SAGEM SA

MAxx1 ADDENDUM

Installation guide

XE 0085-02

SK-0000011322-02 - June 2004

SAGEM

SAGEM SA

WELCOME TO SAGEM SA MORPHOACCESS™ MAXX1 VERSION

Congratulations for choosing the high end and secured SAGEM SA MorphoAccess™ terminal. MorphoAccess™ provides an innovative and effective solution for access control or time and attendance applications using Fingerprint Verification or/and Identification.

Among a range of alternative biometric techniques, the use of finger imaging has significant advantages: each finger constitutes an unalterable physical signature which develops before birth and is preserved until death. Unlike DNA, a finger image is unique to each individual - even identical twins.

Although MorphoAccess™ terminal has an important sturdiness, in order to obtain the best results of the fingerprint recognition, you had to take care of the optronic sensor.

SAFETY INSTRUCTIONS

The installation of this product should be made by a qualified service Person and should conform to all local codes.

It is strongly recommended to use a class II power supply at 12 V ±5% and 2.5 A/min according with Safety Electrical Low Voltage (SELV). The 12 V power supply cable length should not exceed 3 meters.

This product is intended to be installed in accordance with the NEC Class 2 requirements; or supplied by a listed external Power Unit marked Class 2, Limited Power source, or LPS and rated 12 V DC, 2.5 A minimum.

In case of building to building connection it is recommended to connect 0 V to ground. Ground cable must be connected with the terminal block board fixation screw marked with universal ground symbol.

Europe: SAGEM SA hereby declares that the SAGEM SA MorphoAccess™ has been tested and found compliant with the below listed standards as required by the EMC Directive 89/336/EEC: EN55022 (1994)/EN55024 (1998) and by the low voltage Directive 73/23/EEC amended by 93/68/EEC: EN60950 (2000).

USA: This equipment has been tested and found compliant with Class B digital device requirements, pursuant to part 15 of the FCC Rules. These requirements are designed to ensure reasonable protection against harmful RF 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 interfere with radio communications. If this equipment interferes with radio or television reception - which can be determined by disconnecting and re-connecting the unit - 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.

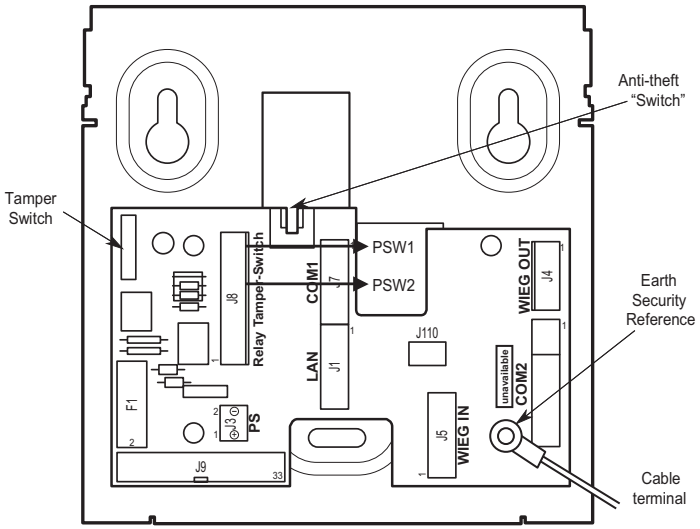
Replacement of the battery located on the motherboard

CAUTION
Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type recommended by the manufacturer.
Must be disposed of properly.

