ekey net wiring examples

ID79/152/0/73: Version 4, 26.04.2012

801471

TOOLS LIST FOR THE WIRING

You need the tools below in order to mount the ekey FS OM:

Screwdriver 2.5mm slot	Wire stripper

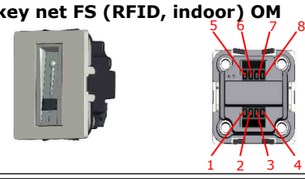
STOP

The connections do NOT have reverse polarity protection! An incorrect electrical connection of the devices can cause them serious damage.

The creation of electrical connections and the connections to the mains can only be carried out by specialists!

Device / Product

ekey net FS (RFID, indoor) OM



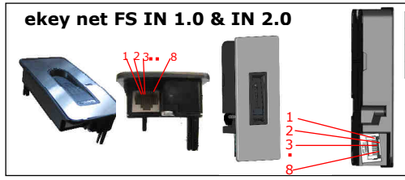
Clamp Nr.	Signal description	Recommended cable color - ekey norm
1	RS485 (clamp 1)	green
2	RS485 (clamp 2)	yellow
3	Power supply (clamp 3)	brown
4	Power supply (clamp 4)	white
5	Relay pot.free normally open	pink
6	Relay pot.free normally open	red
7	Input (PINA)	blue
8	Input (PINB)	grey

ekey net FS (RFID) WM 1.0 & WM 2.0

Clamp Nr.	Signal description	Recommended cable color - ekey norm
1	RS485 (clamp 1)	green
2	RS485 (clamp 2)	yellow
3	Power supply (clamp 3)	brown
4	Power supply (clamp 4)	white
5 AP2.0 REL	REL NO potential free	pink
6 AP2.0 REL	REL NO potential free	red
7 AP2.0 REL	Input (PINA)	blue
8 AP2.0 REL	Input (PINB)	grey

Termination WM 2.0 with switch **LEFT** = ON

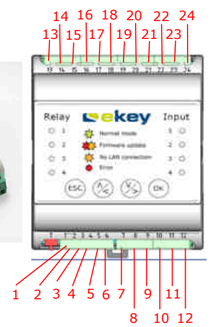
ekey net FS IN 1.0 & IN 2.0



Clamp Nr.	Signal description	Recommended cable color - ekey norm
4	RS485 (clamp 1)	green
5	RS485 (clamp 2)	yellow
7	Power supply (clamp 3)	brown
8	Power supply (clamp 4)	white

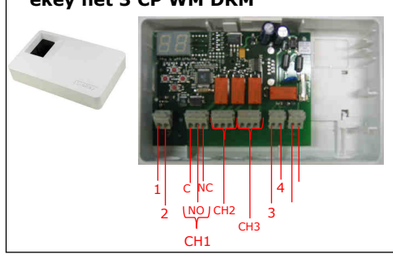
Termination INTEGRA 2.0 with switch **UP** = ON

ekey net CP DRM



Clamp Nr.	Signal description	Recommended cable color - ekey norm
1	RS485 (clamp 1)	green
2	RS485 (clamp 2)	yellow
3	Power supply FS (clamp 3)	brown
4	Power supply FS (clamp 4)	white
5	+VCC	
6	-VCC	
7	Relay 1 C (common)	
8	Relay 1 NO (normally open)	
9	Relay 1 NC (normally close)	
10	Input12 C	
11	Input 1	
12	Input 2	
13	Relay 2 C (common)	
14	Relay 2 NO (normally open)	
15	Relay 2 NC (normally close)	
16	Relay 3 C (common)	
17	Relay 3 NO (normally open)	
18	Relay 3 NC (normally close)	
19	Relay 4 C (common)	
20	Relay 4 NO (normally open)	
21	Relay 4 NC (normally close)	
22	Input 34 C	
23	Input 3	
24	Input 4	

ekey net 3 CP WM DRM



1		RS485 (clamp 1)	green
2		RS485 (clamp 2)	yellow
CH1	C	Relay 1 common	-
	NO	Relay 1 normally open	-
	NC	Relay 1 normally close	-
CH2	C	Relay 2 common	-
	NO	Relay 2 normally open	-
	NC	Relay 2 normally close	-
CH3	C	Relay 3 common	-
	NO	Relay 3 normally open	-
	NC	Relay 3 normally close	-
3		Power supply FS (clamp 3)	brown
4		Power supply FS (clamp 4)	white
9VAC	A	+Vcc	-
9VAC	B	-VCC	-

