



TriFusion
Intelligent Solutions

Solutions

Expertise

Results

Installation and Operating Manual

TOCA[®] access light
TOCA[®] access light+

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Contents

1. SCOPE OF SUPPLY	3
2. INFORMATION ON FINGER SCAN.....	3
3. PLACE OF INSTALLATION AND HINTS FOR INSTALLATION	3
4. INSTALLATION ON THE WALL OF THE OUTSIDE UNIT	4
5. INSTALLATION ON THE WALL OF THE INSIDE UNIT	4
6. ELECTRICAL CONNECTION.....	4
7. INITIAL OPERATION.....	6
8. PROGRAMMING	6
9. EXAMPLES OF OPERATION.....	8
10. DRAGGING THE FINGER OVER THE SENSOR.....	8
11. RESET TO INITIAL SETTINGS	9
12. POSSIBLE PROBLEM AREAS AND SOLUTIONS.....	9
13. CODES OF FAILURES	10
14. FURTHER INFORMATION	10
15. TECHNICAL DATA	10

1. Scope of supply



Illustration 1 External unit



Illustration 2 Mounting plate for outside unit



Illustration 3 Internal unit

- external power supply 9VAC
- Inside unit
- Fixing screw for outside unit
- 4 screws and pins
- User list
- Warranty card
- Installation – and operating manual

2. Information on finger scan

Your product is established with a finger scanner. This finger scanner reads special characteristics of your finger lines and uses the same for identification. Each of your fingers is unique and differentiates itself from the fingers of other persons.

Remark:

In order to enhance the identification efficiency it is necessary to drag the entire finger - preferably starting from the finger joint - over the sensor. The bigger the identified finger surface, the higher is the probability that you are recognised again by the system.

3. Place of installation and hints for installation

The inside unit has to be installed in a way that it is safe from third party access. Danger of security!

The outside unit has to be installed in a place, where it is safe from impacts of heavy rain or snowfall as well as from too strong incident solar radiation.

The connection wire between outside and inside unit is to be run separately from electronic – house installations, as they send out signals in the lower voltage area, which can be irritated by other neighbouring current leading cables.

Remark:

The cables are not protected against reversed polarity.

4. Installation on the wall of the outside unit

Install the Mounting plate (as shown in Illustration 2 Mounting plate) on a electrical outlet or directly on the wall. The ideal installation height is at approx. 135 cm. For this installation height the bevel of the box was specially developed.

Screw the "fitting plate" on a electrical outlet. The mounting hole are designed to make the assembly on a standard electrical outlet possible. Alternatively you can work with pins or wooden screws or similar screws directly on the wall.

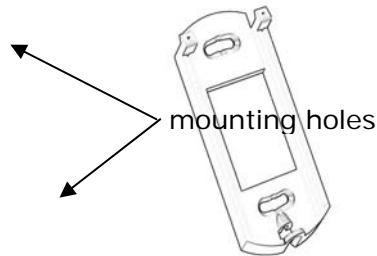


Illustration 4 Mounting of the mounting plate

Mount the "fitting plate" of the inside unit. This fitting plate at the same time serves as fastener for the casing of the inside unit.

5. Installation on the wall of the inside unit

Mount the "fitting plate", which can be found at the backside of the inside unit. The "fitting plate" at the same time serves as fastener for the casing of the inside unit. Put up the inside unit onto the fitting plate.

6. Electrical connection

Open the inside unit by grooving a flat screw driver and pressing to the upside.

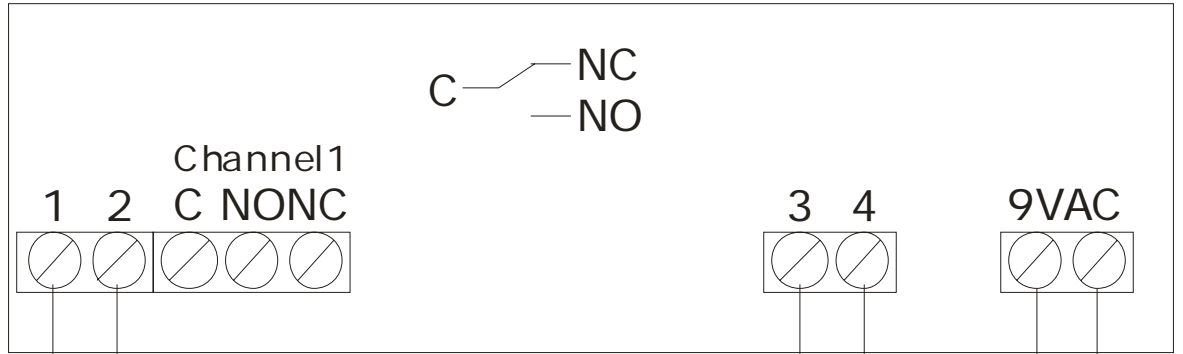
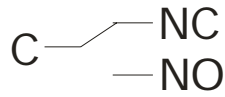
The operation of the inside unit and of the electrical connection shall be executed only by trained employees.

