# VOXIO-T (Touch)


black, with keypad | black, without keypad | white, with keypad | white, without keypad

**All versions are available with and without keypad as well as in flush-mounted and surface-mounted versions.**
**Customer-specific individualization (e.g. own logo, other colors) possible on request.**

## Product designation

| variant | RFID technology |
|---|---|
| VOXIO-T-1260-A | Multi-ISO reader **(based on LEGIC SM-4200M)**<br>▪ LEGIC prime / advant<br>▪ MIFARE classic / DESFire / EV1 / EV2 / EV3<br>▪ ISO 14443 A+B / ISO 15693<br>▪ INSIDE secure<br>▪ Sony FeliCa subset (NFC Forum Type 3 Tag)<br>▪ ST SR series |

**Interfaces**

- RS485
  - ➔ expandable to Ethernet TCP/IP ***(with separate RS485-Ethernet interface converter. Optionally available)***
- Magstripe Clock/Data
- Wiegand D0/D1

**Application areas**

- access control
- Machine data acquisition
- Production data acquisition
- Alarm systems
- Parking systems
- General user identification

**Special features**

- Function can be expanded using plug-in modules (relays, SAM, ...)
- Backlit glass front with or without capacitive keypad
- Reading module, wall bracket and surface-mounted housing are made of plastic
- Connection via screw terminal
- Suitable for indoor and outdoor use
- Sabotage monitoring
- Signal elements
  - 3 RGB LEDs, colors and intensity adjustable
  - Buzzer for acoustic signaling, frequency adjustable

**Firmware / software protocols**

- phg_crypt
- Actively sending
- OSDP
- "Magstripe" Clock/Data Format: Track 1 or Track 2 (parameterizable)
- "Wiegand" D0/D1
- Customer-specific protocols possible

## Technical data

| Product name | Rated voltage [V DC] | Nominal Power [W] | Temperature ranges [°C] | | Dimensions [mm] | Weight [g] |
|---|---|---|---|---|---|---|
| | | | storage | Operation | | |
| VOXIO-T-1260-A | 8…30 | Typ: 1,5<br>Max: 3,5 | -30 … +70 | -25 … +60 | see below | Surface mounted: 160<br>Flush-mounted: 140 |

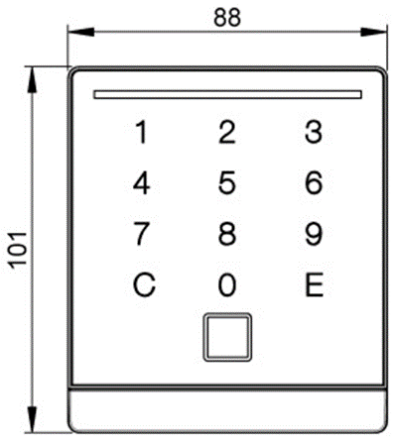
**Protection class:** IP 54

The seal against the mounting wall determines the maximum achievable protection class IP 54.

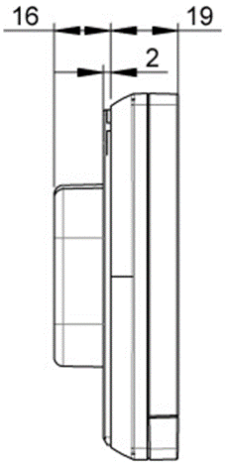
When using the surface-mounted housing , the cable entry on the wall must be sealed with sealants.

An additional sealing of the rear module to the wall is possible. Suitable sealants (e.g. silicone) must be selected by qualified personnel according to the ambient conditions.

