SmartRelay, SmartRelay G2

Manual

02.12.2022

Simons≡Voss technologies

Content

1 Intended use

SimonsVoss SmartRelay is an electronic switch which can be activated with suitable ID media *such as transponders*. SmartRelay administration varies depending on the SmartRelay in question:

	ADMINISTRATION	PROGRAMMING
3063	LSM Basic, Business or Professional	SMART.CD
	LSM Starter	CD.STARTER *or* *SMART.CD*
MobileKey	Web application	MK.CD.STARTER

Some SmartRelays can be optionally programmed via internal LockNodes with suitable routers. However, a programming device should always be used to perform initial programming.

SmartRelays may only be used for the purposes described in this manual. No other use is permitted as it may cause damage to the SmartRelay.

NOTE

SmartRelays should always be programmed before installation and connection

2 General safety instructions

Signal word (ANSI Z535.6)	Possible immediate effects of non-compliance
DANGER	Death or serious injury (likely)
WARNING	Death or serious injury (possible, but unlikely)
PRUDENCE	Minor injury
IMPORTANT	Property damage or malfunction
NOTE	Low or none

WARNING

Blocked access

Access through a door may stay blocked due to incorrectly fitted and/or incorrectly programmed components. SimonsVoss Technologies GmbH is not liable for the consequences of blocked access such as access to injured or endangered persons, material damage or other damage!

Blocked access through manipulation of the product

If you change the product on your own, malfunctions can occur and access through a door can be blocked.

- Modify the product only when needed and only in the manner described in the documentation.

Do not swallow battery. Danger of burns from hazardous substances

This product contains lithium button cell batteries. Swallowing the button cell battery, in can result in severe internal burns leading to death in as little as two hours.

1. Keep new and used batteries away from children.
2. If the battery compartment does not close securely, cease using the product and keep it away from children.
3. If you think batteries have been swallowed or are in any part of the body, seek medical attention immediately.

Risk of explosion due to incorrect battery type

Inserting the wrong type of battery can cause an explosion.

- Only use the batteries specified in the technical data.

PRUDENCE

Fire hazard posed by batteries

The batteries used may pose a fire or burn hazard if handled incorrectly.

1. Do not try to charge, open, heat or burn the batteries.
2. Do not short-circuit the batteries.

IMPORTANT

Damage resulting from electrostatic discharge (ESD)

This product contains electronic components that may be damaged by electrostatic discharges.

1. Use ESD-compliant working materials (e.g. Grounding strap).
2. Ground yourself before carrying out any work that could bring you into contact with the electronics. For this purpose, touch earthed metallic surfaces (e.g. door frames, water pipes or heating valves).

Damage resulting from liquids

This product contains electronic and/or mechanic components that may be damaged by liquids of any kind.

- Keep liquids away from the electronics.

Damage resulting from aggressive cleaning agents

The surface of this product may be damaged as a result of the use of unsuitable cleaning agents.

- Only use cleaning agents that are suitable for plastic or metal surfaces.

Damage as a result of mechanical impact

This product contains electronic components that may be damaged by mechanical impacts of any kind.

1. Avoid touching the electronics.
2. Avoid other mechanical influences on the electronics.

Damage as a result of overcurrent or overvoltage

This product contains electronic components that may be damaged by excessive current or voltage.

- Do not exceed the maximum permissible voltages and/or currents.

Damage due to polarity reversal

This product contains electronic components that may be damaged by reverse polarity of the power source.

- Do not reverse the polarity of the voltage source (batteries or mains adapters).

Operational malfunction due to radio interference

This product may be affected by electromagnetic or magnetic interference.

- Do not mount or place the product directly next to devices that could cause electromagnetic or magnetic interference (switching power supplies!).

Communication interference due to metallic surfaces

This product communicates wirelessly. Metallic surfaces can greatly reduce the range of the product.

- Do not mount or place the product on or near metallic surfaces.

NOTE

Intended use

SimonsVoss-products are designed exclusively for opening and closing doors and similar objects.

- Do not use SimonsVoss products for any other purposes.

Malfunctions due to poor contact or different discharge

Contact surfaces that are too small/contaminated or different discharged batteries can lead to malfunctions.

1. Only use batteries that are approved by SimonsVoss.
2. Do not touch the contacts of the new batteries with your hands.
3. Use clean and grease-free gloves.
4. Always replace all batteries at the same time.

Qualifications required

The installation and commissioning requires specialized knowledge.

- Only trained personnel may install and commission the product.

Incorrect installation

SimonsVoss Technologies GmbH accepts no liability for damage caused to doors or components due to incorrect fitting or installation.

Modifications or further technical developments cannot be excluded and may be implemented without notice.

The German language version is the original instruction manual. Other languages (drafting in the contract language) are translations of the original instructions.

Read and follow all installation, installation, and commissioning instructions. Pass these instructions and any maintenance instructions to the user.

3 Product specific safety instructions

IMPORTANT

Unauthorised access

The relay in the controller can be short-circuited by unauthorised persons.

- Mount the controller with the relay in an environment that is protected against unauthorised access.

Unauthorised switching of the relay by magnet

The relay can switch unintentionally due to strong magnets nearby.

1. Mount the controller with the relay in an environment that is inaccessible to unauthorised persons with magnets.
2. Alternatively, operate the relay permanently activated (invert output and use NC+COM instead of NO+COM).

NOTE

Remove backup battery during storage

The backup battery is designed for power outages. Longer storage of the SmartRelay will drain the backup battery.

- If you store the SmartRelay for more than a week, remove the backup battery.

Perform a function test after installation or battery replacement.

4 Meaning of the text formatting

This documentation uses text formatting and design elements to facilitate understanding. The table explains the meaning of possible text formatting:

Example	button
☑ Example ☐ Example	checkbox
◉ Example	Option
[Example]	Tab
"Example"	Name of a displayed window
| Example |	Upper programme bar
Example	Entry in the expanded upper programme bar
Example	Context menu entry
▼ Example	Name of a drop-down menu
"Example"	Selection option in a drop-down menu
"Example"	Area
Example	Field
Example	Name of a (Windows) service
Example	Commands (e.g. Windows CMD commands)
`Example`	Database entry
[Example]	MobileKey type selection

5 General

5.1 Versions

SmartRelays are available in an extensive variety of versions for different product lines. Carefully check which SmartRelay is the right one for your use before placing an order.

SREL *(black)*		**SREL2** *(white)*	
G1	**G2**		
SREL	SREL.G2	SREL.W.G2	Basic version of SmartRelay 3063.
SREL.ZK	SREL.ZK.G2	SREL.W.ZK.G2	As the basic version of SmartRelay 3063, plus access control and time zone control.
SREL.ADV			As the access control version of SmartRelay 3063, but with additional functions for issuing.
		SREL2.G2.W	Basic version of SmartRelay2 3063.
		SREL2.ZK.G2.W	As the basic version of SmartRelay2 3063, plus access control and time zone control.
		SREL2.ZK.MH.G2.W	As the access control version of SmartRelay2 3063, but also with support for an internal MIFARE® card reader and connection options for a maximum of three external MIFARE® card readers.

	SREL	SREL .ZK	SREL .ADV
Authorised for up to 8,184 transponders	X	X	X
Authorised for up to 64,000 transponders			

Access control		X	X
Extended connection options			X
Support for MIFARE & Desfire cards			
Connection options for external card readers			

	SREL .G2	SREL .ZK.G2	SREL .W.G2	SREL .W.ZK.G2
Authorised for up to 8,184 transponders				
Authorised for up to 64,000 transponders	X	X	X	X
Access control		X		X
Extended connection options				
Support for MIFARE & Desfire cards				
Connection options for external card readers				

	SREL2 .G2.W	SREL2 .ZK.G2.W	SREL2 .ZK.MH.G2.W
Authorised for up to 8,184 transponders			
Authorised for up to 64,000 transponders	X	X	X
Access control		X	X
Extended connection options			
Support for MIFARE & Desfire cards			X
Connection options for external card readers			X

SmartRelay

The SREL provides simple yes/no authorisation for a maximum of 8,184 different transponders.

