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1 Information about this document

1.1 Contents and purpose

This document supplements the SVA/SVI locks' assembly instructions and contains technical information for the mounting and commissioning of an SVA 2xxx or SVA 2xxxF lock.

1.2 Target group

The locks may only be mounted by technical specialists who have been trained for this purpose by dormakaba.

1.3 Other applicable documents

- SVA/SVI locks assembly instructions
- Manual for the connecting cable SVP-A 1100/2100
- Technical documents for the selected control unit
- Commissioning instructions for the SVI lock
- Assembly instructions for the fittings used, e.g. door handles, panic bar or knob.

1.4 Abbreviations

| | |
|------------|---|
| SVA | Active, self-locking (anti-)panic lock for the active door leaf in 2-leaf door units |
| SVI | Inactive, self-locking (anti-)panic lock for the passive door leaf in 2-leaf door units |
| 2xxx/2xxxF | All versions of a lock; the exact lock type is marked with 3 digits instead of xxx. |
| G | Active door leaf |
| S | Passive door leaf |
| DCW bus | DCW is short for "DORMA Connect & Work". A dormakaba-owned fieldbus system for the connection of up to 4 identical components to a DCW central unit. |
| CAN bus | Serial fieldbus system according to ISO 11898-3, for connecting several components to one cable harness |

1.5 Symbols used

1.5.1 Hazard categories



ATTENTION

This signal word indicates a situation of potential risk that could lead to damage to property or the environment if not averted.



NOTE

This signal word indicates useful information for efficient and trouble-free operation.

1.5.2 More symbols

1

2

Item numbers used in image caption

2 Safety

2.1 Intended use

The SVA 2xxx/2xxxF is a lock for the active door leaf on 2-leaf door units.

- Use only the components approved by dormakaba for mounting:
 - SVI 4xxx, SVI 5xxx or SVI 2xxxF on the door unit's passive door leaf
 - SVP-A 1100 or SVP-A 2100 connection cable
- Only mount combinations of lock and fitting that have been tested and approved in accordance with EN 179 or EN 1125. The list of approved components can be found in the constancy of performance certificate at www.dormakaba.com. Other combinations on request.
- Mounting on fire and smoke protection doors is only permitted if the usability certificates for these doors provide for this mounting and if the requirements are followed.
- The following SVA door locks are suitable for use on fire and smoke protection doors
 - SVA 2xxxF lock series
 - SV 2xxx lock series in combination with the external Power Reserve module "SVP-PR DCW" (item no: 70922601)

2.2 Non-intended use

- The lock must not be opened by third parties. If the lock is opened by a third party, there is a risk that safety-relevant functions (e.g. escape/panic functions) will no longer exist.
- The identification plate on the lock contains important information required by law and must not be damaged or obscured.

2.3 Reasonably foreseeable misuse

- There may be no other locking devices on the door unit.
- Do not make any changes to the door unit that are not described in this manual.
- If door seals (e.g. profile seals, floor seals) are used, they must not impede the intended function.



ATTENTION

Damage to property due to the use of an incorrect cylinder screw. Only use the cylinder screw supplied with the lock to secure the cylinder (DIN EN ISO 7046-1, M5 x (backset + 5 mm)).

3 Product description

The SVA 2xxx/2xxxF is a lock for the active door leaf. The SVA lock locks automatically as soon as the door leaf is closed. In case of emergency, the door can be opened in the escape direction at any time. The SVA lock can query the status of the trip latch, bolt, door handle/panic bar and the locking cylinder. The functions are controlled electronically.

It can be optionally controlled via:

- an SVP-S3x (CH) or SVP-S4x lock control unit
- a TMS or SafeRoute system
- an automatic operator ED 100 or ED 250 (ED firmware version V2.500 or higher)

The connection to the control unit is via the DCW bus or CAN bus.

Alternatively, the SVA lock can also be connected directly analog (Stand Alone operation).

Automatically opening installation example

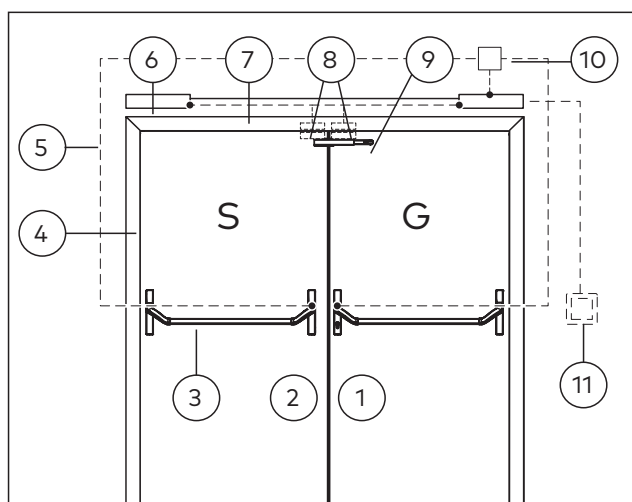


Fig. 1 Barrier-free installation situation (example)

