

User Manual

Remote Controller Visionline 3G/4G

Configurations with LCU 6334 and RS485 Gateway V2

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July 2023

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FCC/ISED (IC) statements

FCC (Federal Communications Commission) statements

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.

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference; in which case, correction of the interference is at the user's expense.

Important: Changes or modifications to an intentional or unintentional radiator not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

The end product must be labeled to say 'FCC ID: Y7V-LCU6334' or 'FCC ID: Y7V-LCU6333', depending on which LCU (*lock controller unit*) that is applicable.

ISED (IC) statements

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions:

- (1) this device may not cause interference, and
- (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

- (1) l'appareil ne doit pas produire de brouillage, et
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

The LCU is labeled 'IC:9514A-LCU6334' or 'IC:9514A-LCU6333', depending on which LCU (*lock controller unit*) that is applicable.

The term "IC" before the equipment certification number only signifies that the Industry Canada technical specifications were met.

Le terme "IC" devant le numéro de certification signifie seulement que les spécifications techniques Industrie Canada ont été respectées.

1. Introduction

The *remote controller* gives remote control to different devices such as electric door strikes or motor locks on common doors, e.g. vehicle barriers, health clubs, conference suites, staff entrances or hotel garages. The term *remote controller* here refers either to a standalone configuration, or to the remote controller with *RS485 gateway V2*. Depending on configuration, the external devices to be controlled are connected to the card reader or to the *RS485 gateway V2*.

Note: For more information about *RS485 gateway V2*, see *User manual RS485 gateway V2*.

The remote controller gives a

- green LED signal when a valid card is presented at the reader
- red LED signal when an invalid card is presented at the reader

In certain situations yellow LED signals are given, e.g. if one or more user groups are blocked from the remote controller. For detailed information about different LED signals, see the appendix about LEDs and sound signals in *User manual Visionline*.

Note: There are no sound signals in the remote controller.

The remote controller must be mounted on a flat surface, either indoors or outdoors. If the unit is located outdoors, it should be mounted on a vertical surface under a covering roof. If mounting under a roof is not possible, a rain cover must be used to protect the unit from intense rain. **Note:** Avoid mounting the unit where it might be exposed to prolonged direct sunlight.

Note: For older interface boards (serial number earlier than *12370450001*), it is necessary to perform a pairing between LCU (*lock controller unit*) and interface board. See [Appendix C](#) for details on the pairing procedure. For newer interface boards, i.e. serial number *12370450001* or later, pairing is **not recommended**.

1.1 Use external relays on RS485 gateway V2

If external relays are applicable, follow steps 1-4 below.

1. Set up the *RS485 gateway V2* output to the required setting *NO/NC*; see *User manual RS485 gateway V2* for details.
2. The system will only control *OUT 1* (only one relay output, and it is set up to be *NO* or *NC* in step 1 above).
3. The external relays can be used for exit button (IN1), door switch (DSW; IN2) and privacy button (IN3):
4. In Visionline, set in the **Door details** for the concerned remote controller up that external relays should be used; see details in [section 4.1.1](#).

If Rex functionality is applicable (see details in *User manual RS485 gateway V2*), inputs/outputs according to [Table A1](#) are available.

2. Mount remote controller

2.1 Parts

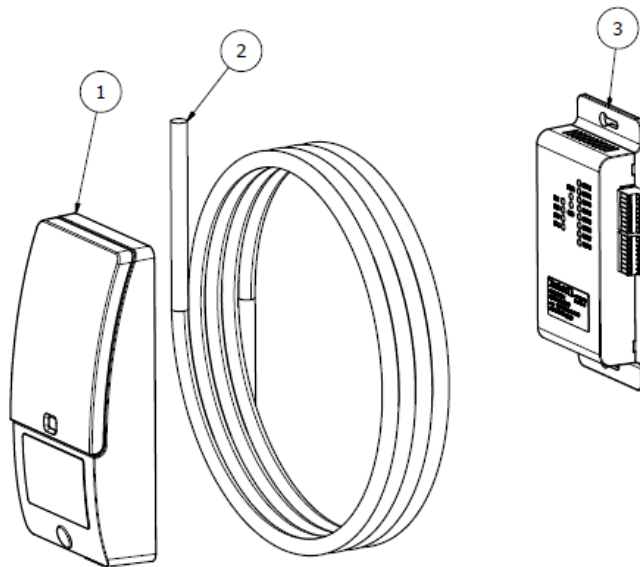


Figure 1: Parts included in a remote controller kit

Pos	Description
1	Remote controller Visionline 3G/4G RFID
2	Cable, low capacity, 20m, 3 pairs, 0.25mm ² / AWG 24
3	RS485 gateway V2

Table 1: Description of the parts in Figure 1

2.2 Dimensions

Dimensions in mm (inches)

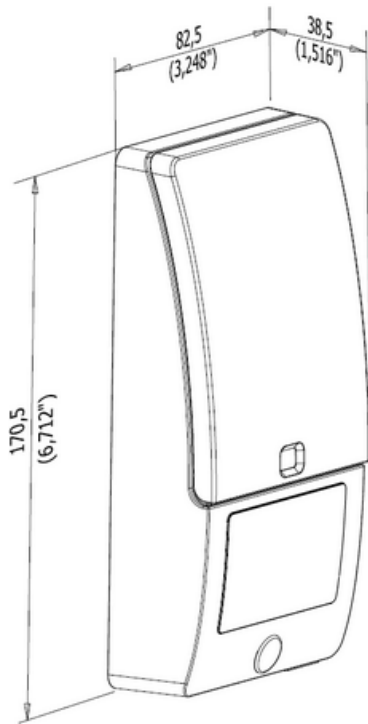


Figure 2: Dimensions for remote controller

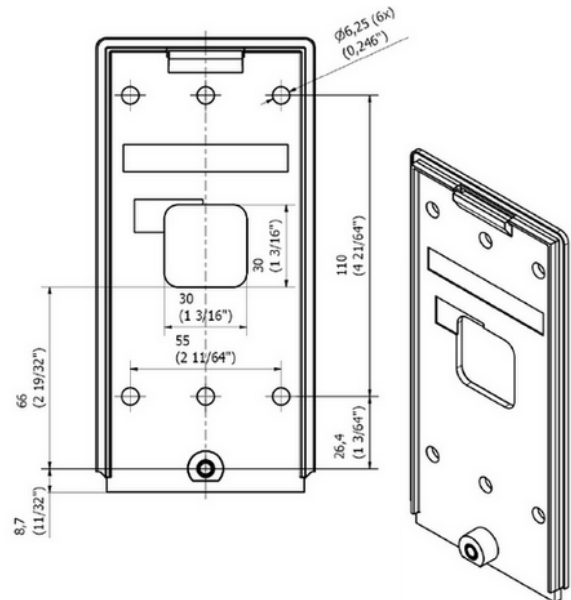


Figure 3: Dimensions for mounting plate

Note: The screws for installing the mounting plate to the wall are not included at delivery.

2.3 Mounting instruction

2.3.1 To plan the mounting

- If the heating element is used, there is a communication cable length limitation of max. 20 m/yds; see Table 3 in [section 3.3](#) for detailed information. For other cable data, see the applicable configuration section [3.4.1-3.4.3](#).
- Make sure to install the *RS485 gateway V2* in a secured area.
- Make sure to have enough space underneath the remote controller since the service interface used at initiation, firmware upgrade etc with *Lock Service 3G* is located underneath.

2.3.2 Tools needed

- Torx TR20
- Torx Plus IP8
- Flathead screwdriver for wiring terminals

2.3.3 To prepare the remote controller for mounting



Figure 4: Removal of escutcheon

1. Remove the escutcheon by unscrewing the bottom mounting screw.
2. Slide the escutcheon upwards and lift it out from the bottom side.
The escutcheon will now be released from the back plate.

