

## Technical Data sheet



# **XMP-K32SX**

## **4/8 DOOR CONTROLLER**

The high-end real-time door control units are designed for access control, time recognition, time & attendance and building automation systems. These controllers are working as communication interface of the security system XMP-BABYLON and can be used as a stand-alone system with an integrated database, if required.

Besides a number of different RFID technologies the controller communicates with barcode readers, electronic cylinders and/or door handles and special biometric systems like fingerprint and palm vein.

Regarding of data protection all telegrams is fully encrypted and will send in real-time to the server. If the server-controller communication is missing the controller uses his backup data, controls all actions and stores each event into his internal log-file for later synchronization between server and controller. All door control units are able to communicate over peer-to-peer to guarantee global security features.

In addition special features are available like connection of IP cameras, elevator control or LPR interfaces which are all controlled by the door control unit.

Because of his open attribute technology special security demands like man-traps can be integrated really quick and easy.

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# 1 Technical Data

## 1.1 General

Real-time LINUX operating system	
10/100 MBit Ethernet-Interface	
CPU with 300 MHz, 32 Bit	
64 MB RAM, 2 GB MicroSD-Memory card	
Power supply electronic board:	10 - 30 VDC
Input voltage power supply	110 - 240 V AC 50Hz
Output voltage power supply 12V	13,8 V
Output voltage power supply 24V	27,6 V
Power supply	100 W
Maximum power consumption 230V	115 W
Maximum load for periphery (12V & 24V power supply)	59 W
Maximum power consumption for periphery (12V power supply)	4,3 A
Maximum power consumption for periphery (24V power supply)	2,15 A
Maximum charging current 12V battery	2,5 A
Maximum charging current 24V battery	1,25 A
3V Lithium battery (supply for real-time clock during power outage for max. 6 months)	
Blowfish encryption (XMP protocol, SecuCrypt®)	
AES256 encryption (SecuCrypt®)	
AES-GCM encryption (SecuCrypt®64)	
Offline memory up to 15,000 badges, 25,000 access profiles and 50,000 bookings	Standard
Extension Offline memory to 50,000 badges, 50,000 access profiles, 50,000 bookings	Optional (Software license)
Extension Offline memory to 250,000 badges, 50,000 access profiles, 50,000 bookings	Optional (Software license)
Analogue or digital inputs	16

Powered or potential free relay outputs	8
COM1 interface for card reader	RS485
COM2 interface for extension boards	RS485
USB 2.0 connector	2
Maximum connection of card reader or XMP-RIM	4 or 8 (with software license and XMP-K32-050/-051)
Maximum extension of inputs	256 (16 x XMP-KDM)
Maximum extension of outputs	192 (8 x XMP-KDA/KDR)
Connection of IP cameras	4
Integrated UPS 12V / 24V	See order numbers

## 1.2 Environmental conditions

Housing temperature (Operation)	0° - 50°C, 32° - 122°F
Storage	-10° - 70°C, 14° - 158°F
Relative humidity	5 - 90 %

## 1.3 Dimensions




B x H x T (wall mounting housing)	305 x 405 x 125 mm
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## 1.4 Protection class



Protection class (wall mounting housing)	IP54
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## 2 Controller order numbers

### 2.1 XMP-K32SX –Controller - 4/8 Readers

Order-No.	Description	Dimensions (mm)
 XMP-K32SX-000	4/8 door controller with 12 V power supply for card readers / door strikers. Integrated uninterruptable power supply (7 Ah UPS)	405x305x125
 XMP-K32SX-002	4/8 door controller with 24 V power supply for card readers / door strikers. Integrated uninterruptable power supply (2,9 Ah UPS)	405x305x125
 XMP-K32SX-901	XMP-K32SX board 12 V/24V, without housing, power supply, battery.	181x155

### 2.2 XMP-K32-05x – Hardware-extension for 8 card readers

Order-No.	Description	Dimensions (mm)
 XMP-K32-050	Connection module 12 V with 7 Ah UPS power supply for 8 card readers	335x230x100
 XMP-K32-051	Connection module 24 V with 2,9 Ah UPS power supply for 8 card readers.	335x230x100