- **SmartRelay ZK**

  Similar to the basic version (SREL), but with the option of access event logging connected separately for the last 1,024 accesses (firmware version 4.0.01.15 and higher) with date and time, or day-time zones for up to five user groups and automatic locking and unlocking.

- **SmartRelay Advanced version**

  Similar to the ZK version but with the following additional functions:

  - Connection for external modules via a three-wire bus.
  - Connection to an external antenna.
  - Connections for serial ports to external time-and-attendance terminals or access control readers.
  - Connection for external LED or buzzer.

- **SmartRelay 2**

  The SREL2.G2.W is basically used with transponders, i.e. as purely "active" components. There is also the option of using a CompactReader and thus operating the SREL2 with Mifare Classic/ DERFire® cards. This SmartRelay provides simple yes/no authorisation for a maximum of 64,000 different transponders.

- **SmartRelay 2 ZK**

  The same as the basic version (SREL2.G2), but with the option of access event logging with date and time connected separately for the last 1,024 accesses, or day time zones for up to 100 user groups and automatic locking and unlocking (time-controlled switch-over). This version can also be used as a gateway in a virtual network.

- **SmartRelay 2 MH**

  As the ZK version. Two external card readers (SC.M.E.G2) and an internal card reader (SC.M.I.G2) can be connected to this version. Mifare Classic/DESFire® cards can be operated on this SREL2.

5.2 Accessories

SmartRelay can be combined with a variety of accessories. Carefully check which combinations can be used before placing an order.

Accessories for SmartRelay 3063 G1

	SREL	SREL.ZK	SREL.ADV
MOD.SOM8			X
SREL.AV			X
SREL.BAT	X	X	X

Accessories for SmartRelay 3063 G2

	SREL.G2	SREL.ZK.G2	SREL.W.G2	SREL.W.ZK.G2
WNM.LNI.SREL.G2			X	X
SREL.BAT	X	X		
SREL.AV	X	X		
SREL2.COVER1			X	X

Accessories for SmartRelay 3063 *(G2)*

	SREL2.G2.W	SREL2.ZK.G2.W	SREL2.ZK.MH.G2.W
SREL.AV			X
WNM.LNI.SREL2.G2	X	X	X
SC.M.I.G2			X
SC.M.E.G2.W			X
SREL2.COVER1	X	X	X

- **SC.M.E.G2.W** *(Mifare smart card, external, G2 white)*

  A maximum of two external card readers (SC.M.E.G2.W) and an internal card reader (SC.M.I.G2) can be connected to a SREL2.ZK.MH.G2.W or SREL2.ZK.MH.G2.W.WP. If two external card readers are connected to an SREL2, then a dip switch placed at the "on" position must be connected to an external card reader. The dip switch is found on the right-hand side beneath the 26-pin plug connector on the card reader.

  The cabling type used to wire components should be CAT5 (FTP) or a higher quality. Shielded control cabling may also be used. Cable length: max. 10 m. An own power supply and own wiring should be installed if the cable line length is > 3m for the external card reader.

- **SC.M.I.G2** *(Mifare smart card, internal G2)*

  The internal card reader is plugged directly into the SREL2.

- **SmartRelay 2 WP version**

  Weatherproof design. This option is also available for all SREL2s. You must seal the bushing yourself under your own responsibility. We recommend using suitable materials such as silicon or other resistant sealing materials. The housing features an IP65 design.

5.3 Power supply

A stable power supply is required to operate Digital SmartRelay 3063. Mains adapters are not included in the delivery package.

Some SmartRelays can be operated using batteries (SREL.BAT) as an option. No additional power supply may be connected in such cases.

	Direct current	Alternative current
■ SREL ■ SREL.ADV ■ SREL.W ■ SREL.G2 ■ SREL.W.G2	5 V_{DC} - 24 V_{DC} (max. 15 W)	12 V_{AC} (max. 15 W)
SREL2.G2.W	9 V_{DC} - 24 V_{DC} (max. 15 W)	Not possible.

IMPORTANT

Malfunction due to switched-mode power supply

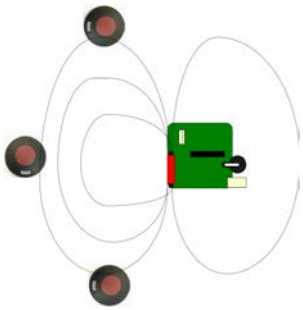
Do not use switched-mode power supplies.

5.4 Determining installation position

The transponder transmission range for SmartRelay (read range) is a max. of 1.5 m, but may be reduced in environments containing metals, especially in magnetic fields or where aluminium is present.

Ideally, you should perform a read range test with an authorised transponder and a battery-powered SmartRelay.

Radiation characteristics of the antenna (SREL2.G2.W)



3-dimensional
radiation characteristic

5.5 More information

- All cabling used to connect SmartRelay should be type IY(ST)Y ....x0.6 – twisted pair, shielded cable – and should not exceed 100 m in length. Power losses should be taken into account when dimensioning the power supply.
- The technical data regarding inputs and outputs are to be taken into account (see *Technical specifications [▸ 37]*).
- All cabling must be installed and connected as per VDE regulations (VDE = German Association of Electro-technology, Electronics & Information Technology).

6 Initial operation

Check

1. Unpack SmartRelay and check for any damage.
2. Connect SmartRelay to a power supply or a battery.
3. Activate the SmartRelay with a transponder and test whether the SmartRelay responds to activation in some way or other.

Programming

Programme the SmartRelay with the appropriate software, e.g. LSM Software for SmartRelay 3063. The SmartRelay must be connected to a power source for the programming process. You will find the details on programming in the LSM Software here: *Configurations in the software [▸ 26]*

Connection and installation

✓ The SmartRelay is not connected to any power source and is in a de-energised state.

1. Use backup battery: **The positive terminal on the 3V-CR1220 battery faces upwards in all SmartRelays.**
2. Connect all cables to their designated terminals on the SmartRelay (see *Connections [▸ 17]*)
3. Switch on the power supply (connect the plug or battery if required).
4. Use an authorised transponder to test the programmed SmartRelay.
5. Install SmartRelay.
   ↳ Remove the housing if you install in a flush-fitted masonry box. SmartRelay circuit boards come in two different sizes. Check that the SmartRelay circuit board fits into your flush-fitted masonry box before installing SmartRelay.
   ↳ If mounted on the surface, the base plate can be used as a template for the drill holes (6 mm).

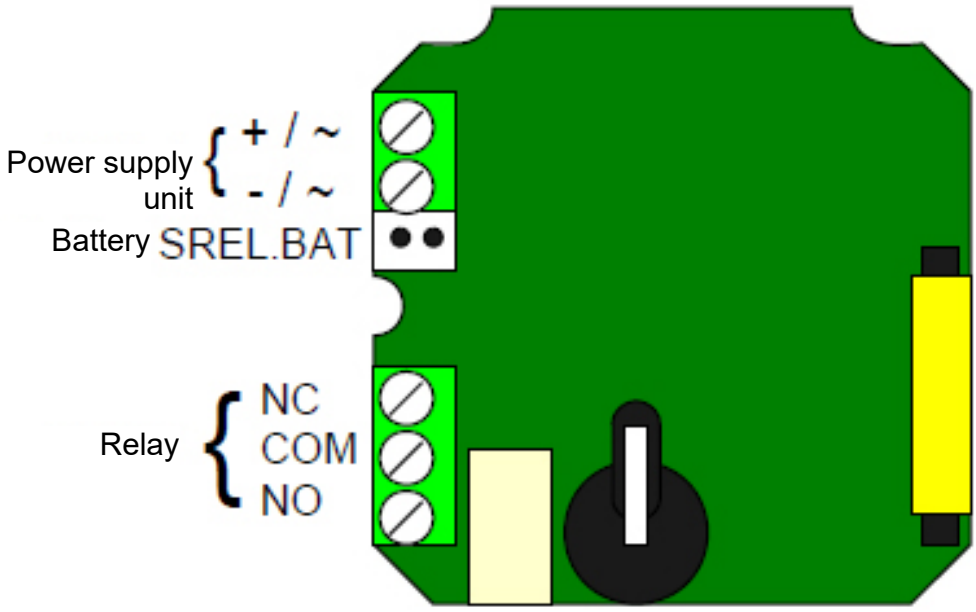
NOTE

The backup battery must not be used if SmartRelay is powered by a battery (SREL.BAT).