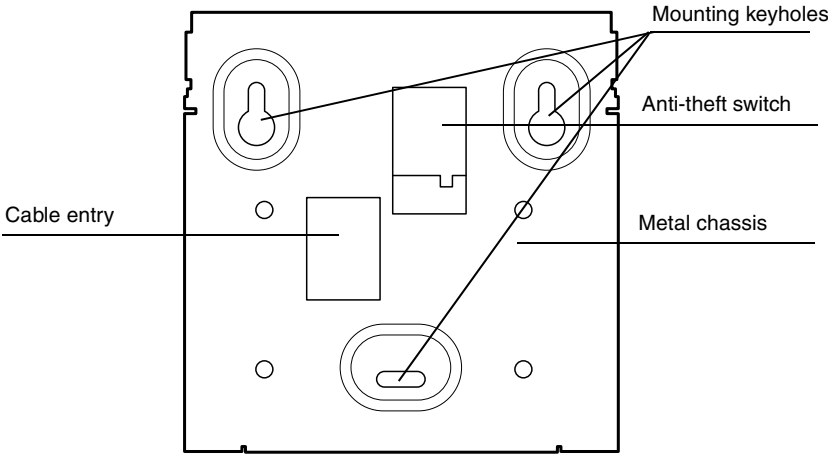
ATTENTION
Il y a danger d'explosion s'il y a remplacement incorrect de la batterie.
Remplacer uniquement avec une batterie du même type ou d'un type équivalent recommandé par le constructeur.
Éliminer de façon appropriée.

For systems placed in other building than supervisor one's, the electrical security is guaranteed with an "earth connection" to the terminal.

A cable terminal connected to "earth security reference" must be tied to the fixation designed for (See bottom view).



GENERAL DESCRIPTIONS



INSTALLATION PROCEDURE

Stage 1: Drilling the mounting holes for the metal chassis assembly

Tamper switch and anti-theft function provide a part of the security of the terminal.

Anti-theft function is realized with a block placed on the wall, and hiding the opto light.

In order to satisfy the security profile of the MorphoAccess™ Maxx1 as a high level of security, **a connection may be done towards the supervisor system**.

Only the **connected mode provides the high security** level required for this terminal.

Standalone mode cannot be so secured.

a) Drill the 2 holes for the screws for the mounting keyholes so that the cable entry is in a suitable position for your cabling, using the dimensional drawing above (See the section Drilling Template).

b) Drill the hole for the third screw in the center of the slot so that it is possible to correct the position later, if necessary.

c) The mounting screws must be 5 mm diameter maximum.

d) Drill the hole for the srew, for the anti-theft block, as mentioned on the view.

Stage 2: Mounting the metal chassis assembly

a) Disconnect the ribbon cable between the motherboard and the terminal block board so that the assembly shown above can be detached from the rest of MorphoAccess™.

b) Pass the connecting cables through the cable entry.

c) Position the chassis assembly against the wall using the two screws in the mounting keyholes.

d) Hold the chassis in place with a screw through the mounting slot.

e) Adjust the position, and fix in place by tightening all three screws.

f) Adjust the anti-theft block into the hole designed for, and fix in place the screw.

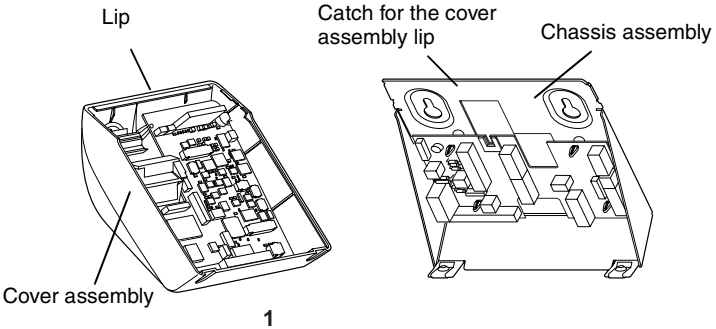
Check that nothing is interfering with the switch and opto component.

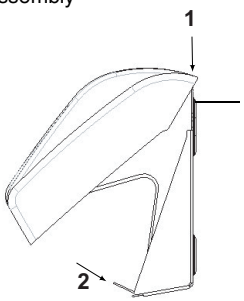
g) Connect cables to terminal blocks (see the detailed instructions in the following sections).