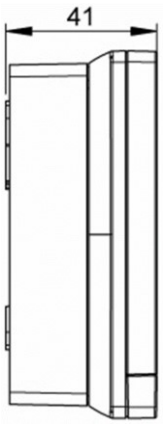
**Dimensions:**




Front view




Side view of the flush-mounted version



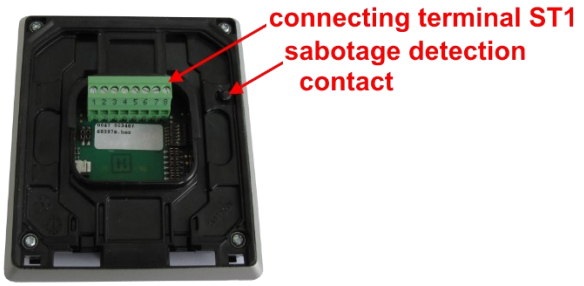

Side view surface-mounted variant

## Supported transponder media

The support of the transponder media listed below generally depends on the respective variant or reading technology (hardware platform) and the respective reader firmware. The list of transponder media is not guaranteed to be complete. Further information on this is available upon request.

| Transponder type | VOXIO-T-1260-A (LEGIC SM-4200M) |
|---|---|
| LEGIC MIM 256 | X |
| LEGIC MIM 1024 | X |
| LEGIC ATC256-MV410 (ISO 15693) | X |
| LEGIC ATC2048-MP110 (ISO 14443A) | X |
| LEGIC ATC4096-MP310 (ISO 14443A) | X |
| LEGIC ATC4096-MP311 (ISO 14443A) | X |
| LEGIC AFS4096-JP11 (ISO 14443A) | X |
| LEGIC ATC1024-MV010 (ISO 15693) | X |
| LEGIC ATC1024-MV110 (ISO 15693) | X |
| LEGIC CTC4096-MP410 (Prime) | X |
| LEGIC CTC4096-MP410 (ISO 14443A) | X |
| LEGIC CTC4096-MM410 (Prime) | X |
| LEGIC CTC4096-MM410 (ISO 14443A) | X |
| LEGIC CTC4096-MM410 (ISO 15693) | X |
| ISO 14443A transponder (UID/CSN) | X |
| ISO 15693 transponder (UID/CSN) | X |
| SONY FeliApprox subset | X |
| INSIDE Secure (UID/CSN) | X |
| MIFARE Classic | X |
| MIFARE DESFire EV1 / EV2 / EV3 | X |
| Transparent, ISO14443A | |
| Transparent, ISO14443A Layer 3 | X |
| Transparent, ISO14443A/B Layer 4 subset | X |
| Transparent, ISO15693 Layer 3 | X |
| Transparent, NFC Forum Type 2 tag | X |
| Transparent, NFC Forum Type 3 tag | X |
| hitag 1 | |
| hittag 2 | |
| hitag S | |
| EM4200 | |
| EM4550 | |

## Pin assignment




Reading module on the back with connection terminal

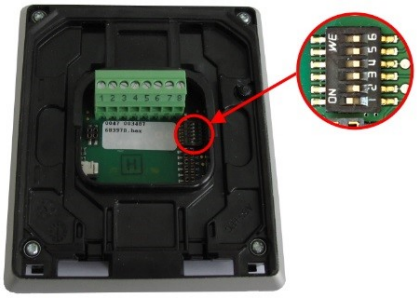
**Connection terminal ST1** (8-pin screw terminal)

| Pin code No. | Interface variant | | |
|---|---|---|---|
| | **RS485** | **“Magstripe” clock/data** | **"Wiegand" D0/D1** |
| 1 | Data "A" | - | - |
| 2 | Data "B" | - | - |
| 3 | Output 1 | Data | D1 |
| 4 | Output 2 | Clock | D0 |
| 5 | Input 1 | | |
| 6 | Input 2 | | |
| 7 | GND | | |
| 8th | +Ub (8 to 30 V / DC) | | |

**Terminal specification:**
Stranded wire or solid wire: AWG 28 - 16
Cable stripping length: 6-7 mm

**Attention! The reader must be wired in a de-energized state, i.e. the operating voltage may only be switched on after the reader has been completely installed.**

