

OEM reading module VOXIO-A (Standard IP65)

VOXIO-A (Standard IP65)

Interfaces: RS485 or RS232
or
Magstripe Clock/Data or Wiegand D0/D1
or
Serial "TTL"

Variants:

Standard	RFID technology	Special Feature
VOXIO-A-1200-I	LEGIC® prime / advant (Basis LEGIC® 4200M) <u>Note:</u> LEGIC media cannot be initialized	Multi-ISO platform ■ LEGIC prime/advant ■ MIFARE Classic DESFire / EV1 / EV2 ■ ISO14443 A+B ■ ISO15693
VOXIO-A-2000-I	125kHz	
VOXIO-A-3100-I	MIFARE classic MIFARE DESFire / EV1 / EV2	

Wall-mounted / with- or without keyboard



Wall-mounted without keyboard



Wall-mounted with keyboard

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General Data

Applications

- Access control
- Time and attendance
- Data collection
- Parking systems, alarm systems
- General user identification

Special features

- Compact design
- Easy to mount
 - Casing can be installed after closing
 - Separate screw channels outside the casing interior
 - Wall-mounted cable feeding
 - Cable feeding from the bottom or from above possible (one PG-screwing)
- Suitable for outdoor usage
- Type of connection:
 - connection terminals (lift system)
- Separate construction of the casing
 - Front module** with integrated reading system
 - three LED fields
 - keyboard connection
 - sabotage detection
 - Rear module** with integrated interface
 - DIP switches
 - piezo buzzer
 - switch controller (8 to 30 V / DC)
 - connection terminals

Technical data

- ABS casing / halogen free
- Casing colour RAL 7035 light grey
- Front module screws are made of stainless steel
- Temperature ranges:
 - Storage temperature -30°C bis +70°C
 - Operating temperature -25°C bis +60°C

Interfaces

- RS 485 (A, B) **not** electrically isolated
 - address setting via DIP-switch
 - connectable bus terminating resistor (also via DIP switch)
- or
- RS232
- or
- "Magstripe" Clock/Data
- oder
- "Wiegand" D0/D1
- or
- serial TTL
- I²C bus interface
 - Actuation of additional peripheral equip (e.g. I/O - Box)

Signal elements

- 3 LED fields / green, yellow, red (with 9 LEDs per colour)
- 1 piezo buzzer

Power supply

- 8...30V DC (internal polarity reversal protection)
- Power input
 - LEGIC Basis 4200 2,00 W
 - 125kHz 2,00 W
 - mifare 3,50 W

Firmware / Software protocols

- phg_crypt
- active sending
- "Magstripe" Clock/Data, format track 1 or 2 (can be parameterized)
- "Wiegand" D0/D1, format 26 bit or 56 bit (can be parameterized)
- OSDP
- Modbus
- customer-specific



The support and availability of the different software protocols depends on the current RFID-technology. Detailed information on request

Dimensions and Weight

- 90 x 120 x 50 mm (height x width x depth)
- Weight: 275 g

Protection class

Standard installation

(Wall mounted cable entry using the PG - screwing)

- IP65



During professional installation and suitable cable diameter (4,5mm up to 10mm) of the connection cable

Optional installation

(Cable exit off the wall / Cable entry through the rear module)

- not specified

During this installation the

reachable IP protection depends on the sealing (e. g. silicone) the cable feeding is sealed with.



Option

- Opening protection with key lock



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Supported transponder medias



The support of the transponder media listed below is generally dependent on the respective variant reader technology (hardware platform) and on the respective reader firmware. The listing of the transponder media is without guarantee of completeness. Further information can be received on request.

