Installation Guide

PG45i Detection Gate (9984232)

Your library's collection is a valued community investment. To protect these library resources you can use the PG45i Library Detection Gates. The gates help you protect your printed materials and digital media from unintended removal or theft. When someone walks through the gates with a library item that is not checked out properly an alarm will sound.

Table of Contents

Technical support

Email address

support-library@nedap.com

Visitors address

Nedap Library Solutions
Parallelweg 2d
Groenlo
The Netherlands

Postal address

Nedap Library Solutions
P.O. box 102
7140 AC Groenlo
The Netherlands

Telephone Number

Tel: +31(0)85 8888850

Document history

Version	Date	Author	Description
1.0	12-05-2016	G. Heinen	First version of this document
1.1	12-05-2016	G. Heinen	Replaced picture on front page
1.2	24-05-2016	G. Heinen	Fixed typos
1.3	24-05-2016	R. Heersink	Completed marketing check and released for publication
1.5	24-05-2016	E. Veurman	Edited document properties and system links
1.6	04-07-2016	E. Veurman	Updated images and mounting instructions (nuts and bolts)
1.7	18-10-2016	E. Veurman	Temporarily changed spec # gates powered by one power supply to 3 gates until further notice.
1.8	9-2-2017	E. Veurman	Added accessories for Conformance.

Safety Precaution

- For indoor use only
- Installation of these products should be performed by a qualified installation partner.
- Do not use the product in damp places.
- If you smell smoke or other odors or hear a strange sound, unplug the power cord and contact your dealer.
- Protect the cables from physical or mechanical abuse, such as being twisted, kinked, pinched, closed in a door, or walked upon. Pay particular attention to plugs, wall outlets, and the point where the cord exits the product.
- Do not disassemble, repair or modify the product at your own discretion.
- To reduce the risk of electrical shock or damage, do not expose this device to rain or moisture.
- Refer all servicing to qualified service personnel. Servicing is required when the system has been damaged in any way, such as the power supply cord or plug is damaged, liquid has been spilled, or the device has been dropped.
- Use only UL listed mounting material, which complies with local regulations.
- This product is intended to be supplied by a UL Listed Power Unit marked "Class 2" or "LPS" or "Limited Power Source" with output rated for 24 VDC, 60W.
- Do not connect directly to mains power for any reason.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other sources of heat.
- Do not use strong or abrasive detergents when cleaning the device body.

WARNING: Do not place near electromagnetic fields.

WARNING

This equipment should be installed, operated, serviced, and repaired by qualified personnel only. The installation and interconnection of this equipment to facility wiring and other equipment must be done by a competent, qualified craftsperson who is familiar with applicable standards and codes governing the installation. Installation methods, practices, or procedures that are unauthorized or done improperly are dangerous and could result in serious personal injury or damage to property and equipment.

Declaration of Conformity

EU

Hereby, De N.V. Nederlandsche Apparatenfabriek "Nedap" declares that the radio equipment type PG45i is in compliance with Directive 1999/5/EC. The full text of the EU declaration of conformity is available at the following internet address: http://www.nedaplibrary.com (login required).

FCC and IC

FCC-ID: CGDPG45I135   IC: 1444A-PG45I135

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 to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help

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.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Cet appareil se conforme aux normes CNR210 exemptés de license du Industry Canada. L'opération est soumis aux deux conditions suivantes:
(1) Cet appareil ne doit pas causer interférence et

(2) Cet appareil doit accepter toute interférence, y compris l'interférences qui peuvent causer un mauvais fonctionnement de l'appareil.

Les changements ou modifications n'ayant pas été expressément approuvés par la partie responsable de la conformité peuvent faire perdre à l'utilisateur l'autorisation de faire fonctionner le matériel.

This equipment complies with FCC and Canadian radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Cet équipement est conforme a CNR102 limites énoncées pour un environne- ment non contrôlé. Cet équipement doit être installé et utilisé avec une distance minimale de 20 cm entre le radiateur et votre corps.

This Class B digital apparatus complies with Canadian ICES-3.
Cet appareil numérique de Classe B est conforme à la norme Canadienne NMB-3.

Product overview

Content of Box

When you receive the box, it is strongly advised to check the contents of the box before installation. The box should contain the following components:

Quantity	Article number	Article name	Comments
1x	9984232	PG45i detection gate	
1x	8025622	Power & communication cable	(two ferrites and connectors included)
1x	5410487	Floor mounting plate	installation template and spacer for use with floor threshold

* note that no power supply is supplied with the gates
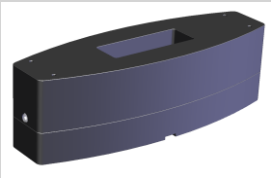
Power supply specifications

A power supply with the following specifications should be used together with a system consisting of PG45i gates:

- Output voltage: 24V DC
- Minimum output current: 2,5A
  (note: max. 3x PG45i gates can be daisy-chained on one power supply, regardless of power supply capabilities)
- Minimum output power: 60W
- Class2, LPS or 'Limited Power Supply' rating

Accessories

The PG45i has some optional accessories. They are listed in the table below, with their Nedap article numbers, which you can use to order the accessories.

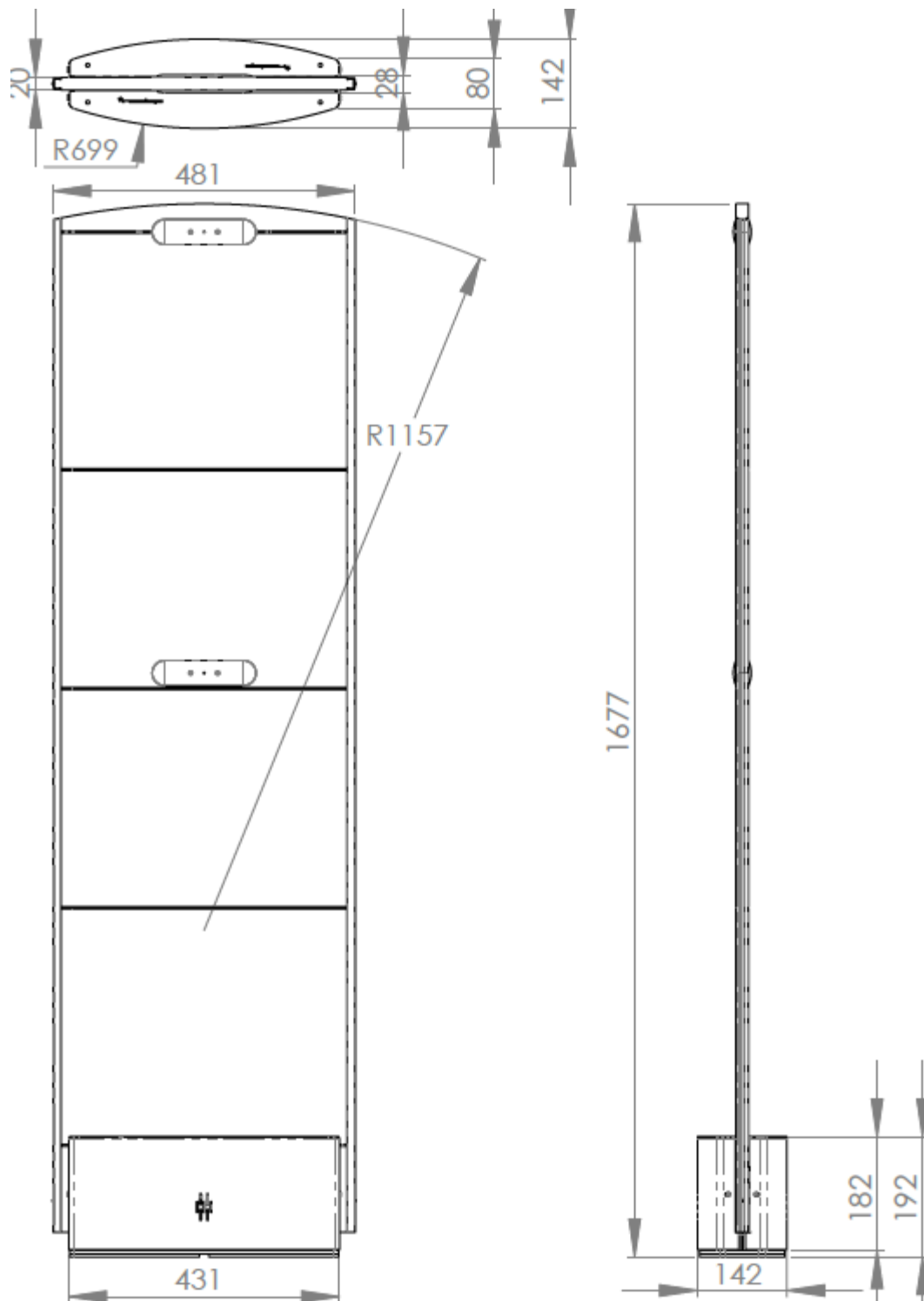| Photo	Article number	Article name	Comments
	7603282	Plastic Foot Raise	It heightens the gate to a total of 1,80m (71"). Required for installations where FCC and IC are applicable.
	9984844	Docking Station	Connector plates to make the PG45i easily detachable.