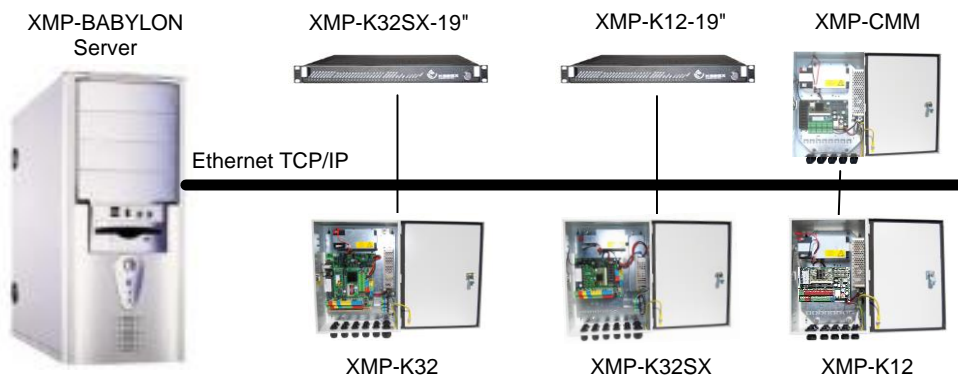


In addition the software 8 reader software extension must be activated. Please see chapter "Software licenses for controllers"

### 2.3 XMP-K32SX-F\* - Software licenses

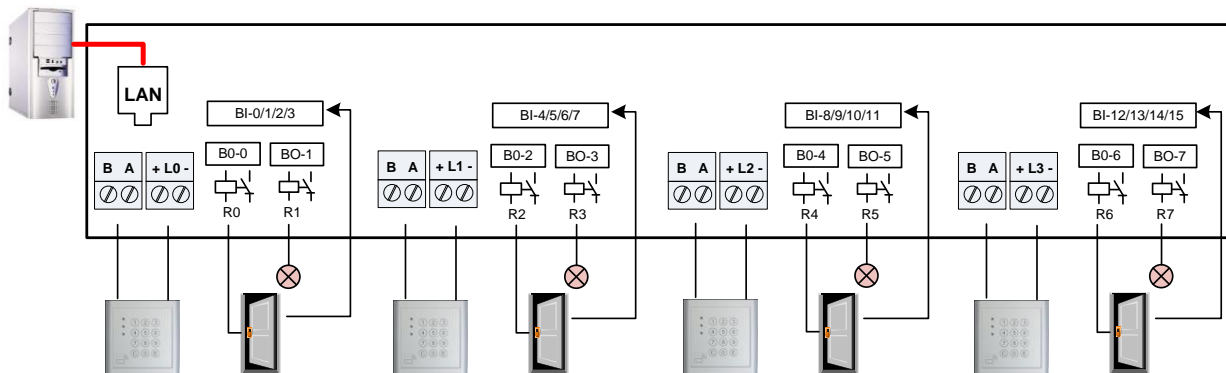
<b>Customer protection</b>	XMP-K32SX-CP
<b>1 = Enable 50,000 badges</b>	XMP-K32SX-F1
<b>2 = 8 reader support</b>	XMP-K32SX-F2
<b>3 = Alarms via Mail / SMS</b>	XMP-K32SX-F3
<b>4 = License plate detection (ANPR)</b>	XMP-K32SX-F4
<b>5 = Automatic picture comparison (FacePass-Interface)</b>	XMP-K32SX-F5
<b>6 = Interface to IP-Cameras (CCTV)</b>	XMP-K32SX-F6
<b>7 = Support for PalmPass Controllers</b>	XMP-K32SX-F7
<b>8 = Enable UFR and HADP Protocols</b>	XMP-K32SX-F8
<b>9 = Enable Aperio Protocol</b>	
<b>10 = Enable 250,000 badges → requires F1</b>	XMP-K32SX-F10
<b>11 = Write offline data from foreign systems to badge</b>	XMP-K32SX-F11
<b>12 = Enable Visonic interface</b>	XMP-K32SX-F12
<b>13 = Enable Key-Diversification</b>	XMP-K32SX-F13
<b>14 = Enable eLock Offline write function</b>	XMP-K32SX-F14
<b>15 = Support of Barcode Scanner (only TMC3500)</b>	
<b>16 = Enable Modbus/IP interface</b>	XMP-K32SX-F16
<b>17 = Reserved</b>	
<b>18 = Reserved</b>	