Transponder medias	Reader technology		
	LEGIC prime / advant	Mifare Classic / DESFire	125 kHz
LEGIC MIM 22 / MIM 256 / MIM 1024	X		
LEGIC ATC512-MP110 (ISO 14443A)	X	X (CSN/UID)	
LEGIC ATC2048-MP110 (ISO 14443A)	X	X (CSN/UID)	
LEGIC ATC4096-MP310 (ISO 14443A)	X	X (CSN/UID)	
LEGIC ATC4096-MP311 (ISO 14443A)	X	X (CSN/UID)	
LEGIC AFS4096-JP10/JP11 (ISO 14443A)	X	X (CSN/UID)	
LEGIC ATC128-MV210 (ISO 15693)	X		
LEGIC ATC256-MV210 (ISO 15693)	X		
LEGIC ATC1024-MV110 (ISO 15693)	X		
ISO 14443A-Transponder(UID/CSN)	X	X	
ISO 15693-Transponder(UID/CSN)	X		
SONY FeliCa subset	X		
INSIDE Secure (UID/CSN)	X		
Classic 1k / 4k	X	X	
DESFire 4k	X	X	
DESFire EV1 / EV2, 2k / 4k / 8k	X	X	
Transparent, ISO14443A		X	
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			X
hitag 2			X
hitag S			X
µem 4102 (read only)			X
µem V4150			X



Attention:

Recommendation at use of smart card chips for LEGIC “card in card“Solutions

An aptitude examination of the corresponding medium should be carried out before use or intended use.

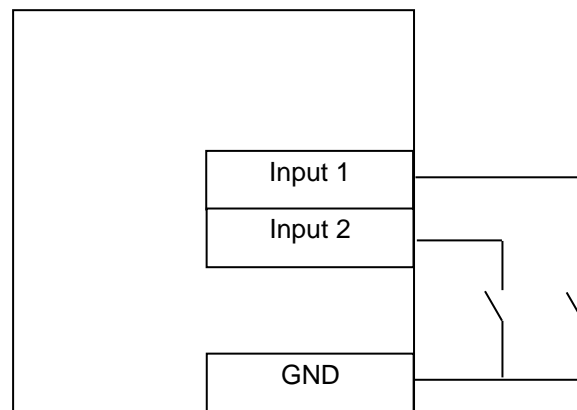
Detailed information about the procedure are available on request.

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Pin allocation / Terminal specification / Hardware wiring



Rear module with interface (rear view)



General hardware wiring

ST1 connection terminal (7-pin connection terminal) power supply / interface / inputs/outputs			
PIN No.	Interface version		
	RS485	RS232 asynchronous	serial "TTL" asynchronous
1	Input 1 (Active Low)	Input 1 (Active Low)	Input 1 (Active Low)
2	Input 2 (Active Low)	Input 2 (Active Low)	Input 2 (Active Low)
3	"B" Data	RTS	Internally connected
4	"A" Data	RxD	RxD
5	Internally connected	TxD	TxD
6	GND		
7	+Ub (8 to 30 V / DC)		
PIN No.	Interface version		
	"Magstripe" Clock/Data		"Wiegand" D0/D1
1	Input 1 (Active Low)		Input 1 (Active Low)
2	Input 2 (Active Low)		Input 2 (Active Low)
3	Clock	Open collector "Active low" maximum 10 mA	D0
4	Data		D1
5	CLS		Internally connected
6	GND		
7	+Ub (8 to 30 V / DC)		

