

Installation and Operating Instructions

# DOM Protector<sup>®</sup>

EDV-Nr. 297876 / 0 / gb / 04.12 Rev. F

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## Scope of delivery

According to order:

### **DOM Protector® double cylinder**

- Basic length 30/30 mm
  - Maximum overall length (without knobs): 65/65 mm
  - 1x screw; battery (pre-assembled)
- or

### **DOM Protector® readable from both sides**

- Basic length 30/30 mm
  - Maximum overall length (without knobs): 65/65 mm
  - 1x screw; 4x Torx screws (TX10); 2 batteries (pre-assembled externally)
- or

### **DOM Protector® half cylinder**

- Basic length 30 mm
- Maximum overall length (without knobs): 65 mm
- 1x screw; battery (pre-assembled)

On request: Overall lengths larger than 65 mm, KL (Short/Long) and glass door cylinder

### **Optionally available**

- Rubber grip rings for a better grip on the knobs
- Starter pack comprising: 1 x master card in ISO cheque card format; 1 x program card in ISO cheque card format; 1 x installation tool kit comprising: special open-ended spanner and knob tongs
- Torx screwdriver TX6; TX10
- DOM ClipTac, battery-free passive transponder for mechanical keys
- ISO cheque card transponder, battery-free passive transponder
- ISO cheque card transponder with magnetic strip, battery-free passive transponder
- Custom-printed transponders (Standard Tac and cheque card transponder)
- Card constantly open, card constantly closed in ISO cheque card format
- Management software for PC and PDA
- Serial RS232 infrared adapter for programming and management with software
- PC desktop reader for reading and writing locking media into software
- CF-RW module for reading locking media into software

## Functional description

All DOM access control components and therefore also the DOM Protector® leave the factory in neutral state. They are only "initialised", i.e. assigned to a master card, shortly before installation. From this point the ELS terminal device can only be programmed by this master card or by program cards or PDAs authorised with this master card. The holder of the master card therefore exclusively decides on assignments and the allocation of authorisations. Alternatively, authorisations can be stored on the transponders (please also see ELS Software Manual in this regard).



Note! Keep the master card in a safe place, which can only be accessed by authorised persons. The master card has no locking medium function! If you lose the master card, you must contact your dealer. Complex reprogramming is required.

### **DOM Protector®**

The DOM Protector® in the standard version offers complete security, flexibility and convenience. The cylinder is in accordance with the state-of-the-art and offers maximum protection against electronic and mechanical manipulation attempts.

Up to 32,000 locking media (users) can be managed with numerous access control functionalities (time zones etc.). The ability to store up to 2,000 events ensures the traceability of door openings. Identification by means of transponder occurs on the outside of the door. From inside, the door is basically operated using the knob, without identification.

### **DOM Protector®, readable from both sides**

Characteristics as DOM Protector®, but in this version both outside and inside knob are free-turning. Consequently, before opening a door - irrespective of from which side - identification by the transponder is essential. This enables entry and exit control by means of the cylinder, for example. By allocating different authorisations on the outside and inside, flows of people through a building can be specifically controlled or areas can be clearly separated from each other.

### **DOM Protector®, Basic, Basic Plus**

In these variants, the DOM Protector® fulfils the performance features necessary for interior use, for example, cost-effectively and efficiently. In this case the organisation of access is more important than the physical protection of assets.

## For your safety

Always comply with the notes and safety instructions!

Some sections of these Installation and Operating Instructions are highlighted by graphic symbols. Memorise these symbols and their meanings:



Attention! This symbol marks a warning or indicates an action that can cause damage to the DOM Protector® or other objects.



Note! This symbol indicates useful information for installation or operation.

## Important information



Attention! Keep locking media away from small children. Small parts can be swallowed.



Attention! Material damage due to incorrect storage. If you need to keep the DOM Protector® for a prolonged period before installation, store all components in their original packing in a dry, dust-free location at room temperature (also see chapter on Storage/Maintenance).



Note! The DOM Protector® is exclusively intended for use in fittings without a core cover (core pulling protection). The profile cylinder opening must be free.



Attention! Damage due to incorrect installation and operation. Read these instructions through thoroughly and carefully before installation and commissioning. Follow the instructions step by step. The manufacturer cannot accept any liability for damages resulting from incorrect installation or operation.



Attention! Damage due to incorrect use. Never throw or drop the DOM Protector®. Never use force during installation.



Attention! Material damage due to incorrect use of the door. Do not open the door with the knob of the DOM Protector®. Always use the door handle to open the door.



Attention! Material damage due to stiff locks or jamming doors. Maintain worn locks or replace with new locks if necessary, and maintain powered doors. Knobs must operate smoothly after installation.



Attention! The DOM Protector® must not be used in potentially explosive areas.



Note! Incorrect installation of the DOM Protector will impede the desired locking function. The outer knob is always located on the body side marked with the CE logo.



Note! If you wish to ensure VdS-compliant installation, you must use the DOM Protector® in doors with a protective fitting. On doors with a forced entry risk, the locking cylinder used (VdS-compliant) must be protected with a VdS-approved burglary resistant door plate in class B or C. Door plates of this type comply with DIN 18257 Class ES2 – ZA or ES3 – ZA.



Attention! Electronic components can be destroyed by an electrostatic discharge (spark or breakdown). Therefore, before installing or removing the knob sleeve, avoid electrostatic charges or touch a conductive, earthed object beforehand (e.g. a water pipe, heating), so that you are electrostatically discharged. Never touch electronic components with your fingers.



Attention! Always keep locking media in a safe place, so that they are only accessible to authorised persons. If a locking medium is lost, it must be deleted or blocked immediately.



Attention! The usability of the DOM Protector in emergency exits and escape routes cannot be guaranteed. The pertinent building laws and regulations must be complied with. The DOM Protector® is a free-turning cylinder with knobs. In cases of doubt, the application must be checked with the specialist dealer.



Note! To communicate with the DOM Protector® by software, you need a software release V4.0 or higher. You also need PDA software V3.0 or higher.



Attention! The DOM Protector® must not be oiled or greased.



Attention! Always keep the DOM Protector® at a suitable distance from the master card, in order to prevent accidental initialisation.



Note! Please ensure a weather-protected installation (e.g. in the form of roofed entries) in accordance with VdS guideline 2156-2, if the unit is to be installed out of doors.



## Installation

Follow the described sequence and pay attention to the notes and illustrations.



Attention! When installing the system, observe the VDE (Association for Electrical, Electronic and Information Technologies) and local EVU (Electricity Board) regulations.



Attention! Material damage due to firm tightening of screw connections. Always observe the specified torques.



Attention! The DOM Protector® must not be mounted horizontally on account of the locking function, as the knob would be blocked. This does not apply for the DOM Protector® Basic and Basic Plus.



Note! The DOM Protector® is exclusively intended for use in fittings without a core cover (core pulling protection). The profile cylinder opening must be free.



Attention! The cylinder overhang must not exceed 3 mm in security-relevant doors.

### Preparation for installation

If you wish to install a large number of DOM Protectors®, we recommend performing initialisation before installation. If you wish to program with a master card and program card, you can also set up programming and locking media before installing the DOM Protectors®. Follow the steps below:

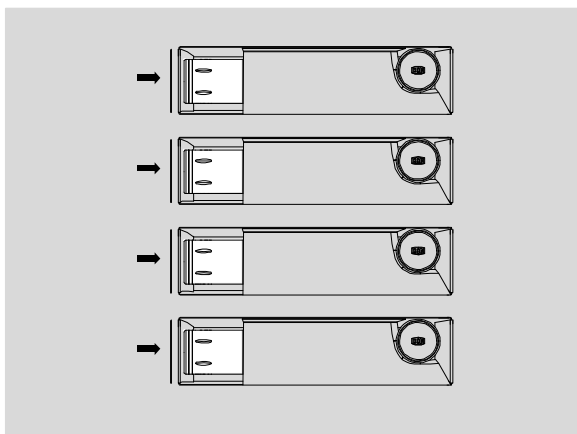


Fig. 1: Collective initialisation

1. Lay the open packages out ready.
2. Hold the master card or program card in front of the package and carry out the programming, as described in detail from page 16.
3. In the case of the DOM Protector® readable from both sides, the internal electronics must also be mounted. Please note the information on page 16 in this regard.

