Content

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- FPSwitch – fingerprint reader
- RFID card (master card)
- screw driver
- dowel, screws
- ornamental enclosure (hole shielding)
- terminal support
- transfer picture
- user manual

1.2 Mounting, electric connections

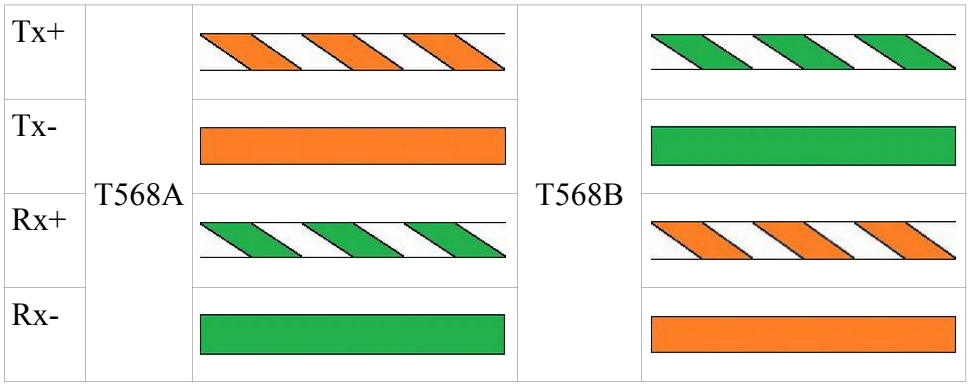
1. **Mounting**

The transfer picture is pasted on the surface where the terminal will be mounted. The surface where the mounting shall be performed will be drilled with a 6mm borer, according to the marks from the transfer picture.

2. **Electric connections**

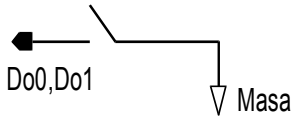
- The connector plate can be removed from the terminal enclosure, therefore assuring a comfortable working method.

- The supply connection can be done by connecting the +12 V c.c. wires to the VCC connector, and the ground to the GND.
- The inputs and outputs can be connected as needed (see some standard schemes below)
- The UTP cable can be connected based on two standards: T568A or T568B.



3. Digital outputs

The outputs are (Do0,Do1) Open collector types, meaning they behave like a two position switch, that makes the connection to the ground when it is activated.



4. Wiegand Interface

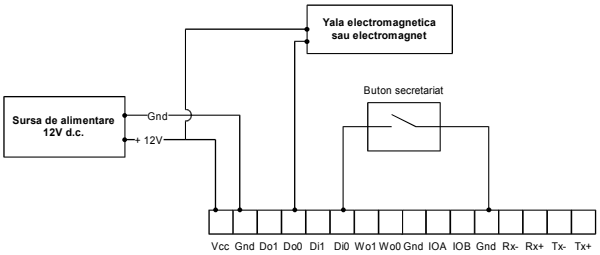
It is a wiegand type exit on 26 bits. With this interface the terminal transmits the code to the read proximity card or in the case of a fingerprint identification, transmits a preset user code through the configuration interface of the terminal.

1.3 Standard configurations

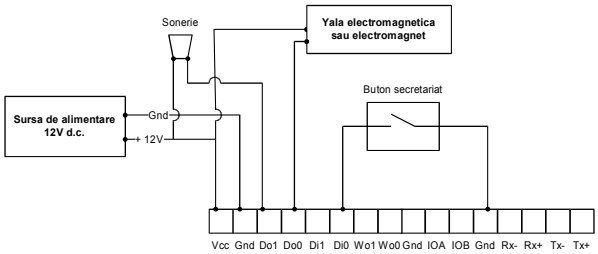
The peripherals, inputs and outputs can be set by accesing the configuration interface of the terminal from a browser. The default IP Adress is 192.168.0.200. The default setting of the terminal allows the functioning of some standard confirgurations. The below chart summarises the default configuration of the peripherals:

Event	Action
Successful identification (card or fingerprint)	output Do0 activ (NC)
	WEB service (UDP package)
	Beep
	Green Led
	Wiegand
Identification failure (card or fingerprint)	Output Do1 active (NO)
	WEB service (UDP package)
	Beep
	Red Led
	Wiegand
Di0 input activated	output Do0 active (NC)
	WEB service (UDP package)
	Beep
	Green Led
Di1 input activated	output Do1 active (NO)
	WEB service (UDP package)
	Beep
	Green Led