The inside unit has to be supplied with electricity. The voltage is 9 VAC. Please use the "9VAC – in" connecting terminals.

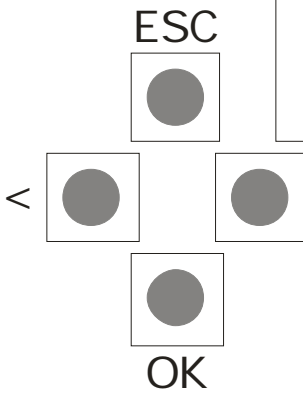
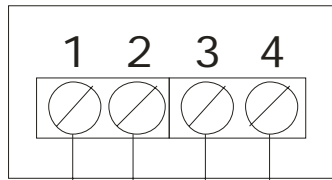
The inside and outside unit have to be connected via a 4-lines wire with a minimum line diameter of 0,75mm². In the case of a wire length of more than 20m the diameter of the wire has to be enlarged and a screened cable has to be used.

1 relay (3 relays with the product TOCAaccess light+) is available for controlling external switchgear. The programming is carried out via the programming menu. The relay is equipped with a change-over contact, which is freely usable, the maximum switching power is 250V~5A.

Inneneinheit/ inside unit



Außeneinheit/ outside

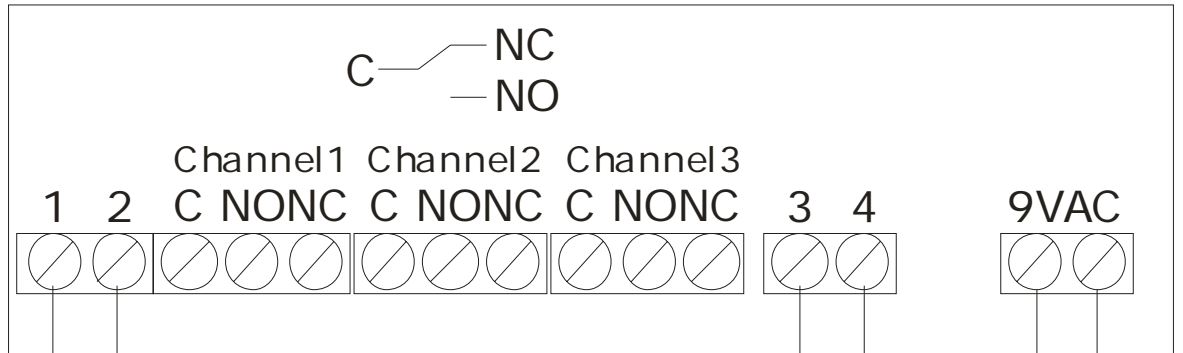
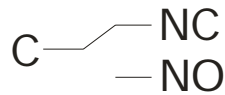


9V~

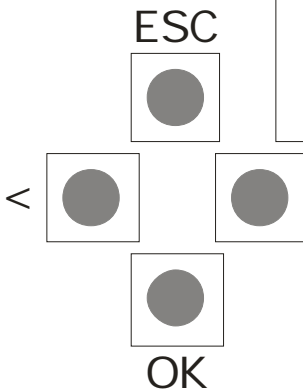
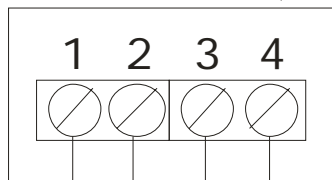
TOCA® access light



Inneneinheit/ inside unit



Außeneinheit/ outside



9V~

TOCA® access light+



Illustration 5 Scheme of connection

7. Initial operation

After activating the power both dots (..) are illuminated in the display.