## DOM Protector® double cylinder

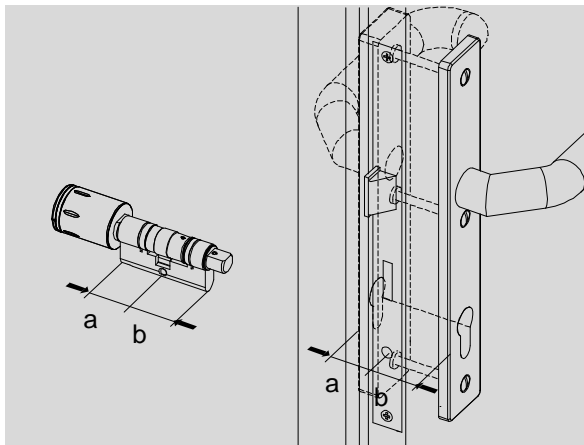


Fig. 2: Measure thickness

1. Measure thickness of the door with fitting.
2. Make sure that the basic length of the DOM Protector is adapted to the measured thickness: Note the division into outside (a) and inside (b).



Note! Ideally, the door with fitting should be a little thinner than the cylinder body of the DOM Protector, so that the knobs do not scrape on the fitting and operate smoothly. The cylinder must not project from the fitting more than 3 mm on security-relevant doors.



Note! Always install and program the DOM Protector® with the door open, so that you do not lock yourself out.

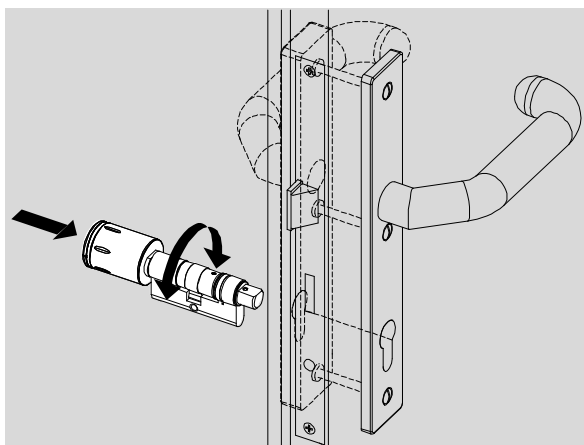


Fig. 3: Insert DOM Protector®

3. Dismount the old locking cylinder if necessary. (no illustration)
4. Take out DOM Protector® with pre-assembled outer knob from the pack.
5. Align the cam flush with the cylinder body.



Note! Always install the DOM Protector® from the outside.

6. DOM Protector® with the inner side to the fore through the fitting from outside.

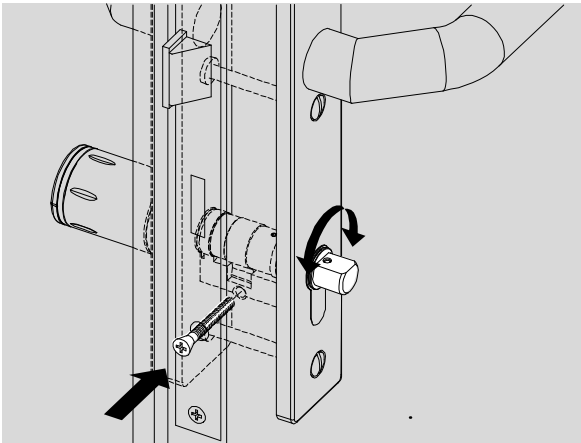


Fig. 4: Align cam

7. Turn the inner side so that you can feel the correct position of the cam and align the DOM Protector®.
8. DOM Protector® with the screw as soon as you feel the correct position. Do not completely tighten the screw yet.

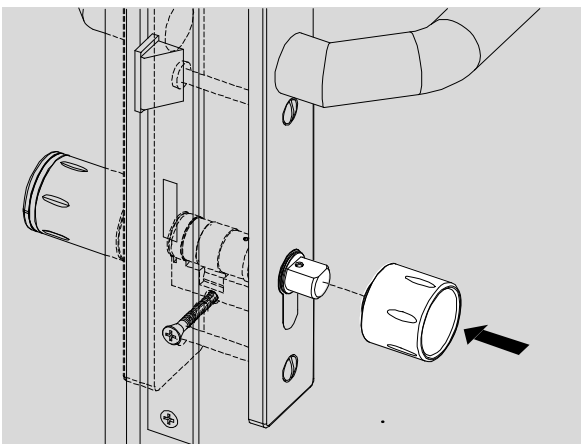


Fig. 5: Insert inside knob

9. Insert the inside knob accurately until it reaches the end position.



**Attention!** Do not tighten the screw with a cordless screw driver without torque control, because you may damage the DOM Protector® with the tool.

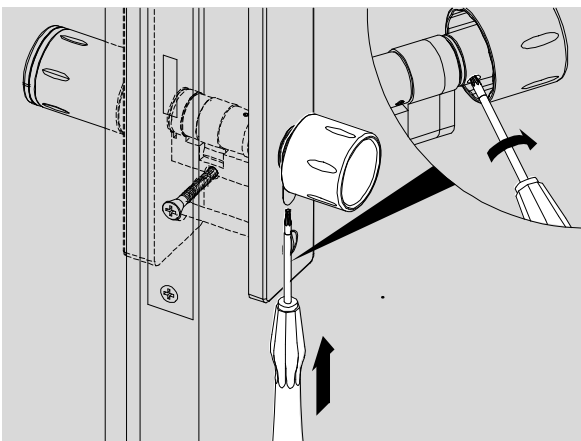


Fig. 6: Tighten inside knob

10. If necessary, turn the inside knob with the shaft, thus enabling free access of the screw driver to the set screw.
11. Turn the set screw M3 (Torx T6) manually to the right with the screw driver (approx. 4 revolutions).
12. Check that both knobs turn freely, without scraping on the fitting.
13. Tighten the screw.



**Note!** Keep the original packaging, so that you can store the DOM Protector® safely at any time.

## DOM Protector® double cylinder readable from both sides



Note! Ideally, the door with fitting should be a little thinner than the cylinder body of the DOM Protector, so that the knobs do not scrape on the fitting and operate smoothly. The cylinder must not project from the fitting more than 3 mm on security-relevant doors.



Note! The body side marked with the CE logo is the attack side, which is usually fitted on the outside! This side has additional drilling protection.



Note! Always install and program the DOM Protector® with the door open, so that you do not lock yourself out.

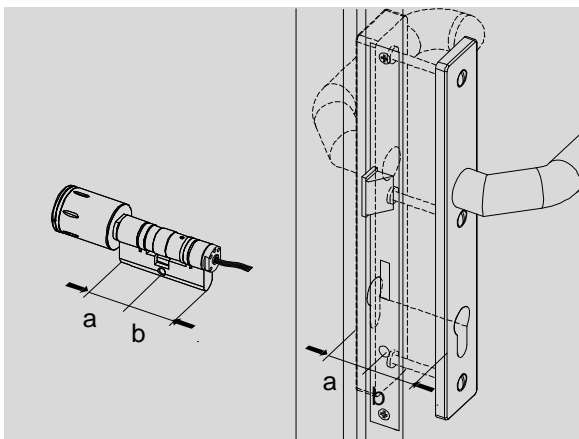


Fig. 7: Measure thickness

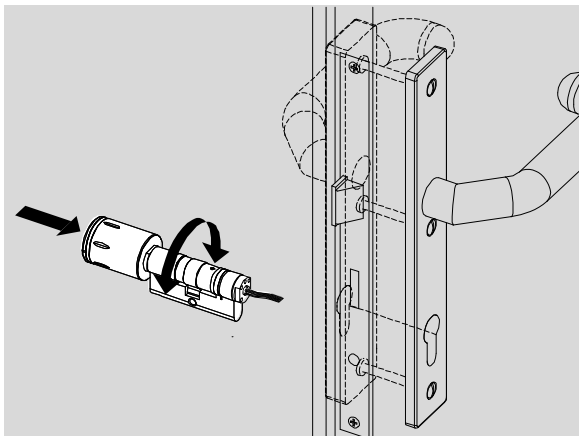


Fig. 8: Align cam



Attention! Do not remove the protective hose from the flex cord before the final fixation.

1. Measure thickness of the door with fitting.
2. Make sure that the basic length of the DOM Protector® is adapted to the measured thickness: Note the division into outside (a) and inside (b).

3. Dismount the old locking cylinder if necessary (no illustration).
4. Carefully remove the DOM Protector® with pre-assembled outer knob from the package.
5. Align the cam flush with the cylinder body.



Note! Always install the DOM Protector® from the outside.



Attention! Make sure that the flex cord is not sheared off.