When these two steps are performed, go to [section 2.3.4](#) for further information about the mounting. When the remote controller has been mounted, follow [section 2.3.5](#).

2.3.4 Step-by-step-mounting

Note: See [Appendix B](#) for a picture of the parts mentioned in the instruction below.

1. Position the mounting plate on the wall and mark where it should be mounted. For dimensions of the mounting plate, see [section 2.2](#).
2. Drill a hole for the cables.
3. Pull the cables through the wall. Fill/seal the hole.
4. Mount the mounting plate securely with four suitable screws.

Note: Mounting screws are not included.

5. Connect the wires to the interface board (see details in [section 3.1](#)) according to the applicable configuration. For the stand-alone configuration, see [section 3.4.1](#).
For online configurations with *RS485 gateway V2*, see sections [3.4.2-3.4.3](#).
6. **If the heating element should not be used**, remove the two jumpers from the heating element; see in Figure 5 where they are located. In case the heating element should be used in the future, let instead the jumpers be on the heating element but put jumper 1 on pins 2 and 3 and jumper 2 on pins 4 and 5. See [section 3.3](#) for more information about the pins and the entire heating element.

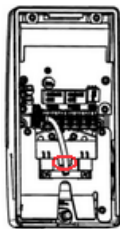


Figure 5: Heating element jumpers

7. Switch the power on. **Note: A green LED on the interface board of the remote controller indicates when the power is on.**
8. To fasten the escutcheon, insert and slide it downwards until it is aligned with the mounting plate and the hole for the set screw. Mount the set screw using a *TR20 driver*. Cover the set screw by mounting the plastic plug.



Figure 6: Mounting of escutcheon

Important: For steps 9-12 below, make sure that the remote controller and *Visionline/Lock Service 3G* both have the same status, i.e. either both in demo mode or both with system ID set. The system ID can be set in the remote controller either with a system ID card (see *Setup manual Visionline*) or with *Lock Service 3G* (see *Quick reference guide Lock Service 3G*).

9. Make sure that the remote controller has got the correct firmware version, i.e. latest available version of remote controller firmware for *Visionline*. The version

is read out with the service PC and the software *Lock Service 3G*, which is also used for uploading the correct firmware to the remote controller. See *Quick reference guide Lock Service 3G* for detailed information.

10. For interface boards of certain older batches, it is necessary to perform pairing of LCU (*lock controller unit*) and interface board; see [Appendix C](#) for details.
Important: Pairing is not recommended for newer interface boards (serial number 12370450001 or later).
11. **If the remote controller should be used in an online configuration** (see sections [3.4.2-3.4.3](#)), the remote controller should be set in online mode with an *RS485 configuration card* which is issued in the Visionline software.
For more information on how to issue the card, see *Setup manual Visionline*.
12. Initiate the remote controller according to [chapter 4](#).

2.3.5 To check the installation

To make sure that the installation is properly performed, the steps below should be followed:

1. The *RS485 gateway V2* is mounted correctly in a secured area.
2. All cables are properly fixed and located either onto the wall or in surface conduits.
3. No cables are pinched.
4. The cable hole in the wall is filled or sealed.
5. All external devices are functioning.

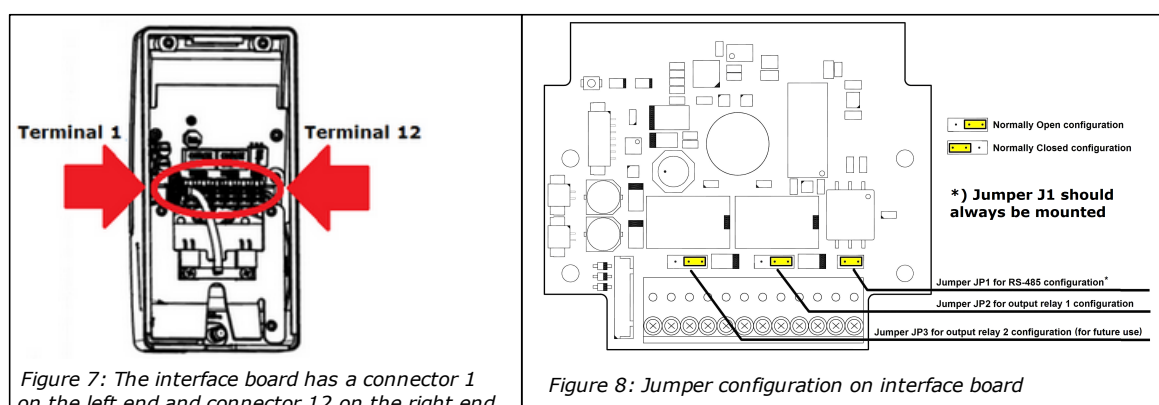
3. Electrical specification

See [Appendix A: Quick reference of technical data](#) for details about current consumption, required power, maximum load etc.

3.1 Interface board connector

On the interface board (*PCB Assembly 3016*) which is located inside the remote controller, there is an interface board with the below connections.

1	Input voltage -	Internally connected to GND
2	Input voltage +	
3	Relay 2	Not in use
4	Relay 2	-''-
5	Relay 1	For electric door strike, motor lock or similar device
6	Relay 1	-''-
7	Door Switch	Internally connected to GND
8	Door Switch	
9	Exit Button	Internally connected to GND
10	Exit Button	
11	RS485: B	
12	RS485: A	Table 2



3.2 UPS (uninterruptible power supply)

If the system should operate also when the main power fails, the external power supply must be connected to an UPS (*uninterruptible power supply*). There is no separate connection of power to the heating element. If a heating element is installed, the power capacity for external power supply/UPS must meet this additional power requirement. To decide the required capacity of power supply/UPS, the power consumption of all external connected equipment such as electric door strike or motor lock must also be added.

3.3 Heating element

A heating element is included in the remote controller. At delivery, it is configured for 24VDC; see Figure 9. In high humid climate installations, the heating element is mandatory to use.

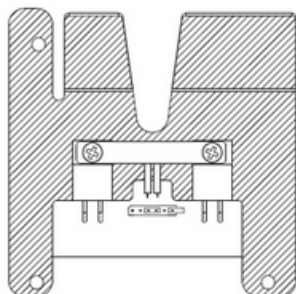


Figure 9: Heating element

- If the heating element should not be used, it should be set out of function. See the [mounting section 2.3.4](#) for details.
- There is no separate connection of power to the heating element. If a heating element is installed, the power capacity for external power supply/UPS must meet this additional power requirement.
- The jumpers on the heating element must be connected according to the output voltage for the external power supply.
- Please follow the instructions for cable lengths in Table 3 below.