### 3 Connection Overview



#### 3.1 XMP-K32SX – Sample of connection

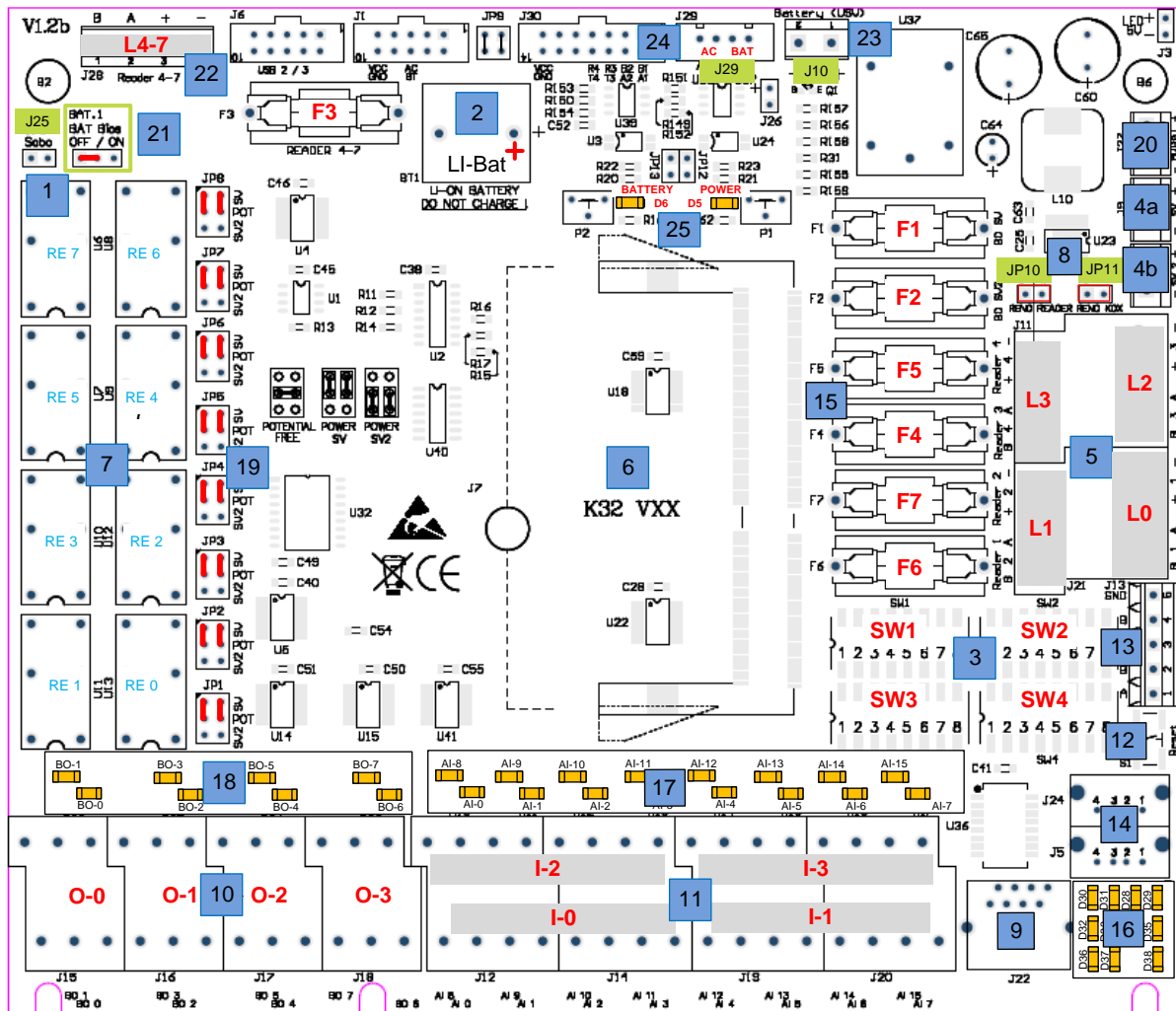
Per reader two relays and four inputs are available.



