# KESO NOK

**Operation with KESO Management Software k-entry® Version 5.0.6.5**

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**Version:** 001
Important Notes

This documentation is part of the KESO Management Software k-entry®. It contains important information on using and commissioning KESO KEK nok. For this reason, please familiarise yourself with the content and, in particular, observe the instructions on safe handling, operation, and installation.

This documentation is based on information that was correct at time of printing. KESO AG accepts no liability for the correctness and completeness of the content of this documentation. The pictures or graphics shown may differ from the supplied or displayed components, graphics, or views. This document is not covered by our "Update Service".

1.1 KESO Management Software k-entry® help
See separate documentation entitled “k-entry help”

1.2 KESO KService / KESO NOKService
See separate documentation entitled “KService / NOKService”

2 Benefits, functions, and structure of the system

In combination with KESO network-on-key, KESO Management Software k-entry® connects the online and offline worlds in the most convenient locking technology solution.

- Compatible with existing KESO KEK electronic devices with firmware in version AIO V04.01.01 or later.
- Compatible with existing ID media i.e. KESO KEK Combi or KESO key tags; KESO Batch.
- Can be combined with conventional authorisations (dual mode).
- Group authorisations with up to 255 authorisation groups.
- Start and end date including time can be set for each NOK authorisation group.
- Battery level is displayed or transmitted automatically.
- No programming needed for changes to NOK group authorisations. It is merely necessary to program the door electronics on site with the NOK groups.

2.1 System function

The NOK concept works as follows:
1. Create authorisation group(s) in the NOK view.
2. Authorise the authorisation group(s) on the door electronics in the door view.
3. Program the door electronics (offline/online).
4. In the NOK view, assign issued ID media to the authorisation group(s).
5. Collect authorisation data at the NOK terminal by means of the ID medium.

Each ID medium that has been issued to a person can be added to a main and a sub-group in the NOK view.
2.2 System structure

When a NOK project is planned, the existing network should first be monitored with network monitoring software in order to rule out any problems.

Public supply lines (such as ADSL, Cable) have a limited bandwidth and don’t provide Quality of Service (QoS).

- Our system’s current architecture depends on NOK job requests being transmitted to the NOK terminals and back again to KESO Management Software k-entry® in the shortest possible time.
- If the network is overloaded or fails, this will cause emergency validation at the NOK terminal (see section 5.3 NOK terminal and system failure)

3 Requirements

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- Our system’s current architecture depends on NOK job requests being transmitted to the NOK terminals and back again to KESO Management Software k-entry® in the shortest possible time.
- If the network is overloaded or fails, this will cause emergency validation at the NOK terminal (see section 5.3 NOK terminal and system failure)

3.1 KESO Management Software k-entry® licenses

K.719 KESO Management Software k-entry® Standard
K.724 KESO network-on-key Software Module

Other KEKnet licenses can be acquired as required. This would be the case if multiple NOK terminals or online KEK electronic devices are used.

3.1.1 NOK view in KESO Management Software k-entry®

The NOK tab in the toolbar and the NOK connection icon on the lower right are only enabled if there is a valid NOK license. The NOK view is in two parts. The main view manages the NOK authorisation groups and the sub-view lists all issued ID media that have not yet been assigned to a NOK group.
3.1.1.1 NOK filter functions

In the door view, you can select the “Keys with NOK authorisations” filter function in the “Keys” sub view. If the filter is enabled for this function, only ID media with NOK authorisations will be shown for the selected door electronics.

In the ID Media view, you can select the “With NOK authorisation” filter function in the sub view. If this filter is enabled, only door electronics with NOK authorisation for the selected ID media will be shown.

3.2 Anti-virus software and firewall

The anti-virus/anti-hacker software and the firewall must be configured to allow the following programs and ports. For more information see the “KESO KService / NOKService” documentation.

- KESO KEKnet Manager
- KESO KEKnet ManagerWS TCP port 7320
- KESO KService
- KESO KService Control TCP port 4002 / 4004 / 5001
- KESO NOKService
- KESO NOKService Control TCP port 5500 / 4004 / 5001

3.3 Additional KESO tools for operating NOK

3.3.1 KESO KEKnet Manager

Documentation checked with version 1.0.2.1
This additional program administers KService and NOKService. KESO KEKnet Manager allows you to configure and update KService and NOKService. For installation and commissioning, please see the documentation entitled “KService / NOKService”

3.3.1.1 KESO KService (first column)
Documentation checked with version 4.46.0.0

3.3.1.2 KESO NOKService (second column)
Documentation checked with version 2.8.0.0

3.3.1.3 KESO KEKnet ManagerWS Service (third column)
This service lets you stop and restart KService or NOKService remotely via KESO Management Software k-entry®. This enhancement only works however with Windows Vista or later, or if you have a server installation with Windows Server 2003 or later.
3.3.2 KESO KService Control

Documentation checked with version 1.12
The KService Control software works as an intermediary and handles the communication between KESO Management Software k-entry® and the online door electronics. For installation and commissioning, please see the documentation entitled “KService / NOKService”.

