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Notes on the layout

In these Fitting and Operating Instructions, various elements are highlighted with defined layout features:

- Additional information on the efficient use of the OMEGA IES
- Reference to additional information
- Notes with the ESD symbol warn against possible damage by electrostatic discharges.
- Notes on the correct disposal
- Steps in a sequence of actions. Tips with this symbol require you to perform an action
These Fitting and Operating Instructions will help you fit and use the Intelligent Electronic Shield OMEGA ACTIVE IES (the "IES") as intended, safely, and cost-efficiently.

Any person who fits, programs, operates, or disposes the IES must have read and understood the entire contents of these Fitting and Operating Instructions.

These Fitting and Operating Instructions should be kept within reach at all times as long as the IES is used.

These Fitting and Operating Instructions should be handed over to the end users.

Be sure to use the most recent version of these Fitting and Operating Instructions. Updated versions are available free of charge at www.ces.eu.

3.1 Versions

These Fitting and Operating Instructions only apply to:

CEStronics OMEGA ACTIVE Electronic Shield IES, in all variants

3.2 Manufacturer and Service

The manufacturer of the IES is:

CEStronics GmbH
Friedrichstr. 243
42551 Velbert
Tel: +49 (0) 2051-204-0
Fax: +49 (0) 2051-204-105
www.ces.eu

For service support please contact your professional CESTronics partner.
3.3 Target group

These Fitting and Operating Instructions are intended for trained fitting staff, maintenance staff and operators.

As regards the use of these Operating Instructions, it is assumed that the necessary technical knowledge on how to use the product as intended is available.

The necessary product training is provided by your professional CEStronics partner. If this has not yet taken place, please contact your professional CEStronics partner to obtain training on the product.

---

NOTICE

Unintended condition of your system possible!

If you are not fully familiar with the various possibilities of your system, it may perform unexpected functions.

- If you program the OMEGA FLEX system, you must be clearly aware of the consequences of your programming to prevent undesired results.
- If there are functions of the OMEGA FLEX system you do not understand, contact your professional CEStronics partner to obtain further information.
- Always satisfy yourself that your programming produces the desired result.
4.1 Explanation of the safety notes

These Fitting and Operating Instructions include safety notes of the following types:

- **NOTICE**
  These notes warn against possible property or environmental damage.

- **CAUTION**
  CAUTION notes warn against hazards that may result in slight or medium injuries.

- **WARNING**
  WARNING notes warn against hazards that may result in medium to fatal injuries.
4.2 Intended use

The IES serves for the authorized opening and locking of doors with locks provided with latch function. It is exclusively intended and may only be used for that purpose.

Any other use is considered to be improper and may result in property damage or even personal injury.

CEStronics GmbH does not accept any liability for any damage resulting from improper use. Basic safety instructions
4.3 CE Declaration of Conformity

Declaration of Conformity

We, the manufacturer

CEStronics GmbH
Electronic Security Systems
Friedrichstraße 243
D-42551 Velbert
Germany
Phone: +49(0)2051 204-444
Fax: +49(0)2051 204-245

declare on our own responsibility, that the product:

Name: Electronic shield
Type: OMEGA Active
Product: IES, in all varieties and types

is in compliance with following standards:

1999/5/EC R&TTE directive
2004/108/EC EMC directive
2006/95/EC Low voltage directive

Applied standards:
EN 300 220-1, V 2.4.1 (2012-05)
EN 300 220-2, V 2.4.1 (2012-05)
EN 300 330-1, V 1.5.1 (2006-04)
EN 300 330-2, V 1.3.1 (2006-04)
EN 301 489-1, V 1.6.1 (2005-09)
EN 301 489-3, V 1.4.1 (2002-08)
EN 60950-1 (2006)

A technical documentation for the product is fully available from the manufacturer. The information provided in the user information is available.

Velbert, 2013/11/04

Dipl.-Ing. Richard Rackl
Managing Director
4.4 Basic safety instructions

Observe all warnings and notes in these Fitting and Operating Instructions when fitting, programming and using the IES. Always keep these Fitting and Operating Instructions near the IES.

To prevent danger to life and limb, the following safety instructions must be observed:

4.4.1 Danger of explosion

Live parts of the IES may cause an explosion. Do not use the IES in potentially explosive atmospheres.

4.4.2 Danger of suffocation

Never allow children to play with packaging material and/or plastic bags. There is a risk that children pull them over their head and suffocate.

4.4.3 Danger of poisoning

Always keep the IES out of the reach of children. There is a risk that children swallow small parts such as batteries or screws.

4.4.4 Danger of property damage

To prevent property damage, the following safety instructions should be observed:

- Always have repairs performed by properly qualified personnel.
- Only use accessories and spare parts recommended by CEStronics.
- Do not use any drilling machines or cordless screwdrivers for fastening the IES.
- Only use the proper tools to open the IES.
• When fitting the IES, make sure that the lock and the door are in perfect condition. Malfunctions of the lock may impair the functioning of the IES.
• The IES may not be used for locks with split follower (hub).
• Special regulations apply to approved doors. Before drilling any holes into or through the door, satisfy yourself that the use of the IES is permitted for doors of that type.
• In case of doors in escape or rescue routes, satisfy yourself that the lock and the IES are suitable for the equipment of the door.
• Make sure that the IES can be fitted without jamming and without using force. If that is not possible, align the lock and the IES so as to prevent jamming and bending of the IES during its installation.
• Do not use any lubricants or oils for the IES.
• Do not drop the IES on the floor, on hard surfaces or on hard objects.
• Protect the electronic components of the IES against water and other liquids.
• The IES contains highly sensitive electronic parts that may be damaged or destroyed through static charges. Do not disassemble the IES in rooms with built up static charge.
• Do not store the IES without inserting a charged battery.
4.4.5 Danger through environmental conditions

- Do not use the IES in corrosive atmospheres (chlorine, ammonia, lime water).
- Only use the IES in rooms in which the humidity does not exceed 95%.
- Do not use the IES in rooms with a high level of dust formation.
- Do not use the IES near sources of heat.
- The outside shield may only be exposed to temperatures between -25 °C and +75 °C.
- The inside shield may only be exposed to temperatures between 0 °C and +50 °C.

4.4.6 Danger of malfunctions

The reading unit in the outside shield of the IES must not be covered with any metallic material.
4.5  Notes on the handling of batteries

- Only the batteries inserted by CEStronics and specified for the IES may be used.
- Keep batteries out of the reach of children. If a battery was swallowed, consult a physician without delay.
- Always insert new batteries. Never insert old and new batteries at the same time.
- Never mix the battery types. Always replace batteries by batteries of the same or an equivalent type.
- Before inserting the batteries, check that the terminals in the device and at the batteries are clean. Clean these with alcohol or spirit as necessary.
- Do not touch the contacts after they have been cleaned.
- Observe the correct polarity (+/-) when inserting the batteries.
- Never attempt to recharge non-rechargeable batteries. There is a risk of explosion!
- Never short-circuit the batteries.
- Always store new batteries at a cool, dry place. Direct strong heat may damage the batteries. Do not expose any battery-powered devices to strong sources of heat.
- Never throw any batteries into a fire.
- Always remove leaked batteries immediately from the device. Clean the terminals before inserting new batteries. There is a danger of acid burns through battery acid!
- Remove flat batteries from the device.
- Replace flat batteries by new batteries within one hour.
- Always replace flat batteries promptly after the first Low Battery alarm.
- Be sure to send back the batteries to orderly disposal.
**5 Introduction**

### 5.1 Description

The IES is an electronic fitting allowing a simple upgrading and converting of existing mechanical door locks. No modification of the lock is required.

Mechanical emergency opening is possible with mechanical locking cylinders if these are used together with the IES. If the battery is empty, electronic emergency opening is possible with the optional Emergency Power Supply and an authorized locking medium.

The IES is part of the OMEGA ACTIVE system. It is based on active transponder technology which unlike passive transponders allows reading distances of about 70 cm.

The IES is intended for installation in locks with or without profile cylinders. It can be installed with a minimum of fitting effort.

The IES can only be operated with authorized locking media. You authorize a locking medium for your IES with Master media (see page 27, "Optional Master media").

To operate the IES, you move an authorized locking medium within the reading range of the outside shield. Touch the proximity sensor with your finger to trigger the opening function of the IES. The reader module recognizes your authorized locking medium. In response, the lock and the door handle are coupled and you can open the door with the handle.

All OMEGA ACTIVE transponder media can be programmed and used as authorized locking media at the IES. OMEGA ACTIVE locking media are read within a range of approximately 70 cm so that it is no longer necessary for you to take these locking media into your hand.

The IES additionally comprises a reader for 125 kHz transponder media. This makes it possible to read current
passive locking media and existing OMEGA 125 kHz series media as an alternative to OMEGA ACTIVE media.

The IES responds to various events during programming, operation and maintenance with different visual and acoustic signals.

The IES can be programmed manually with the appropriate transponder cards (SYSTEM-MASTER, PROGRAM-MASTER, optional Master cards, see page 27, Chapter "Optional Master media").

In addition, wireless programming is possible so that virtually no time is lost by going to the individual devices for manual programming. Online programming is performed quickly via installed Access Points. Online programming is significantly more convenient and clearer.

---

A wireless system always comprises a PC, the OMEGA ACTIVE software and a number of Access Points for data exchange as well as at least one locking device.

The IES can also be programmed using the optional RF-Stick. For this purpose, you will require a Windows™ PC (such as a netbook with installed OMEGA software) and the optional RF-Stick available from CES. This will allow you to program the IES at its place of installation (see also page 17, "Programming with OMEGA software").

