

Instructions for Installation, Operation and Maintenance

DOM Protector[®] EE

(for emergency exit door locks)



Attention! The present document must be handed over to the end customer after installation.



Attention! This product serves for the protection of human lives! Carefully read these instructions before installation, commissioning, operation and maintenance. The manufacturer does not assume responsibilities for damages resulting from inappropriate and incorrect assembly, commissioning, operation or maintenance.

Handed over:

Name / Signature

Received:

Name / Signature

Instructions for Installation, Operation and Maintenance

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For your safety

Comply with the step by step 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® EE or other objects.



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

Important information



Attention! Damages might occur through inappropriate assembly, operation and maintenance. Carefully read the complete instructions before installation, commissioning, operation and maintenance. Comply with the instructions step by step. The manufacturer does not assume responsibilities for damages resulting from inappropriate and incorrect assembly, operation or maintenance. Never throw or drop the DOM Protector® EE. Never use force during installation.



Attention! Operators of the plant and/or their subcontractors must be admonished to comply with these instructions for assembly, operation and maintenance. In case of non-compliance with these absolutely mandatory instructions, no warranty can be assumed for unobjectionable functioning of the DOM Protector EE. The functional efficiency of the DOM Protector® EE must be ensured. A monthly inspection for functionality is recommended.



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



Attention! The DOM Protector® EE must be listed in the certificates of the lock manufacturers (for this also see EU conformity certificates according to DIN EN 179 and DIN En 1125).



Attention! Do not install the DOM Protector® EE in emergency exit doors with automatically operated multipoint locking systems.



Attention! Neither in open state nor in closed state of the door must the DOM Protector® EE prevent the emergency exit door lock from being operated from the inside (e.g. the inner knob must not obstruct the area of operation of the panic lock bar or of the door handle).



Attention! For ensuring the escape door function it is mandatory to install the correct combination of emergency exit lock and DOM Protector® EE. An updated list of the recommended locks can be found on the internet under www.domextranet.de. Always consider the instructions for installation, operation and maintenance issued by the manufacturers of the emergency exit door locks.



Attention! Unauthorised modifications, changes or any provisional and makeshift repairs are prohibited for safety reasons. In the event that parts must be replaced, only original spare parts must be used and assembled by the manufacturer.



Attention! Damages might be caused in the DOM Protector® EE through stiff locks or stiff and stuck doors. In such cases worn locks must be repaired or replaced by new locks, if applicable, and stiff or stressed doors must be serviced or re-adjusted, if required. After installation, the knobs must operate smoothly and must not rub against the fittings.



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



Attention! Incorrect installation of the DOM Protector® EE prevents the required locking function. The outer knob is always located on the side labelled with the CE-Logo, among others.



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 store the DOM Protector® EE at an appropriate distance from the master card in order to prevent accidental initialisation. Always store your locking media in a safe place, such that they can only be accessed by authorised persons. In case of loss of a locking medium the respective medium must immediately be deleted or blocked. Never let children play with any locking media or batteries. They might swallow small parts.



Attention! Material damage due to incorrect storage. If you need to keep the DOM Protector® EE 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).



Attention! Safety related fittings must be inspected for correct and tight fit as well as for wear, on a regular basis. According to requirements, fastening elements must be re-tightened and damaged parts must be replaced.



Note! To communicate with the DOM Protector® by software, you need a software release V4.2 R3 or higher. You also need PDA software V3.2 R5 or higher.



Note! The images and figures display the installation situation with panic bar (according to DIN EN 1125). However, the installation processes also apply for installation situations with door handles or door push plates (according to DIN EN 179).



Note! With applications for which the DOM Protector® EE can only be installed from the inside, installation of the DOM Protector® EE DK is required.



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.

Scope of delivery

According to order:

DOM Protector® EE (VdS)

DOM Protector® EE without inner knob (VdS)

DOM Protector® EE DK* (VdS)

DOM Protector® EE DK* without inner knob (VdS)

* DK = dismountable outer knob

DOM Protector® Basic EE

DOM Protector® Basic EE without inner knob

DOM Protector® Basic Plus EE

DOM Protector® Basic Plus EE without inner knob

- Basic length 30 mm
- Maximum overall length (without knobs): 65 mm
- 1x screw; 4x Torx screws (TX10); battery (pre-assembled)

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

Optionally available

- 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 /Tac
- 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
- Service confirmation card

Functional description

All DOM access control components and therefore also the DOM Protector® EE leave the factory in neutral state. They are only "initialised", i.e. assigned to a master card, shortly before installation. From this moment on, programming at the ELS terminal can only be carried out by this specific mater card or programming media authorised by 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® EE

With the Protector® EE the locking bolt is adjusted to a defined position in state of rest of the cylinder. This is required for an application of DOM Protectors□ EE in emergency exit locks according to DIN EN 179 / 1125, as an undefined locking bit position may lead to a blocking of the lock when installed in some of the commercially available locks. In order to assess such possible definition requirement, the EU conformity certificates of the lock manufacturers must be consulted. In accordance with the SIN EN 179 and DIN EN 1125 standards monthly maintenance is required.

The DOM Protector® EE in its standard form offers complete security, flexibility and convenience. The cylinder provides the highest possible degree of protection against attempted electronic and mechanical tampering.

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 the inside, the door is basically operated using the knob, without identification.

DIN EN 179 and DIN EN 1125



Attention! A high degree of safety can only be guaranteed with installation in emergency exit doors that comply with the DIN EN 179 (Emergency exit locks) and DIN EN 1125 (panic door locks) standards. It must be verified in any case that the DOM Protector® EE is listed in the EU conformity certificate of the manufacturer of the respective emergency exit lock.

DIN EN 179: Emergency exit locks according to DIN EN 179 are intended for emergency situations in which the occurrence of panic situations is not likely. In the event that it is foreseeable that people will push against the door leaf in case of a panic situation, a panic door lock according too DIN EN 1125 should be used.

DIN EN 1125: Panic door locks according to DIN EN 1125 are intended for application in areas in which it is likely that panic situations occur in case of an emergency. In panic situations, the behaviour of individual persons differs largely from the behaviour of a group of people. If two or more persons rush towards an escape door, quite likely in the dark and/or through smoke-filled rooms, it is possible that the first person reaching the door does not necessarily operate the panic door lock but pushes against the door surface (door under pressure) while the other persons will try and operate the horizontal actuation bar by pressing against it with their hands or their bodies.

For more information about emergency exit systems see DIN EN 179 and DIN EN 1125.

Proper use

Proper use is a prerequisite for any application of the DOM Protector® EE.

In order to ensure proper use:

- required information and the respective instructions must be handed over to the operators of the system and/or their subcontractors.
- the installation of the locking cylinders must be carried out by skilled personnel with adequate knowledge in the fields of escape routes and emergency routes in compliance with the respective instructions for installation. Other applicable DIN and EN standards must be considered.
- the locking cylinders must be installed in accordance with their defined application as intended.
- the locking cylinders must be treated in accordance with the instructions for maintenance and care (also see Maintenance Chapter).
- the locking cylinders must not be used beyond their service limit.

The manufacturer does not assume any responsibilities for damages to persons and property as a result of improper use or application.

DOM Protector® EE installation versions

The DOM Protector® EE is manufactured in the following versions:

- DOM Protector® EE (VdS)
- DOM Protector® EE without inner knob (VdS)
- DOM Protector® EE DK* (VdS)
- DOM Protector® EE DK* without inner knob (VdS)

* DK = dismountable outer knob

- DOM Protector® Basic EE
- DOM Protector® Basic EE without inner knob
- DOM Protector® Basic Plus EE
- DOM Protector® Basic Plus EE without inner knob



Attention! Suitability of the cylinder must be verified in any case by consulting the EU conformity certificates of the lock manufacturer.

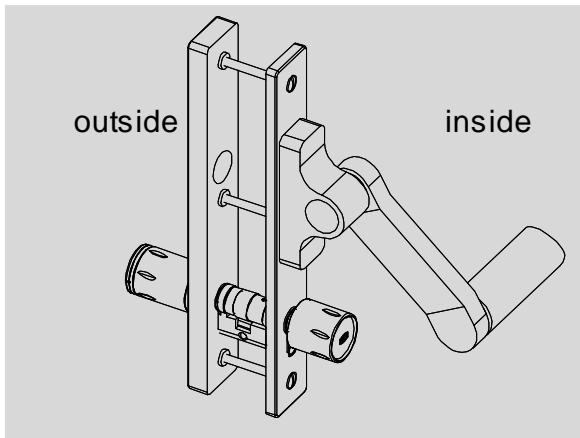


Fig. 1: DOM Protector® EE

The DOM Protector® EE with dismantlable inner knob and fix outer knob is generally intended for application in fittings without core cover (protection against pulling out the core). The PC (profile cylinder) opening must be clear.