## DIP switch

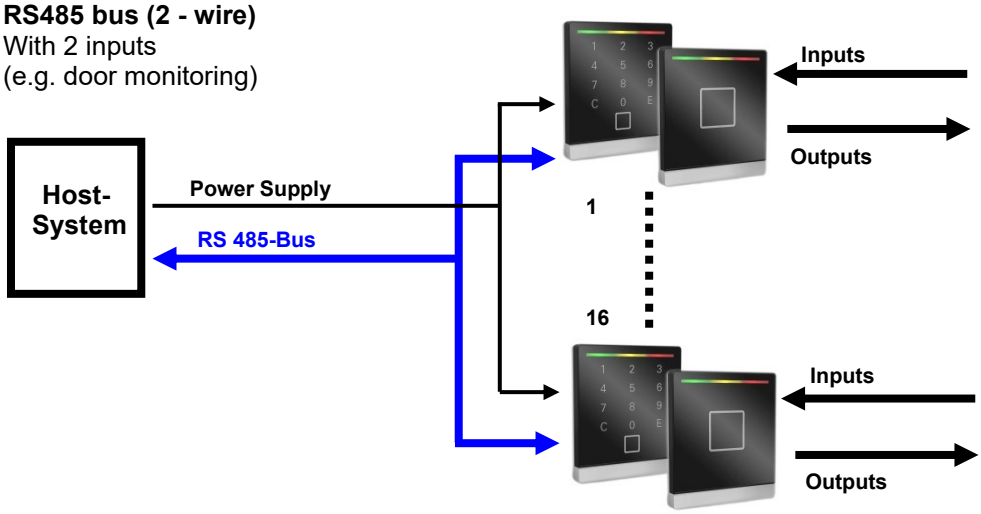


Reading module on the back with connection terminal

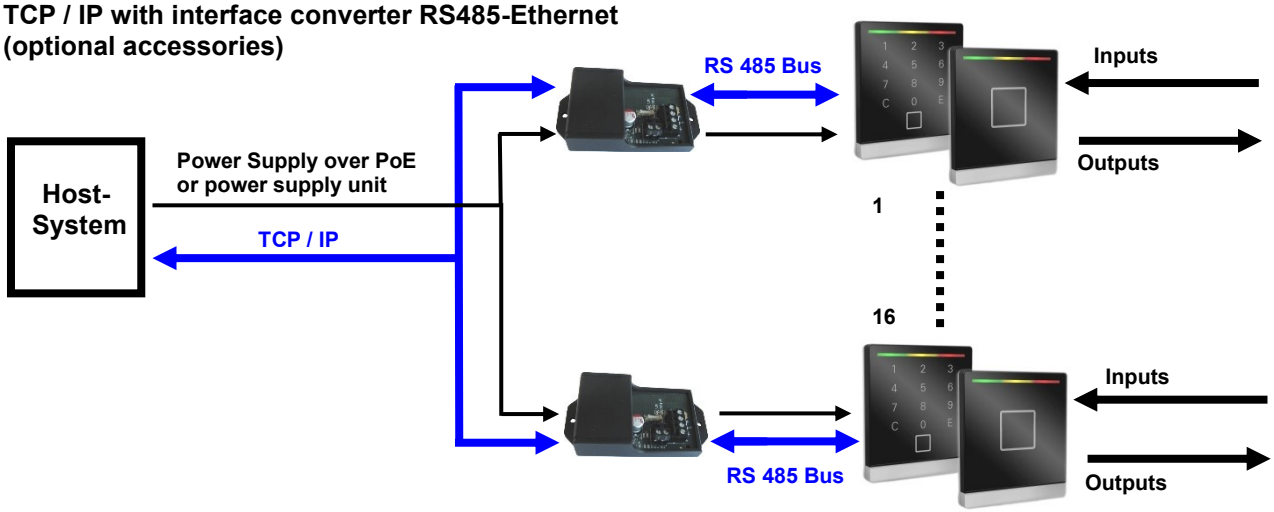
| DIP switch | function |
|---|---|
| S1…S6 | **Depending on the firmware**<br>e.g. setting of the reader address , LED functions , baud rate, bus terminating resistor, etc |
| | **The appropriate connection diagram is included with every reader and also includes the DIP switch settings** |

## Configuration options

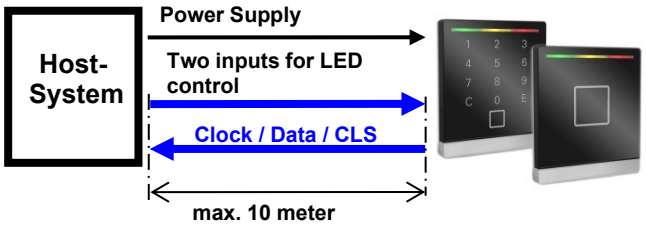
**RS485 bus (2 - wire)**
With 2 inputs
(e.g. door monitoring)