---

For further information, please refer to the programming instructions for the OMEGA ACTIVE system which are available free of charge at www.ces.eu.
Further features of the IES:

- Active transponder technology
- Integrated 125 kHz reader
- Integrated 868 MHz RF transceiver
- Integrated evaluation unit with memory for:
  - 2,048 locking media with access authorizations
  - 500 events with date and time
- Reading distance of up to 70 cm, irrespective of the orientation of the locking medium; it is no longer necessary to hold the locking medium directly in front of the IES (applies to OMEGA ACTIVE locking media only)
- Programming with Master media or CP100 programmer with suitable software (not included in the scope of delivery)
- Five different Master media available as an option to increase the functionality of the IES (see page 27 ff.)
- Online programming via 868 MHz RF network and additional OMEGA ACTIVE software (optional extra, not included in the scope of delivery)
- Interface for Emergency Power Supply
- Two colour LEDs and beeper for status indication and feedback
- Outside and inside shield made of stainless steel
- Available in two different widths: 38.6 mm und 54 mm (version for installation without drilling in 54 mm only)
- The IES is also available in a version for installation without drilling; this does not require any drilling or other modification at the door.
5.2 Programming with OMEGA software

You can also control and manage your locking systems online via a radio frequency link.

The following components are required for a wireless system (see also next page):

- State-of-the-art PC (1, 2) with Windows 7™, Windows 8™, Windows Server 2008™ or Windows Server 2013™ (XP™ and Windows Server™ 2003 are no longer supported).
  
  1 GHz processor, at least 1 GB RAM, at least 1 GB free hard disk memory

- Network interface card with TCP/IP protocol (for the installation with Access Points)

- CD-ROM drive for installing the software from data media

- One free USB port for the use of the RF-Stick (optional)

- Existing Internet connection for using OMEGA-Quicksupport

- Monitor with a resolution of 1,024 × 768 pixel or higher, or a resolution of 1,024 × 600 pixel (netbook)

- OMEGA ACTIVE Access Point (No. 3, maximum of ten devices per Access Point)

- CEStronics Suite software

- At least one locking device (No. 4, locking cylinder, IES, wall terminal).

- A valid licence for CEStronics Suite software

- The RF-Stick (5) can be used either instead of Access Points (3) or in addition to Access Points.
Setting up a wireless radio network

For further information, please refer to the User Manual of the CEStronics Suite which are available free of charge at www.ces.eu.
5.3 Scope of delivery

- Before proceeding with fitting and commissioning, please check the contents of the package and the scope of delivery.
- Take the IES from the package and remove all packaging material such as films, padding and packaging board.
- Check new devices for transport damage and inform your CEStronics partner promptly if any damage is found.

5.3.1 Basic version

![Fig. 1 - Scope of delivery Basic version]

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1 x outside shield with fixed connection cable and antenna module</td>
</tr>
<tr>
<td>2</td>
<td>1 x inside shield</td>
</tr>
<tr>
<td>3</td>
<td>1 x centring sleeve for guiding the lower tapped bush of the outside shield</td>
</tr>
<tr>
<td>4</td>
<td>1 x screw M3 × 10 mm</td>
</tr>
<tr>
<td>5</td>
<td>1 x coupling unit</td>
</tr>
<tr>
<td>6</td>
<td>1 x hexagon socket head screw for coupling unit</td>
</tr>
<tr>
<td>7</td>
<td>1 x direction indicator for up/down handle operation</td>
</tr>
<tr>
<td>8</td>
<td>1 x plastic pipe (only with initial supply)</td>
</tr>
</tbody>
</table>
9 1 x spindle (supplied to your specifications)
10 1 x hexagon socket head key 3 mm
11 1 x hexagon socket head key 2 mm
12 2 x screws M5 × 60 mm
13 2 x screws M5 × 50 mm
14 2 x batteries (3,6 V, AA-size; 2,2 Ah) CEStronics part number: 248108V
1 x drilling template (not shown)

5.3.2 Version for installation without drilling

The version for installation without drilling additionally includes:

15 Outside fastening plate
16 Inside fastening plate
17 3 x M5 press-in nuts for outside fastening plate
18 2 x M5 × 6 mm fastening screws for the inside plate with the electronics module
19 2 x M5 × 12 mm fastening screws for outside shield
20 3 x M5 fastening screws for the fitting, length depending on door thickness (see table on page 38)
5.3.3  Version short plate

![Diagram of version short plate components]

**Fig. 3 - Scope of delivery for version short plate**

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1 x outside shield with fixed connection cable and reader module</td>
</tr>
<tr>
<td>2</td>
<td>1 x inside shield</td>
</tr>
<tr>
<td>3</td>
<td>1 x centring sleeve for guiding the lower tapped bush of the outside shield</td>
</tr>
<tr>
<td>4</td>
<td>1 x screw M3 × 10 mm</td>
</tr>
<tr>
<td>5</td>
<td>1 x coupling unit</td>
</tr>
<tr>
<td>6</td>
<td>1 x hexagon socket head screw for coupling unit</td>
</tr>
<tr>
<td>7</td>
<td>1 x direction indicator for up/down handle operation</td>
</tr>
<tr>
<td>8</td>
<td>1 x plastic pipe (only with initial supply)</td>
</tr>
<tr>
<td></td>
<td>Description</td>
</tr>
<tr>
<td>---</td>
<td>-------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>9</td>
<td>1 x spindle (supplied to your specifications)</td>
</tr>
<tr>
<td>10</td>
<td>1 x hexagon socket head key 3 mm</td>
</tr>
<tr>
<td>11</td>
<td>1 x hexagon socket head key 2 mm</td>
</tr>
<tr>
<td>12</td>
<td>2 x screws M5 × 60 mm</td>
</tr>
<tr>
<td>13</td>
<td>2 x screws M5 × 50 mm</td>
</tr>
<tr>
<td>14</td>
<td>2 x batteries (3,6 V, AA-size; 2,2 Ah) CESTronics part number: 248108V</td>
</tr>
<tr>
<td></td>
<td>1 x drilling template (not shown)</td>
</tr>
<tr>
<td>15</td>
<td>Outside fastening plate</td>
</tr>
<tr>
<td>16</td>
<td>Inside fastening plate</td>
</tr>
<tr>
<td>17</td>
<td>2 x M5 press-in nuts for outside fastening plate</td>
</tr>
<tr>
<td>18</td>
<td>2 x M5 × 6 mm fastening screws for the inside plate with the electronics module</td>
</tr>
<tr>
<td>19</td>
<td>2 x M5 × 12 mm fastening screws for outside shield</td>
</tr>
<tr>
<td>20</td>
<td>2 x M5 fastening screws for the fitting, length depending on door thickness (see table on page 38)</td>
</tr>
</tbody>
</table>
5.3.4 Version involving push bar installation

Fig. 4 - Scope of delivery for version involving push bar installation

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1 x hexagon socket head screw</td>
</tr>
<tr>
<td>2</td>
<td>1 x outside shield with fixed connection cable and reader module</td>
</tr>
<tr>
<td>3</td>
<td>1 x coupling unit with direction indicator</td>
</tr>
<tr>
<td>4</td>
<td>2 x screws M5</td>
</tr>
<tr>
<td>5</td>
<td>1 x outside shield</td>
</tr>
<tr>
<td>6</td>
<td>1 x outside fastening plate</td>
</tr>
<tr>
<td>7</td>
<td>1 x spindle</td>
</tr>
<tr>
<td>8</td>
<td>1 x screw M4 x 6</td>
</tr>
<tr>
<td>9</td>
<td>2 x screws M5 x 6</td>
</tr>
<tr>
<td>10</td>
<td>1 x spacer</td>
</tr>
<tr>
<td>11</td>
<td>2 x crossbar mechanism</td>
</tr>
<tr>
<td>12</td>
<td>1 x upper fastening screw M4 x 6</td>
</tr>
<tr>
<td>13</td>
<td>2 x centre/lower fastening screw M5</td>
</tr>
<tr>
<td>14</td>
<td>2 x cover plate for crossbar mechanism</td>
</tr>
<tr>
<td>15</td>
<td>2 x fastening screw for lever arm M5 x 10</td>
</tr>
<tr>
<td>16</td>
<td>4 x cover cap for pos. 15</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>17</td>
<td>2 x stud screws for pos. 14</td>
</tr>
<tr>
<td>18</td>
<td>1 x crossbar</td>
</tr>
<tr>
<td>19</td>
<td>2 x lever arm</td>
</tr>
<tr>
<td>20</td>
<td>1 x inside shield</td>
</tr>
<tr>
<td>21</td>
<td>1 x countersunk screw M3 x 10</td>
</tr>
<tr>
<td>22</td>
<td>2 x batteries (3,6 V, AA-size; 2,2 Ah) CESTronics part number: 248108V</td>
</tr>
<tr>
<td>23</td>
<td>2 x M3 × 6 mm fastening screws for the inside shield</td>
</tr>
<tr>
<td>24</td>
<td>1 x fastening screw for inside mounting, wooden or sheet metal screw depending on door</td>
</tr>
<tr>
<td>25</td>
<td>1 x inside shield</td>
</tr>
<tr>
<td>26</td>
<td>1 x spacer plate for inside</td>
</tr>
</tbody>
</table>
5.4 System components

Several options are available for the OMEGA ACTIVE system. Also different implementation stages offering different levels of operating convenience are possible.

The following shows the components of the OMEGA ACTIVE system that can be combined:

- The listed options can be purchased from a CEStronics partner in line with your requirements.

- For use as a standard PC, a suitable netbook is available from CEStronics. For other PCs please contact your computer dealer.