Power	Heating element	Cable length
12VDC	full power	10 m/yds
12VDC	half power	20 m/yds
24VDC	full power	20 m/yds

Table 3: Communication cable length for different heating element configurations

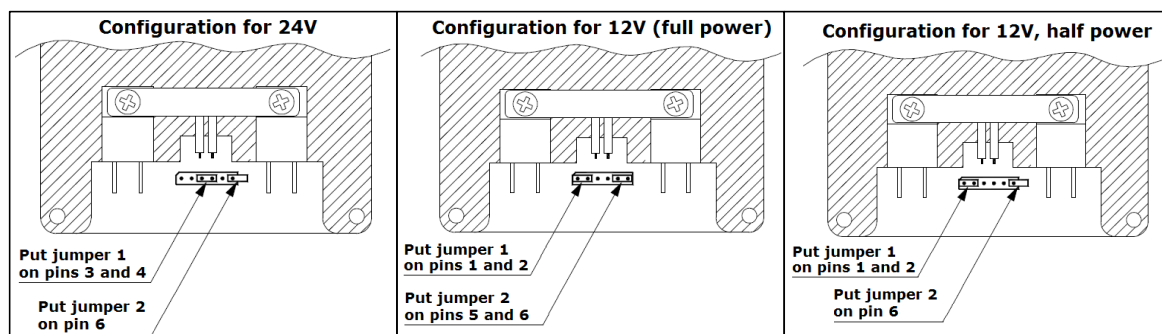


Figure 10: Heating element configurations

3.4 Configurations

Three different configurations are described in the following sections:

- [offline configuration](#): remote controller connector configuration; stand-alone
- [RS485 gateway V2 connected to Power over Ethernet \(PoE\) and remote controller connected to external power supply](#)
- [remote controller and RS485 gateway V2 connected to external power supply](#)

Note: For operation of strikes etc, it is possible to use either the relay inside the remote controller or to use one or more of the 8 relay outputs of the RS485 gateway V2.

3.4.1 Remote controller connector configuration (stand-alone)

- Make sure that you have the latest version of remote controller firmware for Visionline. To read out firmware version and upload new firmware, use the service PC and *Lock Service 3G*; see *Quick Reference Guide Lock Service 3G* for detailed information.

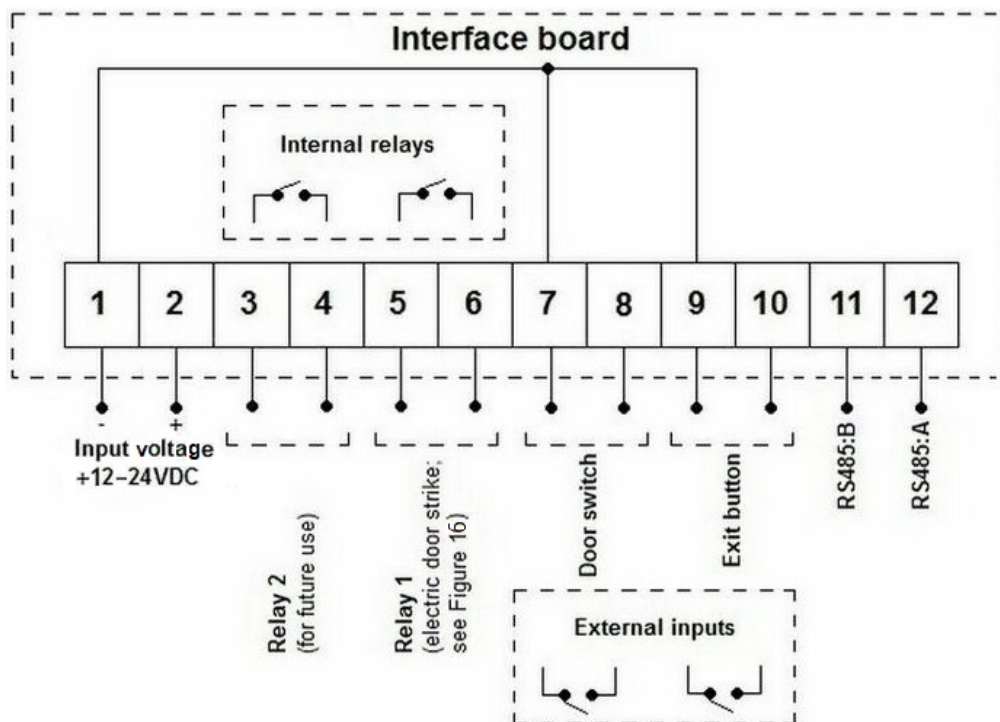


Figure 11: Connection terminals on the interface board

3.4.2 RS485 gateway V2 connected to Power over Ethernet; RC connected to external power supply

- Make sure that you have the correct firmware, i.e. latest available version of remote controller firmware for Visionline. To read out firmware version and upload new firmware, use the service PC and *Lock Service 3G*; see *Quick reference guide Lock Service 3G* for details.
- The maximum load is NOT the same for a relay output on the *RS485 gateway V2* as for a relay output on the interface board connector; see details in [Appendix A](#).
- The PoE device must be compliant with *UL 294B*.
- If external relays on the *RS485 gateway V2* are to be used, see [section 1.1](#) for details.
- If the *RS485 gateway V2* is powered by PoE, do NOT power the remote controller by the voltage supplied from the *RS485 gateway V2*.
- The cable 2x2, which is used between the remote controller and the *RS485 gateway V2*, shall be of TP (*twisted pair*) type with a conductor area of minimum 0.25mm² / AWG 24 and shielded if the length exceeds 20 m/yds; LiYCY/UL 2919. In case of shield, one end shall be connected to protective ground.
- All cables in the configuration are TP cables specified as above, except for the cable between *RS485 gateway V2* and LAN which is of CAT5 type or higher.
- The maximum length for each cable is 30 m/yds.
- A green LED on the interface board of the remote controller indicates when the power is on.

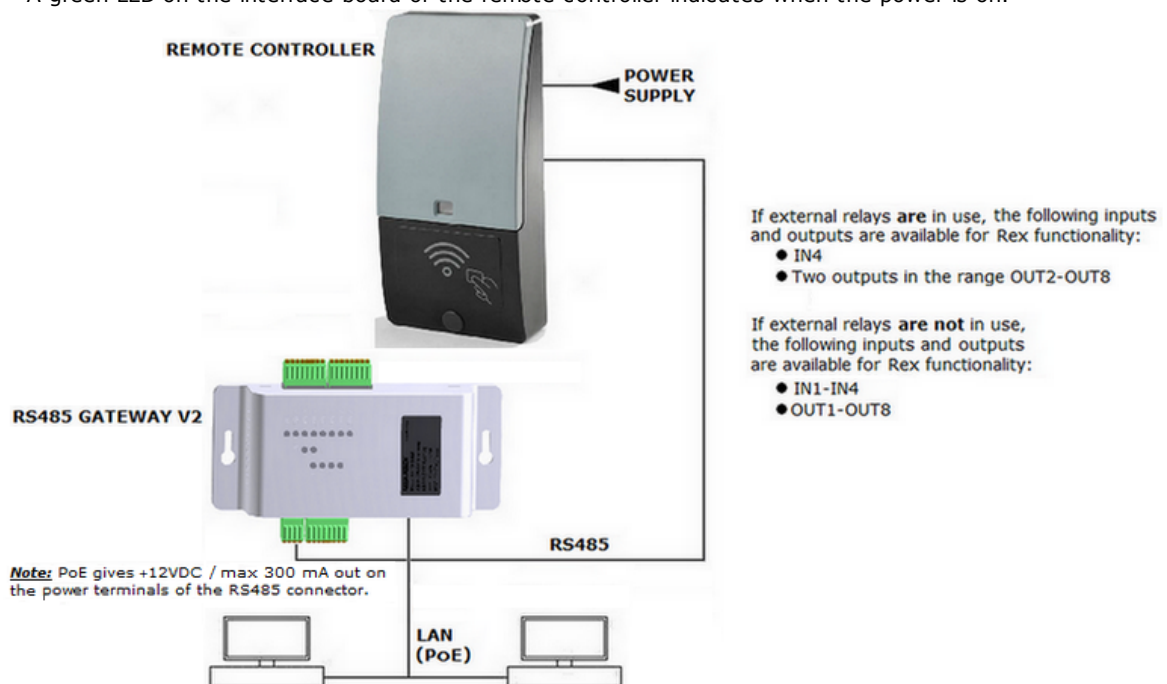


Figure 12: Configuration overview when the *RS485 gateway V2* is connected to Power over Ethernet and the remote controller is connected to an external power supply; maximum one remote controller per *RS485 gateway V2*. For detailed information about connector on the remote controller etc, see the first sections of [chapter 3](#). For details about current consumption, required power, maximum load etc, see [Appendix A](#).