A mixed-mode of SecuCrypt® devices and third-party products is not recommended

## 4 Overview electronic board

### 4.1 XMP-K32SX – Meaning of the elements





## Security System XMP-BABYLON

1	Tamper contact	13	Extension for XMP-KDA/KDM
2	Lithium-Battery	14	USB 2.0 interface (reserved)
3	DIP-switch SW1 to SW4	15	Fuses
4a	Power supply readers and relays (SV)	16	Status LEDs
4b	Second power supply relays (SV2)		
5	Reader clamps R0 to R3	17	Input LEDs (BI/AI)
6	Connecting socket (Geode GX1 Module)	18	Output LEDs (BO)
7	Relays to control the BOs	19	Jumper for relay voltage
8	Jumpers for readers and XMP-KDM/KDA bus line REND-resistors	20	Power supply for board
9	RJ45 Host interface	21	Li-Battery jumper
10	Clamps for binary outputs BO	22	Clamp for reader extension (4-7)
11	Clamps for BI/AI-Inputs	23	Battery clamp
12	Reset-Button	24	Interface cable to power supply
		25	D5 and D6 (LEDs for operating mode power supply or battery)

## 4.2 Meaning of the fuses

By factory the following fuses are build-in (5x20mm).

Door controller	Fuse value
12V Relay outputs	F2A
24V Relay outputs	F1A
Interface card readers	T500mA



For detailed information's please see the installation manual of the door controller.

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## 4.3 Meaning of the LEDs



For detailed information's about the LED functions please see the installation manual of the door controller.

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## 4.4 Meaning of the Jumpers



For detailed information's about the Jumpers please see the installation manual of the door controller.

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#### 4.5 Meaning of the Dip-switch SW1 to SW4

<b>SW1</b>	1..8	Hardware address ( $2^0$ to $2^7$ ) Low significant byte
<b>SW2</b>	1..4	Hardware address ( $2^8$ to $2^{11}$ ) Most significant byte
	5	DHCP / DNS support
	6	Reserved
	7	Reset IP-settings
	8	Reserved
<b>SW3</b>	1..2	Baud rate for reader interface (COM1)
	3..4	Baud rate for XMP-KDM-016/XMP-KDA-024 (COM2)
	5	Reserved
	6	SecuCrypt64 (AES-GCM) on Ethernet interface
	7	Telegram encryption on Ethernet Interface
	8	Perform Cold-Start
<b>SW4</b>	1	FTP Server, Telnet Server (only for service)
	2	Start WEB configuration (for installation only)
	3-7	Reserved
	8	Protection against replay attacks (SW3-7 should be set)




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For detailed information's please see the installation manual of the door controller.

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## 5 Connection of card reader

The card reader will be connected on the RS485 interface (COM1) on the door controller.

Card reader	Door controller	Description
~	+ or -	Power supply
~	+ or -	Power supply
B	B	Reader interface RS485
A	A	Reader interface RS4785



For detailed information's about cable distance, cable types, configuration, please see the installation manual of the door controllers and/or card readers.

## 6 Connection of inputs

The terminator pairs designated with AI-0 to AI-15 correspond to the 16 configurable inputs of the XMP-K32SX. Normally the inputs are used as binary inputs with two states (0 or 1). For higher quality access control systems all inputs can be configured as line supervising inputs with four states (0, 1, 2 or 3).



The wiring of the inputs is allowed exclusively with potential free contacts. External voltages on the terminals of the XMP-K32SX can lead to the destruction of the device.



For detailed information's about cable distance, cable types, configuration, please see the installation manual of the door controllers and/or card readers.

## 7 Connection of relay outputs

When connecting DC-door striker freewheeling diodes of type 1N4004 are required!

When connecting AC-door striker, varistors are needed. We recommend using the varistor type S10K. If not already available in the door opener, please install the freewheeling diode or varistor as close as possible to the door opener.

