

GAT NET.Lock 7000 System

Electronic RFID Locker Locks





Installation, Configuration, Operation Document Version 3.3

GAT NET.Lock 7000 System





© Copyright 2014-2015, GANTNER Electronic GmbH, Schruns (Austria).



Dear customer,

We congratulate you on having selected a product (appliance or software) from GANTNER Electronic GmbH. Our aim is to ensure that our product operates with safety and to your complete satisfaction. To achieve this aim we take this opportunity to familiarise you with the following guidelines:

- 1. Installation, commissioning, operation and maintenance of the purchased product must be carried out in accordance with the instructions, i.e., in accordance with the technical conditions of operation as described in the corresponding product documentation.
- 2. Before installation, commissioning, operation or maintenance it is therefore essential that you read the corresponding chapter of this manual and observe its instructions.
- 3. If there are still some points on which you are not entirely clear, please do not take a chance. All queries can be clarified by your Gantner company representative, or by ringing the GANTNER Electronic GmbH hotline.
- 4. Where not otherwise specifically documented, the appropriate installation, commissioning, operation and maintenance of the product is the customer's responsibility.
- 5. Directly on receipt of the goods, inspect both the packaging and the product itself for any signs of damage. Also check that the delivery is complete and includes all accessories, documentation, auxiliary devices, etc.
- 6. If the packaging or product has been damaged in transport, or should you suspect that it may have a fault, the product must not be put into service. In this case, contact your Gantner company representative. They will make every effort to resolve the problem as quickly as possible.
- 7. Installation, commissioning and servicing of our appliances must only be carried out by suitably trained personnel. In particular, electrical connections must only be made by correspondingly qualified specialists. Here, the appropriate installation provisions in accordance with the relevant national Electrical Engineers construction regulations (e.g., ÖVE, [Austrian] VDE, [German]...) must be observed.
- 8. Where not otherwise stated, installation and maintenance work on our appliances must be carried out when disconnected from the power supply. This applies in particular to appliances which are normally supplied by low-voltage current.
- 9. It is prohibited to make alterations to the appliances or to remove protective shields and covers.
- 10. Do not attempt yourself to repair an appliance after a defect, failure or damage, or to put it back into operation again. In such cases, it is essential you contact either your Gantner company representative or the GANTNER Electronic GmbH hotline.
- 11. GANTNER Electronic GmbH accepts no responsibility for any injuries or damage caused as a result of improper use.
- 12. Although every care is taken and we are continuously aiming for improvement, we cannot completely exclude the possibility of errors appearing in our documentation. GANTNER Electronic GmbH therefore accepts no responsibility for the complete-ness or the accuracy of this manual. The right is reserved to make alterations, and we may carry out alterations at any time without giving prior notice.
- 13. Should you discover any fault with the product or in its accompanying documentation, or have any suggestions for improvement, you may confidently approach either your Gantner company representative or GANTNER Electronic GmbH directly.



14. However, even if you just want to tell us that everything has functioned perfectly, we still look forward to hearing from you.

We wish you a successful application of our product and look forward to welcoming you again as a customer soon.

Contact address / manufacturer:

GANTNER Electronic GmbH Montafonerstrasse 8 A - 6780 Schruns/Austria Tel.: +43 5556 73784 - 442 Fax: +43 5556 73784 - 8020 Email: info.leisure@gantner.com Website: www.gantner.com

4



TABLE OF CONTENTS

1.	. IN	NTRODUCTION			
	1.1	About this Manual	7		
	1.2	Contact & Inquiries	7		
2.	. Ge	eneral Information	8		
	2.1	System Parts	8		
	2.2	Órdering Guide	9		
	2.3	Basic Function of the GAT NET.Lock 7000 System	.11		
	2.4	Term Definitions	.11		
	2.5	RFID Technology	.12		
3.	. Mo	ounting	.13		
-	3.1	Definition of the Door Hinge (Right or Left Door)	.13		
	3.2	Metallic and Non-Metallic Doors	.14		
	3.3	Dimension Diagrams for Mounting	.14		
	3.3	3.1 Door Width	.14		
	3.3	3.2 Basic Dimensions of GAT NET.Lock 7000 and the GAT NET.Lock Bolt Sets	.15		
	3.4	Door Status Contact	.16		
	3.5	Mounting in Lockers with Non-Metallic Doors	.17		
	3.5	5.1 Important Measures when Mounting the GAT NET.Lock 7000 and Bolt Set (Non-Metal Doors)	.17		
	3.5	5.2 Steps for Mounting of the GAT NET.Lock 7000 at Non-Metallic Doors	.18		
	3.6	Mounting in Lockers with Metallic Doors	.20		
	3.6	6.1 Cut-Outs in the Locker Door	.21		
	3.6	6.2 Important Measurements when Mounting the GAT NET Lock 7000 and Bolt Set (Metal Doors)	.21		
	3.6	.6.3 Steps for Mounting the GAT NET.Lock 7000 onto Metallic Doors	.22		
	3.7	Points to be observed during installation	.23		
	3.8	Test Installation	.24		
	3.9 2.10	Replacement aller a burglary Allempt	.24 24		
	3.10 3.1	10.1 Installation of the GAT NET. Controller M/S 7000	.24 25		
			.20		
4.			.21		
	4.1	System Structure	.21 20		
	4.Z	2.1 Connection Cable	20. مد		
	4.2	2.2. Coble Outlets	.20 20		
	4.2	2.2 Cable Oullets	.20 20		
	43	Connections at the Slave Controller GAT NET Controller S 7000	20		
	4.0	3.1 GAT NET Lock 7000 Connection	29		
	4.3	3.2 Network Connection	.29		
	4.3	3.3 Power Supply	.31		
	4.3	3.4 LED Signals and Buttons	.32		
	4.4	Connections on the GAT NET.Controller M 7000 Master Controller	.33		
	4.4	4.1 Connecting the GAT NET.Controller S 7000 Slave Controllers to the Master Controller	.33		
	4.4	4.2 Ethernet Connection	.33		
	4.4	4.3 Connection of the Power Supply	.34		
	4.4	4.4 LED Signals and Buttons	.34		
5.	. Co	onfiguration And Operation	.35		
	5.1	Antenna Adjustment of the GAT NET.Lock 7000	.35		
	5.2	Locker Operation by the Visitor	.35		
	5.2	2.1 Lock a Locker	.35		
	5.2	2.2 Unlock and Open a Locker	.35		
	5.3	Restart a Controller GAT NET.Controller S 7000 or GAT NET.Controller M 7000	.36		
	5.4	Delete Configuration Parameters of a Controller (= Reset to Default Settings)	.36		
	5.5	Status Information for the GAT NET Controller S 7000 and GAT NET Controller M 7000	.37		



5.5.1	Slave Controller	
5.5.2	Master Controller	
5.6 GA	AT Relaxx - Operation Software for GAT NET.Lock 7000 System	
5.6.3	User Interface	
6. Techni	ical Data	
6.1 GA	AT NET.Lock 7000	
6.2 GA	AT NET.Controller S 7000	
6.3 GA	AT NET.Controller M 7000	

6



1. INTRODUCTION

1.1 About this Manual

This manual contains all the necessary information required to install GAT NET.Lock 7000 RFID locks into lockers/depots. Operating instructions for the end user are also fully explained. In order to use GAT NET.Lock 7000 locks, a GAT NET.Controller S 7000 slave controller, a GAT NET.Controller M 7000 master controller with their associated network and power cabling are required. In addition to these hardware requirements, PC software (e.g. GAT Relaxx) is required to firstly configure the installation then used to control and monitor the locker system and the RFID data carriers used to operate the locks. The installation and operation of these system parts are also described in this manual. For the GAT Relaxx configuration software there is also a separate installation manual as well as a help function which is integrated into the software.