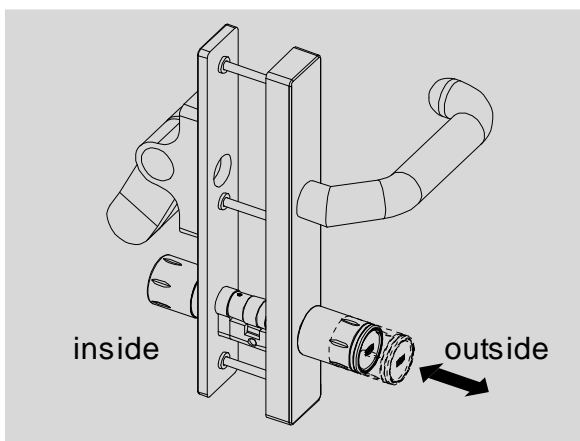


Fig. 2: DOM Protector® EE DK

With applications for which the DOM Protector® EE can only be installed from the inside, installation of the DOM Protector® EE DK is required.

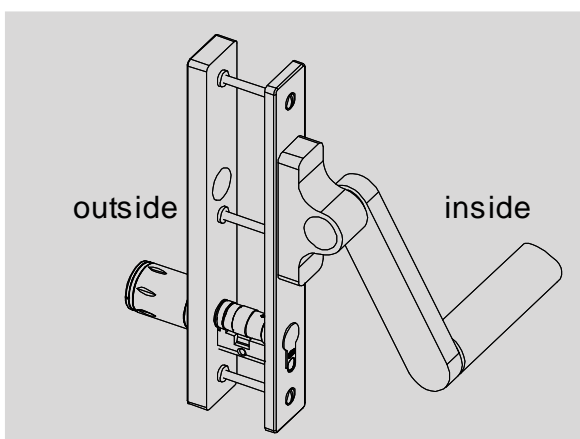


Fig. 3: DOM Protector® EE (also DK) ohne Innenknopf

The installation situations may require installing a DOM Protector® EE or a DOM Protector® EE DK without inner knob, in order to guarantee the functional efficiency of the emergency exit lock (also see figure 5 on page 13).

Installation

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



Attention! In order to ensure appropriate functional efficiency, installation must be carried out by skilled personnel with great care and in consideration of all instructions for installation.



Attention! Before beginning with the installation of the DOM Protector□ EE you must ensure that the doors and locks are properly installed and do not display any deformation. In such cases worn locks must be repaired or replaced by new locks, if applicable, and stiff or stressed doors must be serviced or re-adjusted, if required. After installation, the knobs must operate smoothly and must not rub against the fittings. The knobs must always return to their neutral position through their own energy (the locking bolt must be flush, see figure 12 on page 16).

After the installation of the DOM Protector® EE the emergency exit door system must always be inspected for correct functioning.



Attention! Please ensure that no safety-related signs, labels or symbols are covered or destroyed through the installation of the DOM Protector EE. If required, the respective signs and symbols must be replaced or installed in another position.



Attention! Please ensure that the emergency exit door can be swivelled open unrestrictedly after the installation of the DOM Protector EE.



Attention! The bars and handles displayed in the figures are basic drawings. Due to the large number of different installation situations available on the market, deviations may occur for individual parts. However, the installation sequence is maintained and must always be complied with. The instructions must always be observed, if in doubt please contact the manufacturer.



Attention! An inspection for functional efficiency must be carried out after every installation. The inner knob must always return to its neutral position through its own energy (the locking bolt must be flush, see figure 12 on page 16). In the event that you install a DOM Protector® EE without inner knob, the inspection must be carried out via the outer knob in engaged status.



Attention! Directly after the installation it must be verified that the emergency exit lock can be opened one-handedly in any position of the cylinder (0-360°). In addition, the instructions and notes of the lock and fitting manufacturers must always be considered.



Attention! In the event that you have to replace the knobs at the DOM Protector® EE, original spare knobs of the DOM Protector EE must be used, exclusively. Under no circumstances use knobs of the DOM Protector.



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® EE must not be mounted horizontally on account of the locking function, as the knob would be blocked.



Note! The DOM Protector® EE is generally intended for application in fittings without core cover (protection against pulling out the core). The PC (profile cylinder) opening must be clear. If a DOM Protector® EE with dismountable outer knob DK is used, the installation will not be approved according to VdS (sub-organisation of the German Insurance Association responsible for damage prevention).



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 EE, 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 EE. Follow the steps below:

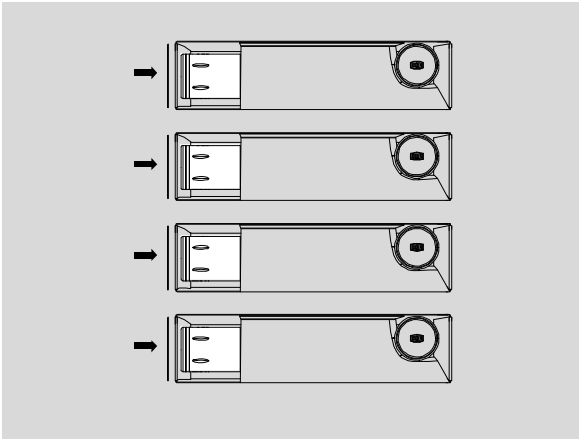


Fig. 4: Collective initialisation

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 23.

Installation situation



Attention! Before installation it must be ensured that the inner knob of the DOM Protector EE does not impair the functional efficiency of the panic bar (according to DIN En 1125) or the door handle (according to DIN EN 179). Please ensure that sufficient distance is maintained between inner knob and panic bar or door handle, such that the panic bar or the handle can be operated properly and the door can be unlocked with one hand. If this cannot be ensured, a DOM Protector® EE without inner knob must be used. Instructions and notes of the respective lock and fitting manufacturers must always be observed.

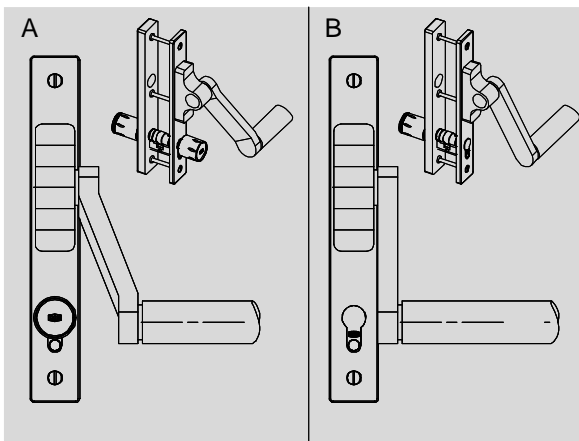


Fig. 5: Example: panic bar



Note! The images and figures display the installation situation with panic bar (according to DIN EN 1125). However, the installation processes also apply for installation situations with door handles or door push plates (according to DIN EN 179).

DOM Protector® EE



Note! The knobs must not rub against the fittings. The cylinder must not project from the fitting more than 3 mm on security-relevant doors.

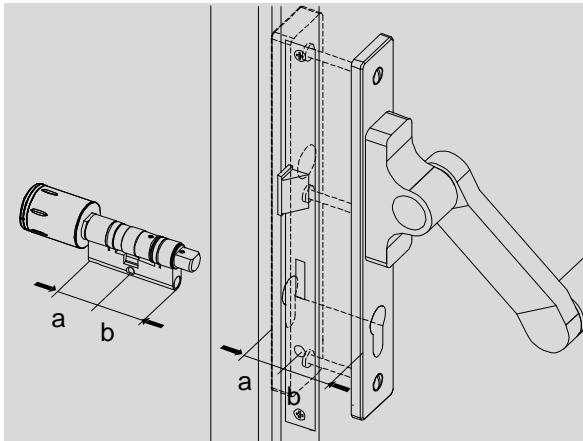


Fig. 6: Measure thickness

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



Note! The side equipped with the CE logo, among others, is what is referred to as the application side that is commonly mounted on the outside, i.e. as a general rule in the direction of the escape routes! 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.