3.3.3 KESO NOKService Control

Documentation checked with version 1.12
This program administers the NOK terminals and the NOK jobs for the ID media. KESO NOKService must be configured with this program. For installation and commissioning, please see the documentation entitled “KService / NOKService”.

3.4 NOK system limits

A maximum of 255 NOK groups can be administered in KESO management Software k-entry®. An ID medium issued to a person can be authorised in a maximum of two NOK groups – a main group and a sub group. There are two tabs in the NOK view for the main and sub groups. With large systems and depending on the authorisations, it might not be possible to implement the locking concept with NOK technology alone. Depending on the authorisations or the organisation, combination with conventional locking authorisations may make sense. We are referring here to the so-called Dual Mode.

KESO k-entry® prevents an ID medium from being assigned to multiple main and sub groups. This means that an ID medium cannot be assigned to main group “A” and sub group “A” at the same time.

Sub group authorisations are only read if the door electronics are configured accordingly in the NOK properties (see section 7.2).

KESO KEKKnok does not have a block list. But you can still block ID media immediately and easily (see item 7.9.3).

3.5 Information about KESO KEK electronics in combination with NOK technology

For NOK operation, all KEK electronic devices must have KEK firmware 04.01.01 or later. The latest KEK electronic firmware is available on the KESO website at www.keso.com.

The latest electronic firmware is also placed automatically in the installation path for the software (firmware folder) when a KESO Management Software k-entry® update is carried out. Please refer to the document entitled “k-entry help” under “Online Firmware Update” or “Offline Firmware Update” for how to update the KEK Electronic devices with the KESO KEK Electronic firmware.
3.5.1 KEK components for use as a NOK terminal

3.5.1.1 KEK electronics
The following KEK electronics can be used as NOK terminals:
- KESO AccessPoint ET article no.: EG.715.012.10.ET
- KESO AccessPoint ET article no.: EG.715.024.05.ET
- KESO AccessPoint ET article no.: EG.715.000.00.ET
- KESO AccessPoint ET article no.: EG.716.000.00.ET

3.5.1.2 KEK KEK i-reader
The following KESO KEK i-readers can be used as "supplementary readers" for a NOK terminal:
- KEK i-reader surface-mounted article no.: K.548
- KEK i-reader flush-mounted article no.: K.549
- KEK i-reader flush-mounted EDIZIOdue article no.: K.550

3.5.1.3 KEK Programmer
The following KESO programming devices can be used as a NOK terminal:
- KESO KEK Programmer PPG V2 article no.: K.536

3.5.2 Remarks concerning NOK-capable KEK ID media
- KESO KEK combi key
- KESO batch
- KESO key tags

3.5.3 Remarks concerning NOK-capable offline KEK products
- KESO KEK electronics firmware V04.01.01 and later
  (electronics with firmware V2.1.79 and later can be updated)
- KESO KEK Genie BS only with grey antenna window
- KESO KEK Genie knob only with grey antenna window
- KESO batchless cannot be used as a NOK terminal
- KESO KEK i-handle S
- KESO KEK i-handle HS cannot be used as a NOK terminal in online operation
- KESO AccessPoint ET
- KESO AccessPoint SA
- KESO KEK i-turn
- KESO KEK Programmer PPG V2 firmware V1.02 Pro Rev. T and later
## NOK Icons

In combination with the network-on-key technology, various new icons have been integrated into KESO Management Software k-entry®. The function icons for KEKnet must always be enabled for the NOK application.