See [Figure 13](#) for a detailed connection picture.

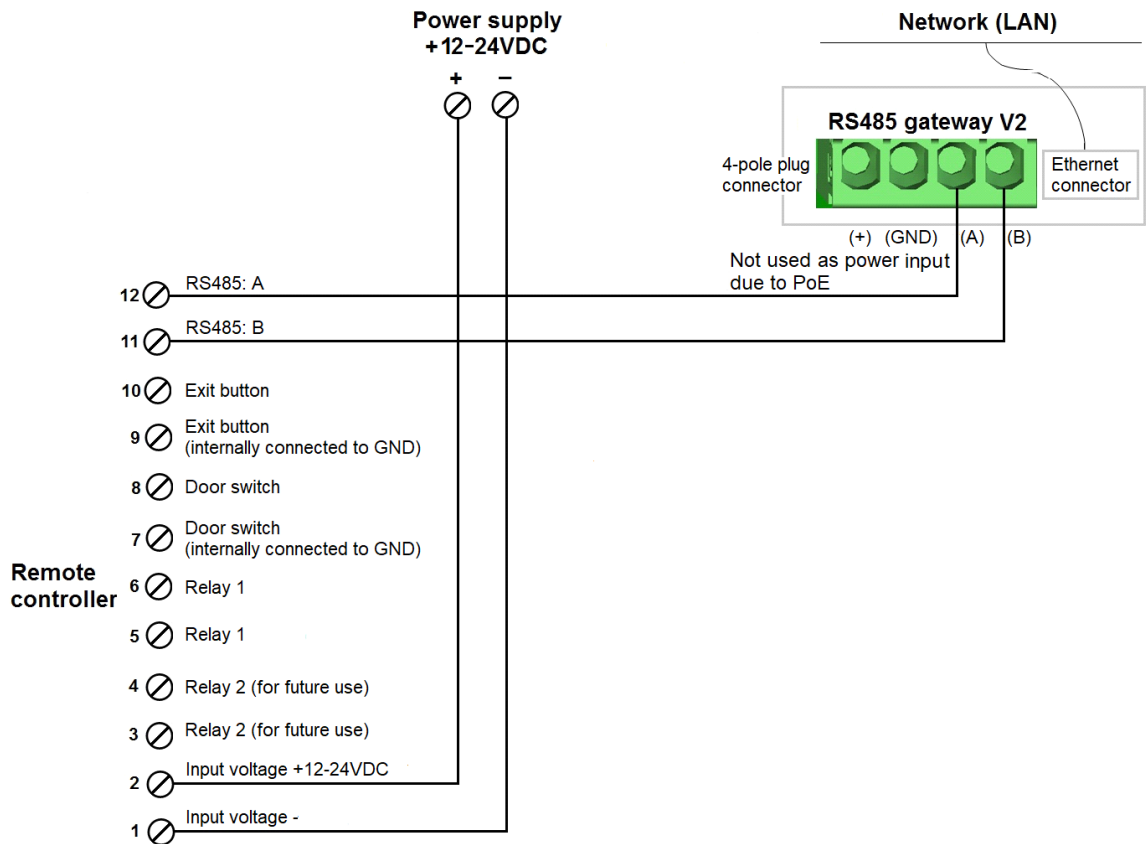


Figure 13: Detailed connection when the RS485 gateway V2 is connected to Power over Ethernet and the remote controller is connected to an external power supply; maximum one remote controller per RS485 gateway V2. See [section 3.4.1](#) for details about terminals 3-12 on the remote controller. For more information about terminals 5-10, also see [section 3.5](#).

3.4.3 Remote controller and RS485 gateway V2 connected to external power supply

- Make sure that you have the correct firmware, i.e. latest available version of remote controller firmware for Visionline. To read out firmware version and upload new firmware, use the service PC and *Lock Service 3G*; see *Quick reference guide Lock Service 3G* for details.
- The maximum load is NOT the same for a relay output on the *RS485 gateway V2* as for a relay output on the interface board connector; see details in [Appendix A](#).
- If external relays on the *RS485 gateway V2* are to be used, see [section 1.1](#) for details.
- The cable 2x2, which is used between the remote controller and the *RS485 gateway V2*, shall be of TP (*twisted pair*) type with a conductor area of minimum 0.25mm² / AWG 24 and shielded if the length exceeds 20 m/yds; LiYCY/UL 2919. In case of shield, one end shall be connected to protective ground.
- **If the heating element is not used**, the maximum TP cable length is 30 m/yds. **If the heating element is used**, the maximum recommended TP cable length is (depending on heating element configuration) 20 m/yds or 10 m/yds respectively; see [section 3.3](#) for further information.
- All cables in the configuration are TP cables specified as above, except for the cable between *RS485 gateway V2* and LAN which is of CAT5 type or higher.
- The maximum length for each cable is 30 m/yds.
- A green LED on the interface board of the remote controller indicates when the power is on.

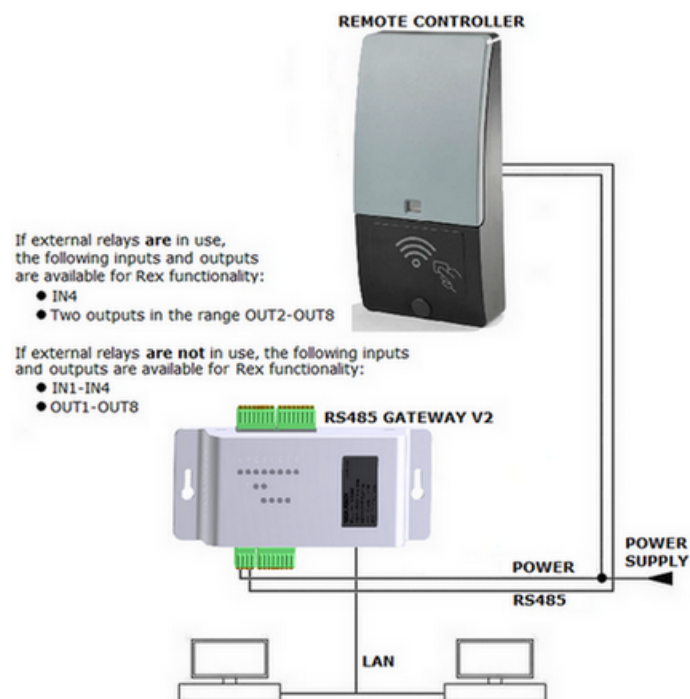


Figure 14: Configuration overview when remote controller and RS485 gateway V2 are connected to an external power supply; maximum one remote controller per RS485 gateway V2. For detailed information about connector on the remote controller etc, see the first sections of [chapter 3](#). For details about current consumption, required power, maximum load etc, see [Appendix A](#).

See [Figure 15](#) for a detailed connection picture.

Important: Use the same external power supply for the RS485 gateway V2 and the remote controller, i.e. connect as described in Figure 15. This is to make sure that the ground is common for the *RS485 gateway V2* and the remote controller.