6. Carefully push the DOM Protector® with the inner side to the fore through the fitting from outside.

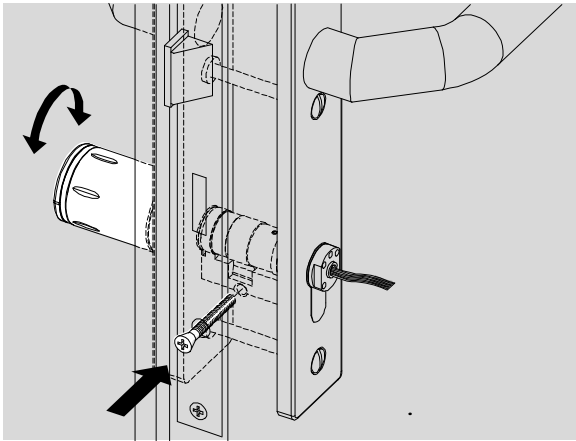


Fig. 9: Insert DOM Protector®

7. Hold authorised transponder in front of the outer knob if necessary, in order to engage the cam and align the DOM Protector®.
8. Fix the DOM Protector® with the screw as soon as you feel the correct position. Do not completely tighten the screw yet.

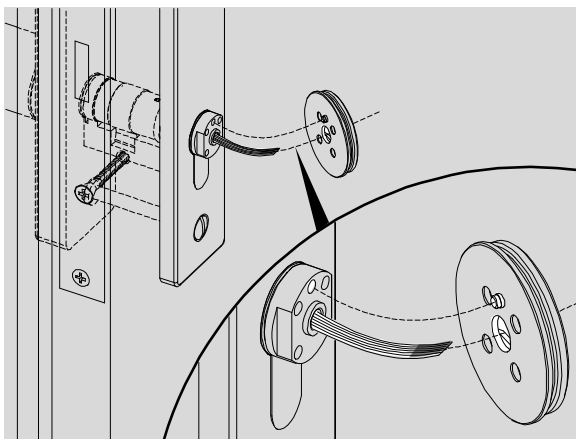


Fig. 10: Attach flange

9. Lead flex cord through the flange.
10. Align the flange so that the pin on the flange is guided accurately into the hole on the cylinder.



**Attention!** If you mount the flange on the inside, you must not place the open-ended spanner against the shaft on the outside. Place the open-ended spanner on the inside to tighten the screw on the inside without damaging the DOM Protector®.

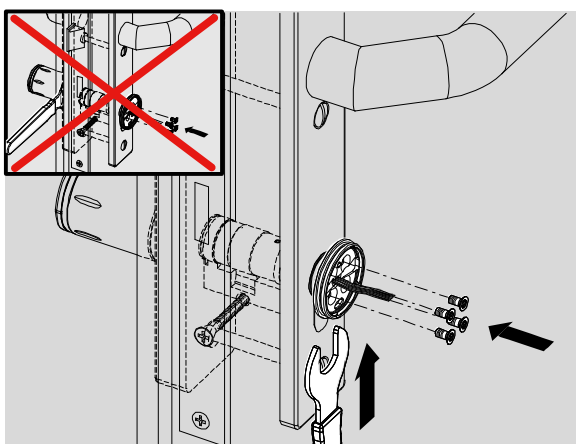


Fig. 11: Fasten flange

11. Attach flange and fasten with 4 Torx screws (TX10) (approx. 1.5 Nm): If necessary, support the open-ended spanner against the shaft on the inside.



Attention! Before installing or removing electronic components, avoid electrostatic charges or touch a conductive, earthed object beforehand (e.g. a water pipe, heating), so that you are electrostatically discharged. Never touch electronic components with your fingers.

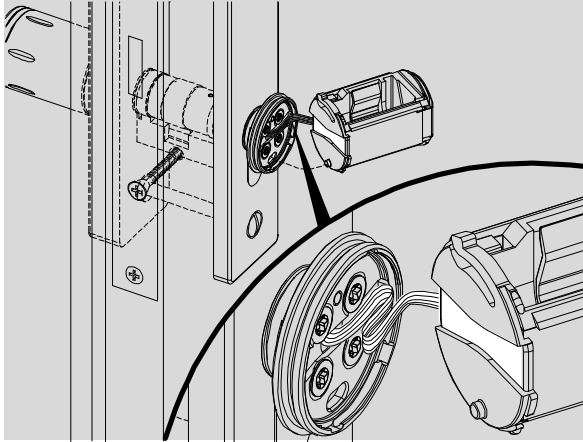


Fig. 12: Align electronic holder

12. Align the pin on the electronic holder in the direction of the slot on the flange.

13. Lead flex cord along the recess past the electronic holder.



Note! Do never shorten the flex cord to the necessary size, as this will remove the contacts.

14. If the flex cord is too long, fold it, so that the line is situated in the gap between flange and electronic holder after mounting the electronic holder.

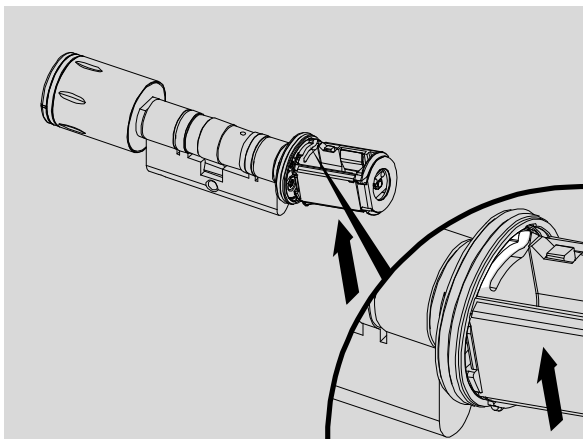


Fig. 13: Press the locking lug on



Note! Align the recesses on the flange with the guide lugs on the electronic holder.

15. Press electronic holder with the locking lug against the inside of the screw flange.

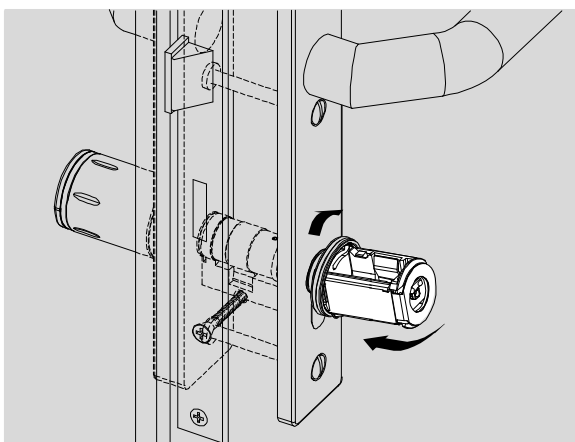


Fig. 14: Mount electronic holder

16. Tilt electronic holder down and insert guide lugs accurately into the recesses.

17. Turn the electronic holder to the right a little, until the locking lug engages.

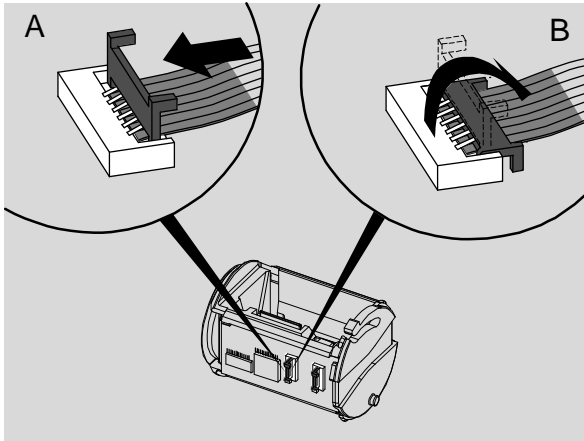


Fig. 15: Connect flex cord

18. Open the retaining spring clip of the flex connector on the electronic holder if necessary.

19. Push flex cord, with the contact side down, into one of the flex connectors on the electronic holder as far as the stop (A).

20. Push retaining spring clip down on the selected flex connector (B).

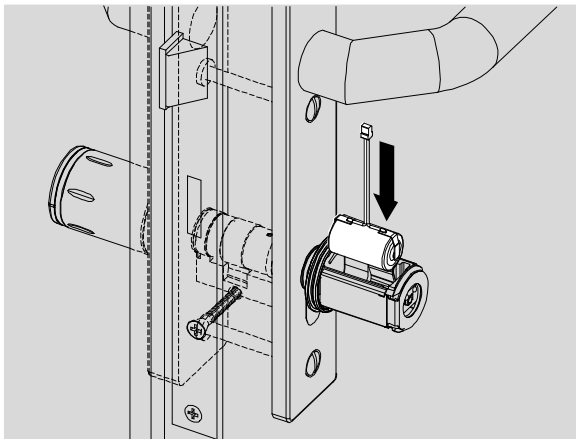


Fig. 16: Insert battery

21. Insert battery.



Note! The battery connector has a torsion-resistant guide lug.