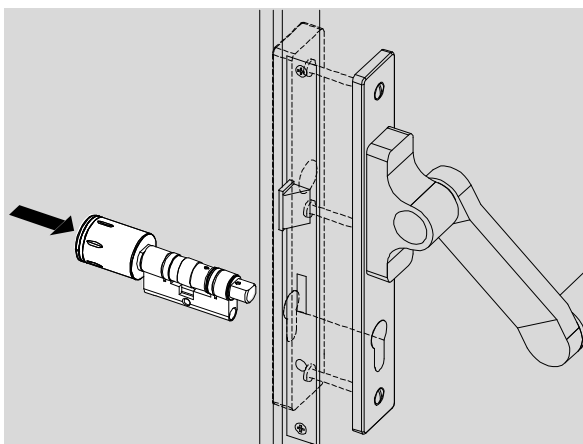


Fig. 7: Insert DOM Protector® EE

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



Note! Always install the DOM Protector® from the outside. Does not apply for DOM Protector® EE DK!

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

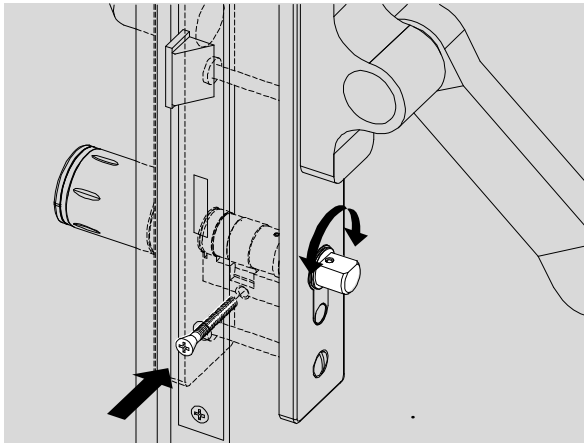


Fig. 8: Align closing catch

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

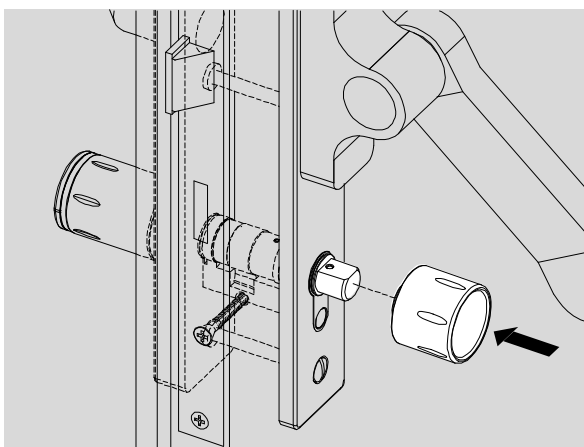


Fig. 9: Insert inside knob

8. 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® EE with the tool.

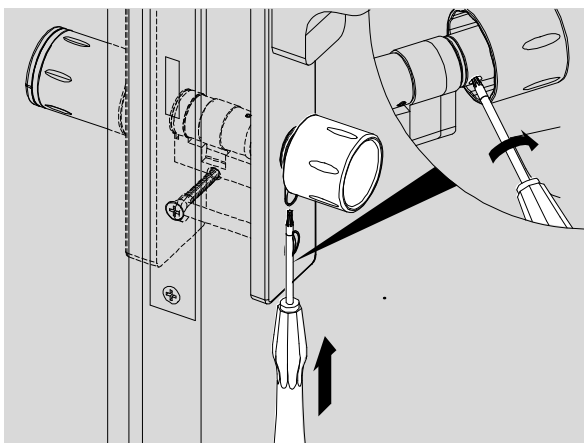


Fig. 10: Tighten inside knob

9. If necessary, turn the inside knob with the shaft, thus enabling free access of the screw driver to the set screw.
10. Turn the set screw M3 (Torx T6) manually to the right with the screw driver (approx. 4 revolutions).
11. Check that both knobs turn freely, without scraping on the fitting.
12. Fasten set screw hand tight. Never fasten it with the help of a machine (e.g. cordless screwdriver).



Attention! An inspection for functional efficiency must be carried out after every installation. After turning, the knobs must always return to their neutral position through their own energy. (locking bolt must be flush)

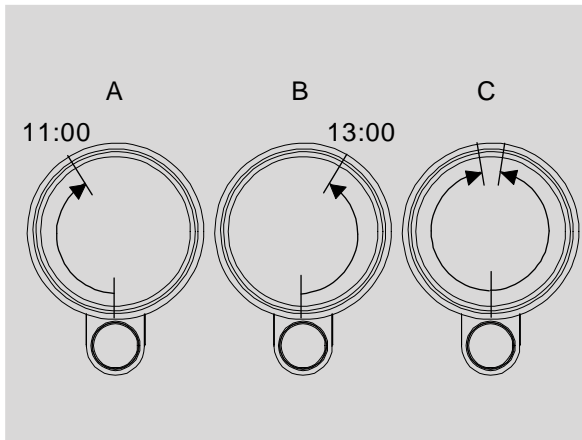


Fig. 11: Inspection for functionality

A/B: Rotate the inner knob by a little more than a quarter turn in clockwise and anti-clockwise direction (11 o'clock and 1 o'clock position). In both cases the knob must rotate back to its neutral position independently.

If the knob does not rotate back, the DOM Protector® EE must be re-aligned and the lock must be inspected for possible defects.

C: If you rotate the inner knob by approx. one half turn the knob will remain in this position (dead-centre point) due to constructional reasons.



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



Attention! After installation it must be ensured that the emergency exit lock can safely be unlocked and opened according to the instructions of the lock and fitting manufacturers.

DOM Protector® EE DK



Note! The knobs must not rub against the fittings. The cylinder must not project from the fitting more than 3 mm on security-relevant doors.

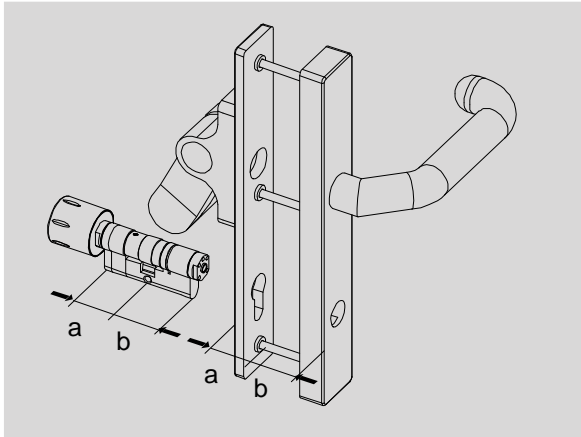


Fig. 12: Measure thickness

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



Note! The side equipped with the CE logo, among others, is what is referred to as the application side that is commonly mounted on the outside, i.e. as a general rule in the direction of the escape routes!



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

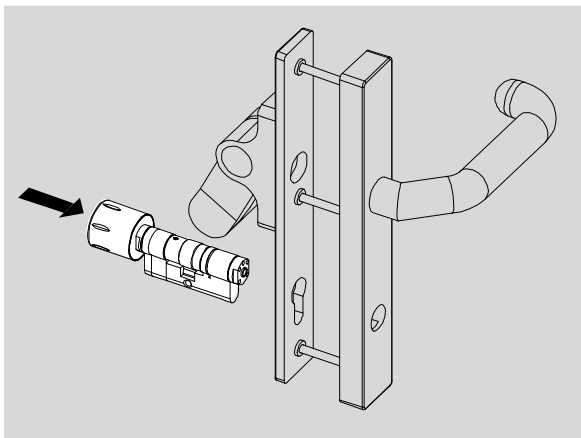


Fig. 13: Insert DOM Protector® EE DK

3. Dismount the old locking cylinder if necessary (no illustration).
4. Carefully remove the DOM Protector® EE DK with pre-assembled inner knob from the package.



Note! Always install the DOM Protector® from the inner side.

