GUNNEBO ENCRY 300 INSTALLATION MANUAL

GUNNEBO SAFE STORAGE

Note:

The cover sheet provides warning information, and an explanation of the symbols and terms used, together with our disclaimer.

This description is directed solely at trained technical personnel / safe technicians, who are familiar with the applicable national standards.

All technical personnel are obliged to use the documentation published at the relevant time for all installation and commissioning work.

Moreover, they must ensure that the application or use of the described products meets all safety requirements, including all applicable legislation, regulations, provisions and standards.

Note

Electrostatic Sensitive Devices

Electrostatic charging can damage the components of an electronic high-security lock system!

This equipment contains electrostatic sensitive components that can be damaged by improper handling.

Always ground yourself and use a wrist strap or anti-static mats when working with ESD.

Avoid contact with clothing, synthetic materials, plastic films, etc.

Avoid direct contact with components, connectors and sockets

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General

Locks of the Gunnebo Encry 300 has standard installation dimensions and can be mounted in all 4 installation positions (right, left, top, bottom). It is designed for force absorption by the bolt flanks.

The lock is intended to be installed on metal safes.

Depending on the version, additional locking elements (e.g. angle rail with bolts) can optionally be attached to the bolt using the existing holes. Ensure the proper operation of the lock and its connection.
The electronic lock is maintenance-free in a normal residential or office environment.

We recommend arranging for a safe technician to test the security and functions of the electronic lock after around 10,000 closures.

It is essential that the lock is protected against external attacks. We recommend protecting the security-relevant components of the high-security lock from being accessed even when the safe door is open.

There must be no openings in the door of the safe or strong room in the assembly area.

Do not apply any lubricants or other substances to the lock.

Always adhere to the following sequence for installation:

- Check the preconditions for installation
- Wiring / installation of the cables
- Disconnection of the power supply
- Functional test of the locking mechanism
- Perform all settings (user creation, time delay)