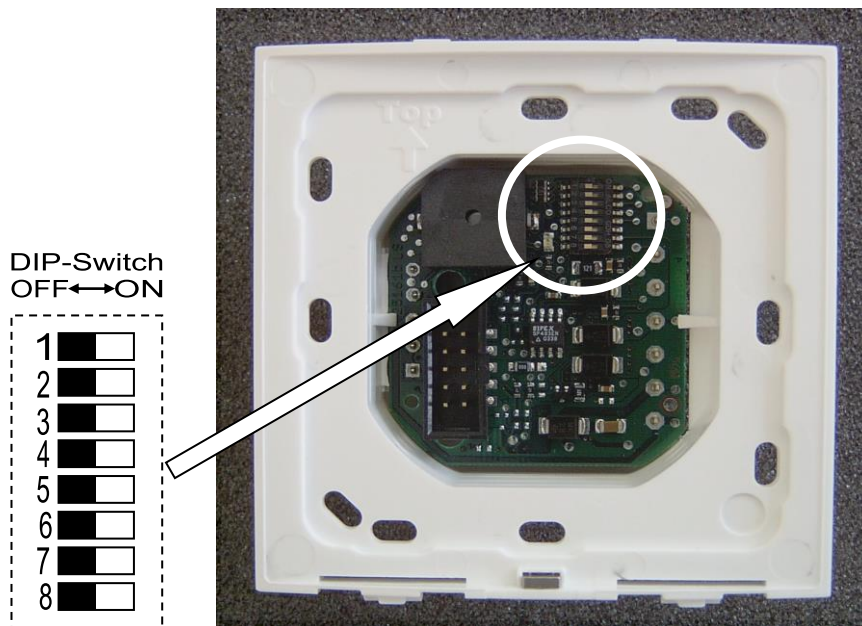
Terminal specification: Lift system / connection diameter 0.3 – 1.5 mm / stripping length 6 mm

ST3 connection terminal (5-pin connection terminal) I ² C bus, power supply for external devices (e.g. I/O - Box)		
PIN No.	Function	Meaning
1	GND _{out}	Power supply for external devices e.g. I/O - Box
2		
3	+Ub _{out}	
4	SCL	I ² C bus interface "Master" function depends on the firmware
5	SDA	

Terminal specification: Lift system / connection diameter 0.4 – 1.4 mm / stripping length 5 mm

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DIP switch



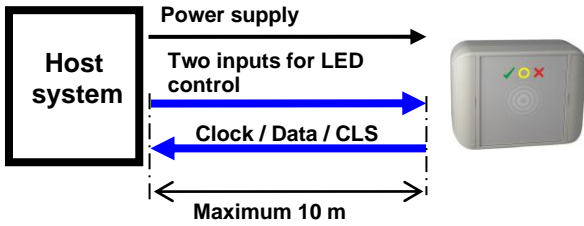
Rear module with interface (front view)

DIP switches (8 Switches, S1 to S8)					
Device address, mode					
DIP switch	Function				
	RS485	RS232	serial TTL	“Magstripe” Clock/Data	“Wiegand” D0 / D1
S1	Depends on the firmware, e.g. setting of the reader address				Depends on the firmware, e.g. operating mode, LED functions
S2					
S3					
S4					
S5					
S6	OFF	must be fixed set to OFF (internal function)			
S7	OFF	no bus terminating resistor	no function		
	ON	120 Ohm bus terminating resistor			
S8	OFF	Normal operation			
	ON	Voltage for reader board (front module) switched off, for pulling out / inserting the connecting cable when operating voltage is applied to the interface			

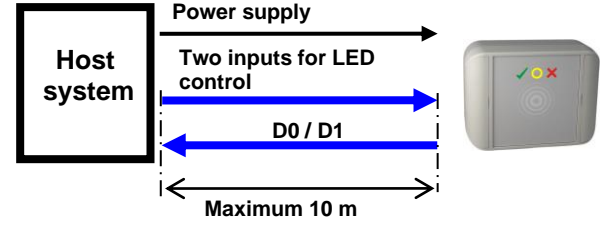
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Configuration Possibilities