Press the OK key followed by the ESC key.

The initialising process runs fully automated, whereby the devices are coupled with each other. During this process, which lasts for approx. 15 sec. the display shows OK.

This coupling is used to secure that the outside unit can not be misused and changed to allow unauthorised persons the access.

After initialisation the blinking dot signalises normal operation. The standard security code which is automatically used is 99. Please change this code to your own individual code.

Remark:

The exchange of the outside unit is only possible via reset of the system to the initial settings. All data is erased in this case. You have to carry out the initialisation once again. All fingers have to be enrolled again in the system after this reset.

8. Programming

Programming is carried out by usage of 4 keys: ← → OK ESC

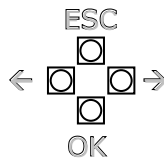


Illustration 6 Keys in use for programming

To enter the menu press the OK key.

← and → serve to change the values in the display and respectively for navigation like shown in Illustration 7 Programming menu.

OK serves to confirm your input.

ESC serves to stop your current input.

Program-, menu functions and display

- Normal operation (blinking)
- Enrol user Eu
- Delete user du
- Security code setting Sc
- Reset to initial settings (deletes all user settings and data) rr

Special features of TOCAccess light +

This version provides 3 relays for your usage. Each finger can be assigned to a relay. For instance this could be 3 different doors, which every person controls with different fingers. The menu point "Eu" is expanded to a sub channel o1...o3, where the relay desired is chosen.

Remark:

The programming menu is not meant for daily usage and administration.

Note the names of the persons in the attached user list, which assigns them a conforming user number.

