Transponder Holder

TH22A01KNX – Varnished Light grey
TH22A11KNX – Dark grey
TH22A21KNX – White

Product and Applications description

The transponder holder TH22A01KNX is an EIB/KNX wall mounting device suitable to access and control detection of people inside a room as well as simple holder of user's transponder card.

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 front of transponder holder is illuminated when no card is present, turned off when card is accepted and flashes for 3 seconds when card is refused (entrance not allowed).

The Transponder Holder reads the card while inserting inside the slot. 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 all information are acknowledge the Transponder Holder can enable all room services and loads and sends 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 ± 10%
- Maximum current : 150mA

Inputs

- Number: 2 potential free contacts
- Input signal voltage U_n = 24V
- Input signal current at close contact = 1mA per channel

Outputs

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

Transponder Reader features

- IC for transponder reading Atmel/Temic.
- Internal Power Supply 5V DC
- Operating Frequency 125 KHz

Control Elements

- 1 programming button (back)

Display Elements

- 1 LED red (back) for ETS programming
- 1 LED for lighting of reading slot

Connections

- Bus line:
  bus terminal connector block, single core max 0,8mm Ø
- External Power Supply 12/24 VAC/DC:
  Screw terminal block
  Conductor cross section max.1.5 mm²
- Output relays
  Screw terminal block
  Conductor cross section max.1.5 mm²
- Inputs signals (potential free)
  Screw terminal block
  Conductor cross section max.1.5 mm²

Wiring Diagram
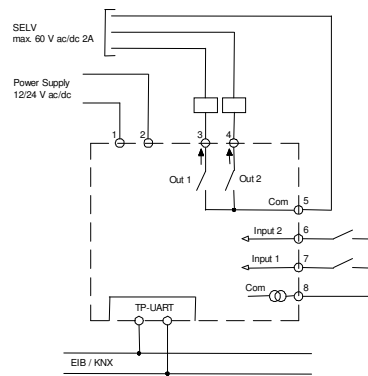
Physical specifications and Dimensions

- Housing: plastic
- Colours: Light Grey Varnished (TR22A01KNX),
  Dark Grey (TR22A11KNX)
- 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 Ø60mm, 40mm deep
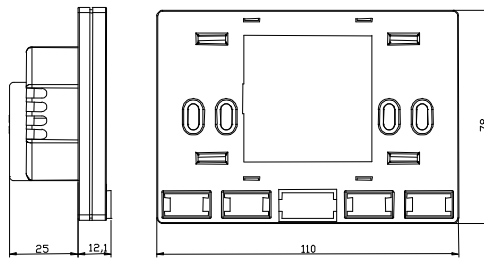
Electrical Safety

- Pollution degree : 2 (according to EN 60664-1)
- Protection class IP20 (according to EN 60529)
- Safety class: II (according to EN 61140)
- Overvoltage category: II (according to EN 60 664-1)
- Bus: safety extra low voltage SELV DC 24 V
- Device complies with EN 50090 e EN 60664-1

Electromagnetic compatibilità

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: 0℃ + 45℃
- Storage temperature: - 20 + 55 °C
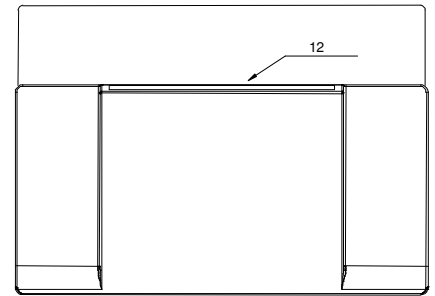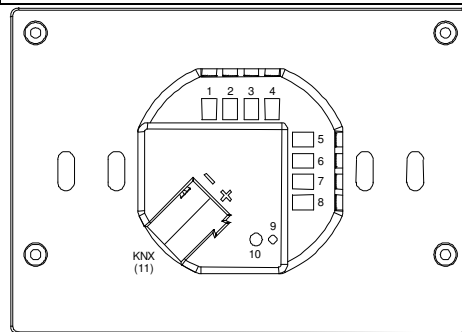- Relative humidity: max 90 % without condensation

Certification

KNX/EIB certificate

CE Mark

In accordance with the EMC guideline and low voltage guideline

Location and Function operating and display elements

Terminals and Operating Elements:

1. Power Supply 12/24 Vcc/ac
2. Power Supply 12/24 Vcc/ac
3. OUT 1 terminal relay 1 (NO)
4. OUT 2 terminal relay2 (NO)
5. COM Outputs
6. IN 2 (potential free)
7. IN 1 (potential free)
8. COM Inputs
9. Programming LED
10. Programming button
11. Bus Connection Terminal:
    Black = bus polarity (-)
    Red = bus polarity (+)
12. LED blue for lighting slot

Installation Instructions

The device may be used for permanent indoor installations in dry locations within wall box mounts.

WARNING

- The device must not be connected to 230V cables
- 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.

Mounting instructions