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# Digital Padlock AX (Z5.PL)

Manual

09.07.2024

**Simons  Voss**  
technologies

Simons  Voss

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## 1. General safety instructions

### Signal word: Possible immediate effects of non-compliance

WARNING: Death or serious injury (possible, but unlikely)

CAUTION: 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.



### CAUTION

#### 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) when enclosure is open

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 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.

### Different times for G2 locks

The internal time unit of the G2 locks has a technical tolerance of up to  $\pm 15$  minutes per year.

- ❑ Regularly reprogram time-critical locking devices.

### 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.

## 2. Product-specific safety instructions

### IMPORTANT

#### Mechanical damage to the thumb turn as a result of obstacles

If the thumb turn can knock against the wall or other objects as a result of the installation situation, it may become damaged.

- In such situations, use a suitable door stop.

#### Damage caused by moisture in outdoor use

Moisture can damage the electronics.

1. If you want to use the locking cylinder for outdoor applications or in high humidity (bathrooms or washrooms), use the WP version.
2. Carefully insert the locking cylinder to avoid damaging the O-rings.

#### Damage to the Digital Cylinder AX due to unsuitable tools

Special tools are required to open the cover and dismantle the Digital Cylinder AX. If you use unsuitable tools, you may damage the Digital Cylinder AX.

- Only use the separately available SimonsVoss special tool (Accessories).

## 3. Intended use

The digital padlock is used to lock doors or other entrances or access points. The padlock may only be used for this specific purpose.

## 4. Programming



### NOTE

#### Freely rotating active/hybrid Digital Cylinder AX only with shortened range

With freely rotating cylinders, the reader knobs may not have sufficient clearance at low cylinder lengths. Due to the range of the active technology, the radio signal can also be unintentionally received by the second reader knob.

1. Program freely rotating cylinders with the SmartStick AX or the SmartCD.MP.
2. Ensure that the short range is selected during programming (standard setting for cylinders factory- supplied as freely rotating).

#### First transponder activation rejected after initial programming of AX products

If a transponder is the first identification medium to be activated after initial programming, the transponder can be rejected once and synchronised with the locking device in the background. Transponders will then function as normal.

- ✓ LSM software version 3.5 or higher installed.
  - ✓ LSM open.
  - ✓ SmartStick AX, SmartCD.MP or SmartCD.G2 connected (recommended: SmartStick AX).
1. Select the locking system that you require. Use the **...** button to open the locking system properties and use the **▶** and **◀** buttons to select the required lock system.
  2. Click on the **🔒** button to add a new locking device.
    - ↳ The "New lock" window will open.
  3. Open the **▼ Area** drop-down menu.
  4. Select the area.
  5. Open the **▼ Lock type** drop-down menu .
  6. Select the entry "AX cylinder".
  7. Complete the rest of the form.
  8. Click on the **Save & next** button.
    - ↳ Locking device has been added.
  9. Click on the **Exit** button.
    - ↳ Window closes.
  10. Select the entry for the AX locking cylinder in the matrix.
  11. Position your programming device.



**NOTE****Duration of initial programming**

A large amount of data is transferred during initial programming. The data transfer speed is significantly higher with a SmartStick AX or a SmartCD.MP (and the programming time is therefore shorter).

- If possible, use a SmartStick AX or a SmartCD.MP for initial programming.

12. Open the context menu by right-clicking on the AX locking cylinder entry in the matrix.
13. Select the **Programming** item.
14. Open the ▼ **Type** drop-down menu .
15. Select the entry "Card reader (SmartCD MP)" or "SmartCD".
16. Click on the **Programming** button.

**NOTE****Programming with SmartStick AX**

The SmartStick AX BLE interface has a wide range and can reach several locking devices at the same time. This is why the SmartStick AX first needs to know which locking device to programme.

