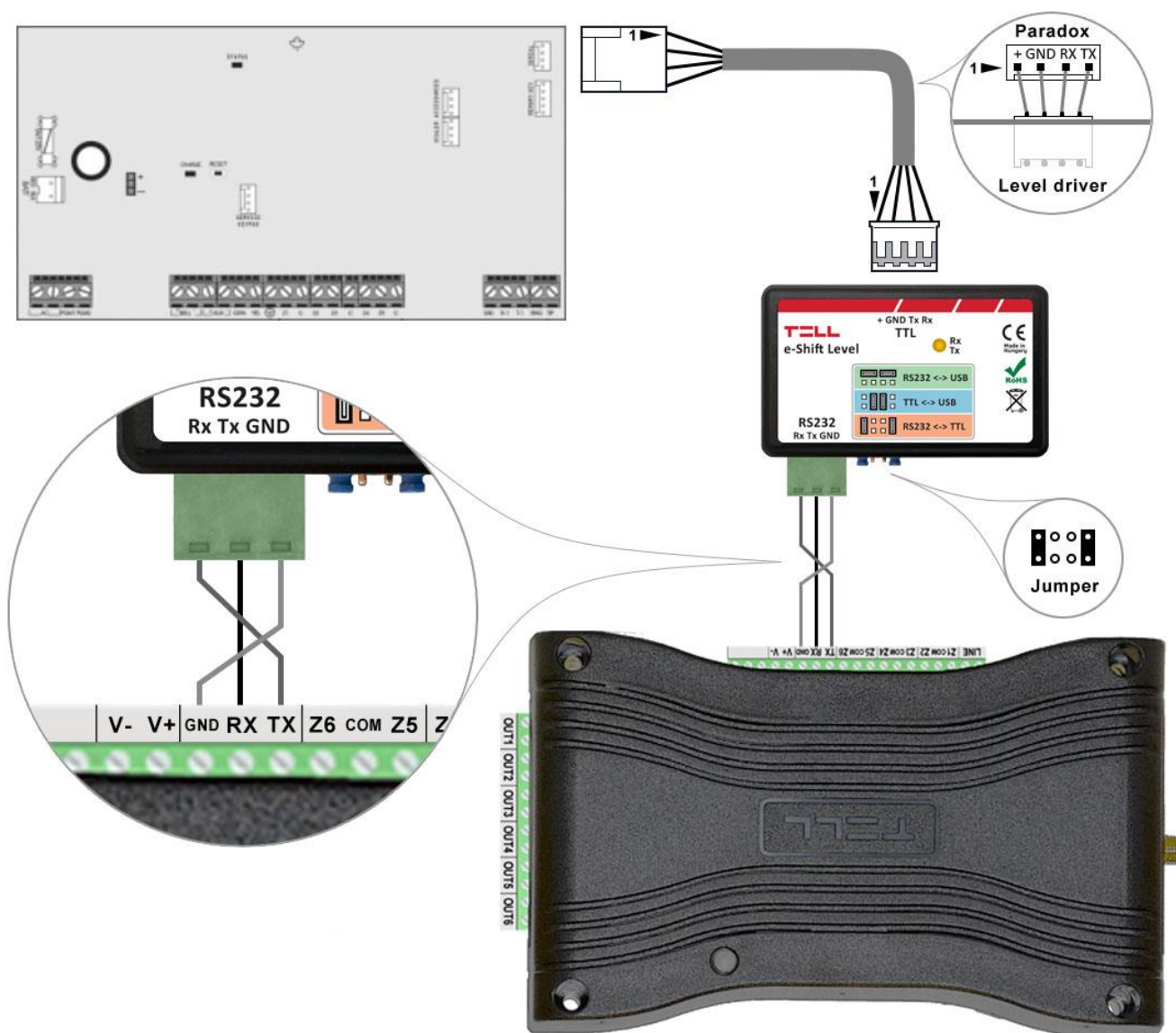


Wiring diagram for Paradox alarm systems

Connect the **RS232** serial port of the level driver interface to the serial port of the **Adapter2**, then link the level driver interface with the alarm control panel using the supplied special cable, as shown in the figure above. Configure the jumpers of the level driver interface as well as shown in the figure above.

Further details you can find in the user's manual of the **Adapter2**.