In chapter 2 "General Information", general information about the GAT NET.Lock 7000 system as well as an overview of the various system parts with order information can be found.

Chapter 3 "Mounting" includes instructions on how the GAT NET.Lock 7000 locks are mounted in the lockers. Here the mounting procedure of the locks and bolt sets is described in addition to all important measurements and installation information. Because there are many different types of lockers available, the mounting procedure is described generally and is not for a certain type of locker.

The chapter 4 "Electrical Connection" describes how the GAT NET.Lock 7000 locks and controllers are connected to each other and connected to their power supplies. Also found here is information about the requirements and installation of the network connection cables.

Chapter 5 "Configuration And Operation" describes the operation of the GAT NET.Lock 7000 by a user/visitor within a facility. Instructions for antenna adjustment and the resetting and deleting of configuration parameters in the controllers are also explained. The LED display signals and acoustic signals on the controllers are also described here. A brief overview of the GAT Relaxx configuration software is also included in this chapter.

Chapter 6 "Technical Data" contains the necessary technical information for the GAT NET.Lock 7000 locks and the GAT NET.Controller S 7000 and M 7000 controllers.

1.2 Contact & Inquiries

For all inquiries concerning the GAT NET.Lock 7000 system and associated devices please get in touch with your representative / distributor or directly with one of the GANTNER Technology branch offices. The addresses, phone and fax numbers are listed on the inner side of the cover.



2. GENERAL INFORMATION

2.1 System Parts

The GAT NET.Lock 7000 system consists of the following system parts:



Figure 2.1 - System parts of the GAT NET.Lock 7000 system



- 1. GAT NET.Lock 7000 Electronic RFID locker lock without connection cable and without bolt set.
- GAT NET.Lock BoltSet 7100
 Bolt set with door shackle and booster. Used for non-metallic doors. The bolt set is mounted on the inside of the locker door.
- GAT NET.Lock BoltSet 7200
 Bolt set with door shackle and booster. Used for metallic doors. The bolt set is installed into locker door. The label carrier is also included in the set.
- GAT NET.Controller S 7000
 The slave controller is a control unit to connect up to 24 GAT NET.Lock 7000 locks. There are two different types of slave controllers available which differ in the type of RFID technology they can read.
- GAT NET.Controller M 7000
 The master controller is a control unit to connect up to 8 GAT NET.Controller S 7000 slave controllers. The master controller is used to connect the slave controller(s) to a server / PC.
- 6. GAT NET.Power Supply 100-240V Power supply unit for the slave and master controller.
- GAT NET.Power Cord US
 Power cable for connection of GAT NET.Power Supply
 - Power cable for connection of GAT NET.Power Supply 100-240 V to the US mains power sockets.
- GAT NET.Power Plug Plug to supply multiple controllers with a single power supply (see "4.3. Connections at the Slave Controller GAT NET.Controller S 7000").
- 9. GAT NET.Lock Tool 7000 Centre punch gauge for bolt mounting in the locker doors. With this gauge drill holes for the bolt installation can be easily marked on the locker door.
- 10. GAT NET.Lock Label 7000 GEA xxx Different locker door labels in GANTNER design. The labels are available for right and left doors and with or without printed locker numbers. On metallic doors the labels are stuck onto the label carrier. On non-metallic doors the labels can be stuck directly onto the doors.
- GAT NET.Lock Cable 4m
 4-pin connection cable (4 metres) to connect a GAT NET.Lock 7000 to a slave controller. MOLEX plug on both ends.
- 12. GAT NET.Lock Connector Connection socket to connect two GAT NET.Lock Cable 4m.
- 13. Ethernet Patch Cable Standard network cable (min. CAT5) to connect the slave controller to the master controller.
- 14. GAT NET.Lock Basic Set xxx

Set consisting of five master cards and an assumption of liability sheet. The master cards have master key functionality and can be used to open all lockers in a GAT NET.Lock 7000 locker system (e.g. used for service-and cleaning personnel). Available for different RFID technologies ("F" for MIFARE[®] and "ISO" for ISO 15693 systems).

2.2 Ordering Guide

For the planning and ordering of the GAT NET.Lock 7000 system components, an ordering guide is available in a separate document ("DK_GAT-NETLOCK7000--Bestellhilfe-EN").







2.3 Basic Function of the GAT NET.Lock 7000 System

The GAT NET.Lock 7000 lock is the ideal solution for the convenient electronic locking of wardrobe lockers in fitness clubs, baths, golf resorts, hotels and other individual company applications. Operation of the GAT NET.Lock 7000 is carried out using contactless RFID data carriers (Radio Frequency Identification).

The GAT NET.Lock 7000 is suitable for any type of locker material (e.g. sheet metal, wood, HPL, solid plastic) and can be used for left- and right-hinged doors alike. The various operating modes enable the flexible use of these locks.

The GAT NET.Lock 7000 is installed on the inner side of the locker body. A bolt set is mounted on the inside of the locker door. This bolt set holds the door shackle which inserts into the GAT NET.Lock 7000 and locks the door. The bolt set also includes a passive booster in order to amplify the RFID reading field.

The GAT NET.Lock 7000 locks are controlled by the GAT NET.Controller S 7000 slave controllers. The slave controllers support the RFID technologies MIFARE[™] and ISO 15693. Up to 24 GAT NET.Lock 7000 locks can be connected to one slave controller. The slave controllers are connected to master controllers which then communicate over Ethernet with a software application (e.g. GAT Relaxx software from GANTNER Electronic GmbH) on a host computer/server.

Using a locker

The facility user closes the door of a free locker and whilst holding the door shut puts their data carrier next to the reading centre on the locker door (the reading centre is indicated by the LED inside the lock). The GAT NET.Lock 7000 reads the data carrier information then communicates with the host software (via the slave and master controllers) to determine if the user is allowed to use the locker (depending on their authorisation). If the user is authorised to use the locker, a command is sent to the GAT NET.Lock 7000 to lock the locker door.