<table>
<thead>
<tr>
<th>Icon</th>
<th>Door</th>
<th>Identification medium</th>
<th>Persons</th>
<th>NOK</th>
<th>Task bar</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>![NOK Symbol]</td>
<td>![x]</td>
<td>![x]</td>
<td>![x]</td>
<td>![x]</td>
<td></td>
<td>NOK Symbol. Is used for the standard NOK display.</td>
</tr>
<tr>
<td>![No KEKnet connection]</td>
<td>![x]</td>
<td>![No KEKnet connection]</td>
<td>![x]</td>
<td></td>
<td></td>
<td>No KEKnet connection. This means that the NOK function cannot be executed.</td>
</tr>
<tr>
<td>![KEKnet connection established]</td>
<td>![x]</td>
<td>![KEKnet connection established]</td>
<td>![x]</td>
<td></td>
<td></td>
<td>KEKnet connection established.</td>
</tr>
<tr>
<td>![No NOK connection]</td>
<td>![x]</td>
<td>![No NOK connection]</td>
<td>![x]</td>
<td></td>
<td></td>
<td>No NOK connection. This means that the NOK function cannot be executed.</td>
</tr>
<tr>
<td>![NOK connection established]</td>
<td>![x]</td>
<td>![NOK connection established]</td>
<td>![x]</td>
<td></td>
<td></td>
<td>NOK connection established.</td>
</tr>
<tr>
<td>![Door electronics offline]</td>
<td>![x]</td>
<td>![Door electronics offline]</td>
<td>![x]</td>
<td></td>
<td></td>
<td>Door electronics offline. This means that the NOK terminal function cannot be executed.</td>
</tr>
<tr>
<td>![Door electronics online]</td>
<td>![x]</td>
<td>![Door electronics online]</td>
<td>![x]</td>
<td></td>
<td></td>
<td>Door electronics online.</td>
</tr>
<tr>
<td>![Search for ID medium via KESO KEK Programmer PPG V2]</td>
<td>![x]</td>
<td>![Search for ID medium via KESO KEK Programmer PPG V2]</td>
<td>![x]</td>
<td></td>
<td></td>
<td>Search for ID medium via KESO KEK Programmer PPG V2 (KESO KEK programmer PPG V2 serves as the NOK terminal)</td>
</tr>
<tr>
<td>![Update ID medium via KESO KEK Programmer PPG V2 (KESO KEK programmer PPG V2 serves as the NOK terminal)]</td>
<td>![x]</td>
<td>![ID media being read by KESO KEK Programmer PPG V2 and current NOK data from ID medium is displayed]</td>
<td>![x]</td>
<td></td>
<td></td>
<td>Update ID medium via KESO KEK Programmer PPG V2 (KESO KEK programmer PPG V2 serves as the NOK terminal)</td>
</tr>
<tr>
<td>![ID medium without unique number or NOK expiry date exceeded]</td>
<td>![x]</td>
<td>![ID medium without unique number or NOK expiry date exceeded]</td>
<td>![x]</td>
<td></td>
<td></td>
<td>ID medium without unique number or NOK expiry date exceeded.</td>
</tr>
<tr>
<td>![Person with NOK block]</td>
<td>![x]</td>
<td>![Person with NOK block]</td>
<td>![x]</td>
<td></td>
<td></td>
<td>Person with NOK block.</td>
</tr>
<tr>
<td>![ID medium with NOK block]</td>
<td>![x]</td>
<td>![ID medium with NOK block]</td>
<td>![x]</td>
<td></td>
<td></td>
<td>ID medium with NOK block.</td>
</tr>
<tr>
<td>![ID medium indicating a NOK block. The ID medium must be updated for the block at the NOK terminal.]</td>
<td>![x]</td>
<td>![ID medium indicating a NOK block. The ID medium must be updated for the block at the NOK terminal.]</td>
<td>![x]</td>
<td></td>
<td></td>
<td>ID medium indicating a NOK block. The ID medium must be updated for the block at the NOK terminal.</td>
</tr>
<tr>
<td>![ID medium with a conventional block]</td>
<td>![x]</td>
<td>![ID medium with a conventional block]</td>
<td>![x]</td>
<td></td>
<td></td>
<td>ID medium with a conventional block.</td>
</tr>
<tr>
<td>![Last NOK change on ID medium not updated]</td>
<td>![x]</td>
<td>![Last NOK change on ID medium updated]</td>
<td>![x]</td>
<td></td>
<td></td>
<td>Last NOK change on ID medium not updated.</td>
</tr>
<tr>
<td>![Last NOK change on ID medium updated]</td>
<td>![x]</td>
<td>![Last NOK change on ID medium updated]</td>
<td>![x]</td>
<td></td>
<td></td>
<td>Last NOK change on ID medium updated.</td>
</tr>
<tr>
<td>![ID medium with 24-hour access with conventional authorisations]</td>
<td>![x]</td>
<td>![ID medium with 24-hour access with conventional authorisations]</td>
<td>![x]</td>
<td></td>
<td></td>
<td>ID medium with 24-hour access with conventional authorisations.</td>
</tr>
<tr>
<td>![ID medium with one or more time conventional slot authorisations]</td>
<td>![x]</td>
<td>![ID medium with one or more time conventional slot authorisations]</td>
<td>![x]</td>
<td></td>
<td></td>
<td>ID medium with one or more time conventional slot authorisations.</td>
</tr>
<tr>
<td>![Battery level good]</td>
<td>![x]</td>
<td>![Battery level good]</td>
<td>![x]</td>
<td></td>
<td></td>
<td>Battery level good.</td>
</tr>
<tr>
<td>![Battery level critical. Replace battery immediately]</td>
<td>![x]</td>
<td>![Battery level critical. Replace battery immediately]</td>
<td>![x]</td>
<td></td>
<td></td>
<td>Battery level critical. Replace battery immediately.</td>
</tr>
<tr>
<td>![Programming required]</td>
<td>![x]</td>
<td>![Programming required]</td>
<td>![x]</td>
<td></td>
<td></td>
<td>Programming required.</td>
</tr>
</tbody>
</table>
5 NOK Terminal

A NOK terminal is made up of two components: KESO AccessPoint ET and the KESO KEK i-reader.