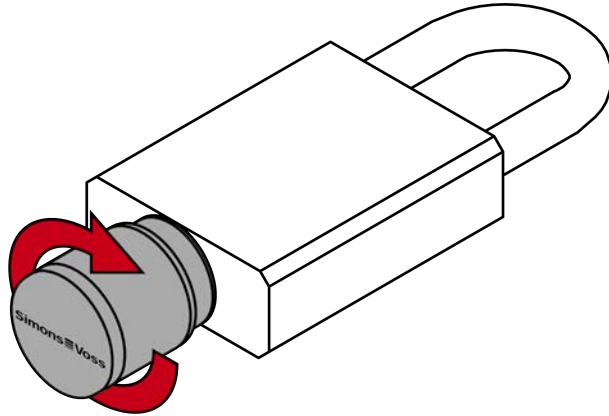
- Tap the locking device to be programmed immediately after starting programming with the SmartStick AX.

- ↳ Programming launches.
17. Wait for programming to complete.
- ↳ AX locking cylinder is programmed.

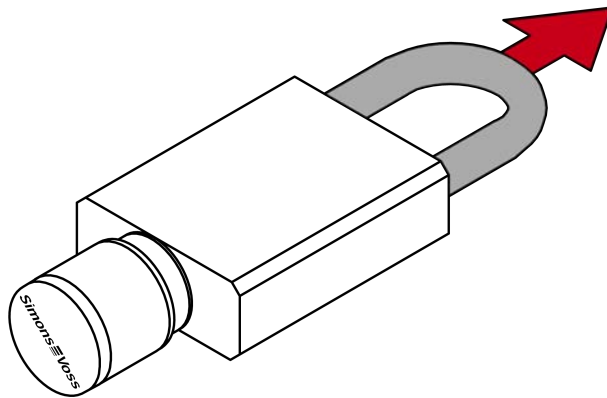
## 5. Operation

Open

1. Activate your identification medium on the knob.
2. Turn the knob fully clockwise.  
↳ Shackle unlocked.



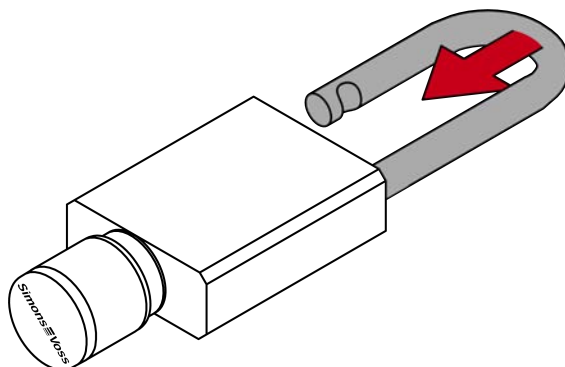
3. Open the shackle.



- ↳ Padlock open.

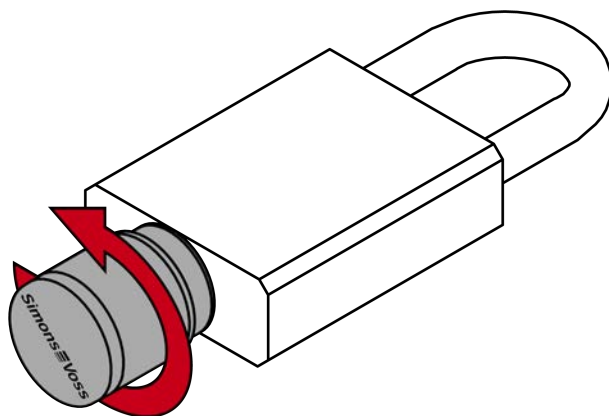
Closing

1. Close the shackle.  
↳ SL version: Shackle locks into place automatically.



2. ML version only: Activate your identification medium on the knob.

3. ML version only: Turn the knob fully counter-clockwise.  
↳ Shackle locked.



4. Check for correct closure.  
↳ Padlock locked.

## 6. Battery replacement



### NOTE

#### Battery contact malfunction due to grease film

When touching batteries, leave a thin film of skin grease on the batteries. This film deteriorates the contact between the electronics and the batteries.