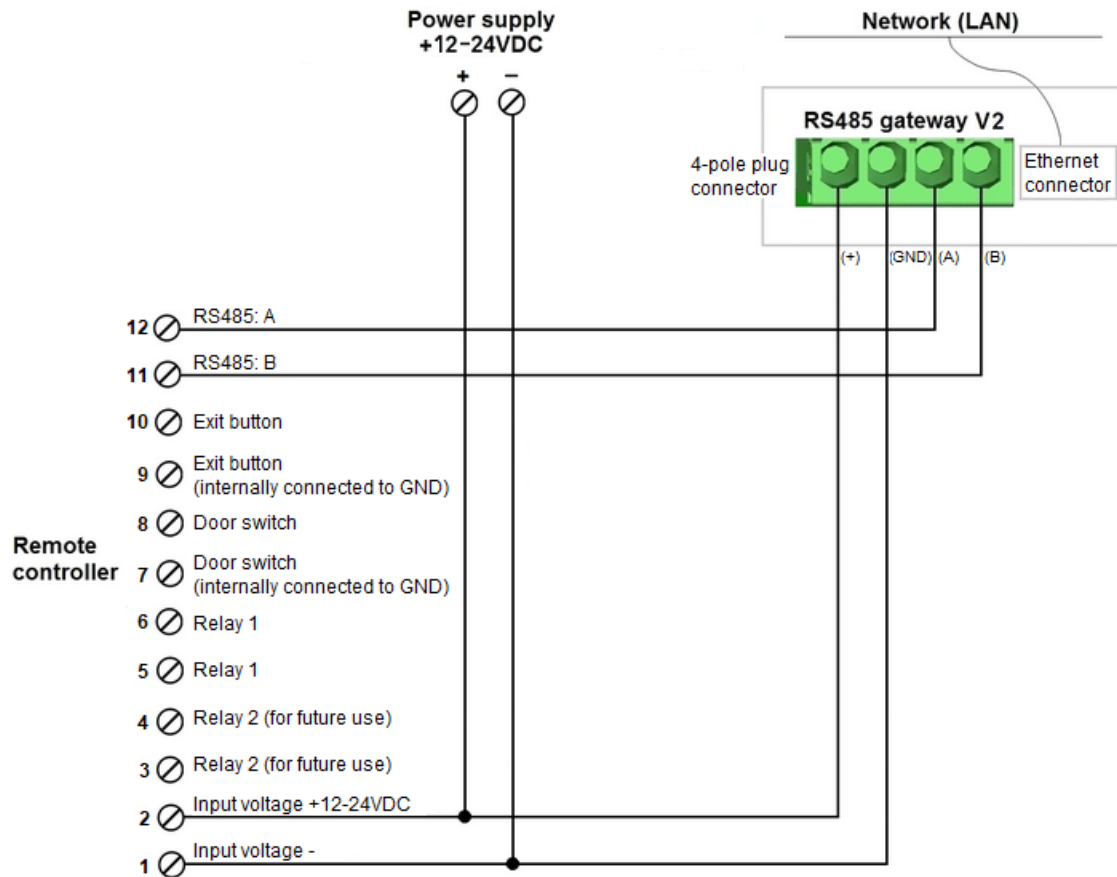


Figure 15: Detailed connection when remote controller and RS485 gateway V2 are connected to an external power supply; maximum one remote controller per RS485 gateway V2. See [section 3.4.1](#) for details about terminals 3-12 on the remote controller. For more information about terminals 5-10, also see [section 3.5](#).

3.5 Connect devices directly to remote controller

Note: If external relays on RS485 gateway V2 are applicable (see [section 1.1](#) for details), the devices are instead connected to the RS485 gateway V2.

When the door is unlocking, the relay switches on and contact between terminals 5 and 6 is established.

3.5.1 Electric door strike

A transient suppression diode shall be mounted in parallel directly on the connections of the electric door strike. The diode is used for noise reduction. The diode supplied with this unit is bi-directional which means that the polarity does not matter. Maximum voltage when using this diode is 24VDC.

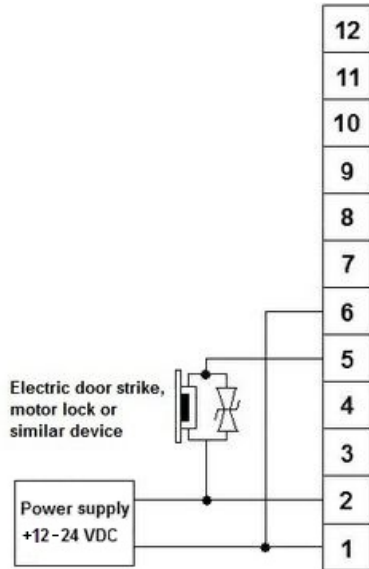


Figure 16: Wiring example with a single power supply for both remote controller and electric door strike, motor lock or similar device

3.5.2 Motor lock

Normally, no transient suppression diode is used.

3.5.3 Exit button

An exit button can be connected to the exit inputs of the remote controller; when the button is pushed, the remote controller performs an opening. If the door is in stand open mode, nothing will happen when the button is pushed.

3.5.4 Exit remote controller

The exit button input can be connected to another remote controller, if access should be required also when leaving a building.

3.5.5 Door switch

It is possible to connect a door switch to the remote controller. The door switch must have closed contacts when the door is closed.

4. Initialization and service functions

4.1 Prepare for initialization

When the remote controller has been mounted and connected according to [chapter 2](#) and [chapter 3](#), the following steps should be performed:

- Remote controllers are set up as doors in the Visionline software. See [section 4.1.1](#) for setup of a remote controller.
- If the remote controller should be used in an online configuration (i.e. any of the configurations with *RS485 gateway V2*; see sections [3.4.2-3.4.3](#) for detailed information), the remote controller should **before initialization** be set in online mode with an *RS485 configuration card* issued in the Visionline software. If the *RS485 gateway V2* is used, this requires that the online option is set and that a device is set up; see *User manual Online option*.
- See *Quick reference guide Lock Service 3G* for information on how to download data from the server to the service PC.

Note:

4.1.1 Set up remote controller in Visionline

1. Double click on **Doors** under the **Lists** tab in the navigation window.
2. Click **Add** to add a remote controller; the **Door Details** dialog is shown.

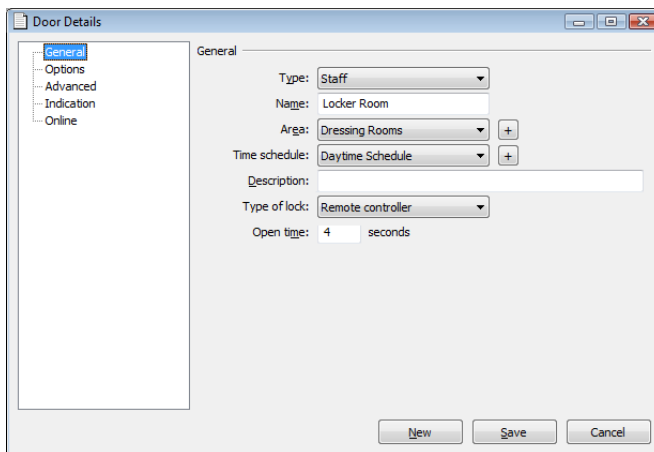


Figure 17

3. Choose the applicable **Type** of door.
4. Enter a **Name** for the remote controller.
5. If the door type is **Guest Entrance** or **Foyer**, enter at **Room Interval** the interval of rooms which is assigned for the door.
6. At **Area**, choose what door area the door shall belong to; should there not be a suitable one, make a new door area by clicking the

 button.

7. At **Time schedule**, choose if applicable what time schedule the door shall belong to; should there not be a suitable one, make a new time schedule by clicking the

 button.

8. If desired, enter a **Description**.
9. At **Type of lock**, choose 'Remote controller'.
10. The **Open time** for the remote controller is by default 4 seconds but can be changed; the open time can be 1-30 s.
11. Under the **Advanced** alternative in the left part of the **Door Details** dialog, some parameters can be set if e.g. a door switch or exit button should be used. See *User Manual Visionline* (section about *Doors*) for further information.
12. Click **New** or **Save** (or **Update**, if an existing remote controller was modified).