5.1 Functional description of the NOK terminal

Read and write times for the ID medium at the NOK terminal can vary depending on the structure of the network. A read/write event normally takes a maximum of 2-3 seconds. During this time, the data on the ID medium is read and updated. If the NOKService is not available within three seconds or if the NOKService does not receive a response to its request from KService, the NOK terminal switches to redundant mode and checks the authorisations according to the configuration. In this case, the NOK terminal emits a beep for approx. three seconds before granting or denying access.

5.2 Standard validation at the NOK terminal
5.3 NOK terminal and system failure

For the event of a system failure (NOKService / KService or network failure), the NOK terminal can be configured accordingly under the “NOK” tab in the door properties.

- Option 1
  No special action to be taken
  See section 5.3.2

- Option 2
  Ignore the key’s NOK expiry date
  See section 5.3.3

- Option 3
  Extend the key’s NOK expiry date
  See section 5.3.4

5.3.1 Red LED on the KESO KEK i-reader flashes rapidly

The red LED on the KESO KEK i-reader flashes rapidly and continually at the NOK terminal following the batch process if the KESO KEK i-reader does not receive a response to its requests from the server. The red LED will stop flashing as soon as the KESO KEK i-reader receives a reply from the server when batching.

5.3.1.1 First course of action when the red LED flashes:
If the red LED on the KESO KEK i-reader flashes, the NOK service and KService should be restarted.

5.3.1.2 Second course of action when the red LED flashes:
If the problem still exists, the network must be checked. In this case, it must be checked in KESO Management Software k-entry® whether the connection icons to KEKnet and to NOK Service are green. If these connection icons are not correct, they must be reconnected.

5.3.1.3 Third course of action when the red LED flashes:
If there is still an error message, KService Control must be checked to see whether the connection icons for the services and on the door electronics are also correct. The first task is to perform a “Check network” in KService Control. If there is still no connection, the “configuration” must be checked in KService Control and adjusted if necessary.

5.3.1.4 Fourth course of action when the red LED flashes:
If there is still an error message, NOKService Control must be checked to see whether NOKService and KService are connected and whether the NOK terminals are configured correctly.

5.3.1.5 Fifth course of action when the red LED flashes:
If the red LED is still flashing, this is probably the result of a problem with the network connection to the door's electronics. In some cases, it is also possible that the anti-virus software or the firewall have been reconfigured therefore preventing a connection from being established. Checking the network cable and the anti-virus software or firewall with the corresponding configuration should enable the problem to be solved.
5.3.2 Option 1 / No special action to be taken

Identification at NOK in the event of a system failure: No special action to be taken

- **NOK terminal reads the ID medium**
  - Conventional expiry date on ID medium valid? **Yes**
  - Conventional expiry date on ID medium valid? **No** -> Does not open door

- **NOK terminal asks NOK Service whether there is a job for this unique number**
  - NOK terminal gets a reply from NOK service within 3 seconds? **Yes**
    - Check existing NOK group authorisations
      - NOK authorisations or NOK expiry date not OK
        - Conventional authorisations OK? **Yes** -> Opens the NOK online door
        - Conventional authorisations OK? **No** -> Does not open door
      - Existing NOK authorisation incl. NOK expiry date OK -> Opens the NOK online door

- NOK terminal gets a reply from NOK service within 3 seconds? **No**
  - Open section 5.2

Since the NOK authorisation was not extended, it is possible that the ID medium is not authorised at the NOK offline doors.
5.3.3 Option 2 / Ignore the key's NOK expiry date

Identification at NOK terminal during system failure. Ignore the key's NOK expiry date

NOK terminal reads the ID medium

Conventional expiry date on ID medium valid?
- Yes
  - NOK terminal asks NOK Service whether there is a job for this unique number
  - NOK terminal gets a reply from NOK service within 3 seconds?
    - Yes: Opens the NOK online door
    - No: See section 5.2

- No: Does not open door

Ignore ID medium NOK expiry date in the event of a system failure

Check existing NOK group authorisations, without NOK expiry date

NOK authorisations not OK
- Conventional authorisations OK?
  - Yes: Opens the NOK online door
  - No: Does not open door

Since the NOK authorisation was not extended, it is possible that the ID medium is not authorised at the NOK offline doors

Offline door see section 5.4
5.3.4 Option 3 / Extend the key’s NOK expiry date

The expiry date is only extended by x days if the ID medium at the NOK terminal has a valid conventional authorisation and/or a NOK authorisation. With existing NOK group authorisations, only the NOK expiry date is extended.
5.4 Identification for offline door

The conventionally granted office function is not checked if the door electronics has a valid NOK authorisation for the ID medium. In this case, the office authorisations must be granted via NOK.
6 Dual Mode

In Dual Mode, network-on-key and conventional authorisations work together at the same time. This means that a person is:

- authorised to access both conventionally and via network-on-key.