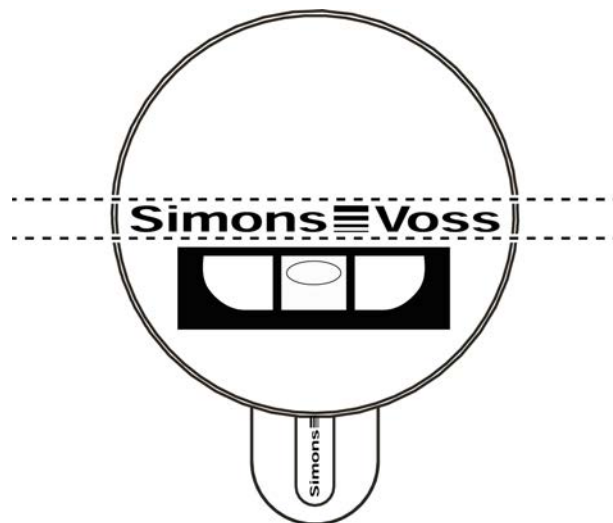
1. Do not touch the contacts of the new batteries with your hands.
2. Use clean and grease-free gloves.

#### Maintaining the condition during battery replacement

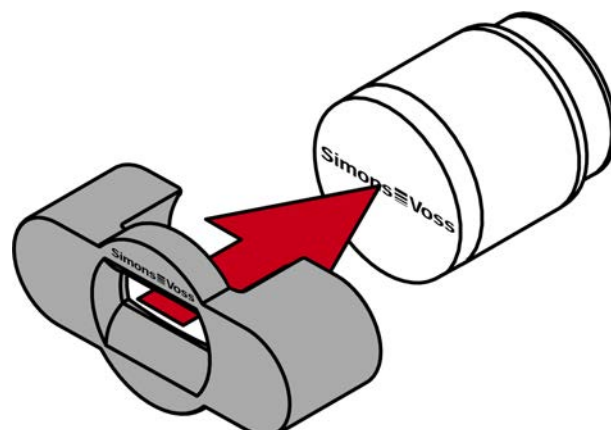
The Digital Cylinder AX cannot engage or disengage without power supply. Therefore, while the batteries are removed, the Digital Cylinder AX retains its current locking status and its data status (programming and stored logs).

- ✓ Special tool available.

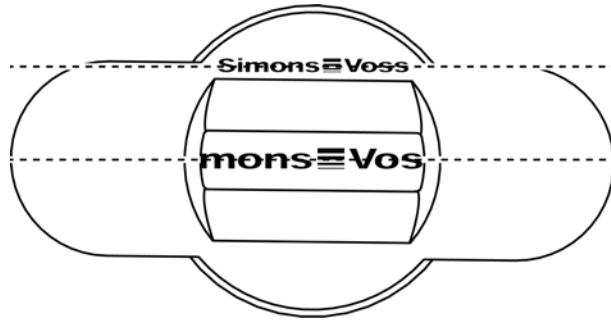
1. Align the thumb turn horizontally.



2. Attach the special tool.



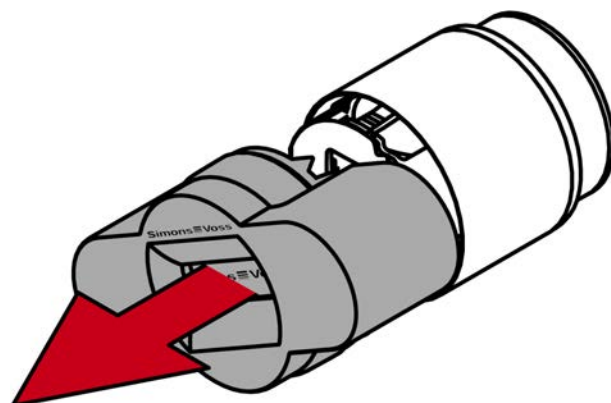
3. Align the special tool so that the logo is parallel to the recess.