5. Carefully push the DOM Protector® with the outside to the fore through the fitting from inside.

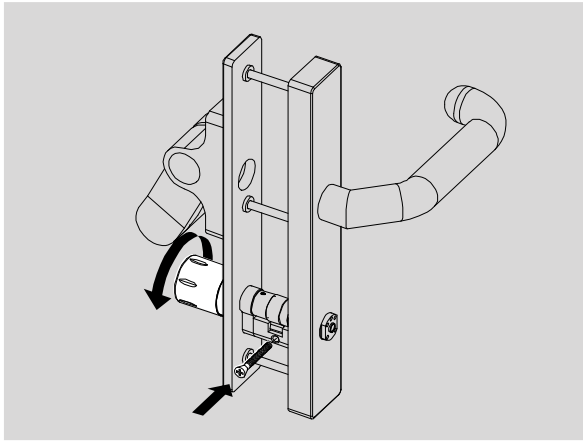


Fig. 14: Align closing catch

6. Turn the inner side so that you can feel the correct position of the closing catch and align the DOM Protector® EE DK.
7. Fix the DOM Protector® EE DK with the screw as soon as you feel the correct position. Do not completely tighten the screw yet.



Attention! When fastening the flange on the outside you must never apply the open-end spanner on the shaft on the inside. Always apply the open-end spanner and the assembly pliers on the inside in order to fasten the flange on the outside without damaging the DOM Protector® EE.

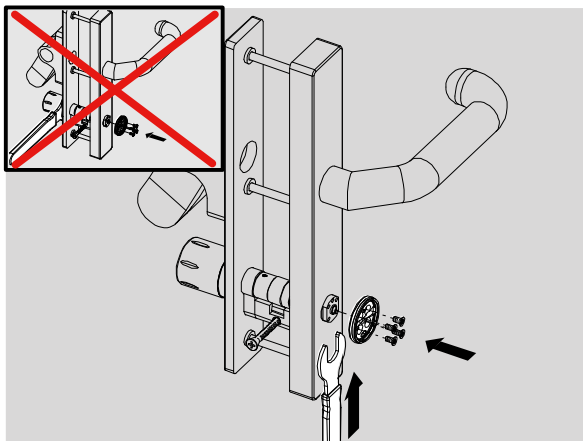


Fig. 15: Fasten flange

8. Attach flange and secure with 4 Torx screws (TX10) (approx. 1.5 Nm): Support against shaft with open-ended spanner on the outside if necessary.

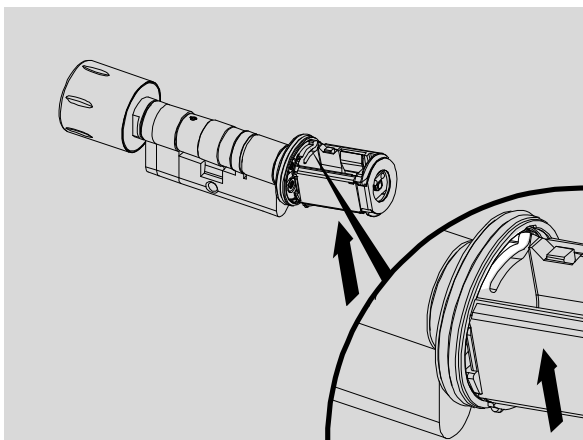


Fig. 16: Press the locking lug on



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

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

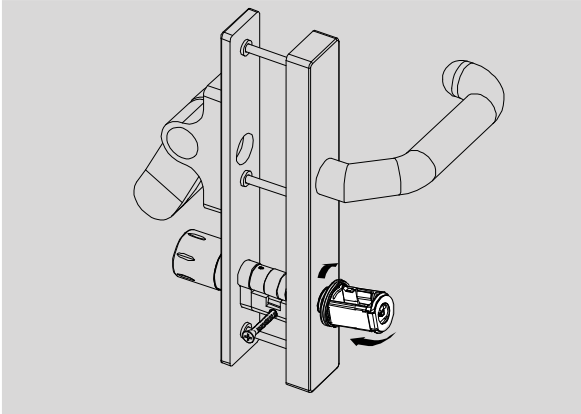


Fig. 17: Mount electronic holder

10. Tilt electronic holder down and insert guide lugs accurately into the recesses.
11. Turn the electronic holder to the right a little, until the locking lug engages.



Attention! The protector battery is a special-type high-current cell with high short-circuit currents of up to 1 Ampere. For this reason, the battery must never be short-circuited (explosion hazard)!

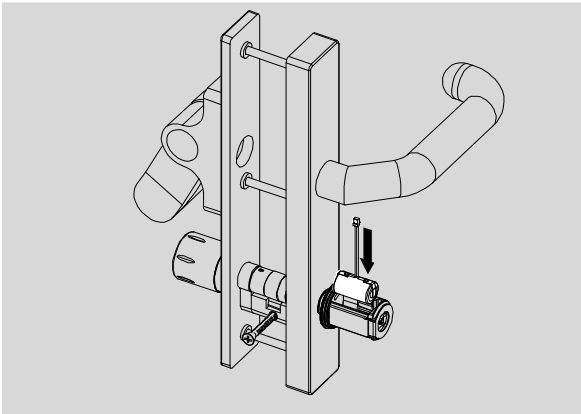


Fig. 18: Insert battery

12. Insert battery.



Note! The battery connector has a torsion-resistant guide lug. Yet, the battery should be installed such that the positive pole faces outward in order for the battery connector to be accurately inserted into the battery socket without having to twist the cable.

13. Insert the battery connector into the battery socket.

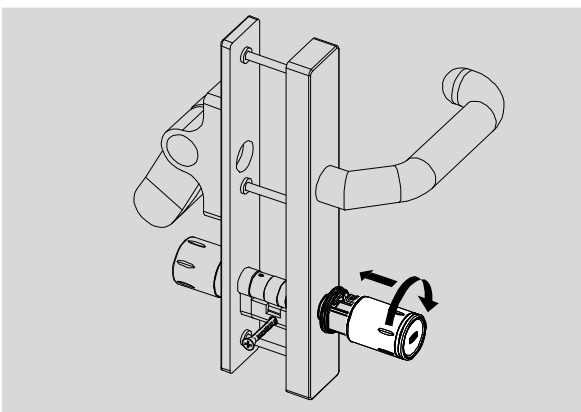


Fig. 19: Screw on outer knob

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



Attention! When fastening the outer knob you must never apply the open-end spanner on the shaft on the inside. Always apply the open-end spanner and the assembly pliers on the outside in order to fasten the outer knob without damaging the DOM Protector® EE.

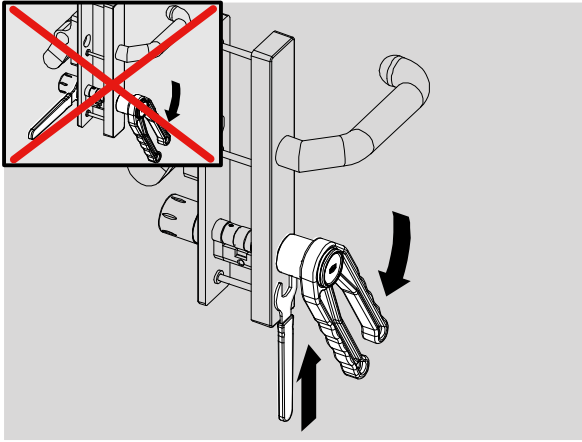


Fig. 20: Tighten outer knob

15. Place installation tongs on the outer knob with locking lugs accurately positioned in the design cavities.
16. Place the open-ended spanner on the shaft on the outside.
17. Tighten the outer knob (approx. 12 Nm).
18. Check that both knobs turn freely, without scraping on the fitting.
19. Fasten set screw hand tight. Never fasten it with the help of a machine (e.g. cordless screwdriver).



Attention! An inspection for functional efficiency must be carried out after every installation. After turning, the knobs must always return to their neutral position through their own energy. (locking bolt must be flush)

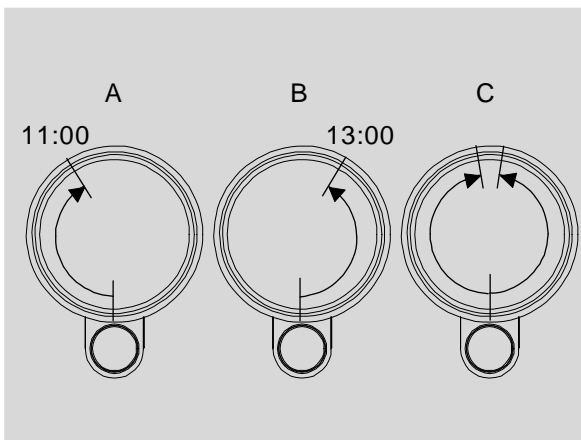


Fig. 21: Inspection for functionality

A/B: Rotate the inner knob by a little more than a quarter turn in clockwise and anti-clockwise direction (11 o'clock and 1 o'clock position). In both cases the knob must rotate back to its neutral position independently.