Fig. 5 - Combinable system components

- You can purchase various locking media from a CEStronics partner to match your specific requirements.
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Locking media (optional): You can operate the IES with the following locking media: transponder key, key fob, card.</td>
</tr>
<tr>
<td>2</td>
<td>Locking devices (optional): IES fitting, wall terminal, locking cylinder.</td>
</tr>
<tr>
<td>3</td>
<td>Access Point (optional) for the wireless connection to online locking devices.</td>
</tr>
<tr>
<td>4</td>
<td>Standard PC (Desktop PC, Laptop or Netbook, not included in the scope of delivery) with OMEGA Software.</td>
</tr>
<tr>
<td>5</td>
<td>RF-Stick (optional) for the wireless manual programming of offline locking devices.</td>
</tr>
<tr>
<td>6</td>
<td>Emergency power supply for unlocking locking devices in case of an emergency (optional).</td>
</tr>
<tr>
<td>7</td>
<td>CP100 Programmer (optional). The CP100 Programmer can still be used for the IES. For more information, please consult the operating instructions for the CP100 Programmer.</td>
</tr>
<tr>
<td>8</td>
<td>Desktop reader (optional) for conveniently reading in locking media and Master media at your PC.</td>
</tr>
<tr>
<td>9</td>
<td>Master cards (optional): Master cards are used to authorize locking media through manual programming. For more information, please refer to the operating instructions of your locking devices.</td>
</tr>
</tbody>
</table>

---

You can combine mechanical locking cylinders, IES fittings and electronic locking cylinders and/or access terminals in one and the same locking system. In this case, you can use transponder keys for both mechanical and electronic locking cylinders from CEStronics.
5.5 Optional Master media

Optional Master media allow you to set additional functions manually without requiring additional aids such as a PC or programmer.

5.5.1 SYSTEM-MASTER

With the SYSTEM-MASTER, you define the allocation to a locking system. The SYSTEM-MASTER grants all authorizations on the highest level. For each locking system, there is one and only one valid SYSTEM-MASTER.

With the SYSTEM-MASTER, you can authorize up to ten PROGRAM-MASTERS. In its basic version, a locking system requires one SYSTEM-MASTER and one PROGRAM-MASTER each to program your locking devices. The SYSTEM-MASTER is also used to authorize the following additional Master media for your locking devices:

- TIME-MASTER,
- RELEASE-MASTER,
- BLOCK-MASTER

5.5.2 PROGRAM-MASTER

The PROGRAM-MASTER is used to authorize and delete the authorization of your locking media.
5.5.3 TIME-MASTER

With the TIME-MASTER, you set the opening time of the IES. During the opening time, your IES allows free access.

When the IES detects the TIME-MASTER, it starts beeping at one-second intervals. The number of beeps determines the opening time.

5.5.4 RELEASE-MASTER

With the RELEASE-MASTER, you can set the IES into enable condition. In enable condition, no locking media are read and the IES allows permanent free access.

5.5.5 BLOCK-MASTER

With the BLOCK-MASTER, you can set your IES into blocked condition. In blocked condition, all locking media are rejected. The IES is permanently blocked and prevents access.
5.5.6 RF-INI-MASTER

The RF-INI-MASTER is used to switch your IES into RF (radio) mode. The IES must be switched into RF mode to permit its operation within the wireless network. In this mode, the IES attempts to establish a connection with the OMEGA server to receive new programming jobs. Also, the stored events at the IES are transmitted. Programming jobs and events are transmitted cyclically.
5.5.7  RF-TRACE-MASTER

The RF-TRACE-MASTER serves to verify the quality of the radio frequency (RF) link between the OMEGA server and your locking devices.

To verify the quality of the RF link to your locking devices, proceed as follows:

- Hold the RF-TRACE-MASTER for about two seconds in front of your locking device.

The function is performed immediately.

- If the green LED of your locking cylinder or wall terminal flashes, the RF link is OK.
- If the red LED of your locking cylinder or wall terminal flashes, the RF link is not OK and must be checked.
- If the red and the green LEDs flash alternately or simultaneously, the RF link is weak and should be checked to ensure full functionality and reliability.
- Red LED of your IES flashes: No RF link established and trouble-shooting required.

During the verification, the Access Point emits the same signals as the locking device.
6.1 Preparing the IES for the fitting

NOTICE

The shield may be damaged by the ingress of rain water.

- Ensure that the door is not exposed to driving rain.
- Do not leave the door open when it is raining.

<table>
<thead>
<tr>
<th>IP 54</th>
<th>Protection against touching with tools, wires, etc., protection against internal dust accumulation, protection against splashing water from any direction</th>
</tr>
</thead>
<tbody>
<tr>
<td>IP 40</td>
<td>Protection against small, solid bodies &gt; 1 mm Ø, no protection against water</td>
</tr>
</tbody>
</table>

Fig. 6 - Protection classes on mounting
Before being fitted, the IES must partly be disassembled.

The following tools are required for the fitting:

- the tools supplied with the IES
- the drilling template supplied with the IES
- cross-tip screwdriver with appropriate bits
- awl for marking (Only for fitting the basic version)
- power drill with appropriate drill bits (Only for fitting the basic version)
- profile cylinder bitting gauge (multi-function key).

**NOTICE**

The electronic components of the IES may be damaged.

- Do not disassemble the IES in rooms with a high built-up static charge.
- Always use an ESD grounding bracelet during fitting and maintenance work so as to establish potential equalization.
- Do not store the locking cylinder without inserting a charged battery.
- Do not remove the ESD cover of the electronic unit.

**NOTICE**

The IES may be damaged if not fitted properly.

- Only skilled personnel may fit the IES.

This personnel must have been trained on the product by CEStronics or a CEStronics partner.
6.1.1 Unpacking the IES

- Take the IES from the package and remove all packaging material such as films, padding and packaging board.
- Also remove the piece of cardboard which is placed between the shield and the electronics module in the inside shield.

⚠️ Take care that you do not accidentally discard the enclosed drilling template as well.

- Carefully lift the inside shield from the inside plate.
- Make sure that the distance piece for the screw remains fixed in the inside shield.
- Remove your existing door fitting.
- Check the handle bore hole has the correct diameter so that the coupler nut (1) fits in the handle bore hole with enough clearance.
- If necessary, expand the handle bore hole to the correct diameter of 25 mm.

Fig. 7 – 9 - Preparing the IES
NOTICE
The door may accidentally close while you are fitting the IES and it may not be possible to open the door again.
- Secure the door against accidental closing when fitting the IES.
- Ensure that you have an authorized locking medium ready.

CAUTION
Danger of injury when handling the punched metal pieces.
- Wear protective gloves as required.

NOTICE
The IES cannot be used on locks with split follower (hub).
6.1.2 Check length of the locking cylinder

Before fitting, satisfy yourself that the locking cylinder has the correct length for the door lock by measuring the distance by which the locking cylinder projects from the door.

- Use the drawing below to find the correct dimensions.

Example:
18.5 mm + thickness of the door + 18.5 mm = minimum length of the locking cylinder

To ensure that you receive the correct set of screws, you will have to state the thickness of your door already when ordering the IES.
Basic version

Version for installation without drilling and version for short plate

Version for push bar installation
(also see information on the next page)

Fig. 10 – 12, Check projections
6.1.3 Information on push bar installation

**WARNING**

**Risk of injury!**

In case of malfunctions, people may not be able to open the door in emergencies and may be injured or killed.

- Only use mortise locks with panic function that have been approved and examined for this push bar.

---

The door thickness must be at least 39 mm and no more than 100 mm.

The extension kit, optional feature, must be used on a door thickness from 65 mm.

The push bar is only available with a 9 mm bolt. Your lock must, therefore, be fitted with a 9 mm hub.

- Trim the bolt to a projection of 15 mm (measured from the interior door leaf).

---

*Fig. 13 - 15 mm projection*
6.1.4 Determine the length of the bolt

**NOTICE**
Malfunctions may occur if the spindle (square) is too long!

For some handle types (strongly cranked for short backsets) and unfavourable door dimensions, it may be necessary to shorten the spindle.

**NOTICE**
The IES may be damaged.

- Shorten the 155 mm square when you fit the IES in a door of a thickness between 74 mm and 84 mm*.

<table>
<thead>
<tr>
<th>Door thickness</th>
<th>Length of the square</th>
<th>Length of the screws</th>
</tr>
</thead>
<tbody>
<tr>
<td>38 – 44 mm</td>
<td>105 mm</td>
<td>M5 × 40/45 mm</td>
</tr>
<tr>
<td>45 – 54 mm</td>
<td>105 mm</td>
<td>M5 × 50/55 mm</td>
</tr>
<tr>
<td>55 – 58 mm</td>
<td>105 mm</td>
<td>M5 × 60 mm</td>
</tr>
<tr>
<td>56 – 64 mm</td>
<td>120 mm</td>
<td>M5 × 60 mm</td>
</tr>
<tr>
<td>65 – 73 mm</td>
<td>120 mm</td>
<td>M5 × 65/70 mm</td>
</tr>
<tr>
<td>74 – 84 mm*</td>
<td>155 mm</td>
<td>M5 × 75/80 mm</td>
</tr>
<tr>
<td>85 – 94 mm</td>
<td>155 mm</td>
<td>M5 × 85/90 mm</td>
</tr>
<tr>
<td>95 – 100 mm</td>
<td>155 mm</td>
<td>M5 × 95/100 mm</td>
</tr>
</tbody>
</table>

For push bar version only: see information on previous page.
6.1.5 Fit the direction indicator

Select and fit the direction indicator of the coupling unit according to your requirements:

Fig. 14 - Fit the direction indicator
Insert the selected direction indicator (3) corresponding to the type of your door into the coupling unit (4) from above.

Fig. 15 - Insert the coupling unit
Observe the following drawing for correct assembly:

- In a **uncoupled state**, you can move the handle up and down.
- In a **coupled state**, you can only move the handle down.

**NOTICE**

- Make sure not to damage the connection cables fixed to the IES.
  - Always pull off the outside shield slowly and carefully.
  - Avoid all mechanical stress of the connection cables.
  - Avoid squeezing the connection cables.
  - Check the connection cables for mechanical damage.
6.2 Fitting the Basic version

Fig. 17 - Overview of basic version

1. Outside shield with antenna
2. Antenna cable
3. Plug for coupling unit
4. Direction indicator
5. Fixing screw for spindle
6. Coupling unit
7. M6 fixing screw for handle
8. Spindle (square)
9. Inside plate
10. Fixing screw M5 × 50 mm
11. Inside shield
12. 2 x M3 fixing screws for inside shield and outside shield
13. 2 x batteries (3,6 V, AA-size; 2,2 Ah) CEStronics part number: 248108V
14. Battery PCB
1. Select the spindle appropriate for the follower (hub).
   Insert the spindle into the follower of the coupling unit.