7 Connections

7.1 SREL

- SmartRelais Default G1 (SREL)

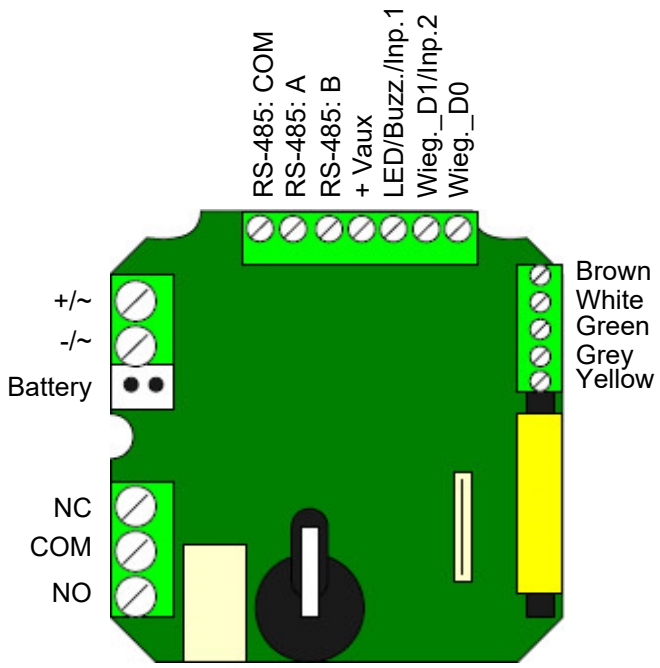


Name	Symbol	Description
Power supply unit	+	Either positive terminal when connected to a direct current (5 to 24 VDC) or one of the two alternative current connections (12 V AC)
Power supply unit	-	Either minus terminal when connected to a direct current (5 to 24 VDC) or the second alternative current connections (12 V AC)
Battery		Connector for a battery when operated without a power supply unit; order code for battery, including SREL.BAT connector
Relay NC		Normally closed contact in the relay changeover contact. This contact is closed against Relay COM when not connected
Relay COM		Common contact in the relay changeover contact. This contact is wired either against an NC relay (break contact) or against a NO relay (closing contact)

Name	Symbol	Description
NO relay		Normally open contact in the relay changeover contact. This contact is closed against Relay COM when not connected

7.2 SREL.ADV, SREL.W, SREL.G2, SREL.W.G2

- SmartRelais Advanced G1 (SREL.ADV)
- SmartRelais White G1 (SREL.W)
- SmartRelais G2 (SREL.G2)
- SmartRelais G2 White (SREL.W.G2)



Name	Symbol	Description
Power supply unit	+	Either positive terminal when connected to a direct current (5 to 24 V DC) or one of the two alternative current connections (12 V AC)
Power supply unit	-	Either minus terminal when connected to a direct current (5 to 24 V DC) or the second alternative current connections (12 V AC)
Battery		Connector for a battery when operated without a power supply unit; order code for battery, including SREL.BAT connector

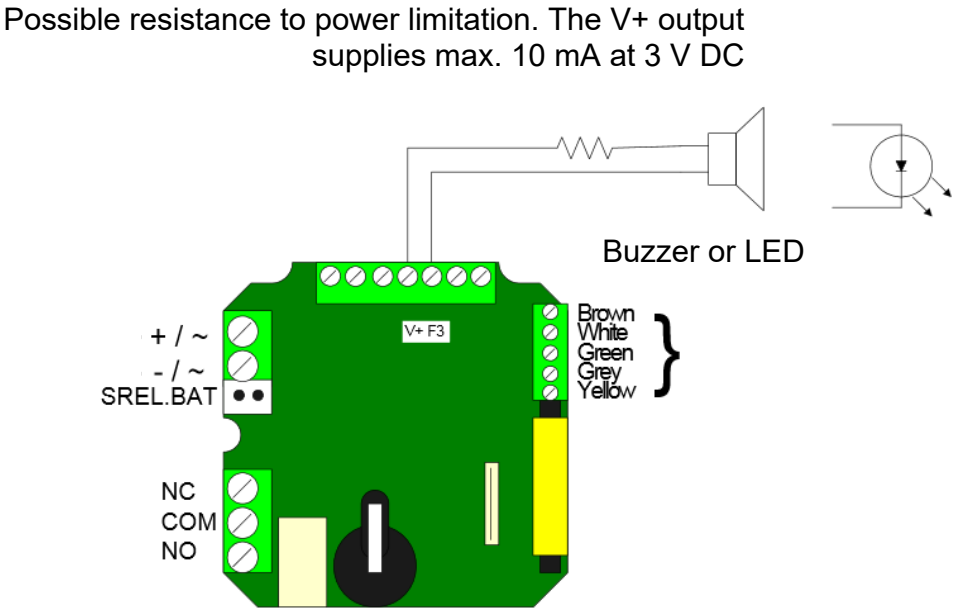
Name	Symbol	Description
Relay NC		Normally closed contact in the relay changeover contact. This contact is closed against Relay COM when not connected
Relay COM		Common contact in the relay changeover contact. This contact is wired either against an NC relay (break contact) or against a NO relay (closing contact)
NO relay		Normally open contact in the relay changeover contact. This contact is closed against Relay COM when not connected
External antennas BROWN WHITE GREEN GREY YELLOW	 BN WH GN GY YL	Connection for colour-coded cables in an external antenna (order code: SREL.AV) brown/white/green/yellow
RS-485COM RS-485A RS-485-B	C A B	Bus connection for external modules
+ Vaux	+V	Type 3.0 - 5.0 V +/- 0.5 V for external LED or buzzer, max. 10 mA
LED / buzzer / input	F3	Multi-function connection
Serial 1 / Input 2	F2	Multi-function connection
Serial 2	F1	Multi-function connection

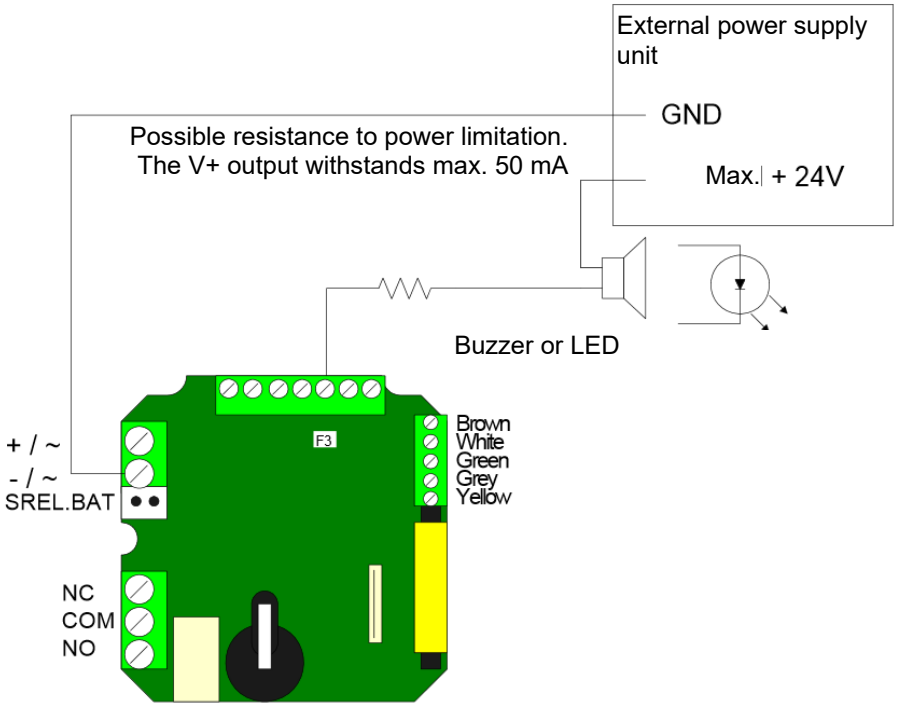
7.2.1 Notes on SREL connection

To use a SmartRelay as a card reader in a third-party access control or time-and-attendance system, the hardware (cabling and signal emitter) and data formats must match those of the card reader precisely. This is the only way that the third-party system will be able to understand and evaluate data from transponders.

