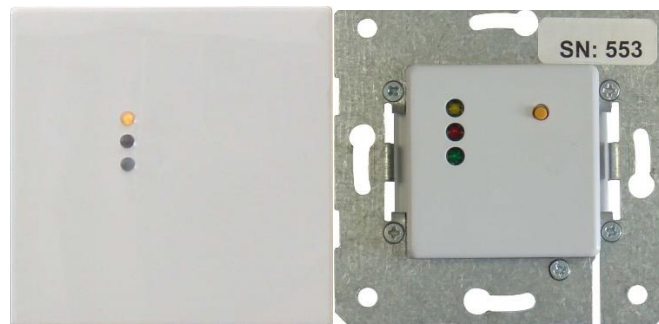


## Technisches Datenblatt



### **XMP-TMC2457-UP**

#### **ACCESS READERS**

The badge readers type XMP-TMC24x7-UP are designed for use in access control applications in combination with the management software XMP-BABYLON. The readers read passive contactless badges with standard RFID technology in the frequency range 13.558 MHz (MIFARE Classic® & MIFARE® DESFire® EV1 / EV2 / EV3).

The card readers are connected to the door controllers XMP-K32 / XMP-K32SX / XMP-K32EX / XMP-K6EX / XMP-K12 / XMP-K12EX / XMP-CMM / XMP-CMM-EX or as second card reader to the IP terminal XMP-TMC3500/3600 via an RS485 interface. The data transmission between reader and controller is encrypted with an AES-256 GCM (SecuCrypt®2.0) or via AES-128 (OSDP™ V2 Crypto).

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## Technical data

Beschreibung	XMP-TMC2457-UP		
Processor	ARM 180 MHz		
Program memory	1 MB Flash 136 KB RAM		
Power supply	12 bis 24 V DC $\pm 10\%$		
Power consumption	78 bis 397 mA bei 12V DC 36 bis 176 mA bei 24V DC		
Interfaces	RS485 (2 Wire)		
Baud rate	9600 oder 19200		
Tamper Switch	x	x	x
Beeper	x	x	x
3 LED status indicator	x	x	x
Dip-Switch	x	x	x
Housing Jung LS994 & GIRA	x	x	x
Protection class IP54	x	x	x
Environmental conditions	Operation: -20 bis 75°C (-4 to 167°F) Storage: -20 bis 75°C (-4 to 167°F) 5 bis 90% Relative humidity		
Dimensions	see chapter "Order numbers"		

## 1.1 Maintenance – Cleaning– Disposal

Defective circuit boards must be disposed of properly. Batteries and rechargeable batteries belong in hazardous waste. The packaging can be reused or disposed of.

Dispose of green filling material in the organic waste.

The reader should only be cleaned dry, with the aid of a dust rag, brush or vacuum cleaner. If the housing is heavily soiled, a mild, non-aggressive cleaning agent can be used.

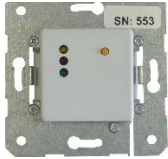
## 1.2 Protection Class

Protection class	IP54
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- - IP54 when mounted
- - The maximum achievable degree of protection is IP54.
- - Cable entries and mounting holes must be sealed with a sealant if necessary.
- - Suitable sealants (e.g. silicone) must be selected according to the ambient conditions.

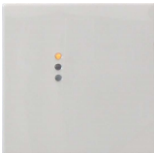
### 1.3 Order Number

Order-Nr.	Description	Dimensions
 XMP-TMC2457-UP	<i>Flush-mounted card reader MIFARE® classic/DESFire® EV1 / EV2 / EV3 for connection to door controller</i>	71 x 71 x 24 mm
XMP-TMC2457-UP-CH	<i>Flush-mounted card reader MIFARE® classic/DESFire® EV1 / EV2 / EV3 for connection to door controller (Switzerland variant)</i>	71 x 71 x 24 mm
XMP-TMC2457-UP-BLE	<i>Flush-mounted card reader MIFARE® classic/DESFire® EV1 / EV2 / EV3 card reader including Bluetooth module for connection to door controller</i>	71 x 71 x 24 mm