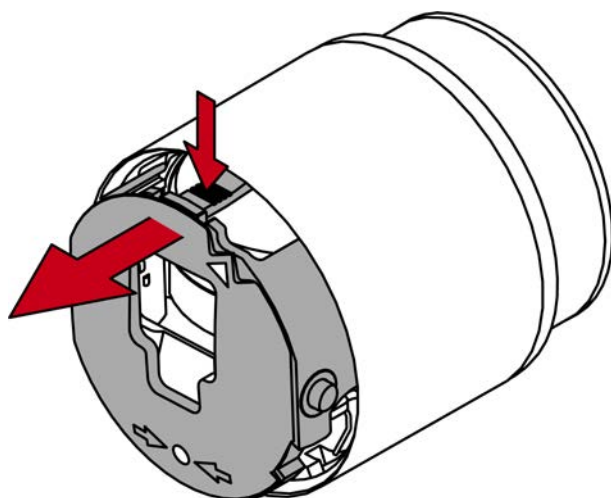
4. Hold the special tool and thumb turn cap firmly at the same time and turn them together 1-2° clockwise first and then counter-clockwise.



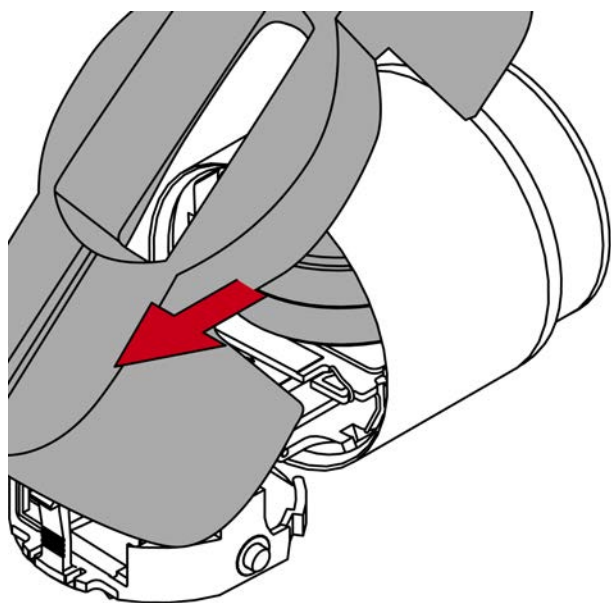
5. Remove the tool and cover.



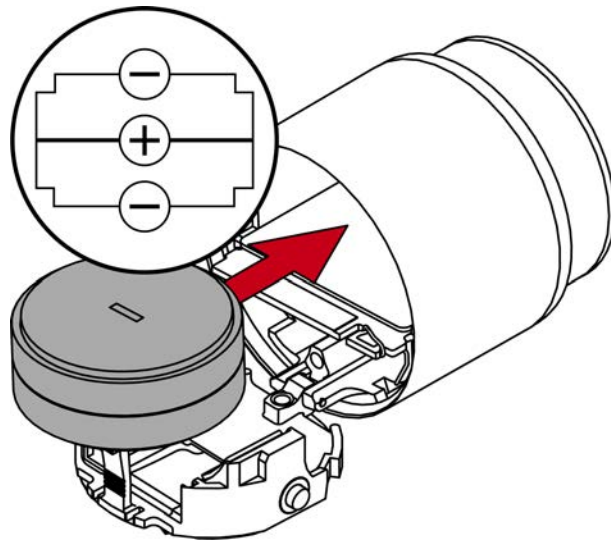
6. Push the latch inward and open the battery cover.