- (1) Active door leaf with SVA 2xxx/2xxxF
- (2) Passive door leaf with SVI 2xxxF
- (3) Panic door fitting
- (4) Cable transfer CT, cable spiral CS and if necessary detachable cable transfer DT
- (5) Connecting cable SVP-A 1100/2100
- (6) Operator inc. control unit (e.g. ED100/250)
- (7) Sequential locking control
- (8) Door contact TK
- (9) Carry bar
- (10) SVP-S 4x / 3x (CH) control unit
- (11) Access control components

3.1 Parts included

- SVA lock
- Screws required for mounting
- Commissioning instructions SVA 2xxx/SVA 2xxxF

3.2 Door fittings required

Inner side of the door: Door handle or panic bar

Outer side of the door: Door knob (without function)

Locking pin: 9 mm square for interchangeable fittings

3.3 Technical data

| | | |
|--|--|---|
| Supply voltage: | 24 V DC stabilized (+/- 10%) | |
| Power consumption: | 0.05 A (max. 0.3 A) | |
| Bus operation: | DCW bus or CAN bus (ISO 11898-3) | |
| "Locked" signal: | output switches to GND, 30 mA at max. 30 V DC | |
| | Tubular frame locks | Solid door locks |
| Rear backset: | 15 mm | 33 mm |
| Distance between door handle and locking cylinder: | 92 mm for profile cylinder 94 mm for round cylinder | 72 mm profile cylinder 74 mm round cylinder |

| | | |
|--------------------|--------------------------------------|-------|
| Bolt throw: | 20 mm | 20 mm |
| Temperature range: | -25°C to +70°C | |
| Relative humidity: | up to 95% at 55°C no condensation | |

3.4 Variants

(F) = Version with integrated Power Reserve module. These versions cannot be switched "permanently open".

Variants for rebated solid doors

Forend: 235 x 20 mm, for profile cylinder:

- SVA 2271(F): Backset 65 mm, DIN left
- SVA 2272(F): Backset 65 mm, DIN right
- SVA 2281(F): Backset 80 mm, DIN left
- SVA 2282(F): Backset 80 mm, DIN right
- SVA 2291(F): Backset 100 mm, DIN left
- SVA 2292(F): Backset 100 mm, DIN right

Forend: 235 x 20 mm, for round cylinder:

- SVA 2371(F): Backset 65 mm, DIN left
- SVA 2372(F): Backset 65 mm, DIN right
- SVA 2381(F): Backset 80 mm, DIN left
- SVA 2382(F): Backset 80 mm, DIN right
- SVA 2391(F): Backset 100 mm, DIN left
- SVA 2392(F): Backset 100 mm, DIN right

Variants for solid butt doors

Forend: 235 x 24 mm, for profile cylinder:

- SVA 2277(F): Backset 65 mm, DIN left/right
- SVA 2287(F): Backset 80 mm, DIN left/right
- SVA 2297(F): Backset 100 mm, DIN left/right

Forend: 235 x 24 mm, for round cylinder:

- SVA 2377(F): Backset 65 mm, DIN left/right
- SVA 2387(F): Backset 80 mm, DIN left/right
- SVA 2397(F): Backset 100 mm, DIN left/right

Variants for tubular frame doors

Forend: 270 x 24, for profile cylinder:

- SVA 2719(F): Backset 35 mm, DIN left/right
- SVA 2729(F): Backset 40 mm, DIN left/right
- SVA 2739(F): Backset 45 mm, DIN left/right

Forend: 270 x 24, for round cylinder:

- SVA 2819(F): Backset 35 mm, DIN left/right
- SVA 2829(F): Backset 40 mm, DIN left/right
- SVA 2839(F): Backset 45 mm, DIN left/right

3.5 Integrated Power Reserve module (only version SVA 2xxxF)

The internal Power Reserve module is tested 5 mins after the power is turned on and then every 48 hrs. If the test completes with an error, the corresponding flashing code appears once according to the error messages (see Chapter 7). The test is then performed a second time after a further 5 minutes. If this test is also negative, the flashing code is permanently displayed.

3.6 LED display

The SVA lock shows colored light signals in the area around the bolt. The LED is covered by the forend and is not directly visible. The LED color indicates the operation mode when the door is open (see Chapter 3.7). The LED display signals the options selected during parameterization (see Chapter 6.2.1 to 6.2.3). In addition, the LED display shows the error messages (see Chapter 7).

