sygonix SY-6121664 RFID and PIN Code Lock Instruction Manual

Contents

SY-6121664 RFID and PIN Code Lock

Operating Instructions
RFID and PIN Code Lock

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2 Introduction

Dear customer,

Thank you for purchasing this product.

If there are any technical questions, please contact: www.conrad.com/contact

3 Operating Instructions for download

Use the link www.conrad.com/downloads (alternatively scan the QR code) to download the complete operating instructions (or new/current versions if available). Follow the instructions on the web page.

4 Intended use

The product is a single door standalone access control with Wiegand input & output.

The device supports 1,000 users (990 common users + 10 visitor users). It supports multi access modes in card access, PIN access, card + PIN access, or multi cards/PINs access.

The product is intended for vertical installation on a wall and is suitable for indoor and outdoor use (IP 66). If you use the product for purposes other than those described, the product may be damaged. Improper use can result in short circuits, fires, electric shocks or other hazards.

The product complies with the statutory national and European requirements. For safety and approval purposes, you must not rebuild and/or modify the product.

Read the operating instructions carefully and store them in a safe place. Make this product available to third parties only together with the operating instructions.

5 Features

- IP66 ingress protection rating

- Tamper resistant metal enclosure
- One relay, 1,000 users (990 common + 10 visitor)
- PIN length: 4 to 6 digits
- Card Type: 125 kHz EM Card
- Wiegand 26 bits output, Wiegand 26/34 bits input automatic identification
- Card block enrollment
- Tri-color LED status display
- Pulse mode, toggle mode
- Low temperature resistance (-40 °C)
- Tamper switch via light sensor

6 Delivery content

- 1x Access control with cable (30 cm)
- 2x Torx head screws
- 1x Torx head wrench
- 1x Plastic back box
- 4x Screws for back box
- 4x Dowels
- 4x Screw cover stickers
- 1x Diode
- 1xOperating instructions

7 Description of symbols

The symbol warns of hazards that can lead to personal injury.

The symbol warns of dangerous voltage that can lead to personal injury by electric shock.

8 Safety instructions

Read the operating instructions carefully and especially observe the safety information. If you do not follow the safety instructions and information on proper handling in this manual, we assume no liability for any resulting personal injury or damage to property. Such cases will invalidate the warranty/guarantee.

8.1 General information

- The device is not a toy. Keep it out of the reach of children and pets.
- Do not leave packaging material lying around carelessly. This may become dangerous playing material for chil dren.
- If you have questions which remain unanswered by these operating instructions, contact our technical support service or other technical personnel.
- Maintenance, modifications and repairs must only be completed by a technician or an authorised repair centre.

8.2 Handling

- Please handle the product carefully. Jolts, impacts or a fall even from a low height can damage the product.

8.3 Operating environment

- Do not place the product under any mechanical stress.
- Protect the appliance from extreme temperatures, strong jolts, flammable gases, steam and solvents. Protect the product from high humidity and moisture.
- For installations in industrial facilities, follow the accident prevention regulations for electrical systems and equip ment issued by the national safety organisation or the corresponding national authority.

8.4 Operation

- Consult an expert when in doubt about the operation, safety or connection of the appliance. If it is no longer possible to operate the product safely, take it out of operation and protect it from any accidental use. DO NOT attempt to repair the product yourself. Safe operation can no longer be guaranteed if the product: – is visibly damaged,
  – is no longer working properly,
  – has been stored for extended periods in poor ambient conditions or
  – has been subjected to any serious transport-related stresses.

8.5 Product

- Do not mount or connect the product when it is connected to a power supply.
- Do not exceed the contact rating for the changeover contact. See: “23 Technical data” on page 19. Never connect directly to the mains voltage, as this can cause life-threatening electric shock!

8.6 Installation

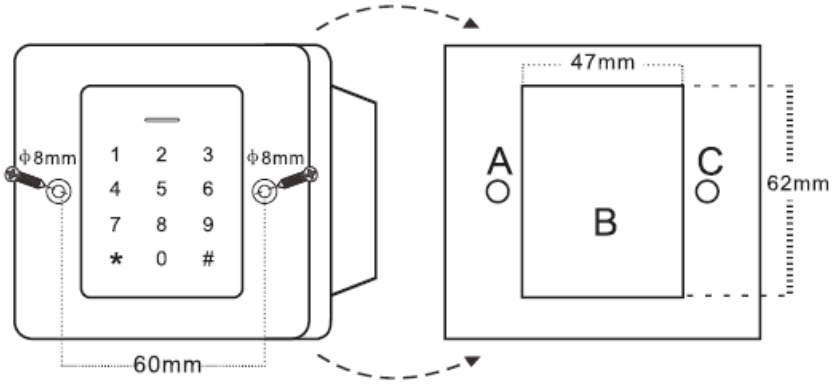
- Avoid kinking or crushing connection cables to prevent malfunctions, short circuits, and device defects.
- Ensure no cables are damaged when drilling or tightening screws.
- Only install and connect with the power supply off.