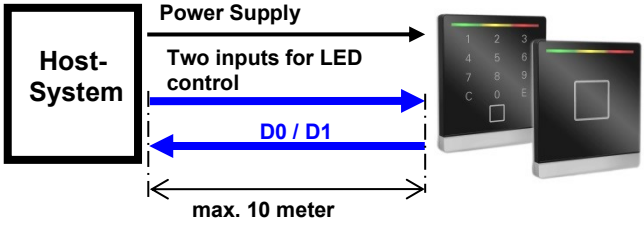

**TCP / IP with interface converter RS485-Ethernet**
**(optional accessories)**




**"Magstripe" Clock/Data**



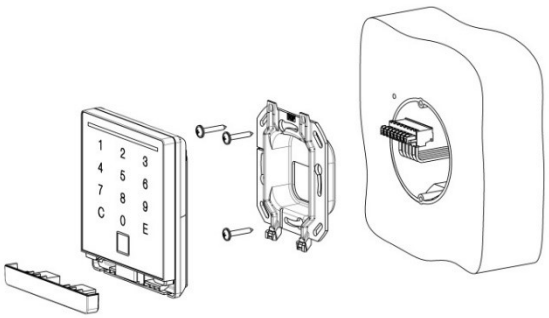

**"Wiegand" D0/D1**



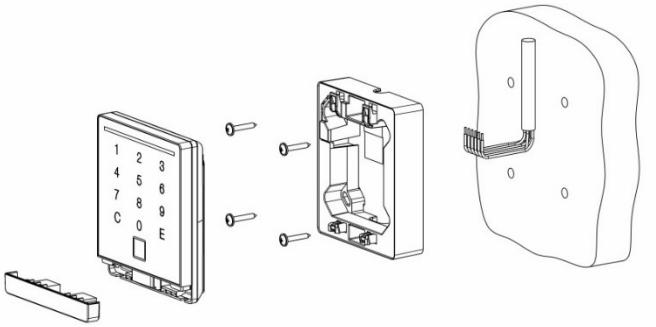

**Accessories (card holder, surface-mounted frame, etc.) are described in detail in the separate data sheet " *VOXIO-T Accessories* ". You will receive this upon request.**

## installation

**Attention! The reader must be wired in a de-energized state, i.e. the operating voltage may only be switched on after the reader has been completely installed.**



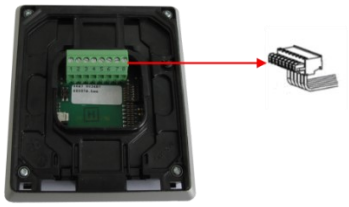
Flush-mounted variant (UP)



Surface-mounted variant (AP)

## Assembly process

**Preparing for installation** **Lay the connection cable accordingly and prepare it for connection. Remove the pluggable 8-pin connection terminal from the reading module and wire it according to the respective connection diagram**