With door electronics, the NOK data is always checked first. If an ID medium is not NOK authorised on the door electronics, the conventional authorisations will then be checked. It is therefore possible that an ID medium is granted access via the conventional authorisation level although it does not have NOK authorisation.

Outside of Dual Mode, the authorisations can be granted as follows:

- only authorised for access via network-on-key (NOK group authorisations).
- only authorised for access conventionally.

6.1.1 Advantages / disadvantages of Dual Mode

In the following example, it does not make sense to create another NOK group (Head of Group 1) just for Mr. Müller. Since only one person needs access to the “Manager's Office”, it is better to grant conventional authorisations here. In addition, such an authorisation management method would have the disadvantage that changes in the common authorisation part (affects D1 and D2) would always affect two groups. This constellation is therefore a typical scenario for use of Dual Mode.

Mr. Müller's ID medium is also assigned to group 1 and is therefore also NOK authorised. So that he can open his office door, the door's electronics must be programmed with a conventional authorisation for Mr. Müller.

The door could also be fitted with an “old” KESO KEK Genie Cylinder (blue antenna window) as KESO KEK Genie Cylinders do not support the NOK function.
7 Working with NOK

7.1 NOK recognition characteristics

As soon as a door electronics is assigned at least one NOK authorisation group in the door view (sub view - NOK Groups tab), it then runs in NOK mode and, accordingly, checks NOK group authorisations from now on. In the door view, all door electronics running in NOK mode are marked in the Status column with the light blue NOK symbol.

7.2 NOK main and sub-groups

The main and sub-groups in the NOK view are identical as far as authorisations are concerned. It is only relevant whether an assignment is made to the main or the sub-group if the door electronics are configured in such a way that only the main group is read. This configuration is made in the door properties on the “NOK” tab. If “Sub group in cylinder operation” is not enabled, only the main NOK groups are read at this door electronics. This has the advantage that the unlocked time of the KESO KEK Genie Cylinder can be slightly reduced. The default setting (recommended by KESO AG) is that the “Sub group in cylinder operation” option is enabled.

7.3 Creating NOK authorisation groups

The NOK groups are created in the NOK view. In order to generate a new NOK group, in the main view, press the right-hand mouse button and select “New NOK group...” in the context menu.

7.3.1 NOK group authorisation data/settings

Default values can be predefined when creating a new NOK group. These default values can be adjusted or changed at any time.

If the properties of the NOK group are changed, the changes will not automatically be transferred to the existing group members.
7.3.1.1 Designation
You can enter a unique name for the NOK group here.

7.3.1.2 ID medium validity period
If “Valid from” or “Valid until” are outside of the valid time period, this data will be highlighted in red and a question mark with a red background will appear for this person in the status column.

7.3.1.3 Extension....
The ID medium will be extended by x days. This means that each ID medium will automatically no longer be authorised at NOK group doors if it is presented to a NOK terminal after x days.

Some examples

a. «0» days
The ID medium will be extended during batch processing until 24.00 on the same day. The advantage of this action: When extended by «0» days, the ID medium will be updated only once on that day at the NOK terminal.

b. «x» days
When batching, the ID medium is always extended by x days until the defined time. An extension by x days means that the data medium is extended until the defined end time on the same day.
The advantage of this action is that, within 24 hours, the ID medium is only updated during the first batch process at the NOK terminal. The expiry data and time are not updated again during this day.

Example of this action:
If batching takes place on 4th June 2011 at 07:15, the first time on this day, the «Valid until» date on the ID media will be extended until the next day (5th June 2011) at 20:00. The end time and the expiry date are not adjusted again during any subsequent batch processes on 4th June. When updated regularly at the NOK terminal, the extensions continue until the defined end date of 30.09.2011 is reached.
c. Valid until «Unlimited»
   If the «Unlimited» option is set for “Valid until”, the ID medium will be extended when batching by the defined extension of x days until 24:00.

Example of this action:
If batching takes place on 4th June 2011 at 07:15, the first time on this day, the «Valid until» date on the ID media will be extended until the next day (5th June 2011) at 24:00. The end time and the expiry date are not adjusted again during any subsequent batch process on 4th June.

d. No dates entered
If the «Unlimited» option is set for “Valid from”, the ID medium will be extended when batching by the defined extension of x days until 24:00. This means that entering start and end dates is not obligatory.

