Morpho *Wave* Compact

Quick User Guide
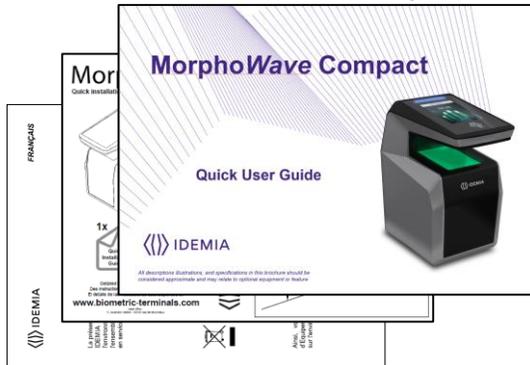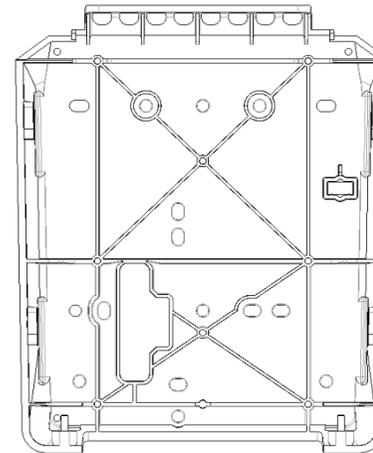
MorphoWave Compact box content

Product packaging checklist:

QTY	ITEM
1	Morpho*Wave* Compact terminal
1	Wall Mounting Plate
1	Documentation package

Electronic documentation is provided in Adobe® Acrobat® format (PDF). Adobe® Acrobat® Reader is available at http://www.adobe.com.

Regulatory, safety and environmental notices

CE

Products bearing the CE marking comply with one or more of the following EU Directives as may be applicable:

- Radio Equipment Directive (RED) 2014/53/UE
- RoHS Directive 2011/65/EU.

Compliance with these directives is assessed using applicable European Harmonised Standards.<<<

The installation of this product should be made by a qualified service Person and should comply with all local regulations.

It is strongly recommended to use a class II power supply at 12V-24V and 2.5 A. min (at 12V) in conformity with Safety Electrical Low Voltage (SELV). The AC power supply cable length should not exceed 10 meters.

This system must be installed in accordance with the National Electrical Code (NFPA 70), and the local authority having jurisdiction.

This product is intended to be installed with a power supply complying with IEC60950-1, in accordance with the NEC Class 2 requirements; or supplied by a listed IEC60950-1 external Power Unit marked Class 2, Limited Power source, or LPS and rated 12VDC, 2.5 A minimum or 24VDC, 1.25 A minimum.

In case of building-to-building connection it is recommended to connect 0V to ground. Ground cable must be connected with the terminal block Power Ground.

Note that all connections of the Morpho*Wave* Compact terminal described hereafter are of SELV (Safety Electrical Low Voltage) type.

This symbol means do not dispose of your product with your other household waste. Instead, you should protect human health and the environment by handing over your waste equipment to a designated collection point for the recycling of waste electrical and electronic equipment.

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Product Overview

MorphoWave Compact provides an innovative and effective solution for access control applications using very fast acquisitions of four (4) fingerprints without any contact.

- ◆Access control and Time & Attendance
- ◆Biometric authentication by a hand swipe through the active volume without contact
- ◆IDEMIA False finger detection algorithms
- ◆Simple and ergonomic man-machine interface
- ◆Contactless card reader (MIFARE Classic, MIFARE Plus, DESFire, HID® iClass*, HID ® Seos, HID® PROX*)
- ◆Intercom system
- ◆Universal connectivity (Gigabit Ethernet, Wi-Fi™, RS485/422, Wiegand, Dataclock)
- ◆Anti-tamper sensor

Speaker

Status LED

Contactless card area

4.3″ WVGA touchscreen LCD

Microphone

Hand proximity sensor

Contactless biometric sensor

Optional Wifi interface

IDEMIA

10:15

Step one : overview

* Depending on product version

Terminal Implementation

To secure an access, IDEMIA recommends installing the Morpho*Wave* Compact terminal as a part of a typical Access Control system, which consists of the components described below.
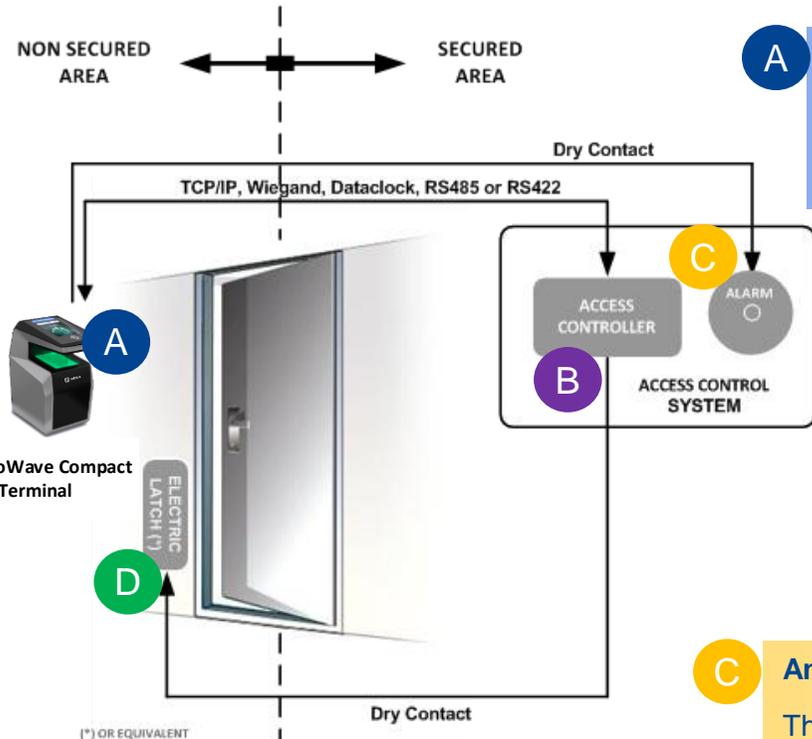
A — The Morpho*Wave* Compact terminal