Fig. 18 - Insert the spindle

The correct spindle must already be specified with the order.

2. Fasten the spindle with the hexagon socket head screw.
   Use the 2 mm hexagon socket head key supplied for fastening the spindle.

Fig. 19 - Fasten the spindle

NOTICE

Malfunctions may occur if the hexagon socket head screw is not inserted properly!
   Always insert the hexagon socket head screw so that it faces up.
3. Connect the coupling unit with the plug connector of the sheathed flexible cable.

*Fig. 20 - Connect the coupling unit*

4. Place the coupling unit into the outside shield.

*Fig. 21 - Place the coupling unit*

5. Insert the coupling unit with the upper end tilted into the outside shield.

- Make sure that the upper silicone bearing is inside the tab.

*Fig. 22 - Insert the coupling unit*
6. Now insert the bottom end of the coupling unit into the outside shield. Use a suitable screwdriver to position the bottom silicone bearing into the tab.

*Fig. 23 - Insert the silicone bearings*

**NOTICE**

Malfunctions may occur if the coupling unit is not fitted properly and/or the tabs are bent!

- Be sure that the tabs are not bend.
- Be sure that the coupling unit is placed firmly and flush in the outside shield.
- Be sure that both silicone bearings are fitted properly.

7. Fasten the hexagon socket head screw of the handle of the outside shield using the 3 mm hexagon socket head key.

*Fig. 24 - Fasten the handle screw*
Next drill the holes for the IES into the door.

8. Place the supplied drilling template over the spindle. 
   - Align the template accurately.  
   - Ensure parallel alignment of the measuring scale on the template.

   Fig. 25 - Place the drilling template

9. Mark the holes for the fixing screws with an awl on both sides of the door.

   Fig. 26 - Mark the holes

10. Remove the lock.

   Fig. 27 - Remove the lock
11. Drill the marked holes for the fixing screws with a power drill.
   - Drill from both sides so that the drill does not run off centre.
   - Remove all chips.

*Fig. 28 - Drill the marked holes*

12. Insert the lock again.

*Fig. 29 - Insert the lock*

13. Optional fitting step:
   - Insert the locking cylinder into the lock.
   - Fix the locking cylinder loosely with the cylinder fixing screw so as to just prevent slipping.
   - Do not yet tighten the cylinder fixing screw at this point.

*Fig. 30 - Insert the locking cylinder*
14. Feed the connection cables (2) through the hole for the upper fixing screw (1).
   - Use the plastic pipe as an aid if necessary.

   *Fig. 31 - Feed the connection cable*

15. Mount the outside shield on the door.

   *Fig. 32 - Mount the outside shield*

**NOTICE**

Malfunctions may occur if the connection cable is squeezed!

- Be sure that the connection cables are guided through the hole for the fixing screw without being damaged.
- Be sure that the connection cables are not squeezed when you mount the outside shield.
16. Feed the connection cables (1, 2) through the relief in the inside plate. Only plug it in after the inside plate has been secured (No. 22).

**Fig. 33 - Feed the connection cable**

---

**NOTICE**

If the ESD cover (3) is removed, this may cause malfunctions of and/or damage to the IES.

- Do not remove the ESD cover of the electronic unit (3).

---

17. Slip the inside plate on the spindle and over the cylinder. Properly align the inside plate.

**Fig. 34 - Mount the inside plate**
18. Secure the inside plate with the two M5 × 60 mm fixing screws to the outside shield.
- Tighten the two fixing screws with a tightening torque of 2.5 ± 0.5 Nm.

**Fig. 35 - Secure the inside plate**

19. Carefully plug in the plug connector of the 12-conductor cable (1).
- Carefully plug in the plug connector of the antenna (2).
- Make sure that no contacts are bent in the process.

**Fig. 36 - Plug in the plug connector**

---

**NOTICE**

If the ESD cover (3) is removed, this may cause malfunctions of and/or damage to the IES.
- Do not remove the ESD cover of the electronic unit (3).
20. Insert the two batteries. Note the correct position of the battery poles. The correct polarity is located in the battery compartment.

Fig. 37 - Insert the batteries

NOTICE

Malfunctions and/or damage may occur if the batteries are not inserted correctly or if wrong batteries are used!

- Be sure to insert the batteries with the correct polarity.
- Be sure to use only batteries type 3,6 V, AA-size; 2,2 Ah. CEStronics part number: 248108V.

21. Insert the battery protection foil between the batteries. For the broad shield design only:
- Ensure that the distance piece for the M3 screw is fixed in the inside shield.

Fig. 38 - Insert the battery protection foil
22. Place the inside shield on the inside plate.
   - The inside shield is locked when you hear a distinct click.

   *Fig. 39 - Place the shield*

23. Fasten the inside shield and the outside shield with one M3 screw (1) each at the bottom.

   *Fig. 40 - Fasten the shield*

24. Tighten the hexagon socket head screw of the handle of the inside shield with the 3 mm hexagon socket head key.

   *Fig. 41 - Tighten the screw*

This completes the fitting of the IES.
### 6.3 Fitting the drilling-free version

**Fig. 42 - Overview of drilling-free version**

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Outside shield with coupling unit and square</td>
</tr>
<tr>
<td>2</td>
<td>Outside fastening plate</td>
</tr>
<tr>
<td>3</td>
<td>M5 × 12 mm fastening screws for outside shield</td>
</tr>
<tr>
<td>4</td>
<td>Inside fastening plate</td>
</tr>
<tr>
<td>5</td>
<td>M5 fastening screws for the fitting, length</td>
</tr>
<tr>
<td></td>
<td>depending on door thickness (see table on page</td>
</tr>
<tr>
<td></td>
<td>38)</td>
</tr>
<tr>
<td>6</td>
<td>Inside plate with electronics module and battery</td>
</tr>
<tr>
<td></td>
<td>compartment</td>
</tr>
<tr>
<td>7</td>
<td>M5 × 6 mm fastening screws for inside plate</td>
</tr>
<tr>
<td></td>
<td>with the electronics module</td>
</tr>
<tr>
<td>8</td>
<td>Inside shield</td>
</tr>
</tbody>
</table>
1. Remove any existing escutcheons and handles.

*Fig. 43 - Remove your existing door fitting*

2. Select the spindle appropriate for the follower (hub).
   - Check that your square has the right length.
   - Insert the spindle into the follower of the coupling unit.

*Fig. 44 - Insert the spindle*

*i The correct spindle must already be specified with the order.*

3. Fasten the spindle with the hexagon socket head screw.
   - Use the 2 mm hexagon socket head key supplied for fastening the spindle.

*Fig. 45 - Fasten the spindle*
**NOTICE**

Malfunctions may occur if the hexagon socket head screw is not inserted properly!

- Always insert the hexagon socket head screw so that it faces up.

For reasons of clarity, the square is not shown in the following fitting examples.

4. **Fig. 46 - Connect the coupling unit**
   - Connect the coupling unit with the plug connector of the sheathed flexible cable.

5. **Fig. 47 - Place the coupling unit**
   - Place the coupling unit into the outside shield.
   - Satisfy yourself that the cables are not squeezed or damaged.
6. **Insert the coupling unit with the upper end tilted into the outside shield.**
   - Make sure that the upper silicone bearing is inside the tab.

   *Fig. 48 - Insert the coupling unit*

7. **Now insert the bottom end of the coupling unit into the outside shield.**
   - Use a suitable screwdriver to position the bottom silicone bearing into the tab.

   *Fig. 49 - Insert the bottom end*

---

**NOTICE**

**Malfunctions may occur if the coupling unit is not fitted properly and/or the tabs are bent!**

- Be sure that the tabs are not bend.
- Be sure that the coupling unit is placed firmly and flush in the outside shield.
- Be sure that both silicone bearings are fitted properly.
8. Lay the cables along the side of the coupling as shown.
   - Satisfy yourself that the cables are not squeezed or damaged.
   - Fix the cables e.g. with adhesive tape to make the handling easier.

   Fig. 50 - Lay the cables

9. Tighten the hexagon socket head screw of the handle of the inside shield with the 3 mm hexagon socket head key.

   Fig. 51 - Tighten the screw of the handle

    - Use the three holes provided as shown in the figure.

   Fig. 52 - Press the press-in nuts
11. **Fig. 53 - Guide the cables**

   - Guide the cables from the outside shield through the cut-out in the outside fastening plate as shown in the figure.

12. **Fig. 54 - Fasten the outside fastening plate**

   - Fasten the outside fastening plate on the outside shield with the two M5 × 12 mm screws.

13. **Fig. 55 - Fit the lock**

   - If the lock had been removed, fit it again.
14. Guide the cables through the escutcheon hole.

- If necessary, carefully bend the plug in longitudinal direction so that it will pass more easily through the hole.
- Satisfy yourself that the cable is not damaged.

Fig. 56 - Guide the cables

15. Push the square of the outside shield through the door lock.

- Push the outside shield on to the door.
- Secure the outside shield against sliding off.

Fig. 57 - Push the square through the door lock

16. Guide the cables (1, 2) through the cut-out of the inside fastening plate as shown in the figure.

- Ensure that the cable is not squeezed.

Fig. 58 - Guide the cable through the cut-out
17. Fasten the inside fastening plate with the screws appropriate for the thickness of your door as shown in the figure.
- Refer to the table on page 38 to select the right screws.
- Tighten the screws leaving enough play so that you can still align the fitting.

18. Accurately align the outside shield.
- Accurately align the inside fastening plate as well.
- Satisfy yourself of the perfect and smooth functioning of lock and IES.
- Now fully tighten the three screws for fastening the inside fastening plate.
NOTICE

Malfunctions may occur if the connection cable is squeezed!

- Be sure that the connection cable is guided through the escutcheon hole without being damaged.
- Be sure that the connection cable is not squeezed when you mount the outside shield.

19. Guide the connecting cables through the cut-out of the inside plate with the electronics module as shown in the figure.