### Maximum load of the relay outputs by 12V / 24V DC internal power supply

1 x relay output	12V DC 500 mA	1 x relay output	24V DC 250 mA
8 x relay output	12V DC 2 A	8 x relay output	24V DC 1 A
Fuse value: T2A		Fuse value: T1A	

### Maximum load of dry contacts (external power supply)

Each relay output	12V DC 2 A	Each relay output	24V AC 1 A
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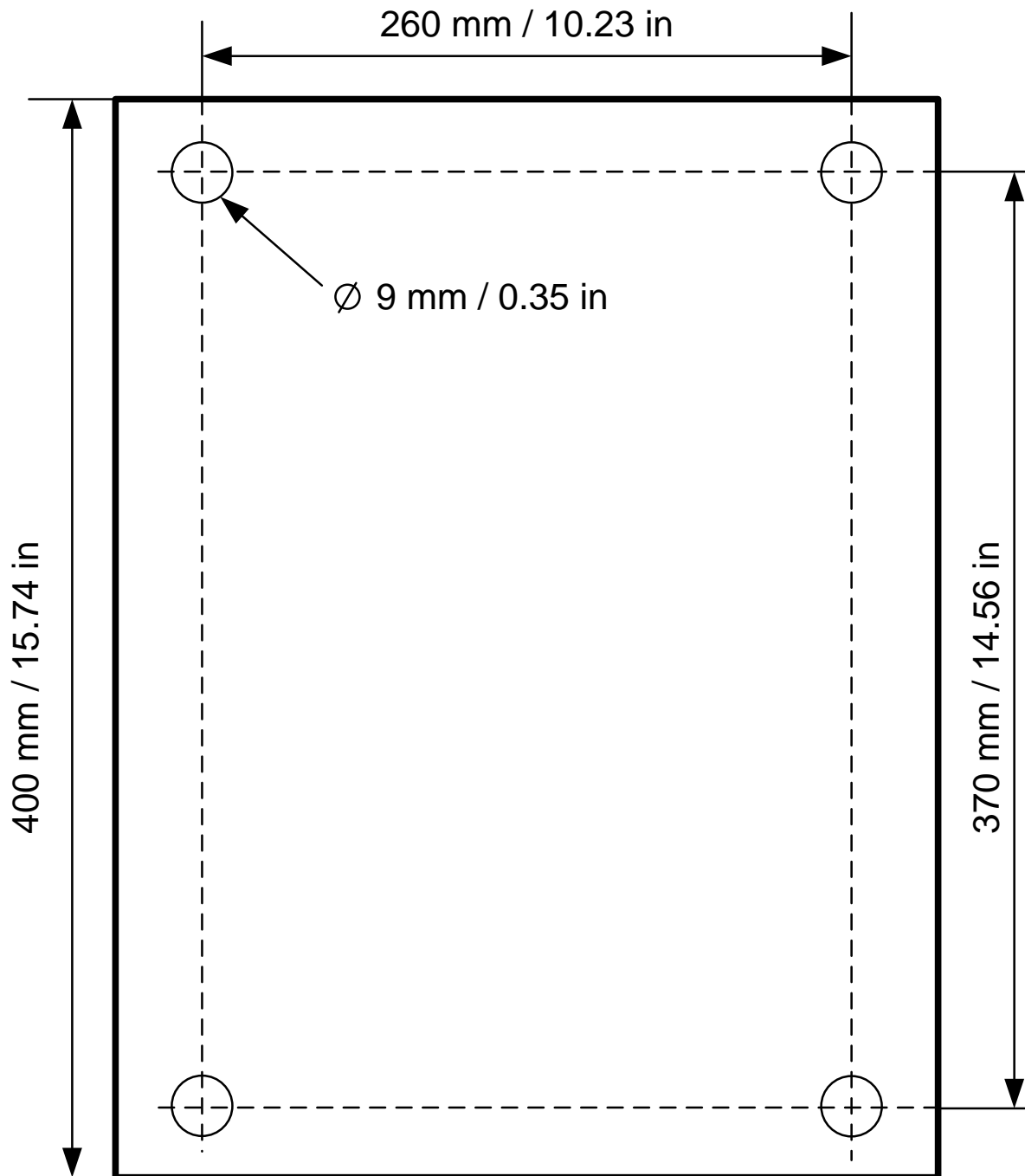

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Detailed information's about the Jumpers, cable types, configuration, please see the installation manual of the door controller.

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## 8 Dimension housings

### 8.1 Controller XMP-K32SX – wall mounting



## 9 Document History

Version	Date	Description
V3.0	04.01.2017	New design of controller data sheets.



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