Under the **Options** alternative in the left pane of the **Door Details** dialog:

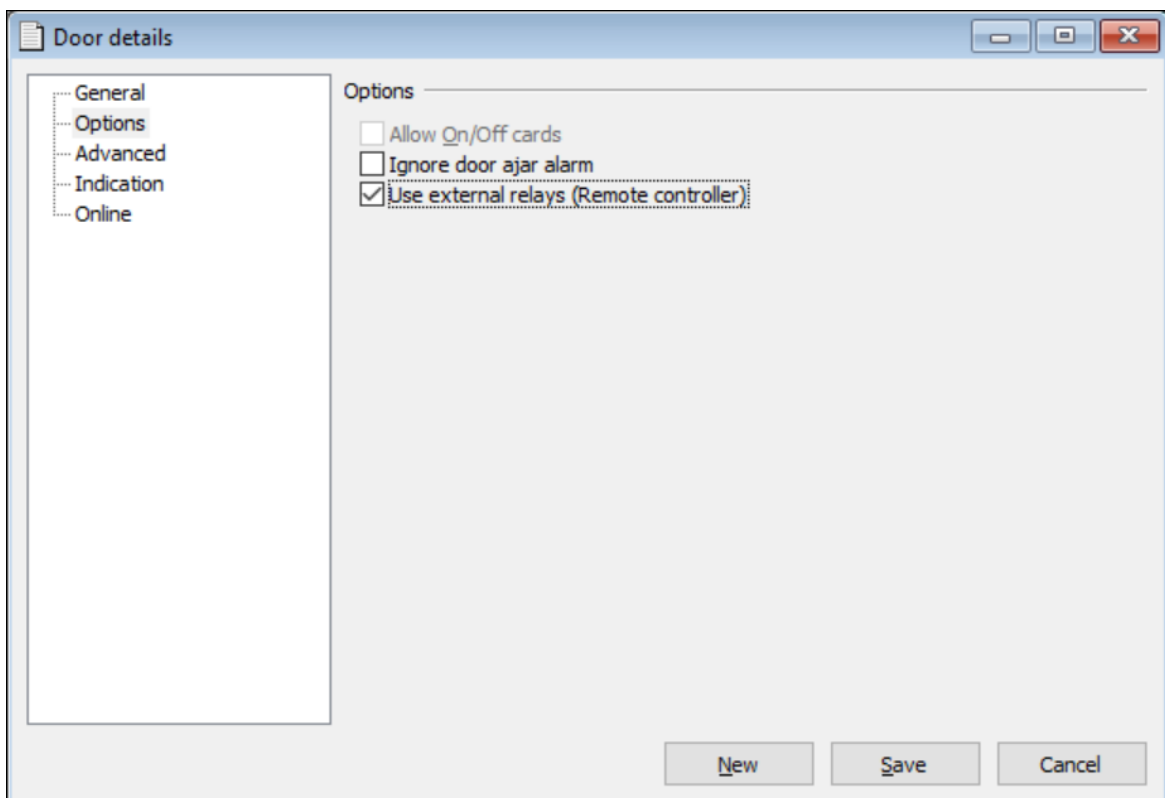


Figure 18

13. If external relays on the *RS485 gateway V2* should be used, mark the checkbox 'Use external relays (Remote controller)'.

Note: The **Indication** and **Online** alternatives in the left pane of the **Door Details** dialog are not applicable.

4.2 To initialize the remote controller

For all operations described in this entire section 4.2, make sure that the remote controller and *Lock Service 3G/Visionline* both have the same status, e.g. either both demo or both with system ID. The system ID can be set in the remote controller either with a system-ID card (see *Setup manual Visionline*) or with *Lock Service 3G* (see *Quick reference guide Lock Service 3G*). Note that from Visionline 1.28.0 and onwards, sett

The remote controller is initialized with a service PC with the software *Lock Service 3G*. The initialization can be performed either before or after the system-ID is set. When a remote controller is initialized, parameters such as the below are transferred:

- calendar
- date and time (if that is chosen)
- remote controller number
- opening time
- opening mode
- cancel list

4.2.1 To initiate with Lock Service 3G

For information about initiating the remote controller with the service PC and *Lock Service 3G*, see *Quick reference guide Lock Service 3G*.

4.3 Service functions

Note: For all operations described in this section 4.3, make sure that the remote controller and *Visionline/Lock Service 3G* both have the same status, e.g. either both demo or both with system ID. The system ID can be set in the remote controller either with a system ID card (see *Setup manual Visionline*) or with *Lock Service 3G* (see *Quick reference guide Lock Service 3G*).

4.3.1 Read-out

The read-out can be performed either with *Lock Service 3G* or with a read-out card.

If using *Lock Service 3G*, it is possible to read out 2000 events.

4.3.1.1 Read-out with Lock Service 3G

For information about read-out with the service PC and the software *Lock Service 3G*, see *Quick reference guide Lock Service 3G*.

4.3.1.2 Read-out with card

To issue a *read-out card* (or *read-out card advanced*) in Visionline:

1. Double click on **Read-out** (or, if applicable, **Read-out Advanced**) under the **Cards** tab in the navigation window.
2. Make the applicable choices/enter the applicable fields etc in the card dialog.
3. For cards of type **Read-out Advanced**, it is possible to read out only new events, i.e. events that have not been marked as read in the remote controller. In this case, check **Only new events**. In order to read only new events, check **Mark events as read**.
4. When all information has been entered, click **Make card**; present a card at the encoder.

To make a read-out:

1. Present the card at the remote controller; there is a yellow continuous LED while the information is being transferred. Wait for a short green LED flash before retracting the card, or the operation will not be successful. **Note:** One *read-out card* can be used in several remote controllers. When the card is full, three short red LED flashes will alert the user.

To transfer the information to the ASSA ABLOY Hospitality PC for processing:

1. Click the icon **Read events from card** (or, if applicable, **Read parameters from card**) and present the card at the encoder.
2. Click **Read card** to see the fetched events or parameters. The events/parameters can only be fetched from the card once, then they are erased from the card; they can however be read out from the remote controller again.

4.3.2 Firmware upgrade

For information about firmware upgrade with the service PC and *Lock Service 3G*, see *Quick reference guide Lock Service 3G*.

4.3.3 Cold reset

For information about cold reset, see *Quick reference guide Lock Service 3G*.

5. To check the remote controller

1. Make sure that all wires are attached correctly, as described in this manual (see configurations in [section 3.4](#)).
2. Verify that the jumpers for the heating element (see [section 3.3](#) for details) are set to the correct voltage (or are removed, if used in a dry indoor installation).
3. Turn on external power.
4. Initiate the remote controller; see sections [4.1](#) and [4.2](#) of the manual.
5. Press the exit button (if used) and make sure that the attached strike or motor lock operates.
6. Present a valid keycard, and make sure that
 - the LED on the remote controller emits a green light
 - the attached strike or motor lock operates.
7. Present a *Check Zigbee status* card (issued in Visionline) and make sure that the LED emits a green light; this verifies that the remote controller is online.
8. If connected, make sure that the heating element provides heat (the remote controller should after some time feel a bit warm).

Appendix A: Quick reference of technical data

Dimensions, remote controller (WxHxD):

Outside: 82.5 x 170.5 x 38.5 mm (3.25" x 6.71" x 1.52")

Dimensions, mounting plate:

See [section 2.2](#).