To unlock a locker door the user again holds their data carrier next to the reading centre of their previously locked locker door. The GAT NET.Lock 7000 communicates with the controllers and host software to confirm or deny if the user has valid authorisation to unlock the locker door. The locker door automatically opens after a valid command has been sent to the GAT NET.Lock 7000.

2.4 Term Definitions

Several terms are used often in this manual and are defined below.

Locker:

The term "locker" is used to generally describe all possible locker applications, for example, a changing locker, a depot or a private box. All these locker possibilities are locked by the GAT NET.Lock 7000.

Lock:

General term for the GAT NET.Lock 7000.

RFID (Radio-Frequency Identification):

Identification from a short distance using radio frequency. An RFID data carrier is used as identification media.

Data Carrier:

A data carrier in this manual is an identification media which is used by the persons/visitors of a facility for identification at the GAT NET.Lock 7000 locker locks. Data carriers are available in many different forms such as plastic wristbands or chip cards. Data carriers are available in different technologies (MIFARETM, ISO 15693).



FID (Company ID) and Site Key:

LEGIC systems use an FID number. In MIFARE systems a site key is used which is a combination of the FID and the read and write keys. The FID and site keys are unique numbers for every leisure facility installation. These numbers are encoded in every data carrier and device and with this number it can be guaranteed that data carriers of one installation are not used in other installations.

Slave Controller:

The GAT NET.Controller S 7000 slave controller is a device to which all GAT NET.Lock 7000 locks are connected to (up to 24 locks per slave controller). The slave controller receives control signals via the serial RS 485 network and operates the connected electronic locks accordingly.

Master Controller:

The GAT NET.Controller M 7000 master controller is used to connect the slave controllers via Ethernet to a higherranking PC/server running locker system control software (e.g. GAT Relaxx).

Booster:

Electronic component for amplifying the RFID reading field of the GAT NET.Lock 7000. A booster is often used to extend the RIFD reading range of the GAT NET.Lock 7000, e.g., on metallic or thick doors or small data carriers. The bolt sets for the GAT NET.Lock 7000 already include boosters - 1 in the GAT NET.Lock BoltSet 7100 for non-metallic doors and 2 in the GAT NET.Lock BoltSet 7200 for metallic doors.

GAT Relaxx:

PC software which is installed on a server/host computer and which is used to configure and control the connected controllers and locks. A separate installation manual and integrated help is available for this software.

User / Visitor:

The general terms "user" and "visitor" describe the people that use the lockers and the GAT NET.Lock 7000.

2.5 RFID Technology

Identification of users at the GAT NET.Lock 7000 is done via RFID (radio-frequency identification) using a frequency of 13.56 MHz. There are two different technologies supported. Different letter/letters are added to GANTNER product model identifiers to notify of the technology which the device supports:

- "F": MIFARE™
- "ISO": ISO 15693

The GAT NET.Lock 7000 and the GAT NET.Controller M 7000 master controller can work with all of these technologies. The slave controller GAT NET.Controller S 7000 F/ISO supports also both of these technologies.

Therefore, it is necessary that all data carriers in a facility are of the same technology. The information in this manual is written in general for all RFID types. If there is special information only valid for a certain type of technology it will be noted.



3. MOUNTING



This mounting instruction describes how to install the GAT NET.Lock 7000 locker locks. Please read this instruction carefully and follow it prior to working on the lockers or installing the locks.



As there is a wide variety of applications and locker types, a test installation including a functional testing must always be performed prior to the serial production of the lockers and the installation of the locks (see chapter "3.8. Test Installation").



Please also read the most important points for installation summarized in chapter "3.7. Points to be observed during Installation".

3.1 Definition of the Door Hinge (Right or Left Door)

For the mounting, it is important to determine whether the door is hinged to the left or the right. This is defined as follows:



Figure 3.1 - Definition of the opening direction of lockers (left/right)

In the following pages the mounting for right-hinged doors is described. The installation process for left locker doors is in principle the same as for right locker doors, only with reversed lock and door orientation.



The hinges must not be equipped with retaining springs or other elements which keep the locker door shut! The locker door must release and open without resistance by itself when it is unlocked by the GAT NET.Lock 7000.



3.2 Metallic and Non-Metallic Doors

Because the RFID field of the GAT NET.Lock 7000 is distorted or blocked by metal (e.g. with metallic locker doors), a cut-out has to be made in metallic locker doors into which the GAT NET.Lock Bolt Set 7200 and the label carrier can be installed. A specific cut-out for non-metallic doors is not necessary, only a drill hole for the LED field is required.

Since the reading range of the GAT NET.Lock 7000 is limited, the locker door of non-metallic lockers must not be too thick. The maximum door thickness of non-metallic doors depends on the RFID technology and data carriers used.

3.3 Dimension Diagrams for Mounting

3.3.1 Door Width

The minimum door width allowed (measured from the door shackle to the hinge) is 230 mm. If the door is narrower, the door shackle would hit the locker when the door is being closed.



Figure 3.2 - Minimal door width

Top View



1 25.0 mm (0.98") 4 $\langle |$ Front View Side View 0 \triangleleft 4 OYO 100.0 mm (3.94") 1 4 2 Santner technologie 94.0 mm (3.7") 88.1 mm (3.47") - 10 6 \triangleleft 50.0 mm (1.97") 2 C \bigcirc 5 6 0 t 6 $\langle \Box \rangle$ ¢ < 6.0 mm (0.24") → 17.0 mm (0.67") 8 mm (0.31") 40.3 mm (1.58") 91.0 mm (3.58") 110.0 mm (4.33")

3.3.2 Basic Dimensions of GAT NET.Lock 7000 and the GAT NET.Lock Bolt Sets



Top View



Side View Front View 0 \triangleleft 305 6 D 1 (4) ntn@r technologies 88.1 mm (3.47") < B 104.5 mm (4.11") 3 8 \bigcirc \square Gan 0 3 °O. D \bigcirc 5 0 7 0 \triangleleft 0 8 D $\overline{0}$ 6 10 mm (0.39") 61.8 mm (2.43") 78.0 mm (3.07")





- 1. GAT NET.Lock 7000
- 2. GAT NET.Lock BoltSet 7100 (for non-metallic doors)
- 3. GAT NET.Lock BoltSet 7200 (for metallic doors)
- 4. Door shackle
- 5. Door contact
- 6. Booster
- 7. Status LED
- 8. Label carrier

3.4 Door Status Contact

The GAT NET.Lock 7000 has a feedback function which is activated by the door contact (5) on the bolt set as soon as the locker door is closed. To guarantee the correct functionality of the GAT NET.Lock 7000 it is important, that this contact is clean and not damaged.