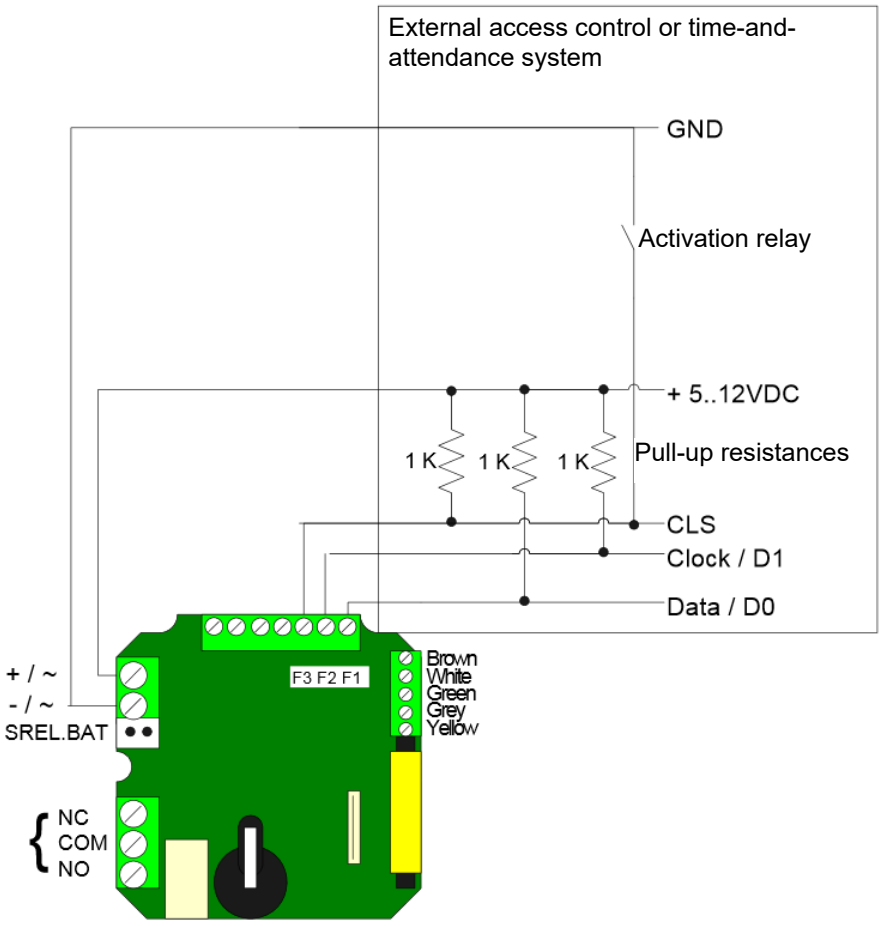
First of all, the SmartRelay reads the transponder data. If the transponder is authorised for use in the SmartRelay, these data are transmitted to the third-party system via the serial interface. You will receive detailed specifications for individual data formats from SimonsVoss Technologies GmbH.

7.2.1.1 External signalling

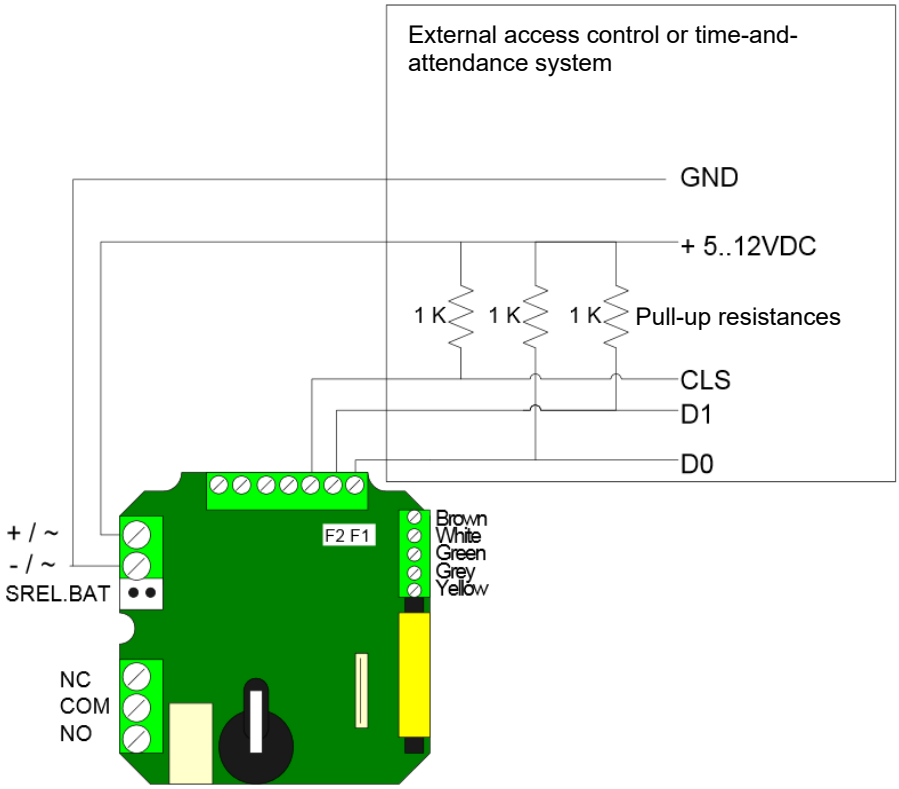



External power supply unit
GND
Max. + 24V
Possible resistance to power limitation.
The V+ output withstands max. 50 mA
Buzzer or LED
+ / ~
- / ~
SREL.BAT
NC
COM
NO
F3
Brown
White
Green
Grey
Yellow

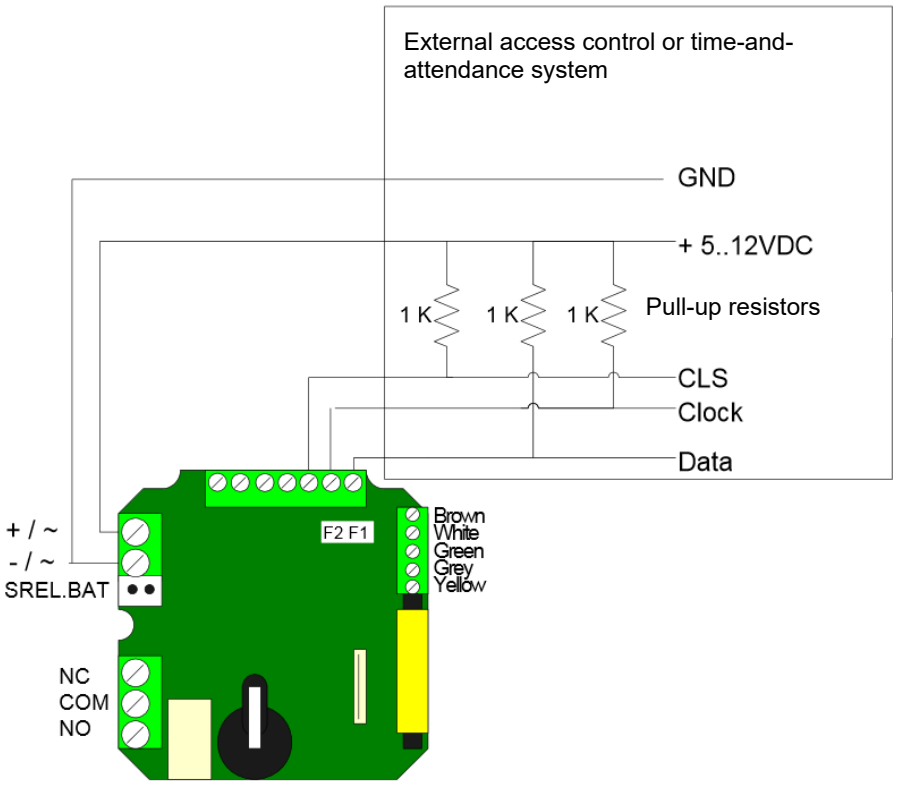
7.2.1.2 OMRON


External access control or time-and-attendance system
GND
Activation relay
+ 5..12VDC
1 K
1 K
1 K
Pull-up resistances
CLS
Clock / D1
Data / D0
+ / ~
- / ~
SREL.BAT
F3 F2 F1
Brown
White
Green
Grey
Yellow
NC
COM
NO