22. Insert the battery connector into the battery socket.

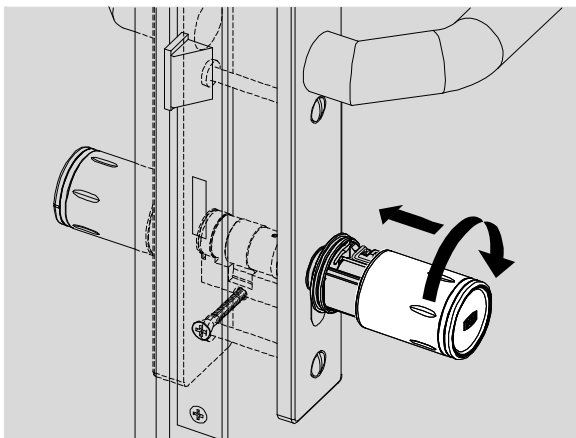


Fig. 17: Screw on inside knob

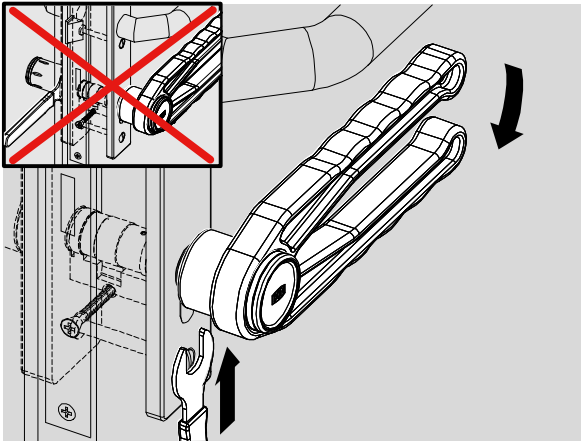
23. Attach inside knob in the correct position and tighten by hand first of all.



Attention! If you tighten the inside knob, you must not place the open-ended spanner against the shaft on the outside. Place the open-ended spanner and the assembly pliers on the inside to tighten the inside knob without damaging the DOM Protector®.



Attention! Do not tighten the screw with a cordless screw driver without torque control, because you may damage the DOM Protector® with the tool.



24. Place installation tongs on the inside knob with locking lugs accurately positioned in the design cavities.

25. Place the open-ended spanner on the shaft.

26. Tighten the inside knob (approx. 12 Nm).

27. Check that both knobs turn freely, without scraping on the fitting.

28. Tighten the screw.

Fig. 18: Tighten inside knob



Note! Keep the original packaging, so that you can store the DOM Protector® safely at any time.



## DOM Protector® half cylinder



Note! Ideally, the door with fitting should be a little thinner than the cylinder body of the DOM Protector, so that the knob does not scrape on the fitting and operates smoothly. The cylinder must not protrude more than 3 mm from the fitting.

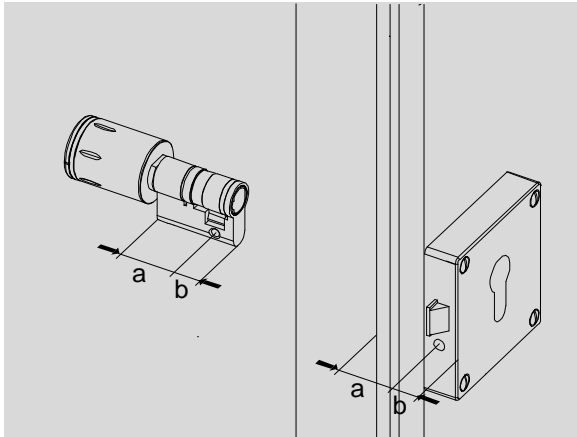


Fig. 19: Measure thickness

1. Measure thickness of the door with lock housing.
2. Make sure that the basic length of the DOM Protector is adapted to the measured thickness.

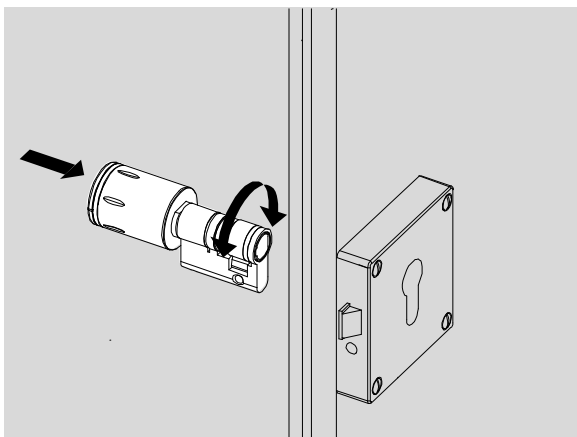


Fig. 20: Align cam

Dismount the old locking cylinder if necessary (no illustration).

3. Carefully remove the DOM Protector® with pre-assembled outer knob from the package.
4. Align the cam flush with the cylinder body.
5. DOM Protector® through the fitting.

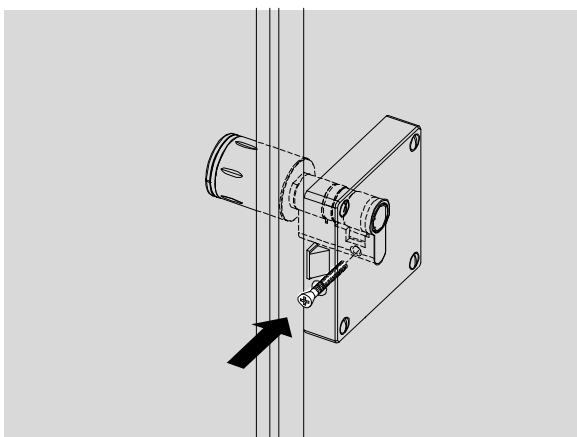


Fig. 21: Fix DOM Protector®

6. Hold authorised transponder in front of the knob if necessary, in order to engage the cam and align the DOM Protector®.
7. DOM Protector® with the screw as soon as you feel the correct position.
8. Check that the knob turns freely without scraping on the fitting.
9. Tighten the screw.

## Commissoning

Once you have correctly installed the DOM Protector®, you can carry out commissoning.



Attention! You only need the master card to commission the DOM Protector®. This is to set the system's identification. This is a one-off process, which must be performed and is **irreversible**.



Note! Programming with master and program card is performed on the outer knob. All status messages and acknowledgements during programming therefore occur exclusively on the outer knob.



Note! Always perform programming with the door open, so that you are not locked out.

To initialise the DOM Protector®, follow the steps below:

Hold the master card directly in front of the outer knob (approx. 1 cm).

The green LED will give two short flashes and one long flash.



The DOM Protector® is commissioned.



Note! An additional initialization on the inside knob of the DOM Protector® readable on both sides is not necessary.



Note! The DOM Protector® readable from both sides is programmed using the outer knob. The authorisation of the locking media is the same on both sides. If different authorisations are required for both sides, the programming must be carried out using the ELS software (see ELS Software Manual).



Note! Keep the master card in a safe place which can only be accessed by authorised persons. The master card does not have a locking medium function! If you lose the master card, you must contact your dealer. Complex reprogramming is required.

## Operation

You can now use the master card to define program cards, which you can then use to define locking media.



Note! The master and program cards have no locking medium function.

### **Master card**

The master card has the following functions:

- Initialisation of the DOM Protector;
- Setting the engagement time;
- Definition or deletion of individual locking media, program cards and programming media;
- Simultaneous deletion of all locking media, program cards and programming media.

### **Program card**

The program card has the following functions:

- Definition or deletion of individual locking media;
- Deletion of all locking media.

### **Locking medium (key fob, Clip Tac, card, etc.)**

- Locking and opening.

### **Constantly open card**

The constantly open card has the following functions:

- Setting of electronics to constantly open position;
- Resetting of electronics to initial state;
- Change from constantly closed to constantly open position.

### **Constantly closed card**

- Setting of electronics to constantly closed position;
- Resetting of electronics to initial state;
- Change from constantly open to constantly closed position.