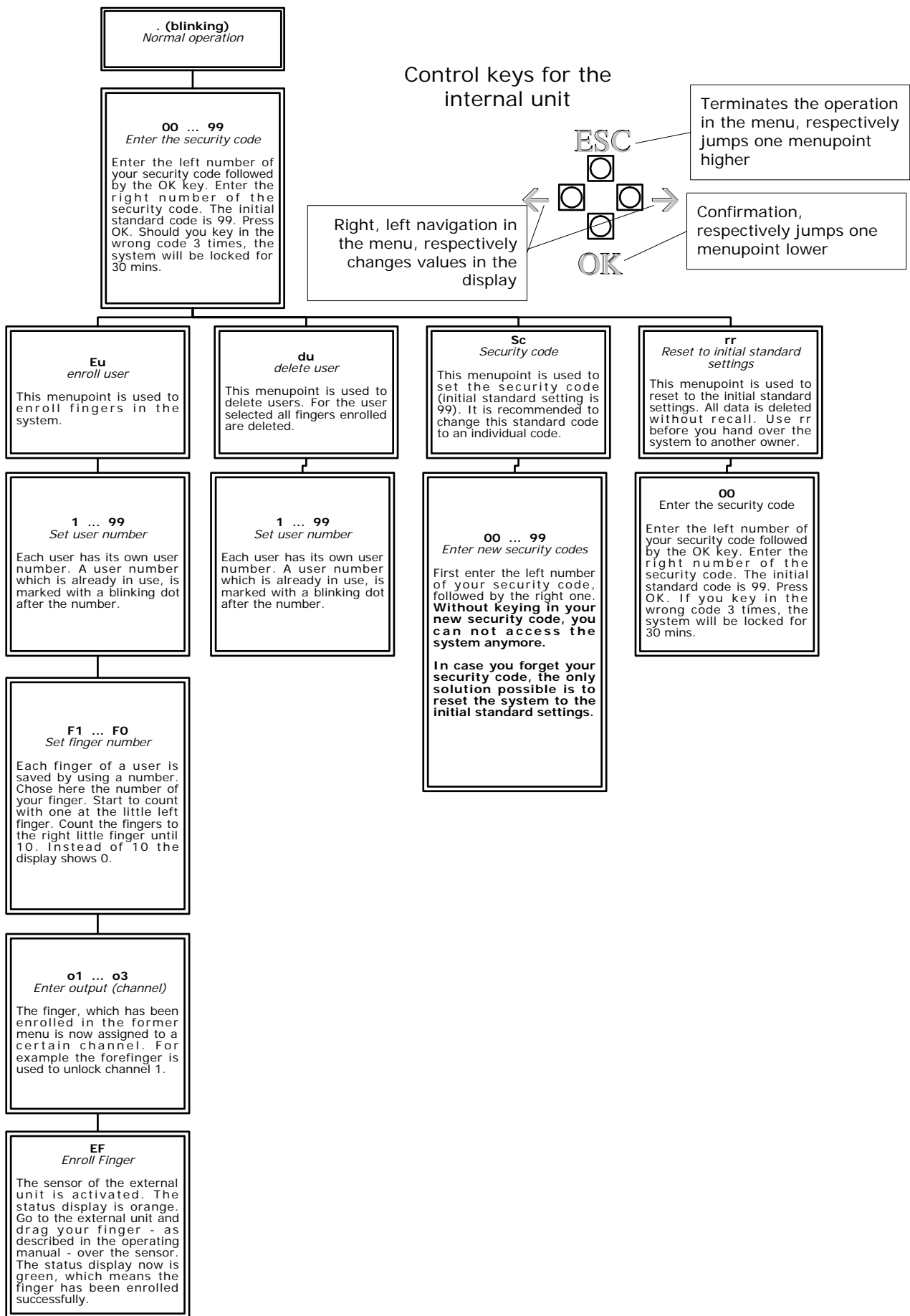


Illustration 7 Programming menu

The outside unit has a status display, which signals the state of operation in different colours.

- Red The finger could not be scanned successfully
- Green Successful scan
- Orange Operating state "enrolment". The device is waiting for a finger to be scanned.

9. Examples of operation

Enrolment of a finger

- Press the OK key in the inside unit.
- By using the keys < and > enter the left number of the security code (standard setting is 9)
- Press OK
- By using the keys < and > enter the right number of the security code (standard setting is 9)
- Press OK
- In the display „Eu“ (enrol user) is illuminated
- Press OK
- The display shows “1”. A lightning dot next to the number signalises that this user number is already in use. Example: “1.” Assign the desired user number by using the keys < and >.
- Press OK
- The display shows F1. F1 stands for finger 1. Please start to count your fingers at the left hand with the little finger. The right little finger has the number 10 (setting F0 in the display). A lightning dot next to the number signalises that this user number is already in use. For example for the right forefinger set F7.
- Press OK
- In the version TOCAccess light the display shows EF. Please continue reading at the next point but one.
In the version TOCAccess light+ 01 is shown. Set the desired channel by using the keys < and > . Channel 1 is signalled in the display by 01.
- (TOCAccess light+) Press OK
- The display shows EF (Enrol Finger). From now on you have 60 sec to drag your finger over the sensor. In order to do so go to the outside unit and drag your finger over the sensor – like described in “10. Dragging the finger over the sensor”.
- If the display status of the outside unit is illuminated green, the enrolment was successful. If it is illuminated in red, you have to drag the finger more exact over the sensor. In this case you have to start the enrolment again from the beginning on.

Deleting a finger

- Press the OK key in the inside unit
- By using the keys < and > enter the left number of the security code (standard setting is 9)
- Press OK
- By using the keys < and > enter the right number of the security code (standard setting is 9)
- Press OK
- The display shows “Eu”
- By using the keys < and > go to “du” (delete user)
- Press OK
- By using the keys < and > choose the user number you intend to delete from the system.
- Press OK
- OK is illuminated in the display
- The device returns to its normal operation (. blinking)

10. Dragging the finger over the sensor

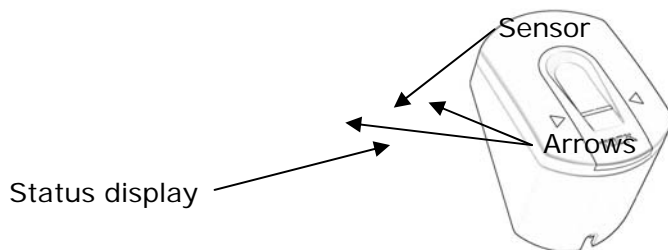


Illustration 8 Sensor

Please drag the desired finger – starting from the finger joint – over the sensor. The sensor is situated between the 2 green illuminated arrows. See Illustration 9.

After successful enrolment the status display of the outside unit is illuminated in green. See Illustration 8 Sensor. Please take note, that only the area of your finger is used for identification, which in the course of dragging touches the sensor. (Drag the finger moderately strong over the approx. 2 x 14 mm big sensor).