Preparation for installation

Installation dimensions of lock Gunnebo Encry 300

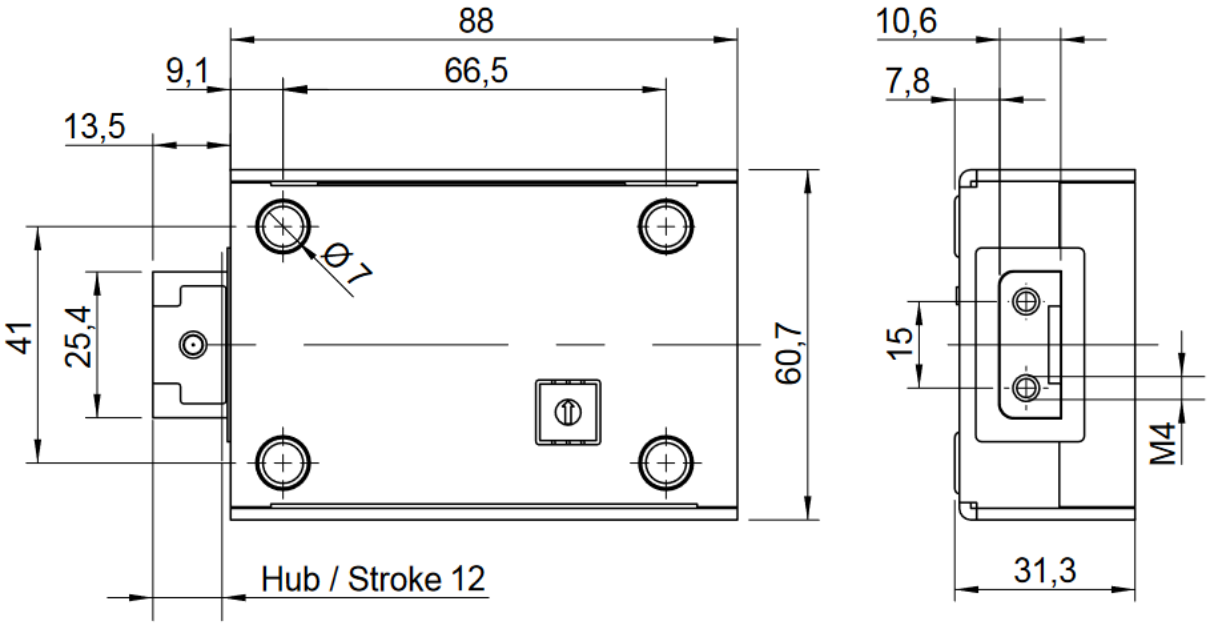


Figure 1 - Dimensional drawing of Gunnebo Encry 300

Installation dimensions of the Gunnebo Encry keypad

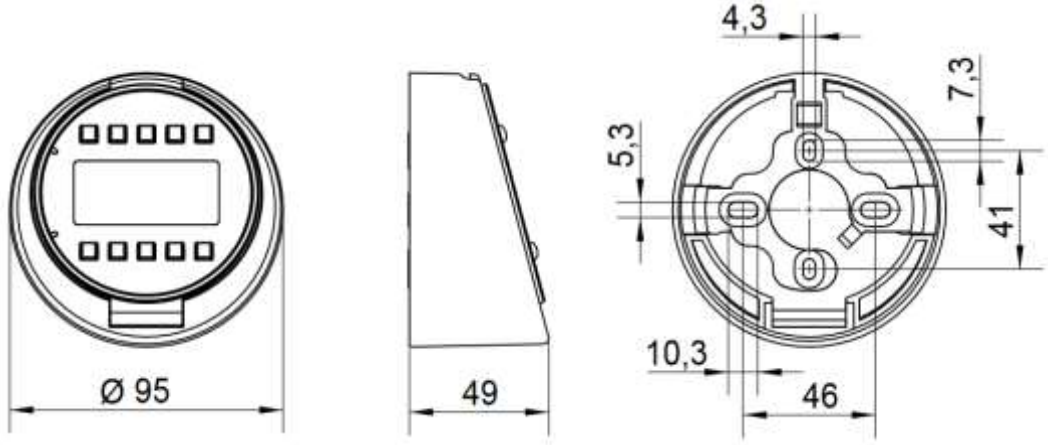


Figure 2 - Dimensional drawing keypad

Preparation of the boltwork / door

To install the lock, ensure that there are four threaded holes on the bolt work or inside the safe door. Use the screws supplied or M6 or 1/4” cylinder screws (min. strength class 8.8) to fix the electronic lock. Measure the length of the screws to ensure a minimum screw penetration depth of 5 mm.

Installation

Torque tightens the retaining screws to between 3.5 to 5 Nm.

We recommend using a bolt locking agent (adhesive) to prevent the screws from coming undone by themselves. Ensure that the bolt of the lock is not under tension or pressure once installed. Make sure there is sufficient clearance to the locking point.

Cabling / Installation

Bus addresses

The locks are identified by their addresses within the bus system. Addresses are assigned by an encoder switch on the locks. Up to 16 bus nodes can be addressed. Only addresses 00 and 01 are available with regard to the implemented pairing and encryption functions and the OTC module connection. (The address representation in the documentation is in two-digit decimal format, the coding switches are labeled in single-digit hexadecimal notation)

The addresses are always set in pairs, i.e. electronic units of a lock are set to the same bus address.

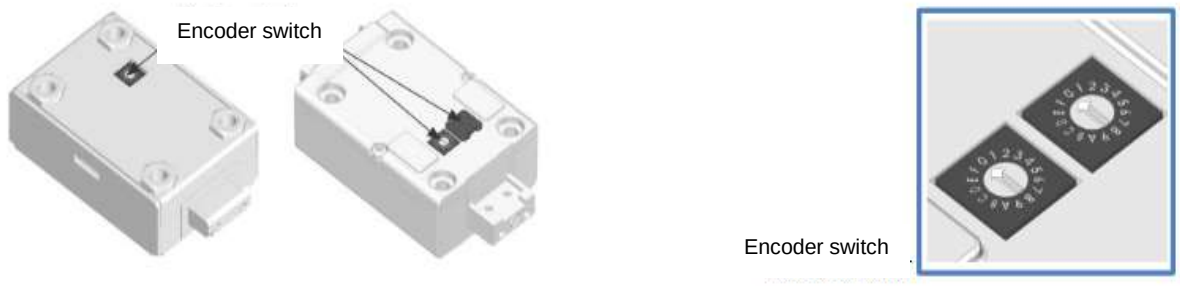


Figure 3 - Encoder switch

Make sure that every address appears only once within a bus line. Otherwise, communication will not work.