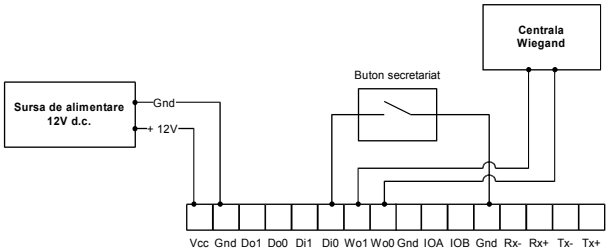
1 Simple configuration with a terminal at the entrance and an interior exit button (*works with the default configuration*)



2 Configuration with a terminal at the entrance and an interior exit button, and interior bell (it functions with a bell for the persons who are not registered in the sistem; *works with the default configuration*)



3 Reader connected to the Wiegand26 access unit (*works with the default configuration*)



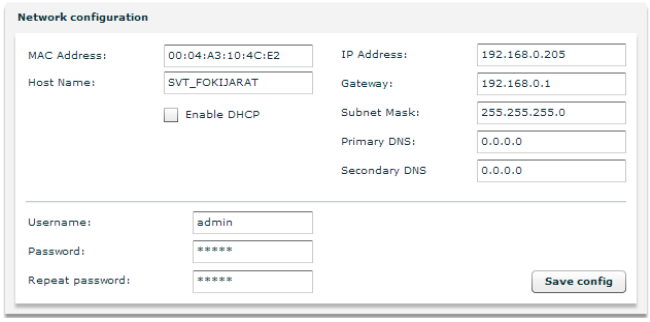
2 WEB interface

The configuration interface of the terminal can be accessed from a browser. The default IP adress is 192.168.0.200. Identification data:

user: admin
password: admin

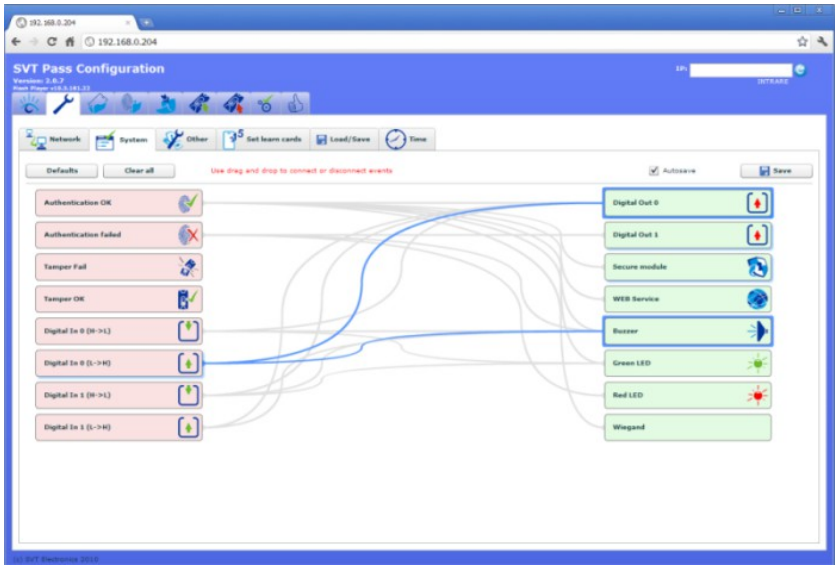
2.1 Settings/Network – network settings, password change

Network settings as well as password change can be performed from the Settings/Network tab.



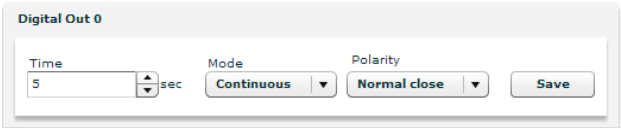
2.2 Settings/System – peripheral settings inputs/outputs

The peripheral settings can be done from the Settings/System tab. In the left column are the possible events while in the rigth column are the possible actions. The events can be connected with the desired action with the „drag and drop” method.