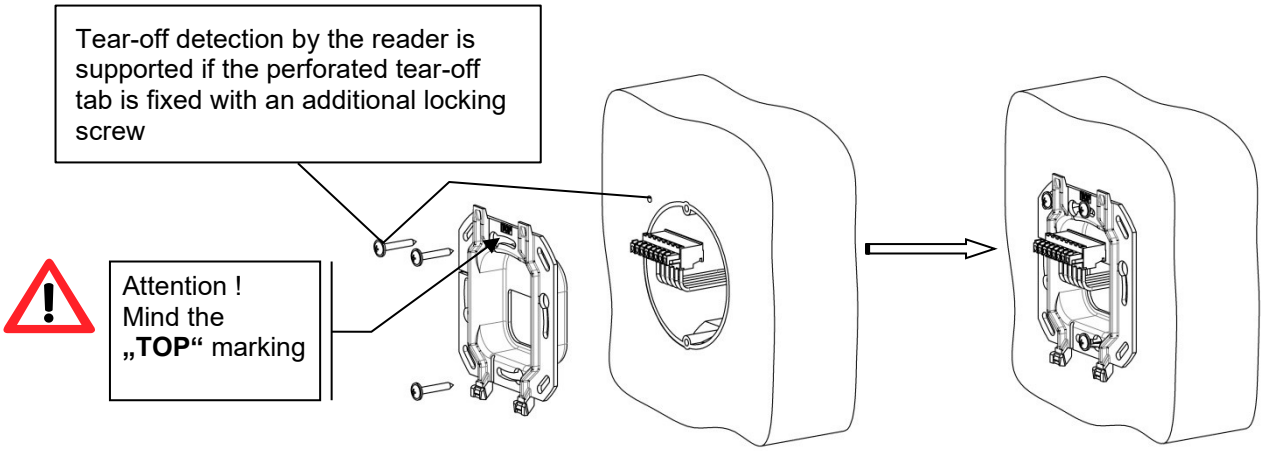


**The appropriate connection diagram is included with every reader**

**Attention! The wiring of the reader must be done in a de-energized state, i.e. the operating voltage may only be switched on after the reader has been completely installed.**

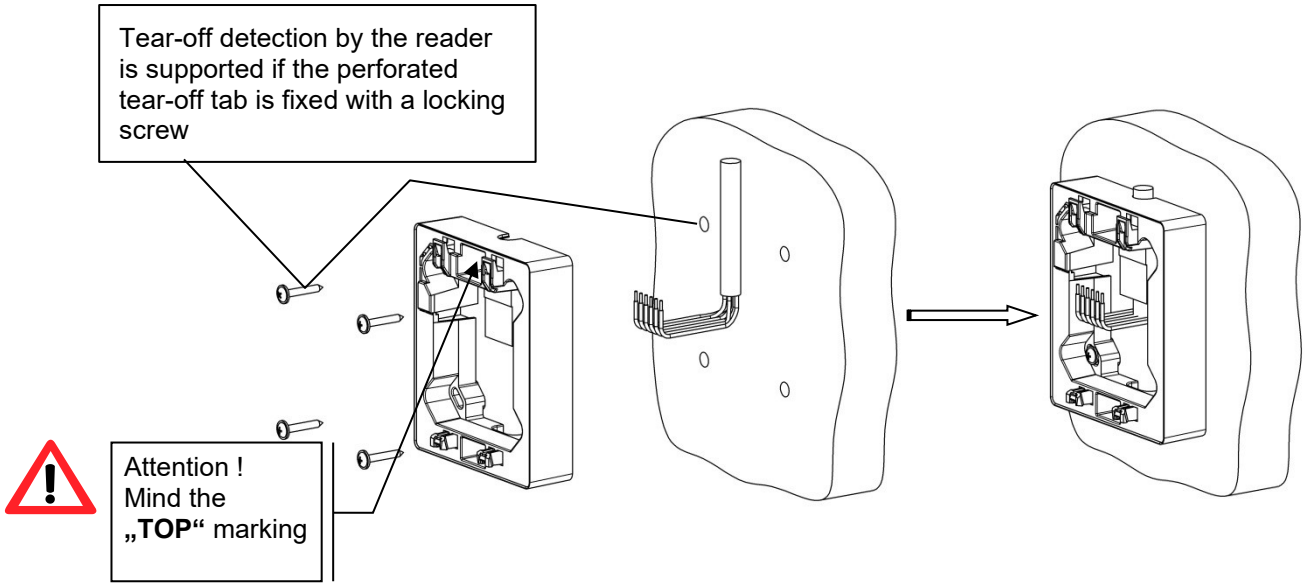
**Flush-mounted variant**

Screw the wall bracket onto a DIN device socket with a device screw distance of 60mm using the screws provided.



