

# ekey net finger scanner WM 2.0 RFID

## Product description

The *ekey net FS WM 2.0 RFID* is a biometric sensor terminal which records fingerprints via a RF line sensor manufactured by Authentec.

The finger scanner is to be operated in the networked access system *ekey net*, and has been conceived specifically to be wall mounted.

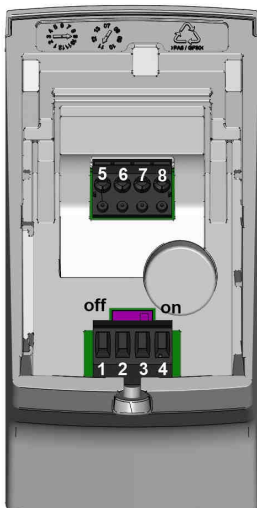


## Features

- 40 / 200 / 2000 fingers can be recorded
- May be used outdoors
- AC /DC power supply
- RFID interface compliant with ISO15693
- Operates only within the networked *ekey net* access system
- The bus termination can be activated directly on the device
- High FAR
- Protection class IP44

## Pin assignment

Finger scanner electrical connection via 4-pole push terminal RM 3.5.



| Clamp #:   | Signal description     | Recommended cable color (ekey standard) |
|--|------------------------|---|
| 1  | RS485 (Clamp 1)        | green                                   |
| 2  | RS485 (Clamp 2)        | yellow                                  |
| 3  | Power supply (Clamp 3) | brown                                   |
| 4  | Power supply (Clamp 4) | white                                   |
| Optionally only for model <b>ekey net FS REL</b> |                        |   |
| 5  | REL NO potential free  | -                                       |
| 6  | REL NO potential free  | -                                       |
| 7  | Input                  | -                                       |
| 8  | Input                  | -                                       |

## Description and item numbers

| Description               | Number of fingers | Item # |
|---------------------------|-------------------|--------|
| ekey net S FS WM 2.0 RFID | 40                | 101393 |
| ekey net M FS WM 2.0 RFID | 200               | 101394 |
| ekey net L FS WM 2.0 RFID | 2000              | 101395 |

**A SOFTWARE LICENSE is compulsory in order to be able to operate the *ekey net FS WM 2.0 RFID*! This license must be ordered separately.**

## Standards

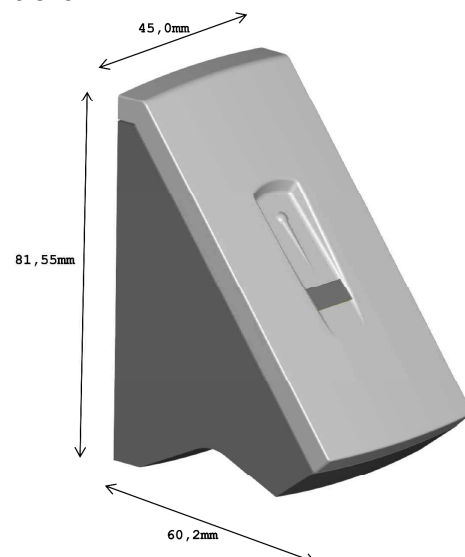
The *ekey net FS WM* is compliant with the 2004/108/EG (CE) and 2002/95/EC (RoHs) guidelines.

| Applied standards | harmonized |
|-------------------|------------|
| EN 61000-6-2:2005 |            |
| EN 61000-6-3:2007 |            |

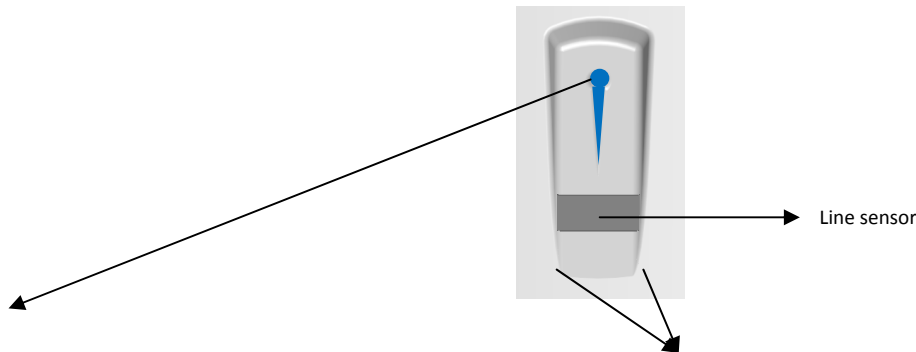


## Dimensions

Dimensions in mm



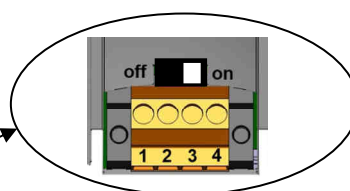
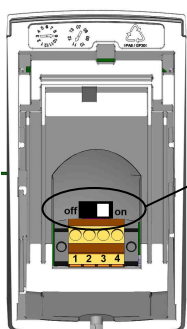
## Controls and visual indications