Its role is to process the access request from the user. It performs access right checks using one-to-many biometric identification or one-to-one biometric verification, and/or RF card authentication, and/or PIN check.

B — An Access Controller (3rd party product)

The terminal interfaces with an Access Controller (using TCP/IP, Wiegand, Data Clock, RS485 or RS422 protocol):

After access request, the terminal sends the result of user's access rights to the Access Controller (this message contains at least the User ID)

The Access Controller performs additional checks, and returns the final decision (access granted/denied) to the terminal (which displays the result to the user), and to the door controller which opens the door (if the access has been granted).

C — An Alarm (3rd party product)

The terminal sends a message to the Access Controller, to activate the Alarm as soon as a malicious activity, such as tamper or pulling, is detected

D — A Door Electric Latch or equivalent (3rd party product)

The Access Controller sends a command to activate the latch if the access is granted (i.e. if the individual's User ID is listed in the Controller authorized user List). Control of the latch is made through a dry contact..

Step one : overview

Typical Access Control Process

On Access Request, the terminal checks user's access rights using a biometric check.

If the result of the check is successful (access granted), a message is sent to the Central Access Controller for additional access rights check.

If the user is allowed to access to the protected zone, the central access controller returns an "access granted" message to the terminal and a "open" command to the gate controller.

Access Granted!

ACCESS DENIED

Note: One user must be enrolled in the terminal database, in order to be able to perform biometric check.

Step one : overview

Access Control Modes

The terminal can be configured in one of the modes described in the table below

	Identification	Authentication	Multifactor	Proxy
Access control application	Application that runs on the terminal when it starts.	Application that runs on the terminal when it starts.	Application that runs on the terminal when it starts.	Remote application that controls the terminal through network commands
Access control triggering event	A user swipes his/her hand in the biometric sensor.	A user places a contactless card in front of the reader. (*)	Both Identification and Authentication triggers are enabled.	Triggering events are selected by the remote application
Biometric check (if enabled)	The user's captured fingerprints are matched against all fingerprints in the terminal database.	The user's captured fingerprints are matched against his/her reference fingerprints. (**)	As per Identification or Authentication, depending on the triggering event	Selected by the remote application
Decision to display result signal to user	By Identification standalone application or controller feedback	By Authentication standalone application or controller feedback	By running standalone application or controller feedback	By remote application

(*) or the user enters his/her Identifier on the keypad, or a Wiegand frame is received from an external device
(**) stored on the contactless card or in the user record in the terminal's local database

Step one : overview

Deployment Environment

Operating temperature	-10°to + 55 °C (14°to 131°F) when ECO-Mode ON
	-10°to + 45 °C (14°to 113°F) when ECO-Mode OFF
Operating humidity	10 % < RH < 80 % (non condensing)
Storage temperature	-25°to + 70 °C (-13°to 158°F)
Storage humidity	5% < RH < 95 %
IP Code	IP65
	For UL 294 compliance, the products are rated for indoor use

⚠️ Please apply eco mode feature accordingly to operating temperature range in order to avoid over heating of the product

General precautions
◆Do not expose the terminal to extreme temperatures.
◆When the environment is very dry, avoid synthetic carpeting near the Morpho*Wave* Compact terminal, to reduce the risk of unwanted electrostatic discharge.

Areas containing combustibles
◆Do not install the terminal in the vicinity of gas stations or any other installation containing flammable or combustible gases or materials. The terminal is not designed to be intrinsically safe.

The terminal should be installed in controlled lighting conditions
◆Avoid exposure of the biometric sensor to direct sunlight.

The terminal should be installed in controlled area in order to avoid water on the sensor

Step one : overview

ECO Mode

On top of the standard Stand-by mode, Morpho*Wave* Compact provides an ECO Mode

When ECO Mode setting is ON :
◆ green light of the sensor is switched off after 30s
◆ the 2 proximity sensors (on each side of the product) are activated, allowing automatic detection of the hand to switch on again the green light
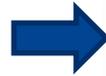
When ECO Mode setting is OFF, the proximity sensors are disabled :
If the product enters in Stand-by mode (with ECO mode setting OFF), waving the hand will not wake-up the product (for details on ECO-MODE, please refer to next page).

