

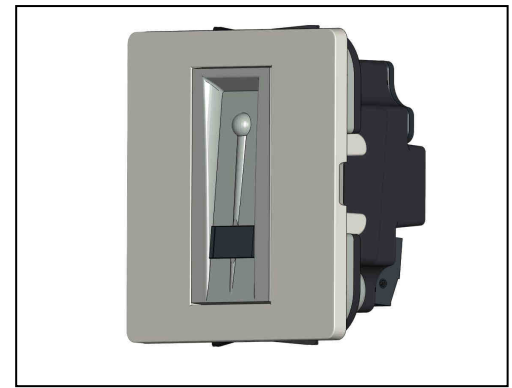
## ekey net finger scanner OM REL

### Product description

The *ekey net FS OM 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 mounted in standardized wall outlets. The scanner design allows it to be integrated into the switch range of the biggest European electrical switch manufacturers.

### Features

- 40 / 200 / 2000 fingers can be recorded
- Bezel: pure white, aluminium and anthracite, available as accessories
- Its design can be adapted to the switch range of the biggest manufacturers.
- To be mounted into wall outlets, diameter=60mm, depth=40mm compliant with DIN 49073
- 1 switching relay (NO)
- 1 input for door status monitoring
- AC /DC power supply
- Operates only within the networked *ekey net* access system
- The bus termination can be activated directly on the device
- High FAR
- Protection class IP54
- May **NOT** be used outdoors for safety-related reasons



### Description and item numbers

Description	Number of fingers	Item #
ekey net S FS OM REL	40	101156
ekey net M FS OM REL	200	101157
ekey net L FS OM REL	2000	101158

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

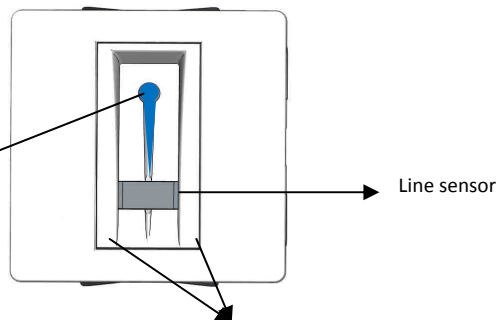
### Standards

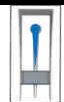
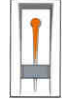
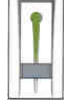
The *ekey net FS OM REL* is compliant with the 2004/108/EG (CE) and 2002/95/EC (RoHS) guidelines.




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

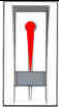
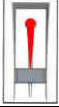


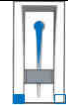
### Controls and visual indications



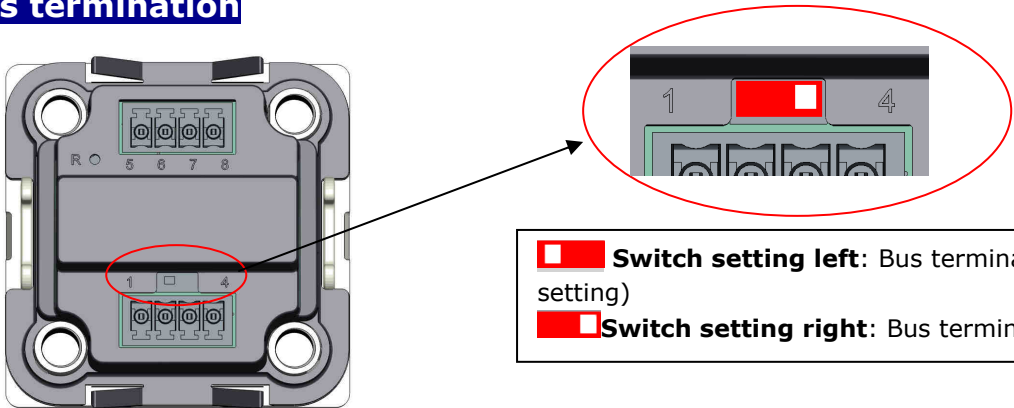
Display	Function LED	Signification of the indication
	Blue	The device is ready to read a finger. A finger may be swiped over the sensor.
	Blinking orange	The analysis and identification of an enrolled finger image is currently being done.
	Green	The finger has been identified and has access rights.