**Status messages**

Programming with master or program card is performed on the outer knob. All status messages and acknowledgements during programming therefore occur exclusively on the outer knob.

If a locking medium is held in front of one of the knobs in the case of the DOM Protector readable on both sides,® the status message always occurs on both sides.

**Depassivation routine**

In order to prevent passivation of the battery, the DOM Protector® carries out so-called depassivation at regular intervals. This process will take place once a week at 3 am on Monday in accordance with the internal clock in the DOM Protector®. This process lasts approx. 40-45 seconds and is displayed by an orange flashing light in accordance with the diagram below.

It is therefore recommended that the DOM Protector® clock is synchronised at regular intervals in order to allow the depassivation routine to take place during the intended period.



Warning! During this period the DOM Protector® is not in a position to read transponder and therefore respond to this.

**Signalling depassivation:**

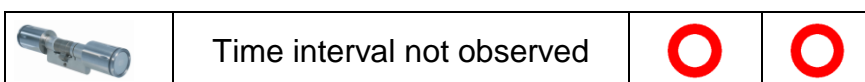
A passing of the door is no longer possible in this time slot! The warning takes place through orange flashing light in a 2 second cycle.



On completion of the depassivation routine, the DOM Protector® can resume normal operation.

**Acknowledgement of terminations**

In general, if one of the time windows specified in the various programming modes (removal or presentation of master or program card and locking medium) is not observed, a termination occurs. Such a termination is acknowledged by two flashes of the red LED.



## Opening and locking

To open or lock the door, hold an authorised locking medium a short distance in front of the relevant knob.

Authorised transponder:



The DOM Protector® is engaged and the green LED flashes during the set clutching duration. After expiration of the clutching time, the red LED flashes once.

Unauthorised transponder:



The DOM Protector® is not engaged. The red LED flashes four times.

**Setting the engagement time**



Note! The engagement time denotes the period for which the DOM Protector® can be actuated after presentation of an authorised transponder. In delivery status the engagement time is 5 seconds.

All you need is the master card. Follow the steps below.

1. Hold the master card flat a short distance in front of the outside knob. Presentation of the card is confirmed by two green flashes.
2. Now hold the master card in front of the outside knob again and leave it in the reading field of the outer knob.





















The green LED flashes three times. The red LED then flashes at one-second intervals. Each flash corresponds to 1 second of the engagement time. Hold the master card in front of the outer knob for the desired engagement time (max. 30 seconds).

3. Remove the master card as soon as the desired engagement time is reached.

The green LED flashes twice as confirmation.

The engagement time is set.

Set the engagement time:

				 Leave in reading field			
				Continue to leave in reading field			
				...			
				.			
As soon as desired engagement time is reached, remove master card							

**Definition of locking or programming media**

You need the master or program card and the media that you wish to define.



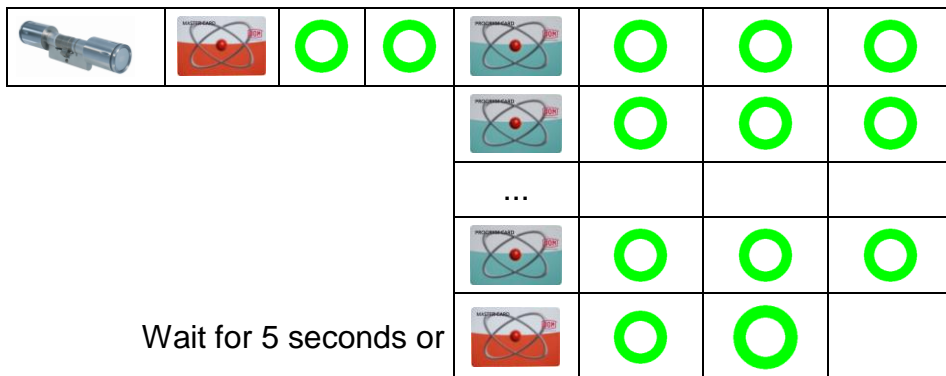
Note! You can define a maximum of 5 program cards and 5 PDAs or PCs. When you have defined one program card, you can use this to continue programming.

Follow the steps below:

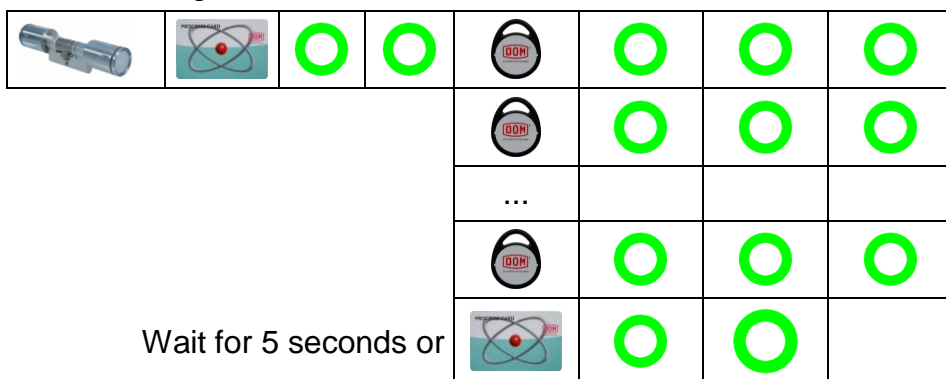
1. Hold the master or program card flat, a short distance in front of the outer knob: Presentation of the card is confirmed by two green flashes.
2. Then present the programming media or transponders that you wish to define, one after another: The presentation of each programming medium or transponder is confirmed by three green flashes.

The programming process is ended after a pause of 5 seconds or by presenting the master or program card.

Define programming media:



Define locking media:



**Deletion of locking or programming media**

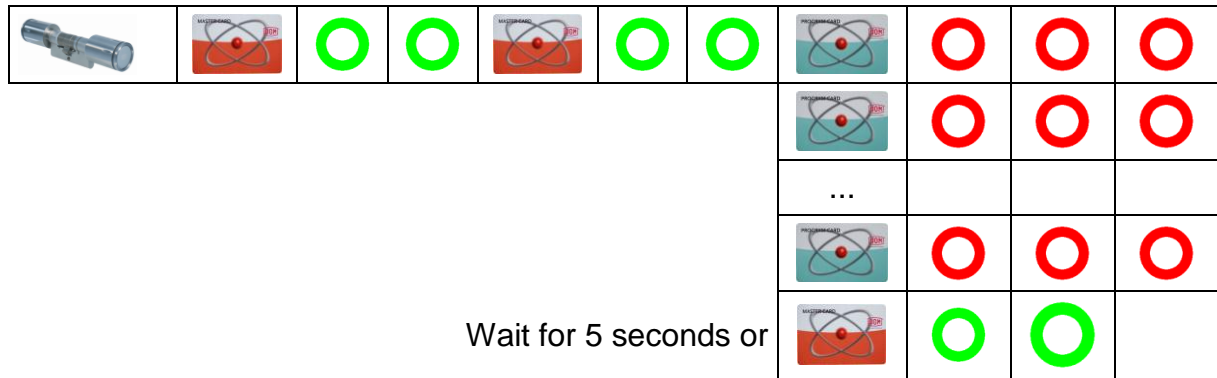
You need a master or program card and the media that you wish to delete.

Follow the steps below:

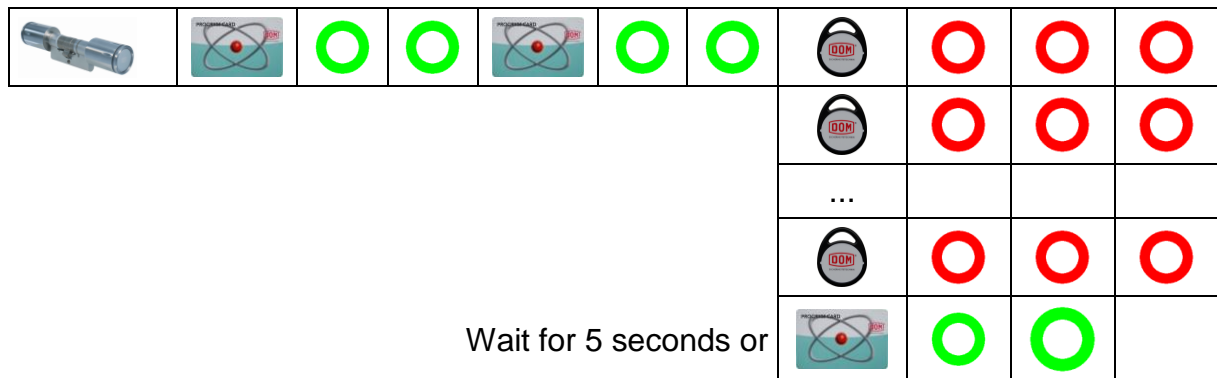
1. Present the master or program card twice, holding it flat a short distance in front of the outer knob: Presentation of the card is confirmed by two green flashes.
2. Then present the programming media or transponders that you wish to delete, one after another: The presentation of each programming medium or transponder is confirmed by three red flashes.