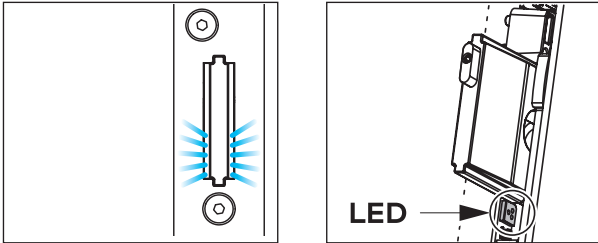


Fig. 2 LED display in bolt recess for tubular frame locks

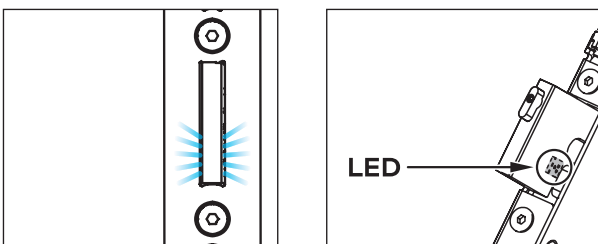


Fig. 3 LED display in bolt recess for solid door locks

3.6.1 LED display at system start

As soon as the operating voltage is switched on, the LED displays the last set parameters one after the other when the door is open:

- Operation mode: The LED lights up blue, yellow or orange for 2 s.
- Bus address in DCW® or CAN bus operation: The LED flashes green 1 x – 4 x.
- Terminating resistor (only in CAN bus operation): The LED lights up green for 1 s when the resistor is switched on. If the resistor is switched off, there is no additional signaling.

| Example | LED display at system start |
|---------------------------------|-----------------------------|
| DCW bus, address 3 | |
| CAN bus, Address 2, resistor on | |
| Stand Alone | |

3.7 Operation modes

The lock can be controlled in 3 operation modes. The operation mode determines whether and how the signals are transmitted between the door lock and the control unit. During normal operation, the LED lights up in the operation mode's color as soon as the door is opened.

| Operating mode | LED display |
|----------------|-------------|
| DCW bus | blue |
| CAN bus | yellow |
| Stand Alone | orange |

3.7.1 DCW bus operation

In DCW bus operation, the SVA lock can be connected to a DCW bus. It can be controlled by means of an SVP-S 4x (version 4.7.000 or higher), SVP-S 3x (version 1.1.000 or higher), a SafeRoute-SCU (version 1.9.000 or higher) or an automatic operator ED100/ED250 (ED firmware version V2.500 or higher).



NOTE

A DCW bus may contain a maximum of 2 SVA/SVI 2000(F) lock combinations. Each lock must be given a unique address 1 to 4.

3.7.2 CAN bus operation

In CAN bus operation, the SVA lock can be connected to a CAN bus. It can then be controlled by a compatible control unit (see Chapter 4).



NOTE

In the CAN bus operation mode, the terminating resistor must be switched on for the door lock with the greatest distance to the bus center point. The terminating resistor is switched off ex works.

3.7.3 Stand Alone operation

In Stand Alone mode, the SVA lock can be controlled with analog signals, e.g. by a potential-free switch (see Chapter 4). Stand Alone operation has changed functions (see Chapter 4.3).

3.7.4 Factory settings

The default setting is the DCW operation mode with the DCW bus address 1.

3.8 Classification

3.8.1 Tubular frame locks

| | |
|-----------|--|
| CE | dormakaba Deutschland GmbH DORMA Platz 1 - 58256 Ennepetal |
|-----------|--|

| | | | | | | | | | | | | |
|--------------|-------------------|---|---|---|----|---|---|---|---|-------|--|----|
| | 0432-CPR-00026-97 | | | | | | | | | | | 18 |
| SVA 2xxx RR | EN 14846:2008 | 3 | S | 6 | E* | 0 | M | 7 | 1 | 1**/3 | | |
| SVA 2xxxF RR | | 3 | S | 6 | E | 0 | M | 7 | 1 | 1**/3 | | |
| DOP_0165 | | | | | | | | | | | | |

| | | | | | | | | | | | | |
|--------------|-------------------|---|---|---|----|---|---|---|---|---|---|----|
| | 0432-CPR-00026-11 | | | | | | | | | | | 18 |
| SVA 2xxx RR | EN 179:2008 | 3 | 7 | 7 | B* | 1 | 4 | 5 | 2 | A | A | |
| SVA 2xxxF RR | | 3 | 7 | 7 | B | 1 | 4 | 5 | 2 | A | A | |
| DOP_0166 | | | | | | | | | | | | |

| | | | | | | | | | | | | |
|--------------|-------------------|---|---|---|----|---|---|---|-----|-----|---|----|
| | 0432-CPR-00026-01 | | | | | | | | | | | 18 |
| SVA 2xxx RR | EN 1125:2008 | 3 | 7 | 7 | B* | 1 | 4 | 2 | 1/2 | A/B | A | |
| SVA 2xxxF RR | | 3 | 7 | 7 | B | 1 | 4 | 2 | 1/2 | A/B | A | |
| DOP_0167 | | | | | | | | | | | | |

* Only with external PR module "SVP-PR DCW" (item no: 70922601)