Step one : overview

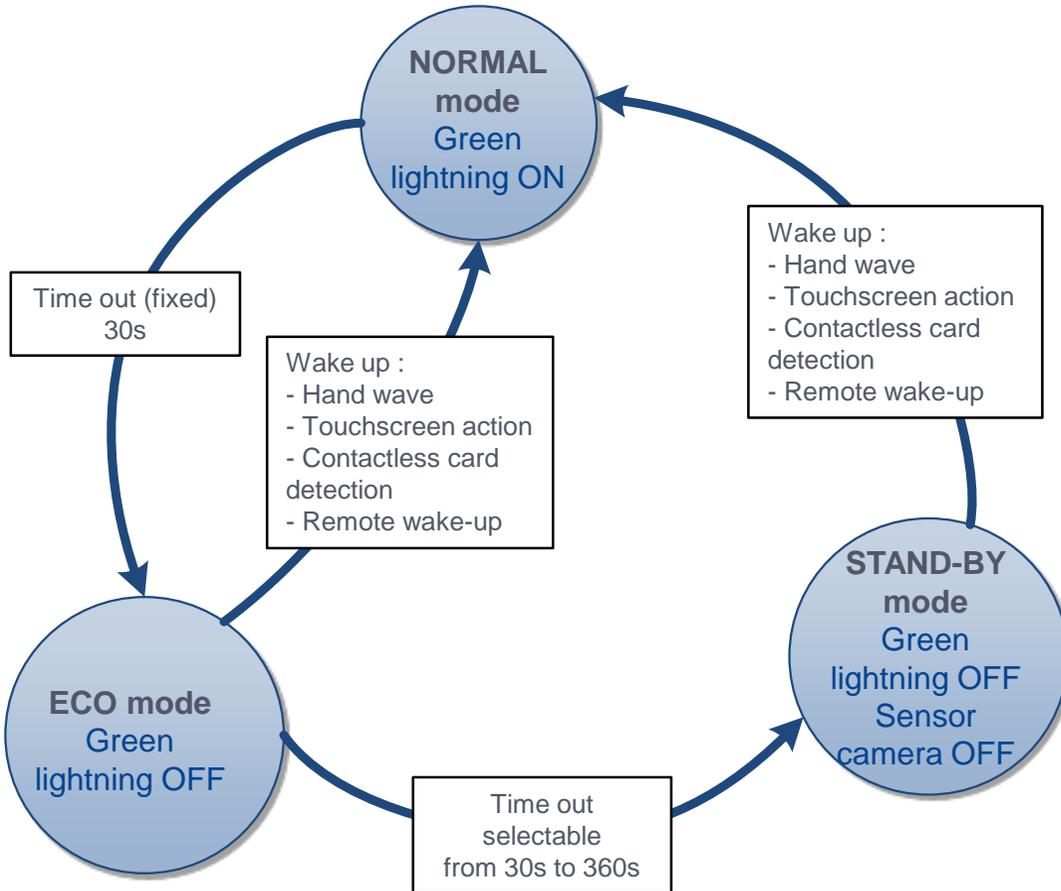# ECO Mode detailed diagram

Eco mode ON

NORMAL mode
Green lightning ON

ECO mode
Green lightning OFF

STAND-BY mode
Green lightning OFF
Sensor camera OFF

Time out (fixed) 30s

Wake up :
- Hand wave
- Touchscreen action
- Contactless card detection
- Remote wake-up

Wake up :
- Hand wave
- Touchscreen action
- Contactless card detection
- Remote wake-up

Time out selectable from 30s to 360s

Eco Mode OFF

NORMAL mode
Green lightning ON

STAND-BY mode
Green lightning OFF
Sensor camera OFF

Wake up :
- Touchscreen action
- Contactless card detection
- Remote wake-up

Time out selectable from 30s to 360s

Step one : overview

Wiring Overview

RJ-45 : Ethernet & PoE

Pin	Signal	Color
1	ETH TX+	Orange / White
2	ETH TX-	Orange
3	ETH RX+	Green / White
4	ETH VPORT+	Blue
5	ETH VPORT+	Blue / White
6	ETH RX-	Green
7	ETH VPORT-	Brown / White
8	ETH VPORT-	Brown
Shell	ETH GND	Drain wire (no color)

RJ45

8 wires
5 wires
7 wires
7 wires
7 wires

⚠ Pin numbers shown in this document correspond to the internal connector pinout in the product. The connector attached to the cable is for test only and should be removed for installation.

RS-422 and 485

Pin	Signal	Color
7	RS485_RX_A	Blue / Black
8	RS485_TX_Z	Green / White
9	RS485_RX_B	Blue / White
10	RS485_TX_Y	Green / Black
11	RS485_GND	Black / Red

GPIO

Pin	Signal	Color
19	GPI2	Orange / Black
20	GPO2	Yellow / Red
17	GPI1	Orange / Red
18	GPO1	Yellow / Red
15	GPI0	Orange
16	GPO0	Yellow
22	GPIO_GND	Black / Red

Wiegand IN & Wiegand OUT

Pin	Signal	Color
25	WIEGAND_LEDOUT1	Blue
28	WIEGAND_LEDOUT2	Blue / Red
23	WIEGAND_IN1	White / Red
24	WIEGAND_OUT0	Green
26	WIEGAND_OUT1	White
21	WIEGAND_IN0	Green / Red
27	WIEGAND_GND	Black / Red