- Be sure not to damage or squeeze the cable.

20. Push the inside plate with the electronics module onto the square.

- Fasten the inside shield with the two M5 x 6 mm fastening screws.
- Be sure not to squeeze or damage the cable.
21. Guide the cables (1) below the holder of the inside handle upward to the plug connector.
   - Be sure not to damage or squeeze the cables.

   *Fig. 63 - Guide the cable*

22. Carefully plug in the plug connector of the 12-conductor cable (1).
   - Carefully plug in the plug connector of the antenna (2).
   - Make sure that no contacts are bent in the process.

   *Fig. 64 - Plug in the plug connector*

---

**NOTICE**

If the ESD cover (3) is removed, this may cause malfunctions of and/or damage to the IES.

- Do not remove the ESD cover of the electronic unit (3).
23. Insert the two batteries.
   Note the correct position of the battery poles.
   The correct polarity is located in the battery compartment.

Fig. 65 - Insert the two batteries

NOTICE

Malfunctions and/or damage may occur if the batteries are not inserted correctly or if wrong batteries are used!

- Be sure to insert the batteries with the correct polarity.
- Be sure to use only batteries type 3,6 V, AA-size; 2,2 Ah. CEStronics part number: 248108V.

24. Insert the battery protection foil between the batteries.
   Ensure that the distance piece for the M3 screw is fixed in the inside shield.

Fig. 66 - Insert the battery protection foil
25. **Fig. 67 - Place the inside shield**

- Place the inside shield on the inside plate.
- The inside shield is locked when you hear a distinct click.

26. **Fig. 68 - Fasten the shields**

- Fasten the inside shield and the outside shield with one M3 screw (1) each at the bottom.

27. **Fig. 69 - Tighten the head screw of the handle**

- Tighten the hexagon socket head screw of the handle of the inside shield with the 3 mm hexagon socket head key.

This completes the fitting of the IES.
6.4 Fitting the version for short plate

Fig. 70 - Installation overview of the short plate

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Outside shield with coupling unit and square</td>
</tr>
<tr>
<td>2</td>
<td>Outside fastening plate</td>
</tr>
<tr>
<td>3</td>
<td>M5 × 12 mm fastening screws for outside shield</td>
</tr>
<tr>
<td>4</td>
<td>Inside fastening plate</td>
</tr>
<tr>
<td>5</td>
<td>M5 fastening screws for the fitting, length depending on door thickness</td>
</tr>
<tr>
<td>6</td>
<td>Inside plate with electronics module and battery compartment</td>
</tr>
<tr>
<td>7</td>
<td>M5 × 6 mm fastening screws for inside plate with the electronics module</td>
</tr>
<tr>
<td>8</td>
<td>Inside shield</td>
</tr>
</tbody>
</table>
1. Remove any existing escutcheons and handles.

*Fig. 71 - Remove your existing door fitting*

2. Select the spindle appropriate for the follower (hub).
   - Check that your square has the right length.
   - Insert the spindle into the follower of the coupling unit.

*Fig. 72 - Insert the spindle*

- The correct spindle must already be specified with the order.

3. Fasten the spindle with the hexagon socket head screw.
   - Use the 2 mm hexagon socket head key supplied for fastening the spindle.

*Fig. 73 - Fasten the spindle*
NOTICE

Malfunctions may occur if the hexagon socket head screw is not inserted properly!

- Always insert the hexagon socket head screw so that it faces up.

For reasons of clarity, the square is not shown in the following fitting examples.

4. **Fig. 74 - Connect the coupling unit**
   - Connect the coupling unit with the plug connector of the sheathed flexible cable.

5. **Fig. 75 - Place the coupling unit**
   - Place the coupling unit into the outside shield.
   - Satisfy yourself that the cables are not squeezed or damaged.
6. Insert the coupling unit with the upper end tilted into the outside shield.
   - Make sure that the upper silicone bearing is inside the tab.

   Fig. 76 - Insert the coupling unit

---

7. Now insert the bottom end of the coupling unit into the outside shield.
   - Use a suitable screwdriver to position the bottom silicone bearing into the tab.

   Fig. 77 - Insert the bottom end

---

**NOTICE**

Malfunctions may occur if the coupling unit is not fitted properly and/or the tabs are bent!
   - Be sure that the tabs are not bend.
   - Be sure that the coupling unit is placed firmly and flush in the outside shield.
   - Be sure that both silicone bearings are fitted properly.
8. Lay the cables along the side of the coupling as shown.
- Satisfy yourself that the cables are not squeezed or damaged.
- Fix the cables e.g. with adhesive tape to make the handling easier.

9. Tighten the hexagon socket head screw of the handle of the inside shield with the 3 mm hexagon socket head key.

10. Guide the cables from the outside shield through the cut-out in the outside fastening plate as shown in the figure.
11. Fasten the outside fastening plate on the outside shield with the two M5 × 12 mm screws.

*Fig. 81 - Fasten the outside fastening plate*

12. If the lock had been removed, fit it again.
   Satisfy yourself that the cables are not squeezed or damaged.

*Fig. 82 – Fit the lock*

13. Guide the cable through the opening in the door as shown in the illustration.
   Satisfy yourself that the cable is not damaged.

*Fig. 83 - Guide the cables*
14. Push the square of the outside shield through the door lock.
   - Push the outside shield on to the door.
   - Secure the outside shield against sliding off.

*Fig. 84 - Push the square through the door lock*

15. Guide the cable through the opening in the interior plate as shown in the illustration.
   - Satisfy yourself that the cable is not damaged.

*Fig. 85 - Guide the cables*

16. Fasten the inside fastening plate with the screws appropriate for the thickness of your door as shown in the figure.
   - Refer to the table on page 38 to select the right screws.
   - Tighten the screws leaving enough play so that you can still align the fitting.

*Fig. 86 - Fasten the inside fastening plate*
17. Fig. 87 - Accurately align the shields

- Accurately align the outside shield.
- Accurately align the inside fastening plate as well.
- Satisfy yourself of the perfect and smooth functioning of lock and IES.
- Now fully tighten the three screws for fastening the inside fastening plate.

**NOTICE**

Malfunctions may occur if the connection cable is squeezed!

- Ensure that the connecting cable is guided through the opening without being damaged.
- Be sure that the connection cable is not squeezed when you mount the outside shield.

18. Fig. 88 - Guide the cable

- Guide the connecting cable through the opening in the interior shield as shown in the illustration.
- Be sure not to damage or squeeze the cable.
19. **Fig. 89 - Fasten the inside shield**

- Push the inside plate with the electronics module onto the square.
- Fasten the inside shield with the two M5 x 6 mm fastening screws.
- Be sure not to squeeze or damage the cable.

20. **Fig. 90 - Guide the cable**

- Guide the cable (1) below the holder of the inside handle upward to the plug connector.
- Be sure not to damage or squeeze the cable.

**NOTICE**

If the ESD cover (3) is removed, this may cause malfunctions of and/or damage to the IES.
- Do not remove the ESD cover of the electronic unit (3).
21. Carefully plug in the plug connector of the 12-conductor cable (1).

Carefully plug in the plug connector of the antenna (2).

Make sure that no contacts are bent in the process.

![Fig. 91 - Plug in the plug connector](image)

22. Insert the two batteries.

Note the correct position of the battery poles.

The correct polarity is located in the battery compartment.

![Fig. 92 - Insert the two batteries](image)

**NOTICE**

Malfunctions and/or damage may occur if the batteries are not inserted correctly or if wrong batteries are used!

- Be sure to insert the batteries with the correct polarity.
- Be sure to use only batteries type 3,6 V, AA-size; 2,2 Ah. CEStronics part number: 248108V.
23. Insert the battery protection foil between the batteries.
   Ensure that the distance piece for the M3 screw is fixed in the inside shield.

*Fig. 93 - Insert the battery protection foil*

24. Place the inside shield on the inside plate.
    The inside shield is locked when you hear a distinct click.

*Fig. 94 - Place the inside shield*

25. Fasten the inside shield and the outside shield with one M3 screw (1) each at the bottom.

*Fig. 95 - Fasten the shields*
26. Tighten the hexagon socket head screw of the handle of the inside shield with the 3 mm hexagon socket head key. This completes the fitting of the IES.

*Fig. 96 - Tighten the head screw of the handle*
### 6.5 Version for push bar installation

![Installation overview for push bar version](image)

**Fig. 97 - Installation overview for push bar version**

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1 x M6 fixing screw for handle</td>
</tr>
<tr>
<td>2</td>
<td>1 x Outside shield with antenna</td>
</tr>
<tr>
<td>3</td>
<td>1 x Coupling unit with direction indicator</td>
</tr>
<tr>
<td>4</td>
<td>2 x M5 fastening screws</td>
</tr>
<tr>
<td>5</td>
<td>1 x outside shield</td>
</tr>
<tr>
<td>6</td>
<td>1 x outside fastening plate</td>
</tr>
<tr>
<td>7</td>
<td>1 x Spindle (square)</td>
</tr>
<tr>
<td>8</td>
<td>1 x M4 x 6 mm fastening screw</td>
</tr>
<tr>
<td>9</td>
<td>2 x M5 x 6 mm fastening screws</td>
</tr>
<tr>
<td>10</td>
<td>1 x spacer</td>
</tr>
<tr>
<td>11</td>
<td>2 x crossbar mechanism</td>
</tr>
<tr>
<td>12</td>
<td>1 x upper fastening screw M4 x 6 mm</td>
</tr>
<tr>
<td>13</td>
<td>2 x centre/lower fastening screw M5 (not shown)</td>
</tr>
<tr>
<td>14</td>
<td>2 x cover plate for crossbar mechanism</td>
</tr>
<tr>
<td>15</td>
<td>2 x fastening screw for lever arm M5 x 10 mm</td>
</tr>
<tr>
<td>16</td>
<td>4 x cover cap for pos. 15</td>
</tr>
<tr>
<td>17</td>
<td>2 x stud screws for pos. 14</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>18</td>
<td>1 x crossbar</td>
</tr>
<tr>
<td>19</td>
<td>2 x lever arm</td>
</tr>
<tr>
<td>20</td>
<td>1 x inside shield</td>
</tr>
<tr>
<td>21</td>
<td>1 x countersunk screw M3 x 10 mm</td>
</tr>
<tr>
<td>22</td>
<td>2 x batteries (3.6 V, AA-size; 2.2 Ah) CEStronics part number: 248108V</td>
</tr>
<tr>
<td>23</td>
<td>2 x fastening screws for inside mounting M3 x 6 mm</td>
</tr>
<tr>
<td>24</td>
<td>2 x fastening screws for inside mounting, wooden or sheet metal screw depending on door</td>
</tr>
<tr>
<td>25</td>
<td>1 x Inside plate with electronics module and battery compartment</td>
</tr>
<tr>
<td>26</td>
<td>1 x spacer plate for inside</td>
</tr>
</tbody>
</table>

1. Select the spindle appropriate for the follower (hub, see pages 38 and 37).
   - Insert the spindle into the follower of the coupling unit.