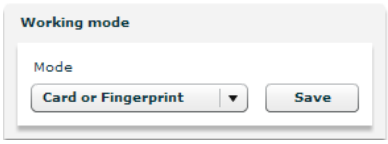
2.3 Settings/Other – output settings, identification level

Settings/Other



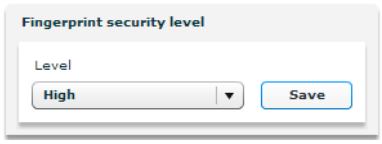
Time – sets the time period for which the output should be active Do0/Do1
Mode/Continuous – with this mode the output is continuously active
Mode/Pulsed – with this mode the output is pulsly active
Polarity/Normal Close – output is active normally closed
Polarity/Normal Open – output is active normally open

Attempts - the maximum number of identification attempts can be set



Working mode - identification method:

- Card or fingerprint – identification with the proximity card or fingerprint
- Card and fingerprint - identification with the proximity card and fingerprint
- Fingerprint only – identification only with fingerprint



Security level - the security level of the fingerprint identification

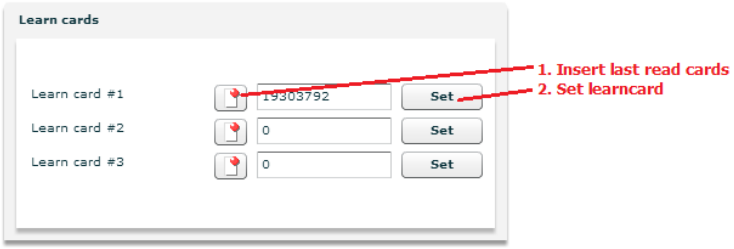
2.4 Settings/Set learn card – master card

In standalone mode, the fingerprints can be registered with the help of the master card. A terminal may have 3 master cards. The master cards can be trained by following the below steps:

1. the card is approached to the reader until a long beep sound is released (unsuccesfull identification)

2 from the "Set learn cards" menu the serial number of the last card can be uploaded

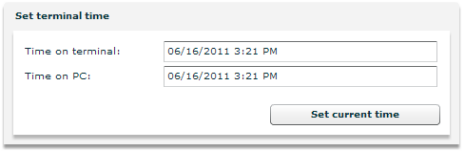
3 press the "Set" button



2.5 Settings/Load/Save – saving the configuration

From this menu the terminal configuration can be saved / uploaded.

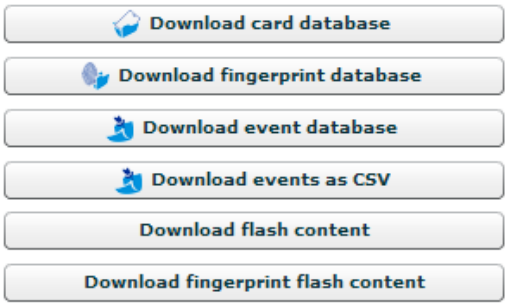
2.6 Settings/Time - synchronizing the terminal time with the PC time



The "Set current time" button synchorizes the terminal time with the PC's internal time.

After installation it is compulsory to set the terminal time.

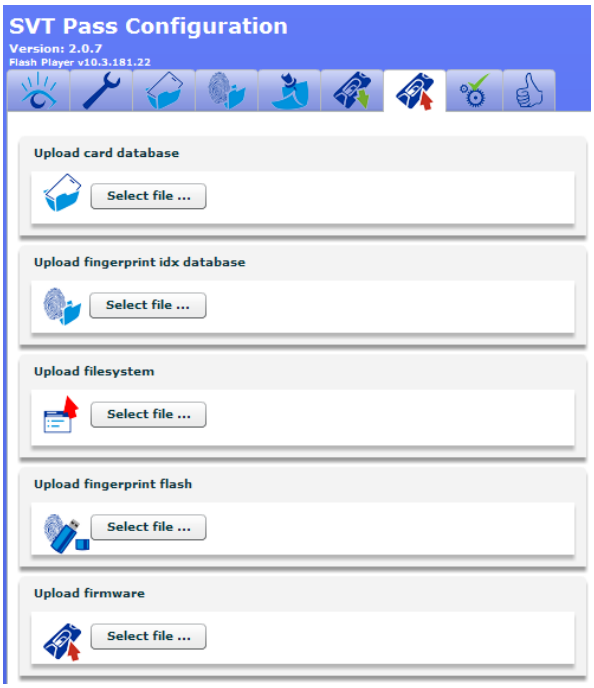
2.7 Download – saving the database from the terminal to the PC