Power supply & Tamper switch

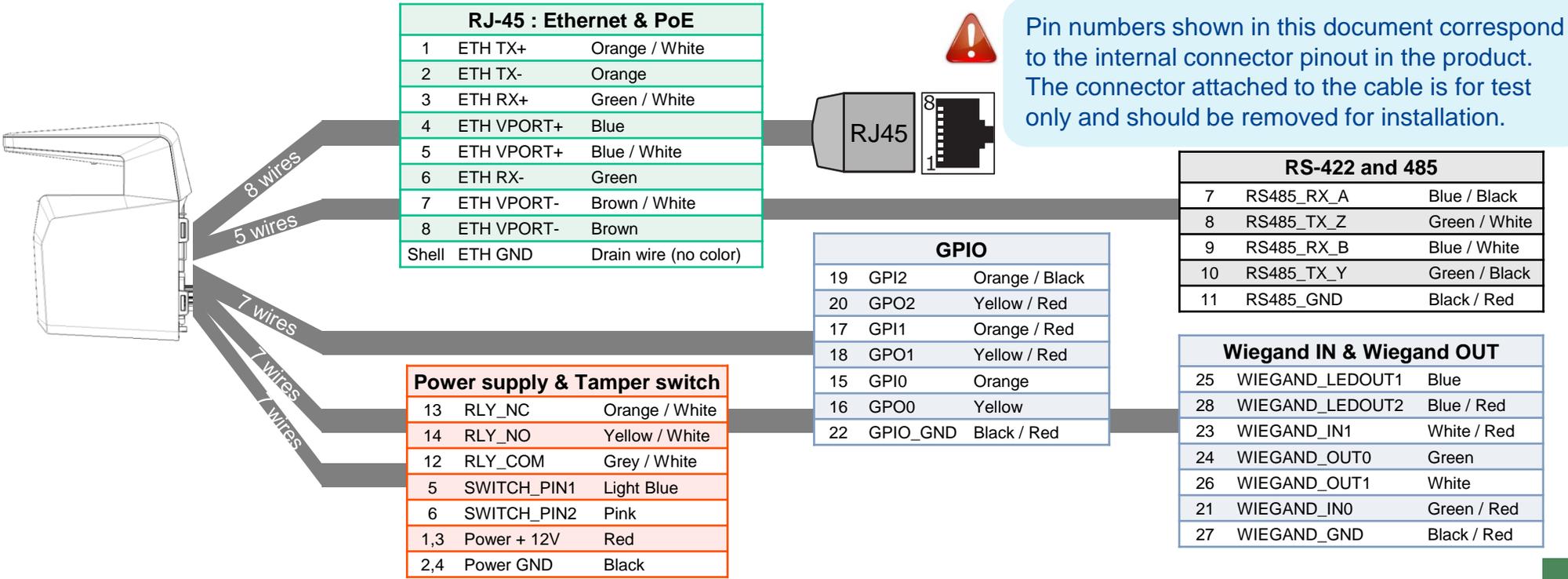| Pin	Signal	Color
13	RLY_NC	Orange / White
14	RLY_NO	Yellow / White
12	RLY_COM	Grey / White
5	SWITCH_PIN1	Light Blue
6	SWITCH_PIN2	Pink
1,3	Power + 12V	Red
2,4	Power GND	Black

All connections of the terminal are of SELV (Safety Electrical Low Voltage) type.

⚠ **Power supply from electrical source shall be switched off before starting the installation.**

Before proceeding, make sure that the person in charge of installation and connections, is properly connected to earth, in order to prevent Electrostatic Discharges (ESD).

Backup of the Date/Time of the terminal: the volatile settings (such as date/time) of the terminal are protected against power failure, by a dedicated component during at least 24 hours (at 25°C) without external power supply.

Step two : wiring

Power supply
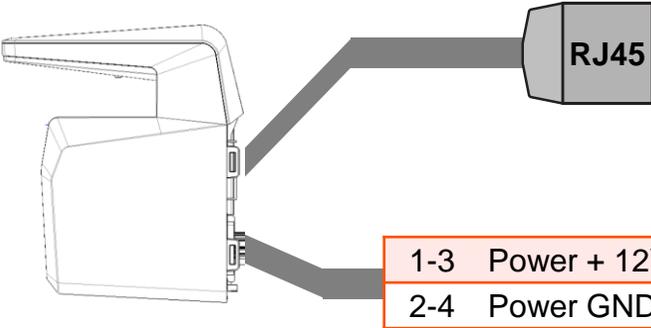
Power Over Ethernet (POE+): power can be provided through RJ-45 connector using a PSE (Power Sourcing Equipment) **IEEE802.3at type 2** compliant.

The terminal is a Class 4 (25.5 W) PD (Powered Device).

RJ45

1-3	Power + 12V	Red
2-4	Power GND	Black

External Power Supply: 12-24 Volts (regulated and filtered) 2.5 Amp min @12 V, IEC/EN EN60950-1 standard compliant. If sharing power between devices, each unit must receive 2.5 A (e.g. two units would require a 12 VDC, 5 A supply).