** Operation mode "Stand Alone".

3.8.2 Solid door locks

| | |
|-----------|--|
| CE | dormakaba Deutschland GmbH DORMA Platz 1 - 58256 Ennepetal |
|-----------|--|

| | | | | | | | | | | | | |
|--------------|-------------------|---|---|---|----|---|---|---|---|-------|--|----|
| | 0432-CPR-00026-08 | | | | | | | | | | | 15 |
| SVA 2xxx VB | EN 14846:2008 | 3 | S | 5 | E* | 0 | L | 7 | 1 | 1**/3 | | |
| SVA 2xxxF VB | | 3 | S | 5 | E | 0 | L | 7 | 1 | 1**/3 | | |
| DOP_0161 | | | | | | | | | | | | |

| | | | | | | | | | | | | |
|--------------|-------------------|---|---|---|----|---|---|---|---|---|---|----|
| | 0432-CPR-00026-11 | | | | | | | | | | | 17 |
| SVA 2xxx VB | EN 179:2008 | 3 | 7 | 7 | B* | 1 | 4 | 5 | 2 | A | A | |
| SVA 2xxxF VB | | 3 | 7 | 7 | B | 1 | 4 | 5 | 2 | A | A | |
| DOP_0162 | | | | | | | | | | | | |

| | | | | | | | | | | | | |
|--------------|-------------------|---|---|---|----|---|---|---|-----|-----|---|----|
| | 0432-CPR-00026-02 | | | | | | | | | | | 17 |
| SVA 2xxx VB | EN 1125:2008 | 3 | 7 | 7 | B* | 1 | 4 | 2 | 1/2 | A/B | A | |
| SVA 2xxxF VB | | 3 | 7 | 7 | B | 1 | 4 | 2 | 1/2 | A/B | A | |
| DOP_0163 | | | | | | | | | | | | |

* Only with external PR module "SVP-PR DCW" (item no: 70922601)

** Operation mode "Stand Alone"

4 Pin assignment



NOTE

For earthed door frames, the bridge on the SVP-A x100 connection cable's plug must be disconnected.



NOTE

Observe the connection diagram of the selected control unit and the SVI lock.

| Cable color SVP-A 1100/2100 | Connection/function depending on operation mode | | |
|-----------------------------------|--|----------|--|
| | DCW | CAN | Stand Alone |
| Black | GND | GND | GND |
| Red | - | - | Unlock (1-leaf), pull input to GND via a switch. |
| White | +24 V DC | +24 V DC | +24 V DC |
| Brown | - | - | Unlock (2-leaf), pull input to GND via a switch. |
| Violet | - | - | Locked, output switches to GND (max. 30 mA) |
| Red/blue | - | - | - |
| Blue | - | - | External door contact, pull input to GND via door contact. Door closed = contact closed |
| Green | DCW (B) | CAN H | - |
| Gray/pink | - | - | - |
| Yellow | DCW (A) | CAN L | - |
| Gray* | RS485 N | RS485 N | RS485 N |
| Pink* | RS485 P | RS485 P | RS485 P |