Cabling

The installation positions of the input unit and lock can be sited independently of each other. Make openings with a diameter of 9 mm through which to pass the cables into the safe.

Always route the cables in such a way that they do not come into contact with moving parts, e.g. of the boltwork. Ensure that there is no movement of the cables during operation.

Disconnect the power supply, and the battery, before starting work or making any changes to the wiring between the lock, keypad or signal boxes.

When routing cables inside the keypad, make sure that the cables are routed in such a way that they do not become trapped when the keypad door is closed.

To do this, route the cables below the side of the support walls behind the zinc pressure-cast housing.

Figure 4 –Gunnebo Encry keypad cable routing

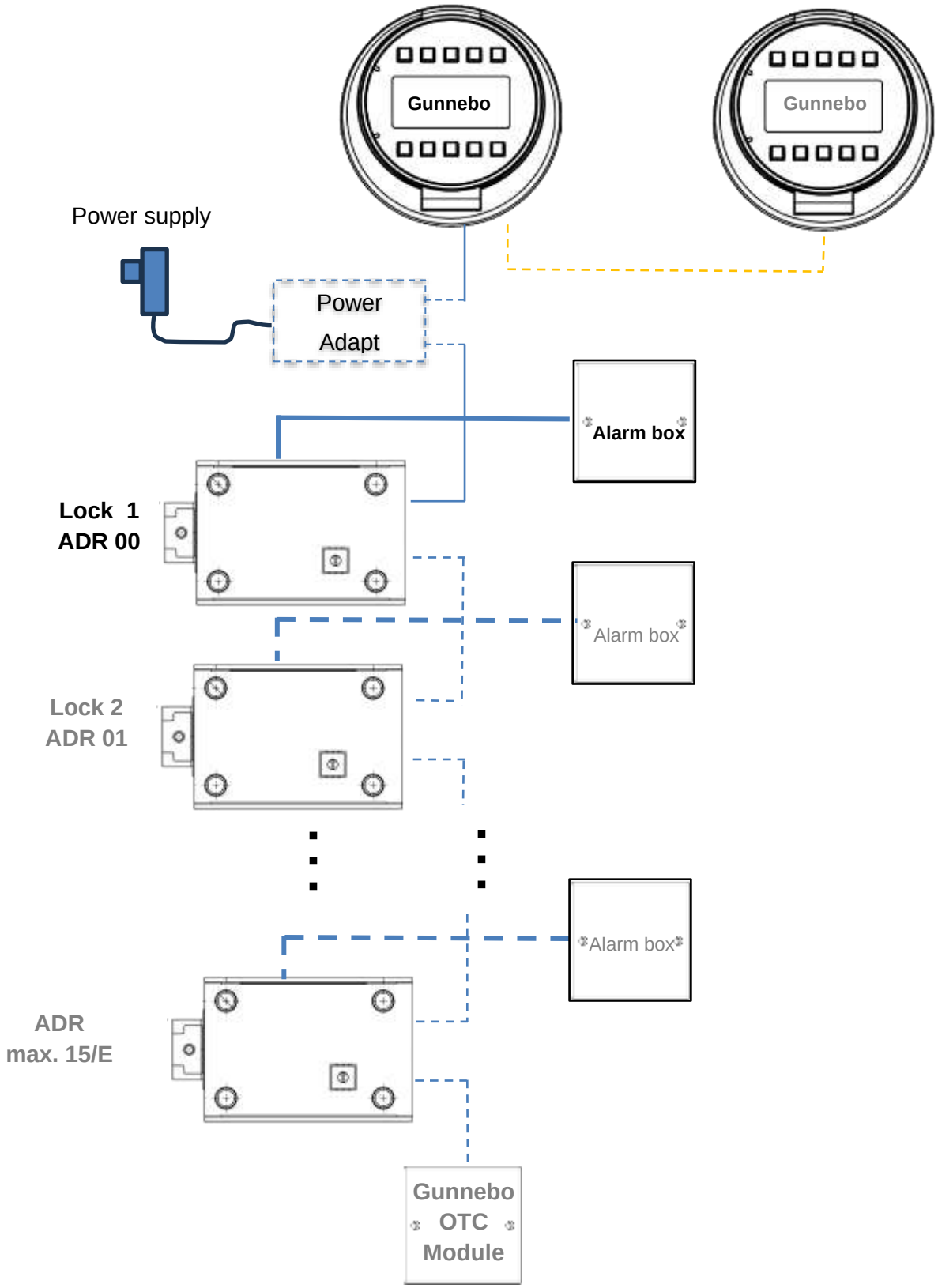


Figure 5 - Circuit topology

The thin lines (dashes or solid line) mark the system cables equipped with 4-pin Molex connectors. Bold printed lines represent the 8-pin system cables for connection of the alarm boxes.

The dashed lines shown in Figure 5 represent optional connections / system cables depending on the system configuration.

All optional components (locks, boxes, keypad) are marked in grey.
The minimum components for a functioning unit are a keypad, a lock (ADR 00) and a signal box.
In principle, up to 15 locks can be operated from one keyboard.
(Address 00 to 14 or 0 to E).