A battery backup or uninterrupted power supply (UPS) with built-in surge protection is recommended.

IDEMIA recommends using a 24V power supply and AWG16 gauge cable. The voltage measured on the product block connector of the terminal must be equal to 12V-24V (-15% / +10%).

The voltage drop due to the cable shall be taken into account. The table at the right, shows the maximum distance between power supply and 1 unique device, depending on cable gauge and power supply rating.
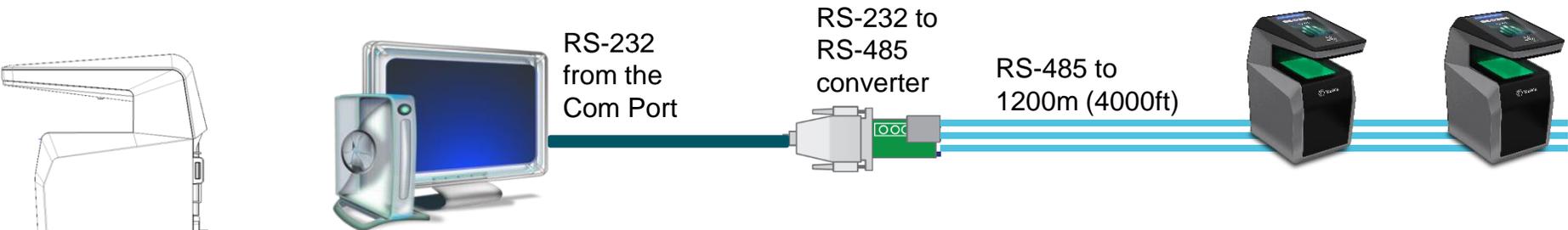
Gauge AWG	Section (mm²)	Maximum distance (meters) vs power source rating		
		12V +/-10%	12V +/-5%	24V +/-10%
16	1.31	9 m	20 m	300 m
18	0.82	6 m	12 m	200 m
20	0.52	3 m	8 m	120 m
22	0.32	2 m	5 m	75 m

WARNING: Under powering may cause memory and data corruption; over powering may cause hardware damage. Both of these situations will void the warranty

Step two : wiring

RS-485 Communication

RS-232 from the Com Port

RS-232 to RS-485 converter

RS-485 to 1200m (4000ft)

8	RS485_TX_Z (-)	Green / White
10	RS485_TX_Y (+)	Green / Black
11	RS485_GND	Black / Red

For RS-485 installations, the cable should be run in a daisy-chain configuration (i.e. converter > position 1 > position 2 > position 3, etc.).

Choose a RS-232 to RS-485 converter that supports Sense Data to switch from Send to Receive mode.

Use CAT-5 UTP (or better) cable (shielded recommended) with a characteristic impedance of 120 ohms.

AWG 24 should be the minimum wire gauge used.

Choose one twisted pair of conductors to use for RS485_TX_Y (TX+, Green / Black wire - 10) and RS485_TX_Z (TX-, Green / White wire - 8). Another conductor should be used for Signal Ground (Black / Red wire - 11).
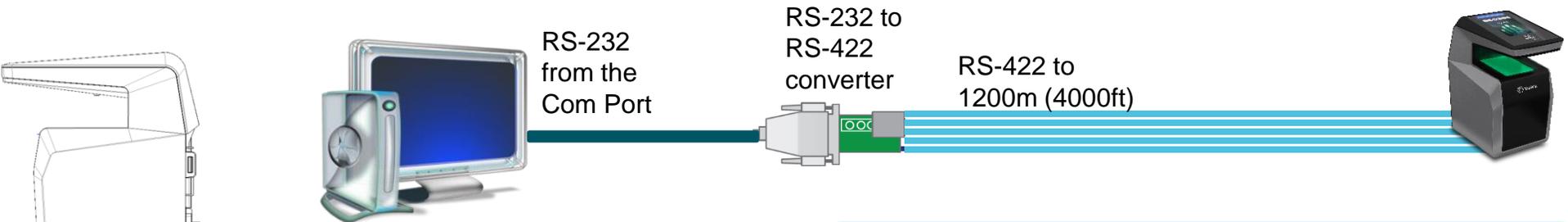
IMPORTANT:

➤ A maximum of 31 devices may be installed on the same line.

➤ The maximum total cable length is 1200m (4000 ft.)

➤ The cable must be dedicated to this installation and not used for any other purpose

Step three : communications

RS-422 Communication

RS-232 from the Com Port

RS-232 to RS-422 converter

RS-422 to 1200m (4000ft)

7	RS485_RX_A (RX+)	Blue / Black
8	RS485_TX_Z (TX-)	Green / White
9	RS485_RX_B (RX-)	Blue / White
10	RS485_TX_Y (TX+)	Green / Black
11	RS485_GND	Black / Red

For RS-422 installations, the cable should be run in a point to point configuration (i.e. PC > converter > terminal)

Use CAT-5 UTP (or better) cable (shielded recommended) with a impedance of 120 Ω. AWG 24 should be the minimum wire gauge used.

Choose one twisted pair of conductors to use for RS485_TX_Y (TX+, Green / Black wire - 10) and RS485_TX_Z (TX-, Green / White wire - 8).