If the knob does not rotate back, the DOM Protector® EE must be re-aligned and the lock must be inspected for possible defects.

C: If you rotate the inner knob by approx. one half turn the knob will remain in this position (dead-centre point) due to constructional reasons.



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



Attention! After installation it must be ensured that the emergency exit lock can safely be unlocked and opened according to the instructions of the lock and fitting manufacturers.

DOM Protector® EE without inner knob



Note! The knob must not rub against the fitting. The cylinder must not project from the fitting more than 3 mm on security-relevant doors.

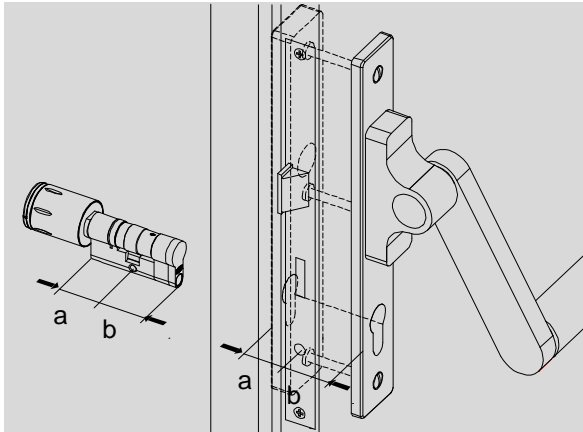


Fig. 22: Measure thickness

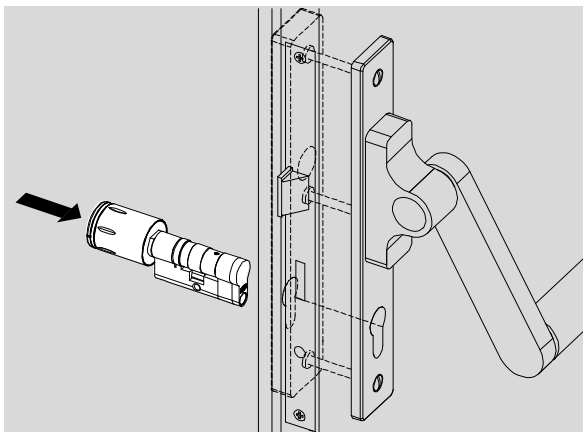


Fig. 23: Insert DOM Protector® EE

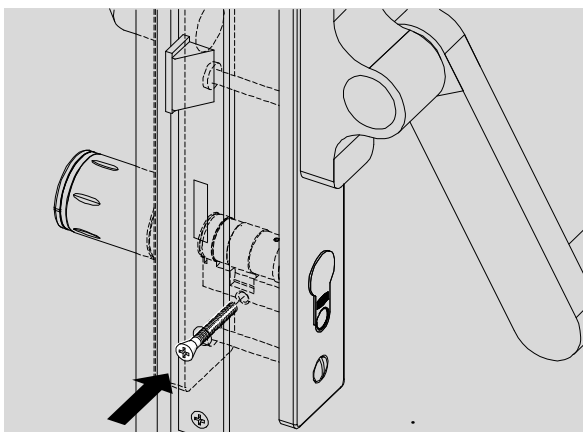


Fig. 24: Fix the DOM Protector® EE

1. Measure thickness of the door with fitting.
2. Make sure that the basic length of the DOM Protector® EE 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® EE with pre-assembled outer knob from the package.
5. Carefully push the DOM Protector® EE through the fitting from outside.
6. If required, position an authorised transponder in front of the knob in order to engage the locking bolt and to correctly align the DOM Protector® EE.
7. Fix the DOM Protector® EE with the screw as soon as you feel the correct position.
8. Check whether the knob can be rotated freely or if it rubs against the fitting.
9. Fasten set screw hand tight. Never fasten it with the help of a machine (e.g. cordless screwdriver).



Attention! An inspection for functional efficiency must be carried out after every installation. After turning, the knobs must always return to their neutral position through their own energy. (locking bolt must be flush)

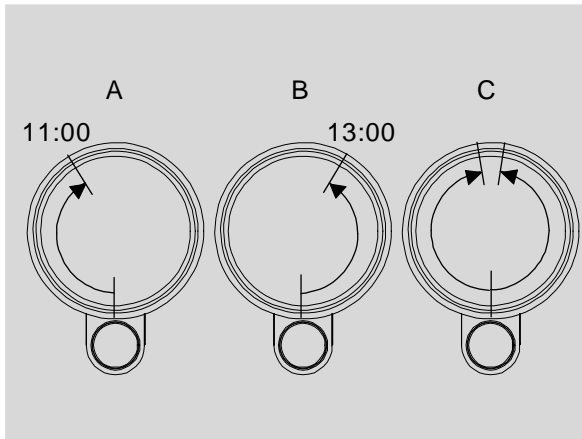


Fig. 25: Inspection for functionality

A/B: Rotate the outer knob by a little more than a quarter turn in clockwise and anti-clockwise direction (11 o'clock and 1 o'clock position). In both cases the knob must rotate back to its neutral position independently.

If the knob does not rotate back, the DOM Protector® EE must be re-aligned and the lock must be inspected for possible defects.

C: If you rotate the outer knob by approx. one half turn the knob will remain in this position (dead-centre point) due to constructional reasons.



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



Attention! After installation it must be ensured that the emergency exit lock can safely be unlocked and opened according to the instructions of the lock and fitting manufacturers.

Commissioning

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



Attention! You only need the master card to commission the DOM Protector® EE. 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® EE, 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® EE is commissioned.



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® EE;
- 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.

Service confirmation card

The Service confirmation card has the following function:

- Documentation of the maintenance intervals.

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

- Locking and opening.

Constantly open card / Tac

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

The constantly closed card has the following functions:

- 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.

Depassivation routine

In order to prevent passivation of the battery, the DOM Protector® EE 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® EE. 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® EE 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® EE is not in a position to read transponder and therefore respond to this.

Signalling depassivation:

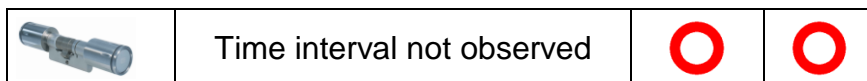
A passing of the door is no longer possible in this time slot! The warning takes place through orange flashing light in a 2 second cycle.



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

Acknowledgement of terminations

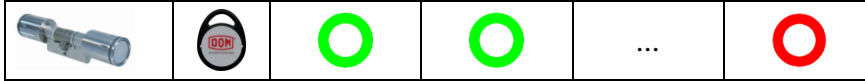
In general, if one of the time windows specified in the various programming modes (removal or presentation of master or program card and locking medium) is not observed, a termination occurs. Such a termination is acknowledged by two flashes of the red LED.



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® EE 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® EE 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® EE 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 outer knob. Presentation of the card is confirmed by two green flashes.
2. Now hold the master card in front of the outer 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				

Defining locking / programming media and service confirmation card

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



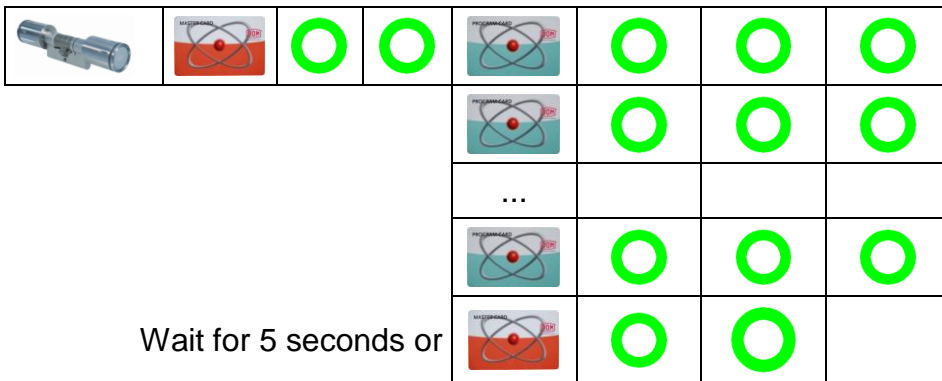
Note! You can define a maximum of 5 Program-Cards, 3 service confirmation cards and 5 PDAs or PCs. When you have defined one program card, you can use this to continue programming.