The OTC module can only generate opening codes for lock addresses 1 and 2. The power supply can be provided via a battery, via Power Adapt, via a power supply unit or via the alarm box through the alarm or hazard detection system or a power supply unit connected to the alarm box.

For multi-lock systems a mains supply is strongly recommended.

For systems with more than 3 locks on one input unit, an individual consideration of the required connecting points for the power supply and the cable lengths must be considered. We strongly recommend contacting your customer advisor to create an appropriate care concept.

Additional alarm boxes are not essential with two- or three-lock systems. The alarm box connected to lock 1 is sufficient if the inputs and outputs available are sufficient for the application.

Keypad

Figure 2 - open keypad insert

Lock

Figure 3 - View of lock connectors

Power Adapt

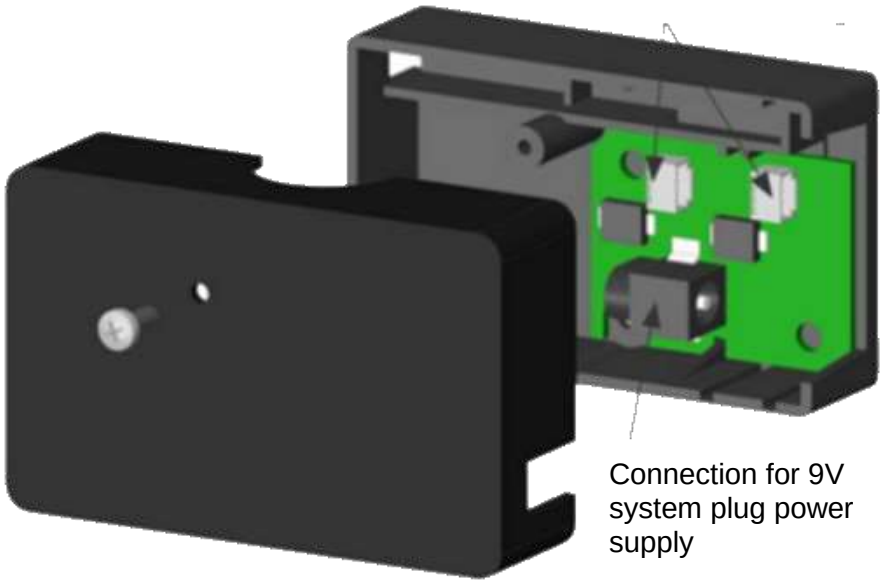


Figure 4 - Power Adapt

Communication device

Communication between the keypad, the locks and the OTC module via bus connection is protected against tampering and spying by encryption and an authentication mechanism. The freely selectable ten-digit installation key is the basis for calculation of the required electronic key.

To pair the key, a user with a corresponding execution right must be stored in the lock to which the keypad is assigned with regard to the lock address. This is factory-preset depending on the configuration. (see Appendix E _ Configuration)
Perform the same procedure when replacing components or expanding the system.