* only in combination SVI 2xxxF

4.1 Block diagram SVA 2xxx(F) CAN

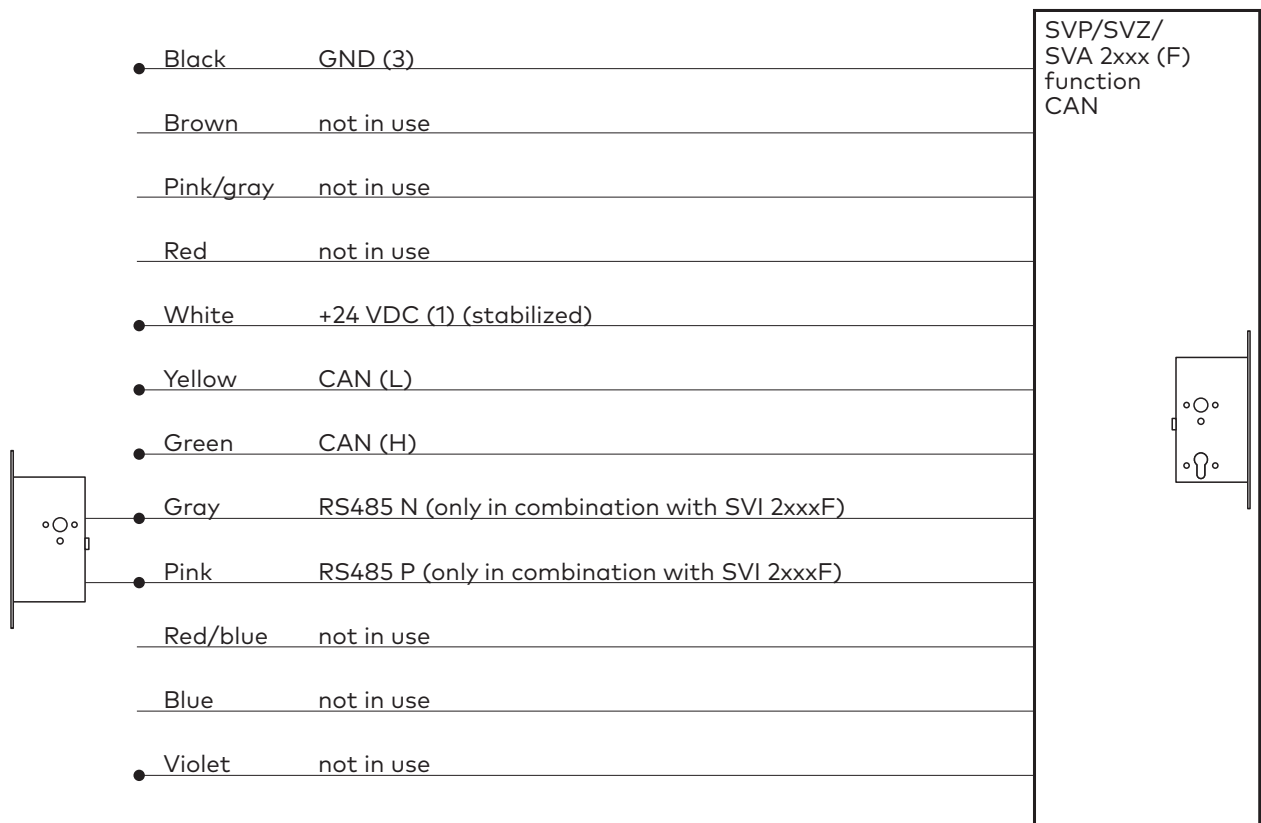


Fig. 4 Block diagram

4.2 Block diagram SVA 2xxx(F) DCW

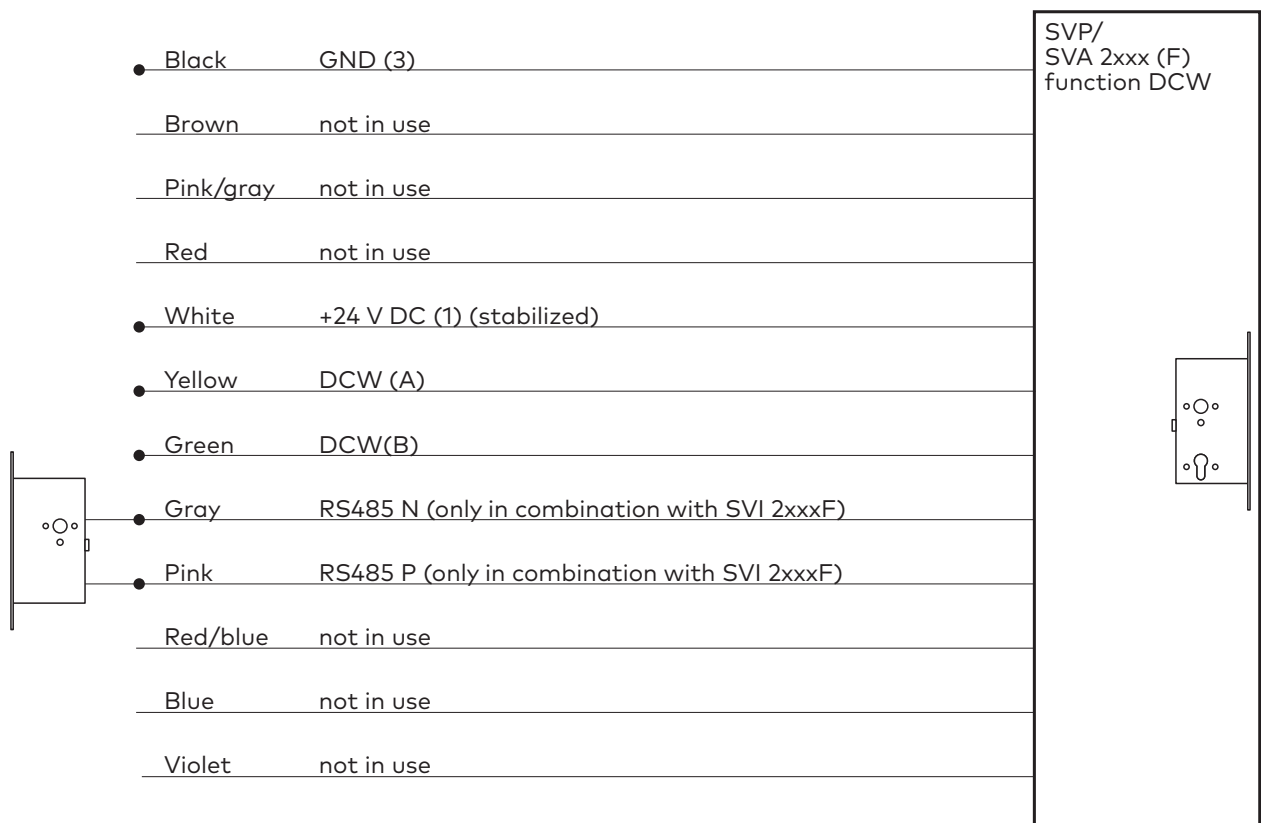


Fig. 5 Block diagram

4.3 Block diagram SVA 2xxx(F) Stand Alone

Contact definition: Position of the switches when the door is closed and locked. Door handle and cylinder not actuated.

