

ekey net finger scanner WM 2.0 RFID REL

Product description

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

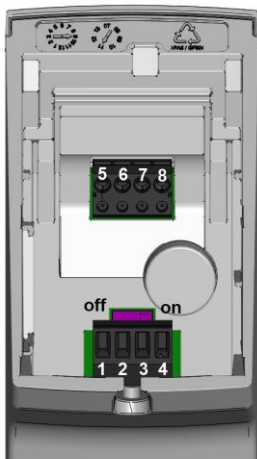
The finger scanner is to be operated in the networked access system ekey net, and has been conceived specifically to be wall mounted.

Features

- 40 / 200 / 2000 fingers can be recorded
- May be used outdoors
- AC /DC power supply
- RFID interface compliant with ISO15693 + ISO 14443 A/B
- 1 switching relay on board
- 1 input for door status monitoring
- Operates only within the networked *ekey net* access system
- The bus termination can be activated directly on the device
- High FAR
- Protection class IP44
- May **NOT** be used outdoors for safety-related reasons

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 ekey net FS REL		
5	REL NO potential free	-
6	REL NO potential free	-
7	Input	-



Description and item numbers

Description	Number of fingers	Item #
ekey net S FS WM 2.0 RFID REL	40	101399
ekey net M FS WM 2.0 RFID REL	200	101400
ekey net L FS WM 2.0 RFID REL	2000	101401

A SOFTWARE LICENSE is compulsory in order to be able to operate the *ekey net FS WM 2.0 RFID REL*! 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	



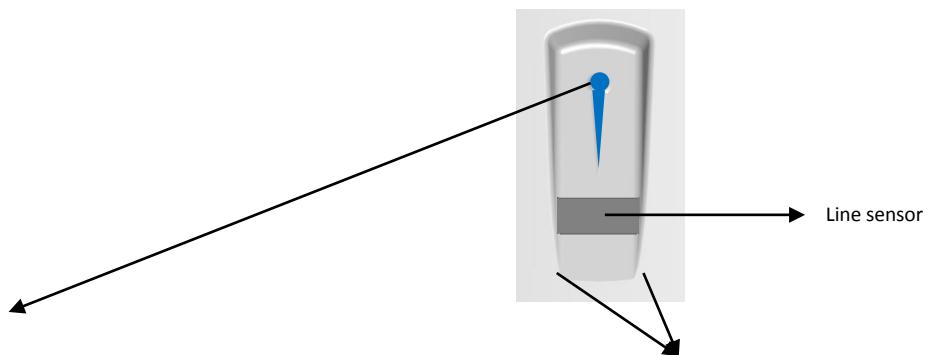
Dimensions

Dimensions in mm



8	Input	-
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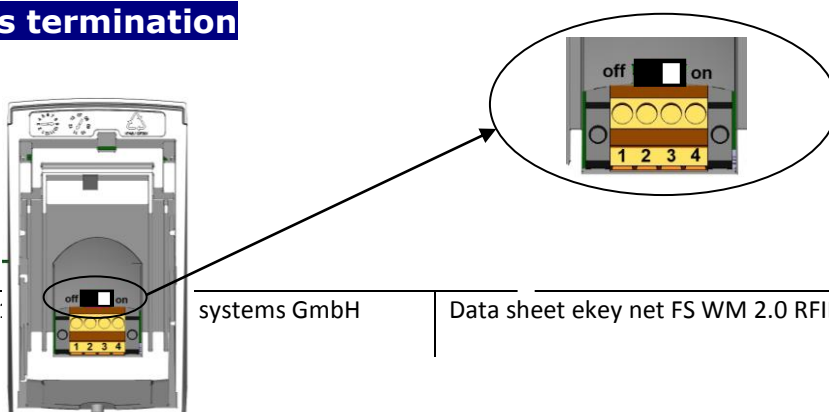
Controls and visual indications



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 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 Right: off	The finger scanner is HALF-OFFLINE: there is no data connection to the ekey net terminal server.
	Right: on 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 blinking 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] ¹	Idle mode	mA	85
	Matching	mA	90
Power input ²	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 + ISO 14443 A/B)		MHz	13,56
RFID range		cm	Typically 2
Max. cable length RS485 bus (CLAMP 1,2) ³		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
Relay contact	Switching voltage	V	42
	Max. switching voltage	Vp	60
	Switching current	A	2

	ON resistance (max)	Ω	0,12
	Leakage current	μA	1
	Switching-on time	ms	1.5
	Switching-off time	ms	0.5
Input ⁴	ON	k Ω	< 1
	OFF	k Ω	> 50

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

2) The power input varies $\pm 10\%$ within the whole operating voltage area

3) When using the recommended cables

4) An input signal can be generated by short-circuiting PIN7 and 8 via a potential free contact. The contact may have for an ON signal a maximum and for an OFF signal a minimum resistance, which is specified here. The specified values are valid at a minimum supply voltage of 8VDC.

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