

Operating instructions TBSRJ45A

2BSecure for Ethernet interfaces

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1. Introduction

2BSecure is a compact black box that is placed between a machine control (e.g. PLC or IPC) and the connected ETHERNET interface to prevent unauthorised access or cyber attacks.

2. Operating principle

When 2BSecure is installed properly, the Ethernet interface is deactivated by default so that an unauthorised access is not possible. The activation happens manually via authorised personnel, either directly via the control (e.g. via password) or via a key switch or RFID system connected in between (see 6. Application examples).

3. Installation

3.1 Preparation

- Please make sure that the machine control (e.g. PLC or IPC) is switched off.
- Please check if all necessary components are at hand (2BSecure, connecting cable, if applicable illumination ring and key switch or RFID system).

3.2 Connection

- Please connect output "X1" on 2BSecure with the Ethernet interface of the control system.
- Next, connect input "X2" on 2BSecure with the Ethernet interface of a network-compatible device.
- If applicable: Connect the cable VK_MLX3_MLX3_(200/800) with the illumination ring LR22K24DUORG_619 and port "X4" on 2BSecure.
- Then, connect port "+24 V DC" and "GND" on "X3" of 2BSecure with a corresponding, switched off energy source.

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- Lastly, connect the control input "DATA Enable" on "X3" of 2BSecure with the control system (e.g. PLC/IPC, key switch or RFID system; see 6. Application examples). The control system has to be deactivated by default (no energy supply on 2BSecure).

3.3 Activation

- Please switch on the machine control.
- Switch on the supply voltage (+24 V DC/GND).
- Now check the functionality of the Ethernet interface. The illumination ring must glow red and there should be no connection/link between the network-compatible device and the machine control.
- If there is a connection and/or the illumination ring glows green, please check if the control input "DATA Enable" on "X3" of 2BSecure is being supplied with energy. If that is the case, please switch off the energy supply and repeat above steps. Otherwise, please contact our support (see 9. Contact information).

4. Operation

4.1 Activation of the Ethernet interface

- The Ethernet interface is deactivated by default.
- Activation of data transmission:
For data transmission, the control input "DATA Enable" must be supplied with energy (see 6. Application examples). The activation happens for example via:
 - the machine control (e.g. via password) or
 - a 2-position key switch * (switching on by turning the key) or
 - a RFID system * (switching on via transponder, please observe manual of the implemented system)

* Schlegel offers corresponding products

4.2 Disabling of the Ethernet interface

- Disable the system in accordance with the activation in reverse order.

5. Technical data

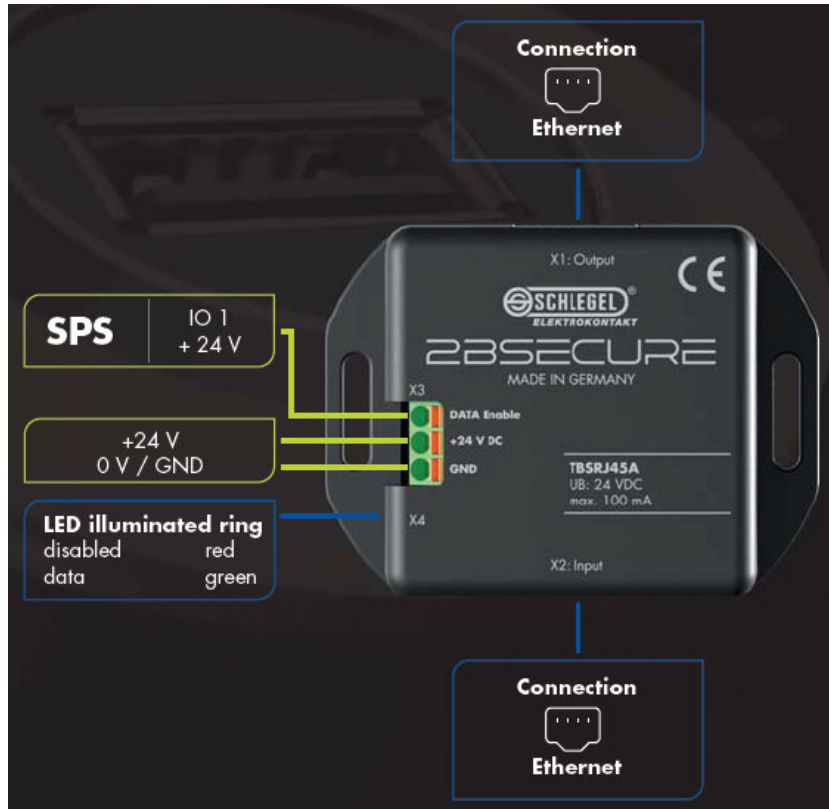
- Connections: 2x RJ45
- Rated voltage: +24 V DC
- Dimensions: 66.5 x 50 x 20 mm
- Data rate: 100 Mbit
- Further technical data is available in the datasheet.