The programming process is ended after a pause of 5 seconds or by presenting the master or program card.

Delete programming media:



Delete locking media:





## Deletion of all locking or programming media

If you have lost a locking medium, you can no longer individually delete this locking medium (without ELS or ELS4PDA software). In this case, you must delete all locking media and redefine the existing locking media.

You only need a program card to do this.



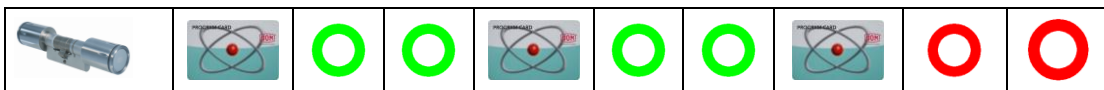
Note! If you use the master card instead of the program card, all programming media will also be deleted.

Follow the steps below:

1. Present the program card twice, holding it flat a short distance in front of the outer knob: Presentation of the card is confirmed by two green flashes.
2. Present the program card a third time, holding it flat a short distance in front of the outer knob: The red LED flashes twice as confirmation.

All locking or programming media have been deleted.

Delete all locking media:



Delete all locking and programming media:



Note! You must now redefine the locking media that you wish to re-authorise (see page 21).

## Programming and management with software

The electronics has an infrared interface. Data can be exchanged with a PC/laptop or a PDA via this interface. If you will be using a PC/laptop, then you need a serial infrared adapter which is connected to the serial interface of the PC or laptop.

If you have ELS software (version 4.0 or higher) or ELS4PDA software (version 3.0 or higher), you can use this to manage and program your DOM Protector®. You can manage locking media and authorisations, as well as using further functions that are exclusively available via software. These include:

- ◆ Read-out of the event memory
- ◆ Allocation of time zones
- ◆ Deletion of individual locking media that are no longer available

In addition, using the software to manage larger systems provides greater convenience and clarity in comparison with using the master card.



Note! The programming and management of the DOM Protector with the ELS or ELS4PDA software is described in the respective software operating manual.



Note! Perfect communication between PC/laptop or PDA and DOM Protector® is only guaranteed if the infrared adapter recommended by DOM is used. Information on this can be found in the software operating manual or obtained directly from DOM.

The infrared interface is placed on the outer knob and is located directly behind the DOM logo. The connection range is up to one metre.



Note! The infrared connection can be destroyed by ambient light (e.g. fluorescent tubes).



Note! A perfect **infrared** connection can be affected by soiling of the infrared module or/and the knob.

## Maintenance

The DOM Protector® is maintenance-free. The energy supply for the DOM Protector is provided by a 3.6 volt lithium battery. The battery must be changed when the battery warning appears.



Note! The energy supply for the DOM Protector readable from both sides is provided by two 3.6 volt lithium batteries. When a battery warning appears, the batteries must be changed on both sides!

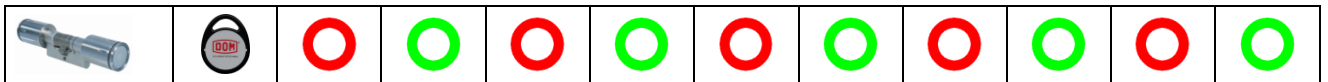
The DOM Protector® is equipped with a three-stage warning system.



Note! In warning stages 1 and 2, at least 100 opening operations are still possible. In the 3rd warning stage, only one opening operation is possible with the master or program card.

### First warning stage:

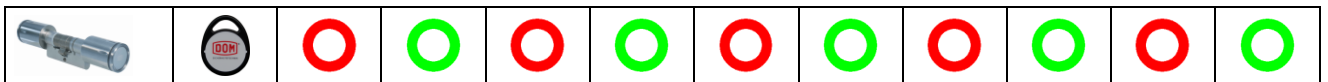
Before indication of an unauthorised or authorised transponder and possibly before engagement, the red and green LEDs flash alternately.



Engagement then occurs.

### Second warning stage:

The authorised transponder must be presented twice. After detection of the transponder, the battery warning appears (first of all).



Engagement then occurs.

### Third warning stage:

Opening is only possible by master card or program card!



After detection of the card, the battery warning appears once. Engagement then occurs.

## Changing the battery

To change the battery, follow the steps below:



Attention! Electronic components can be destroyed by an electrostatic discharge (spark or breakdown). Therefore, before installing or removing the knob sleeve, avoid electrostatic charges or touch a conductive, earthed object beforehand (e.g. a water pipe, heating), so that you are electrostatically discharged. Never touch electronic components with your fingers.



Note! Only use 3.6 volt lithium batteries from DOM Sicherheitstechnik which are already pre-assembled with the connection cable.



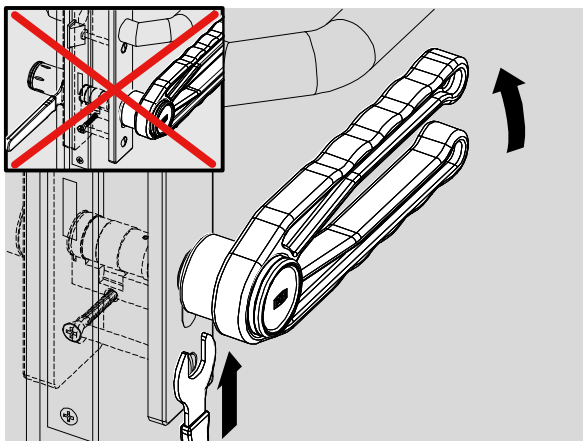
Note! 3.6 volt lithium batteries have a limited storage time. Therefore, avoid storing them and purchase new batteries as required from your DOM dealer, where possible.



Note! When performing a battery change on the double cylinder readable from both sides, you must always replace both batteries, on both the inside and the outside knob.



Attention! If you untighten the outside knob, you must not place the open-ended spanner against the shaft on the inside and vice versa. Place the open-ended spanner and the assembly pliers always on one side to untighten the knob without damaging the DOM Protector®.



1. Place the open-ended spanner on the locking cylinder between fitting and knob and loosen the relevant knob with the knob tongs.

Fig. 22: Loosen knob

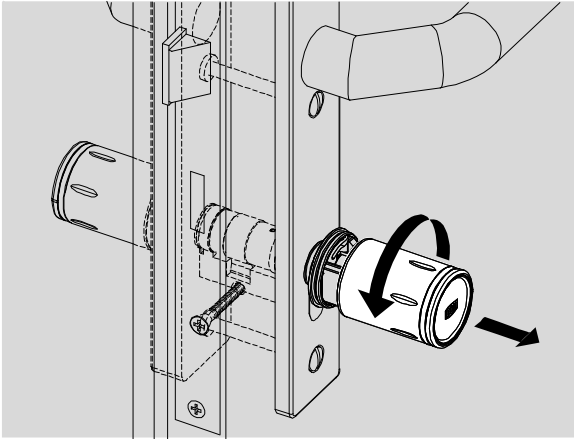


Fig. 23: Unscrew knob

2. Unscrew the knob.

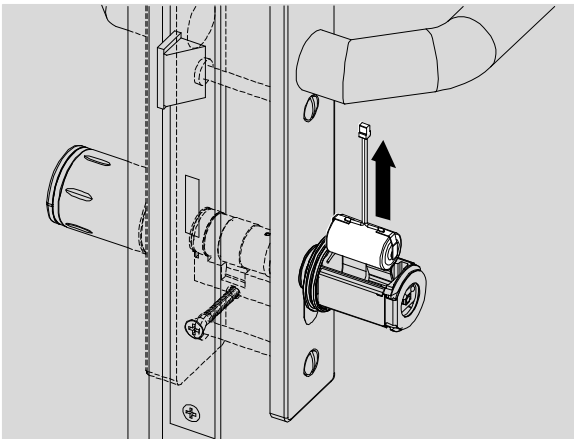


Fig. 24: Remove battery

3. Pull battery connector out of battery socket and remove old battery.

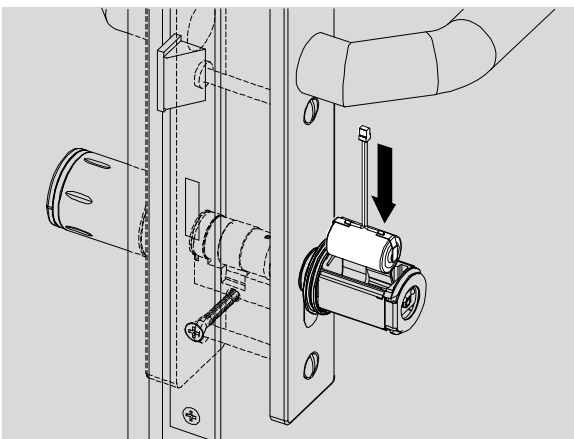


Fig. 25: Insert battery

4. Insert new battery.



Note! The battery connector has a torsion-resistant guide lug.