Stage 3: Connecting the chassis assembly to the cover assembly

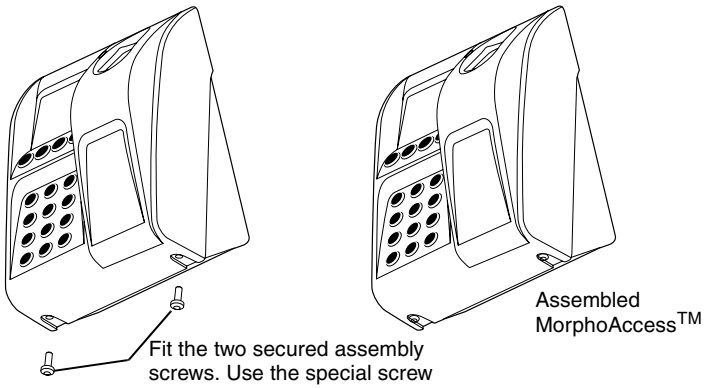
No add-on.

Stage 4: Closing MorphoAccess™



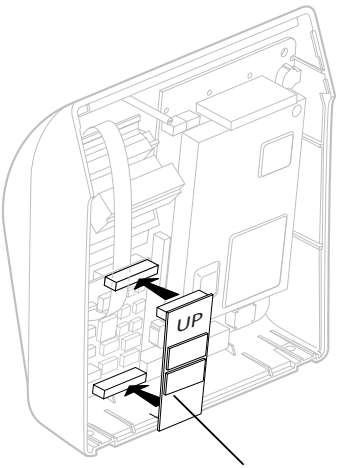


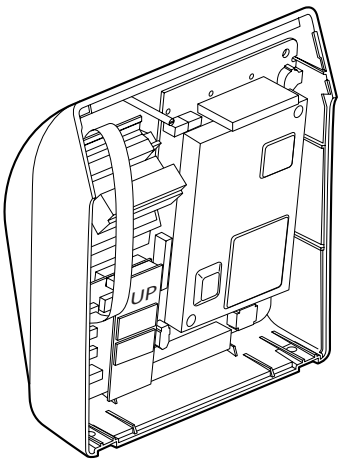
When the ribbon cable has been connected between the two assemblies (see stage 3), the cover assembly is fitted to the chassis assembly.
1 - The lip on the cover slides behind the chassis, to fit over the catch shown on the diagram above.
2 - The cover is fitted onto the chassis by rotating it.



SAGEM SA

HOW TO UPGRADE MA201 TO MA301

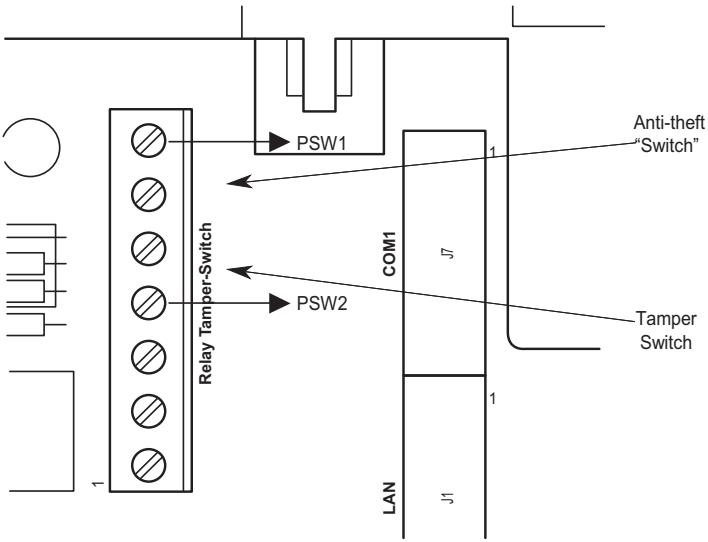




ELECTRICAL INTERFACES

Attention, on these Maxx1 versions **COM2 is unavailable**.