| Display | Function LED    | Signification of the indication   |
|---------|-----------------|---|
|         | Blue            | The device is ready to read a finger. A finger may be swiped over the sensor.                               |
|         | Blinking orange | The analysis and identification of an enrolled finger image is currently being done.                        |
|         | Green           | The finger has been identified and has access rights.   |
|         | Red             | The finger has been denied access (reason: unknown finger or for instance due to a time-restricted access). |
|         | Blinking red    | Finger scanner data is currently being updated (finger templates, rights).                                  |

| Display | Status LED                            | Signification of the indication   |
|---------|---------------------------------------|---|
|         | Right : off<br>Left: off              | The finger scanner is ONLINE: there is an active data connection to the ekey converter LAN and to the ekey net terminal server (normal status). |
|         | Left: on<br>Right: off                | The finger scanner is HALF-OFFLINE: there is <b>no</b> data connection to the ekey net terminal server.   |
|         | Right: on<br>Left: on                 | The finger scanner is OFFLINE: there is no connection neither to the ekey CV LAN nor to the ekey net terminal server.                           |
|         | Right left<br>blinking<br>alternately | A software update is being done on the finger scanner.  |

## Bus termination



- Switch setting left:** Bus termination = off (factory setting)
- Switch setting right:** Bus termination = on

## Cable recommendation

We recommend using the cable types below in your system:

**J-Y(ST)Y 4 x 2 x 0,8**

**Wire configuration:**

2x RS485 bus (green/white) + 2x RS485 (yellow/white) as a reserve

2x power supply (red/blue) + 2x as a reserve (brown/white) for cross-section increase for cable lengths > 50m

## Technical data

### Absolute maximum threshold value

Operating the device beyond these values will destroy it!

| Technical data    |           | Unit | Values        |
|-------------------|-----------|------|---------------|
| Supply            | AC        | V    | 0-24          |
|                   | DC        | V    | ±24           |
| Temperature range | Storage   | °C   | -20 up to +75 |
|                   | Operation | °C   | -20 up to +75 |

### Electrical characteristics

| Technische Daten  |           | Einheit      | Werte                  |
|---|-----------|--------------|------------------------|
| Operating voltage   | AC        | V            | 8-24                   |
|   | DC        | V            | 8-24                   |
| Current draw [12VDC] <sup>1</sup>   | Idle mode | mA           | 85                     |
|   | Matching  | mA           | 90                     |
| Power input <sup>2</sup>  | Idle mode | W            | ~ 1                    |
|   | Matching  | W            | ~ 1                    |
| Temperature range   | Storage   | °C           | -25 up to +70          |
|   | Operation | °C           | -25 up to +70          |
| Memory  |           | Finger       | S(40), M(200), L(2000) |
| Security  |           | FAR          | 1:10.000.000           |
|   |           | FRR          | 1:100                  |
| Protection class  |           |              | IP44                   |
| Speed   |           | s            | 1-4                    |
| Life time cycle   |           | Finger scans | ~ 10 million           |
| RFID carrier frequency (ISO15693)   |           | MHz          | 13,56                  |
| RFID range  |           | cm           | Typically 2            |
| Max. cable length RS485 bus (CLAMP 1,2) <sup>3</sup>                                  |           | m            | 500                    |
| Max. length of the power supply cable (CLAMP 3,4) when operated in an industrial area |           | m            | 30                     |
| Dimensions LxWxD  |           | mm           | 81,55 x 45 x 60,2 mm   |
| Mounting height   |           | cm           | 135                    |

1) The power input varies according to the operating voltage (the power input remains constant with variations of ±10%)

2) The power input varies ±10% within the whole operating voltage area

3) When using the recommended cables

**Subject to optical and technical modifications, any liability for misprints excluded!**