7.3.2 Setting/granting authorisations for ID media
When assigning an ID medium to a NOK group, the default values (see item 7.3.1) for the NOK group are taken over automatically for each ID medium. These settings can be adjusted or changed for the specific group member at any time. For example, the office function can also be set individually for each ID medium (see item 7.3.3).
7.3.3 Office function (only for NOK group members)

The office function can be set individually for each NOK group member. The office function is only effective if the door electronics, for which the respective NOK group was assigned, also has an office function. Each ID medium can be given a “Master” or “Slave” office function here. “Master” means office master key (24-hour authorisation) and “Slave” means office key (authorisation only during the authorised time slot). Please refer to the “k-entry help” documentation or the technical documentation accompanying the KEK products for more information about using the office function (see section 5.4 Identification for offline door).

7.3.3.1 Properties of the door electronics for the office function

The “Use office/shop function” on the “KEK” tab in the properties of the door electronics must always be enabled in order for a NOK group member to use the office function.

7.3.4 Expiry date

The NOK expiry date is checked independently from the ID medium's conventionally set expiry date. If an ID medium does not have a NOK authorisation on the door electronics, the conventional permissions will also be checked. In this case, the system uses the conventional expiry date. This means: The person no longer has access, irrespective of the NOK expiry date, if the conventional expiry date has expired.
7.4 Assigning/removing NOK authorisation groups to/from door electronics

You can assign NOK groups to door electronics in two ways in the door view. A programming requirement will be generated on the door electronics whenever a NOK group is assigned or any changes made here.

7.4.1 Method 1 via drag and drop

The door electronics must be selected in the door view. After selecting, all NOK groups that have been created appear in the sub-window on the “NOK Groups” tab. The required NOK groups can be selected and “pulled” onto the door electronics via drag and drop.

The NOK group authorisation window will then appear so that you can authorise the NOK groups that you want.

If additional time slots were selected or enabled in advance under “Register time” in the properties for the door electronics, they will be displayed in this view. If the NOK group authorisations apply to certain time slots, they will be authorised for the specified times on the door electronics.

When you save the selection, a programming requirement is generated on the door electronics, and the authorised NOK groups are marked in the sub-window with the blue “NOK briefcase” or the blue “clock icon”. A blue “NOK briefcase” means that these NOK groups have 24-hour authorisation on the door electronics. A blue “clock icon” means that the NOK group authorisations at the door electronics are limited by time.

Once the door electronics have been programmed (online or offline), the programming requirement icon disappears and the NOK groups are enabled on the door electronics.
7.4.2 Method 2 via the right mouse button or the “Shift+Ctrl+P” key combination

By right-clicking the door electronics and then selecting “NOK Authorisations Shift+Ctrl+P”, the authorisation window for the NOK groups will be displayed. You can make the authorisations in this window as described in section 7.4.2.

7.4.3 Removing NOK authorisation groups from door electronics

If one or more NOK groups have to be removed from a door electronics, proceed as described in section 7.4.1 or 7.4.2. Instead of enabling the time-slot, the selections are removed in the authorisation window.

If you remove NOK authorisation groups, a programming requirement is generated on the door electronics. The door electronics must be reprogrammed in order to activate the changes.

7.4.4 Displaying a list of authorised cylinders

If you choose a NOK group or person by right-clicking in the NOK view, you can then execute the “List of authorised cylinders...” command from the context menu. In this list, you can see the door electronics for which the NOK group or person is authorised.

7.4.5 Settings and properties for door electronics

In the door properties, the “Ignore key’s expiry date” option can be enabled and disabled on the “NOK” tab for all door electronics (with firmware dated 04.01.01 or later).

If you select or enable this option, the expiry date of an ID medium will be ignored by this door electronics.
7.5 Assigning/removing ID media to/from NOK authorisation groups

NOK group authorisations can only be made in the tree view.

7.5.1 Assigning ID media to NOK groups

NOK group assignments are handled in the NOK view. The main and sub groups are shown on the individual tabs in the main view. All ID media issued to persons not yet assigned to a NOK group are displayed in the sub-view for the main or sub group.

In order to authorise one or more ID media or persons in the respective NOK group, you must first select the main or sub group. You can then select the person or ID media or persons in the sub-view and move them to the respective NOK group via drag and drop. If the ID media or persons are assigned to a NOK group, they will no longer appear in the sub-view.

The assignment can be made in the main view on the “Main groups” as well as the “Sub groups” tab. This means that an ID medium issued to a person can be assigned to two NOK groups.

Changes or modifications of any kind made in the NOK view do not generate programming requirements on the door electronics.