Output Relay and tamper switch interfaces

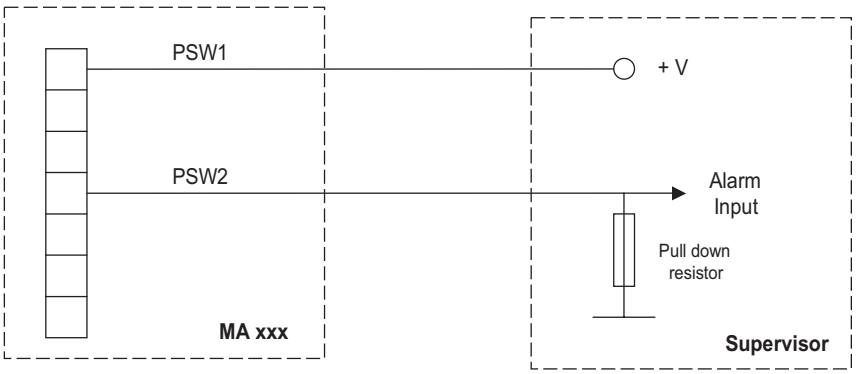


PSW1 and PSW2 signals are connected to alarm management of the supervisor system.

The supervisor system manages alarms.

This system received the integrity information from Maxx1 with the 2 cables.

Example of wiring:



CONFIGURING THE MAXX1

No add-on.

MORPHOACCESS™ SOFTWARE USER INTERFACE

– Password

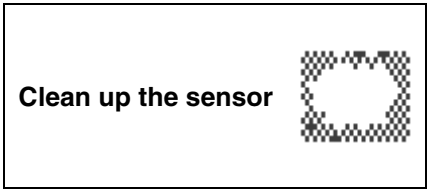
MorphoAccess xx1 terminal has a specific password "131664". For security reasons, **SAGEM SA recommends strongly** to the fitter man to **configure it with a different value**, and specific at each customer.

– MorphoAccess xx1 out of order

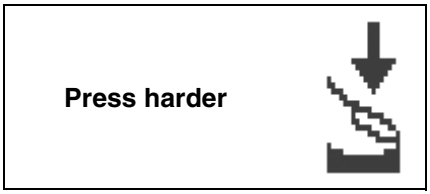
When the MorphoAccess xx1 is out of order, the MorphoAccess™ xx1 can no longer be used, excepted access to admin mode, ILV operations and change languages. A persistent screen is displayed:

– Specific MorphoAccess xx1 messages

Some additional messages may appear during MAxx1 operation.



If fingerprint zone is too small:



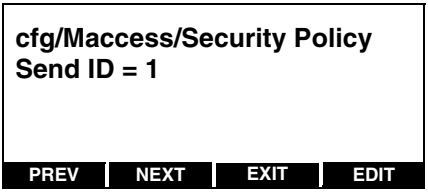
MORPHOACCESS™ SOFTWARE ADMINISTRATOR INTERFACE

The Config menu

COM2 is unavailable and Send parameter is not activated (default = 0)

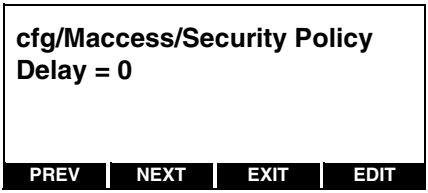
Parameter	Value	Comment
Send	0 (default)	COM2 unavailable
	1	Forbidden value for Maxx1

Specific FFD parameters



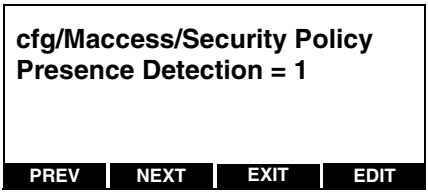
The administrator may choose if specific FFD ID is sent when a false finger is detected, with the Host System Interface.

Parameter	Value	Comment
Send ID	0	No ID is sent on FFD events
	1 (default)	ID is sent on FFD events (if cfg/Maccess/Admin/ Send = 1)



The administrator may choose the "wasting" time after a false finger is detected, and before next identification.

Parameter	Value	Comment
Delay	0 (default)	No time after 1 attempt of fake finger presentation
	YY	Time (YY x 10ms) after 1 attempt of fake finger presentation



The administrator may choose the finger presence detection mode.