7.2.1.3 Wiegand interface

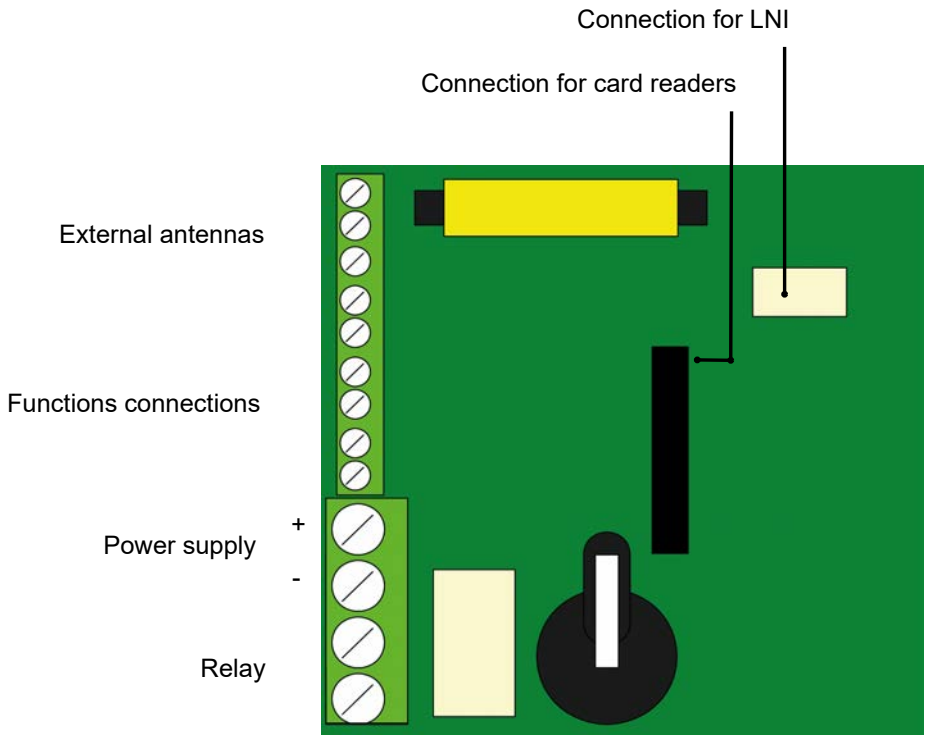


7.2.1.4 Kaba Benzing, Siemens, Gantner LEGIC, Primion and ISGUS interface



7.3 SREL2.G2.W

- SmartRelais 2 G2 White (SREL2.G2.W)



Name	Symbol	Description
Power supply unit	+	Direct current 9 to 24 V DC
Power supply unit	-	Direct current 9 to 24 V DC
Relay COM		Common contact in the relay. This contact is wired against the NO relay (normally open contact)
NO relay		Normally open contact in the relay. This contact is closed against Relay COM when switched. Can be inverted
Brown	BN	Connection for colour-coded wires in an external antenna (order code: SREL.AV)
White	WH	
Green	GN	
Grey	GY	
Yellow	YL	

Name	Symbol	Description
Functions connection 1	F1	Input ext. Trigger input (3-24 V DC ext. contact must be isolated)
Functions connection 2	F2	Omron data / Wiegand DO
Functions connection 3	F3	Omron CLK / Wiegand D1 LED / buzzer (external)
SimonsVoss bus	SVB	SimonsVoss bus – card reader line link

Open drain outputs up to max. 24 V DC / 0.5 A. Earth connection to power supply's negative terminal. If a CLS (card loading signal) is featured, the SREL2 must be configured for CLS in its properties.

7.3.1 Notes on SREL2 connection

SREL2.G2 with three card interfaces

It is possible to operate the SREL2 with a total of 3 card interfaces at the same time (1 x internal and 2 x external). The dip switch must be set to 1 (ON) on the internal card interface for such operation.

External trigger for SREL2.G2

The SREL2 is triggered if a current of +3 to +24 Volt (DC) is added to F1 as a pulse. This configuration can be used to implement the OMRON function, for example.

External LED or buzzer to SREL2.G2

An external LED or buzzer can be connected to the F3 and PLUS (+) connections. The voltage at F3 and PLUS is the same as the supply voltage. If necessary, the voltage must thus be reduced by a suitable series resistor.

8 Configurations in the software

SmartRelays are very specific due to their hardware and can therefore only be operated in environments designated for them.

Item order code	Protocol generation	Software
SREL	G1: Type G1 or G2 + G1 locking systems only	LSM
SREL.ZK		
SREL.ADV		
SREL.G2	G2: Type G2 or G2 + G1 locking systems only	
SREL.ZK.G2		
SREL.W.G2		
SREL.W.ZK.G2		
SREL2.G2.W		
SREL2.ZK.G2.W		
SREL2.ZK.MH.G2.W		
MK.SREL2.ZK.G2.W	MobileKey	MobileKey
MK.SREL2.LN.ZK.G2.W		

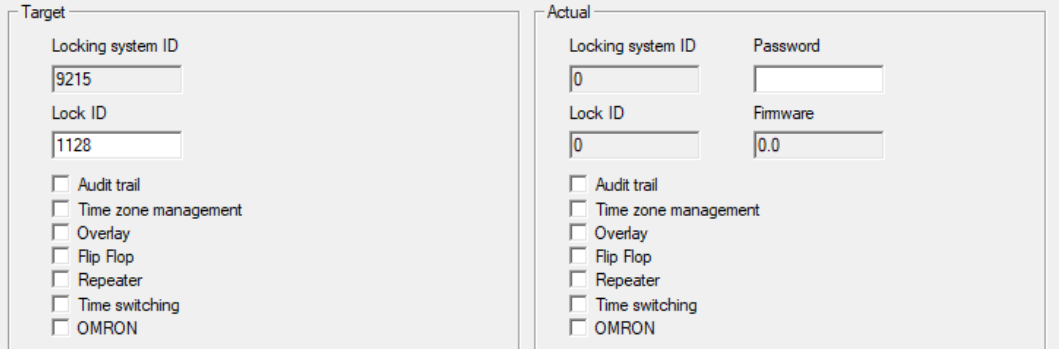
8.1 LSM

The SmartRelay's settings can be adjusted in the [Configuration/Data] tab in the locking device's properties.