   *Fig. 98 - Insert the spindle*

   The correct spindle must already be specified with the order.

2. Fasten the spindle with the hexagon socket head screw.
   - Use the 2 mm hexagon socket head key supplied for fastening the spindle.

   *Fig. 99 - Fasten the spindle*
**NOTICE**

Malfunctions may occur if the hexagon socket head screw is not inserted properly!

- Always insert the hexagon socket head screw so that it faces up.

3. Connect the coupling unit with the plug connector of the sheathed flexible cable.

![Fig. 100 - Connect the coupling unit](image)

4. Place the coupling unit into the outside shield.
- Satisfy yourself that the cables are not squeezed or damaged.

![Fig. 101 - Place the coupling unit](image)
5. Insert the coupling unit with the upper end tilted into the outside shield.
   - Make sure that the upper silicone bearing is inside the tab.

   **Fig. 102 - Insert the coupling unit**

6. Now insert the bottom end of the coupling unit into the outside shield.
   - Use a suitable screwdriver to position the bottom silicone bearing into the tab.

   **Fig. 103 - Insert the bottom end**

---

**NOTICE**

Malfunctions may occur if the coupling unit is not fitted properly and/or the tabs are bent!

- Be sure that the tabs are not bend.
- Be sure that the coupling unit is placed firmly and flush in the outside shield.
- Be sure that both silicone bearings are fitted properly.
7. Tighten the hexagon socket head screw of the handle of the inside shield with the 3 mm hexagon socket head key.

*Fig. 104 - Tighten the screw of the handle*

Now make the bore holes in the door for the mounting and the push bar:

8. Place the supplied drilling template over the spindle.
   - Align the template accurately.
   - Ensure parallel alignment of the measuring scale on the template.

*Fig. 105 - Place the drilling template*

9. Mark the holes for the fixing screws with an awl on both sides of the door.
   - Now transfer the dimensions for the push bar bore holes.

*Fig. 106 - Mark the holes*
Use the following drilling template for the dimensions:

Fig. 107 - Drilling template for the push bar version

X = dimension depends on your present door. You have to specify this yourself.

10. Remove the lock.

Fig. 108 - Remove the lock
11. Drill the marked holes for the fixing screws with a power drill.
   - Drill from both sides so that the drill does not run off centre.
   - Remove all chips.

*Fig. 109 - Drill the marked holes*

12. If the lock had been removed, fit it again.

*Fig. 110 - Fit the lock*

13. Optional fitting step:
   - Insert the locking cylinder into the lock.
   - Fix the locking cylinder loosely with the cylinder fixing screw so as to just prevent slipping.
   - Do not yet tighten the cylinder fixing screw at this point.

*Fig. 111 – Insert the locking cylinder*
14. ![Mount the mechanism](image1)

- Mount the crossbar mechanism on the spacer using the M4 × 6 mm screw.

**Fig. 112 - Mount the mechanism**

15. ![Tighten mechanism](image2)

- Insert the two M5 fastening screws.
- Use the grommet supplied for the lower screw.
- Insert the crossbar mechanism on the inside of the door through the bore holes on the right side.

**Fig. 113 - Tighten mechanism**

16. ![Screw the outside and inside plates](image3)

- Screw the crossbar mechanism on the inside onto the fastening plate on the outside.
- Afterwards fit the shield to the fastening plate.

**Fig. 114 - Screw the outside and inside plates onto the door**
17. Lay the cables along the side of the coupling as shown.  
   Satisfy yourself that the cables are not squeezed or damaged.  
   Fix the cables e.g. with adhesive tape to make the handling easier.

18. Push the outside shield on to the door.  
   Carefully guide the connecting cable (2) through the lower fastening bore (1).

**NOTICE**

Malfunctions may occur if the connection cable is squeezed!

- Ensure that the connecting cable is guided through the fastening bore without being damaged.  
- Be sure that the connection cable is not squeezed when you mount the outside shield.
19. Mount the base plate

- Apply the base plate.
- Carefully guide the cable through the slit underneath the fastening screw.
- Screw the base plate to the door.
- Depending on door design, use a wooden or sheet metal screw as lowest screw.
- Tighten the two M5 fastening screws (1).

20. Mount the crossbar mechanism

- Screw the crossbar mechanism onto the base plate.
- To this end please use the M4 × 6 mm screws (at the top) and two M5 × 6 mm (in the middle/at the bottom).

21. Fit the covers

- Fit both covers to the crossbar mechanisms.
- Use the stud screws to fasten them both from underneath.
22. Mount the crossbar

- Shorten the crossbar (1) as required.
- Insert the crossbar between the two lever arms (2).
- Insert the two lever arms in the two cover plates.
- Fasten the lever arms using the M5 × 6 mm countersunk screws (3) and seal the four holes using the cover caps (4).

Fig. 120 - Mount the crossbar

23. Fasten the inside shield

- Apply the inside mounting to the base plate.
- Guide the cables (1) through the upper opening in the inside mounting.
- Use the two M3 x 6 mm screws to tighten the inside mounting.

Fig. 121 - Fasten the inside shield

24. Plug in the plug connector

- Carefully plug in the plug connector of the 12-conductor cable (1).
- Carefully plug in the plug connector of the antenna (2).
- Make sure that no contacts are bent in the process.

Fig. 122 - Plug in the plug connector
If the ESD cover (3) is removed, this may cause malfunctions of and/or damage to the IES.

- Do not remove the ESD cover of the electronic unit (3).

Insert the two batteries.
- Note the correct position of the battery poles.
- The correct polarity is located in the battery compartment.

*Fig. 123 - Insert the two batteries*

**NOTICE**

Malfunctions and/or damage may occur if the batteries are not inserted correctly or if wrong batteries are used!

- Be sure to insert the batteries with the correct polarity.
- Be sure to use only batteries type 3,6 V, AA-size; 2,2 Ah. CEStronics part number: 248108V.
26. Insert the battery protection foil between the batteries.

For the broad shield design only:

- Ensure that the distance piece for the M3 screw is fixed in the inside shield.

Fig. 124 - Insert the battery protection foil

27. Fasten the blind shield to the interior shield.

- Use a M3 screw (1) to fasten the blind shield to the lower side.

Fig. 125 - Fasten the blind shield

This completes the fitting of the IES.
7 Operating the door lock

7.1 Correct door operation

**NOTICE**

The OMEGA FLEX cylinder may be damaged if the door is operated incorrectly.

- Only use the door handle for opening and closing the door as shown in the figure.

- Never pull at the key to open the door:

- Never pull at the knob to open the door:
7.1.1 From the inside

To operate the IES from the inside, you do not need any locking medium. The handle is always directly coupled with the lock.

- Use the handle to operate the door lock.

7.1.2 From the outside

To operate the door lock from the outside, you need a locking medium that is authorized for the IES.

Ensure that the access authorizations for the respective IES are granted correctly. Please refer to the enclosed Programming Instructions on how to authorize a locking medium.

Fig. 126 - Use the IES correctly
7.1.3 Passive locking media (125 kHz series)

1. Touch the proximity sensor (1).

*Fig. 127 - touch the sensor*

2. Within two seconds, hold your authorized locking medium (2) in front of the outside shield (3) of the IES.

*Fig. 128 - show your media*

The reader module in the outside shield detects the locking medium. The green LED and a short beep of the reader module signal the enabled status.

The handle is coupled with the lock.

- Use the handle of the outside shield to open the door.

If you are using a locking medium that is not authorized to enable the IES, the light at the IES flashes red four times and you hear four successive beeps. In this case, the handle is not coupled with the lock. You can operate the handle but this will not unlock the lock.
7.1.4 Active locking media (OMEGA ACTIVE series)

- Move with your authorized locking medium (2) into the reading range of the IES. This range is about 70 cm. You do not have to hold your locking medium in your hand.

- Touch the proximity sensor (1).

![Fig. 129 - touch the sensor](image1)

![Fig. 130 - show your media](image2)

The reader module in the outside shield identifies the locking medium. The green LED and a short beep of the reader module signal the enabled status.

The handle is coupled with the lock.

- Use the handle of the outside shield to open the door.
8 Programming with the RF-Stick

The optional RF-Stick permits the wireless manual programming of your locking devices (locking cylinder, IES fitting, wall terminal). The maximum radio range of the RF-Stick is 10 metres.