Parameter	Value	Comment
Presence Detection	0	No presence detection in identification mode
	1 (default)	Presence detection mode is activated in identification mode (sensor in standby, when no finger presence detection)

The administrator may choose the specific ID sent on Wiegand Data clock interfaces, when a false finger is detected.

Parameter	Value	Comment
FFD ID	XXXXh (FFFFh default)	Value sent when a fake finger is detected.

The fake finger detection (FFD) is characterized by a false reject rate (percentage of live fingers detected as fake fingers) and a false acceptance rate (percentage of fake finger detected as real ones). This FRR (resp. FAR) is called FFD-FRR (resp. FFD-FAR). The overall reject rate of MAxx1 models is in fact: Standard MA FRR + FFD-FRR.

Three security levels are proposed and provide different trade-off between FFD-FAR and FFD-FRR.

Parameter	Value	Comment
Level	0	Low false finger security level
	1 (default)	Medium false finger security level
	2	High false finger security level

SAGEM SA

COMMUNICATION PROTOCOL

See the "Host System Interface Addendum" documentation.

MORPHOACCESS™ TECHNICAL CHARACTERISTICS

This security of the MorphoAccess™ MAxx1 series terminal is strengthened.

In fact a specific system (SAGEM SA patents) detects fake fingers such as paper copy.

When a fake finger is detected by the terminal, the supervisor system is informed and no information is supplied to the user.

It is the administrator responsibility, according to its own security policy, to manage the possible alarms returned by the MAxx1, and to insure that the MAxx1 configuration is conformed to its need.

When an alarm is detected the appropriate action must be carried out by the access control system.

RECOMMENDATIONS

We advise persons with pacemaker or other electronic disposals against using this MAxx1 version of MorphoAccess™ terminal.

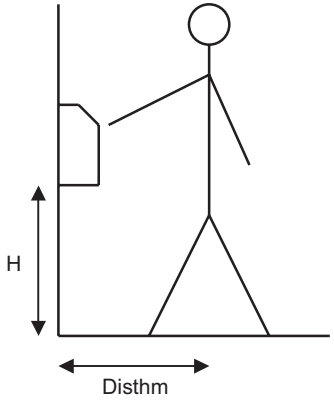
Cleaning

It is recommended to clean up the optronic sensor when this one is dirty. If dust is deposited, the MAxx1 performances are degraded.

The cleaning material for sensor must be a soft material to prevent scratches. It is advised to clean daily the sensor with a lightly damp rag, to dry it and to wait 30 minutes before starting up again the terminal.

In order to eliminate organic marks a weekly cleaning is required. In this case using a rag moistened with diluted dishwashing liquid is advised.

Scratch materials, alcohol and acids products are forbidden.



– Elevation from ground to MA terminal

If the MA terminal is hung up vertically to a wall, the optimal elevation from ground to MA terminal is between 1.1 to 1.35 meter.

*H optimum = (h man + h woman)/2 - (dlcd + ((tan(alpha-teta) + tan(alpha + teta)) * disthm/2 + dyt)*

Hypothesis:
h man = 1.75 m (population average)
h woman = 1.70 m (population average)
Distance man/machine (disthm) = 0.5 m
Distance eyes/top head (dyt) = 0.1 m
LCD Angle of view LCD (teta) = ± 25°
LCD Angle/vertical (alpha) = 25°
Distance from middle LCD/bottom of MA (dlcd) = 0.11 m

*H optimum = 1.514 - 0.596 * disthm*

> H optimum = 1.22 meter

– Tilt the MA terminal if elevation is a constraint

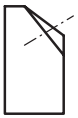
If the MA terminal must be located at a given "H" elevation, the optimal tilt angle of the MA terminal could be adjusted, in order to have a good LCD visibility and an optimum finger ergonomics (MA Angle /vertical = beta)

Beta = Arctan (tan(alpha) + ((h optimum - H)/disthm)) - 25°

Beta = Arctan (0,466 + 2(h optimum - H)) - 25°*

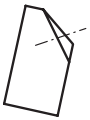
Examples:

H = 1.22 meter (= h optimum) Beta = 0°



H = 1.00 meter Beta = +17°

H = 1.40 meter Beta = -19°



This case is not recommended.
It has a poor finger ergonomics.