9 Installation

Caution!

Never switch the mains voltage via the potential-free changeover contact! There is a risk of fatal electric shock! Observe the permissible contact rating. See: “23 Technical data” on page 19.

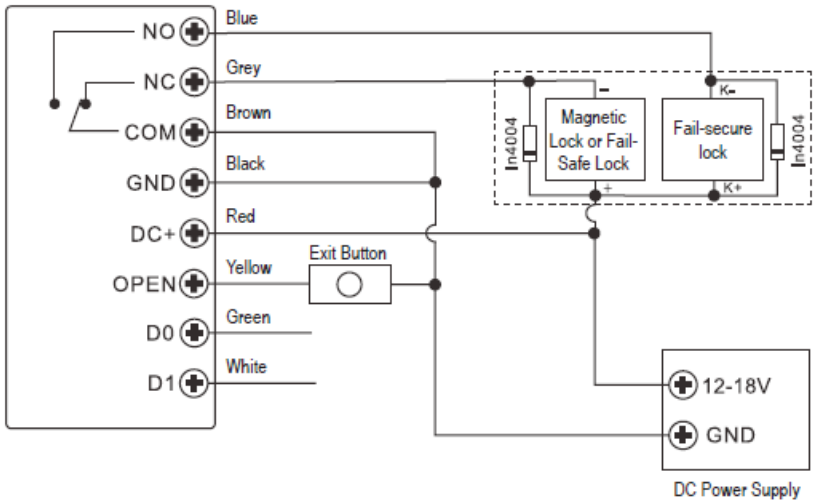
For installation, make sure that the brightness sensor on the back is not exposed to light beams as switch ing the system on can cause activation of tamper protection and subsequent locking of all functions.
If needed, disconnect the power briefly to reset tamper protection.



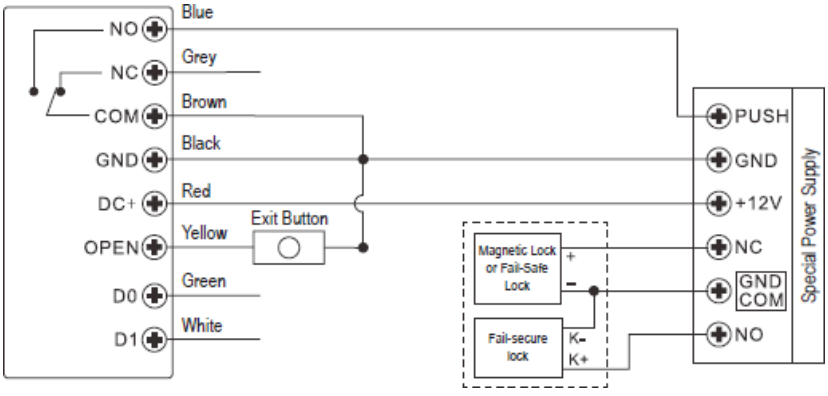
10 Connecting to power supply

⚠ A protective diode is included for the door opener to prevent voltage surge damage. Ensure correct polarity as shown in the wiring diagrams (the ring on the diode must face the positive pole/+).

10.1 Common power supply



10.2 Access control power supply Blue



11 Wiegand interface

There are two application options for the Wiegand interface of the code lock.

