

## Transponder Reader

### TR22A11KNX – Anthracite (Outdoor version)

#### Product and Applications description

The Transponder Reader TR22AxxKNX is an EIB/KNX wall mounting device suitable to access control application. This device can be used in any kind of building (Hotel, Hospital, Offices, Parking, etc..) where the access control application is required.

The device is equipped with two binary inputs (potential free contacts) that can be used, for instance, to control whether the door lock has been opened or closed or other signals coming from external switches/contacts (i.e. windows, bathroom emergency alarms, etc..).

The transponder reader is equipped also with two output relays which can be used for any purposes, typically to open the door or turning on the courtesy light inside the room.

The product provides on the front side four LEDs in order to enlighten 4 icons to display the following states (e.g. in case of Hotel management):

- Access Allowed/Not Allowed
- SOS request
- Service Call (clean room, etc..)
- Client status ("Busy room" or "Do not Disturb")

The LEDs and icons can be configured in association with other alarms or events.

The transponder reader can read cards or keys at a maximum distance of 30mm from the front side.

The access control follows a sequence where the "build number" has been checked at first, then the "data" to check if it has been elapsed or not, next the password ID for client/guest/service identification, then the enabled entrance timing window. In case card reading pass all checks the door is opened and, if set, the courtesy light inside is switched on. At the same time the Transponder Holder can send the reading response to the bus.

The device configuration for commissioning in terms of physical address, group addresses and parameters is done with ETS (Engineering Tool Software) through a download of the Application Program.

#### Application Program

See Eelectron product Database: "Eel\_db01.VD2".

#### Technical Specifications

##### Power Supply

- External Auxiliary Voltage: 12/24 V AC/DC  $\pm$  10% (SELV)
- Maximum current : 150mA

##### Inputs

- 2 potential free contacts
- Input signal voltage  $V_n = 24V DC$
- Input signal current at close contact = 1mA per channel

##### Outputs

- 2 relays NO 24 V AC, 2 A (AC1), 1A (AC3)
- Relay 1 (OUT1) door lock or general purpose
- Relay 2 (OUT2) courtesy light or general purpose

##### Transponder Reader features

- Operating Frequency 125 KHz

##### Control Elements

- 1 programming push button (back)

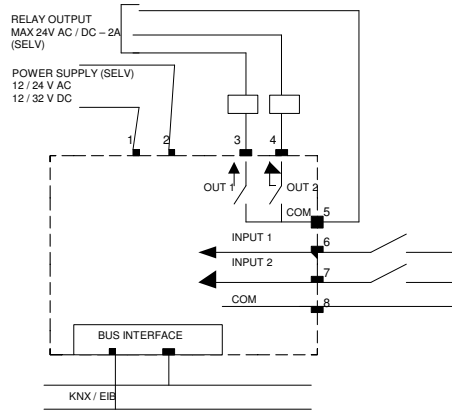
##### Display Elements

- 1 LED red (back) for ETS programming
- 1 LED red/green (front):
  - Red: "Access Not Allowed"
  - Green: "Access Allowed"
  - Red Blinking: "Grant Date not valid"
  - Orange: "Build Number not valid"
  - Orange Blinking: "Day of week not valid"
  - Green Blinking: "Hour Range not valid"
- 1 LED red (front): free signalling
- 1 LED amber (front): free signalling
- 1 LED verde (front): free signalling

##### Connections

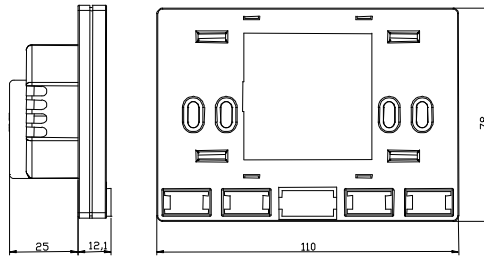
- Bus line:
  - bus terminal connector block, single core max 0,8mm  $\varnothing$
- External Power Supply 12/24 VAC/DC (SELV):
  - Screw terminal block
  - Conductor cross section max.1.5 mm<sup>2</sup>
- Output relays
  - Screw terminal block
  - Conductor cross section max.1.5 mm<sup>2</sup>
- Inputs signals (potential free)
  - Screw terminal block
  - Conductor cross section max.1.5 mm<sup>2</sup>