- saving the fingerprint database
- saving the event database in binary format
- saving the event database in .csv form
- saving flash content
- saving the fingerprint flash database

2.8

2.9 Upload - uploading the database from the terminal to the PC

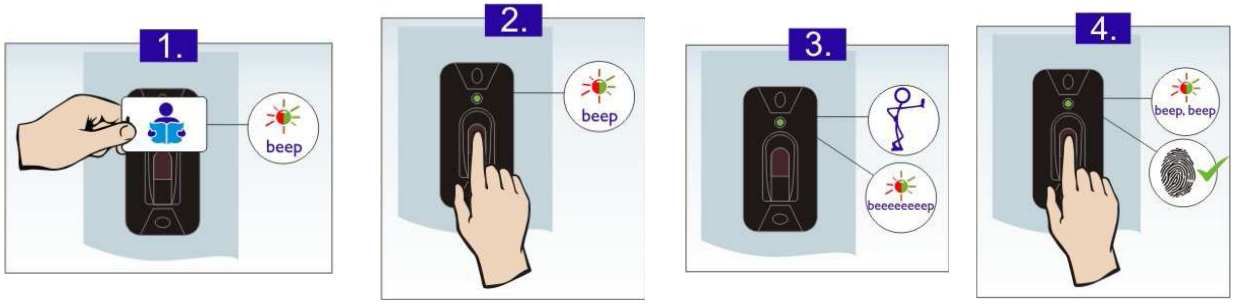


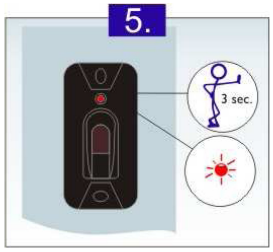
- uploading card database
- uploading fingerprint database
- uploading WEB interface
- uploading fingerprint flash database
- - uploading firmware

3 Usage

3.1 Fingerprint registration in standalone mode

When the terminal is supplied the fingerprints can be registered without a PC connection, only with the help of the learn card, following the steps:

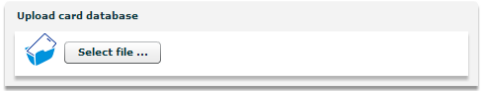




The finger needs to be laid on the sensor in such a way that covers it in a great proportion. If the fingerprint is registered incorrectly than the rate of unsuccessfull registration will be higher. It is not recommended to register the thumb fingerprint.

3.2 Copying the cards from one terminal to the other

1 shall be accessed the configuration interface of the source terminal
2 shall be downloaded the card database



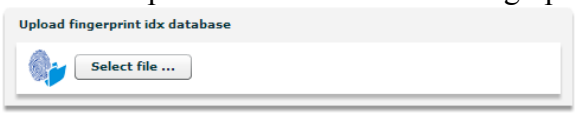
3 shall be accessed the configuration interface of the destination terminal
4 shall be uploaded the card database from the PC

3.3 Copierea amprentelor de pe un terminal pe un alt terminal

1. shall be accessed the configuration interface of the source terminal
2. from the Download menu shall be downloaded on the PC the fingerprint database

3. shall be downloaded on the PC the fingerprint flash database by accessing the Download menu

4. shall be accessed the configuration interface of the destination terminal
5 shall be uploaded from the PC the fingerprint database by accessing the Upload menu



6 shall be uploaded the fingerprint flash database from the PC by accessing the Upload menu

4 Charasterisitcs

Identification				
Card reader	125 KHz			
Fingerprint sensor	capacitiv			
Senzor rezolution	362 dpi			
ESD protection	>15 KV			
Fingerprint check time	1:1	1:150	1:500	
	0,2 s	1 s tipic	2 s tipic	
False Acceptance Rate (FAR)	Can be set 1/1000 .. 1/100000			
Interfaces				
TCP/IP	UDP and HTTP			
Wiegand26	output			
Supply				
Supply	9..30 V DC			
Consumption	1,8 W (150 mA la 12 V)			
Peripherals				
Inputs	No	Tolerance	Reference	
	2	>24 V	GND	
Outputs	Nr	Type	Max Current	Protections
	2	Open drain	1,8 A	overcurrent, temperature
Operating conditions				
Operating temperature (ambiental)	-25 ... 60 °C			
Protection level	IP20			
Relative humidity	20 % .. 90 %			