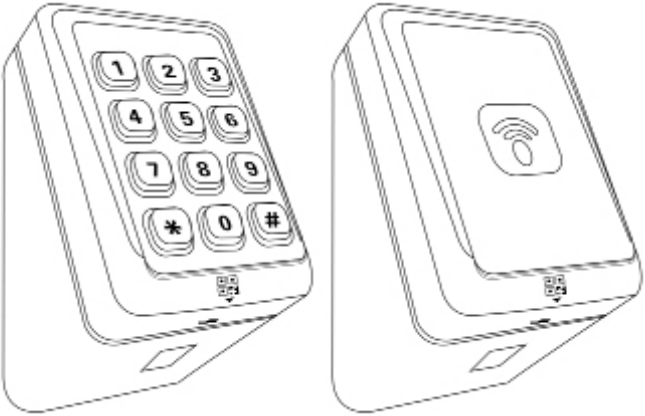
CIDRON QR



Installation guide

Cidron Standard QR Reader
Cidron Combi QR Reader

2 Cidron Standard (VG3 QR) Reader - Technical specifications

Operating frequency	13,56MHz.
Reading technologies	MIFARE® CSN 4 byte, MIFARE® CSN 7 byte, MIFARE® Classic, MIFARE® Plus and MIFARE DESFire® EV1. Also supports other ISO 14443 A/B* compatible cards. *Not all ISO14443 B cards have been implemented in the reader, please contact Civintec Global for more details on current status.
Mobile ID	ISO18092NFC, BLE (Bluetooth low energy)
Barcode/QR scanner	• Area image 640 x 480 pixels, Filed of View 68°(H) x 51(V) • Decode range: 20mm-150mm(QR 20MIL) • Roll/Pitch/Yaw: 360°, ±55°, ±55° • Multiple formats supported (1D & 2D Codes): QR Code, Micro QR code, PDF417, Code 128, Code 39 and most mainstream 1D and 2D barcodes.
Secure Access Module (SAM)	MIFARE SAM AV2, external SIM card connection slot.
Communication protocols	Wiegand, RS485 (OSDP 1, OSDP 2, including Secure channel), BLE.
Reading output format	24-1024 (excluding parity bits)
Keypad output format	Wiegand 4bit, Wiegand 8bit (Dorado), Wiegand 26bit, OSDP ASCII format.
Keypad	12 digit keypad in 4 rows of 3 keys in each row with configurable backlight in blue color. Control features On/Off/Auto indicators. Light itensity can be adjusted.
Indicators	LED, Green, Red and Yellow (Bi-color). Backlight in blue color. Buzzer.
Power supply	9 – 30VDC
Input/Output	4 input for LED and buzzer and 2 configurable General Purpose Input/Output (GPI/O). The GPI/O's are push/pull type which provides 5VDC as output when "high" on each respective GPI/O connection pin.
Tamper alarm	Built-in mechanical tamperswitch which allows for indication both break off protection and opening of the reader.
Operating temperature	• RFID reader: -40° ~ +70°C (With thermostat controlled embedded heater) When installing readers in environments with extreme heat(above + 50°C) it is recommended to utilize the climate protection SC9901-V which provides additional shading to the reader. • QR code module: -20°~ +55°C
Heater	Thermostat controlled embedded heater.
Operating humidity	0 – 95% RHNC (Relative Humidity No Condensation)
Ingress Protection Classification	IP65 require together with weather protection cover SC9901-T or SC9901-V.
Housing dimension	L=143mm, H=80mm, W=91mm
Configuration Methods	Configuration card, Configcard software or factory configured readers.
Compliances	FCC, CE