Dimensions

Figure 1 - PG45i gate dimensions

*all dimensions are in mm

Components

The PG45i is based on Nedap Library Solution's EcoReader, which is an ISO15693 compliant HF RFID reader, specifically designed for libraries. The PG45i has several serviceable parts, which are listed and highlighted below.
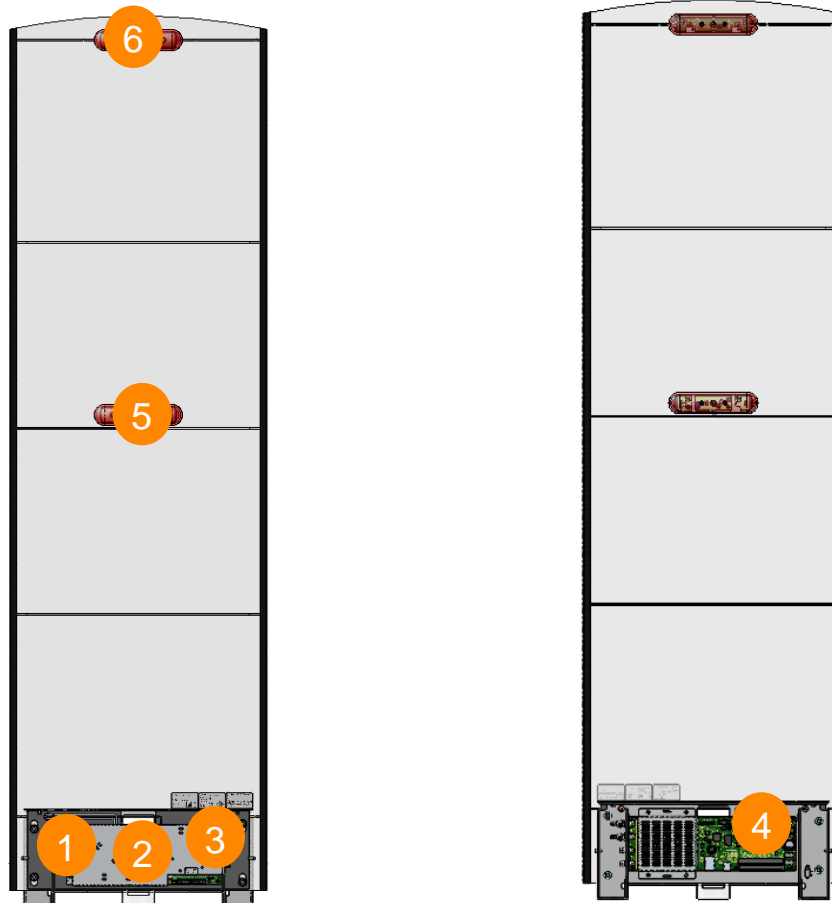
Number	Component	Description
1	Mount plate	Covers the match PCB and serves as placeholder for the coaxial wiring
2	Buzzer	The buzzer can be used for audible alarms.
3	Match PCB	The 50 ohm PCB takes care of the connection between the EcoReader, the RF antenna, power supply, buzzer, customer counter and lights.
4	EcoReader	Main processing unit of the gate, takes care of RFID detection, gate synchronization and customer counter values retrieval
5	Customer counter	Integrated customer counter and lights
6	Top lights	Red light in top of gate used for feedback and alarms

Connections

During installation connections are made to the match PCB, and in some occasions to the EcoReader PCB. These connections are listed below, together with a description what they are used for.
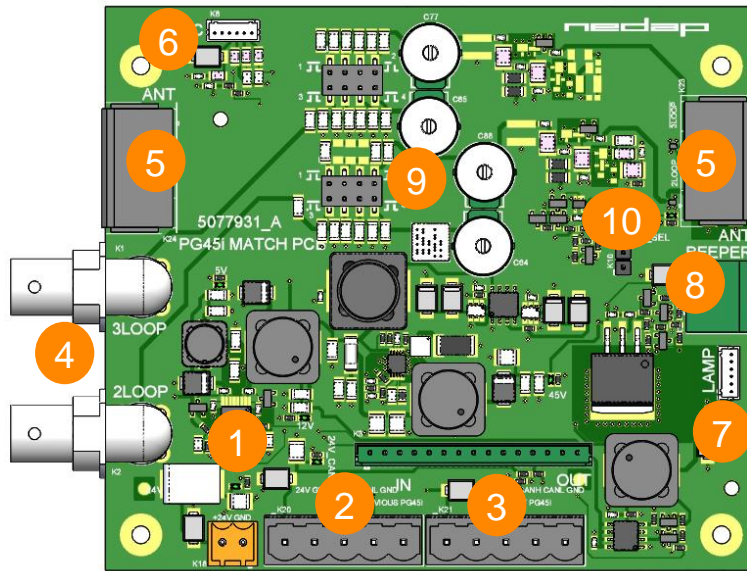
Match PCB

Figure 2 – match PCB

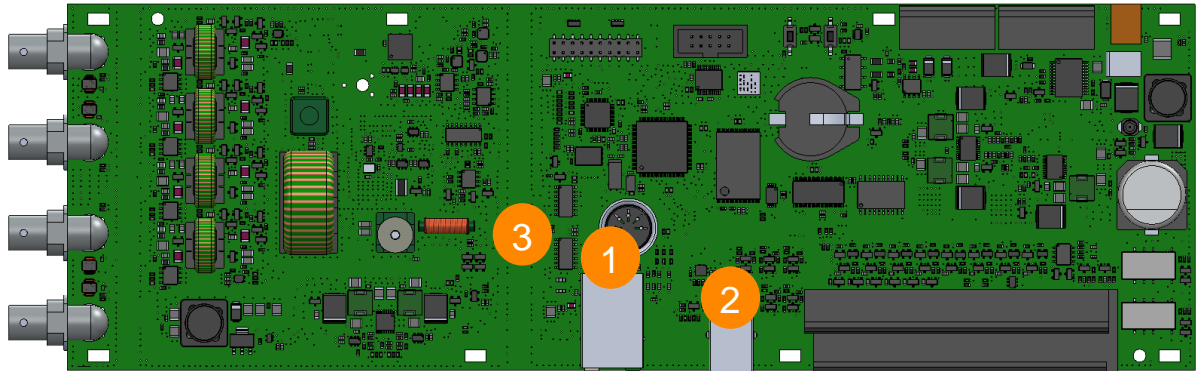| Number	Component	Description
1	External power adapter in	Input connector for the external power supply
2	Communication cable in	Communication cable input coming from the previous PG45i
3	Communication cable out	Communication cable output to the next PG45i
4	RF inputs	Connected to RF outputs on EcoReader PCB
5	Antenna wire input	Connectors for the antenna wires
6	Customer counter connector	Connector to the integrated customer counter and lights
7	Top lamp connector	Connector for the top lights
8	Beeper connector	Connector for the buzzer for audible alarms
9	Tuning trimmers & shunts	Used for matching the antenna to a 50Ω load
10	Antenna selection led	Led which indicates which 'antenna' is selected. Off=3loop, On=2loop

EcoReader PCB

Figure 3 - EcoReader PCB

Number	Component	Description
1	LAN connector	RJ45 connector for ethernet
2	USB connector	USB service connector
3	Tx Led	LED indicator for Tx Power. Off=power on, On = power off

Installation

Preparing

> ⓘ The images in this document may differ slightly from the actual product, you are installing. However the installation procedure remains the same.