3.5 Mounting in Lockers with Non-Metallic Doors

In lockers with non-metallic doors the GAT NET.Lock 7000 is mounted on the left or right inner locker wall (depending if it is a right or left locker) and the GAT NET.Lock Bolt Set 71x0 is mounted on the inside of the locker door. Drilling of the locker door is also required for the LED status display. See the diagram below and the steps afterwards for the mounting instructions.



- 1. GAT NET.Lock 7000
- 2. GAT NET.Lock Bolt Set 7100
- 3. Mounting screws for the GAT NET.Lock 7000 (3x), type depending on the locker material
- 4. Door shackle
- 5. Door contact
- 6. Mounting screws for bolt set
- 7. LED (hole in the locker door)

Figure 3.5 - Mounting of the GAT NET.Lock 7000 in a locker with non-metallic door (right door)

3.5.1 Important Measures when Mounting the GAT NET.Lock 7000 and Bolt Set (Non-Metal Doors)

During the mounting, please pay particular attention to the following points:

- When the door is pressed shut, the gap between the bolt set and the front of the GAT NET.Lock 7000 must not exceed 0.5 mm. Ideally, the bolt set should touch the front of the lock (see measurement in Figure 3.5).
- The middle of the door shackle (4) must be 1 mm higher than the middle of the door shackle opening in the GAT NET.Lock 7000 (see measure in Figure 3.5). This ensures the door's ability to close even if the door position is modified 3 mm downwards or 1 mm upwards (tolerance ±2 mm).



- The cabinet door, the bolt set and the front side of the GAT NET.Lock 7000 must be perpendicular and parallel to each other. If not, the door contact in the GAT NET.Lock 7000, and therefore the lock itself, can potentially not function correctly.



- If right and left doors are used in a mix, please note the LED positions, since the GAT NET.Lock 7000 is mounted upside-down on the left doors, compared to the right doors.



Figure 3.6 - LED positions of GAT NET.Lock 7000 at right and left doors



Before mounting all locks of the locker system a test installation of one lock in a mechanically finalized locker and a subsequent function check must be performed like described below. Only if this check is successful, the rest of the locks may be mounted in the same way!

3.5.2 Steps for Mounting of the GAT NET.Lock 7000 at Non-Metallic Doors

Please perform the following steps in order to mount the GAT NET.Lock 7000 onto non-metallic doors.

• Drill 3 holes (3 in Figure 3.5) for the GAT NET.Lock 7000 into the locker wall.



Attention: Position the 3 holes according to the information in "3.5.1. Important Measures when Mounting the GAT NET.Lock 7000 and Bolt Set (Non-Metal Doors)"!

• Plug-in the connection cable at the GAT NET.Lock 7000 (see "4. Electrical Connection").



• Mount the GAT NET.Lock 7000 with 3 screws (3) on the inside locker wall.

Note: Use the correct screws according to the type of locker material.



Attention: The maximum allowed tightening torque of the screws is 2 Nm.

- Drill 3 holes (6 in Figure 3.5) on the locker door inside for mounting the GAT NET.Lock BoltSet 7100.
- Drill a hole for the LED display in the locker door (7 in Figure 3.5). The recommended drill hole diameter is 10 mm.
 - **Note:** A label is available to cover the LED hole. The label has a transparent (matt) viewing window for the LED to shine through and can be ordered with a standard GANTNER or customer specific design.
- Mount the bolt set onto the inside of the locker door using 3 screws.

Note: Always use the correct screw type and length depending upon the type of locker material.

• Test the locker door to confirm that it can be easily closed and that the door shackle inserts correctly into the opening of the GAT NET.Lock 7000.



3.6 Mounting in Lockers with Metallic Doors

In lockers with metallic doors the GAT NET.Lock 7000 is mounted on the left or right inner locker wall (depending if it is a right or left locker). 2 cut-outs have to be made in the door - one on the inside door sheet and one on the outside door sheet. The two parts of the GAT NET.Lock Bolt Set 7200 are then mounted into the locker door. See the following figure and the steps afterwards for the mounting instructions.



Figure 3.7 - Mounting of the GAT NET.Lock 7000 in a locker with metallic doors (right door)



3.6.1 Cut-Outs in the Locker Door

On the inside and outside walls of the locker door the following cut-outs must be made in order to mount the GAT NET. Lock BoltSet 7200 and the label carrier. The measurements for the cut-outs are as follows.



3.6.2 Important Measurements when Mounting the GAT NET.Lock 7000 and Bolt Set (Metal Doors)

During installation, please pay particular attention to the following points:

- The door thickness must be between 18 and 26 mm (see Figure 3.7).
- When the door is pressed shut, the gap between the bolt set and the front of the GAT NET.Lock 7000 must not exceed 0.5 mm (see measure in Figure 3.7). Ideally the bolt set should touch the front of the lock.
- The middle of the door shackle (4) must be 1 mm higher than the middle of the door shackle opening in the GAT NET.Lock 7000 (see measure in Figure 3.7). This ensures the door's ability to close even if the door position is modified 3 mm downwards or 1 mm upwards (tolerance ±2 mm).
- The cabinet door, the bolt set and the front side of the GAT NET.Lock 7000 must be perpendicular and parallel to each other. If not, the door contact in the GAT NET.Lock 7000, and therefore the lock itself, can potentially not function correctly.





Before installing all locks in a new locker system, a test installation of one lock in a mechanically identical locker and a subsequent function check must be performed as described below. Only after a successful test installation has been performed may the remaining locks be installed in the same way. There is an installation certificate available which will assist with this process (Installation Certificate GAT Lock 7xxx.pdf).

3.6.3 Steps for Mounting the GAT NET.Lock 7000 onto Metallic Doors

Please perform the following steps in order to mount the GAT NET.Lock 7000 onto metallic doors.

• Drill the 3 holes (3) for the GAT NET.Lock 7000 into the locker wall.

Attention: Position the 3 holes according to the information in the previous section "3.5.1. Important Measures when Mounting the GAT NET.Lock 7000 and Bolt Set (Non-Metal Doors)"!

- Plug-in the connection cable to the GAT NET.Lock 7000 (see "4. Electrical Connection").
- Mount the GAT NET.Lock 7000 with 3 screws (3) on the inside locker wall.

Note: Always use the correct screws according to the type of locker material



Attention: The maximum allowed tightening torque of the screws is 2 Nm.

- On the inner wall of the locker door cut-out the hole (63.2 x 68 mm) for the GAT NET.Lock Bolt Set 7200.
- On the inner wall of the locker door drill the 4 holes (6) for mounting the GAT NET.Lock Bolt Set 7200.
- On the outer wall of the locker door cut-out the hole (68.2 x 94 mm) for the label carrier.
- Mount the bolt set onto the inside wall of the locker door using the 4 screws included in the scope of supply (Torx Ø 3.5 x 9.5 mm) as shown in Figure 3.8 on the previous page.