#### 1.4 Blind cover Jung LS994

 XMP- TMC24-UP-001	<i>Jung LS994 blind cover for XMP-TMC24xx-UP card reader ( alpine white )</i>	70 x 70 x 11 mm
XMP- TMC24-UP-002	<i>Jung LS994 blind cover for XMP-TMC24xx-UP card reader ( white )</i>	70 x 70 x 11 mm
XMP- TMC24-UP-003	<i>Jung LS994 blind cover for XMP-TMC24xx-UP card reader ( light gray )</i>	70 x 70 x 11 mm
XMP- TMC24-UP-004	<i>Jung LS994 blind cover for XMP-TMC24xx-UP card reader ( aluminum )</i>	70 x 70 x 11 mm
XMP- TMC24-UP-005	<i>Jung LS994 blind cover for XMP-TMC24xx-UP card reader ( stainless steel )</i>	70 x 70 x 11 mm
XMP- TMC24-UP-006	<i>Jung LS994 blind cover for XMP-TMC24xx-UP card reader ( black )</i>	70 x 70 x 11 mm

#### 1.5 Blind cover Gira

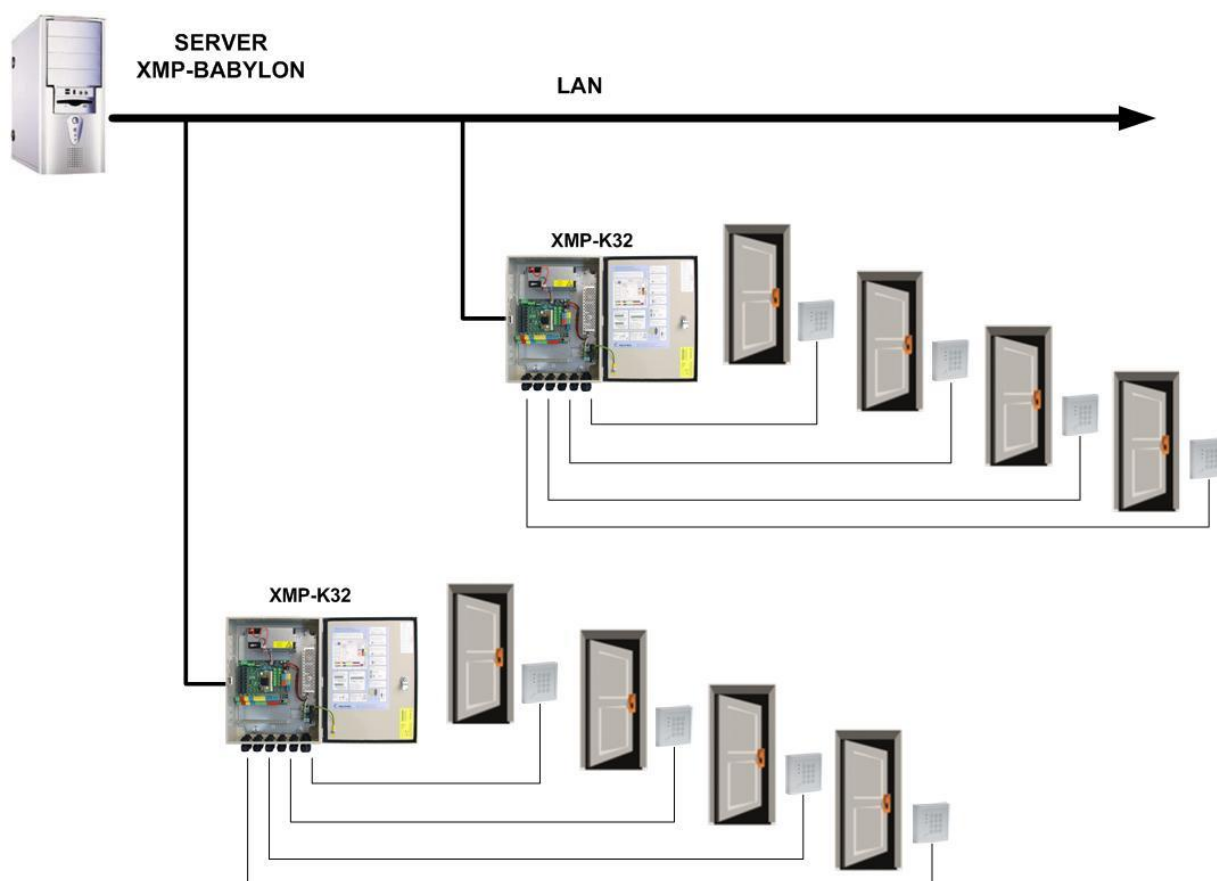
 XMP- TMC24-UP-011	<i>Gira blind cover for XMP-TMC24xx-UP card reader ( white )</i>	55 x 55 x 11 mm
XMP- TMC24-UP-012	<i>Gira blind cover for XMP-TMC24xx-UP card reader ( aluminum )</i>	55 x 55 x 11 mm
XMP- TMC24-UP-013	<i>Gira blind cover for XMP-TMC24xx-UP card reader ( anthracite )</i>	55 x 55 x 11 mm