When preparing an installation of a PG45i gate system, the following should be taken into account:

- The distance between two gates can be maximal 1050mm or 3 ft. 5", but is strongly dependent on environmental influences and tags.
- In a range of 2000mm (6 ft 7") within the gates, no RFID labels with an active alarm may be present. In some exceptions metal can be used to shield labels, which are placed closer than the 2 meter radius.
- The distance between the gate and the entrance is minimal 300mm (1ft). Take this into consideration before the preparation of the cabling in the floor.
- Since large metal objects or metal frames (doors, sliding doors) might detune the gate, it is recommended to measure the SWR of the gate after installation. When an SWR bigger than >1.5 is measured, the gate will perform better when tuned. More information about the SWR can be found in the section about 'Measuring and Testing'.
- The de-tuning of the gate by a nearby door or sliding door might be different depending on the position of the door (open or closed). Before tuning, put the door in the position in which the gates must have their optimal performance.
- Automatic doors with electric motors might cause interference on the RFID system, depending on the motor type. However practical experience has learned that in most cases this interference is negligible when minimal distances are followed.
- A maximum of 16 PG45i gates can be connected to each other
- A maximum of 3x PG45i gates can be powered from one power supply. When more gates are used, power supplies must be added.
- In case of any doubt about the local wiring, consult a local licensed electrician and make sure that it meets local and national codes.
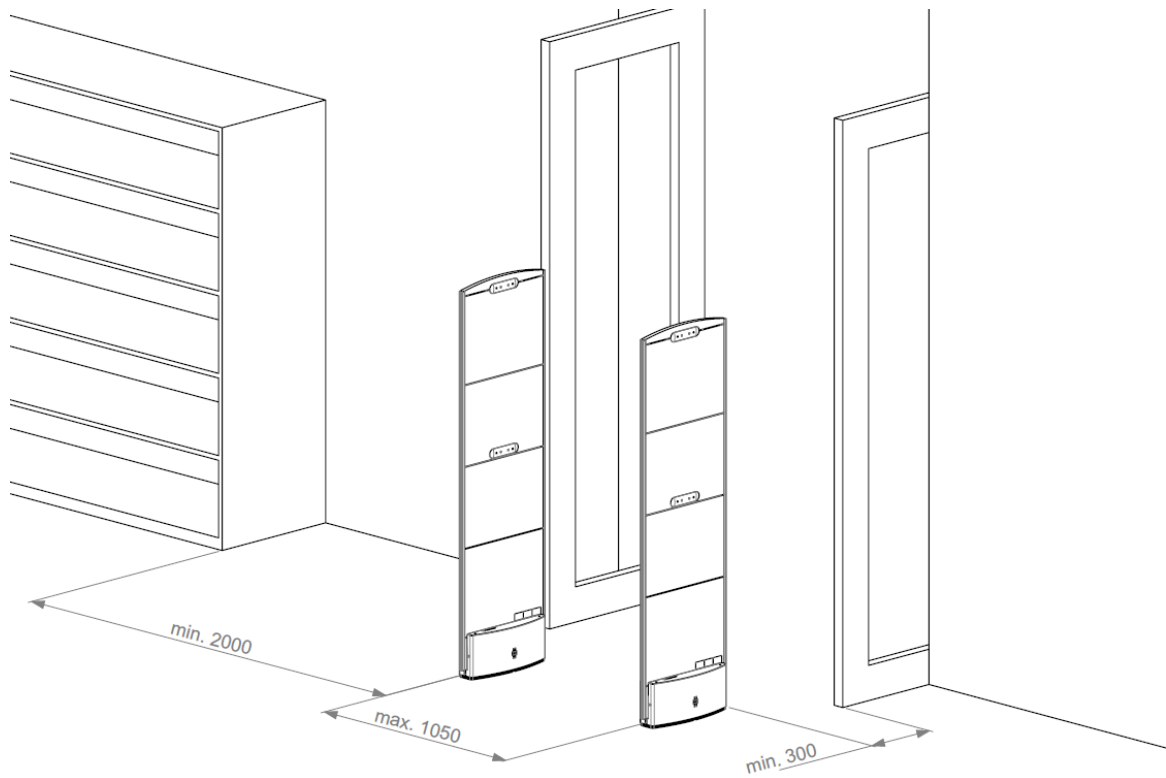
Figure 4. PG45i environment

System overview

In a PG45i system the gates are connected for communications and power. The first gate is called the master and each subsequent is called a slave. The gates have to be configured as such, for the system to work properly. See Figure 5 for an example of a dual aisle system consisting of three gates.
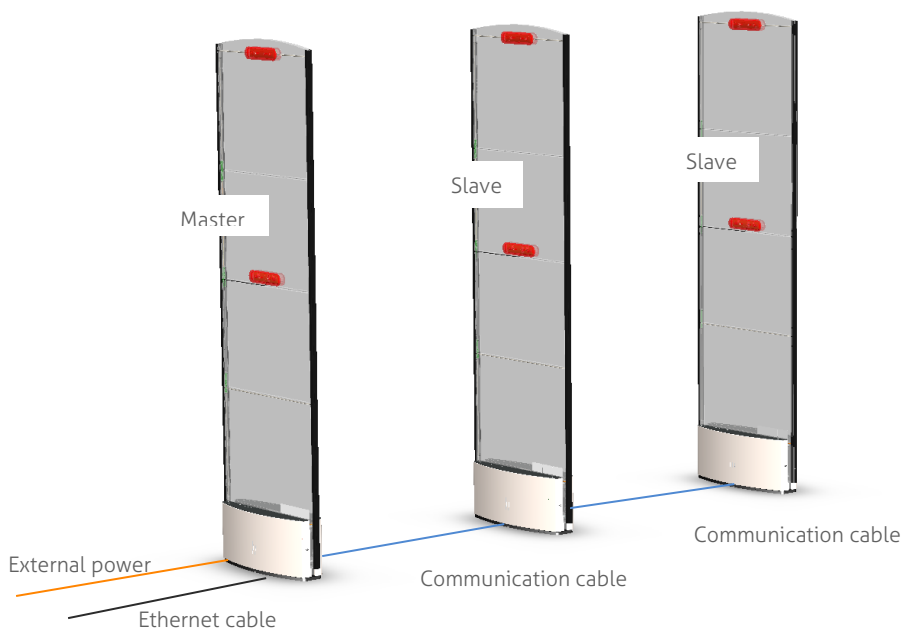

Figure 5 PG45i dual aisle system

When more than four PG45i gates are used in a system, like the example in Figure 6, an extra power supply must be added to every third gate, which make this gate a 'powered slave'. Check the table in Appendix A for larger setups.
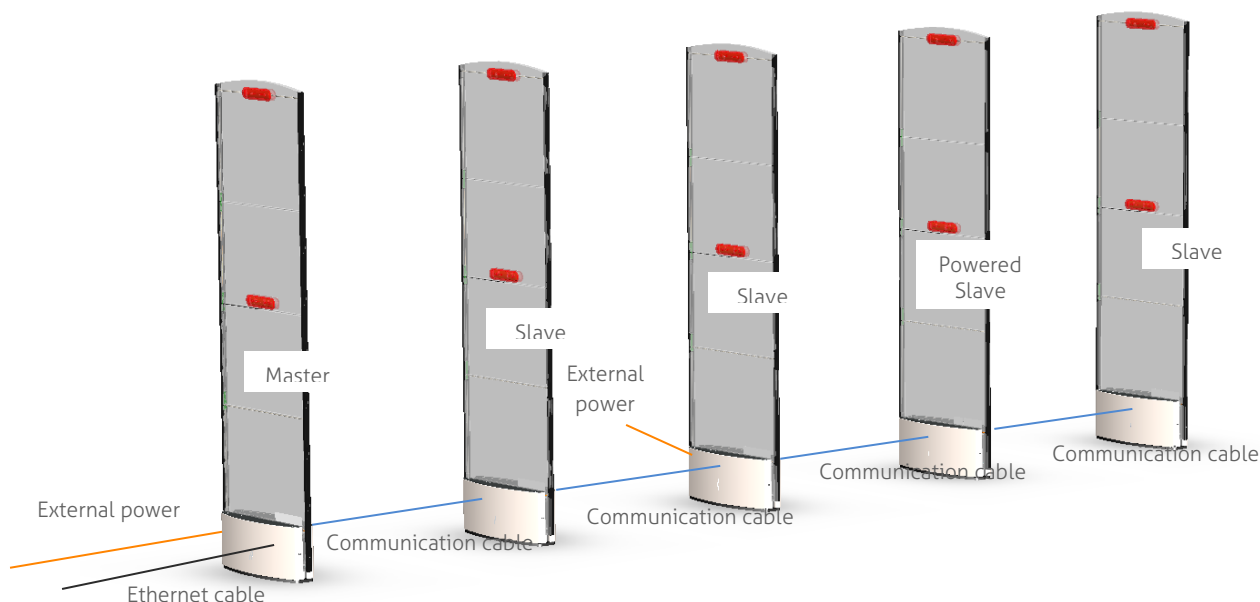

Figure 6 PG45i four aisle system

Customer counting overview

Customer counting in the PG45i gate is done with infrared beams: one gate has an infrared transmitter and the opposite gate has two receivers, which detect the beam from the transmitter. When a customer passes through the gates, the beams are interrupted and the order of interrupt of the two receivers, determine the direction of the customer.