5. Insert the battery connector into the battery socket.

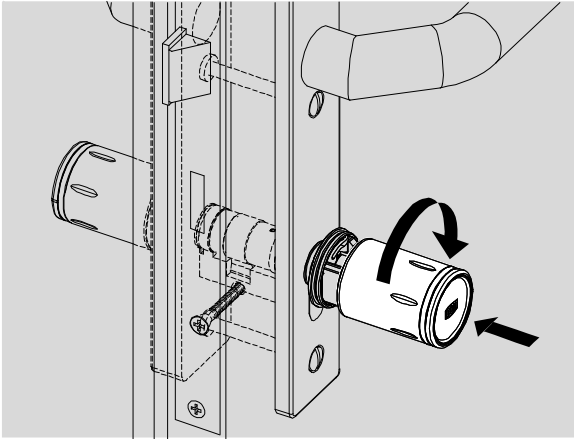


Fig. 26: Screw knob on

6. Attach knob in the correct position and tighten by hand first of all.



Attention! If you tighten the knob, you must not place the open-ended spanner against the shaft on the other side. Place the open-ended spanner and the assembly pliers on the same side to tighten the inside knob without damaging the DOM Protector®.

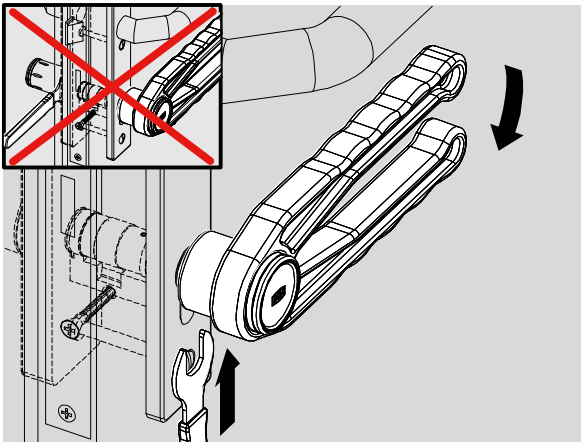


Fig. 27: Tighten knob

7. Place installation tongs on the inside knob with the locking lugs accurately positioned in the design cavities.
8. Place the open-ended spanner on the shaft.
9. Tighten inside knob.

## Disassembly

Disassembly basically occurs in the reverse order to installation.



Attention! Before installing or removing electronic components, avoid electrostatic charges or touch a conductive, earthed object beforehand (e.g. a water pipe, heating), so that you are electrostatically discharged. Never touch electronic components with your fingers.



Attention! Material damage due to incorrect storage. If you need to keep the DOM Protector® for a prolonged period before installation, store all components in the original packing in a dry and dust-free location.



Attention! The Torx screws used to fasten the flange have a self-locking gel design. Only use these Torx screws once. When you have removed the Torx screws, they must be replaced with new ones.



Note! When disassembling a DOM Protector readable on both sides, you must present a transponder so that the cam can be engaged and aligned flush via the outer knob.

### Disassembly of the electronic holder

In the case of the DOM Protector® readable from both sides, you must loosen the electronic holder from the flange after loosening and unscrewing the inside knob. (also see page 27)

Follow the steps below:

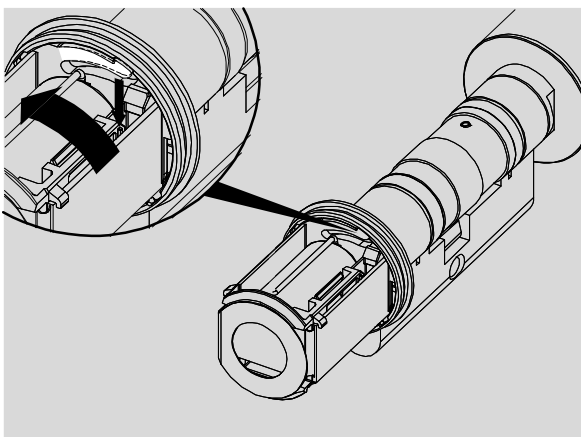


Fig. 28: Loosen electronic holder from flange

1. Remove battery connector from the battery socket.
2. Loosen flex connector (see page 13).
3. Press locking lug down slightly with a small screwdriver first of all if necessary.
4. Turn electronic holder slightly to the left as far as the stop (just a few millimetres).
5. Then remove electronic holder.
6. Dismount flange.
7. Remove cylinder.

## Storage/Care

If you need to keep the DOM Protector® for a prolonged period before installation or use, it in the original packing in a dry and dust-free location at room temperature.



Note! The DOM Protector® has a reduced current consumption in delivery status. However, you should not store the cylinder for any longer than necessary. After initialisation with the master card, the current consumption increases and the battery life is a maximum of 3 years.



Attention! Material damage can be caused by the use of aggressive detergents. Do not use aggressive detergents, graphite or oil. Clean the housing and locking media only using a soft, damp leather cloth without detergent.

## Disposal

Please note that the DOM Protector® comprises some electronic components that require special disposal. Please always comply with all customary environmental protection regulations when disposing of the DOM Protector.

You can return the components of your DOM Protector to the manufacturer in the original packaging.



# Technical data



Note! The specified technical data are in accordance with the current status. We reserve the right to make technical modifications at any time without notification.

**Variants:**

- DOM Protector® with German VdS <sup>1)</sup> approval
- DOM Protector® Basic / Basic Plus without VdS approval
- DOM Protector® DK (with dismountable outer knob) protruding outer shaft (protrusion 6,5 mm or 10,5 mm)
- DOM Protector® FR (fire resistant) application in fireproof doors up to fire resistance class T90
- DOM Protector® EE (emergency exit) application in escape and emergency routes with locks demanding a well-defined cylinder cam position <sup>2)</sup>
- DOM Protector® KL (German: „Kurz-Lang“ cylinder) reduced outside length of 27,5 mm (see cylinder lengths)
- DOM Protector® GL (cylinder für glass doors) reduced inside length of 10-27,5 mm (see cylinder lengths)
- DOM Protector® OI (withot inside knob) prevention of unauthorised locking from the inside
- DOM Protector® WR (water resistant) enhanced resistivity against humidity (IP65) on the outside
- DOM Protector® PP (privacy protection) no storage of individual-related events
- DOM Protector® BS (reader on both sides) reading of transponders also on the inside
- DOM Protector® online for Ethernet networking


**Possible combinations of variants:**

x = available  
o = not available

	KL	GL	DK	OI	EE	FR	BS	WR	PP	online	Protector	Basic/Plus
KL	x	o	x	o	o	o	o	o	x	o	o	x
GL		x	o	o	o	o	o	o	x	x	x	x
DK			x	x	x	x	x	o	x	x	x <sup>1)</sup>	
OI				x	x	o	x	x	x	x	x	x
EE					x	o	x	x	x	x	x	x
FR						x	x	x	x	x	x	o
BS							x	x	x	x	x	o
WR								x	x	x	x	o
PP									x	x	x	x
online										x	x	o
DOM Protector												o
Protector Basic/-Plus												

<sup>1)</sup> The version DK matches the DOM Protector construction. Due to a reduced core drilling protection it is not approved by German VdS.