3 Cidron Combi (VG3 QR) Reader - Technical specifications

Operating frequency	125KHz & 13,56MHz.
Reading technologies	Electromarine EM4200, MIFARE® CSN 4 byte, MIFARE® CSN 7 byte, MIFARE® Classic, MIFARE® Plus and MIFARE® DESFire EV1. Also supports other ISO 14443 A/B* compatible cards. *Not all ISO14443 B cards have been implemented in the reader, please contact Civintec Global for more details on current status.
Mobile ID	ISO18092NFC, BLE (Bluetooth low energy)
Barcode/QR scanner	• Area image 640 x 480 pixels, Filed of View 68°(H) x 51(V) • Decode range: 20mm-150mm(QR 20MIL) • Roll/Pitch/Yaw: 360°, ±55°, ±55° • Multiple formats supported (1D & 2D Codes): QR Code, Micro QR code, PDF417, Code 128, Code 39 and most mainstream 1D and 2D barcodes.
Secure Access Module (SAM):	MIFARE SAM AV2, external SIM card connection slot.
Communication protocols	Wiegand, RS485 (OSDP 1, OSDP 2, including Secure channel), BLE.
Reading output format	24-1024 (excluding parity bits)
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Indicators	LED, Green, Red and Yellow (Bi-color). Backlight in blue color. Buzzer.
Power supply	9 – 30VDC
Input/Output	4 input for LED and buzzer and 2 configurable General Purpose Input/Output (GPI/O). The GPI/O's are push/pull type which provides 5VDC as output when "high" on each respective GPI/O connection pin..
Tamper alarm	Built-in mechanical tamperswitch which allows for indication both break off protection and opening of the reader.
Operating temperature	• RFID reader: -40° ~ +70°C (With thermostat controlled embedded heater) When installing readers in environments with extreme heat (above + 50°C) it is recommended to utilize the climate protection SC9901-V which provides additional shading to the reader. • QR code module: -20°~ +55°C
Heater	Thermostat controlled embedded heater.
Operating humidity	0 – 95% RHNC (Relative Humidity No Condensation)
Ingress Protection Classification	IP65 require together with werther protection cover SC9901-T or SC9901-V.
Housing dimension	L=143mm, H=80mm, W=91mm
Configuration Methods	Configuration card, Configcard software or factory configured readers.
Compliances	FCC, CE

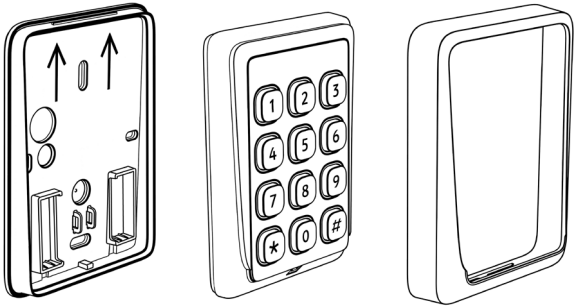
4 Power Consumption

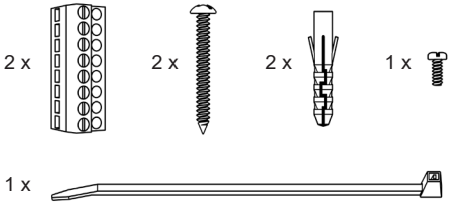
Model Feature	Brightness		Current draw (idle)	
Model: Civintec Global Cidron	LED-Bar	Backlight	12VDC	24VDC
SC93100-MDEB STD 13.56MHz/125KHz/2.4GHz with keypad	Low	Low	90 mA	47 mA
	Medium	Low	90 mA	47 mA
SC93110-MDEB STD 13.56MHz/125KHz/2.4GHz without keypad	Low	Low	90 mA	47 mA
	Medium	Low	90 mA	47 mA
SC93200-MDB SLIM 13.56MHz/2.4GHz with keypad	Low	Low	34 mA	18 mA
	Medium	Low	34 mA	18 mA
SC93210-MDB SLIM 13.56MHz/2.4GHz without keypad	Low	Low	34 mA	18 mA
	Medium	Low	34 mA	18 mA

The above values are excluding heater consumption which is variable and depending on configuration settings. Default value is 220 mA at 12VDC but can be configured in 20 mA intervals from minimum 120 mA to maximum 300 mA. When the heater is set in automatic mode, the heater will be activated when the internal temperature of the reader is below +1°C, the heater will automatically deactivate when the internal temperature exceeds +5°C.

Depending on the heater consumption setting the time it will take for the reader to exceed +5°C will vary- a higher power consumption setting will reduce the time required to heat the reader.

Current draw (idle) is defined as reader connected to power, no LED's lit, buzzer is not sounding and no reading of credential or key pressing is processed by the reader. Current draw (peak) is defined as reader powered with both backlight and LED frame lit (Yellow), buzzer is sounding and reader is reading a credential while simultaneously a key pressing is processed.