## 1.6 Software license

Description	Order-Nr.
CIPURSE™ (SAM) Support	XMP-TMC2457-F1
SAM Support for SecuCrypt® Customkey and MIFARE Classic® & MIFARE® DESFire® EV1/EV2/EV3 Keys	XMP- TMC2457-F2
Bluetooth Support - XMP2GO®	XMP- TMC2457-F4-1
Bluetooth Support – KleverKey Classic	XMP- TMC2457-F4-2
Bluetooth Support - BlueID	XMP- TMC2457-F4-3

## 2 System connection

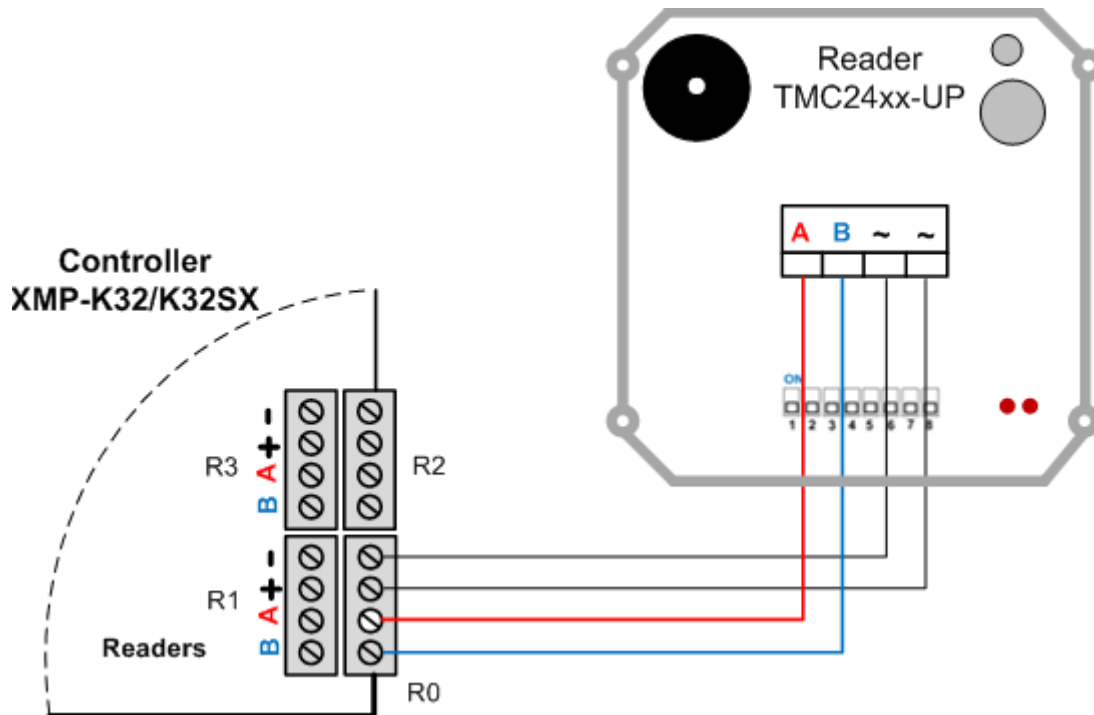
Up to 2048 controllers with 2, 4 or 8 card readers each can be connected to one server.



Defective printed circuit boards must be disposed of properly. Batteries and accumulators belong in the hazardous waste. The packaging can be reused or disposed of. Dispose of the green filling material in the organic waste.



## 2.1 Connection Reader to Doorcontroller



The supply voltage can be supplied centrally from the XMP-K12 / XMP-K32 (recommendation).

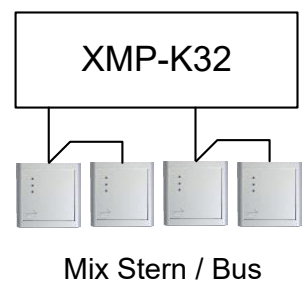
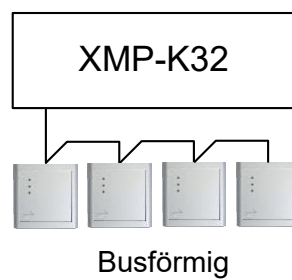
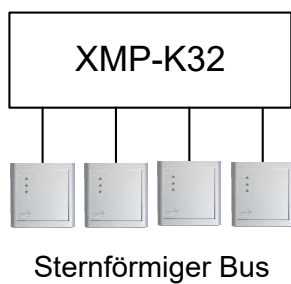
The following ranges must be observed:



- Maximum distance between controller and reader up to 100m at 12VDC and 200m at 24VDC.
- Cable type: 2x2x0,8mm (with shielding braid)

Further information can be found in the respective manuals of the door controllers.