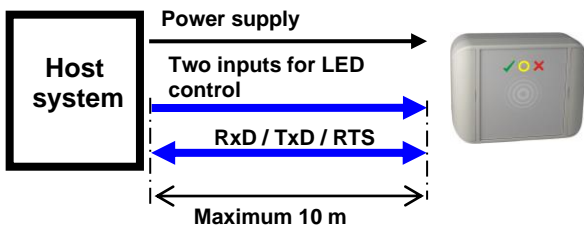
“Magstripe” Clock/Data



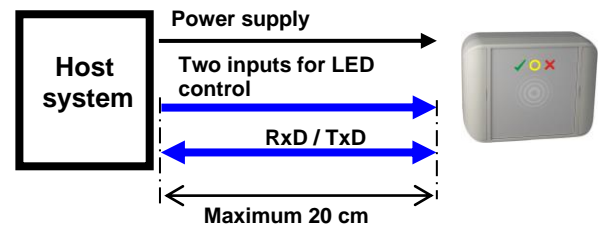
“Wiegand” D0/D1



RS232 Asynchronous

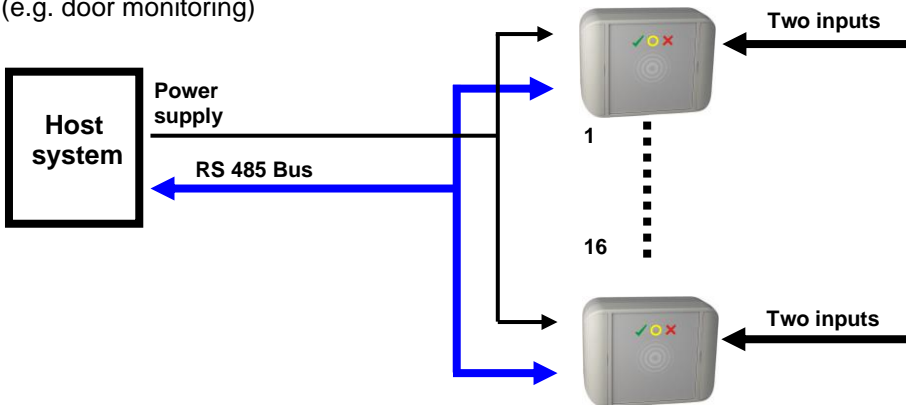


Serial "TTL"



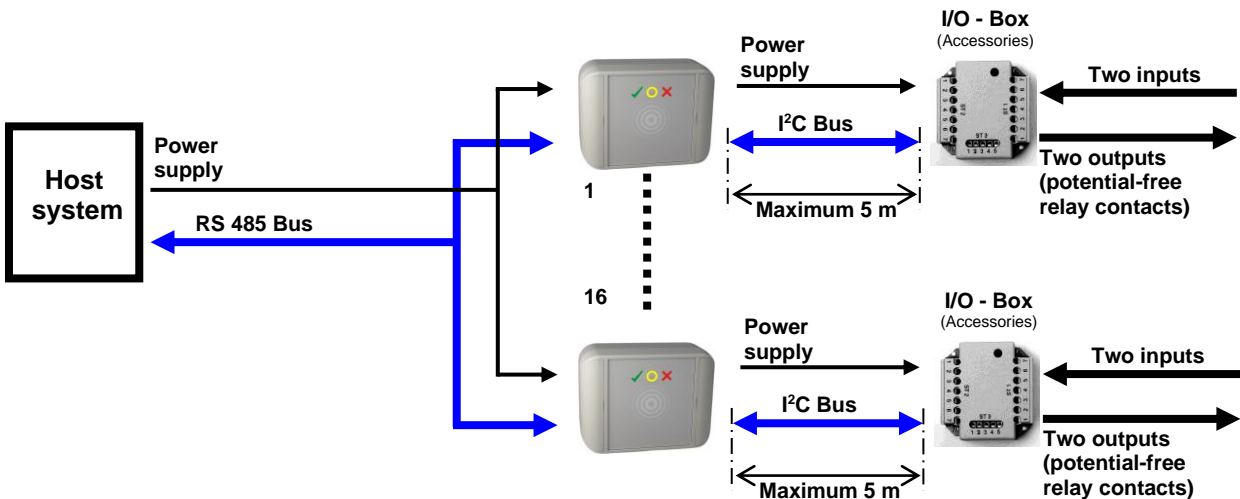
RS485 Bus (2 - Wire)

With 2 inputs
(e.g. door monitoring)



RS485-Bus (2 - Wire)

With external I/O - Box with 2 relay outputs and 2 inputs
(e.g. for alarm, door monitoring and actuation of the door opener)