Note: Use the following screws (which are included in the scope of supply): Torx, Ø 3.5 mm, length 9.5 mm

- Push the label carrier onto the outside wall of the locker door. The label carrier will simply remain in place with the lashes on the label carrier no screws are required.
- Stick the front label onto the label carrier.



- (Front view with lable carrier)
- **Note:** A label is available to cover the LED hole. The label has a transparent (matt) viewing window for the LED to shine through and can be ordered with a standard GANTNER or customer specific design.

Figure 3.9 - Label carrier with front label

• Close the door to test if the locker door can be closed easily and the door shackle inserts into the opening of the GAT NET.Lock 7000.

3.7 Points to be observed during Installation

Fastening screws:

The GAT NET.Lock 7000 is attached to the locker wall using three screws. Use the correct type of screws depending on the type of locker material. The screws must not be over tightened and the maximum allowed tightening torque is 2 Nm.

Mounting of the door shackle:

For fastening the bolt set with the door shackle on the door the correct screws depending on the type of locker material must be used. For mounting the GAT NET.Lock BoltSet 7200 use the pan-head metal screws Torx 3.5 x 9.5 mm (included in the scope of supply). The positioning and mounting of the door shackle should be performed after the final alignment of the lockers on site. As described in the installation instructions, ensure that the bolt set and the front of the GAT NET.Lock 7000 are parallel to each other.

No retaining devices:

No retaining devices such as springs should be used on the doors as this will prevent the opening function of the locker doors.

Hinge:

The hinges of the locker door must not be equipped with retaining springs or similar elements. The locker door must open automatically without resistance when the GAT NET.Lock 7000 unlocks the door.



3.8 Test Installation

As the GAT NET.Lock 7000 is suitable for a wide range of installation applications, always perform a test installation and functional testing of the GAT NET.Lock 7000 in a finished sample locker from the facility before starting with the serial production of the lockers. In particular, test if the door shackle slides centrally into the opening of the GAT NET.Lock 7000, the door locks without any problems and the door opens without resistance (without retaining elements like springs).

Also read a data carrier (ideally an original data carrier of the type to be used on-site) in order to ensure that the data carriers can be read without problems.



Attention, make sure the connection cable is completely installed and guided out of the locker and the connection of the GAT NET.Lock 7000 has been fully completed prior to the locking test.

3.9 Replacement after a Burglary Attempt

If a burglary (forced opening) has been attempted on a locker, the entire GAT NET.Lock 7000 must be replaced with a new one. The bolt set with the door shackle must be replaced as well.

3.10 Installation of the GAT NET.Controller M/S 7000

The GAT NET.Controller M 7000 and GAT NET.Controller S 7000 must be placed in the vicinity of the connected GAT NET.Lock 7000 locks to keep cable lengths to a minimum. Usually the controllers are placed on top of the lockers.

Although the permanent fixing of the controllers is not required (they can simply rest on top of the lockers), when a controller is to be permanently mounted, e.g., on a wall, you can use screws and the screw holes provided in the base of the controller.



Figure 3.10 - Mounting of the GAT NET. Controller M/S 7000



3.10.1 Instructions for Mounting the GAT NET.Controller M 7000 und S 7000:

- Observe the measurements shown in Figure 3.10 and drill 3 holes for the controller mounting points. Use the correct drill diameter required by the screws and/or wall plugs (screws up to max. M4).
- Screw in the top two screws until the head remains approximately 5mm out from the wall.
- Attach the controller housing to the top two screws and push down until the housing stops against the screws. If necessary, remove the controller and tighten the screws as required before rehanging.



• Screw the third screw into the central, lower mounting hole and tighten firmly.

2. 1.

Ensure that the controller is securely fastened and cannot be removed.





4. ELECTRICAL CONNECTION

This chapter describes the electrical connections required between the GAT NET.Lock 7000 and the GAT NET.Controller S 7000 and GAT NET.Controller M 7000 control units.



Electrical connections must only be done in a powerless state and only by trained and specialised personnel.

4.1 System Structure

The GAT NET.Lock 7000 is always connected to the GAT NET.Controller S 7000 slave controller. The slave controllers are in turn networkable via the serial RS 485 interface and are connected to a GAT NET.Controller M 7000 master controller. The master controllers are connected via Ethernet to a host computer or server.



Figure 4.1 - GAT NET.Lock 7000 system structure



4.2 Cable Connection of the GAT NET.Lock 7000



Figure 4.2 - Cable connection at the GAT NET.Lock 7000

4.2.1 Connection Cable

The 4 m GAT NET.Lock Cable 4m (part no. 321826) connection cable is included in the scope of supply. This cable is used to connect the GAT NET.Lock 7000 to a GAT NET.Controller S 7000 slave controller. The cable has a 4-pin MOLEX plug type Micro-Fit 3.0[™] on both ends.

If the standard connection cable is too short, it is possible to use two GAT NET.Lock Cable 4m cables which are connected together using the GAT NET.Lock Connector. Alternatively a single 8m GAT NET.Lock Cable 8m (part no. 734430) can also be ordered



Only use an original cable from GANTNER Electronic GmbH for connecting the GAT NET.Lock 7000.

4.2.2 Cable Outlets

Cut-out one of the cable outlets (1 in Figure 4.2) in order to feed the cable out of the GAT NET.Lock 7000 housing. Depending on the orientation of the GAT NET.Lock 7000 and the cable routing in the locker, use the outlet which allows cable routing with minimal length and effort.

4.2.3 Power Supply

The GAT NET.Lock 7000 is supplied with power via the connection cable connected to the slave controller. A DC supply of 5 V is used (see also technical data).



4.3 Connections at the Slave Controller GAT NET.Controller S 7000

4.3.1 GAT NET.Lock 7000 Connection

The GAT NET.Lock 7000 locks are connected via the 4-pin MOLEX connectors on the side panel of the GAT NET.Controller S 7000.



Attention, always use original cables from GANTNER Electronic GmbH. The lock connection cable must not be modified (shortened or extended) in any way. If the cable is too short, only one GAT Net.Lock Cable 4m (part no.: 321826, length = 4 m) extension cable may be used. The maximum cable length between the GAT NET.Lock 7000 and the slave controller therefore is 8 m.

Up to 24 GAT NET.Lock 7000s can be connected to one slave controller. The locks are controlled and differentiated via the channel numbers indicated on the side panel of the slave controller. Therefore it is important where the locks are connected and how the locking system is configured.

The slave controller should be located in such a manner, that the locks can be connected with the minimum length of cables (e.g. directly on top of the lockers).



Figure 4.3 - Connection to the GAT NET.Lock 7000 to a slave controller GAT NET.Controller S 7000

Note: Do not attempt to connect the RFID locker locks GAT NET.Lock 7000 to a GAT Smart.Controller S 7000 as this smart controller only operates with GAT Smart.Locks 7001. For the GAT NET.Lock 7000, you have to use the GAT NET.Controller S 7000 slave controller.

