Important Advice for RFID Terminals

Important Advice

The order in which the transponder chips are programmed, determines their future function (see below "Transponder Functions")

Before starting the programming, all transponders are the same. You also can use transponders which are available on site. They only have to meet the below listed technical requirements.
The order of programming determines the function of the transponder. Therefore they also should have different colours to be always able to tell them apart. **There is no other possibility of distinguishing them than by the colour or another external marking!**

Transponder Functions

1) Necessary administration transponders
All three transponders described in the following are mandatory. In case one is missing, it is not possible to put the system into operation!!!

IMPORTANT
It is recommended to use the same delete, admin and general transponder in one interlock system with RFID terminals!

- **Delete transponder** (recommended colour: **red**)
  This deletes all programming effected in a terminal and restores it to its delivery status.
- **Admin transponder** (recommended colour: **yellow**)
  By means of this transponder you can program or delete the user transponders per terminal.
- **General transponder** (recommended colour: **green**)
  This functions with all RFID terminals in the interlock control system.

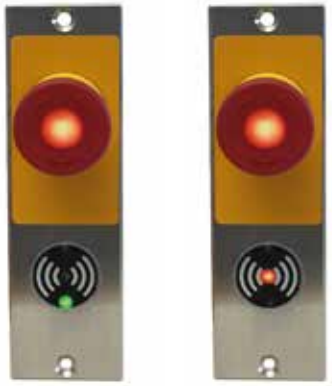
2) User transponders (max. 99 pieces per terminal)
(Recommended colour: **black)**
User transponders can be programmed individually in every RFID terminal. As a user transponder you also can use e.g. transponders which are already used in the building for other doors than those in the interlock system.
Important: Mark the user transponders accordingly and document the programming!!!

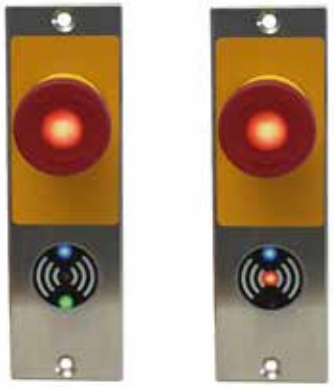
Technical Data RFID Transponder Chips

- Type EM 4100, EM 4102 or EM 4200
- 125 kHz
- 64 Bit
- Optimum working distance approx. 1 cm

LED Indicators of the RFID Terminal

LED Indicators





In total the RFID terminals feature 3 LED indicators:

a) Standard indication of the door status

LED "**green**": The door is correctly locked. It can be unlocked by holding the user transponder in front of the terminal and then be opened.

LED "**red**": The door is locked. At the moment it is not possible to open it. The indication will change to green as soon as it will be possible to request the opening by a transponder.

Both the red and the green LED are off : This always happens when the control terminal gets no feedback from the locking device.

On this point, see also the basic manual of the interlock control system.

b) LED blue

The blue LED informs about the operating state of the terminal by blinking in different sequences or by a different duration of being on.

Basicly there are three different "operation modes":

- Programming the transponder chips
- Normal operating state
- Error

Indication	**Meaning**
2 sec on, 0.2 sec off	Terminal isn't programmed yet. You have to begin with programming the administration transponders.
Blinking 5 sec	Successful programming of the respective transponder
Blinking 2 sec	Registration of the admin or delete transponder and rejection of not programmed user transponders
2 sec on, 1 sec off	Delete transponder has been programmed, next step is to program the admin transponder
1 sec on, 1 sec off	Admin transponder has been programmed, next step is to program the general transponder.
0.2 sec on, 1 sec off	Normal **operation mode**
On during 10 sec	The user transponder is programmed or deleted by holding it to the terminal during this period.
Blue LED off or permanently on	Terminal not working

Setting Up the RFID Terminals - Programming the Administration Transponders

Step 1

Connect the terminal as described in the basic manual and then switch on its power supply.

The first power supply will cause the terminal to automatically initialize all functionally relevant components.

(If there is an error, the blue LED will be permanently on, the terminal is defective.)

If the test is successful, the terminal will automatically change to the programming mode.