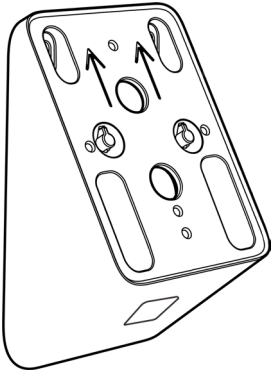




Package content:

- 1pc Installation plate
- 1pc Reader module with front plate
- 1pc Front cover
- 2pcs Terminal connector (8-pin)
- 2pcs Installation screws
- 2pcs Screw plugs
- 1pc Cable strip
- 1pc Fixing screw
- 1pc Quick installation guide

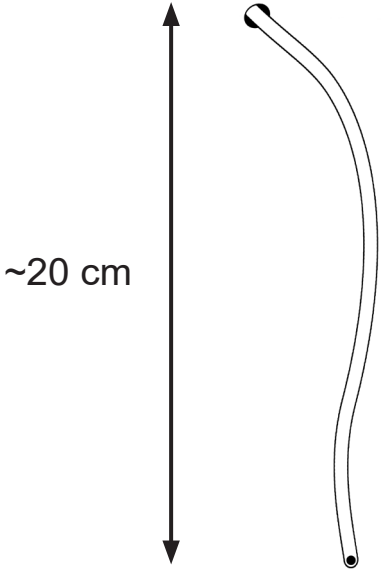
* Please note that all pictures in this manual are illustrations and do not represent the actual sizes and form of the components.



Package content:

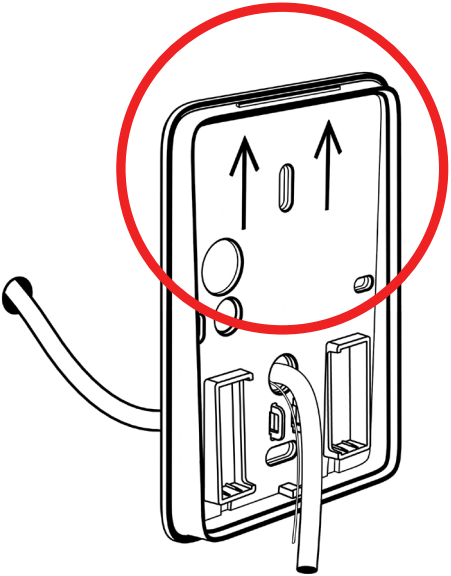
- 4pcs Installation screws
- 4pcs Screw plugs
- 4pcs Fixing screw
- 1pc Tamper switch bolt 1
- 1pc Tamper switch bolt 2

* Please note that all pictures in this manual are illustrations and do not represent the actual sizes and form of the components.



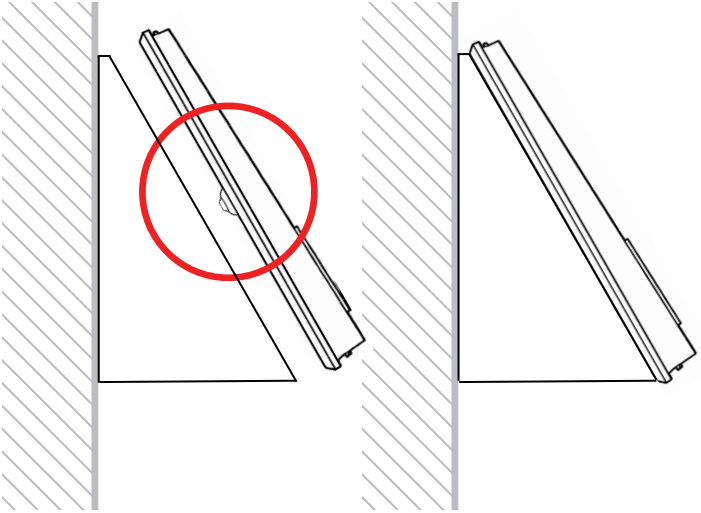
In order to facilitate installation a cable length of 20cm is recommended.