7. Remove the batteries with the special magnetic tool.

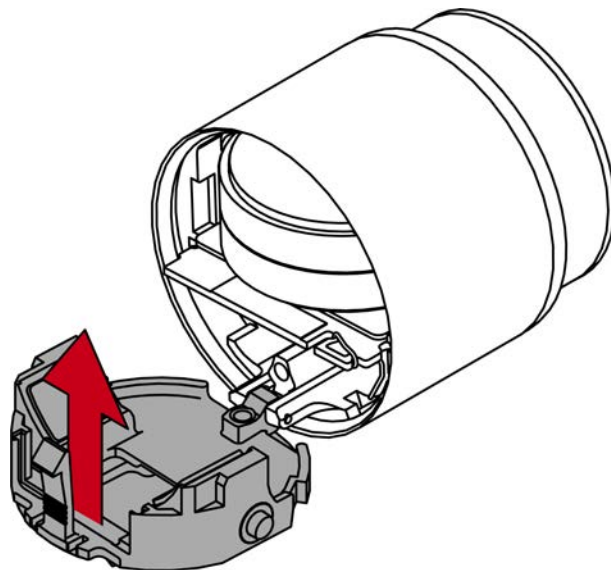


8. Insert the new batteries (positive poles touching in the middle).



9. Close the battery cover.

↳ Cylinder signals the successful change with triple red flashing and beeping.

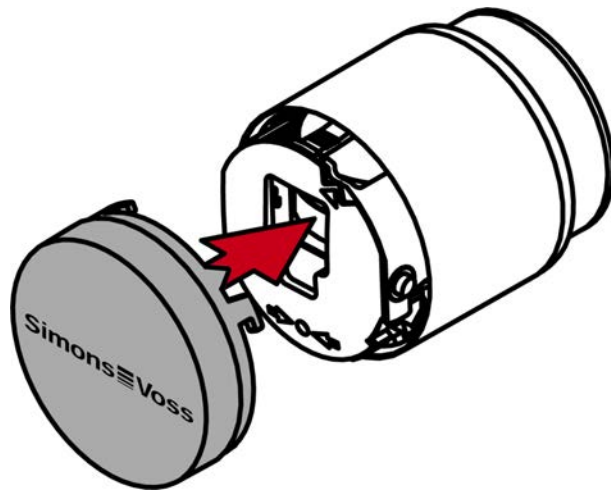


10. Put on the cover.

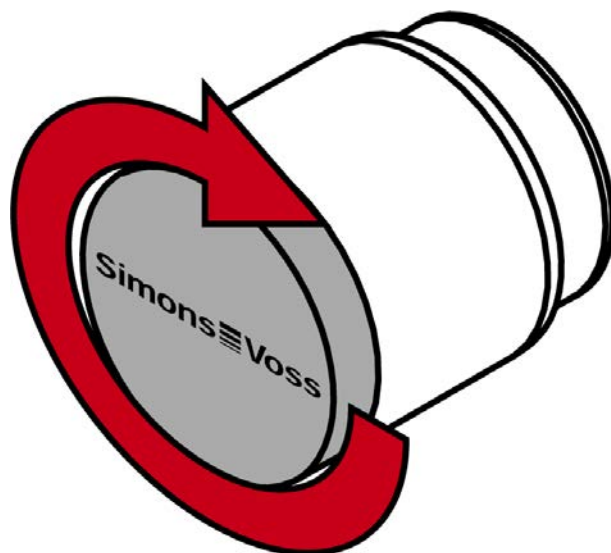


**NOTE**

Align the thumb-urn cover and thumb-turn using the triangles as shown in the graph.



11. Turn the cover clockwise.



↳ The cover snaps into place with one click.

12. Carry out a function test.

↳ Batteries are replaced.



## 7. Signalling

Signalling	Meaning
2× shortly before engaging (green)	Identification medium assumed, normal activation
1× briefly (red)	Identification medium not authorised
1× briefly, 1× long (green)	Flip-flop mode: Engaged
1× long, 1× briefly (green)	Flip-flop mode: Disengaged
3× briefly after battery change (red)	Successful battery change
8× briefly before engaging (red)	Battery Warning Level 1
16× briefly before engaging (red)	Battery Warning Level 2