For further information, please refer to the User Manual of the OMEGA RF-Stick which is available free of charge at www.ces.eu.
The RF-Stick is available in three different packages:

<table>
<thead>
<tr>
<th>Package</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>RF-Stick</td>
<td>Includes the RF-Stick and a CD-ROM only, for the functional extension of existing online and offline systems</td>
</tr>
<tr>
<td>RF-Stick Set</td>
<td>Includes the OMEGA ACTIVE RF-Stick, RF-STICK MASTER, OMEGA ACTIVE SYSTEM MASTER, a CD-ROM with the CEStronics software suite as backup medium and a USB stick with program files and licences</td>
</tr>
<tr>
<td>RF-Stick Programming Package</td>
<td>Includes a netbook with pre-installed CEStronics software suite with single-user licence, OMEGA ACTIVE RF-Stick, RF-STICK MASTER, OMEGA ACTIVE SYSTEM MASTER, USB stick with licence file and data files, CD-ROM with the CEStronics software suite as backup medium</td>
</tr>
</tbody>
</table>
To authorize the programming, you always need the RF-STICK-MASTER. To work with the RF-Stick, proceed as follows:

- Authorize the RF-STICK-MASTER at your locking device (i.e. locking cylinder):

1. ![Authorize RF-STICK-MASTER at locking device](image1)
2. ![Activate system](image2)
3. ![Activate RF-STICK-MASTER](image3)
4. ![Activate system](image4)
5. ![Authorize RF-STICK-MASTER](image5)
6. ![Activate system](image6)

Fig. 132 – authorize the RF-STICK-MASTER
Insert the RF-Stick in a free USB port of your PC (or netbook).

Launch the OMEGA software and log in.

After a few seconds the two status messages "System ready" and "RF-Stick ready" appear in the status line.

Edit your locking system as desired.

You will then see a new status message "Programming required".

Go to the "Other" menu and select "Program changes".

OR select "Programming" in the upper menu bar and click on "Reprogramming all devices".

You will now see two new status messages in the status line "Programming running" and "RF-Stick ready for programming".

Go with your notebook / netbook near your locking devices (max. 10m).

Hold the RF-STICK-MASTER within reading range of your locking device.

If the distance between the RF-Stick and the locking device is too long (longer than 10 m), the locking device will signal the lacking connection with a long beep and red LEDs.

When the locking device has detected the RF-STICK-MASTER, it signals this with a long beep and the green LEDs will go on for about five seconds.

When the transmission starts, the green LEDs start flashing and continue to flash until the data transmission is finished.

After the data transmission has been finished, the programming job is deleted from the "Programming status" list.
When the Low Battery alarm sounds, the battery of the IES must be replaced as soon as possible to prevent damage to the IES.

The Low Battery alarm starts sounding when the battery capacity is falling. In this case, you will hear a very long beep (4 seconds) with every locking attempt.

The battery is tested whenever an authorized unlocking operation is performed. In case of online systems, the OMEGA Software Suite will additionally display the results of the regular battery test in a status message. The regular battery test is performed once per day.

**NOTICE**
The door cannot be opened again from the outside once the battery is completely empty.
- Always replace the battery after the first Low Battery alarm.

If the battery is completely empty, the door can be opened in three different ways:
- using an Emergency Power Supply (see page 104, Chapter "Emergency Opening"
- using the handle on the inside
- using the key for the locking cylinder (if installed).

If you program your locking devices with Master media, setting the time of day is not possible.
Replacing the batteries of the IES

！

**NOTICE**

Risk of damage to the IES.
- Replace batteries within one hour.
- Make sure the Low Battery alarm, even after the battery change.
- If so, repeat the battery change.

When the battery is replaced, the programming data remain stored in the memory of the IES. The battery should be replaced within 60 seconds as otherwise the time of day of the IES must be reset.

In RF mode, you do not have to re-set the time of day, as the current time is continuously transmitted by the OMEGA ACTIVE server.

Please refer to the Operating Instructions for the CP100 programmer on how to set the time of day with the programmer.

！

**NOTICE**

Incorrectly inserted batteries may cause irreparable damage to your IES.
- Only use batteries type 3,6 V, AA-size; 2,2 Ah. CEStrronics part number: 248108V.
- Always insert the batteries with the correct polarity into your IES.
- If a battery of the wrong type or polarity has been inserted, have your IES checked by a CEStrronics partner.
NOTICE

The battery, the case of the electronics module, or the electronics may be damaged if you try to pry out the batteries with an object.

- Only use your hands to remove the batteries.
- Never use any objects for this purpose.

The batteries are located in the inside plate. To replace the batteries, you must first remove the inside shield.

Proceed as follows:

1. Release the M3 screw (1) at the bottom of the inside shield.

   ![Fig. 133 – Release the inside shield](image)

2. Carefully lift the inside shield off the inside plate.

   For broad shield design only:
   - Make sure that the distance piece for the screw remains fixed in the inside shield.

   ![Fig. 134 – Lift the inside shield](image)
3. Unfold the battery protection foil.
   Remove the two batteries.

4. Insert the new batteries with the correct position of the battery poles into the battery compartment.
   Be sure that the polarity the batteries is correct.
   The correct polarity is located in the battery compartment.

5. Fold the battery protection foil around the two batteries again.
6. \[\text{Fig. 138 - Place the inside shield}\]
- Place the inside shield on the inside plate.
- The inside shield is locked when you hear a loud click.

7. \[\text{Fig. 139 - Fix the shield}\]
- Fasten the M3 screw (1) at the bottom of the inside shield.
This completes the battery replacement.
10 Lost master or locking medium

NOTICE

An unauthorized person may gain possession of a Master medium and manipulate the locking system.

- Always keep all Master media at a safe place.
- Make sure that these are not accessible to unauthorized persons.

NOTICE

When a Master medium is lost, the potential finder may manipulate the locking system.

- If a Master medium has been lost, have the IES and/or the access terminal only initialized by persons trained on the product by CEStronics or a CEStronics partner.

During an initialization, all authorizations for this IES are deleted.

- If one of the locking media is lost, please contact a CEStronics partner.
If the battery is empty, you can connect an Emergency Power Supply with the IES to provide the required voltage. To open the door, you also require an authorized locking medium to confirm that you have authorized access.

The Emergency Power Supply is not part of the scope of delivery of the IES. To order it, please contact your CEStronics partner.

**NOTICE**

After an emergency opening, the IES is no longer secured. In this case, you can no longer lock the IES from the outside. You can only lock the IES again after you have inserted a new battery.

- Always insert new batteries into the battery compartment of the electronics module after an emergency opening.

The interface for the Emergency Power Supply is in the reader unit of the outside shield. To perform the opening with the Emergency Power Supply, proceed as follows:

1. Insert the phonoplug (1) into the socket next to the On/Off switch on the back of the Emergency Power Supply.
2. Ensure that the Emergency Power Supply is switched off.

*Fig. 140 – Insert the phonoplug*
2. Insert the three-pole plug of the Emergency Power Supply into the three-pole socket in the outside shield of the IES.

*Fig. 141 – Connect the IES*

The three-pole socket in the outside shield offers reverse voltage protection, so the plug of the Emergency Power Supply can only be inserted with the correct polarity.


The On/Off switch is on the back of the Emergency Power Supply.

*Fig. 142 – Switch on the Power Supply*

- Open the door.
- To unlock the door, use your authorized 24h locking medium (locking medium without temporal limitations).
- After you have opened the door, disconnect the connection between the reader module and the Emergency Power Supply.
- Replace the batteries of the IES immediately after each emergency opening (see page 98, Chapter "Replacing the batteries of the IES").

Observe the notes and instructions in the Operating Instructions of the Emergency Power Supply.
12 Care

The outer accessible parts of your locking devices such as knobs, knob sleeves, covers, fittings, etc. can be cleaned with a soft, slightly moist wipe.

Notice

Risk of damage to surfaces of the IES!

- Never use solvent-containing cleaning agents to avoid damage to your locking devices.

13 Maintenance

- Have the IES serviced and its perfect functioning verified every six months by CEStronics or by a CEStronics partner only so as to avoid damage to your IES.
- Replace the batteries in line with a defined maintenance schedule.
- Make sure to have replacement batteries ready in good time.

14 Spare Parts

The IES does not require any spare parts for you to change.

- If you need service, please contact your professional CES partner.
## 15 Trouble-shooting

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Possible cause and remedy</th>
</tr>
</thead>
</table>
| The door lock cannot be opened although a locking medium is held in front of the reader. | You have used an unauthorized locking medium.  
  - Use an authorized locking medium. |
| The batteries are empty. | Replace the batteries of the IES against new ones (see page 98). |
| The locking medium is not within the range of the reader module of the IES. | Hold the locking medium nearer to the reader module. |
| You have not touched the activation surface of the proximity sensor with your finger. | Touch the sensor. |

- If the door lock still cannot be opened, please contact your CEStronics partner.
Transport notes

The IES may interact if he is placed too close to one another or too close to locking media. This will discharge the battery.

To prevent interaction between IES during transport, please observe the following notes:

- Always keep the IES at least 5 cm apart.
- Do not transport the IES together with ID cards or locking media.
- Only transport the IES with the reader fitted.
Neither the IES, nor the batteries nor parts of the IES may be discarded with the normal household waste.

- Always observe the applicable national and regional regulations.

Our packaging is made of environmentally friendly, reusable materials.

It comprises external packaging and inserts made of cardboard, inserts and protective film made of polypropylene (PE).

- Please dispose of the packaging in an environmentally responsible manner through separate waste streams.
- Ask your local authorities about recycling and/or the proper disposal of the device in line with environmental regulations.

---

**NOTICE**

**Risk of environmental pollution by improper disposal!**

If you violate the disposal regulations, environmental pollution is possible.