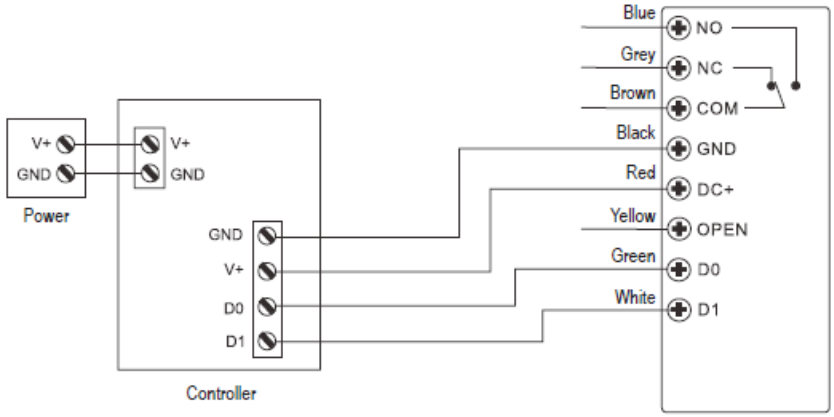
- Pass-through mode
- Controller mode

11.1 Pass-through mode (the code lock is used as an external card reader)

The code lock can be connected to a compatible Wiegand controller and used as an external card reader. The Wiegand controller must support a 26-bit protocol that is used for the transmission of transponder data.

Wiring diagram

⚠ The code lock operates at a voltage of 12 – 18 V/DC. If the Wiegand controller does not support this op erating voltage, the code lock will need a separate power supply unit. In this case, the wiring diagram will differ from the one shown.

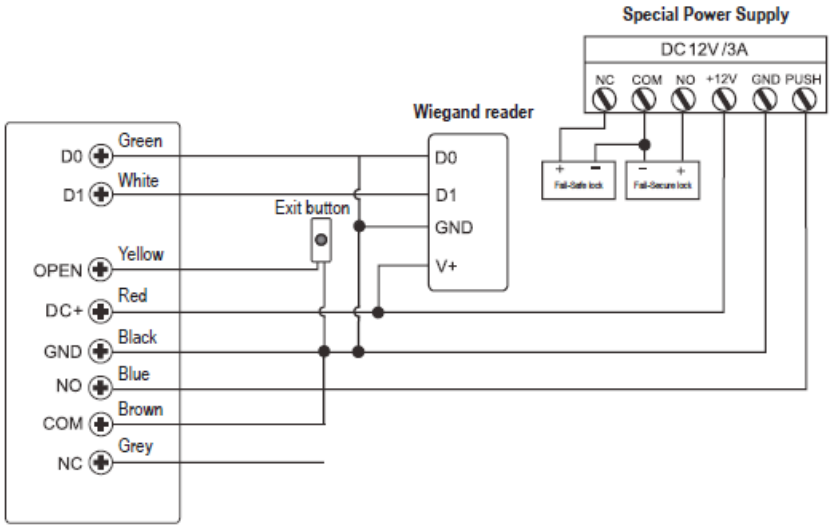


11.2 Controller mode (an external card reader is connected to the code lock)

The code lock functions as a Wiegand controller and can be operated with an external card reader (26 or 34-bit protocol, automatic recognition).

- Card readers for 125 kHz transponders as well as card readers with MIFARE® chip card technology (13.561 MHz) are supported.
- When a MIFARE® smart card reader is used, new transponders can only be paired via this card reader.
- However, when a card reader for 125 kHz transponders is used, transponders can be paired both via the code lock and the card reader (should you face any problems, use only the external card reader for pairing).

Wiring diagram



12 Wiring

Colour	Function	Notes
Red	Power +	12-18 V/DC regulated power input
Black	GND	Ground
Blue	NO	Normally open relay output
Brown	COM	Common connection for relay output
Grey	NC	Normally closed relay output
Yellow	OPEN	Request to exit input (REX)
Green	D0	Wiegand input/output data 0
White	D1	Wiegand input/output Data 1

13 Status indicators

Operation status	LED	Buzzer
Standby	Red light bright	—
Enter programming mode	Red light shines	1x beep
In programming mode	Orange light bright	2x beep
Operation error	—	3x beep
Exit programming mode	Red light bright	1x beep
Open lock	Green light bright	1x beep
Alarm	Red light shines quickly	Constant beeping

14 Power up

DInstallation and connection is complete.

1. Switch on the operating voltage.

Standby mode: The code lock will beep briefly, and the red LED will light up.

Tamper protection activated: The code lock beeps continuously and the LED flashes quickly. – Perform a reset.

– To reset, disconnect the power, ensure the sensor is in the dark, and try again.

2. You can begin programming from standby mode. See: “Programming” on page 10.

15 Programming

- The code lock can be reset to factory defaults, in which case all settings are lost (stored user tran sponders and user codes are retained in this case and may have to be deleted separately).
- For security reasons, reset to factory defaults if you no longer wish to use a master transponder. See: “18 Reset to factory defaults and pair new master card” on page 16.

Programming is done via the keypad. The RFID sensor is hidden behind the keypad, requiring the transponder to be within 3 cm to be recognized.