4.3.2 Network Connection

The slave controllers are interconnected with each other via the serial RS 485 interface. The same RS 485 interface is used to connect the slave controllers to a GAT NET.Controller M 7000 master controller.

RJ 45 plugs are used for connecting the RS 485 cables to the GAT NET.Controller S 7000. It is recommended to use at least CAT. 5 (STP) cable for all network connections.



Figure 4.4 - RS 485 connection on the GAT NET.Controller S 7000

GAT NET.Lock 7000 System Electrical Connection





Observe the following values for the number of connectable controllers per interface:

- A maximum of 8 slave controllers per RS 485 line
- Maximum of one RS 485 line length = 200 m



Figure 4.5 - Maximal RS 485 line length

It is important to differentiate between the RS 485 IN and OUT plugs. Connect the incoming cable (from the master controller or the previous slave controller) to the RS 485 IN plug and the outgoing cable (going to the next slave controller) with the RS 485 OUT plug. This is particularly important if the power supply is to be forwarded to the following slave controllers (please refer to the next section).



Figure 4.6 - RS 485 IN and OUT direction on the GAT NET.Controller S 7000



4.3.3 Power Supply

The GAT NET.Controller S 7000 is connected to the mains power supply via an external power supply unit. Depending on the type of power supply unit and the country, mains voltage may be UAC 230 V or UAC 115 V (please refer to technical data). The power supply is connected to the controller via the MOLEX plug shown in Figure 4.7.



Figure 4.7 - Connection of the power supply on the GAT NET.Controller S 7000

The power supply unit may be placed in the designated storage place inside the slave controller.

There are two different types of power supply connections:

- 1. The power supply can be connected to each slave controller individually.
- 2. The power supply is connected to a single or a few slave controllers, which in turn supply the remaining slave controllers via the RS 485 cable. In this case, the "power plug" must be inserted for those slave controllers which are not supplied directly.
 - **Note:** A power supply must always be connected to the master controller and the first slave controller. If 5 or more slave controllers are used in one line a second power supply is required at the fifth controller.



Figure 4.8 - Power transmission via RS 485 interface



Pay attention to the direction of the supply, as power is transferred only via the "RS 485 OUT" socket.



Attention, the maximum total cable length, if the power is transmitted from a master or slave controller to a subsequent controller, is 200 metres.





Figure 4.9 - Examples for power supply

4.3.4 LED Signals and Buttons

For the display of the operating state and to start certain functions various LED indicators and buttons are provided on the GAT NET.Controller S 7000.



Figure 4.10 - LEDs and buttons provided on the GAT NET.Controller S 7000

LEDs

- RS 485 IN (yellow): The connection with the master controller has been established.
- RS 485 IN (green): RS 485 communication is active.
- LED 1 (blue): Lock activated/controlled.
- LED 2 (green/red): See "5.5. Status Information for the GAT NET.Controller S 7000 and GAT NET.Controller M 7000".

Buttons

- RESET: 1. See "5.3. Restart a Controller GAT NET.Controller S 7000 or GAT NET.Controller M 7000"
 - 2. See "5.4. Delete Configuration Parameters of a Controller (= Reset to Default Settings) "
- MODE: See "5.1 Antenna Adjustment of the GAT NET.Lock 7000"



4.4 Connections on the GAT NET.Controller M 7000 Master Controller

4.4.1 Connecting the GAT NET.Controller S 7000 Slave Controllers to the Master Controller

The slave controllers are connected to the master controllers via the RS 485 interface using RJ 45 plugs. The connection must be made through the "RS 485 SLAVES" socket.



Figure 4.11 - Connection of the GAT NET.Controller S 7000 at the GAT NET.Controller M 7000

Note: The "RS 485 ADD-ON" connector is reserved for future requirements and must <u>not</u> be used to connect the slave controllers.



Observe the following values for the number of connectable controllers per master controller (RS 485 line):

- A maximum of 8 slave controllers per master controller, i.e. per RS 485 line
- Maximum length of one RS 485 line = 200 m

4.4.2 Ethernet Connection

The connection of several GAT NET.Controller M 7000s as well as the connection of the master controller to a PC/server is performed via Ethernet. The Ethernet line is connected to the RJ 45 plug on the back side of the GAT NET.Controller M 7000.



Figure 4.12 - Connection of the GAT NET.Controller M 7000 to Ethernet



4.4.3 Connection of the Power Supply

The GAT NET.Controller M 7000 is connected via an external power supply unit to the mains power supply, i.e. depending on the type of unit and the country of use UAC 230 V or UAC 115 V (please refer to technical data). The power supply is connected to the controller via the MOLEX plug.



Figure 4.13 - Power supply on the GAT NET.Controller M 7000

The power supply unit may be placed in the designated storage space inside the master controller.

4.4.4 LED Signals and Buttons

For the display of different operating states and to start certain functions, various LED indicators and buttons are provided on the GAT NET.Controller M 7000.



Figure 4.14 - LEDs and buttons provided on the GAT NET.Controller M 7000

LEDs

- RS 485 IN (yellow): The connection with the slave controller has been established.
- RS 485 IN (green): RS 485 communication is active.
- LED 1 (blue): Reserved for future functions.
- LED 2 (green/red): See "5.5. Status Information for the GAT NET.Controller S 7000 and GAT NET.Controller M 7000".

Buttons

- RESET: 1. See "5.3. Restart a Controller GAT NET.Controller S 7000 or GAT NET.Controller M 7000"
 - 2. See "5.4. Delete Configuration Parameters of a Controller (= Reset to Default Settings) "
- MODE: Reserved for future functions.



5. CONFIGURATION AND OPERATION

5.1 Antenna Adjustment of the GAT NET.Lock 7000

The antenna of the GAT NET.Lock 7000 must be adjusted so that an optimal reading range for the RFID data carriers is obtained. The antenna adjustment does not need to be done by hand as the GAT NET.Lock 7000 supports automatic antenna adjustment via PC software.

The antenna adjustment of a lock is also possible with the MODE button of the Slave Controller, where the lock is connected (see "4.3.4. LED Signals and Buttons").

Note: The locker door must be closed during the antenna adjustment so that the test conditions meet the later operating conditions.



Proceed with these steps:

- Close all locker doors.
- Press MODE button once.
 - -> The antenna adjustment is completed in less than 1 second.

5.2 Locker Operation by the Visitor

5.2.1 Lock a Locker

In order to use an unused locker (i.e. locking a locker), the door must be pressed shut so that the door shackle moves into the GAT NET.Lock 7000. While the door is pressed shut the user must hold their data carrier next to the reading field on the locker door. The GAT NET.Lock 7000 reads the data carrier then communicates with the slave and master controllers and if the data carrier (i.e. the user) is allowed to use the locker, a command is sent so that the GAT NET.Lock 7000 will lock the locker.