8

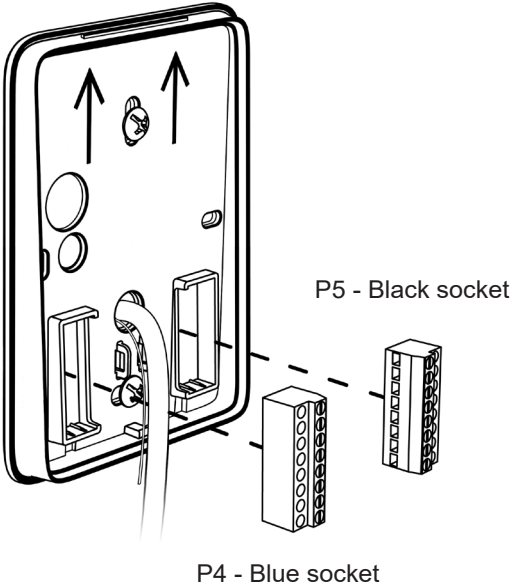


Ensure that the installation plate is fixed in the correct direction, i.e. the arrows pointing upwards.

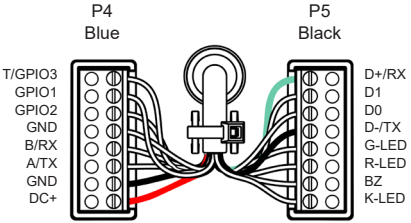
9



Ensure that the area behind the tamper switch bulb of the installation plate is flat, to be able to push the bulb for correct tamper alarm functionality. If it is not flat enough, you will find accessories in this manual that will assist with improving this functionality.



Make sure to place the terminal connectors with the fastening screws facing towards you.

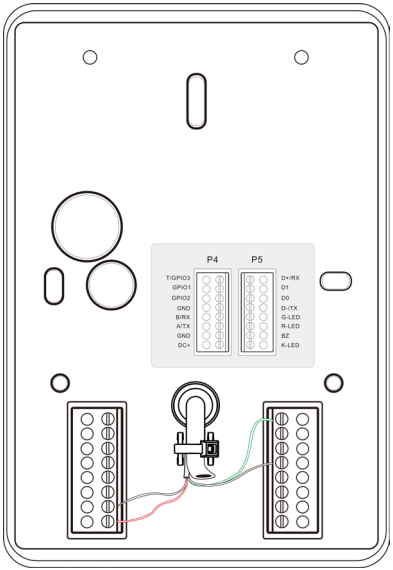


	PIN	Description	Wiegand	RS485/ OSDP
P4 - Blue	T/GPIO3	Tamper output	x	x
	GPIO1	General purpose I/O	x	x
	GPIO2	General purpose I/O	x	x
	GND	Ground	x	x
	B/RX	RS485 -	x	x
	A/TX	RS485 +	x	x
	GND	Power supply	x	x
	DC+	Power supply 9-30 VDC	x	x
P5 - Black	D+/RX	QR-RX	x	-
	D1	Wiegand D1/CLK	x	-
	D0	Wiegand D0/DATA	x	-
	D-/TX	QR-TX	x	-
	G-LED	Green LED control	x	-
	R-LED	Red LED control	x	-
	BZ	Buzzer control	x	-
	K-LED	External Keypad LED control	x	-

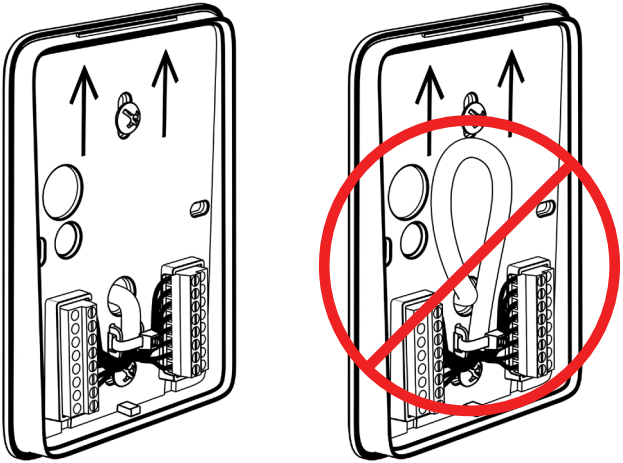
Notes:

1. Maximum wiegand cable length is 150 meters and requires a high quality shielded cable with minimum AWG18 dimension (=0.8231mm2) in an environment free from electrical noise. A cable with smaller dimension or an installation environment with electrical disturbances will reduce the maximum cable length.
2. Wiegand & Clock/Data requires dedicated wires for external control of Green LED, Red LED, Buzzer and Keypad backlight.
3. When utilizing the GPI/O's, each respective GPI/O1 or GPI/O2 must be connected to each respective pin and also to GND. The general purpose input/output will only be activated if so applied in the reader configuration.
4. RS 485/OSDP requires twisted pair cable.