8.1.1 SmartRelay (G1): SREL, SREL.ADV, SREL.W

This tab ([Configuration/Data]) is divided into two sides:

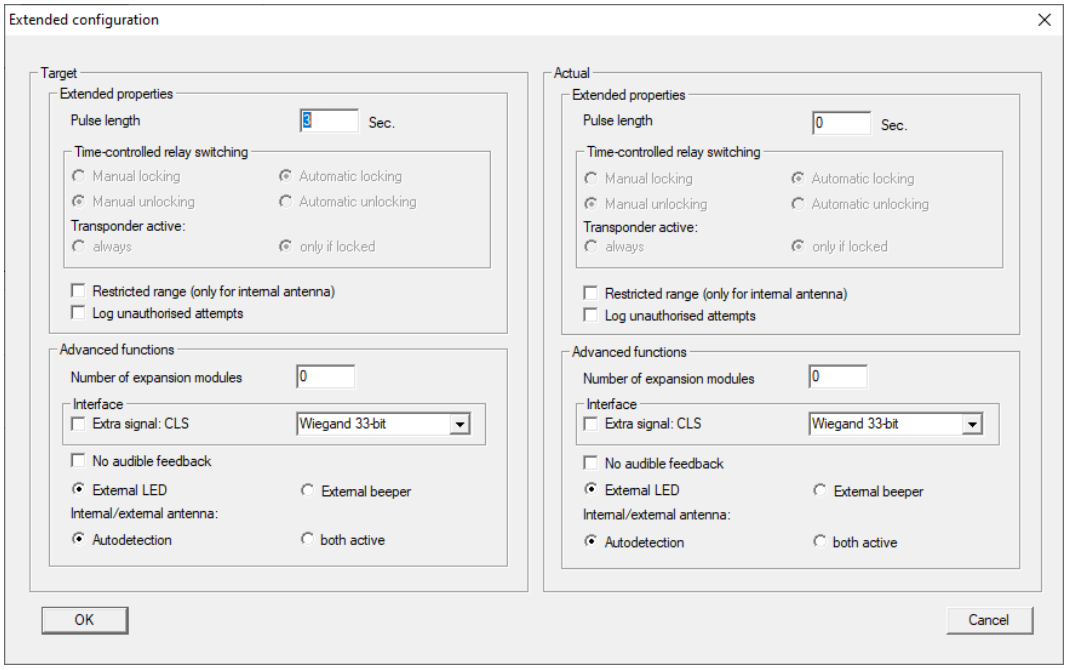
- The left side shows the target status of the locking device ("Actual") – i.e. the desired status configured in the LSM software.
- The right side shows the locking device's current status ("Target") – i.e. the status which was last programmed.



The following features can be enabled **depending on the locking device type**:

☑ Audit trail	Only possible in SREL.ZK and SREL.ADV versions. The 1,024 most recent transponder transactions are logged with the date and time.
☑ Time zone management	Only possible in SREL.ZK and SREL.ADV versions. A time zone plan can be uploaded and the transponders are approved or blocked according to their time zone group.
☑ Overlay	Replacement transponders can overwrite their corresponding original transponders. The original transponder is blocked once the replacement transponder is used for the first time.
☑ Flip Flop	Pulse mode (default setting) is switched off and the pulse duration no longer plays a role. When flip flop mode is activated, SmartRelay changes its status from on to off or vice versa each time it is activated using a transponder. This mode is ideal for switching lights, machines and other systems on and off. *Where applicable, you should ensure that mains adapters and electric strikes are suitable for continuous current operation in such an installation.*
☑ Repeater	The SmartRelay receives a transponder signal, which it amplifies and forwards. This function allows SmartRelay to be used to bridge longer radio transmission paths. The distance to the next SmartRelay can be up to 2 m.

☑ Time switching	For SREL.ZK and SREL.ADV only. A time zone plan needs to be uploaded when the time switch-over is activated. This allows SmartRelay to remain unlocked during the indicated times (in Group 5). During the day, the door can be used freely while only a transponder will open the door at night. *You should ensure that mains adapters and electric strikes are suitable for continuous current operation in such an installation.*
☑ OMRON	For SREL.ADV only Many access control and time-and-attendance systems feature serial interfaces to connect card readers. A SmartRelay can also be connected via these interfaces, thus also allowing you to use SimonsVoss transponders in third-party systems. Select this option on both the SmartRelay and the cylinder if you wish the SmartRelay to transmit transponder data to a third-party system and a remote opening command to be sent from SmartRelay to a cylinder after clearance by the third-party system. Set the type of external system under "Interface". Click on the Extended configuration button to do so.



Some settings can be specified using the Extended configuration button:

Pulse length	This is where you indicate the number of seconds for the duration of switch pulse. The value can be set at 0.1 to 25.5 seconds. If you enter 3 seconds, for example, an electric strike is released for 3 seconds before it locks again.
☑ Restricted range	If you select this option, the reader range from the transponder to the SmartRelay is reduced from 1.5 m to about 0.4 m. This option can be used when several SmartRelays are in close proximity to one another and individual transponders are authorised for use on several SmartRelays, for example.
☑ Log unauthorised attempts	For SREL.ZK and SREL.ADV only: Normally, only authorised transponder operations are logged. You need to select this option if you also wish to record attempts to open the door with non-authorised transponders.

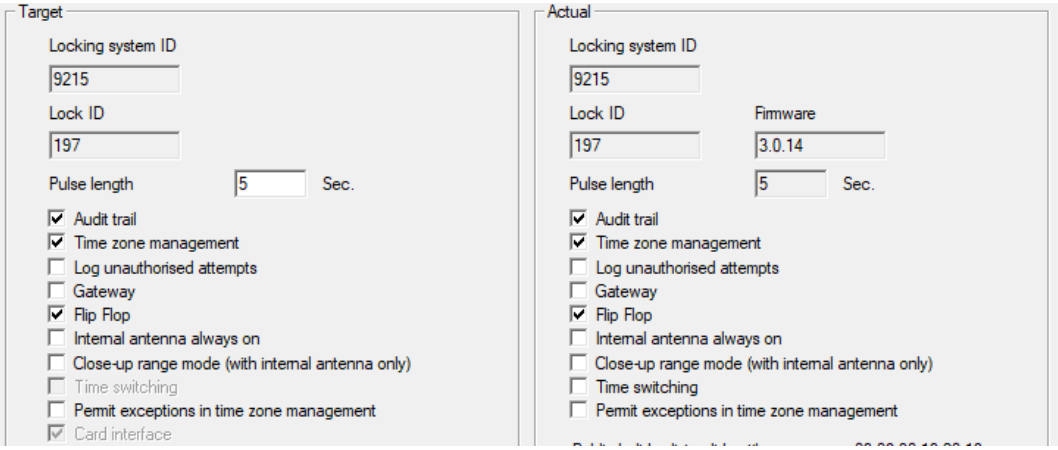
Number of extension modules	This where you indicate the number of external modules connected to the SmartRelay. These modules are connected to the terminals RS-485 C OM, RS-485 A and RS-485 B.
"Interface"	For SREL.ADV only: You can enter the type of card reader here which the SmartRelay is to simulate for operation as a serial interface. The following options are available: ■ Wiegand, 33 bit ■ Wiegand, 26 bit ■ Primion ■ Siemens ■ Kaba Benzing ■ Gantner Legic ■ Isgus
☑ No audible feedback	For SREL.ADV only: You should check this field if you do not want audible programming confirmation signals to be emitted from a connected buzzer or beeper while you are programming SmartRelay.
◉ External LED/ ◉ External beeper	For SREL.ADV only: This indicates which external component group is connected. In flip flop mode, SmartRelay emits a permanent signal when switched on if there is an external LED; in the case of a beeper, an audible signal is only emitted when there is a change of status.

◉ Autodetection/ ◉ both active	For SREL.ADV only ■ ◉ Autodetection If an external antenna is connected, this is the one which is used. SmartRelay switches off the internal antenna in such cases. If no external antenna is connected (standard case), SmartRelay functions with the internal antenna. ■ ◉ both active SmartRelay is able to use both antennas to verify transponder bookings.

8.1.2 SmartRelay (G2): SREL.G2, SREL.W.G2, SREL2.G2

This tab ([Configuration/Data]) is divided into two sides:

- The left side shows the target status of the locking device ("Actual") – i.e. the desired status configured in the LSM software.
- The right side shows the locking device's current status ("Target") – i.e. the status which was last programmed.



The following features can be enabled **depending on the locking device type**:

- **Pulse length**

  This where you indicate the number of seconds for the duration of switch pulse. The value can be set at 0.1 to 25.5 seconds. If you enter 3 seconds, for example, an electric strike is released for 3 seconds before it locks again.

- **Access control**

ZK and ADV possible. The most recent transponder transactions are logged with the date and time.

- **Time zone control**

  Only possible in SREL.ZK and SREL.ADV versions. A time zone plan can be uploaded and the transponders are approved or blocked according to their time zone group.