Choose one twisted pair of conductors to use for RS485_RX_A (RX+, Blue / Black wire - 7) and RS485_RX_B (RX-, Blue / White wire - 9).

Another conductor should be used for Signal Ground (Black / Red wire - 11).

The maximum total cable length is 4000 ft. (1200m).

The cable must be dedicated to this installation and not used for any other purpose

Step three : communications

Ethernet and Wireless LAN

1	ETH TX+	Orange / White
2	ETH TX-	Orange
3	ETH RX+	Green / White
4	ETH VPORT+	Blue
5	ETH VPORT+	Blue / White
6	ETH RX-	Green
7	ETH VPORT-	Brown / White
8	ETH VPORT-	Brown
Shell	ETH GND	Drain wire (no color)

RJ45

Wireless

LAN Ethernet

Management station
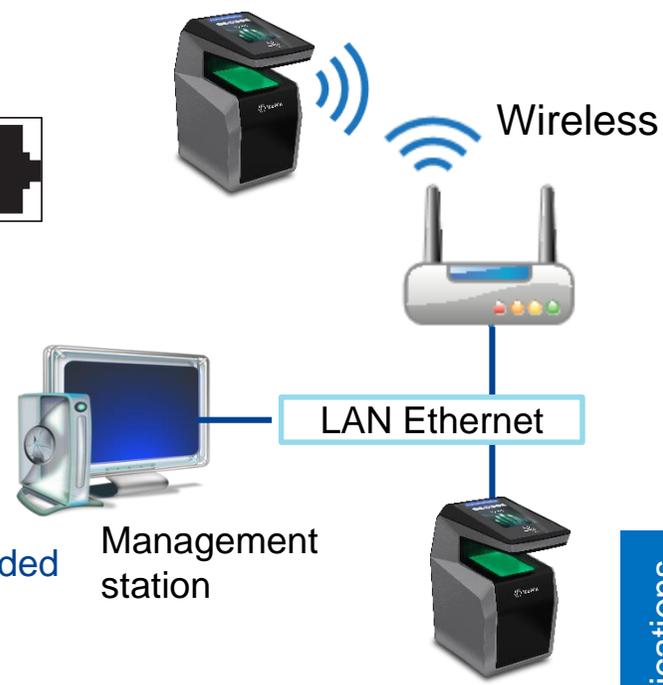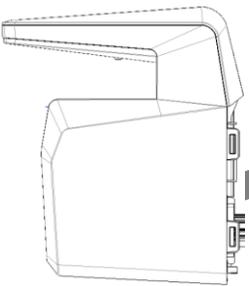
Use a category 6 shielding cable (120 Ohms) or better. It is strongly recommended to insert a repeater unit every 90 m.

Static mode is enabled by default on Morpho*Wave* Compact terminals (factory setting) : IP=192.168.1.10, Gateway=192.168.1.254, Mask= 255.255.254.0

Terminal Block Ethernet connection

◆ Extreme care must be taken while connecting Ethernet wire to the block board since low quality connection may strongly impact Ethernet signal sensibility.

◆ Connect Rx+ and Rx- with the same twisted-pair wire (and do the same with Tx+/Tx- and the other twisted-pair wire).

WLAN option
IDEMIA wireless enabled devices support 802.11b and 802.11g standards. WEP Open, WPA and WPA2 are supported.

Step three : communications

Wiegand Communication

25	WIEGAND_LEDOUT1	Blue	
28	WIEGAND_LEDOUT2	Blue / Red	**LED Out**
23	WIEGAND_IN1	White / Red	
24	WIEGAND_OUT0	Green	
26	WIEGAND_OUT1	White	
21	WIEGAND_IN0	Green / Red	**Wiegand In**
27	WIEGAND_GND	Black / Red	**Wiegand Out**
16	GPO0	Yellow	**LED In**

Three-conductor cable (shielded recommended) is required for Data 0, Data 1, and WGND.

Use 18-22 AWG cable in a homerun configuration from each unit to the Access Control Panel (ACP).
◆ Connect **WIEGAND_OUT0** (Green wire – Pin 24) to ACP Data 0,
◆ Connect **WIEGAND_OUT1** (White wire – Pin 26) to ACP Data 1,
◆ Connect **WIEGAND_GND** (Black / Red wire – Pin 27) to ACP reader common (0vDC).

For 18 AWG, the maximum cable distance is (150m) 500 ft. ; for 20 AWG, the maximum is 90m (300 ft.) ; for 22 AWG, the maximum is 60m (200 ft.)

All controller output shall be open drain or 5 V +/- 5%

Step three : communications

Wiegand Communication (continued)

Important

By default, the Wiegand output format is not enabled. Wiegand output must be configured before connecting to the ACP.