Store the installation key securely. Components can only be replaced, and the pairing cancelled with the current installation key.

System set-up / Pairing

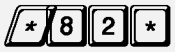
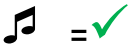
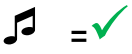
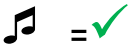
e.g. Admin or Master User ID: 00, Code 87654321 effects the set-up for a new redundant 2 lock system, with a alarm box on the first lock and OTC module

Direct selection using command number (*83*)			Selection using menu guidance [MENU] [OK]
ID-authorised user 0 0 *	ID	= ✓	After authorisation, the system topology is requested. This means how many locks are used in combination with how many modules. The lock types are determined as part of the automated pairing process. There is therefore no need to pre-select the lock type. The locks are factory-supplied with an installation key 10x "0". Should a new pairing be needed, for instance following a component replacement or if the topology is changed due to the expansion of the system, the last assigned installation key will be needed to initiate the pairing process.
Code-authorised user 8 7 6 5 4 3 2 1 *	CODE	= ✓	
Number of locks 0 2 *	locks	= ✓	
Lock 1 signal box yes 1 / no 0 1 *	box	= ✓	
Lock 2 signal box yes 1 / no 0 0 *	box	= ✓	
Second keypad yes 1 / no 0 0 *	Kpad	= ✓	
Gateway yes 1 / no 0 0 *	gate	= ✓	
OTC module yes 1 / no 0 1 *	OTC	= ✓	
Enter installation key 0 0 0 0 0 0 0 0 0 0 *	ISK	= ✓	
Enter new installation key 0 1 9 0 1 7 0 5 3 3 *	↔ISK	= ✓	
Repeat new installation key 0 1 9 0 1 7 0 5 3 3 *	↔ISK	= ✓	
Set-up completed, pairing successful	✓		

OTC set-up / Setting the institute key

The function is only available in the S-00108 configuration and when a Gunnebo Encry OTC module is connected.

The institute key represents the calculation basis for the OTC algorithm. This needs to match the institute key entered in the generator database.

Direct selection using command number 			Selection using menu guidance [MENU]  [OK]
Enter the institute key 			No user authentication is needed to set up the institute key. It is replaced by comparing it with the key already entered. Use the factory key (10x "0") with new systems.
Enter new institute key 			
Repeat new institute key 			
Set-up completed, pairing successful	✓		

Functional test

Once correctly assembled and installed, carry out the functional test. With the door open, open and close the lock several times using the code that has been factory set.

(User with appropriate authorisation depends on the configuration, see Appendix E _ Configuration)

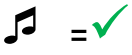
The relationship between easy opening and reliable closing can be set via the operating lever of the boltwork. Check that the bolt of the lock is closed every time the safe is opened.

If the keypad flap has been opened to open the battery compartment, any repeat closure needs to be acknowledged by the entry of a valid opening code. The opening is signalled by the following symbol  .

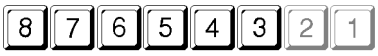
Input of the opening code

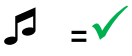
The user is authorised to open without additional restrictions.
e.g. User 01, Code 8765432**1**

ID-authorised user



Code-authorised user





The lock is open. ✓

The key assignment corresponds to the standard assignment for input of the ID number.
Key assignment is random for one input cycle for input of the code digits.

Keypad / System test

We recommend testing the system to ensure that all digit keys, communications and processor function correctly.

Direct selection using command number (*64*)	Selection using menu guidance [MENU] [OK]
Check key 1 1 * Check key 2 2 * … Check key 0 0 *	The checking function can be done without entering the ID or code. Lock communication is also checked as well as the key functions. Key assignment is fixed during the keypad check.

Securing the keyboard flap

It is recommended to secure the closed keyboard flap with a locking piece. This makes access to the battery and/or the cables more difficult. This will prevent inadvertent opening of the keyboard flap and triggering of the monitor switch caused by vibrations (e.g. unrestrained slamming of the door).

Every opening requires acknowledgment in the form of entering a valid opening code.

Any access could also be made obvious using an adhesive seal placed over the screw.

A rubber ring is used to connect the screw to the locking piece in a “captive” manner.

Figure 9 - Securing keyboard flap