## 8. Technical specifications

Dimensions (WxHxD)	Basic body without knob/shackle: 70×51×25 mm (8 mm shackle) or 72.5×60×25 mm (11 mm shackle)
Dimensions knob (Øxlength)	Ø 32 mm × 39.5 mm (electronic)
Shackle diameter	8mm / 11mm
Shackle internal height	For 8mm shackle: 25/60 mm or for 11 mm shackle: 50mm
Material	Body/bracket: Stainless steel, active knob: Stainless steel ring cap, pass- ive/hybrid knob: Plastic cap
Colours	Stainless steel, brushed
Thumb-turn covers for reader thumb-turn	Plastic cap (passive/hybrid), metal ring cap (active), full metal cap (active)
Certifications	Class 3 (8 mm) or Class 4 (11 mm) according to EN 12320
Weather protection	IP67
Temperature range (operation)	-25 °C to +65 °C (according to DIN EN 15684)
Battery type	2x CR2450 3V (lithium)
Approved battery manufacturers	Murata, Panasonic, Varta
Battery lifetime	Up to 12 years on standby or 100,000 activations
Signalisation	Audible signal (buzzer) and/or visual signal (LED – green/red)
Network capability	Yes (integrated LockNode can be ordered and retrofitted - not ap- proved by VdS)
Reading technologies (3060)	Active (25 kHz), passive (MIFARE® Classic and DESFire, hybrid (active and passive), Bluetooth Low Energy (with VdS only active and MIFARE DESFire approved, with authorisa- tion group D no MIFARE Classic and no PinCode keypad)

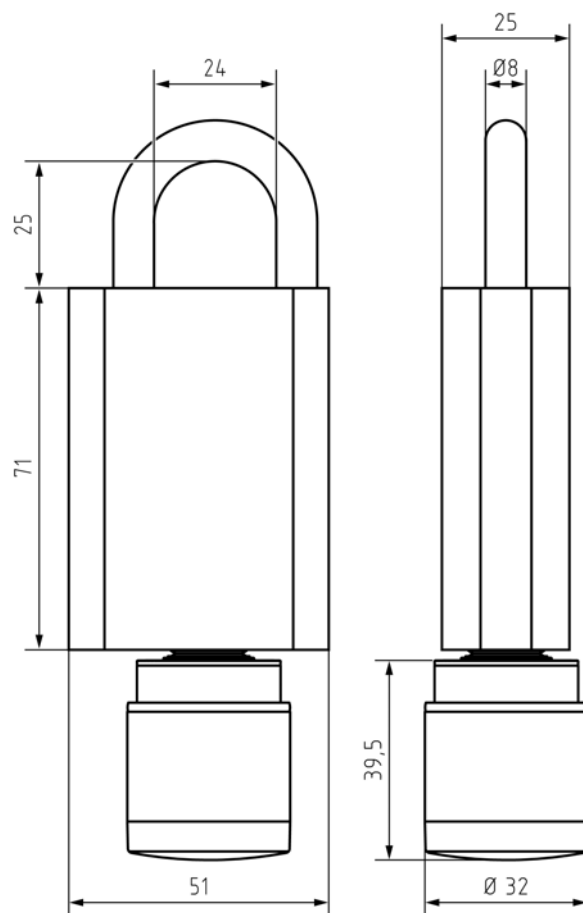
Networking modes	Online, virtual network and offline (can be combined - not approved by VdS)
Opening modes	Pulse flip-flop
Storable accesses (3060)	3,000
Time zone groups	100+1 (G2)
Number of identification media that can be managed per lock	64,000
Number of locks that can be managed per identification media	304,000 per transponder
Upgradeability	Firmware upgradable via BLE