Note

On installation, the system administrator will be prompted to select either a pre-existing Wiegand frame format or create a custom format, and upload it to the unit before the first use.
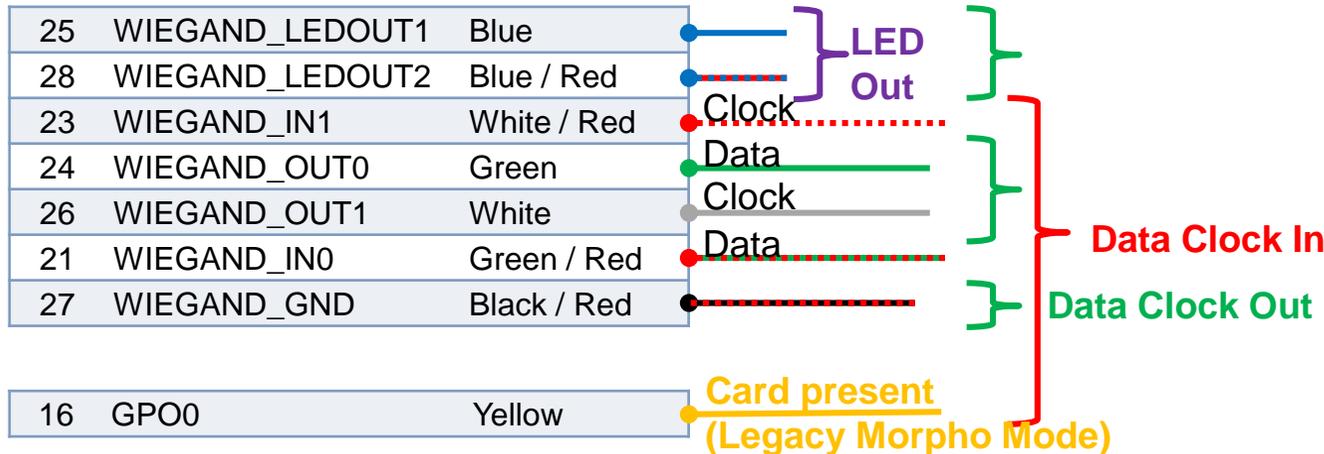
Data Clock

The Wiegand port also supports the Clock & Data protocol. The wiring is described below.

Example Format Information

Type: **Standard 26-bit**

➢ Alt Site Code and Fail Site Code Range: **0-255**
➢ Template ID Number Range: **1-65535**
➢ Extended ID Number Range: **N/A**
➢ ID Start Bit: 9
➢ Length of ID: 16
➢ Site Code Start bit: 1
➢ Length of Site Code: 8
➢ Start Bit length : 0

25	WIEGAND_LEDOUT1	Blue
28	WIEGAND_LEDOUT2	Blue / Red
23	WIEGAND_IN1	White / Red
24	WIEGAND_OUT0	Green
26	WIEGAND_OUT1	White
21	WIEGAND_IN0	Green / Red
27	WIEGAND_GND	Black / Red

| 16 | GPO0 | Yellow |

LED Out

Clock
Data
Clock
Data

Data Clock In

Data Clock Out

Card present (Legacy Morpho Mode)
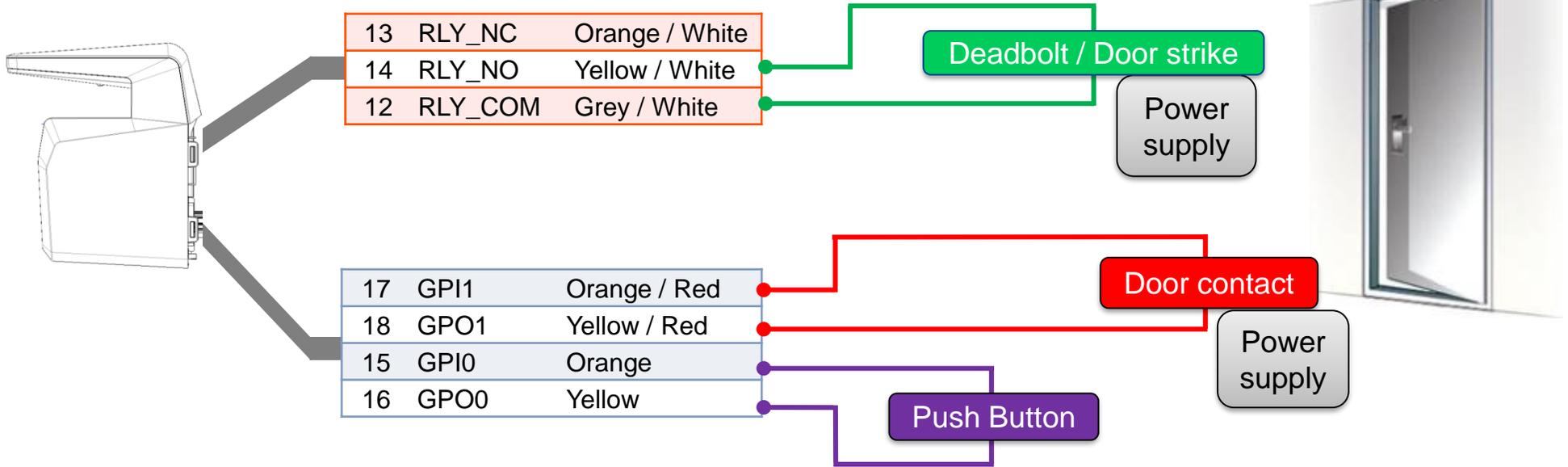
Step three : communications

Single Door Access Control (SDAC)