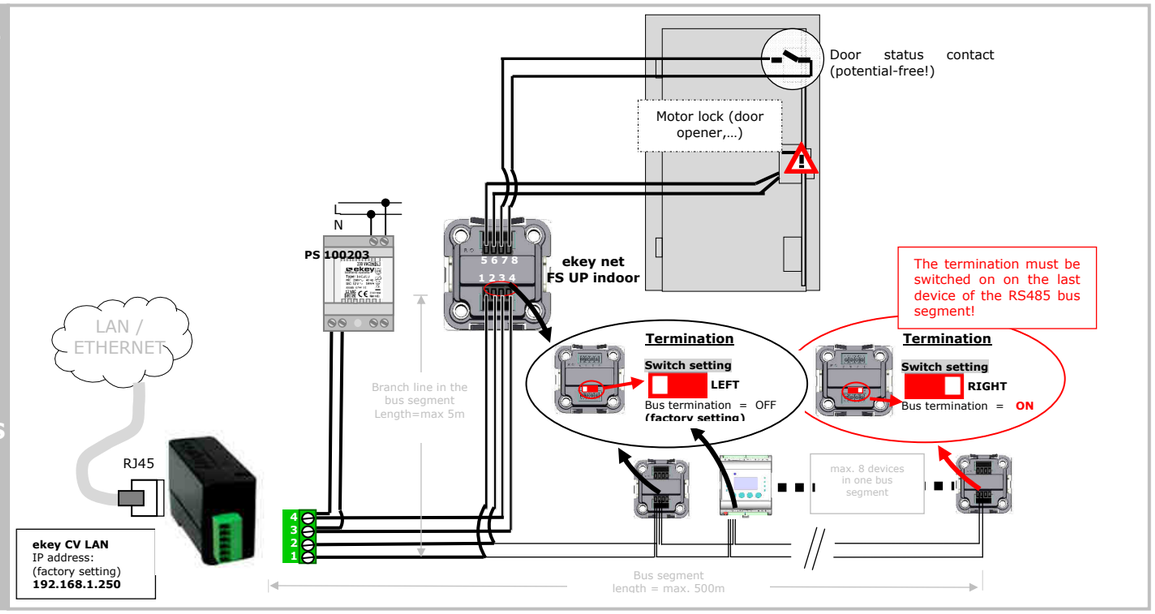
Example 1

"Indoor" version

CAUTION Should only be used for organi-sational access restrictions!

NOT suitable for front doors!