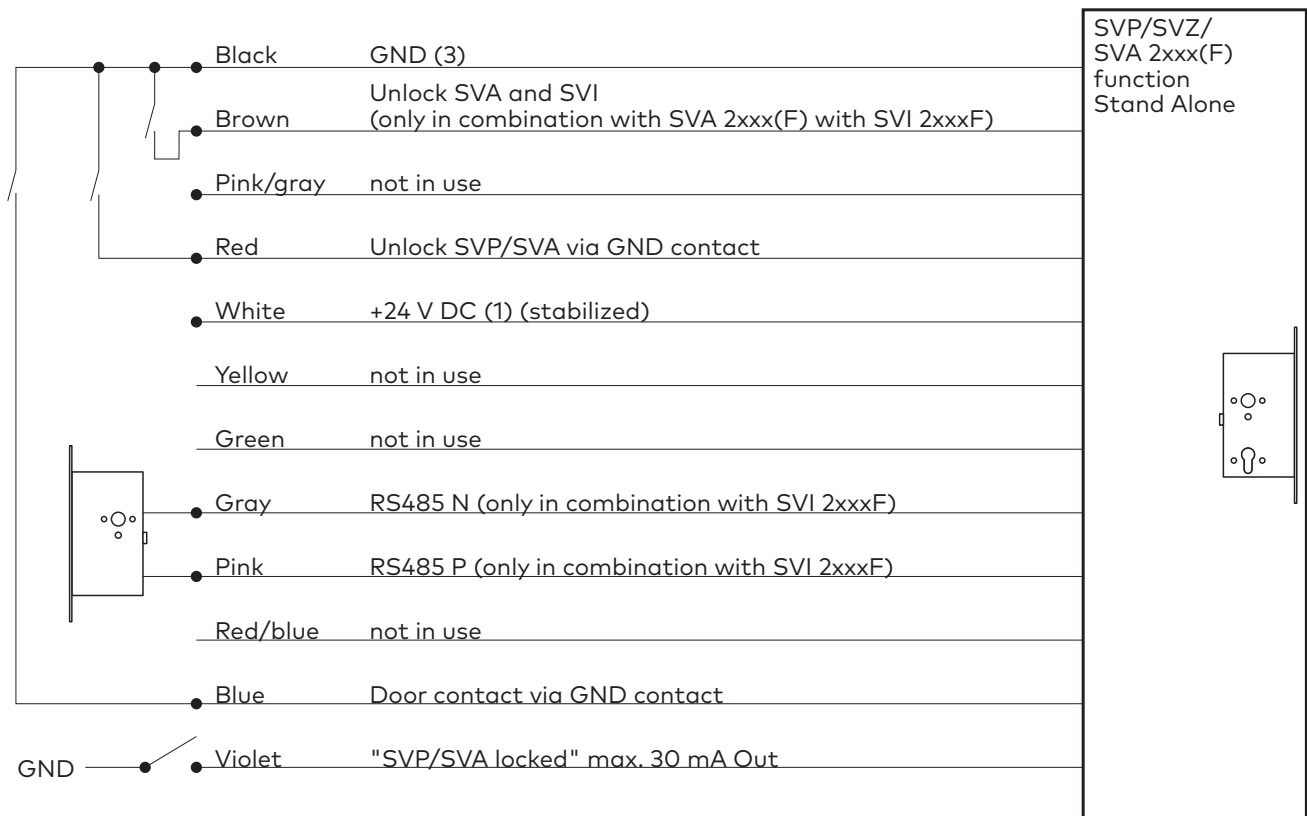


Fig. 6 Block diagram

5 Mounting



ATTENTION

Damage to property due to the use of an incorrect cylinder screw.

Only use the cylinder screw supplied with the lock to secure the cylinder (DIN EN ISO 7046-1, M5 x (backset + 5 mm)).

See SVA/SVI assembly instructions.



<https://techdoc.dormakaba.com/cds/go/SVA-SVI>

SVI commissioning manuals



<https://techdoc.dormakaba.com/cds/go/SVI>

6 Parameterization

The default setting is the operation mode DCW with the DCW bus address 1. If other settings are desired, the SVA lock must be parameterized.

6.1 Requirements

- The door lock is mounted and is under operating voltage (24 V DC).
- The system was de-energized for min. 30 s before the start.
- The system was started up max. 20 min ago.
- The LED is not signaling an error (see Chapter 7) and indicates an operation mode (see Chapter 3.7).



NOTE

Read the entire procedure.

Changed parameters must be saved within 5 min, otherwise parameterization is aborted, (see Chapter 6.2.6).