7.2 Wiring in case of using the IP Bridge communicator

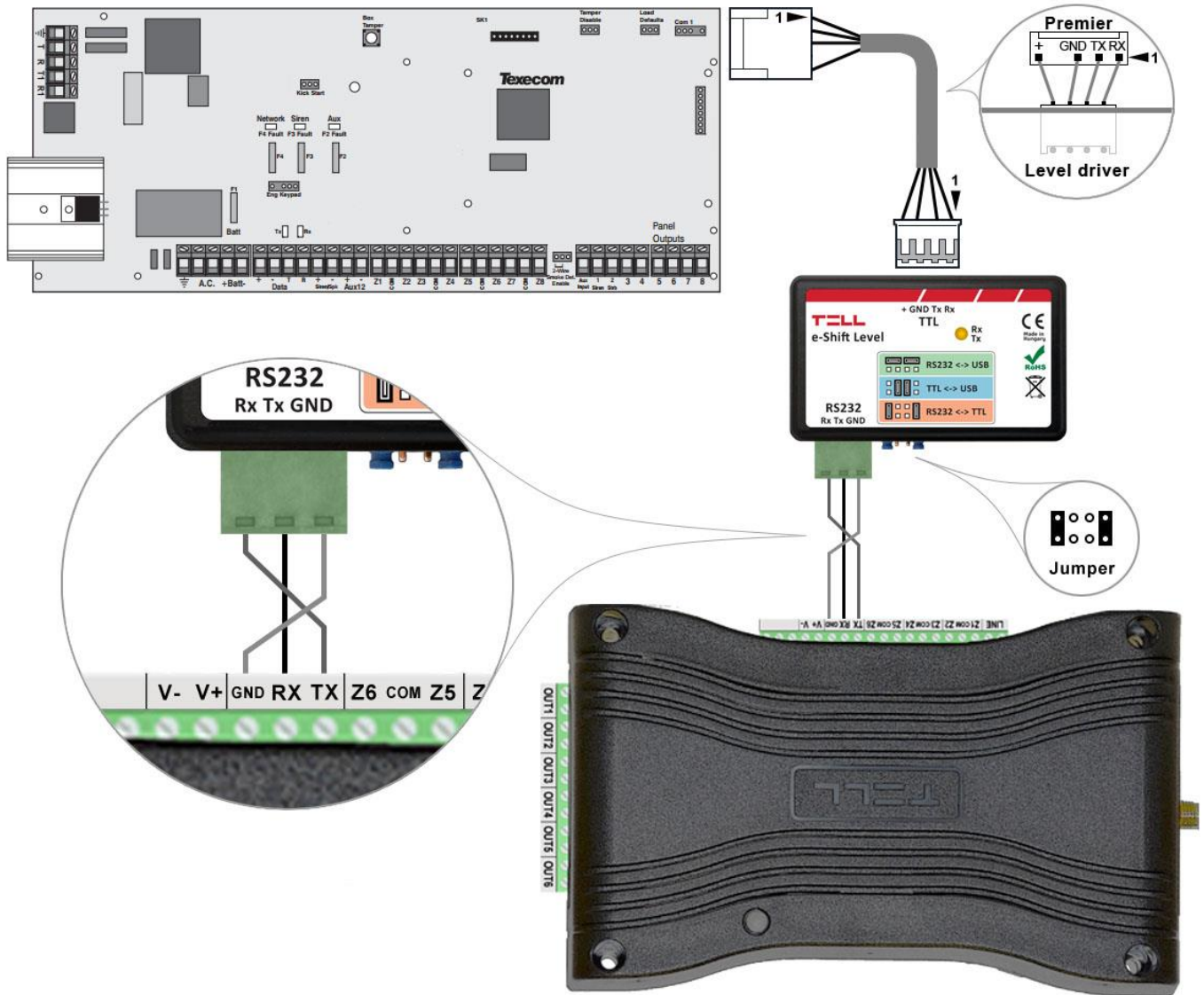


Wiring diagram for Paradox alarm systems

Connect the **RS232** serial port of the level driver interface to the serial port of the **IP Bridge**, then link the level driver interface with the alarm control panel using the supplied special cable, as shown in the figure above. Configure the jumpers of the level driver interface as well as shown in the figure above.

Further details you can find in the user's manual of the **IP Bridge**.

8.2 Wiring in case of using the IP Bridge communicator



Wiring diagram for Premier alarm systems

Connect the **RS232** serial port of the level driver interface to the serial port of the **IP Bridge**, then link the level driver interface with the alarm control panel using the supplied special cable, as shown in the figure above. Configure the jumpers of the level driver interface as well as shown in the figure above.

Further details you can find in the user's manual of the **IP Bridge**.

9 Safety instructions

For your safety, please read carefully and follow the instructions below.

Non-compliance with the safety instructions may produce a risk to you and your environment.

- **DO NOT USE** the device where it can cause danger or it can interfere with other devices and interrupt their normal operation (e.g. medical devices).
- **DO NOT USE** the device in high humidity environment and do not expose to chemical or mechanical impact.
- **DO NOT USE** the device beyond the specified operating temperature range.
- **DO NOT INSTALL** the device in hazardous environment.
- **THE COMPUTER** connected to the device should be connected to the protective ground in any case.
- **DO NOT TRY** to repair the device yourself. Any repairs must be performed by qualified person only.

10 Technical specification

Operating temperature: -20°C...+70°C
Dimensions: 58.5 x 35.7 x 20.8mm
Weight: 27g (packed: 80g)

11 Contents of the package

- **e-Shift Level interface**
- Terminal block and cable for the RS232 port
- Installation and application guide
- Warranty card

12 About the manufacturer

Company: T.E.L.L. Software Hungária Kft
Address: 4034 Debrecen, Vágóhíd u. 2., Hungary
Website: www.tell.hu