Thus in order to have a proper working customer counter setup, the gates must be mounted in such a way that the transmitter is directing towards a receiver.

- The receiver side of the customer counter module can be identified by locating the side with the two 'screws'. See Figure 7
- The transmitter side is logically the other side, it can be detected by the Plexiglas holders and the transmitter opening. See Figure 8.
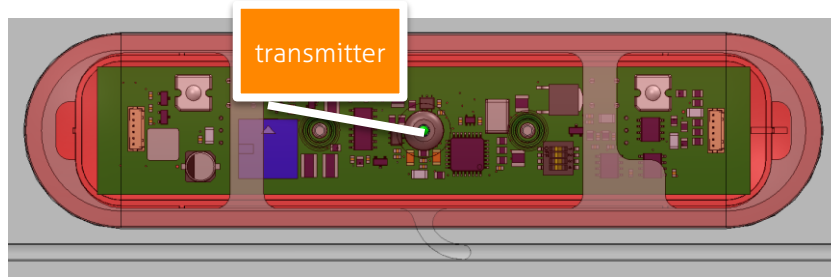

Figure 7 - receiver side of customer counting module

Figure 8 - transmitter side of customer counting module

> ⚠️ The customer counting modules are mounted in a fixed position inside each gate. It is not possible to install them in any other way, so make sure that the gates are properly aligned before mounting them to the floor, so the transmitting and receiving sides are pointing in the correct direction.

A PG45i system is designed in such a way that the aisle numbering is always the same (this is done so all systems behave and function in the same, predictable way, which simplifies troubleshooting).

Looking from outside the library, inside the library building, aisle 1 is always the left-most aisle. Aisle 2 is the next, etc. Refer to Figure 10 for a diagram of this.

In Figure 10 the master is the left-most gate and the transmitter of the master is directing towards the first slave. In Figure 11 the master is also on the left, but the customer counting of the Master is receiving. In Figure 12 the master is on the right, and it is transmitting towards the first slave. In Figure 13 the master is the right-most gate, but its receiver is directed toward the first slave.

In order for the aisle numbering and incoming/outgoing customer counting to be correct the master and all of the slaves have to be configured correctly, which means that the gates must know if the master is positioned left or right, and if its transmitter or receiver is pointing to the first slave. The settings can be altered under Settings > Customer Counting > Serial CC only > Master position (see Figure 9).
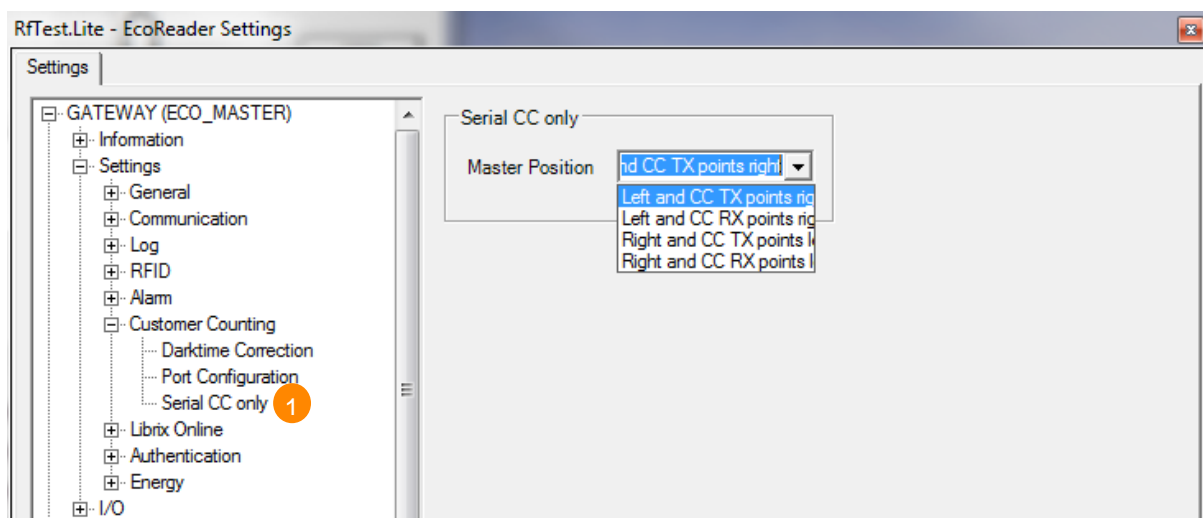

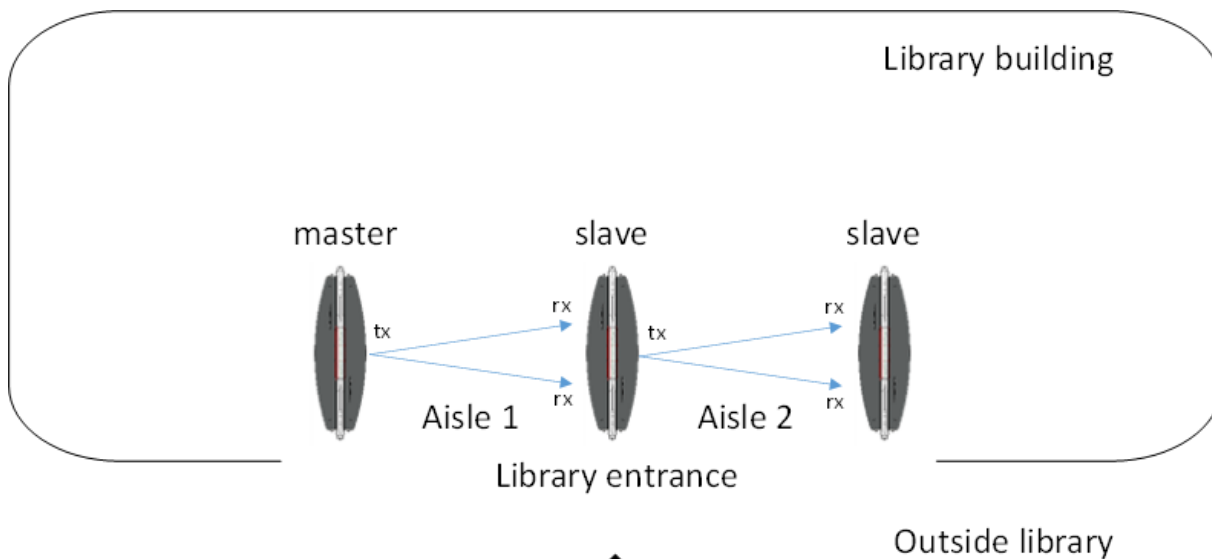Figure 9 – setting in RFTest.Lite to change master position and RX/TX of master.