- **Logging unauthorised attempted access events**

  For ZK and ADV only: Normally, only authorised transponder operations are logged. You need to select this option if you also wish to record attempts to open the door with non-authorised transponders.

- **Gateway**

  SmartRelay can be used as a gateway.

- **Flip-flop**

  Pulse mode (default setting) is switched off and the pulse duration no longer plays a role. When flip-flop mode is activated, SmartRelay changes its status from on to off or vice versa each time it is activated using a transponder. This mode is ideal for switching lights, machines and other systems on and off.

  Where applicable, you should ensure that mains adapters and electric strikes are suitable for continuous current operation in such an installation.

- **Internal antenna always on**

  Even if an external antenna is connected, the internal antenna is still used at the same time.

- **Close range mode (for internal antennas only)**

  Close range mode is activated.

- **Time switch-over function**

  For SREL.ZK and SREL.ADV only. A time zone plan needs to be uploaded when the time switch-over is activated. This allows SmartRelay to remain unlocked during the indicated times (in Group 5). During the day, the door can be used freely while only a transponder will open the door at night.

  You should ensure that mains adapters and electric strikes are suitable for continuous current operation in such an installation.

- **Permit exceptions in time zone management**

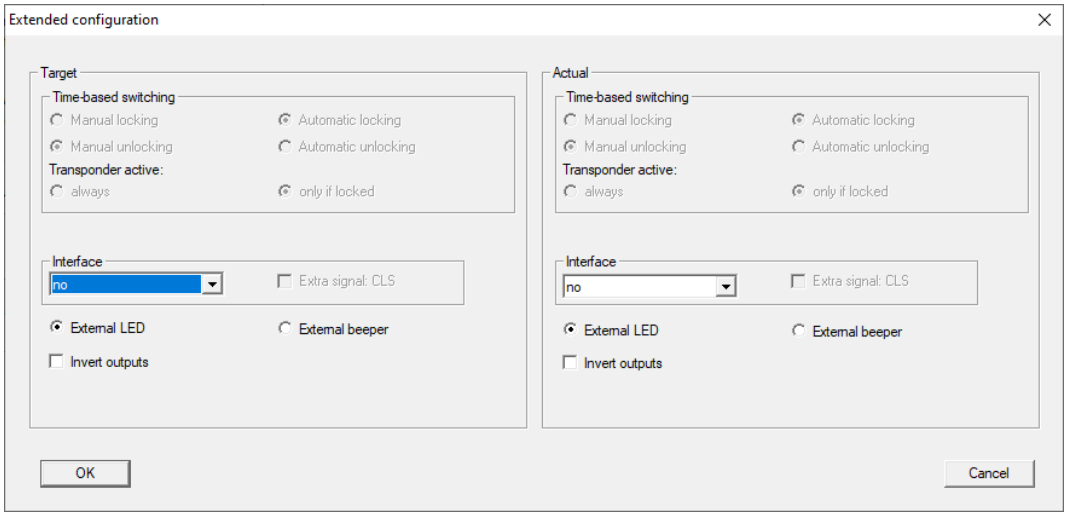
  Exceptions are permitted in time zone management if this checkbox is enabled.

- **Card interface**

This option is enabled for all G2 SmartRelays as standard. The LSM first adds a data record for an active locking device and checks whether the locking device has an interface during programming. If no card interface is detected, LSM automatically disables the checkbox. You no longer need to indicate whether you have an active or hybrid SmartRelay G2 for LSM 3.3 or higher.

NOTE

If you change the card interface setting manually, automatic detection will no longer function and warning messages will be emitted.



Some settings can be specified using the "Extended configuration" button:

- **Interface**

  You can enter the type of card reader here which the SmartRelay is to simulate for operation as a serial interface.

  The following options are available:

  - Wiegand, 33 bit
  - Wiegand, 26 bit
  - Primion
  - Siemens
  - Kaba Benzing
  - Gantner Legic
  - Isgus

- **External LED/external beeper**

For SREL.ADV only: This indicates which external component group is connected. In flip-flop mode, SmartRelay emits a permanent signal when switched on if there is an external LED; if there is a beeper, an audible signal is only emitted when there is a change of status.

- **Invert outputs**

  You can use these settings to invert the relay output.

8.2 MobileKey

A (MK) SmartRelay can be quickly configured in the MobileKey web app. As a general rule, distinction is only made between an opening interval and a permanent opening (flip-flop). A LockNode can be configured as an option to connect the SmartRelay via a SmartBridge.

9 Signalling

SREL, SREL.ADV, SREL.W, SREL.G2, SREL.W.G2

- LED lights up or flashes green: ID medium is authorised and the SREL activates.
- No response from the LED: ID medium rejected or not recognised.

SREL2.G2.W

- LED lights up or flashes blue: ID medium is authorised and the SREL2 activates.
- LED flashes red: ID medium rejected.

10 Maintenance

10.1 Battery warning and battery replacement when SREL.BAT is used

A SmartRelay can emit a battery warning as follows when the battery capacity is depleted:

- SREL, SREL.ZK and SREL.ADV
  - Inside LED flashes 8x each time a transponder is used and before the SmartRelay switches.
  - This LED should be visible from the outside in the case of battery-powered operation.
- SREL.ADV only
  - External LED flashes 8 times or external buzzer beeps 8 times whenever a transponder is used.

NOTE

Around another 100 activations are possible after a battery warning. Transponder battery must be replaced as soon as possible.

10.2 Backup battery

A discharged backup battery may lead to the internal clock stopping in SmartRelays. We therefore recommend checking the time on the clock at regular intervals. A backup battery will last for about ten years if the power supply to the SmartRelay is not interrupted. This battery should be replaced on a periodical basis if SmartRelay draws on the backup battery at regular intervals due to frequent power failures.

NOTE

The backup battery must not be used if SmartRelay is powered by a battery (SREL.BAT).

11 Technical specifications

Radio emissions		
SRD	24.45 kHz - 24.47 kHz	-4.7 dBµA/m (10 m distance)
RFID	13.558 MHz - 13.564 MHz	4.1 dBµA/m (10 m distance, V=13.2)
SRD (WaveNet) (depending on equipment)	868.000 MHz - 868.600 MHz	<25 mW ERP

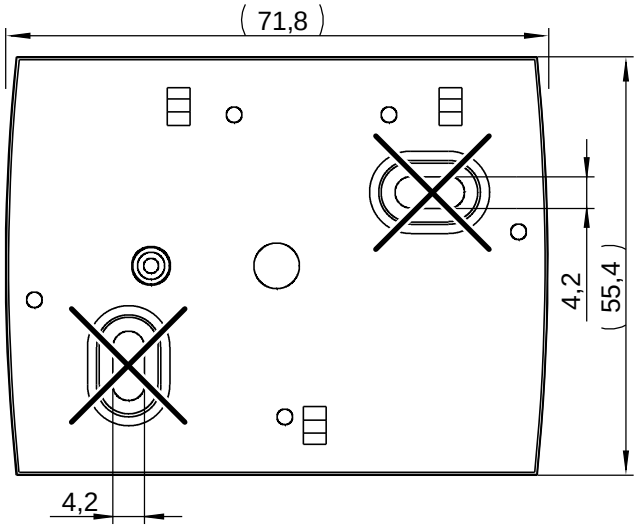
There are no geographical restrictions within the EU.