**Power supply:**

- 1 piece Lithium battery ½AA, 3.6 V
  - type ER-14250-M (LiSOCl<sub>2</sub>-System)
-  *Existence of fire, explosion and severe burn hazard. Do not recharge, short circuit, crush, disassemble, heat above 85°C, incinerate or expose contents to water.*

**Current consumption:**

- operating current: maximum 170 mA (for < 100 ms)
- average quiescent current < 20 µA

**Battery life time:**

- at room temperature (+20°C):
- up to 50.000 locking cycles or
  - up to 2,5 years in case of non-use
-  *For the online version, the corresponding values are 40.000 cycles or 2 years, respectively.*
- multilevel alarm system in case of voltage drop
  - 10 years data preservation without battery

**Time / Date:**

- buffering typically 1 minute (in case of battery change)
- |                  |                   |                  |
|------------------|-------------------|------------------|
| • clock drift at | room temperature: | ±10 minutes/year |
|                  | at -20 and +65°C: | -50 minutes/year |

**Durability:**

- at least 100.000 cycles (according DIN EN 1303)

**Cylinder lengths / profiles:**

- |                     |          |            |
|---------------------|----------|------------|
| • lengths:          | min.     | max.       |
| half cylinder       | 30/- mm  | 80/- mm    |
| double cylinder     | 30/30 mm | 80/80 mm   |
| glass door cylinder | 30/10 mm | 40/27,5 mm |
- higher lengths on request
  - extendable in 5 mm steps (glass door cylinder: inner side in 2,5mm steps)
  - version KL with outer length 27,5 mm (maximum inner length 40 mm)
- mounting in Euro PZ opening (DIN 18252, EN 1303)
  - DOM Protector® CH, 22 mm Swiss round profile
    - always as Version DK (6,5 mm protruding outer shaft)
    - not available in the versions WR, EE, GL, KL or as half cylinder
    - maximum cylinder length: 40/40 mm
  - for backset < 25 mm the application is to be checked.

**Knobs:**

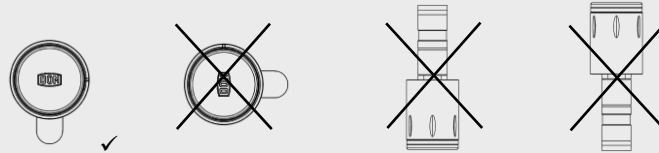
- outside knob: stainless steel   ∅ 30 mm, length 41 mm
- inside knob: zamak               ∅ 30 mm, length approx 25 mm
- for double cylinder with two-side readability
  - both knobs:                       ∅ 30 mm, length 41 mm
- optional with brass
- improved adhesion can be achieved by plugging on a rubber grip ring (standard colour black, material 70EPDM)
  - knob diameter including rubber ring:               approx. 37 mm

**Signalling:**

- optical signalling (red/green)
- circular lighting segments in knob cover
- illuminated DOM logo

**Allowed installation orientations:**

DOM Protector®:



DOM Protector® Basic-Plus:



For the application in padlocks the DOM Protector® Basic-Plus may be used, but only for interior applications.

**Clutch duration:**

- adjustable ranging from 1 to 30 seconds
- permanent open/close mode

**Approvals and certifications:**

- in conformity with all applicable EC directives
- national laws have to be checked separately

- VdS BZ+ approval (VdS 2156-2)<sup>1)</sup>
  - withstanding time against mechanical attacks accord. VdS C
- VdS approval exists solely for the DOM Protector®, but not for the version DK (and especially not for the DOM Protector® Basic/- Plus).*

- application in fire-proof doors T30 / T60 / T90 (test according to DIN EN 1634-1)



For the application in fire-proof doors up to fire resistance class T90 the installation of the special version DOM Protector® FR is mandatory.

**Temperature, relative humidity:**

temperature range:

- stocking: -25°C to +70°C
- operation: -20°C to +70°C

relative humidity:

- 20% to 99%, no condensation

tested according VdS 2156-2 and DIN IEC 60068-2-1/2/3/30




- damp heat, cyclic: 6 cycles of 12 h each
- cold: tested for 16 h at -25°C

**Corrosion resistance:**

- anticorrosive according to DIN EN 1670 class 3
- SO<sub>2</sub> corrosion test according to VdS 2156-2 and DIN EN ISO 6988 (15 cycles with 0,2 l SO<sub>2</sub>)



The SO<sub>2</sub> corrosion resistance is not ensured for the DOM Protector® Basic/- Plus version.

<b>Protection class:</b>	<ul style="list-style-type: none"> <li>• DOM Protector WR: IP 65 (on the outside)</li> <li>• DOM Protector: IP 54</li> <li>• DOM Protector Basic Plus and DK: IP 42</li> </ul>
<b>Environmental behaviour:</b>	<ul style="list-style-type: none"> <li>• According to VdS guideline 2156-2, for outdoor applications a weatherproof installation is necessary (e.g. by means of a roofed over entrance)</li> </ul>
<b>Administration by software:</b>	<p>with PC / notebook / netbook or PDA:</p> <ul style="list-style-type: none"> <li>• ELS-Software V4.0 (online: V4.1), or higher</li> <li>• ELSmobile-Software V4.0, or higher</li> <li>• ELS4PDA-Software V3.0 (online: V3.1), or higher</li> </ul>
<b>Programming devices:</b>	<p>storage of programming devices:</p> <ul style="list-style-type: none"> <li>• max. 5 programming cards, 5 PDA's or 5 ELSmobile devices</li> </ul>
<b>Event memory:</b>	<ul style="list-style-type: none"> <li>• ring buffer for the latest 2.000 events</li> </ul> <p> <i>The DOM Protector® Basic has a ring buffer for the latest 1.000 events.</i></p>
<b>Infrared interface:</b>	<ul style="list-style-type: none"> <li>• positioning: inside knob, behind DOM-Logo</li> <li>• wave length: 880 nm (peak sensitivity)</li> <li>• angle of half intensity: ±24°</li> <li>• data rate: 38,4 kBit/sec</li> </ul>
<b>Inductive transponder interface:</b>	<ul style="list-style-type: none"> <li>• reading range: up to 5 cm</li> <li>• frequency: 125 kHz</li> <li>• field strength in 10 m distance: &lt; -6 dB µA/m</li> <li>• in conformity with ETSI EN 300 330</li> </ul>
<b>Radio online interface:</b>	<p>connection to DOM RF-NetManager via integrated radio module (networking via Ethernet / TCP/IP):</p> <ul style="list-style-type: none"> <li>• range: typica 3 m</li> <li>• frequency: 868 MHz</li> <li>• radiated power: ≤ 7,5 dBm e.r.p</li> <li>• in conformity with ETSI EN 300 220</li> </ul> <p> <i>The radio communication to the DOM RF-NetManager may degrade due to environmental effects, e.g. caused by metal. In order to assure a proper radio communication a functional test on site is recommended.</i></p>
<b>Storage of access authorisations in the cylinder: („conventional“)</b>	<p>memory contents:</p> <ul style="list-style-type: none"> <li>• max. 3.000 conventional transponders with 4 byte transponder serial number</li> <li>• max. 32.000 subscribed transponders with object specific identifier</li> </ul> <p> <i>For the DOM Protector® Basic <u>solely</u> 1.000 conventional transponders can be stored.</i></p> <p>supported transponders:</p> <ul style="list-style-type: none"> <li>• Hitag transponders: Hitag 1, Hitag 2, Hitag S</li> <li>• EM transponders: 4100, 4102, 4150, 4450</li> </ul>

**Storage of access authorisations on the transponders resp. virtual network:**

supported transponders:

- solely available for Hitag S transponders



*Not possible with the DOM Protector Basic.*

- storage of max. 260 areal or 65 single authorisations on the transponder

**Transponder types:**

- DOM Standard Tac, Design Tac, Premium Tac, Clip Tac
- ISO card transponder
- DOM ((o)) butler transponder with passive inlay
- other types have to be checked

**Temporal definition of authorisations:**

- 31 freely definable time zones with three arbitrary time intervals per day
- definition of holidays

1) *VdS: association of German property insurers*

2) *For the installation in escape and emergency routes (EN 179, 1125) the pertinent building regulations as well as the certificates of conformity of the respective lock manufacturer must be considered. For locks without conformity with freewheel cylinders, demanding a well-defined cylinder cam position, there exists a special version DOM Protector® EE with a separate technical data sheet.*

## Warranty

The period of limitation for rights of the customer due to defects is twelve months from delivery of the delivery item to the customer. For claims for damages by the purchaser for reasons other than defects in the delivery item or in respect of the purchaser's rights in the case of fraudulently concealed or wilfully caused defects, the statutory periods of limitation apply. The time limitation regulations of § 479 BGB remain unaffected.

If you have any queries in addition to the information provided in these Installation and Operating Instructions, please contact your national branch directly.

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