Figure 10 - aisle numbering for customer counting, master left, transmitting. Master position: 'Left and CC TX points right'
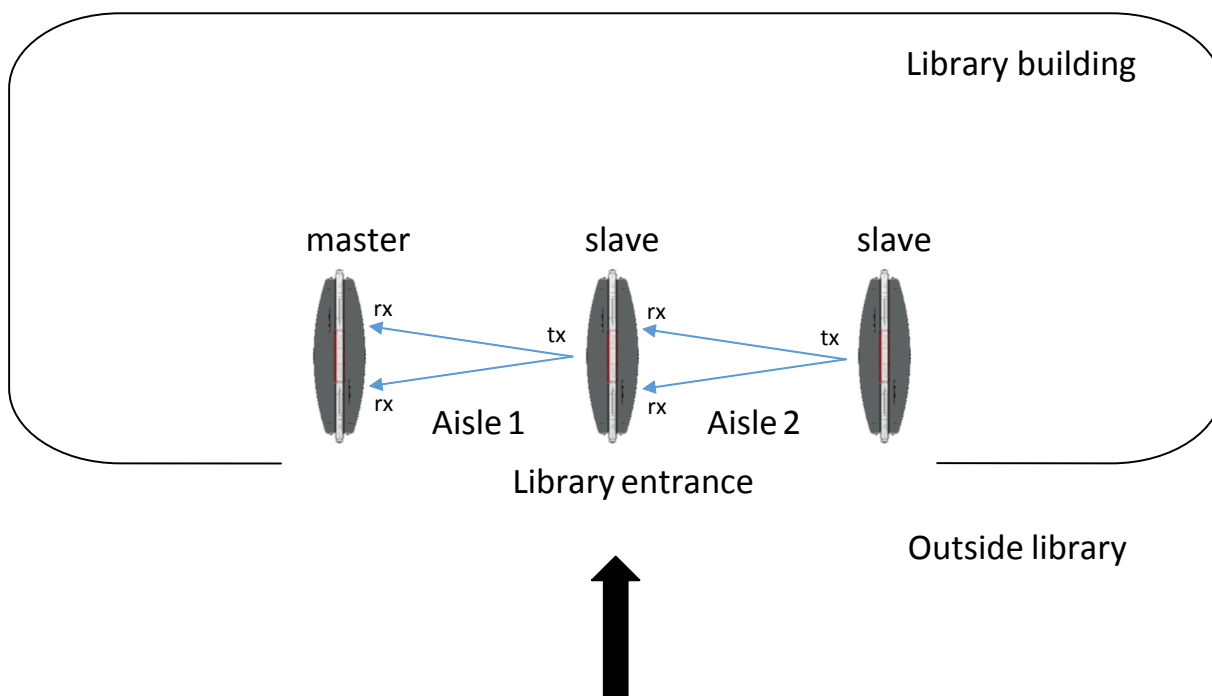

Figure 11 - aisle numbering for customer counting, master left, receiving. Master position: 'Left and CC RX points right'
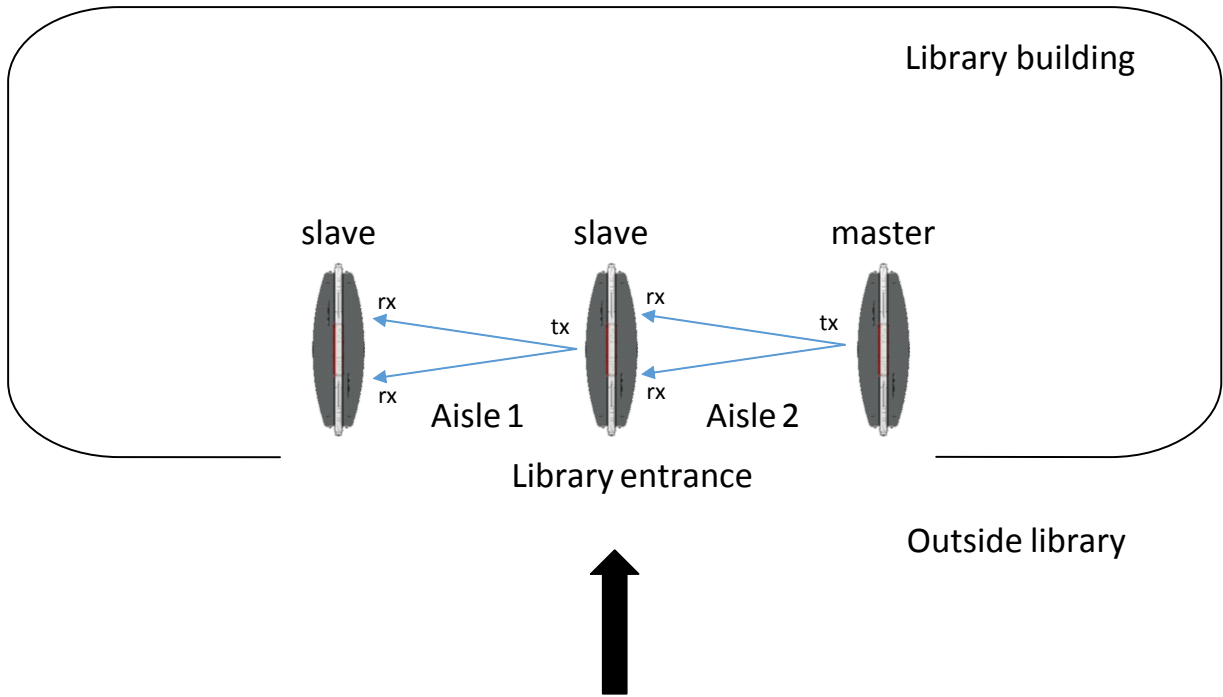
Figure 12 – aisle numbering for customer counting, master right, transmitting. Master position: 'Right and CC TX points left'
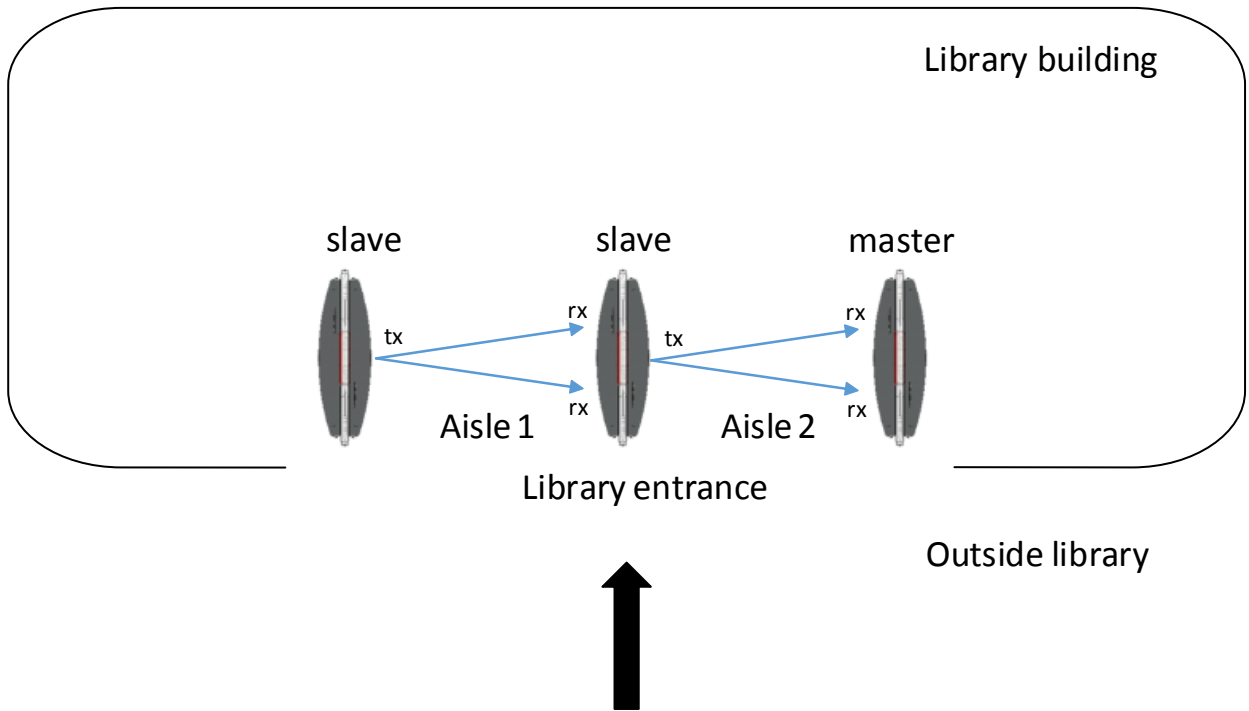

Figure 13 – aisle numbering for customer counting, master right, receiving. Master position: 'Right and CC RX points left'

Testing the customer counting direction

The Pg45i can show if the direction for the gates in configured correctly without having to use special software. Press the test button for approximately 1 second on the Eco Reader (Figure 14). The Eco Reader can be found in the foot (Figure 20). All lights will light up, and stay on. The test mode is now active. Test mode will deactivate after a 1 minute idle time.
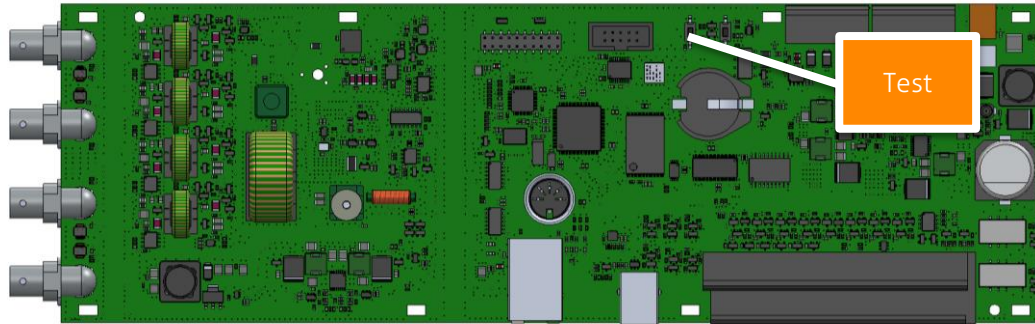

Figure 14 – Test button on Eco Reade inside PG45i

Walk through the gate (without any items) and the top LED of the receiving gate will blink in one of the following patterns:

- **4 times slowly** (1 second ON, 1 second OFF, etc.)
  This notifies that this direction is registered as an *incoming* customer.