The readers can be connected in a star or bus configuration. (Observe fuse values!).

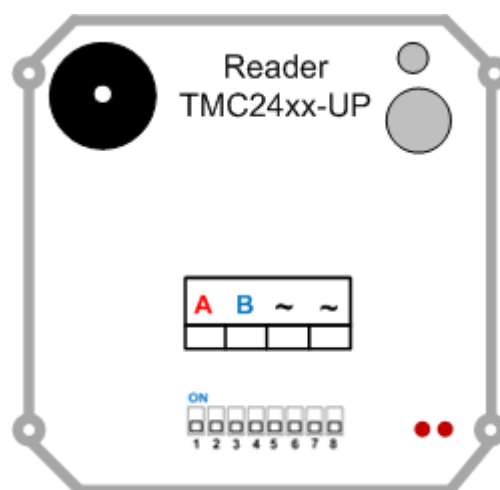


### 3 Meaning of Dipswitch SW1

<p><b>Dipswitch</b></p> <p style="text-align: center;">SW1</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">ON</div> <div style="text-align: center;">OFF</div> </div> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">1</div> <div style="text-align: center;">2</div> <div style="text-align: center;">3</div> <div style="text-align: center;">4</div> <div style="text-align: center;">5</div> <div style="text-align: center;">6</div> <div style="text-align: center;">7</div> <div style="text-align: center;">8</div> </div>
---

The reader address is set at microswitches 1-3 in binary form as follows:

Dip 1	Dip2	Dip 3	Adress
Off	Off	Off	0
On	Off	Off	1
Off	On	Off	2
On	On	Off	3
Off	Off	On	4
On	Off	On	5
Off	On	On	6
On	On	On	7



## 4 Meaning of LEDs

Die Leser haben 3 LEDs zur Statusanzeige.

LED Status	Bedeutung
Yellow on	Operational readiness
Yellow flashing at 0.5 second intervals	No communication to the door control unit
Red on	Not authorized
Green on	Authorized
Yellow and red flashing at 0.5 second intervals	Boot loader program activated
Yellow, red and green on	Reader locked
Back side D11	Communication TXD
Back D12	Communication RXD

## 5 Notes on the reading procedure

### 5.1 13,56 MHz - MIFARE® classic® & DESFire® EV1 / EV2 / EV3

The XMP-TMC2457-UP reads the serial number or memory information of MIFARE® DESFire® EV1 / EV2 / EV3 and classic® badges. For MIFARE® classic® badges the serial number of the badge (UID) is transmitted decimal (e.g. 40004403886360 for 4-byte UID) or hexadecimal (e.g. 800A345CB1986A for 7-byte UID) and for MIFARE® DESFire® EV1 / EV2 / EV3 badges as 7-byte HEX information (e.g. 801B76A1726F04) in 14 digits. After delivery, the reader reads the serial number of the corresponding badge. The reader receives the special parameterization for reading the memory information via the W3XMPCRP utility program.

The SecuCrypt® protocol is assumed as the communication protocol. The selection for setting for the desired reading procedure is realized via a selection menu.



Recommended card type: ISO cards

### 5.2 Reading distances

	MIFARE® classic®	MIFARE® DESFire® EV1 / EV2 / EV3
UID	Up to 6 cm	Up to 6 cm
Memory segment	Up to 3 cm	Up to 3 cm



Metal parts at a distance of 120 mm from the reader can reduce this distance.



A distance of at least 20 cm should be maintained between two installed card readers. Otherwise, the electromagnetic fields may influence each other.

## 6 Compliances

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### FCC INFORMATION (U.S.A.)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that of which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

### FCC Warning Statement:

[Any] changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

### FCC Radio Frequency Exposure:

WARNING: To comply with RF exposure limits the users must keep at least 20 cm separation distance from the device, except during the identification and operation process at the device (e.g. PIN-code input), which must be performed as described.



FCC ID: 2A6AAXMP2457

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device must not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.



This product is in conformity with the following EC directives, including all applicable amendments:

- 2014/53/EU (Radio Equipment Directive)

---



This product is in conformity with the listed UK statutory requirements and designated standards:

Electromagnetic Compatibility Regulations 2016

---

#### FEDERAL COMMUNICATIONS COMMISSION INTERFERENCE STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/ TV technician for help.

#### CAUTION:

Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

#### RF exposure warning

This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provided with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.



## 7 Documenthistory

Version	Datum	Beschreibung
V1.0	14.10.2022	First verison

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