Remark:

Please try to drag the biggest area possible over the sensor - starting from the beginning of the finger joint. Like this you can achieve highest possible identification efficiency.

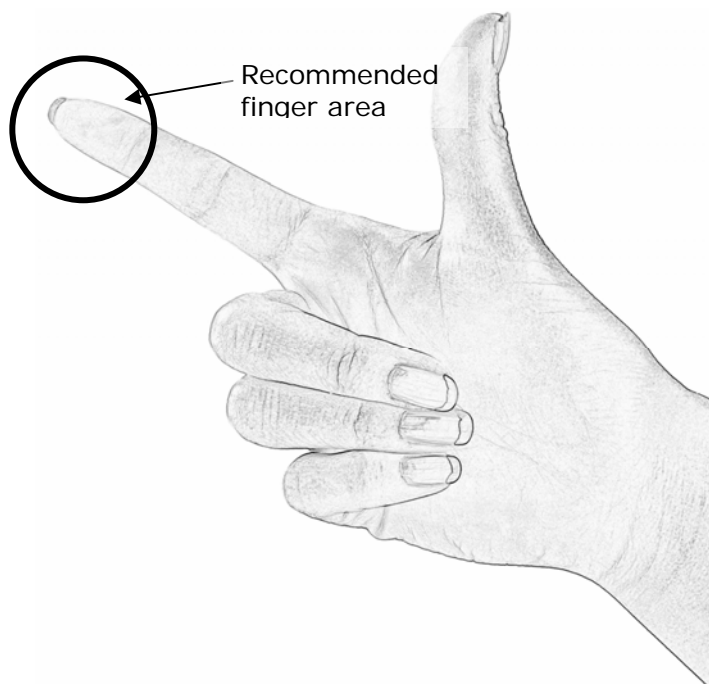


Illustration 9 Recommended finger area

11. Reset to initial settings

This process is thought for the case of handing over the device to a new owner, or similar. When resetting to the initial settings all data from the storage is deleted. The security code is set back to the standard value 99 and the inside and outside unit lose their coupling. After input of the reset command (see menu 7) the display shows “_._” and in the following for approx. 15 sec OK and then “. .” like after delivery. The inside and outside unit are ready for initial operation.

12. Possible problem areas and solutions

Problem	Reason	Solution
The enrolment of a finger is not successful	The finger has not been dragged consistently starting from the finger joint over the sensor. The finger has been dragged too soft or too strong over the sensor. The finger has been dragged too fast or too slow over the sensor.	Drag the finger consistently over the sensor. Drag the finger gently, but not too soft over the finger. Drag the finger with moderate speed over the sensor.
An already enrolled finger can not be found	During enrolment another area of the finger was scanned. The enrolment has not been carried out properly.	The finger has to be enrolled again by dragging it consistently over the sensor. See “Enrolment of a finger is not working” – perfect enrolment ensures high identification efficiency.
Status point of the inside unit is not blinking	Break down of the system	Turn off the device for approx. 20 sec.

13. Codes of failures

Display message	Reason	Solution
E0	No connection to the outside unit	Check the „4-line“ connection wire.
E1	Already 99 fingers enrolled	It is not possible to enrol more fingers. If necessary erase fingers in order to enrol new ones.
E2	30min locking after 3 times entering the wrong security code	Wait for 30 min., in order to key in the security code anew.
E3	Wrong unit coupling. The green LED on the outside unit is signalling a positive identification, which is not accepted, because one of the devices has been changed.	After exchange of the outside or inside unit a reset to the initial settings has to be carried out.

14. Further information

Please find further information on our homepage www.ekey.net. There you can find up-to-date hints and FAQ's.

15. Technical Data

- Connections
 - Connection between inside and outside unit
 - 1x (3x version TOCAccess light+) relay 250V~ 5A
 - 9VAC with supplied external adaptor
- Memory
 - 99 fingers possible
 - No loss of data after power failure
- Security
 - Coupling between inside and outside unit
 - Extremely low rate of false identification
- power consumption
 - max. 7W
- Speed
 - Recognition time <20ms per stored finger
 - Enrolment time ~1,2s per finger

Recommended diameters of the wires:

Length of wire	Min. diameter of the lines	Type
< 20 m	0,75mm ²	unscreened

This device has been produced according to CE regulations. We are not liable for any damage to persons or objects.