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Construction

Reader "delivery status"



PG - screwing for cable entry.
Cable diameter 4,5 – 10 mm



Four Casing - screws

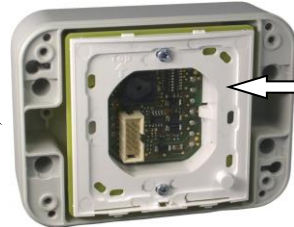
Reader with opened cover (rastbar)



RFID-reader

Silicone sealing

Front module



Plastic holder with interface installed on the installation board

Rear module

Standard cable feeding (e. g. rear module without interface)



Wall mounted with
The option from above



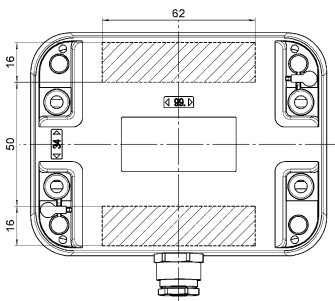
Wall mounted with the
option from the bottom

Installation board
(for plastic holder
with interface)



Depending on the cable insertion the rear module can be installed turned through 180°. The plastic holder with the interface must always installed in the same position (refer to picture above).

Optionale cable feeding (Cable exit off the wall)



If the cable exit comes out off the wall the rear module can be reworked in the range of the shaded area, so that the cable can be inserted.



In this installation the casing lose the specified IP-Protection !

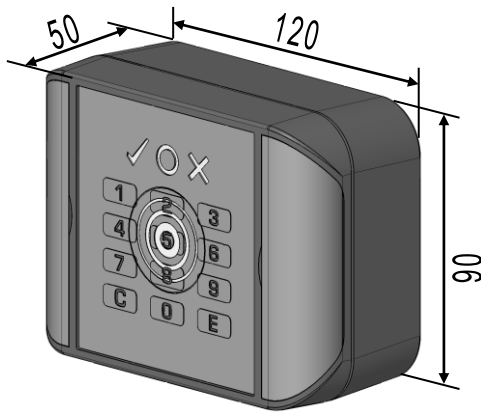
The reachable IP protection depends on the sealing (e. g. silicone) the cable entry is sealed with.

The PG-screwing must be replaced by the provided blind plug.

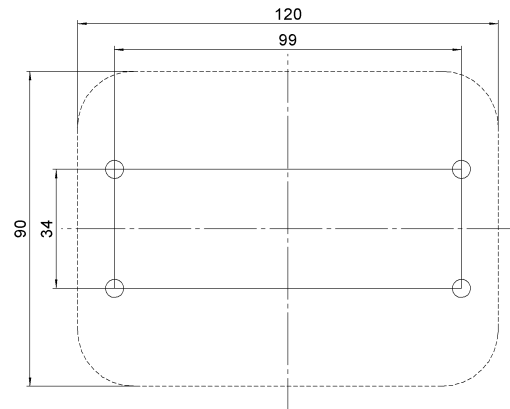


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Dimension (without PG-screwing)



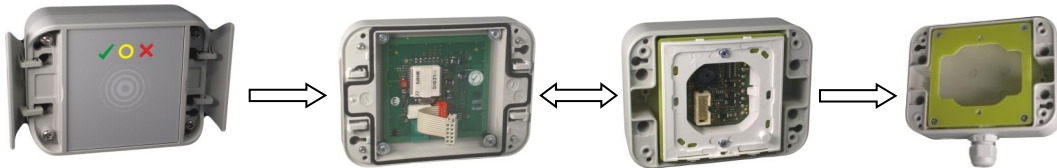
Mounting Dimension



Mounting

Mounting preparations: Install the connection cables for the interface, power supply and, if necessary, for the separate I/O - Box and prepare to connect them.

1. Open Cover (open outwards / release) and removing the four casing screws
Detach the front module of the rear module and unscrew the plastic holder with the interface of the installation board (2 screws)



2. Prepare and if necessary rework the casing for the desired installation (wall mounted cable feeding or cable exit out off the wall).