- **8 times fast** (0.5 seconds ON, 0.5 seconds OFF, etc.)
  This notifies that this direction is registered as an *outgoing* customer.

After blinking, the top LED of the receiving gate will return to a continuous mode, to indicate that it is still in testing mode. The test mode will stop after 1minute idle time, and test mode cannot be stopped manually. After testing the PG45i's will return to its normal working state.

Figure 15 – All LED's will be lit continuously in testing mode. Top LED of receiving gate will blink to show customer counting settings.

If the direction is not as how you want it to be, check your settings from Figure 9, and if you have selected the same setting for every gate (so also for the slaves).
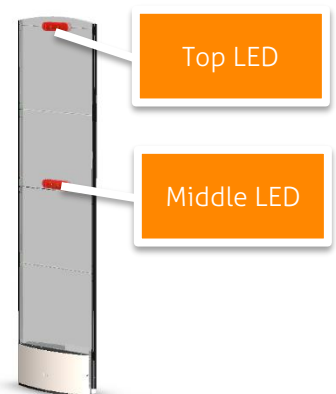
Mounting the gates

When all of the components are collected, and the preparations for the cabling are done correctly, you can walk through the following steps to mount the gates.

---

i Please note that mounting equipment like screws, bolts, anchors or plugs are **not** delivered with the gates. Please consult your local installation regulations on how to mount the PG45i gates.

---

i With each PG45i gate a communication cable of 2m/79" is delivered. Make sure that this cable is either fitted through floor tubing or a floor mounted threshold.

---

i With each gate a mounting plate is delivered. This plate can be used as a template to drill the mounting holes in the floor or as a spacer to create some room for cabling between the floor and the side plates. This can be useful when a floor mounted threshold is used, in case cabling can't be run through the floor.

---

i A mounting frame set (art.nr.7599986) can be ordered from Nedap Library Solutions, which can aid during the installation. With this frame set the mounting plates can be distanced evenly from each other at 90cm, 105cm & 120cm. In the instructions below it will be assumed that this mounting frame set is used.

⚠ When installing in a region which requires FCC or IC approval, you will always need to mount the PG45i on the specially designed foot, which can be ordered with article number 7603282. The gate will be heightened to a total height of 180cm. This can be mounted to the floor the same way as the gates.

---
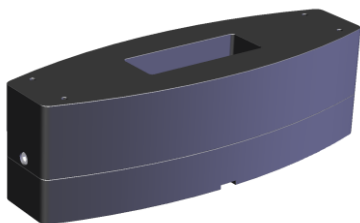
1. Use the mounting frame set and two mounting plates to position the gates in the building. Use a laser pointer to align the gates to the building. Refer to Figure 16.

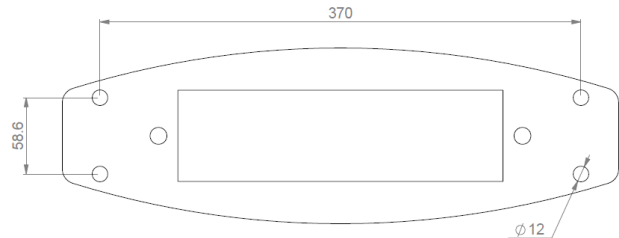
Figure 16 - mounting frame set and mounting plates

Figure 17 - Holes that need to be drilled in floor

2. Drill the marked holes using the holes in the mounting template.
3. Clean the holes and place the anchors (to which the gates will be bolted to) according to anchor specifications.
4. Make sure that the cabling for the gates is available.
5. Remove the side metal panels on the base of the PG gate. Mount the gates in place and secure them tightly to the anchors.
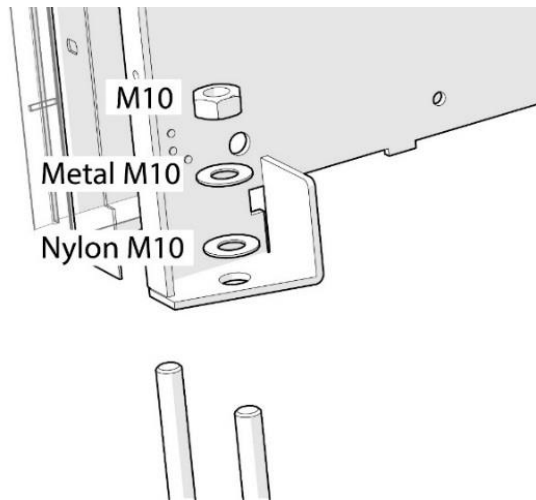

Figure 18 – example of bolting gates

Cabling the gates

Master

1. Locate the master gate and the side with the match PCB.
   Note: the match PCB is on the side of the PG45i with the nameplate sticker
2. Connect the power supply to the power supply connector on the match PCB. See Figure 19 for its location.

Figure 19 - PG45i match PCB location

3. Connect the CAN cable to the CAN OUT connector, which is the right connector on the match PCB. See Figure 19 for its location.
4. Locate the side of the gate with the EcoReader

5. Connect an Ethernet cable or USB cable (if applicable) to the EcoReader. Refer to Figure 20.
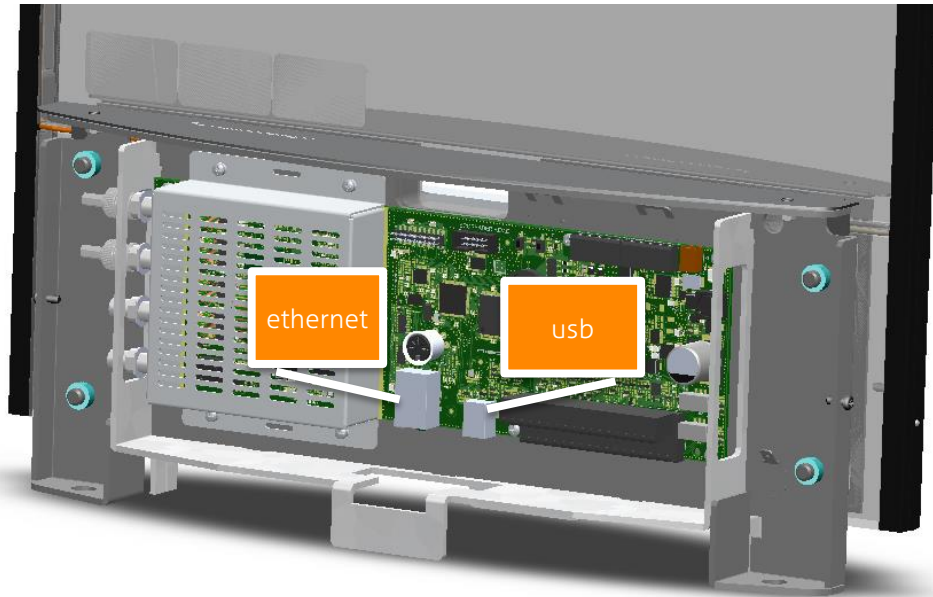   *Note: USB cable is only used during servicing the gate.*

Figure 20 - PG45i EcoReader PCB location

Slave

1. Locate the side with the match PCB of the slave
   Note: the match PCB is on the side of the PG45i with the nameplate sticker
2. Connect the incoming communication cable of the previous master or slave to the CAN IN connector on the left. See Figure 19 for its location.