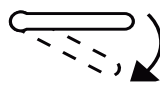
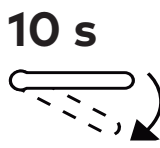

NOTE

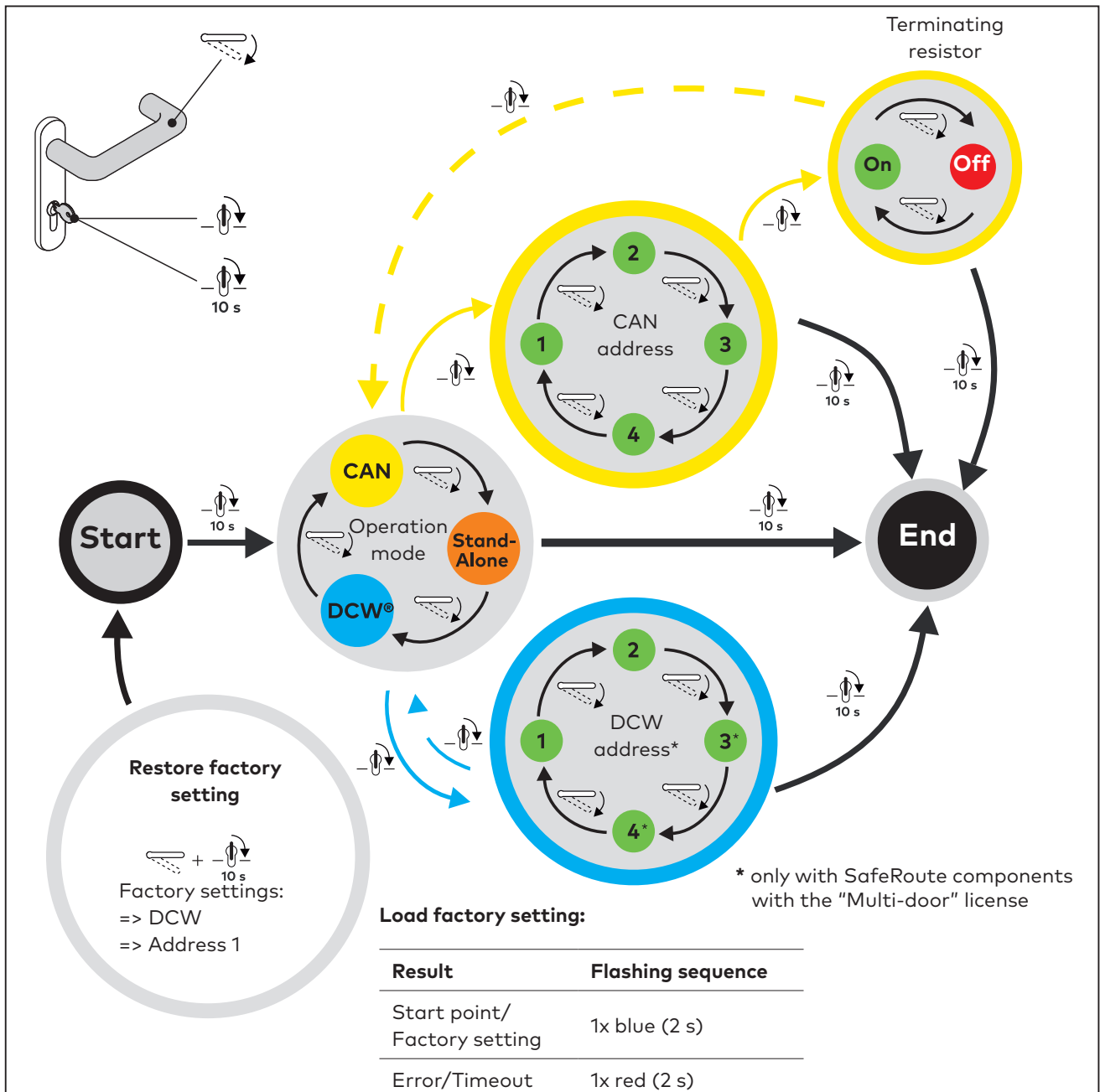
If parameterization is not possible, check the fit of the cylinder cam. The cylinder must touch the cylinder contact.

6.2 Parameterizing

The parameters are set from the inside of the door in its installed state. The switches in the door lock are operated with a door handle or key.

| Symbol | Operating method |
|---|--|
|  | To start parameterization or to save changed parameters: Turn the door key in the locking cylinder in the unlocking direction until it stops and hold it there for at least 10 s. |
|  | To jump from one selection to the next: Turn the door key briefly in the locking cylinder in the unlocking direction until it stops. |

| Symbol | Operating method |
|---|---|
|  | To jump from setting to setting within a selection: Briefly press down the door handle until it stops. |
|  | Restore factory settings and jump back to start: Press the door handle and key at the same time for 10 s: Press and hold the door handle down until it stops, turn and hold the door key in the locking cylinder in the unlocking direction until it stops. |
|  | |



6.2.1 Set for DCW bus

Address assignment is only required in conjunction with a SafeRoute system with multi-door application.