- User transponders can be paired or deleted with the master transponder.

- A new master transponder can be saved if the current one is lost or defective.
- User codes and the master code can be 4-6 digits long. The code lock can store up to 10 visitor transponders or codes, each with 1 to 10 access attempts. For example, a visitor transponder can be set to allow one-time access.

The code lock has 1000 memory cells:

- Cells 0 – 989: user transponders or codes
- Cells 990 – 999: visitor transponders or codes

A special access mode requires both a user transponder and a PIN for entry, enhancing security by needing both a physical transponder and a user PIN. See: “15.10 Select access mode” on page 14.

15.1 Overview

Function description	Operation
Enter Programming Mode	* (Master Code) # then you can do the programming (123456 Is the factory default master code)
Change the Master Code	0 – New Code – # – Repeat the New Code-# (code: 6 digits)
Add Card User	1 – Read Card – # (can add cards continuously)
Add PIN User	1 – PIN-# The PIN is any 4~6 digits except 8888 (8888 Is the factory default PIN code)
Delete User	2- Read Card- # 2- PIN – #
Exit Programming Mode	*

15.2 Enter and exit program mode

Programming step	Keystroke combination
Enter Program Mode	* (Master Code) # Factory default: 123456
Exit Program Mode	*

15.3 Set master code

Programming step	Keystroke Combination
1. Enter Program Mode	* (Master Code) #
2. Update Master Code	0 (New Master Code) # (Repeat New Master Code)# (Master code is any 6 digits)
3. Exit Program Mode	*

15.4 Add common users

PIN/Card user ID: 0~989; PIN length: 4~6 digits except 8888

Programming step	Keystroke combination
1. Enter program Mode	* (Master Code) #
Add Card User	

2. Using Auto ID (Allows the device to assign Card to next availa ble User ID number) OR 2. Select Specific ID (Allows Master to define a specific User ID to as sociate the card to) OR 2. Add Card: Block Enrollment (Allows Master to add up to 988 cards to the Re ader in a single step) Takes 2 minutes to program.	1 (Read Card)/(Input 8/10 Digits Card Number) # The cards c an be added continuously. 1 (User ID) # (Read Card)/(Input 8/10 Digits Card Number) # 1 (User ID) # (Card Quantity) # (The First Card 8/10 Digits N umber) # Cards' number must be consecutive: (Card quantity is the nu mber of cards to be enrolled)
Add PIN User	
2. Using Auto ID (Allows the device to assign PIN to next availabl e User ID number) OR 2. Select Specific ID (Allows manager to define a specific User ID to associ ate the PIN to)	1 (PIN) # The PINs can be added continuously 1 (User ID) # (PIN) #
3. Exit	*

15.5 Tips for PIN security (only valid for 6 digit PIN):

To enhance security, you can conceal your correct PIN by adding additional numbers (max.10 digits). Example PIN: 123434

You could use **(123434)** or **(123434)

("*" can be any number from 0~9)

15.6 Add visitor users

(User ID number is 990-999; PIN length: 4-6 digits except 8888)

There are 10 group Visitor PIN/card available, the users can be specified up to 10 times of usage, after a certain number of times, i.e. 5 times, the PIN/card becomes invalid.

Programming step	Keystroke combination
1. Enter Program Mo de	* (Master Code) #
2. Add Card OR 2. Add PIN	1 (User ID) # (0-9) # (Read Card)/(Input 8/10 Digits Card Number) # 1 (User ID) # (0-9) # (PIN) # Note: The number 0-9 represents the number of allowed usages. A value of 0 indicates 10 us ages.
3. Exit	*

15.7 Change user PIN

PIN length: 4~6 digits except 8888

Programming step	Keystroke combination
Note: Below is done outside programming mode, users can undertake this themselves	
Change PIN	* (User ID) # (Old PIN) # (New PIN) # (Repeat New PIN) #
Change PIN of Card + PIN access mode	* (Read Card) (Old PIN) # (New PIN) # (Repeat New PIN) #

15.8 Delete users

Programming step	Keystroke combination
1. Enter Program Mode	* (Master Code) #
2. Delete User- By Card/PIN OR 2. Delete User – By ID number OR 2. Delete User – By Card number OR 2. Delete ALL Users	2 (Read Card)/(Input PIN) # The users can be deleted continuously. 2 (User ID) # 2 (input 8/10 Digits Card Number) # 2 (Master Code) #
3. Exit	*

15.9 Setting the changeover contact activation time

The relay configuration sets the behaviour of the output relay on activation.