ekey net FS OM indoor + bus segment



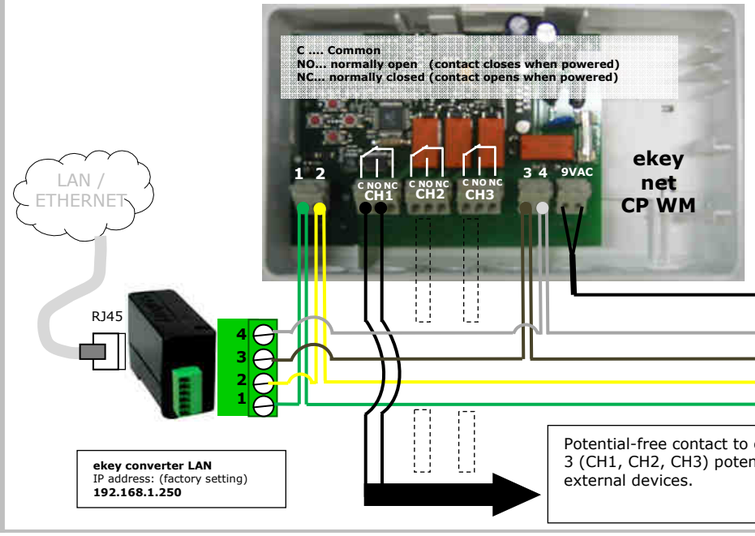
Example 2

"WM" version

ekey net FS WM

+

ekey net CP WM



Example 3

"mini" version

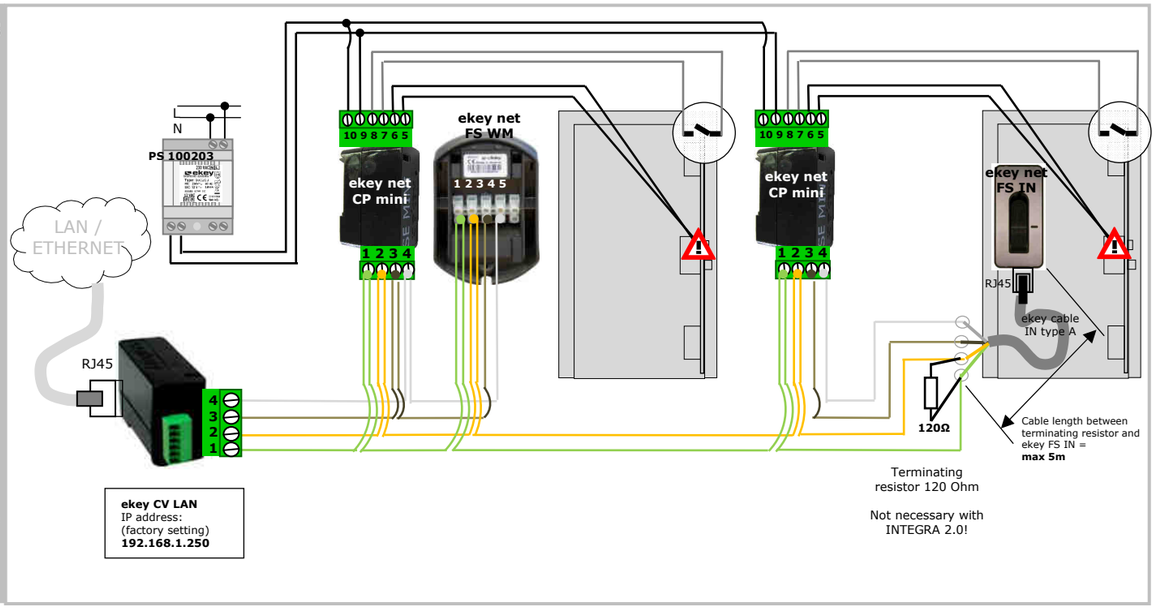
ekey net FS WM+IN

+

ekey net CP mini

High safeguarding against failure

1 complete set (FS + CP) per door. If one door is defective, the others still work.



Please use the following cables:

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

Cable colour:
2 x RS485-Bus (geen/white)
+ 2 x RS485 (yellow/white) reserve
2 x power supply (red/blue)
+ 2 x reserve (brown/white)
(over 50m use a double pair for the power supply)

STOP

The cable between **ekey net CP** (control panel) and **ekey net FS** (finger scanner) must be installed separately from the house electrical installation (230V respectively 380V mains voltage). The cable carries signals in the low voltage range, which may be disrupted by contiguous conducting cables with mains voltage.

Mind the ekey net bus configuration as it is shown here:

- Daisy-chain wiring (no star wiring) of the RS485 bus segment
- Maximum 8 ekey net devices may be connected to each other within a bus segment (= to 1 ekey CV LAN)
- Bus length maximum 500m; branch lines max. 5m
- The last device in the bus line must be terminated.

The connection to the motor lock/door opener should only be seen as a schematic illustration. The wiring varies according to the motor lock type!!

Check the motor lock/door opener technical connection conditions and instructions!!

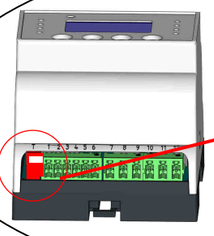
Example 4
„OM" version
ekey net FS OM  **+ ekey net CP DRM** 

Caution: lower safeguarding against failure (There is one ekey net CP for 4 doors. If this CP is defective, then none of the 4 doors will work!)

L
N
230 VAC NL
ekey
biometric systems
Type: 100203
PRI: 230V~ 50 Hz
SEC: 12 V~ 18VA
XXXXX-X/WW-YY
12 VAC
EN61558
Made in EU
13 14 15 16 17 18
19 20 21 22 23 24
Relay
ekey
Input
ekey net CP
ESC
OK
1 2 3 4 5 6
7 8 9
10 11 12
ekey net FS OM
1 2 3 4
LAN / ETHERNET
ekey net
1
2
3
4
ekey CV LAN
IP address:
(factory setting)
192.168.1.250

The connection to the motor lock/door opener should only be seen as a schematic illustration. The wiring varies according to the motor lock type!!

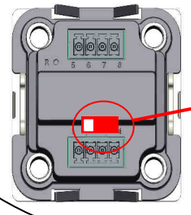
Check the motor lock/door opener technical connection conditions and instructions!!



Termination ekey CP DRM
Bus segment middle

Switch setting
TOP

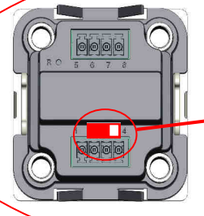
Bus termination = **OFF**
(factory setting)



Termination ekey FS OM
Bus segment middle

Switch setting
LEFT

Bus termination = **OFF**
(factory setting)



Termination ekey FS OM
Bus segment end

Switch setting
RIGHT

Bus termination = **ON**

The termination should only be switched on on the last device of the bus segment!