Electrical specification:

- 12-24VDC input voltage for the remote controller
- 12-48VDC input voltage for the *RS485 gateway V2*
Important: Please note that 48VDC is only for the *RS485 gateway V2* and not for the remote controller.
- If PoE is used, the PoE device must be compliant with *UL 294B*.
- Input terminals of the *RS485 gateway V2* can handle 12-48VDC; non-polarized
- **IN1** = Exit
Note: The actual exit button is not supplied by ASSA ABLOY Hospitality.
- **IN2** = Dsw (door switch)
- **IN3** = Privacy
 - The privacy functionality also requires that the checkbox 'Use external relays' has been set up in the Visionline **Door details** dialog(s) for the concerned remote controller(s); see details in [section 4.1.1](#).
 - Note:** The actual privacy button is not supplied by ASSA ABLOY Hospitality.
- If Rex functionality is applicable (see details in *User manual RS485 gateway V2*), the below inputs/outputs are available in remote controller configurations:

	External relays are not in use	External relays are in use
Inputs available for Rex	IN1-IN4; see details above	IN4
Outputs available for Rex	OUT1-OUT8	Two outputs in the range OUT2-OUT8

Table A1

- The maximum current consumption for the remote controller is
 - **if the heating element is not used:** 150 mA
 - **if the heating element is used:** 1,5 A
 - Note:** There is no separate connection of power to the heating element. If a heating element is installed, the power capacity for external power supply/UPS (*uninterruptible power supply*) must meet this additional power requirement, and also power requirements according to the note above.
- The maximum current consumption for the *RS485 gateway V2* is 200 mA.

Appendix A: Quick reference of technical data

- To decide the required capacity of power supply/UPS, add the power consumption of:
 - remote controller
 - *RS485 gateway V2*, if applicable
 - all external connected equipment, e.g. electric door strike or motor lock, if applicable
 - heating element, if applicable
- The remote controller is in the online case connected to an *RS485 gateway V2* which has got 8 relay outputs.
- The electrical standard for the serial interface connecting the different modules is RS485.
- If the distance between the reader and the *RS485 gateway V2* is more than 20 m/yds, the cable should be shielded. The shield should be connected to protective ground at one end.
- The maximum length for each cable is 30 m/yds.
- **If the heating element is not used:** The maximum TP (*twisted pair*) cable length between remote controller and *RS485 gateway V2* is 30 m/yds. See sections [3.4.2-3.4.3](#) for details about the different configurations.
- **If the heating element is used:** The maximum recommended TP (*twisted pair*) cable length between remote controller and *RS485 gateway V2* is 20 m/yds or 10 m/yds, depending on whether full power or half power is used for the heating element according to [Table 3](#). See sections [3.4.2-3.4.3](#) for details about the different configurations.
- **Important:** The maximum load is NOT the same for a relay output on the *RS485 gateway V2* as for a relay output on the interface board connector; see below.

Maximum load for each relay output on the RS485 gateway V2:
48VDC / 400 mA

Maximum load for the relay output on the interface board connector:
0,4A @28VAC or 2A @28VDC resistive

Firmware upgrade:

See *Quick reference guide Lock Service 3G* for details.

Cold reset:

See *Quick reference guide Lock Service 3G* for details

Appendix B: Exploded view and component list

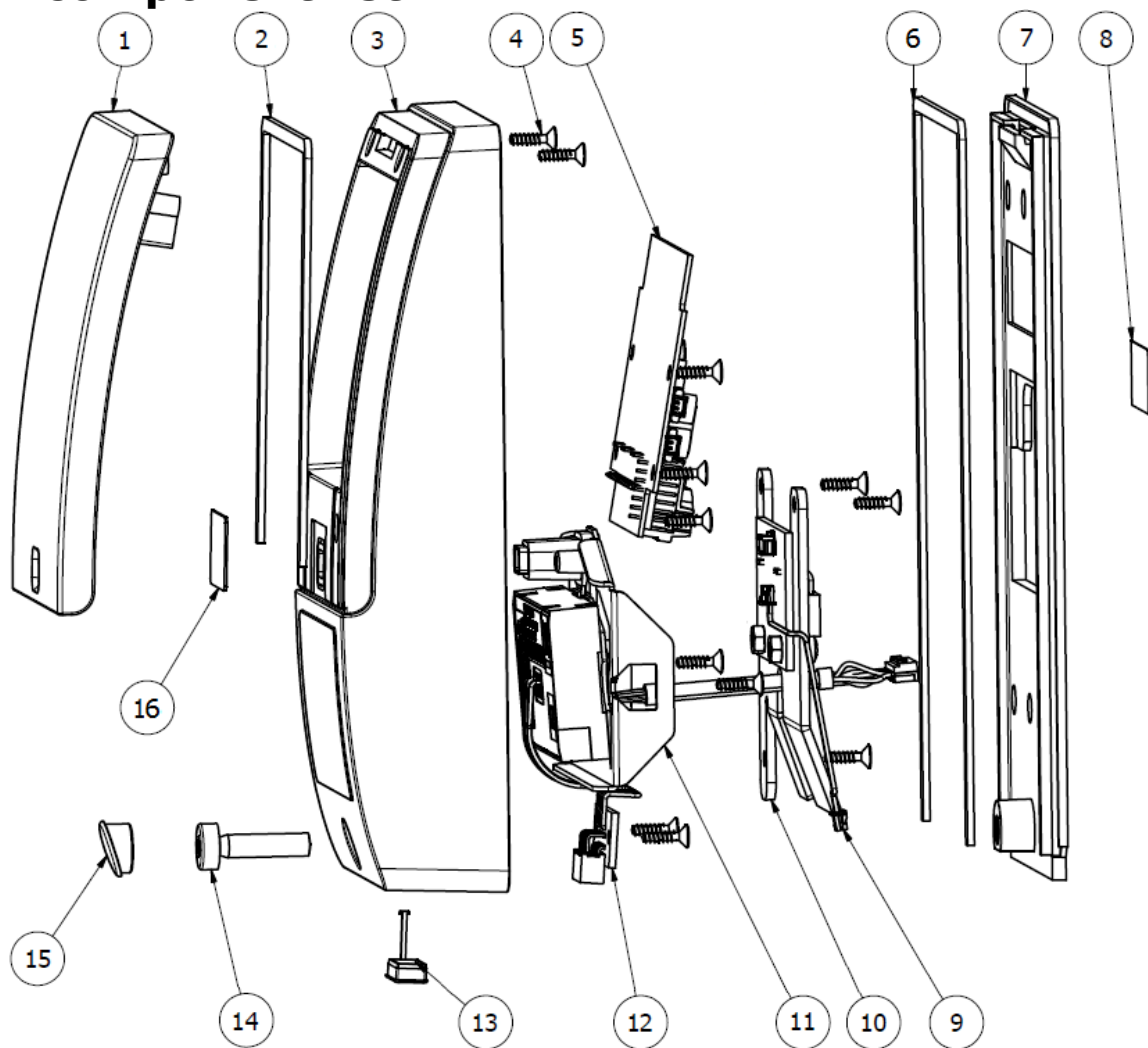


Figure B1

Pos	Description	Pos	Description
1	Front cover	9	Cable assy D02 - D02 Type 1
2	Self adhesive PVC foam 1,5 x 3 mm; 0,25m	10	Heating element
3	Box, RFID, wall reader	11	RFID module, assy
4	Screw, EJOT WN 5454, K 25 x 10	12	PCB Assy 3008
5	Interface board (PCB assy 3016)	13	Plug for connector
6	Self adhesive PVC foam 1,5 x 3 mm; 0,37m	14	Screw M5x20 Torx20
7	Mounting plate assy	15	Plug for M5 screw
8	Label	16	Front glass
			Table B1

Appendix C: To perform pairing (only for certain old boards)

On the back of the interface board, there is a label with serial number; see example marked with arrow in Figure C1. For interface boards delivered before *September 15, 2012*, which corresponds to serial numbers earlier than *12370450001*, it is necessary to perform a pairing between LCU (*lock controller unit*) and interface board. See below for details on how to perform the pairing.