11.1 Technical specifications SREL, SREL.ADV, SREL.W, SREL.G2, SREL.W.G2

Dimensions l×w×h in mm	■ Black housing: 72×57×25.5 ■ White housing (.W): 78×78×19
Installation	■ Surface mount ■ Flush-mounted (box with depth 70 mm - observe insulation)
Protection rating	IP20, not tested for outside use
Temperature	■ When operating: -22 °C to 55 °C ■ In storage: 0 °C to 40 °C
Humidity	< 95% without condensation
Circuit board dimensions l×w×h in mm	55×55×14
Mains voltage	12 V_{AC} or 5-24 V_{DC} (no reverse voltage protection)
Power limitation	Mains adapter must be limited to 15 VA
Standby current	< 5 mA
Max. current	< 100 mA
Backup battery	1× CR1220 3 V_{DC}, positive terminal top
Pulse duration programmable	0.1 to 25.5 seconds
Output relay type	Changeover contact
Output relay continuous current	Max. 1.0 A

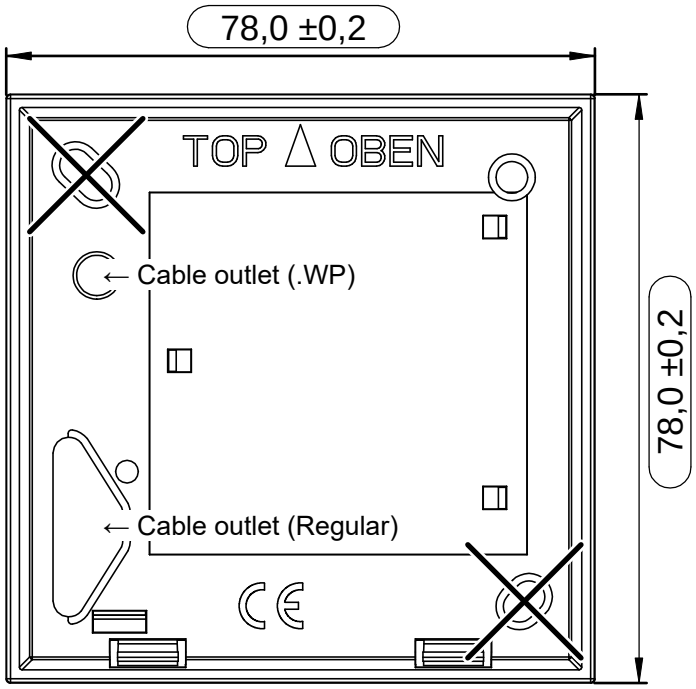
Output relay switch-on current	Max. 2.0 A
Output relay switching voltage	Max. 24 V
Output relay switching power	10^6 activations at 30 VA
Multi-function connections F1, F2, F3	Max. 24 V_{DC}, max. 50 mA
Vibrations	■ 15 G for 11 ms, ■ 6 shocks as per IEC 68-2-27 ■ Not approved for use when subject to permanent vibrations

11.2 Drilling template SREL, SREL.ADV, SREL.G2



(Dimensions in mm)

11.3 Drilling template SREL.W, SREL.W.G2



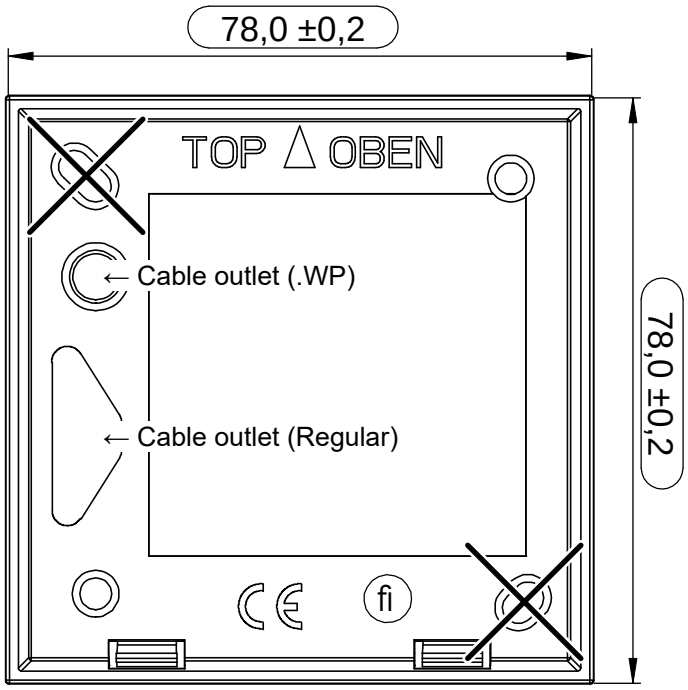
(Dimensions in mm)

11.4 Technical specifications SREL2.G2.W

Housing made of white plastic: Dimensions LxWxH Base plate semi-transparent	About 78 x 78 x 19 mm
Protection rating	IP20, not tested for outside use WP version: IP65
Temperature	When operating: -22°C to 55°C In storage: 0 °C to 40°C
Humidity	< 95% without condensation
Circuit board dimensions l x w x h	50 x 50 x 14 mm
Mains voltage	9-24 V DC
Power limitation	Mains adapter must be limited to 15 VA
Standby current	< 100 mA
Max. current	< 300 mA
Backup battery	1× CR1220 3 V_{DC}, positive terminal top
Pulse duration programmable	0.1 to 25.5 seconds

Output relay type	NO contact
Output relay continuous current	Max. 1.0 A
Output relay switch-on current	Max. 2.0 A
Output relay switching voltage	Max. 24 V
Output relay switching power	10^6 activations at 30 VA
Multi-function connections F1, F2, F3	Max. 24 V DC, max. 50 mA
Vibrations	15 G for 11 ms, 6 shocks as per IEC 68-2-27 Not approved for use when subject to permanent vibrations

11.5 Drilling template SREL2.G2.W



(Dimensions in mm)

12 EU/UK Declaration of conformity

The company SimonsVoss Technologies GmbH hereby declares that article SREL.*, SREL.G2.* complies with the following guidelines:

- 2014/53/EU "Radio equipment"
  as well as the corresponding UK statutory 2017 No. 1206 "Radio equipment"
- 2014/30/EU "EMC"
  as well as the corresponding UK statutory 2016 No. 1091 "EMC"
- 2012/19/EU "WEEE"
  as well as the corresponding UK statutory 2013/3113 "WEEE"
- 2011/65/EU "RoHS"
  as well as the corresponding UK statutory 2012 No. 3032 "RoHS"
- and regulation (EG) 1907/2006 "EU REACH"
  as well as the corresponding "UK REACH"

The full text of the EU/UK Declaration of conformity is available at the following internet address:

https://www.simons-voss.com/en/certificates.html

CE UKCA

13 Help and other information

Information material/documents

You will find detailed information on operation and configuration and other documents on the website:

https://www.simons-voss.com/en/documents.html

Declarations of conformity

You will find declarations of conformity and other certificates on the website:

https://www.simons-voss.com/en/certificates.html

Information on disposal

- Do not dispose the device SREL.*, SREL.G2.* in the household waste. Dispose of it at a collection point for electronic waste as per European Directive 2012/19/EU.
- Recycle defective or used batteries in line with European Directive 2006/66/EC.
- Observe local regulations on separate disposal of batteries.
- Take the packaging to an environmentally responsible recycling point.

Technical support

Our technical support will be happy to help you (landline, costs depend on provider):

+49 (0) 89 / 99 228 333

Email

You may prefer to send us an email.

support-simonsvoss@allegion.com

FAQs

You will find information and help in the FAQ section:

https://faq.simons-voss.com/otrs/public.pl

Address

SimonsVoss Technologies GmbH
Feringastr. 4
D-85774 Unterfoehring
Germany

This is SimonsVoss

SimonsVoss, the pioneer in remote-controlled, cable-free locking technology provides system solutions with a wide range of products for SOHOs, SMEs, major companies and public institutions. SimonsVoss locking systems combine intelligent functionality, high quality and award-winning design Made in Germany.

As an innovative system provider, SimonsVoss focuses on scalable systems, high security, reliable components, powerful software and simple operation. As such, SimonsVoss is regarded as a technology leader in digital locking systems.

Our commercial success lies in the courage to innovate, sustainable thinking and action, and heartfelt appreciation of employees and partners.

SimonsVoss is a company in the ALLEGION Group, a globally active network in the security sector. Allegion is represented in around 130 countries worldwide (www.allegion.com).

Made in Germany

SimonsVoss is truly committed to Germany as a manufacturing location: all products are developed and produced exclusively in Germany.

SimonsVoss technologies

Made in Germany

A BRAND OF ALLEGION