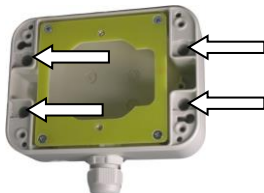


In delivery status the reader is prepared for wall mounted cable feeding (with PG-screwing to insert a cable)



Attention! To achieve the protection class IP65 a cable with the diameter of 4,5mm up to 10 mm must be used

3. Define the mounting position and drill the mounting holes into the wall (refer to "Mounting dimension")
4. Screw the rear module with suitable screws onto the wall



Fastening:
Separate screw channels outside the casing interior



Mounting material is not included in the scope of delivery (e.g. screws , anchor etc.).

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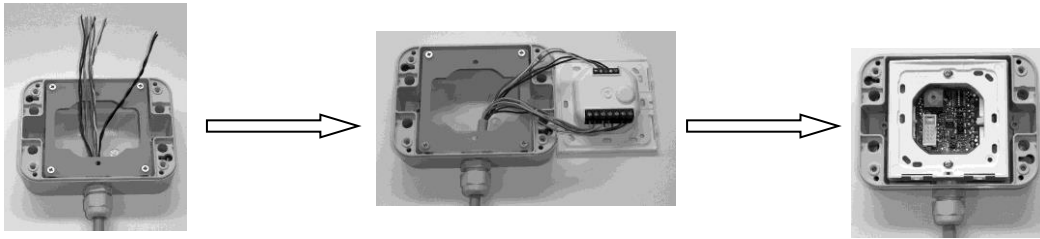
5. - Insert the cable through the PG-screwing
- cut the cable to a suitable length and dismantle the cable
- wire the rear module according to the connection plan




The suitable connection plan is enclosed to the reader .

- Tighten the PG-screwing
- insert the cable in the rear module so that the cable is not damaged by the plastic holder
- insert the plastic holder into the rear module and tighten the screws (2 screws)

Example / Sequence



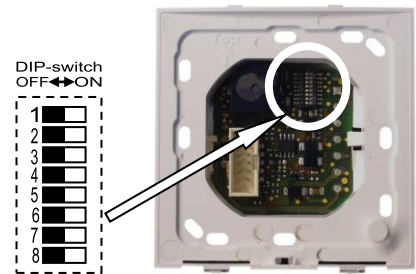
-  **Attention !** The wiring of the rear module must be done under no voltage conditions. The operating voltage may only be turned on after the reader has been completely installed

6. DIP-switch configuration

Set DIP-switches 1 to 7 according to the interface used and the firmware function.

DIP-switch 8

If operating voltage is applied to the rear module while it is open, then DIP switch 8 must be switched ON before sticking on the front module, i.e. the power supply for the reader electronics in the front module is deactivated.



7. Stick on the front module

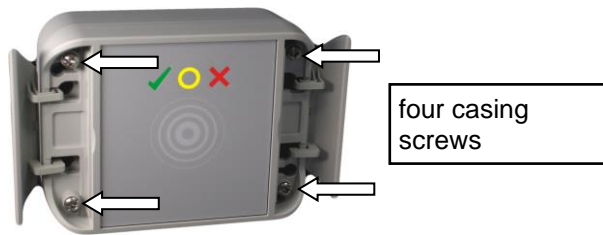


Attention ! Don't pull on the red plug on the front module



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8. Fix the front module on the rear module and tighten the screws



9. Optional mechanical opening protection with key lock



10. Close covers (close inwards until it snaps in)

EG Conformity

The device complies with the essential legal requirements, if used for its intended use.
The EG-Declaration of Conformity can be received on request.

Care and cleaning instruction

The use of hard or sharp objects (rings, fingernails etc.) can cause scratches and damage the device.
Wipe the device with a soft lint-free cloth, or one that has been lightly dampened with water.
The use of caustic liquids such as benzene, thinners, alcohol, solvents, or any kind of abrasive cleaners will lead to surface deterioration and damage.