- Always recycle empty batteries.
- Adhere to the local disposal regulations.
18 Technical data

Dimensions for all models excluding push bar version

The dimensions in brackets apply to the narrow shield.
Dimensions for push bar version

Fig. 145 – 146, Dimensions for push bar version
## Technical data

<table>
<thead>
<tr>
<th>All dimensions in mm.</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Narrow shield:</strong></td>
<td>Length: 281.6 mm, Width: 38.6 mm, Height: 18.3 mm</td>
</tr>
<tr>
<td><strong>Broad shield:</strong></td>
<td>Length: 285.6 mm, Width: 54.0 mm, Height: 18.3 mm</td>
</tr>
<tr>
<td><strong>Height with fastening plates:</strong></td>
<td>23.3 mm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Required backset:</th>
<th>Min. 25 mm with special handle, standard 35 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Shield material:</strong></td>
<td>Stainless steel</td>
</tr>
<tr>
<td><strong>Outside shield enclosure:</strong></td>
<td>IP54</td>
</tr>
<tr>
<td><strong>Type of batteries:</strong></td>
<td>2 x batteries (3,6 V, AA-size; 2,2 Ah) CEStronics part number: 248108V</td>
</tr>
<tr>
<td><strong>Number of locking media:</strong></td>
<td>max. 2,048</td>
</tr>
<tr>
<td><strong>Number of Master media:</strong></td>
<td>1 SYSTEM-MASTER max. 10 PROGRAM-MASTERS</td>
</tr>
<tr>
<td><strong>Permissible temperature at outside shield:</strong></td>
<td>–25 °C to +75 °C</td>
</tr>
<tr>
<td><strong>Permissible temperature at inside shield:</strong></td>
<td>0 °C to +50 °C</td>
</tr>
<tr>
<td><strong>Prohibited atmospheres:</strong></td>
<td>Not suitable for use in corrosive atmosphere (chlorine, ammonia, lime water) Maximum air humidity: 95 %</td>
</tr>
<tr>
<td><strong>Service life of the IES:</strong></td>
<td>According to DIN/EN</td>
</tr>
<tr>
<td><strong>Service life of the batteries:</strong></td>
<td>Typically 30,000 cycles</td>
</tr>
<tr>
<td><strong>Transponder frequencies:</strong></td>
<td>868 MHz 125 kHz</td>
</tr>
<tr>
<td><strong>Connection cable</strong></td>
<td>Connection cable between the reader module in the outside shield and the electronics module in the inside plate of the IES.</td>
</tr>
<tr>
<td>----------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Reader module</strong></td>
<td>The reader module is installed in the outside shield of the IES. It identifies locking media.</td>
</tr>
<tr>
<td><strong>Master media</strong></td>
<td>Media for programming the IES. The OMEGA ACTIVE system comprises various types of Master media: SYSTEM-MASTER, PROGRAM-MASTER, TIME-MASTER, RELEASE-MASTER, BLOCK-MASTER.</td>
</tr>
<tr>
<td><strong>Emergency opening</strong></td>
<td>Opening of the IES in case of flat batteries. For the emergency opening, you need an Emergency Power Supply and an authorized locking medium.</td>
</tr>
<tr>
<td><strong>Profile cylinder hole</strong></td>
<td>Recess in the door lock for accommodating a profile cylinder.</td>
</tr>
<tr>
<td><strong>PROGRAM-MASTER</strong></td>
<td>Master medium that is authorized to program locking media.</td>
</tr>
<tr>
<td><strong>Locking medium</strong></td>
<td>Medium enabling you unlock the IES.</td>
</tr>
<tr>
<td><strong>SYSTEM-MASTER</strong></td>
<td>A master medium that enables you to authorize PROGRAM-MASTERS for the system. Each system has one and only one SYSTEM-MASTER.</td>
</tr>
<tr>
<td><strong>Transponder</strong></td>
<td>A transponder is a wireless communication and control device that receives signals and automatically responds to them.</td>
</tr>
</tbody>
</table>
### 20 Overview of the signals

#### Normal operation with locking media

<table>
<thead>
<tr>
<th>Meaning</th>
<th>Signal type</th>
<th>Signal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authorized access</td>
<td>Beeper</td>
<td>1 × short</td>
</tr>
<tr>
<td></td>
<td>LED green</td>
<td>1 × short</td>
</tr>
<tr>
<td>Unauthorized access attempt</td>
<td>Beeper</td>
<td>4 × short</td>
</tr>
<tr>
<td></td>
<td>LED red</td>
<td>4 × short</td>
</tr>
</tbody>
</table>

#### Programming with Master media

<table>
<thead>
<tr>
<th>Meaning</th>
<th>Signal type</th>
<th>Signal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start of programming</td>
<td>Beeper</td>
<td>1 × short</td>
</tr>
<tr>
<td></td>
<td>LED green</td>
<td>On as long as medium is within range</td>
</tr>
<tr>
<td>End of programming</td>
<td>Beeper</td>
<td>1 × long</td>
</tr>
<tr>
<td></td>
<td>LED green</td>
<td>On as long as medium is within range</td>
</tr>
<tr>
<td>Acknowledgement of programming</td>
<td>Beeper</td>
<td>1 × short</td>
</tr>
<tr>
<td></td>
<td>LED green</td>
<td>On as long as medium is within range</td>
</tr>
<tr>
<td>Acknowledgement of deletion</td>
<td>Beeper</td>
<td>2 × short, after 2 s.</td>
</tr>
<tr>
<td></td>
<td>LED green</td>
<td>On as long as medium is within range</td>
</tr>
</tbody>
</table>
### Enabling and disabling the Office function

<table>
<thead>
<tr>
<th>Meaning</th>
<th>Signal type</th>
<th>Signal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enabling with locking medium</td>
<td>Beeper</td>
<td>1 × long</td>
</tr>
<tr>
<td></td>
<td>LED green</td>
<td>1 × short</td>
</tr>
<tr>
<td>Disabling with locking medium</td>
<td>Beeper</td>
<td>1 × short</td>
</tr>
<tr>
<td></td>
<td>LED green</td>
<td>1 × long</td>
</tr>
</tbody>
</table>

### Programming in radio network

<table>
<thead>
<tr>
<th>Meaning</th>
<th>Signal type</th>
<th>Signal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enabling RF mode</td>
<td>Beeper</td>
<td>1 × short, after leaving reading range</td>
</tr>
<tr>
<td></td>
<td>LED green</td>
<td>On as long as medium is within range</td>
</tr>
<tr>
<td>Disabling RF mode</td>
<td>Beeper</td>
<td>1 × long, after leaving reading range</td>
</tr>
<tr>
<td></td>
<td>LED green</td>
<td>On as long as medium is within range</td>
</tr>
<tr>
<td>Acknowledgement of disabling of RF mode</td>
<td>Beeper</td>
<td>2 × short</td>
</tr>
<tr>
<td>TRACE signal still usable</td>
<td>LED green</td>
<td>1 × very short</td>
</tr>
<tr>
<td>TRACE signal bad</td>
<td>LED red</td>
<td>1 × short</td>
</tr>
</tbody>
</table>
## Overview of the signals

### Programming with RF-Master-Set

<table>
<thead>
<tr>
<th>Meaning</th>
<th>Signal type</th>
<th>Signal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enabling learning mode</td>
<td>Beeper</td>
<td>1 × short, after leaving reading range</td>
</tr>
<tr>
<td></td>
<td>LED green</td>
<td>On as long as medium is within range</td>
</tr>
<tr>
<td>Disabling learning mode</td>
<td>Beeper</td>
<td>1 × long, after leaving reading range</td>
</tr>
<tr>
<td></td>
<td>LED green</td>
<td>On as long as medium is within range</td>
</tr>
<tr>
<td>Learning mode enabled</td>
<td>LED green</td>
<td>1 × short</td>
</tr>
<tr>
<td>Acknowledgement of learning mode</td>
<td>LED green</td>
<td>1 × long</td>
</tr>
</tbody>
</table>

### Trouble and error messages

<table>
<thead>
<tr>
<th>Meaning</th>
<th>Signal type</th>
<th>Signal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Battery warning after unlocking attempt</td>
<td>Beeper</td>
<td>1 × long</td>
</tr>
<tr>
<td></td>
<td>LED red</td>
<td>1 × long</td>
</tr>
<tr>
<td>Communication error</td>
<td>Beeper</td>
<td>3 × (short/long)</td>
</tr>
<tr>
<td></td>
<td>LED red</td>
<td>3 × (short/long)</td>
</tr>
</tbody>
</table>
This programming overview shows all programming procedures.

For further information, please refer to the programming instructions for the OMEGA system. These are available free of charge at www.ces.eu.

Programming is identical for all types of locking media. The following shows the programming on the example of Mifare locking and Master media.

### 21.1 Defining the SYSTEM-MASTER

**Fig. 147 – Defining the SYSTEM-MASTER**
21.2 Authorizing a PROGRAM-MASTER

Fig. 148 – Authorizing a PROGRAM-MASTER
## 21.3 Authorizing a locking medium

| 1. | ![Authorizing a locking medium](image1) |
| 2. | ![Authorizing a locking medium](image2) |
| 3. | ![Authorizing a locking medium](image3) |
| 4. | ![Authorizing a locking medium](image4) |
| 5. | ![Authorizing a locking medium](image5) |
| 6. | ![Authorizing a locking medium](image6) |

Fig. 149 – Authorizing a locking medium
21.4 Enabling RF mode (RF-INI-MASTER)

Fig. 150 – Enabling RF mode

21.5 Enabling and disabling RF mode

Fig. 151 – RF mode ON/OFF

21.6 No RF link established

Fig. 152 – Checking the RF link
21.7 Programming with RF-Stick

Fig. 153 – Programming with RF-Stick
21.8 Authorizing optional media

Programming is the same for all optional media. The following describes the procedure with an "X-Y-Master" as an example for all optional media.

Fig. 154 – Authorizing optional Master media
21.9 Deleting the authorization of a PROGRAM-MASTER

When the authorization of the PROGRAM-MASTER is deleted, all the authorizations of locking media that were granted with that PROGRAM-MASTER are deleted as well.
21.10 Deleting the authorization of a locking medium

Fig. 156 – Deleting the authorization of a locking medium
21.11 Deleting the authorizations of all locking media

Fig. 157 – Deleting the authorizations of all locking media
Notes on the manufacturer's warranty

As stated in our Standard Terms and Conditions, the manufacturer's warranty does not extend to the following types of damage:

- damage to outer mechanical parts and damage resulting from normal wear and tear
- damage as a consequence of external events or influence
- damage as a consequence of improper installation
- damage as a consequence of improper maintenance
- damage as a consequence of improper operation
- damage as a consequence of excess voltage
- damage as a consequence of fire, water or smoke.

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