A push button at the front of the GAT NET.Lock 7000 lock detects if the locker door is closed or not. This feature allows indication of the locker status on a PC running locker system software.

5.2.2 Unlock and Open a Locker

When a user wants to open a locker, the user must identify himself at the lock with his RFID data carrier. As soon as the user holds his data carrier to the RFID scan field the GAT NET.Lock 7000 reads the data carrier, communicates with the slave and master controllers and if the data carrier (i.e. the user) is allowed to open the locker, a command will be sent so that the GAT NET.Lock 7000 will unlock the locker.



5.3 Restart a Controller GAT NET.Controller S 7000 or GAT NET.Controller M 7000

In certain situations (e.g. after an error or network problems) it may be helpful to restart a master or slave controller. This means that the software application in these devices will be restarted.



To restart a controller, proceed with these steps (the picture above shows a slave controller):

- Press the RESET button for 5 seconds
- -> LED 2 will blink red and green - Release the RESET button
 - -> The slave controller restarts. This takes about 5 seconds. The configuration parameters will remain unchanged.

5.4 Delete Configuration Parameters of a Controller (= Reset to Default Settings)

After deleting the configuration parameters of a controller (master or slave), the controller will operate exactly as at the time of delivery.



Attention, the resetting of a controller must only be performed by an authorised service technician. After resetting the controller the entire locker installation must be reconfigured via software.



To reset a controller, proceed with these steps (the picture above shows a slave controller):

- Press the RESET button for approx. 12 seconds.
 - -> LED 1 starts flashing blue.
- Within 3 seconds release the RESET button and press it again.
 - -> Configuration parameters are reset.
 - -> Whilst resetting a slave controller the LEDs on the connected locks will flash red/green.



5.5 Status Information for the GAT NET.Controller S 7000 and GAT NET.Controller M 7000



LED 2 shows the following status information at a slave and master controller.

5.5.1 Slave Controller

LED 2	Status Information
red	Emergency operation (no connection, neither to the master controller nor to the server/software)
red blinking	Emergency operation (connection to master controller OK, but no connection to server/software)
green	Normal operation (connection to master controller and server/software is OK)
flashing red & green	Bootloader mode (a firmware update is currently being loaded or there is no firmware present in
	the controller)

Table 5.1 - Status information for the GAT NET.Controller S 7000 slave controller

5.5.2 Master Controller

LED 2	Status Information
red	Emergency operation (no connection to the server/software)
green	Normal operation (connection to server/software is OK)
flashing red & green	Bootloader mode (a firmware update is currently being loaded or there is no firmware present in
	the controller)

Table 5.2 - Status information for the GAT NET.Controller M 7000 master controller



5.6 GAT Relaxx - Operation Software for GAT NET.Lock 7000 System

Note: This chapter includes only a short overview of the software and its main functions. A detailed description of all GAT Relaxx functions is included as interactive help within GAT Relaxx. For installation, general information and system requirements, an installation manual is also available and included on the GAT Relaxx installation CD.

General

In order to configure, operate and monitor the electronic locker system, GANTNER Electronic GmbH has developed PC software called GAT Relaxx. GAT Relaxx runs on a Microsoft Windows PC (for supported operating systems see the installation manual of GAT Relaxx). GAT Relaxx consists of a Windows service, which runs in the background and takes care of the communication with the locker system, and a user interface where the locking system is configured and controlled and status information is displayed.

It is possible to work with only one GAT Relaxx client, which is installed on the same PC as the GAT Relaxx service. But GAT Relaxx also offers the possibility to install other clients in the network that can log-in and work with the same GAT Relaxx system and database.

A database application is required for GAT Relaxx. Therefore the SQL Server Express application is shipped on the CD together with GAT Relaxx. Furthermore the .NET framework with version 4.0 or higher is required. This is also included on the GAT Relaxx installation CD.

Installation and First Start-up

The GAT Relaxx installation CD includes an installation wizard, which leads the user through the installation of GAT Relaxx. The wizard automatically recognises, whether an SQL server of the version 2008 or later and the .NET Framework version 4.0 or later is installed. If these are not yet installed the installation wizard offers the possibility to install these first.

Before installing GAT Relaxx please read the installation manual, which includes important information about the system requirements, the installation process, the service configuration and the setup of the database.

Upon the first start-up of GAT Relaxx, database settings and general software options must be configured.

It is also necessary to enter the licence and activation codes in order to work with GAT Relaxx. These codes are administered by contacting GANTNER Electronic GmbH.

5.6.1 User Interface

GAT Relaxx has a user rights management system. Therefore a user name and password is required to log-in and permit access to the program functions.

The main functions within GAT Relaxx can roughly be divided into the following areas:

- Configuration of the devices (i.e., define communication channels, configure controllers and locks)
- Controlling and monitoring of the locker system by the end user

These two main user interface areas can be individually displayed by selecting the "Hardware view" and "Organization view" tabs.



Hardware View

Tan In				
dd Channel Edit Channel Delete Channel Start C	bannel Stop Channel Add Contro	aller Edit Controller Delete C	Controller Start Controller Stop	Controller
COM11 [COM]	Channel	State	Is Freelocker	Properties
Controller 1 [Locker Controller 50xx]	1	InUse	V	Assigned Per 0
	2	InUse		Channel 4
0 CH 3	3	Free	V	Is free locker True
CH 4	4	Free		Max, Allower 1
ОСН 5	5	Free		Number 23
🚽 сн 6	6	Free		State Free
🕤 CH 7	7	Free	V	UID in use
- 🕤 CH 8	8	Free		Used by
	9	Free		Used by pere
0 CH 10	10	Free		
-0 CH 12	11	Free	V	
- CH 12	12	Free		
CH 14	13	Free	V	
🔐 CH 15	14	Free		
	15	Free	V	
	16	Free	2	
		6		
		v		Locker(s) actions

Figure 5.15 - GAT Relaxx, Hardware View

The hardware view is divided into the following areas:

1 - Main menu:	Access to all GAT Relaxx functions by selecting the corresponding menu items.
2 - Symbol bar:	Fast access to the main functions.
3 - Switch user interface:	Next to the "Start" tab, a tab is displayed for each user interface. Multiple Hard- ware View and Organization View tabs as well as other tabs like alarm and log tabs are possible.
4 - Selective symbol bar:	Fast access to the main functions of the currently selected user interface.
5 - System overview:	Here, the hardware of the entire system is defined. Communication channels and connected controllers can be added and the lockers used can be defined per con- troller.
6 - Locker overview:	Here the lockers (GAT NET.Lock 7000) of the controller selected on the left are displayed together with their current states.
7 - Information area:	Here, the information regarding the locker selected in middle area (6) is displayed.
8 - Locker actions:	In this field different lock actions can be performed, for example, opening all lock- ers with the "Open all lockers" button.
8 - Status bar:	The status bar displays various information regarding GAT Relaxx and the system such as:
	- If the GAT Relaxx service is running and if the connection is OK.
	- System type (online/offline).
	- If a USB driver is installed.