Important: Pairing is not recommended for newer interface boards (serial number *12370450001* or later).



Figure C1

To perform pairing:

Note: *Lock Service 3G* of version 1.0.1 or higher is required.

1. Choose **Parameters** in the left pane of the *Lock Service 3G* window; the **General** tab will be shown. Connect the service cable to the remote controller and click the **Readout** button.
Note: If the checkbox 'Check time' is marked (default), the time in the remote controller will be compared with the time in the service PC. If the difference is 5 minutes or more, a question to set the time will be shown.
2. Make sure that 'Pairing external device' is NOT shown under 'Lock properties', i.e. that pairing has not been enabled in the remote controller.
3. Disconnect power for at least 1 minute, to have a proper power-up reset.
4. Power up the remote controller.
5. Before performing the pairing, make sure that events are sent from the remote controller to the Visionline server.
6. In *Lock Service 3G*, choose **Configure lock** in the left pane. Choose the configuration 'Enable pairing external device' in the drop-down-menu.
7. Connect the service cable to the remote controller and click the **Set** button. **Note:** Once the pairing has been done, the concerned interface board can only be used with the concerned LCU.

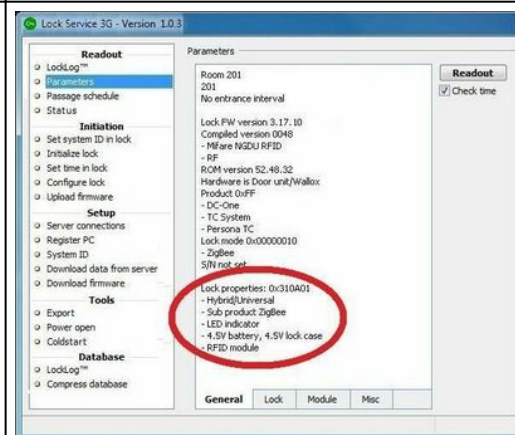


Figure C2

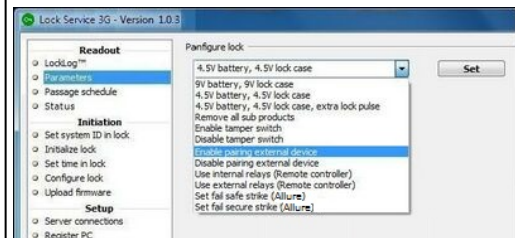


Figure C3

8. Make sure that a card with access to the concerned remote controller opens the relay on the interface board.
9. **If the remote controller should be used in an online configuration** (see sections [3.4.2-3.4.3](#)), the remote controller should be set in online mode with an *RS485 configuration card* which is issued in the Visionline software. For more information on how to issue the card, see *Setup manual Visionline*.
10. Initiate the remote controller according to [chapter 4](#).

Appendix C: To perform pairing

To replace an interface board

If an interface board which has been paired with an LCU needs to be replaced:

1. In *Lock Service 3G*, choose **Configure lock** in the left pane. Choose 'Disable pairing external device' in the drop-down-menu. Connect the service cable to the remote controller and click the **Set** button.
2. Disconnect power for at least 1 minute, to have a proper power-up reset.
3. Remove the faulty interface board.
4. Mount a factory new interface board in the remote controller.
5. Power up the remote controller.
6. Make sure that events are sent from the remote controller to the Visionline server.

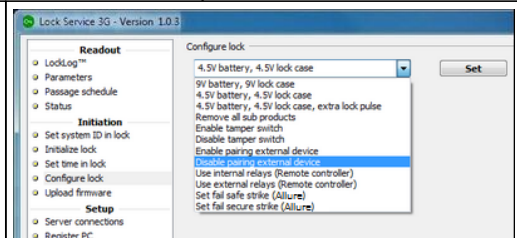


Figure C4

7. Make sure that a card with access to the concerned remote controller opens the relay on the interface board.
8. Set the time in the remote controller by using the *Lock Service 3G* configuration **Set time in lock**.
9. If applicable: set stand open in the remote controller again with a *stand open card*; see *User manual Visionline* for details on how to issue a stand open card.

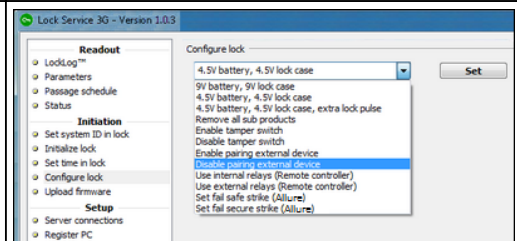


Figure C5

Note: As described [here](#), pairing should not be enabled for new interface boards (serial number 12370450001 or later).

Appendix D: Compliance with UL 294

PoE

If PoE is used (see configuration in [section 3.4.1](#)), the PoE device should be compliant with *UL 294B*.

Standby power

This product does not contain any standby power source, nor a separate input for a standby power supply.

Feature levels

The following feature levels, as specified by *UL 294* for Access Control System Units, are met:

- Destructive Attack Level II
- Line Security I
- Endurance Level IV
- Standby power I

Wiring method

The wiring method shall be in accordance with US National Electrical Code, *ANSI/NFPA 70*.

Test procedure

After installation of the elevator controller, see [chapter 5](#) for information on how to verify that the product is working correctly. There is no requirement for repeated testing at a regular basis.

Appendix D: Compliance with UL 294

Impaired operation

The following conditions must be fulfilled; if they are not, the result may be an impaired operation of the product:

- The remote controller may not be subject to direct rain
- The remote controller may not be exposed to prolonged direct sunlight
- The remote controller may not be connected to mains voltage or any voltage above 24VDC (48VDC for the *RS485 gateway V2*).
- The external power supply must provide sufficient current to operate both the remote controller and the connected equipment (strike, motor lock, heating element).
- The relay outputs may not be loaded beyond their specified capacity.
- The cables must be of specified type, and within the specified length; see details in [section 3.4](#).

To reduce risks

The following features are provided to reduce the risk of a fire or electric shock; do not in any way try to alter the design to bypass these protective elements:

- The remote controller has solid-state resettable fuse and voltage regulators with thermal shutdown and current-limit protection.
- Over voltage protection is added to prevent high voltage spikes from interfering with the operation of the remote controller.
- The heating element has a thermostat which limits the temperature.

Appendix E: Read more

Document name	Document number
Quick reference guide Lock Service 3G	66 1502 003
Setup manual Visionline	66 5013 019
User manual Online option	66 3081 004
User manual RS485 gateway V2	66 4040 005
User manual Visionline	4822114

Revision history

Date	Change	By
March 15, 2017	First release	KG
August 10, 2017	Clarified regarding input voltage for remote controller and RS485 gateway V2	KG
October 17, 2017	Added information about compliance with UL 294	KG
January 22, 2019	Rebranded the document	KG
July 6, 2023	• Clarified that pairing is only applicable for certain older batches • Removed information about initiation card since this card is removed from Visionline	KG

The ASSA ABLOY Group is the global leader in access solutions. Every day we help people feel safe, secure and experience a more open world.

ASSA ABLOY
Global Solutions

ASSA ABLOY Global Solutions APAC
apac.globalsolutions@assaabloy.com
Phone: +852 23162200
ASSA ABLOY Global Solutions EMEA
emea.globalsolutions@assaabloy.com
Phone: +47 69 24 50 00
ASSA ABLOY Global Solutions North America
nam.globalsolutions@assaabloy.com
Phone: +1 972 907 2273
ASSA ABLOY Global Solutions Latin America
lac.globalsolutions@assaabloy.com
Phone: +52 55 36 40 12 00

assaabloyglobalsolutions.com