7.5.1.1 Main and sub groups are displayed during “Mouse Over”

If you hover the mouse over an ID medium (person’s name) in the NOK view, the name of the main or sub group assigned to this ID medium will be shown as a tooltip. If a second NOK group is not assigned, a tool tip with the information “no further group assigned” will also be displayed.

In the example on the right, as well as the main group “002_Büro 1 – EK”, Meier Martin is also assigned to the “006_Ausstellungsraum” NOK group.

7.5.2 Removing ID media from a NOK group

In order to withdraw the NOK group authorisation from an ID medium or a person, this ID medium or person must be moved from the NOK group in the main view back to the sub view. You also do this via drag and drop.
7.6 Updating at the NOK terminal

The last update of the ID medium at the NOK terminal is shown in the NOK view. In this view, the date and time of the last authorisation change is shown in the user column. With this information, you can see whether the authorisation change has already been activated on the ID medium or not (see column with «red cross» or «green tick» «last change active»).

For example, if an ID medium has been blocked in KESO k-entry®, you can use the new information that is displayed to determine whether the data medium is already effectively blocked.

7.7 Changing the status of an ID medium

If the status of an ID medium is changed in the door or ID medium view from “issued” to “lost”, “defective” or “destroyed”, a programming requirement is generated on the door electronics that have conventional authorisations. At the same time, the ID medium will be removed from all NOK groups because it is no longer issued to a person. This also creates a NOK job the ID medium. If the ID medium is then updated at a NOK terminal, the NOK authorisations will be withdrawn. However, the conventionally generated programming requirement on the door electronics remains. This door electronics must be reprogrammed with the KESO KEK Programmer PPG V2.

7.8 Programming/updating ID media with NOK authorisation groups

If an issued ID medium is assigned to one or two NOK groups in the NOK view, a NOK job will be generated for this ID medium. This NOK job can then be collected at a NOK terminal by the holder of the ID medium. The NOK job will be written automatically to the ID medium when the ID medium is presented at the NOK terminal.

The update can also be carried out by means of the KESO KEK Programmer PPG V2 in case a NOK terminal is not available.

In order to update an ID medium using the KESO KEK Programmer PPG V2, the ID medium must be held in front of the KESO KEK programmer PPG V2 or inserted into it. The blue programming button in the NOK view can then be selected. The ID medium gets its NOK authorisations in this way.
7.9 Blocking a NOK ID medium

If it is necessary to block an ID medium temporarily, this can be done in the NOK view. In this way, no programming requirement is generated on the door electronics.

The person or ID medium in question must be selected in the NOK view. Then the properties must be selected in the context menu by clicking with the right mouse button.

The “Blocked” flag can now be activated in the properties window of the “NOK group member”. The block becomes effective as soon as the ID medium is updated at a NOK terminal.

After saving, the issued ID medium will be blocked on all door electronics and marked accordingly.

However, the “blocked” function only affects door electronics with firmware dated 04.01.01 or later, or if the extension period of the ID medium has expired. For security reasons, all door electronics should therefore be operated with firmware dated 04.01.01 or later when NOK is in use.

7.9.1 What happens when a block is applied

An ID medium blocked in the NOK view is always conventionally blocked as well. The status of the ID medium is marked accordingly with a red and white cross in the sub-view.

The block becomes effective as soon as the ID medium is updated at a NOK terminal. When “Blocked” is activated, this means that the conventional authorisations are blocked and the offline door electronics do not have to be reprogrammed.
7.9.2 Block variations
Since the system can combine conventional and NOK technologies (Dual Mode), different icons are used in the status symbol list to display the blocked ID media and doors. (For more information see section 4 - NOK Icons)

7.9.3 Immediate blocking of an ID medium at an NOK offline door
If it is necessary to block an ID medium immediately on the online doors, a new NOK group must be created in the NOK view. The ID media that are still authorised must then be moved to the newly created NOK group. For new NOK groups, please see section 7.3. The newly created NOK group must then be authorised again on the respective door electronics in the door view. The “old” NOK groups that are no longer valid must then be deleted in the NOK view. A programming requirement is generated on all affected doors and the offline doors must be reprogrammed with the KESO KEK Programmer PPG V2. It must be considered that all ID media must be presented again at the NOK terminal for the authorisation to be effective.

KESO AG recommends online functions for all outside access doors (KESO KEKnet) and the use of NOK technology for internal areas.
If this is not possible for technical reasons, the initial “Valid from” and “Valid until” values for the NOK groups as well as extensions by x-days should be kept as “short” as possible (see section 7.3.1 onwards).

8 NOK Analysis Window
In the NOK view, there is an analysis window which reads and displays the current NOK authorisations on the presented ID media.

In order to do this, the ID medium must be presented at the KESO KEK Programmer PPG V2 and the “NOK data on ID medium” option must be selected by means of the icon.