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: blue right: off	The finger scanner is HALF-OFFLINE: there is <b>no</b> 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.


	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).

	Right left blinking alternately	A software update is being done on the finger scanner.
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### Bus termination

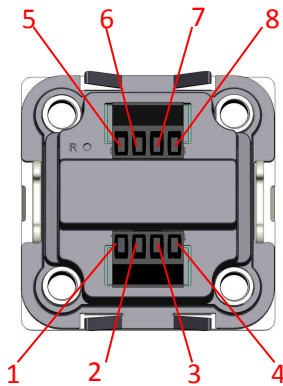


 **Switch setting left:** Bus termination = off (factory setting)

 **Switch setting right:** Bus termination = on

### Pin assignment

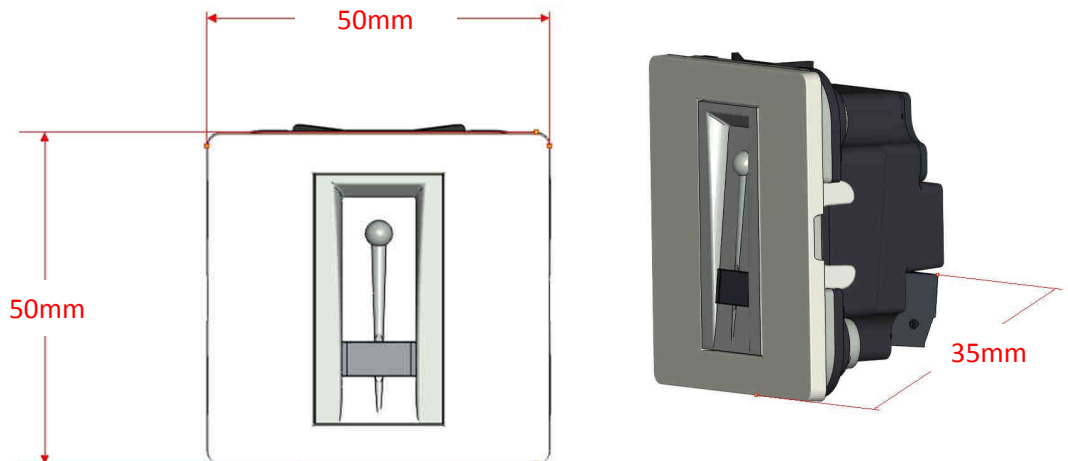
Finger scanner electrical connection via 4-pole push terminal RM 3.5.



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
5	REL NO potential free	
6	REL NO potential free	
7	Input	
8	Input	

### Dimensions

Dimensions in mm



## 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	-25 up to +70
	Operation	°C	-25 up to +70

### Electrical characteristics







Technical data		Unit	Values
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	-20 up to +70
	Operation	°C	-20 up to +70
Memory		Finger	S(40), M(200), L(2000)
Security		FAR	1:10.000.000
		FRR	1:100
Protection class			IP54
Speed		s	1-4
Life time cycle		Finger scans	~ 5 million
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 <sup>3</sup>	ON	kΩ	< 1
	OFF	kΩ	> 50
Max. cable length RS485 bus (CLAMP 1,2) <sup>4</sup>		m	500
Max. length of the power supply cable (CLAMP 3,4) when operated in an industrial area		m	30
Max. cable length relay contact and digital input (CLAMP 5,6,7,8) when operated in an industrial area		m	30
Dimensions LxWxD		mm	50 x 50 x 35mm
Mounting height		cm	155

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) 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.
- 4) When using the recommended cables

## Accessories

Item description	Color	Picture	Item number
ekey OM bezel PW	pure white		101166
ekey OM bezel AL	aluminium		101167
ekey OM bezel AN	anthracite		101168
ekey OM adhesive frame	-		101169
ekey PS power supply 12VDC/2A DRM 4HP	white		100201
ekey PS power supply 12VAC/1.5A DRM 4HP	white		100203
ekey PS power supply 12VDC/1.5A OM	black		100204
ekey PS power supply 12VDC/1A OM	black		100202
ekey PS power supply 24VDC/2A DRM 4HP	white		100891

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