Follow the steps below:

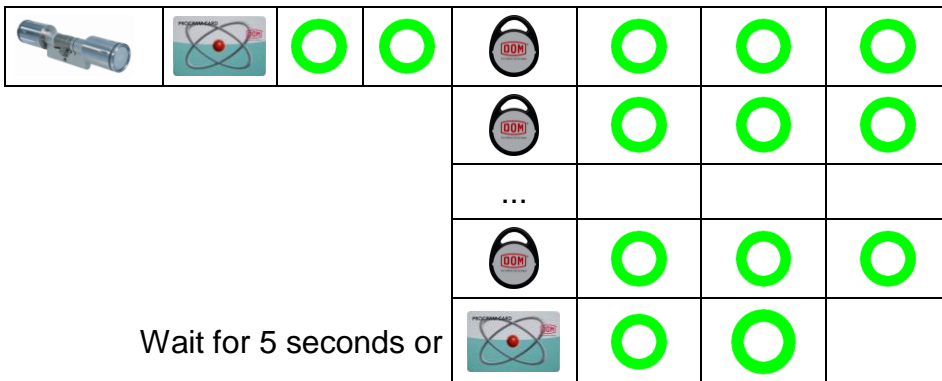
1. Hold the master or program card flat, a short distance in front of the outer knob: Presentation of the card is confirmed by two green flashes.
2. Subsequently the media to be defined one after another are presented: The presentation of every medium is confirmed by a green signal flashing three times.

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

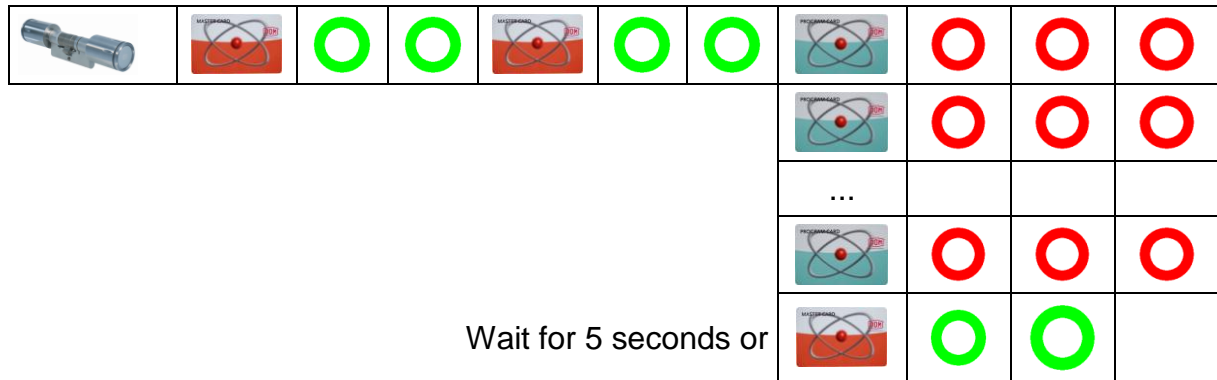
You need a master or program card and the media that you wish to delete.

Follow the steps below:

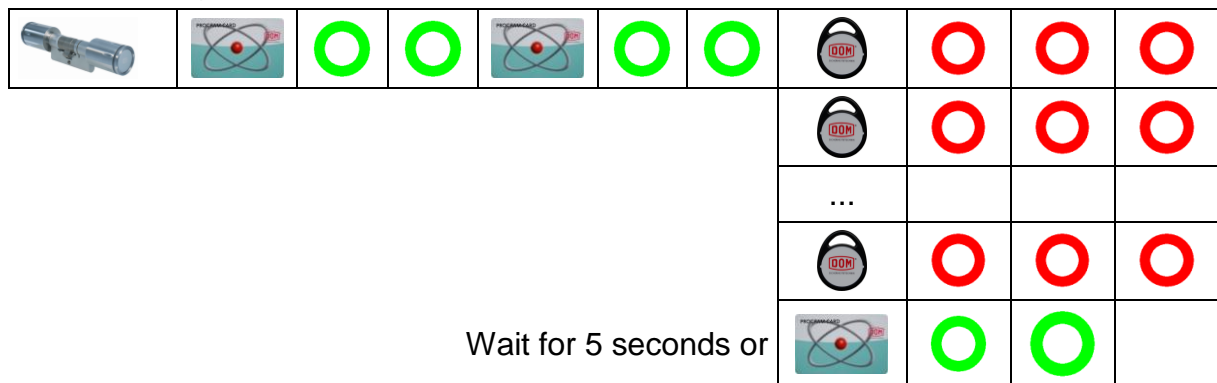
1. Present the master or program card twice, holding it flat a short distance in front of the outer knob: Presentation of the card is confirmed by two green flashes.
2. Then present the programming media or transponders that you wish to delete, one after another: The presentation of each programming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



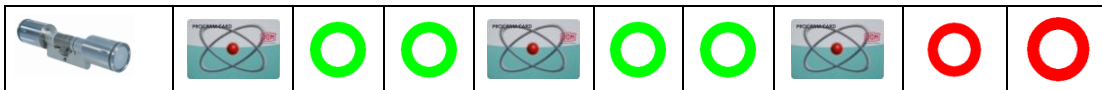
Note! If you use the master card instead of the program card, all programming media will also be deleted.

Follow the steps below:

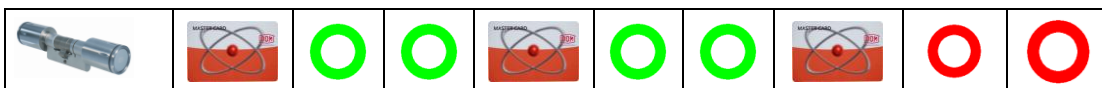
1. Present the program card twice, holding it flat a short distance in front of the outer knob: Presentation of the card is confirmed by two green flashes.
2. Present the program card a third time, holding it flat a short distance in front of the outer knob: The red LED flashes twice as confirmation.

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 28).

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 4.2 or higher) or ELS4PDA software (version 3.2 or higher), you can use this to manage and program your DOM Protector® EE. 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® EE 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® EE 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



Attention! Maintenance inspections and inspection for functional efficiency and smooth operation of the DOM Protector EE should be carried out by the operator or a person authorised by the operator in intervals of no more than one month (also see DIN EN 179 and DIN EN 1125, Appendix C). Maintenance must exclusively be carried out by trained expert personnel.



Attention! The instructions for maintenance of the door, lock and fitting manufacturers must always be observed! Please ensure that the maintenance intervals are always complied with, in order to guarantee continuous functional efficiency of the DOM Protector EE.



Attention! The DOM Protector® EE is equipped with a three-level battery warning system. For warning level 1 and 2 opening processes are possible with the help of the transponder. For warning level 3 opening processes are only possible with the help of a master card or a program card.



Attention! Continuous functional efficiency is determined at 100,000 cycles by actuation from the outside or for a period of 10 years. If the limit has been reached, the warning level for end of service life is activated. As soon as an orange flashing signal is generated at the DOM Protector® EE the DOM Protector® EE must be sent to the manufacturer for correction maintenance, in order to having the worn components replaced.



Attention! Operators and their authorised persons must be advised that safety-related emergency exit components according to DIN EN 179 and DIN EN 1125 must be inspected for tight fitting and wear. Any malfunctions or defects must be removed by an expert company.



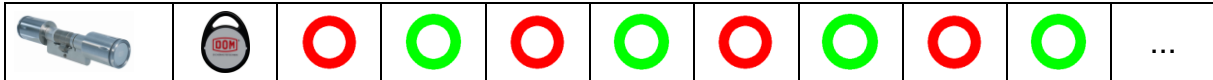
Attention! Safety-related fitting components must be inspected for correct and tight fit as well as for wear, on a regular basis. According to requirements, fastening elements must be re-tightened and damaged parts must be replaced.

Battery warning

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

First warning stage:

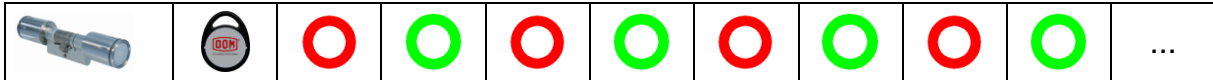
Before indication of an unauthorised or authorised transponder and possibly before engagement, the red and green LEDs flash alternately.



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.

Service life warning

As soon as an orange flashing light is generated at the DOM Protector® EE the DOM Protector® EE must be sent to the manufacturer for correction maintenance, in order to have the worn components replaced.



Attention! In regular intervals a transponder must be held in front of the outer knob in order to verify the service life.