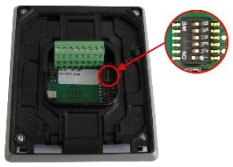

**Surface-mounted variant**

The connection cable is fed either above, below or directly from the wall.
Screw the rear panel to the wall using suitable screws



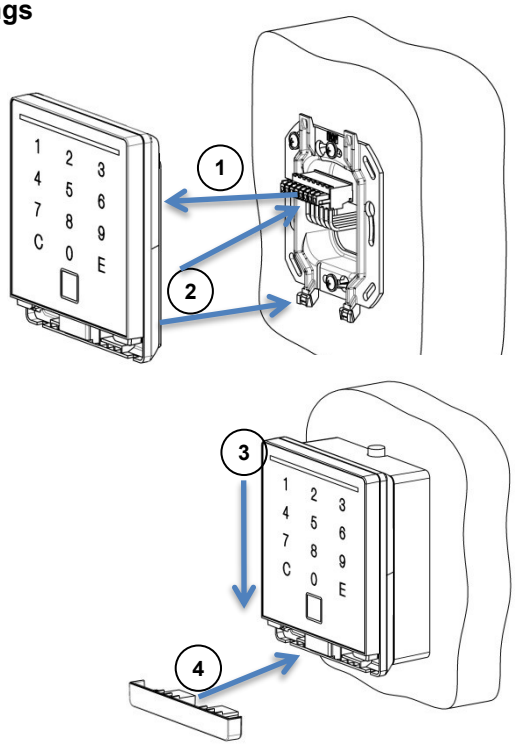
### Configure reading module

**DIP switch configuration:** **Depending on the firmware function, the DIP switches must be set accordingly .**



**The appropriate connection diagram is included with every reader and also includes the DIP switch settings**

### Connect and mount the reading module

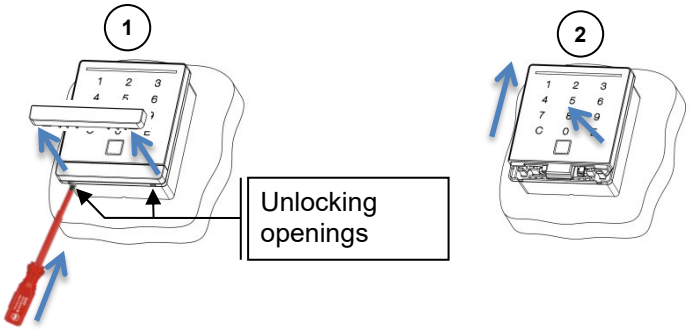



1. Insert the terminal connection terminal into the reading module
2. Place the reader module flat on the wall bracket or on the surface-mounted housing, pushing the connection cable with the reader module back into the flush-mounted box or into the surface-mounted housing
3. Push the reader module downwards until the reader module snaps into place on the wall bracket or the surface-mounted housing
4. After successful engagement, push the locking bar into the reader module until it also engages

**Upon successful snapping operations a clear “click” can be heard in each case**

### Disassemble the reading module

1. Unlock the locking bar.
   To do this, insert a screwdriver with a blade max. 4mm wide into the unlocking openings and press until the locking mechanism unlocks.
   Pull out the unlocked locking bar and remove it from the reading module
2. Push the reading module up (unlock) and lift it forward.




**Detailed information about the assembly process can also be found in the corresponding assembly and installation instructions, which are included with each reader.**

## General information

**Influencing (reducing) the reading distance**

The reading distance can be influenced by a variety of reasons.

Below is a list of points that reduce the reading distance:

- “Shading” or shielding the transponder medium with metal, such as a debit card in a wallet, a key fob on a key ring
- no optimal coupling, ie the antenna surface of the transponder medium is perpendicular (90°) to the antenna surface of the reader
- Transponder medium itself
  - key fob (small active antenna area) - “poor” response of the transponder medium (ID card / key fob) - combination ID card
- Metal surfaces in the “active” effective range of the HF field. The transmission energy is attenuated. This point is particularly relevant when installing the reader components in metal front panels (including metal columns, etc.).

**EC conformity**

When used as intended, the product complies with the basic legal requirements. The relevant EC declaration of conformity is available upon request.

**Care instructions**

Please do not use the product with sharp-edged objects (rings, fingernails, etc.)!

Do not use corrosive or plastic-degrading liquids such as gasoline, turpentine, nitro, etc. to clean. Harsh cleaning agents can damage or discolor the surface. Do not use cleaning agents that have a mechanical effect (e.g. scouring milk or scouring pad).

Clean with a soft, damp cloth. Use only clear water.

**Disposal information**

The product must **not** be disposed of with household waste!