- Information regarding the logged-in user.



Organization View

GAT Relaxx Configurator		-			
File Views Authorizations Online	Devices Windows <u>T</u> ools <u>H</u>	<u>i</u> elp			
handware view Organization vi	ew Log entries view. Show ren	orts view Authorizations	List Dersonal lockers Rea	card Online devices list	Start remuire Stop remuire
Start Hardware view Organization vie		Addioin2adioin3	ist reisonallockers itea		x
		B B	e =		
Add area Edit are	ea Delete area Add group Ed	lit group Delete group As	sign lockers Monitor grou	p Edit overview Delete	overview Save overview
🖻 🏢 Default locker area	Default I		Unknown Open	Closed	
	Default I	ocker area	Expired Locked	Disabled	
G 21					
	20	21	22	72	
<u>9</u> 24	20	21	22	25	
25					
<u>9</u> 27					
20	24	25	26	27	
G 30		20			
32					
G 33					
9 35	28	29	30	31	
					Ladvar(a) actions
	32	33	34	35	Locker(s) actions
	Hide controls				
					Connected 🛛 🐝 Service state: <u>Running</u>
					1

Figure 5.16 - GAT Relaxx, Organization View

The areas (5), (6) and (7) serve a somewhat different purpose in the user interface:

5 - System overview:	Here the lockers within a system are divided logically into "areas", (e.g. "male locker room" and "female locker room"). This division represents only a logical grouping and not the actual hardware-based locker assignment to respective controllers.
6 - Locker overview:	Here, the lockers of the selected area are displayed graphically. The respective locker state is represented by the following colours:
	 Open : Locker available (unlocked) Closed : Locker closed (locked)
	 Expired : Locker locked, but the permissible time of usage has been exceed. Locked : Locker locked and blocked.
7 – Information area:	 Disabled: Locker out of operation (not useable) Alarm: An alarm has occurred regarding this locker Here, the information regarding the locker selected under (6) is displayed



6. TECHNICAL DATA

6.1 GAT NET.Lock 7000

5 V
Via connection cable from the slave controller
60 mW
13.56 MHz
Min. 1,500 N
Max. 100 N
Multi-colour status LED
One-wire (special cable for supply, data and RF signal)
24
MOLEX, type Micro-Fit 3.0™
Plastic (PC)
Min. 230 mm
110 x 100 x 25 mm
0 to +60 °C
IP 52
III
Approx. 160 g
II (conditions in indoor areas)

6.2 GAT NET.Controller S 7000

Nominal voltage U _{DC} :	24 V
Power supply unit:	External power supply units (use only power supply units approved by
	GANTNER Electronic GmbH for the GAT NET.Controller 7000)
Average power consumption:	-
Reader types	
- GAT NET.Controller S 7000 F/ISO:	MIFARE™ + ISO 15693
- GAT NET.Controller S 7000 B:	LEGIC [®] (Advant)
Number of locks per slave controller:	24
GAT Lock Network:	Max. 8 slave controllers GAT NET.Controller S 7000 at one master con-
	troller GAT NET.Controller M 7000
Interface to the locks:	1 Wire (special cable for supply and data signal)
Interface between slave and master:	RS 485
Connectors:	- Slave to master (RS 485): RJ 45
	- Locks: MOLEX, type Micro-Fit 3.0™
	- Supply: MOLEX
Housing material:	Plastic (ABS)
Dimensions:	310 x 133 x 42 mm (12.2 x 5.24 x 1.65 inch)
Permitted ambient temperature:	0 to +60 °C
Protection type:	IP 40
Protection class:	1
Weight:	Approx. 600 g
Environment class based on VDS 2110:	II (conditions in indoor areas)



6.3 GAT NET.Controller M 7000

Nominal voltage U _{DC} :	24 V		
Power supply unit:	External power supply units (use only power supply units approved by GANTNER Electronic GmbH for the GAT NET.Controller 7000)		
Average power consumption:	-		
GAT Lock Network:	Max. 8 slave controllers GAT NET.Controller S 7000 at one master con- troller GAT NET.Controller M 7000		
Memory:	Internal memory for 10,000 bookings. SD card slot for memory expan- sion, log files, firmware update or person lists		
Digital inputs:	4 x optocoupler		
Digital outputs:	4 x relay		
Interface between slave and master:	RS 485		
Interface between master and server:	Ethernet		
Connectors:	- Master to server (Ethernet): RJ 45		
	- Slave to master (RS 485): RJ 45		
	- Supply: MOLEX		
Housing material:	Plastic (ABS)		
Dimensions:	310 x 133 x 42 mm (12.2 x 5.24 x 1.65 inch)		
Permitted ambient temperature:	0 to +60 °C		
Protection type:	IP 40		
Protection class:	I		
Weight:	Approx. 600 g		
Environment class based on VDS 2110:	II (conditions in indoor areas)		



FCC INFORMATION (U.S.A.)

GAT NET.Controller S 7000 F/ISO

Note: 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.

GAT NET.Controller M 7000 F/ISO and GAT NET.Lock 7000

- **Note:** 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.



This WEEE symbol on the products or on their packaging indicates that the corresponding product must not be disposed of with normal household waste. Instead such marked waste equipment must be disposed of by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. By separating and recycling this waste equipment at the time of disposal will help to conserve natural re-sources and ensure that it is recycled in a manner that protects human health and the environment. Please contact your local authority for further details of your nearest designated collection point.

> **Note:** This manual is valid as from March 24th 2015. It is subject to change and amendments and changes can be made without prior notice at anytime!

GANTNER Electronic GmbH

Montafonerstraße 8 6780 Schruns, Austria T +43 5556 73784-0 F +43 5556 73784-8000 info@gantner.com

GANTNER Electronics Ltd. UK

Allington Road, Little Barford, ST. Neots, Cambs, PE19 6WE United Kingdom T +44 1480 211262 F +44 1480 211909 info-uk@gantner.com

GANTNER Electronic GmbH Deutschland Industriestraße 40F 44894 Bochum, Germany T +49 234 58896-0 F +49 234 58896-11 info-de@gantner.com

GANTNER Electronic GmbH Middle East

P.O. Box 62702, BelHasa Buildg., Off. 206 Deira, Dubai, UAE T +971 4 269 3266 F +971 4 269 3265 M +971 50 6504082 info-me@gantner.com

GANTNER Electronics PTY LTD Australia

Unit 6 15/17 Chaplin Drive, West Lane Cove Sydney NSW 2006, Australia T +61 2 9011 8114 F +61 2 8209 1708 info-aus@gantner.com