12 QRcode mode There are four wires,power and communication



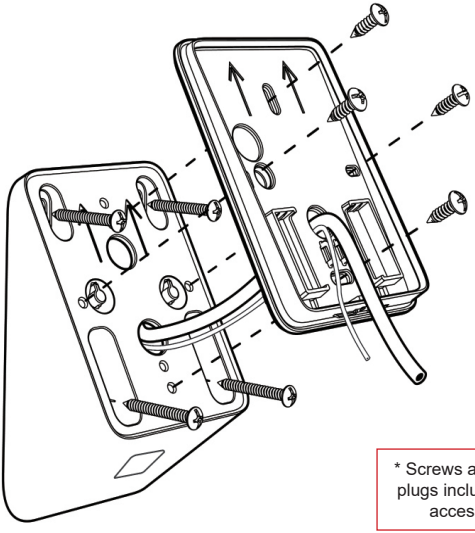
1.Red wires(DC+),The first PIN that connects to the terminal block
2.Black wires(GND),The second PIN connects to the terminal block
3.Green wires(RX),The 9 PIN connects to the terminal block
4.White wires(TX),wires(GND),The 12 PIN connects to the terminal block



Make sure no excess connection cable is left in between the reader module and the installation plate.

Use the enclosed cable strip to fix the cable in the cord grip. It is recommended to connect the the wires to the terminal connectors before tightening the cable strip.

14 Install Mounting Plate with QR CODE MODE



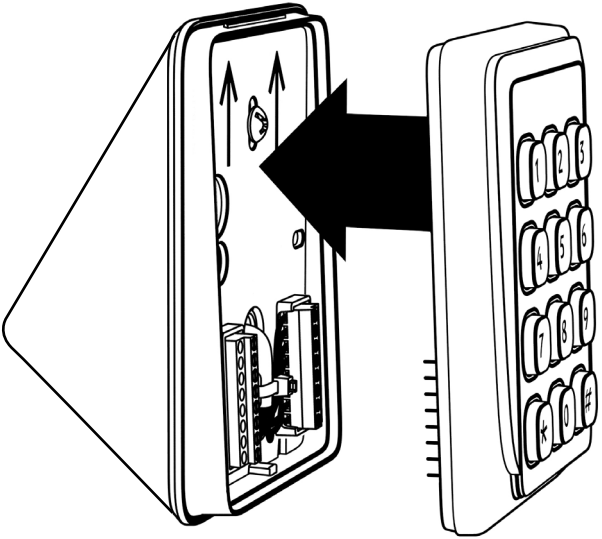
* Screws and screw plugs included with accessory.

Matte black, part no: SC9192-SQ

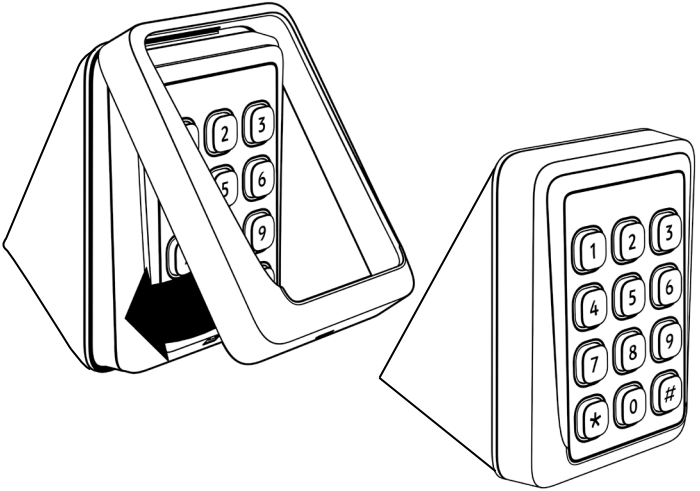
QRcode mode There are four wires,power and communication
1.Red wires(DC+),The first PIN that connects to the terminal block
2.Black wires(GND),The second PIN connects to the terminal block
3.Green wires(RX),The 9 PIN connects to the terminal block
4.White wires(TX),wires(GND),The 12 PIN connects to the terminal block

15 Cleaning instructions

Use compressed air in between the buttons to remove dust and dirt and after that Isopropyl alcohol can be used with a piece of fabric to rub in between the buttons and the reader exterior.