Warning level for service life:

Opening is possible with every authorised transponder! The warning signal is displayed by means of an orange flashing light.



After recognition of the transponder, the warning will be displayed once. Then engagement is carried out.

Service confirmation card

For compliance with and documentation of the monthly maintenance procedures we recommend using the service confirmation card that can be purchased at DOM Sicherheitstechnik. After the monthly inspection for functionality the Service Card is held in front of the outer knob, which records the monthly maintenance interval and allows for reading the data from the memory, if required.



Note! Beforehand, the Service confirmation card must be defined (see page 28).

Changing the battery

To change the battery, follow the steps below:



Attention! The battery must only be replaced by trained expert personnel.



Attention! The DOM Protector® battery is a special-type high-current cell with high short-circuit currents of up to 1 Ampere. The battery must never be re-charged, opened, heated or burnt. For this reason, the battery must never be short-circuited (explosion hazard)!



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. Please use clean gloves that are free of grease and oil.



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.



Attention! After disassembly empty batteries must be correctly disposed according to provisions, and batteries must generally not be stored in the reach of children.



Attention! When unfastening the outer knob you must never apply the open-end spanner on the shaft on the inside. Always apply the open-end spanner and the assembly pliers on the outside in order to unfasten the outer knob without damaging the DOM Protector® EE.



Attention! Fire, explosion and burning hazard.
The battery must never be re-charged, short-circuited, mechanically damaged, dismantled, heated above 85°C, burnt or its contents be brought in contact with water.

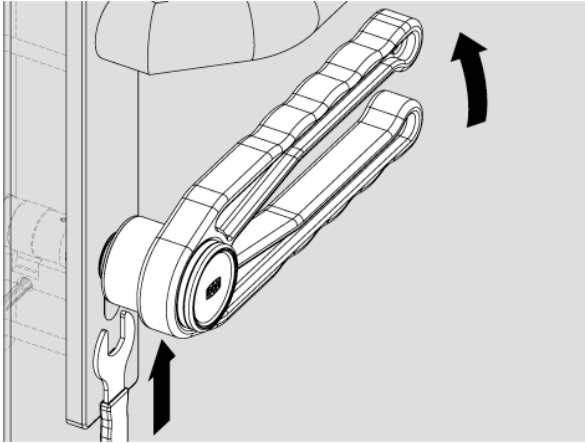


Fig. 26: Loosen outer knob

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

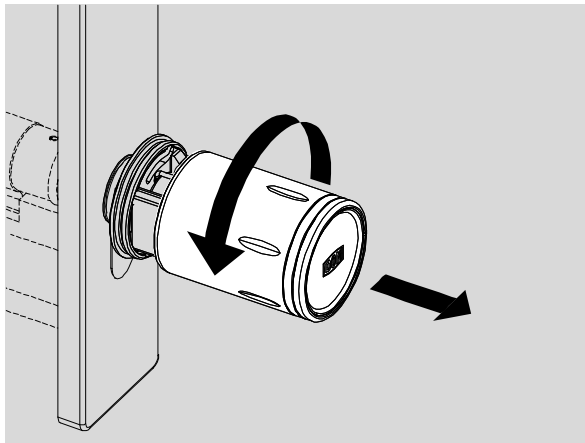


Fig. 27: Unscrew outer knob

2. Unscrew the outer knob.

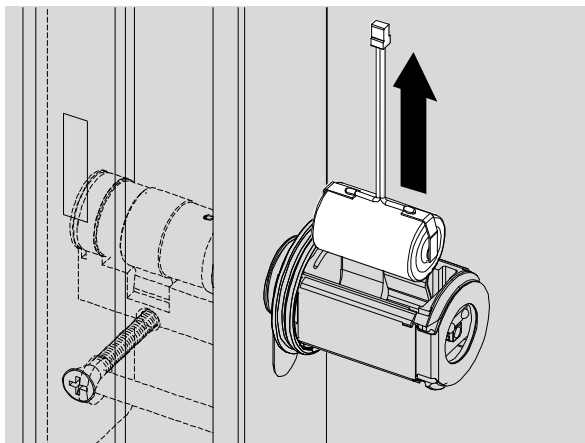


Fig. 28: Remove battery

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



Note! The batteries used in the DOM Protector® EE generate a passivation layer during storage, in order to minimise self-discharge of the battery. The depassivation adapter that can be purchased at DOM Sicherheitstechnik, serves for depassivating the batteries concerned so that subsequently they can be used in the DOM Protector® EE. For this process voltage should be measured in voltmeter. If this value drops below 3.2 Volt after 30 seconds, this battery should not be used again. (see instructions of the depassivation adapter)

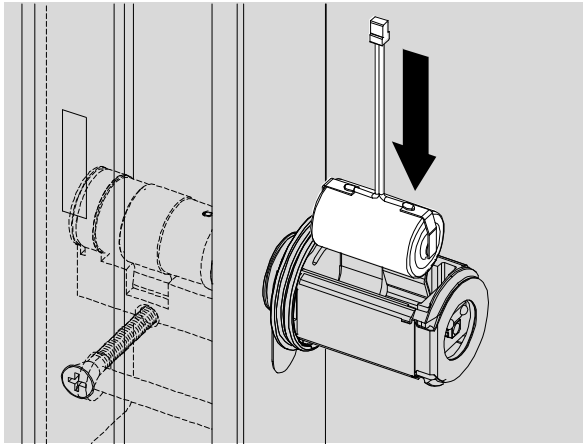


Fig. 29: Insert battery

4. Insert new battery.



Note! The battery connector has a torsion-resistant guide lug. Yet, the battery should be installed such that the positive pole faces outward in order for the battery connector to be accurately inserted into the battery socket without having to twist the cable.

5. Insert the battery connector into the battery socket. The Protector flashes:

Green: the clock set is correct.

Red: the clock must be re-set

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

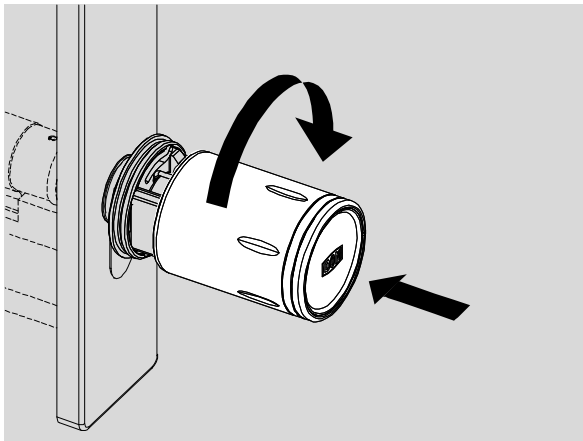


Fig. 30: Screw outer knob on

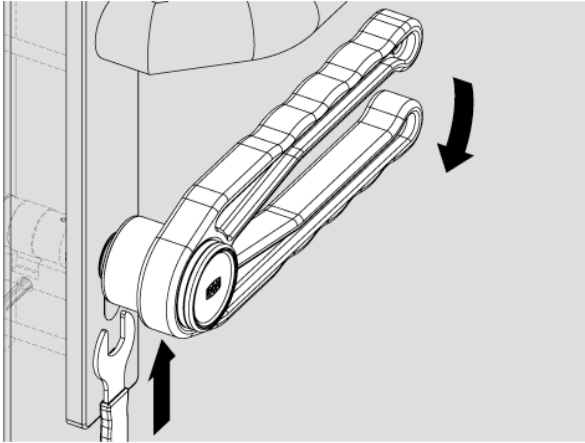


Fig. 31: Tighten outer knob

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



Attention! After having replaced the battery verify the escape and emergency routes according to the values indicated by the lock and fitting manufacturer and carry out an inspection for functionality.

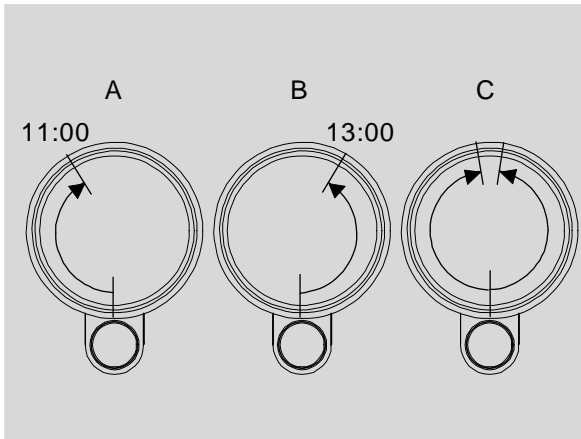


Fig. 32: Inspection for functionality

A/B: Rotate the outer knob in engaged status and/or the inner knob by a little more than a quarter turn in clockwise or anti-clockwise direction (11 o'clock and 1 o'clock position). In both cases the knobs must rotate back to its neutral position independently.