The view that is now displayed shows the general information as well as the group rights for the ID medium (including “Valid until”).
9 Battery Level/Feedback Messages

The battery level of all battery-operated, NOK-capable KEK products is checked automatically and passed on via ID medium and NOK terminal to KESO Management Software k-entry®.

In order to pass on the battery level, the ID medium must be authorised in at least one NOK group and there may be no new NOK jobs that have not yet been processed for the ID medium. There may be only one NOK job for each ID medium.

9.1 Description of the function for passing on the battery level

In the event that a battery-operated KEK product reaches the first warning level, the read/write time for the ID medium is extended automatically so that the battery level can be written to the ID medium. As soon as the ID medium on which the battery level is stored is presented again at the NOK terminal, the battery level information will be saved in the NOK job database. If the KESO Management Software k-entry® is connected to NOKService, NOKService will send the information to KESO k-entry®. KESO k-entry® saves the information in the database and displays it in the status symbol bar for the battery-operated door electronics. In the event that a door electronics with a low battery is read directly in KESO Management Software k-entry® via the KESO KEK Programmer PPGV2, this information will also be saved there.

The respective battery-operated KEK product must be reprogrammed with the KESO KEK Programmer PPG V2 in all cases in order to update the database after changing the battery (battery level icon). Otherwise the battery level icon in the status symbol bar will not be adjusted.

9.1.1 Energy management

- **Battery output good**
  - Functions performed normally
- **Battery should be replaced**
  - Functions only performed every second time
- **Battery critical**
  - Functions only performed every fourth time
- **Battery flat (battery output approx. 10%)**
  - Status changes to the pre-defined state
10 Synchronising NOK Jobs

NOK jobs are normally synchronised fully automatically at the respective NOK terminals. In exceptional cases (e.g. following a system failure), the NOK jobs can be synchronised manually with NOKService by means of the NOKService icon in the KESO Management Software k-entry® task bar on the bottom right. In this case, all of the current NOK data (corresponds to the configuration in the NOK view) will be updated in NOKService. More precisely, the configuration for each ID medium assigned to a NOK group will be transmitted to NOKService.

It must be considered that removing an ID medium from a NOK group (drag and drop) also causes a NOK job to be generated. When synchronising all NOK jobs to NOKService, NOK jobs of type “ID medium removed from group” will not be generated again. In order to generate such a NOK job again, the ID medium must be assigned manually to a NOK group and then removed again.

11 Emergency opening

It is possible to open some KESO KEK products in an emergency by means of the KESO KEK Programmer PPG V2, an authorised ID medium and a suitable programming cable. Please refer to the “k-entry help” documentation and the documents accompanying the individual KEK products.

An ID medium must have at least one NOK group authorisation or conventional authorisation for emergency opening to be possible. Authorisation in any time slot is sufficient for emergency opening.

In the event of emergency opening, the time of an ID medium's time slot authorisation is not taken into consideration.
12 A Simple Example of Use

12.1 NOK – Quick Guide – Step by Step

The following quick guide describes the individual NOK programming steps. This guide does not include any detailed NOK settings such as: validity period of the ID media, extension period, office function etc.

12.1.1 Create NOK group

The NOK groups are created in the NOK view. In order to generate a new NOK group, in the main view, press the right-hand mouse button and select “New NOK group...” in the context menu.

Create all NOK groups in this way that are needed for the organisation or for granting authorisations. The NOK group structure can be created based on an organisational chart of the company.

12.1.2 Assign NOK group to door electronics

The NOK groups are assigned to the door electronics in the door view. When you select the door electronics that you want, all existing NOK groups will appear in the sub window (NOK groups tab). The required NOK groups can be selected and pulled onto the door electronics via drag and drop.

The NOK group selection window will then appear for the door electronics for which the required NOK groups must be enabled.

When you save the selection, a programming requirement is generated on the door electronics and the enabled NOK groups are marked accordingly in the sub view.
12.1.3 Program the door electronics
Once you have assigned the NOK groups, the respective door electronics must be programmed either online or with the KESO KEK Programmer PPG V2. Once the door electronics have been programmed, the programming icon disappears and the NOK groups are now available.

12.1.4 Assign ID media to NOK group
The ID media are assigned to the NOK groups in the NOK view. They are split into main and sub groups. This means that an ID medium issued to a person can be assigned to two NOK groups.

Changes or modifications of any kind made in the NOK view do not generate programming requirements on the door electronics.

12.1.5 Remove ID media from a NOK group
In order to remove a person or ID medium from a NOK group, the person or ID medium must be moved from the main view back to the sub view using drag and drop.

12.1.6 Update ID media at the NOK terminal
The NOK group authorisation becomes effective as soon as the ID medium is updated at a NOK terminal.

If you remove an ID medium from all NOK groups, it is important that the ID medium is presented again at the NOK terminal.
Notes