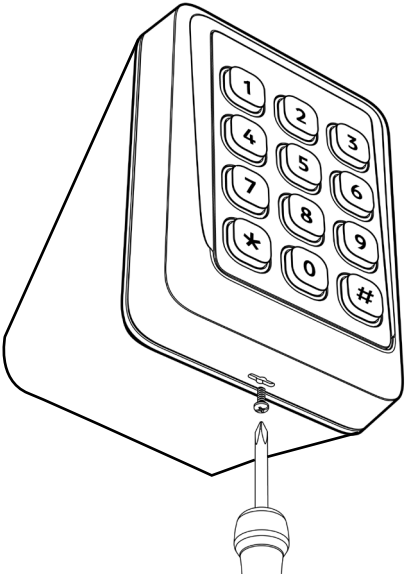


When installing the reader to the mounting plate ensure that the reader pin header contact perfectly aligns with the terminal connector block.

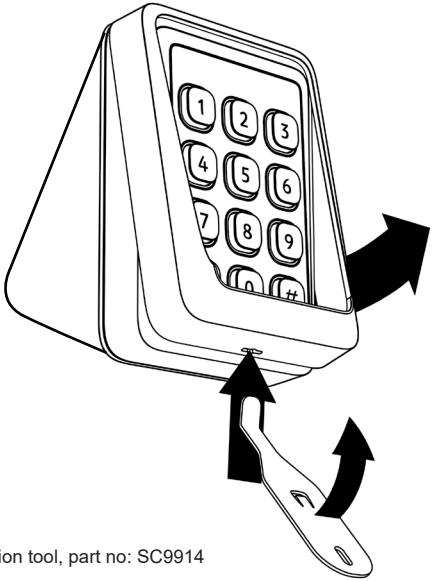


Mount the front cover as per the image above and make sure it is fitted correctly.

In order to do so, allign and fit the top snap fastening, apply and maintain pressure on the top of the front cover while sliding the front cover over the bottom snap fastening.



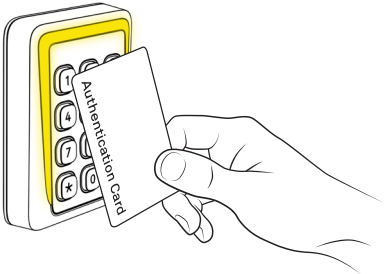
To secure the front cover to the reader use the supplied fixing screw and fix it into the installation plate through the front cover.



Cidron installation tool, part no: SC9914

To open the reader, first remove the fixing screw and then detach the front cover from the installation plate by inserting the tip of the tool into the slot at the bottom of the front cover and move the tool upwards. This will release the front cover without damaging the front cover and/or the installation plate.

Overview, programming of reader



Setting the reader in programming mode

see page: 19

Configuring the reader

see page: 20

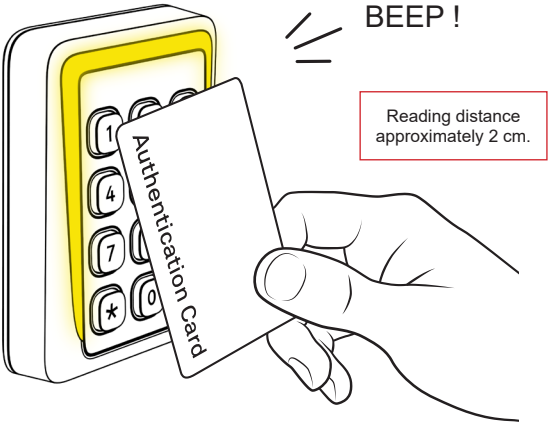
Changing authentication card

see page: 21

Resetting the OSDP secure channel.

see page: 22

21 Setting the reader in programming mode



In order to set the reader in programming mode, present the valid “Authentication Card” to the reader as shown. The reader will beep and start blinking yellow to indicate that it is now in programming mode.