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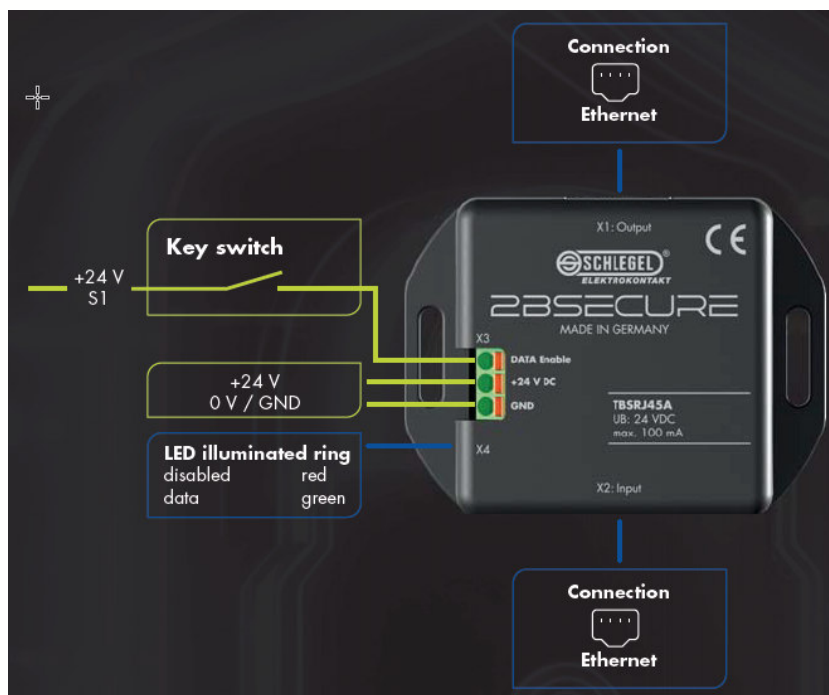
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6. Application examples

6.1 Connection with PLC



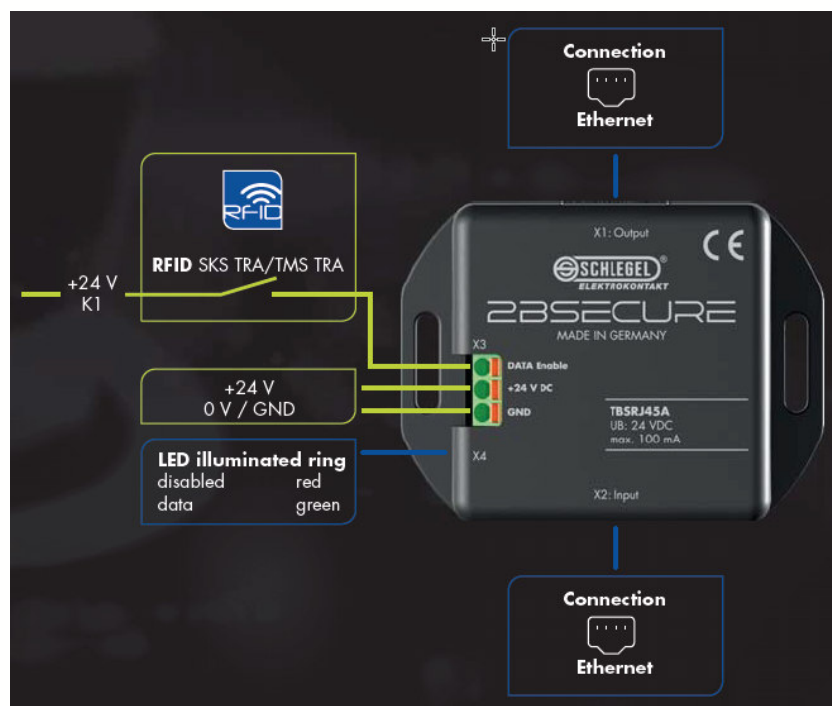
6.2 Connection with key switch



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6.3 Connection with RFID



7. Intended use

2BSecure may only be operated and used as described in this manual. The use of the product is intended exclusively for typical applications under normal conditions. These include, for example, installations, machines, or devices in normally tempered, dry rooms. Any use outside the intended area of application, such as outdoor areas or harsh environments with extreme temperature or humidity, as well as modification of the system, is not permitted. We assume no guarantee or liability for inappropriate use.

8. Disposal

2BSecure is not subject to special disposal requirements. It may be disposed at the following locations:

- Recycling centres
- Special collection points for electronic waste

9. Contact information

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- Phone: +49 73 71 502-0
- E-Mail: info@schlegel.biz

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- Website: www.schlegel.biz