NOTE

Address assignment for combination of SVA 2000(F) and SVI 2000 F:

1-leaf door:

SVA = Address 1

2-leaf doors:

1st door: SVA = Address 1

2nd door: SVA= Address 2

The addresses of SVI locks are assigned automatically.

1. Open the door and release the door handle.
 - ▶ The LED is constantly lit up.
2. Turn the key in the unlocking direction until it stops and hold it there for 10 s.
 - ▶ The LED flashes.
3. Turn the key back to its starting position.
4. Press the door handle down repeatedly and check the operation mode until the LED flashes blue.
5. Turn the key briefly in the unlocking direction until it stops.
 - ▶ The LED flashes green 1 x – 4 x:
1 x flashing = address 1
2 x flashing = address 2 etc.
The signal repeats itself after a pause of 2 s.
6. Press the door handle down repeatedly and check the DCW address until the desired address is reached.
7. Turn the key in the unlocking direction until it stops and hold it there for 10 s.
 - ▶ The LED flashes green for 2 s and then lights up constantly blue.

→ **The door lock is set for operation on the DCW bus.**
8. Turn the key back to its starting position.

6.2.2 Set for CAN bus



NOTE

In the EntriWorX EcoSystem, the address assignment takes place automatically in the CAN bus. No manual adjustment is necessary.

1. Open the door and release the door handle.
 - ▶ The LED is constantly lit up.
2. Turn the key in the unlocking direction until it stops and hold it there for 10 s.
 - ▶ The LED flashes.
3. Turn the key back to its starting position.
4. Press the door handle down repeatedly and check the operation mode until the LED flashes yellow.
5. Turn the key briefly in the unlocking direction until it stops.
 - ▶ The LED flashes green 1 x – 4 x:
1 x flashing = address 1
2 x flashing = address 2 etc.
The signal repeats itself after a pause of 2 s.
6. Press the door handle down repeatedly and check the CAN address until the desired address is reached.
7. If the terminating resistor does not need to be changed (see Chapter 3.7.2), continue with step 9.
8. Turn the key briefly in the unlocking direction until it stops.
 - ▶ The LED flashes red or green.
The signal repeats itself after a 2 s pause.
9. Press the door handle down repeatedly until the desired terminating resistor function is reached.
 - ▶ LED flashes green or red.
10. Turn the key in the unlocking direction until it stops and hold it there for 10 s.
 - ▶ The LED flashes green for 2 s and then lights up constantly yellow.

→ **The door lock is set for operation on the CAN bus.**
11. Turn the key back to its starting position.

6.2.3 Set for Stand Alone mode

1. Open the door and release the door handle.
 - ▶ The LED is constantly lit up.
2. Turn the key in the unlocking direction until it stops and hold it there for 10 s.
 - ▶ The LED flashes.
3. Turn the key back to its starting position.
4. Press the door handle down repeatedly and check the operation mode until the LED flashes orange.
5. Turn the key in the unlocking direction until it stops and hold it there for 10 s.
 - ▶ The LED flashes green for 2 s and then lights up constantly orange.
 → **The door lock is set for Stand Alone mode.**
6. Turn the key back to its starting position.

6.2.4 Jump back to the selection

- Jump from the DCW address selection back to the operation mode selection:
Turn the key briefly in the unlocking direction until it stops 1 x.
- Jump back from the CAN address selection to the operation mode selection:
Turn the key briefly in the unlocking direction until it stops 2 x.








6.2.5 Restore factory setting

- Press the door handle and key at the same time for 10 s.
- Press and hold the door handle down until it stops, turn and hold the door key in the locking cylinder in the unlocking direction until it stops.
 - ▶ The LED flashes blue or red for 2 s:
1 x blue = Start point/Factory setting
1 x red = Error/Timeout

6.2.6 Cancel parameterization

- If the changes are not saved within 5 minutes of the start of parameterization, parameterization is aborted without the changes being accepted: The LED lights up red for 2 s, then it lights up constantly in the color for the originally set operation mode.
- If the power supply is interrupted during parameterization, any unsaved changes are discarded. Previously saved values are retained.

7 Error messages

| LED display | Cause | Activity |
|---|--|---|
|  | Voltage supply outside the tolerance range (24 V DC +/- 10%) | Check power supply unit. |
|  | Power Reserve function test is faulty (SVA 2000F only) | Replace lock. |
|  | Unlocking/locking not successful | Check whether the bolt is blocked from outside the lock. If not, call dormakaba Service |
|  | DCW bus connection interrupted | Check correct wiring. |
|  | CAN bus connection interrupted | Check correct wiring. |
|  | General error | Disconnect and reactivate the power supply for the door. If the error persists, call dormakaba Service. |
|  | Bus cable disrupted in the operation mode CAN mode | Power on again. |

8 Disassembly and disposal

Disassembly is carried out in reverse order of the mounting instructions.



The product must not be disposed of in domestic waste.

Dispose of the product in an environmentally friendly manner at the arranged acceptance and collection points.

Refer to the statutory regulations for your country.