**Radio emissions**

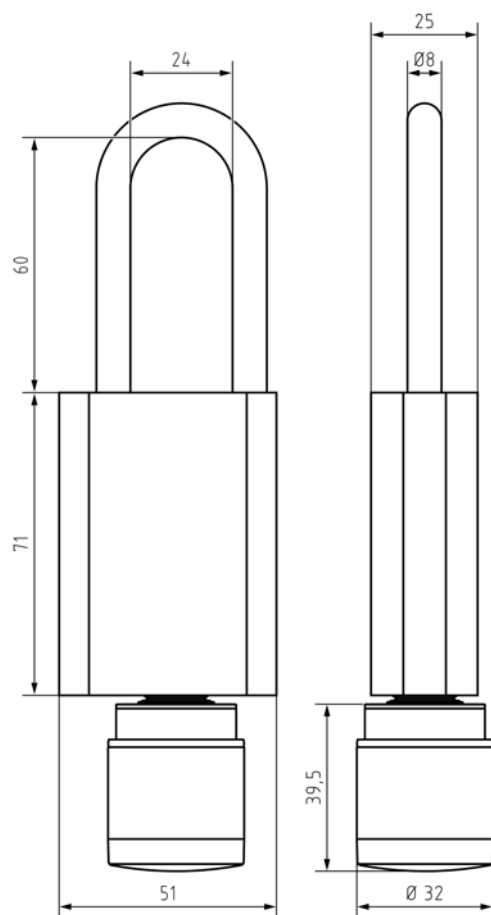
15.25 kHz - 72.03 kHz	10 dB $\mu$ A/m (3 m distance)
13.560006 MHz - 13.560780 MHz	1.04 dB $\mu$ A/m (3 m distance)
868.000 MHz - 868.600 MHz / 869.700 MHz - 870.000 MHz Only for item numbers: SV- Z5.PL.*LN*	<25 mW ERP
2402 MHz - 2480 MHz	2.5 mW

### 8.1 Scale drawings

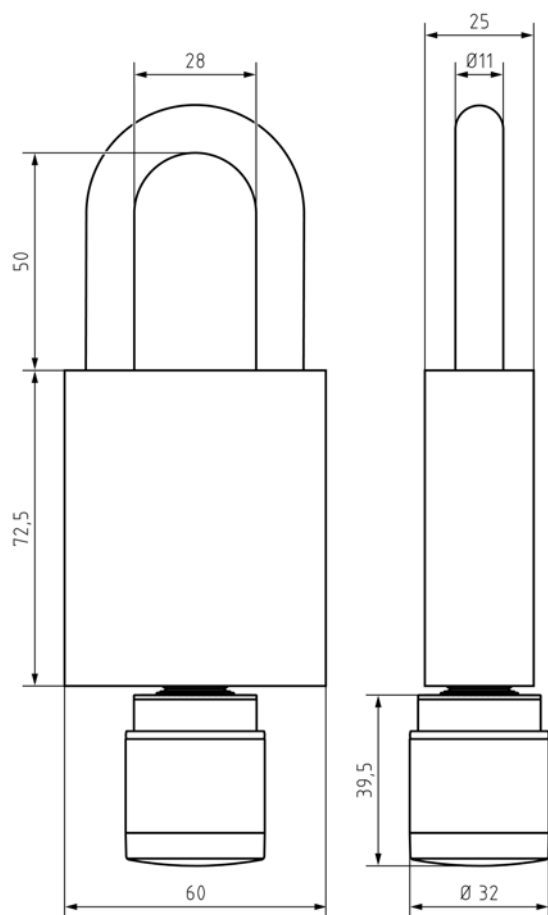
8 mm shackle, 25 mm shackle interior height



8 mm shackle, 60 mm shackle interior height



8 mm shackle, 50 mm shackle interior height



## 9. Declaration of conformity

The company SimonsVoss Technologies GmbH hereby declares that the articles (SV-Z5.PL.\*LN\*, SV-Z5.PL.\*) comply with the following guidelines:

- 2014/53/EU -RED-  
or for the UK: UK statutory 2017 No. 1206 -Radio equipment-
- 2011/65/EU -RoHS-  
or for the UK: UK statutory 2012 No. 3032 -RoHS-



The full text of the EU Declaration of conformity is available at the following internet address: [www.simons-voss.com/en/certificates.html](http://www.simons-voss.com/en/certificates.html).

The full text of the UK Declaration of conformity is available at the following internet address: [www.simons-voss.com/en/certificates.html](http://www.simons-voss.com/en/certificates.html).

## 10. 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 (SV-Z5.PL.\*LN\*, SV-Z5.PL.\*) 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](mailto: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](http://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.

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