Considering that the identified population is diversified from small to tall, if the entrance is equipped with several MA terminals, the best will be to have different MA position height, in order to fit everybody.

Electricity Static Discharge

If you are facing ESD phenomenon, specially in offices equipped with synthetic carpets, in order to limit it, you can follow one of the next recommendations:

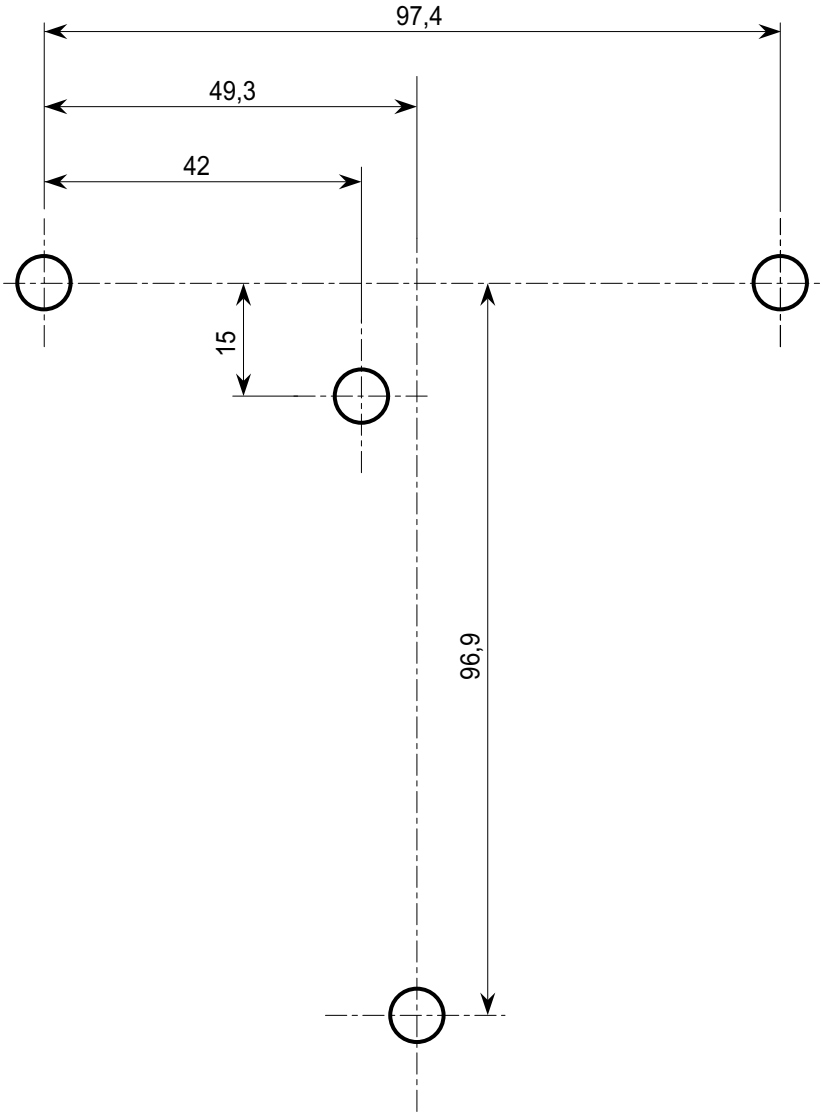
- Clean the MorphoAccess zone with anti ESD spray.
- Put under the MorphoAccess, a conductive carpet connected to earth reference.
- Put an ionizing air system in MorphoAccess zone.

ANNEX 4 - RESERVED CONFIGURATION KEYS

No add-on.

SAGEM SA

DRILLING TEMPLATE



XE 0047-07

251308022 Issue A

SAGEM SA

Siège social : Le Ponant de Paris
27, rue Leblanc - 75512 PARIS CEDEX 15 - FRANCE
Société anonyme à directoire et conseil de surveillance
au capital de 36 405 229 € 562 082 909 RCS PARIS