#### Wiring Diagram



#### Physical specifications and Dimensions

- Housing: plastic
- Colours: Light Grey Varnished (TR22A02KNX), Anthracite (TR22A12KNX), White (TR22A22KNX)
- Dimensions: (W x H x D): 110 x 78 x 37.1 mm
- Weight: approx. 120 g.
- Installation: Flash mounting in 2 or 3 modules or wall round box  $\varnothing$ 60mm, 40mm deep



#### Electrical Safety

- Compliant with LV Directive 2006/95/EC
- Pollution degree : 2 (according to EN 60664-1)
- Protection class IP42 (according to EN 60529)
- Protection class 3K5 (according with EN 50090-2-2); Installation outdoor - covered
- Safety class: III (according to EN 61140)
- Overvoltage category: III (according to EN 60664-1)
- Bus: safety extra low voltage SELV DC 24 V
- Device complies with EN 50090 and EN 60664-1

#### Electromagnetic compatibility

- Complies with EMC Directive 2004/108/EC
- Complies with EN 50081-1, EN 50082-2 e EN 50090-2.2

#### Environmental specifications

- Climatic conditions: complies with EN 50090-2.2
- Ambient operating temperature: -5 °C  $\div$  + 45 °C
- Storage temperature: -20 °C  $\div$  + 55 °C

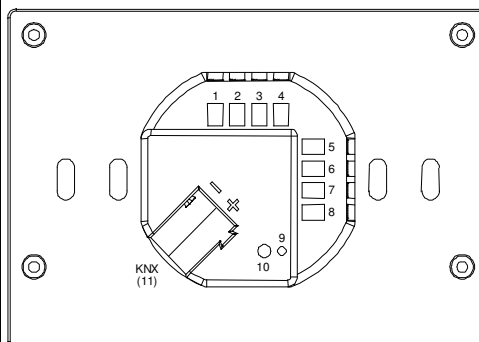
#### Certification

KNX/EIB certificate

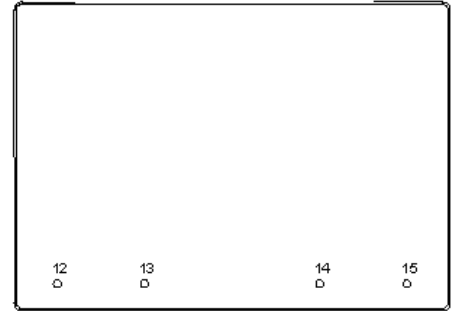
#### CE Mark

In accordance with the EMC guideline and low voltage guideline

#### Location and Function operating and display elements



#### Front Side with glass frame cover



#### Terminals and Operating Elements:

- 1 Power Supply 12/24 V AC/DC (must be SELV)
- 2 Power Supply 12/24 V AC/DC (must be SELV)
- 3 OUT 1 terminal relay 1 (NO) (must be SELV)
- 4 OUT2 terminal relay2 (NO) (must be SELV)
- 5 COM Outputs
- 6 IN 1 (potential free)
- 7 IN 2 (potential free)
- 8 COM Inputs
- 9 Programming LED
- 10 Programming push button
- 11 Bus Connection Terminal:
  - Black = bus polarity (-)
  - Red = bus polarity (+)
- 12 Led 4
- 13 Led 3
- 14 Led 2
- 15 Led red/green

#### Installation Instructions

The device may be used for permanent installation, even outdoor, in covered housing (i.e. roofing)

#### WARNING

- Device is intended to be used in outdoor installation, covered and not exposed directly to rain, water etc...; installation must be covered
- Device must not be connected to 230V AC cables.
- Device must be installed in a single box ; any other device in the same box must be SELV.
- The prevailing safety rules must be heeded.
- The device must be mounted and commissioned by an authorised installer.
- The applicable safety and accident prevention regulations must be observed.
- The device must not be opened. Any faulty devices should be returned to manufacturer.
- For planning and construction of electric installations, the relevant guidelines, regulations and standards of the respective country are to be considered.

#### Mounting and Wiring hints

#### WARNING

**The device must be mounted in horizontal position.**

#### General Description

The device configuration (KNX physical address assignment) is done by pressing the programming push button (10) located in the back side of the housing. Please take care during installation to leave connection wires long enough in order to remove the device easily from the wall box for commissioning.

#### Connecting bus cables

- Connect each single KNX/EIB bus core inside the terminal block (11) observing bus polarity .
- Slip the bus connection block (11) into the guide slot placed on the back side of this device and press the block down to the stop.

#### Wall box mounting

- Use for mounting only screws included.

For further information please visit [www.eelectron.com](http://www.eelectron.com)