This function enables to set the changeover contact activation time from 1 to 99 seconds after a valid access to the code lock (default setting is 5 seconds).

When “0” is set, the changeover contact goes to “toggle” mode. Each valid access to the code lock changes the changeover contact switch position. This can be used to enable/disable an alarm system.

Programming step	Keystroke combination
1. Enter Program Mode	* (Master Code) #
2. Pulse Mode OR 2. Toggle Mode	3 (1~99) # (factory default) The relay time is 1 -99 seconds. (Default is 5 seconds) 3 0 # Sets the relay to ON/OFF Toggle mode
3. Exit	*

15.10 Select access mode

For multi-user access mode, the interval time of reading can not exceed 5 seconds, or else, the device will exit to standby automatically.

Programming step	keystroke Combination
1. Enter Program Mode	* (Master Code) #
2 Card Access OR 2 PIN Access OR 2 Card + PIN Access OR 2 Card or PIN Access OR 2 Multi User Access	4 0 # 4 1 # 4 2 # 4 3 # (factory default) 4 3 (2~9) # (Only after 2-9 valid users, the door can be opened)
3. Exit	*

15.11 Set strike-out alarm

The strike-out alarm will engage after 10 failed entry attempts (Factory is OFF).

It can be set to deny access for 10 minutes after engaging or disengage only after entering a valid card/PIN or Master code/card.

Programming step	Keystroke combination
1. Enter Program Mode	* (Master Code) #
2. Strike-Out OFF OR 2. Strike-Out ON OR 2. Strike-Out ON (Alarm) Set Alarm Time	6 0 # (factorydefault) 6 1 # Access will be denied for 10 minutes (Exit button is still workable) 6 2 # 5 (0~3) # (factory default is 1 minute) Enter Master Code # or Master Card or valid user card/ PIN to silence
3. Exit	*

15. 12 Set audible and visual response

Programming step	Keystroke combination
1. Enter Program Mode	* (MasterCode) #
2. Disable Sound Enable Sound OR 2. LED Always OFF LED Always ON OR 2. Keypad Backlit Always OFF Keypad Backlit Always ON Keypad Backlit Automatic OFF	7 0 # 7 1 # (factory default) 7 2 # 7 3 # (factory default) 7 4 # 7 5 # 7 6 # (factory default) Automatic OFF after 20 seconds, it will go ON by pressing any key (this key is not taken into consideration)
3. Exit	*

15.13 Add or delete users

Add Card/PIN Users	1. Input (Master Card) 2. Input (Card) or (PIN #) Repeat step 2 for additional users 3. Input (Master Card) again
Delete Card/PIN Users	1. Input (Master Card Twice within 5s) 2. Input (Card) or (PIN #) Repeat step 2 for additional users 3. Input (Master Card) again

16 Open the door

There are two three to gain access:

- read valid user card
- Input valid user PIN #
- Card and PIN #.

17 Disabling an alarm

There are three ways to disable an alarm

- Enter Master Code #
- Master Card
- Valid user card/PIN#

18 Reset to factory defaults and pair new master card

18.1 Reset to factory defaults and pair new master card

1. Disconnect the power supply, and wait for the LED to switch OFF.
2. Press and hold the Exit Button then re-establish the power supply.
3. When 2x beeps sound, release the exit button.
   the LED light turns into yellow
4. Hold the new master card in front of the RFID sensor.
   The code lock emits 1x beep and the new master card has been added.
   The previous master card can no longer be used.
5. The LED will turn red when the product has been reset to factory defaults.

18.2 Reset to factory defaults without pairing new master card

- All settings will be reset to factory defaults.
- There will be no master transponder for pairing/deletion of user transponders.

1. Disconnect the power supply, and wait for the LED to switch OFF.
2. Press and hold the Exit Button then re-establish the power supply.
   2x beeps sound.
3. Keep the Exit Button pressed (approximately 10 secs) until a beep sounds and the red LED lights up.
4. Release the Exit Button
   The product has been reset to factory defaults.