Powered slave

1. For a powered slave follow the instructions for a normal slave.
2. Connect the power supply to the power supply connector on the match PCB. See Figure 19 for its location.

> ℹ For a (powered) slave no connection needs to be made to the EcoReader. Only for servicing purposes a Ethernet or USB cable could be connected.

Settings configuration

Configuration can be done with Rftest.Lite over USB or network or with the internal webpage of the EcoReader inside the PG45i.

> **ⓘ** Currently it is only possible to configure the local gate over the webpage. It is not possible to configure the other gates with the webpage. RfTest.Lite must be used for this.

> **ⓘ** Use RfTest.Lite 3.2.0 or newer to configure a PG45i system. Please refer to the Rftest.Lite manual for instructions on how to use RfTest.Lite

> **ⓘ** This manual describes the configuration steps that need to be done using RfTest.Lite

1. Connect with RfTest.Lite to the master gate and retrieve its settings by clicking on the 'Tuning' button.
   During first installation only the settings of the master will be shown, since it is not actually configured as master and therefor it will not show settings from its slave.

   > **ⓘ** A PG45i gate leaves the factory configured as slave. In this way only the master needs to be set to 'master' during installation.

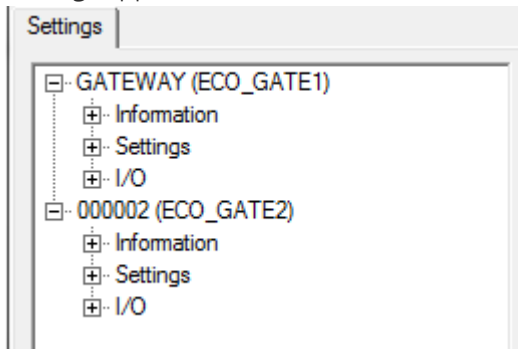2. Navigate to 'GATEWAY>Settings>Communication>Can bus' and set mode to 'Master'
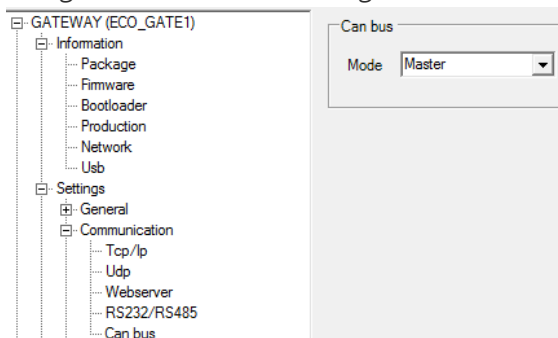
3. The system needs to be restarted now. Do this by unplugging and replugging the power to the master. Alternatively issue the reboot command 12RM=0| with RfTest.Lite.

   > **ⓘ** When everything is configured correctly, the master will now switch on all the slave gates one-by-one.

4. Reconnect with RfTest.Lite to the master and retrieve its settings. The master's and all slave's settings appear now.

5. Navigate to 'GATEWAY>Settings>Customer Counting>Serial CC only' and configure the location and orientation of the master for correct customer counting. See paragraph 'Customer counting overview' for more information.
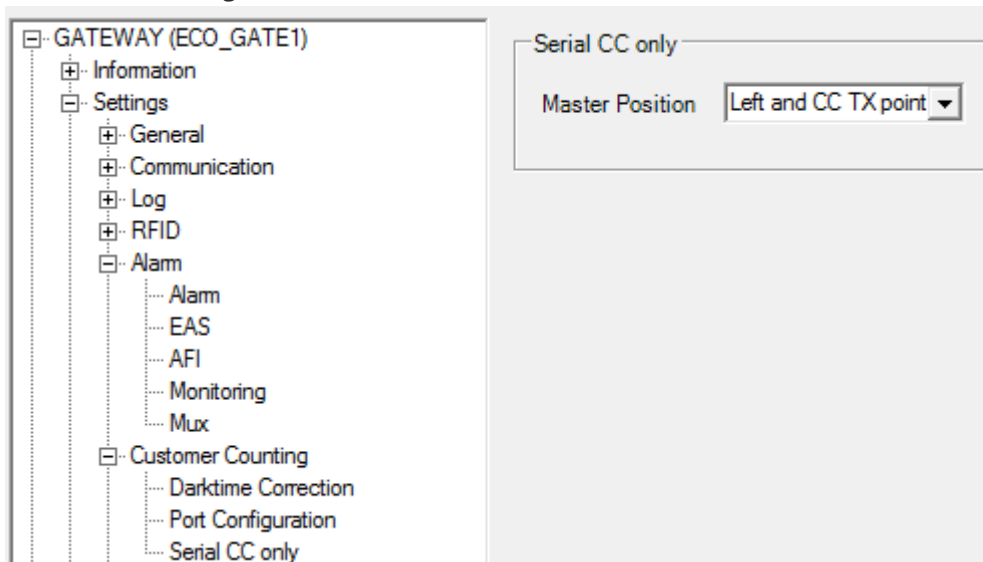
Now the system is configured at a minimum to start scanning. Next each gate (master and slave(s)) need to be configured to use the right alarming type (EAS\AFI) and their antenna power needs to be turned on.

> ℹ The following settings are forced during startup to a specific value. They can be changed, but after a restart they will be switched to their default value:
> - 'Settings>Rfid>Synchronization>Synchronization'
> - 'Settings>Alarm>Mux>External mux'
> - 'Settings>Alarm>Mux>Antennas'

Perform the following steps for each gate:

6. Navigate to 'Settings>RFID>Signal' and set the Tx Power to 4 watt
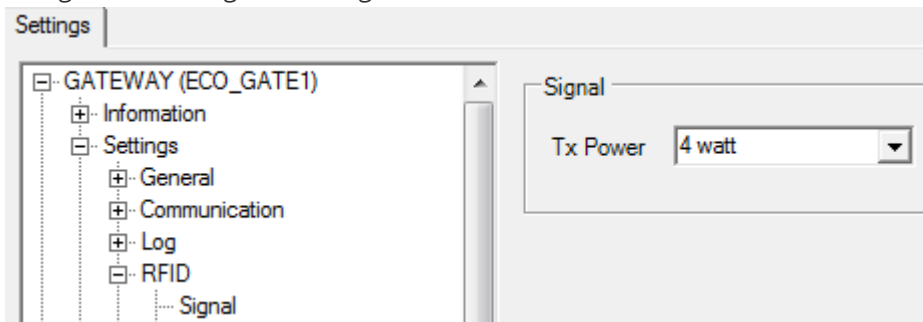
7. Navigate to 'Settings>Alarm>Alarm'.
    Make sure Alarm is enabled, select the alarm type, select the action on an alarm, set the buzzer volume and configure the activation time of the relays, lamps in the gate and buzzer.

> **ℹ** The buzzer is limited in hardware to a activation time of max. 1second. Any longer time configured in software will be overridden by the hardware.

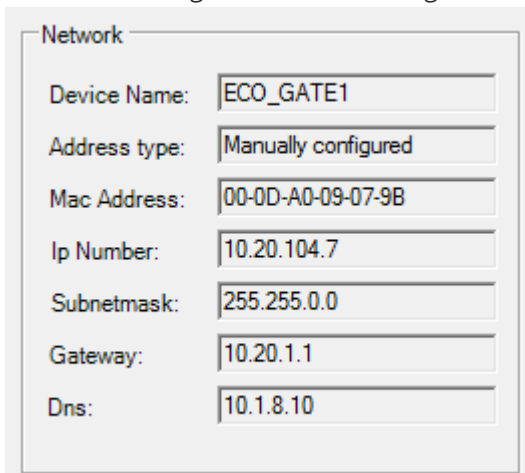When the master gate is connected to the network and\or Librix Online, the master's IP address and Librix Online settings need to be configured:

8. To set a static IP, configure DHCP or retrieve the assigned DHCP address, connect to the master with USB and RfTest.Lite
9. On the communication setup window, click on 'Get DHCP status' to get the currently assigned IP, either static or DHCP.
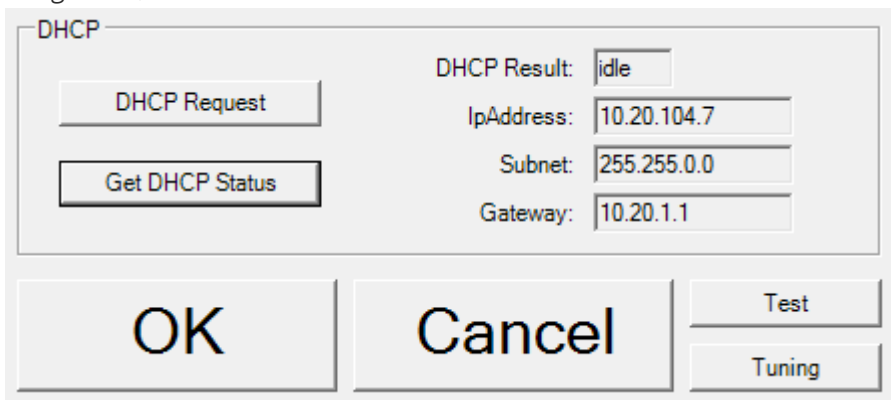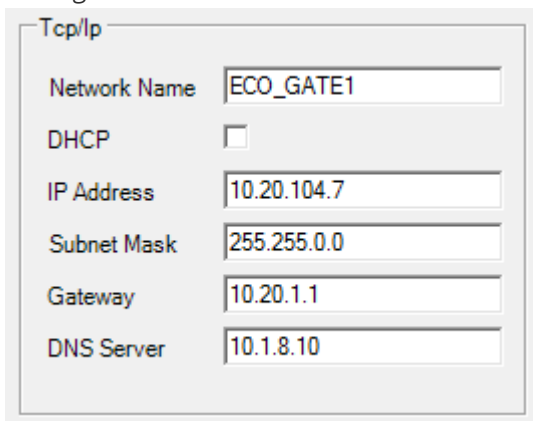

OR

Go to the settings window and navigate to 'GATEWAY>Information>Network'
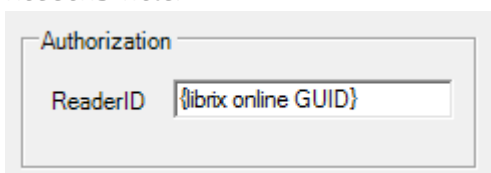
10. To configure the IP address, click Tuning to retrieve the settings and for the master gate navigate to 'Settings>Communication>TCP/IP' and in the window set all the appropriate settings
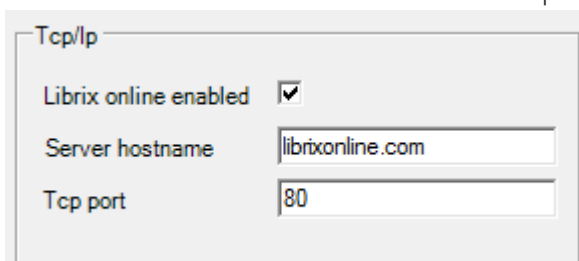
11. To configure the Librix Online connection, make sure that an EcoGate device in Librix Online is created and its GUID is written down.

12. Navigate to 'Settings>Librix Online>Authorization' and enter the Librix Online GUID in the ReaderID field.

13. Navigate to 'Settings>Librix Online>TCP/IP' and make sure Librix Online is enabled, the server hostname is 'librixonline.com' and the port is set to '80'

System operation

When the system is configured correctly, the master and slaves should start multiplexing. On the EcoReader this can be seen by a blinking 'TX LED' (see Figure 3) and on the match PCB by a blinking antenna selection led (see Figure 2).

When an alarm-enabled tag is held next to each gate, an alarm should be detected at this point.

When the system is not working:

- Check the CAN, Synchronization, Mux and alarm settings of each gate and make sure they are correct.
- Check if each slave is powered and stays powered. When it appears that they are switching on and off, the power supply might not be able to power the entire system. Replace it with a power supply with a higher output rating or add extra power supplies.

APPENDIX A.

Amount of gates in your setup (aisles)	Amount of power supplies needed	Gates (counted from master, where master = 1) that need extra power supply
1 (0 aisles)	1	1
2 (1 aisles)	1	1
3 (2 aisles)	1	1
4 (3 aisles)	2	1, 3
5 (4 aisles)	2	1, 3
6 (5 aisles)	3	1, 3, 5
7 (6 aisles)	3	1, 3, 5
8 (7 aisles)	4	1, 3, 5, 7
9 (8 aisles)	4	1, 3, 5, 7
10 (9 aisles)	5	1, 3, 5, 7, 9
11 (10 aisles)	5	1, 3, 5, 7, 9
12 (11 aisles)	6	1, 3, 5, 7, 9, 11
13 (12 aisles)	6	1, 3, 5, 7, 9, 11
14 (13 aisles)	7	1, 3, 5, 7, 9, 11, 13
15 (14 aisles)	7	1, 3, 5, 7, 9, 11, 13
16 (15 aisles)	8	1, 3, 5, 7, 9, 11, 13, 15

Frequently Asked Questions

Question 1. - Aisle width

Can I mount the gates closer together, than the recommended aisle distance?

Answer:

When possible, it is recommended to place the gates closer together. This will improve the density of the detection field.

Question 2. - Nearby objects

Can I mount the gates close to other objects?

Answer:

Although the PG45i gates were developed to be as insensitive as possible to outside disturbances, Nedap advises to follow the recommended distances from metal objects as outlined in this document. Nearby automatic doors or metal frames might cause de-tuning of the gates, which means they need to be tuned. In extreme cases tuning might not be possible, since the de-tuning is outside the range of the gates. However when the gates are installed within a standard library environment, this situation will be extremely rare.

Question 3. - Latest version of manual

Where can I find the latest version of this document?

Answer:

This documents can be found on the Nedap Library Solution support site or contact Nedap directly. Contact details can be found in the beginning of this document.

Question 4. - Installation time

How much time will an installation take?

Answer:

Installation time depends heavily on local conditions, like floor type, cabling conduit availability, etc.. However after the actual mounting of the gates and cabling, very less time is needed to configure the reader. The only major settings are setting the alarm type (EAS or AFI) and the amount of connected gates.

Let's assume that 2x PG45i gates with an EcoReader must be installed. When the following conditions are met, the total installation time will be around 0.5-1hours:
- concrete floor, which can be drilled in
- chemical plugs used
- cable conduits are present and ready for cabling

Question 5. - Mounting

Can I mount the gates on a metal floor or steel reinforced concrete floor?

Answer:

Detection
Nedap PG45i gates are designed to not be affected by their surroundings, including any metal floors, when it comes to detection. Besides that, a well-grounded metal floor provides a ground for the gate which improves the balance of the gate. A well balanced gate will radiate the power that is supplied to it, instead of reflecting it back to the reader. And in the end we want the power to be radiated to improve the detection, instead that it is reflected back to the reader.

Mounting
The PG45i gates are supplied without anchors or bolts. The best suitable anchor should be chosen for the used flooring and the mounting instructions of the anchor should be used. When no drilling in the floor is allowed, a metal, wooden or any other mounting plate can be used.

Question 6. - Network connection problem

I cannot contact the PG45i's EcoReader over its web interface

Answer:

Make sure the EcoReader is configured for DHCP or has a valid static IP address assigned to it. This can be done by connecting a pc or laptop to the EcoReader over the USB connection and by using the configuration and diagnostic tool RfTest.Lite.

Question 7. - CC module problem

The PG45i gate's EcoReader is not showing the settings I expect or is not multiplexing anymore.

Answer:

If the CC module is not connected correctly, the EcoReader inside the PG45i does not know it is in a PG45i gate and it will not act accordingly. If this is the case please check if:

- the connectors from match PCB to customer counter modules are connected correctly
- if the customer counter module is defective. The fastest and easiest way to do this, is by checking if a led is burning on the module.

Question 8. - Power supply problem

A part or the entire system is not working. There are no LEDs burning on the EcoReaders and match PCB's in some or all of the pg45i gates.

Answer:

In a system with one power supply, this power supply might be defective.

In a system with more than one power supply, and the master's supply is defective, nothing will work, since the master controls the entire system.

In a system with more than one power supply, and a powered slave's power supply is defective, the gates after the powered slave will not operate anymore. The system will work from master up to the powered slave.

Question 9. - Customer Counting direction testing, lights go off in test mode

With the PG45i it may happen that some of the lights will go off during the test mode.

Answer:

When the PG45i is in test-mode, and it will detect an item during this test mode, it will alarm and then turn off the light of that gate. At this point, the test-mode is still active but only the lights are off on some of the gates. If you want to prevent this from happening, you will need to make sure that there are no (alarming) items near the gate during the testing procedure.