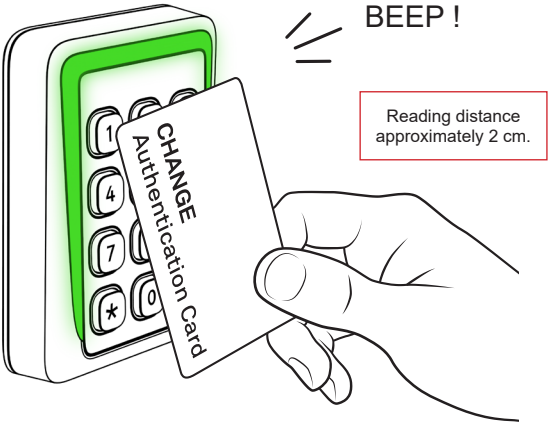
The Reader is in programming mode for 10 seconds. If no other programming card is presented within this time, the reader will return to normal mode. When a reader leaves programming mode it is indicated by a blinking red LED and a beep.

22 Configuring the reader

1: Set the reader in programming mode, see page: 19

2: Present the “Configuration Card” to the reader as shown. Keep the card within reading distance until the reader beeps and blinks in green. The reader is now programmed and ready for use according to the configuration settings on the configuration card.

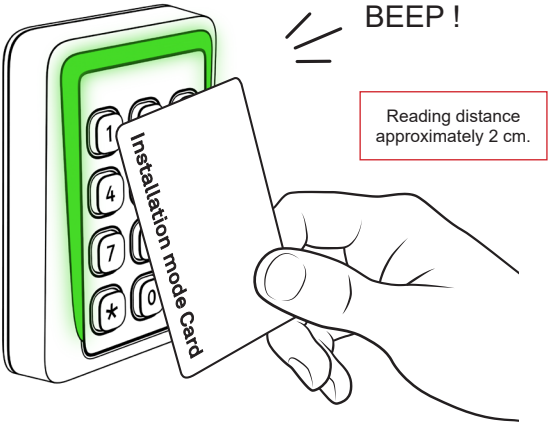
23 Changing authentication card



1: Set the reader in programming mode, see page: 19

2: Present the “CHANGE Authentication Card” to the reader as shown. Keep the card within reading distance until the reader beeps and blinks in green. The reader is now reprogrammed to only be set in programming mode by the new “Authentication Card”. The old “Authentication Card” is no longer authorized to set the reader in programming mode.

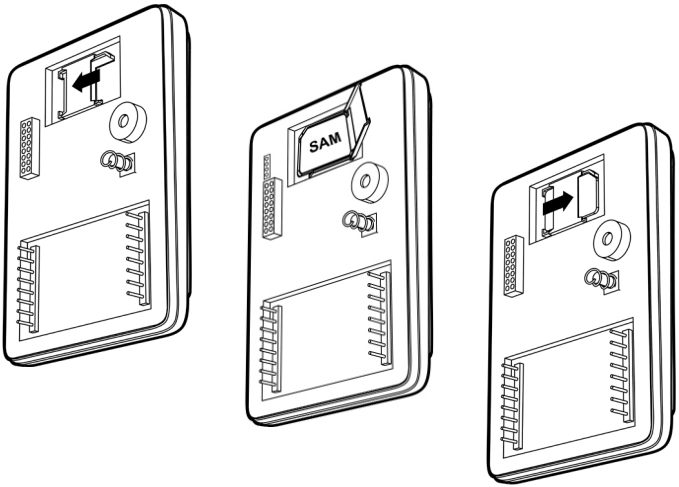
24 Resetting the OSDP secure channel.



1: Set the reader in programming mode, see page: 19

2: Present the “OSDP Installation mode Card” to the reader as shown. Keep the card within reading distance until the reader beeps and blinks in green. The reader has now reset the secure channel encryption keys to installation mode.

25 Installing Secure Access Module



MIFARE® SAM AV2 (SIM Card)

In order to install the SAM into the reader open the SAM socket by unlocking and opening the lid. Then place the SAM into the socket lock it into place by closing the lid and sliding it into locked position.

26 FCC Statement

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
This equipment should be installed and operated with a minimum distance of 20cm between the radiator and your body.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
-- Reorient or relocate the receiving antenna.
-- Increase the separation between the equipment and receiver.
-- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
-- Consult the dealer or an experienced radio/TV technician for help.

CIVINTEC®

The Cidron reader family are intended for Sale to professional security companies and installation by experienced security professionals. Civintec Global can not provide assurance that any entity or person buying or obtaining the product is properly experienced or trained to correctly install security related products including card readers.

CiVinTec Global Co., Limited.

info@civintec.com
www.civintec.com

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