18.3 Factory default settings

Function	Default setting	Chapter
Master code	123456	“15.3 Set master code” on page 11
User PIN	8888	“15.4 Add common users” on page 12
Access mode	Transponder or user code	“15.10 Select access mode” on page 14
Changeover contact activatio n time	5 seconds	“15.9 Setting the changeover contact activa tion time” o n page 14
Alarm time for protection func tion	1 minute	“15.11 Set strike-out alarm” on page 15

19 Troubleshooting

Problem	Suggested solution
Brightness sensor activated tamper protection, locking all functions.	Disconnect power supply. Ensure sensor is not exposed to light. Perform a pre-installation check, cover sensor with non-transparent tape..
Door opener doesn’t work	Use appropriate external wiring for potential-free changeover contact. Verify correct polarity connections. Check protective diode polarity. Ensure transponder is paired. Master transponder cannot enable changeover contact. Correctly wire NO/NC contacts for fail-safe or fail-secure door opener.
Changeover contact stuck (contact is permanently active)	The changeover contact activation time has been set to “0” and is in toggle mode. Set activation time to non-zero to avoid toggle mode.
Factory reset data retention	Resetting does not delete user transponders, codes, or PINs. See: “15.8 Delete users” on page 13.
Cannot pair new transponder.	Hold one transponder at a time in front of RFID sensor (max distance: 3 cm). Use EM transponders (125 kHz). Ensure memory cell is available or clear existing one. Enter memory cell number without leading zeros. For MIFARE® reader, pair via card reader. For 125 kHz transponders, use code lock or external reader.

Problem	Suggested solution
Cannot save user code.	Avoid using code “1234” (reserved for changing user codes). Ensure user c ode is unique
Wiegand connection does not work.	Ensure D0 and D1 data cables are correctly connected. Follow external card reader instructions. Supports both 125 kHz and MIFARE® (13.561 MHz) readers.

20 Cleaning and care

Important:

– Do not use aggressive cleaning agents, rubbing alcohol or other chemical solutions. They damage the hous ing and can cause the product to malfunction.

– Do not immerse the product in water.

Clean the product with a dry, fibre-free cloth.

21 Disposal

This symbol must appear on any electrical and electronic equipment placed on the EU market. This symbol indicates that this device should not be disposed of as unsorted municipal waste at the end of its service life.

Owners of WEEE (Waste from Electrical and Electronic Equipment) shall dispose of it separately from unsorted municipal waste. Spent batteries and accumulators, which are not enclosed by the WEEE, as well as lamps that can be removed from the WEEE in a non-destructive manner, must be removed by end users from the WEEE in a non-destructive manner before it is handed over to a collection point.

Distributors of electrical and electronic equipment are legally obliged to provide free take-back of waste. Conrad provides the following return options free of charge (more details on our website):

- in our Conrad offices
- at the Conrad collection points
- at the collection points of public waste management authorities or the collection points set up by manufacturers or distributors within the meaning of the ElektroG

End users are responsible for deleting personal data from the WEEE to be disposed of.

It should be noted that different obligations about the return or recycling of WEEE may apply in countries outside of Germany.

22 Declaration of Conformity (DOC)

Conrad Electronic SE, Klaus-Conrad-Straße 1, D-92240 Hirschau hereby declares that this product conforms to the 2014/53/EU directive.

- Click on the following link to read the full text of the EU declaration of conformity: www.conrad.com/downloads Enter the product item number in the search box. You can then download the EU declaration of conformity in the available languages.

23 Technical data

Power supply…… 12 – 18 V/DC
Current consumption …… standby < 50 mA
Frequency range …… 124.6 – 125.4 kHz
Transmission power…… 1.62 dBm
Max. reading distance …….. approx. 3 cm
Data retention in case of a power cut …… yes
Suitable transponders …… Commercially available EM transponders for frequency 125 kHz
Output …… Potential-free single-pole changeover contact (relay)
Max. contact rating 24 V/DC, 2 A

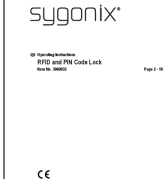
Adjustable switching time (1 – 99 seconds or toggle mode; default setting: 5 seconds)

Wiegand connection…….. yes (output = 26-bit protocol, input = 26/34-bit protocol with automatic recognition)
Memory cells …….. 990 user transponders or user codes

10 visitor transponders or visitor codes

Mounting location …… indoors/outdoors
Ingress protection…… IP66
Temperature …….. -40 °C to +60 °C
Cable length …….. approx. 30 cm
Dimensions (L x W x H)…… 86 x 86 x 25 mm
Weigh …… approx. 198 g

Documents / Resources

	sygonix sygonix SY-6121664 RFID and PIN Code Lock [pdf] Instruction Manual SY-6121664 RFID and PIN Code Lock, SY-6121664, RFID and PIN Code Lock, PIN Code Lock, Code Lock, Lock

References

- Conrad Electronic » All parts of success
- Contact
- Download center
- User Manual