The **blue LED** blinks: **2 sec on, 0.2 sec off**

Step 2 - Programming the Administration Transponders

Blue LED blinks: **2 sec on, 0.2 sec off**

1. Programming - delete transponder

Now hold the delete transponder to the terminal. When the programming has been successful:
the **blue LED flashes quickly: 5 sec**

Subsequently the system changes automatically to the 2nd programming step, indicated by:
the **blue LED** blinks: **2 sec on, 1 sec off**

2. Programming - admin transponder

Now hold the admin transponder to the terminal. When the programming has been successful:
the **blue LED flashes quickly: 5 sec**

Subsequently the system changes automatically to the 3rd programming step, indicated by:
the **blue LED** blinks: **1 sec on, 1 sec off**

3. Programming - general transponder

Now hold the general transponder to the terminal. When the programming has been successful:
the **blue LED flashes quickly: 5 sec**

Subsequently the system changes automatically to the **operating mode**, indicated by:
the **blue LED** blinks: **0.2 sec on, 1 sec off**

Now you can program the user transponders for the respective terminal.

See also the overview on page RFID06.

IMPORTANT

During programming it is **MANDATORY to observe** the **order**. In case there has happened e.g. a mistake in colours of the administration transponders, the programming can be reset by means of the delete transponder, see page 05, and the programming, including the delete transponder, has to be started again.

The described steps have to be effected on all RFID terminals of the interlock control system!!!

Programming/Deleting the User Transponders

Note

User transponders can be programmed or deleted at any time, also later!

Programming the User Transponders

Check whether the terminal is in the operating mode:
the **blue LED** blinks: **0.2 sec on, 1 sec off**

To begin with now hold the **admin transponder** to the terminal. When the registration has been successful:
the **blue LED flashes quickly: 2 sec**

Subsequently the system changes automatically to the programming mode for the user transponders, indicated by:
the **blue LED is on: 10 sec**

Please hold one of the **user transponders during this period** to the terminal. When the programming has been successful, the terminal will again change to the operating mode:
the **blue LED** blinks: **0.2 sec on, 1 sec off**

If several user transponders have to be programmed, this procedure is repeated: always start with holding the admin transponder to the terminal and then when the blue LED is on for 10 seconds, hold the next user transponder to the terminal for programming.

See also the overview on page RFID06.

Deleting a User Transponder

Check whether the terminal is in the operating mode:
the **blue LED** blinks: **0.2 sec on, 1 sec off**

Now begin with holding the **admin transponder** to the terminal. When the registration has been successful:
the **blue LED flashes quickly: 2 sec**

Subsequently the system changes automatically to the programming/deleting mode for the user transponders, indicated by:
the **blue LED is on: 10 sec**

Please hold the (programmed) **user transponder**, which you want to delete, during this period to the terminal. When the deleting has been successful, the terminal will again change to the operating mode:
the **blue LED** blinks: **0.2 sec on, 1 sec off**

See also the overview on page RFID06.

Other Programming Advice

Resetting a Terminal to the Delivery Status

Check whether the terminal is in the operating mode:
the **blue LED** blinks: **0.2 sec on, 1 sec off**

Now hold the **delete transponder** to the terminal. The blue LED blinks for confirming the successful deletion.
The **blue LED** blinks: **2 sec**

After this the blue LED will again signal the delivery status:
the **blue LED** blinks: **2 sec on, 0.2 sec off**

Now you have AGAIN to programm all the transponders, including the delete transponder, in this terminal, see page RFID03 "1. Programming".

Other Advice

During all programming or deleting actions the door opener is shortly activated, i.e. the door is temporarily unlocked!

The administration transponders (**delete**, **admin** and **general** **transponder**) have always to be kept in a safe place!

Overview of Programming the Transponders

Order	Action of Operator	Reaction of Terminal
1	Connection to the power supply	**Blue Led**: 2 sec on, 0.2 s off
2	**Delete transponder** (red)	**Blue Led**: flashing quickly 5 s => 2 sec on, 1 s off
3	**Admin transponder** (yellow)	**Blue Led**: flashing quickly 5 s => 1 sec on, 1 s off
4	**General transponder** (green)	**Blue Led**: flashing quickly 5 s => 0.2 sec on, 1 s off
5	**Operating mode**	**Blue Led**: 0.2 sec on, 1 s off
6	**Admin transponder** (yellow)	**Blue Led**: flashing quickly 5 s => on for 10 s
7	User transponder 1	**Blue Led**: flashing quickly 5 s => 0.2 sec on, 1 s off ADVICE: The user transponder has to be held to the terminal when the LED is on for 10 seconds.
8	**Operating mode**	**Blue Led**: 0.2 sec on, 1 s off

Note:
Please always wait until the terminal has processed the programming!
Deleting a user transponder is effected in the analogue way (order numbers 6/7).