If the knobs does not rotate back, the DOM Protector® EE must be re-aligned and the lock must be inspected for possible defects.

C: If you rotate the knob by approx. one half turn the knob will remain in this position (dead-centre point) due to constructional reasons.

Rotate the outer knob in engaged status by a little more than a quarter turn in clockwise or anti-clockwise direction

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® EE 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.

Storage/Care

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



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

You can return the components of your DOM Protector® EE 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® EE (emergency exit) with VdS¹⁾ approval, application in escape and emergency routes with locks demanding a well-defined cylinder cam position
- DOM Protector® EE Basic / Basic Plus without VdS approval (available as from midyear 2011)
- DOM Protector® EE DK (with dismountable outer knob) protruding outer shaft (protrusion 6,5 mm or 10,5 mm)
- DOM Protector® EE FR (fire resistant) application in fireproof doors up to fire resistance class T90
- DOM Protector® EE OI (withot inside knob) prevention of unauthorised locking from the inside
- DOM Protector® EE WR (water resistant) enhanced resistivity against humidity (IP65) on the outside
- DOM Protector® EE PP (privacy protection) no storage of individual-related events
- DOM Protector® online for Ethernet networking
- For the installation in escape and emergency routes (EN 179, EN1125) the pertinent building regulations as well as the certificates of conformity of the respective lock manufacturer must be considered. The DOM Protector® EE is foreseen for locks without conformity with freewheel cylinders, demanding a well-defined cylinder cam position.

Possible combinations of variants:

	EE DK	EE OI	EE FR	EE WR	EE PP	EE online	DOM Protector EE	DOM Prot. Basic-/Plus EE
EE DK	x	x	o	x	x	x	x ¹⁾	
EE OI		x	x	x	x	x	x	x
EE FR			x	x	x	x	x	o
EE WR				x	x	x	x	o
EE PP					x	x	x	x
EE online						x	x	o
DOM Protector EE							x	o
DOM Protector EE Basic-/Plus								

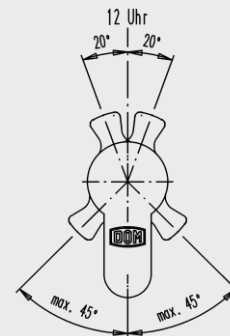
¹⁾ The version DK matches the DOM Protector construction. Due to a reduced core drilling protection it is not approved by German VdS.

Maintenance:

- The operation of the DOM Protector® EE in combination with door, lock and strike plate has to be checked every four weeks by the operator or the operator's authorised agent.
- After 100.000 cycles (via the outer knob) or ten years after initial operation a corrective maintenance of the DOM Protector® EE is necessary. Reaching this value, the necessity of a corrective maintenance is signalled by an orange flashing of the LED during a locking cycle.
- All applicable laws, standards and directives for emergency exit devices must be considered, as well as all instructions of the respective manufacturer of lock and strike plate.

Position of cylinder cam:

- The DOM Protector® EE has a spring driven reset mechanism to turn the cylinder cam to a fixed position.
- Due to the cylinder construction the reset mechanism does not work within the angular dead centers $12^{00} \pm 20^\circ$ and $6^{00} \pm 45^\circ$.



Power supply:

- 1 piece Lithium battery ½AA, 3.6 V
- type ER-14250-M (LiSOCl₂-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:

- minimum length 30/30 mm, maximum length 65/65 mm
- extendable in 5 mm steps
- mounting in Euro opening (DIN 18252, EN 1303)

Knobs:

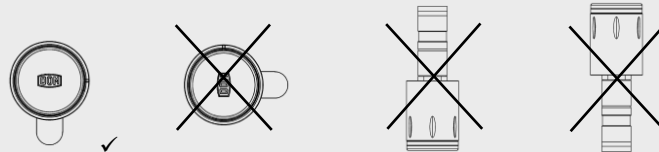
- outside knob: Stainless steel Ø 30 mm, length 41 mm
 - inside knob: zamak Ø 30 mm, length 25 mm
 - optional with brass
- improved adhesion can be achieved by plugging on a rubber grip ring (standard colour black, material 70EPDM)
knob diameter including rubber ring: approx. 37 mm

Signalling:

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

Allowed installations:

- DOM Protector® EE:



- DOM Protector® EE Basic/-Plus:



- The installation of the DOM Protector® EE in multipoint locks has to be checked. Consider the manufacturer's instructions of the respective lock and strike plate.
- With installed DOM Protector® EE, operation of the emergency exit device from the inside must be possible anytime (e.g. no collision with knob).
- For backsets < 25 mm the application is to be checked.


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) ¹⁾
- withstanding time against mechanical attacks accord. VdS C

 The 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 DOM Protector® EE FR is mandatory.

Corrosion resistance:	<ul style="list-style-type: none"> • anticorrosive according to DIN EN 1670 class 3 • SO₂ corrosion test according to VdS 2156-2 and DIN EN ISO 6988 (15 cycles with 0,2 l SO₂) <div style="border: 1px solid #ccc; padding: 5px; margin-top: 5px;">  <i>The SO₂ corrosion resistance is not ensured for the DOM Protector® Basic/- Plus version.</i> </div>
Temperature, relative humidity:	<p>temperature range:</p> <ul style="list-style-type: none"> • stocking: -25°C to +70°C • operation: -20°C to +70°C <p>relative humidity:</p> <ul style="list-style-type: none"> • 20% to 99%, no condensation <p>tested according VdS 2156-2 and DIN IEC 60068-2-1/2/3/30</p> <ul style="list-style-type: none"> • damp heat, cyclic: 6 cycles of 12 h each • cold: tested for 16 h at -25°C
Protection class:	<ul style="list-style-type: none"> • DOM Protector EE WR: IP 65 (on the outside) • DOM Protector EE: IP 54 • DOM Protector Basic/-Plus EE and EE DK: IP 42
Environmental behaviour:	<ul style="list-style-type: none"> • According to VdS guideline 2156-2, for outdoor applications a weatherproof installation is necessary (e.g. by means of a roofed over entrance)
Administration by software:	<p>with PC / notebook / netbook or PDA:</p> <ul style="list-style-type: none"> • ELS-Software V4.0 (online: V4.1), or higher • ELSmobile-Software V4.0, or higher • ELS4PDA-Software V3.0 (online: V3.1), or higher
Programming devices:	<p>storage of programming devices:</p> <ul style="list-style-type: none"> • max. 5 programming cards, 5 PDA's or 5 ELSmobile devices
Event memory:	<ul style="list-style-type: none"> • ring buffer for the latest 2.000 events <div style="border: 1px solid #ccc; padding: 5px; margin-top: 5px;">  <i>The DOM Protector® Basic has a ring buffer for the latest 1.000 events.</i> </div>
Infrared interface:	<ul style="list-style-type: none"> • positioning: inside knob, behind DOM-Logo • wave length: 880 nm (peak sensitivity) • angle of half intensity: ±24° • data rate: 38,4 kBit/sec
Inductive transponder interface:	<ul style="list-style-type: none"> • reading range: up to 5 cm • frequency: 125 kHz • field strength in 10 m distance: < -6 dB µA/m • in conformity with ETSI EN 300 330
Transponder types:	<ul style="list-style-type: none"> • 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

Radio online interface:

- connection to DOM RF-NetManager via integrated radio module (networking via Ethernet / TCP/IP):
- range: typica 3 m
- frequency: 868 MHz
- radiated power: ≤ 7,5 dBm e.r.p
- in conformity with ETSI EN 300 220



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.

**Storage of access authorisations
in
the cylinder:
(„conventional“)**

memory contents:

- max. 3.000 conventional transponders with 4 byte transponder serial number
- max. 32.000 subscribed transponders with object specific identifier



For the DOM Protector® Basic solely 1.000 conventional transponders can be stored.

supported transponders:

- Hitag transponders: Hitag 1, Hitag 2, Hitag S
- EM transponders: 4100, 4102, 4150, 4450

**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

**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

Warranty

The period of limitation for rights of the customer due to defects is twelve months from delivery of the 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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