Single Door Access Control (SDAC) wiring sample : with Push Button

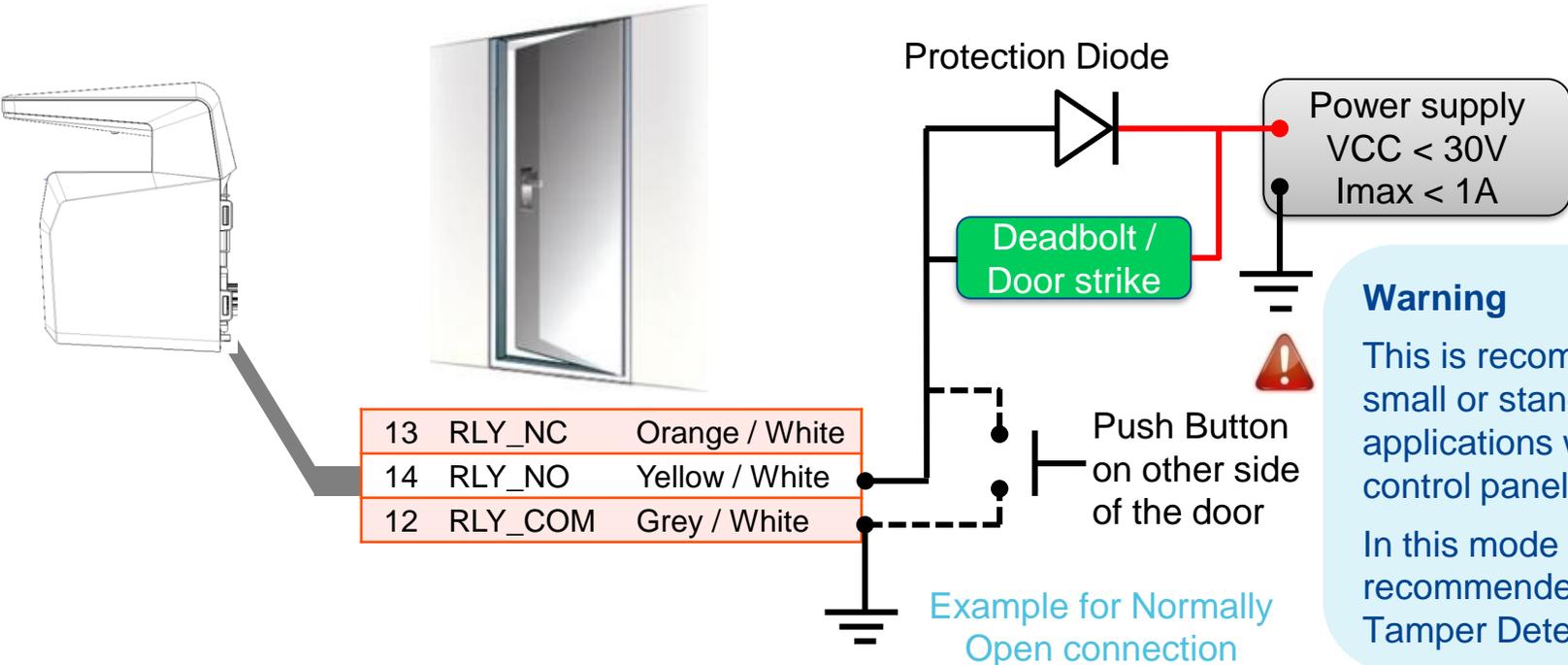See details on next page
for relay connection

13	RLY_NC	Orange / White
14	RLY_NO	Yellow / White
12	RLY_COM	Grey / White

Deadbolt / Door strike

Power supply

17	GPI1	Orange / Red
18	GPO1	Yellow / Red
15	GPI0	Orange
16	GPO0	Yellow

Door contact

Power supply

Push Button

⚠ **If door contact is not used, GPI1 (17) and GPO1 (18) shall be connected together**

⚠ **Power supply from electrical source shall be switched off before starting the installation.**

Step four: SDAC

Internal Relay Wiring

Protection Diode

Power supply
VCC < 30V
Imax < 1A

Deadbolt /
Door strike

13	RLY_NC	Orange / White
14	RLY_NO	Yellow / White
12	RLY_COM	Grey / White

Push Button
on other side
of the door

Example for Normally
Open connection

Warning

This is recommended only for small or stand-alone applications where access control panels are not available.

In this mode it is strongly recommended to monitor the Tamper Detection of the device

Inductive load management requires a parallel diode for a better contact lifetime.

Warning

➢ **The internal relay is limited to a maximum current of 1A @ 30V. If the deadbolt / door strike draws more than 1A, damage to the device may occur. If the deadbolt / door strike load exceeds 1A, an external relay must be used.**
➢ **The internal relay is designed for 100.000 cycles. If more cycles are needed, an external relay driven by GPO must be used.**

Step four: SDAC

Local Administration - First Boot Assistant

The First Boot Assistant (FBA) helps the administrator to configure all the device fundamental settings.

It is automatically launched at first terminal startup, but can also be launched on demand, though administration menu (i.e. to reinitialize terminal main settings)

First Boot Assistant

Date Settings	▼
11/22/2016	
Time Settings	▼
02:26:55	
Time Zone	▶
Trigger Event	▶
Language Settings	▼
English	
Network Settings	▶
Password Settings	▶
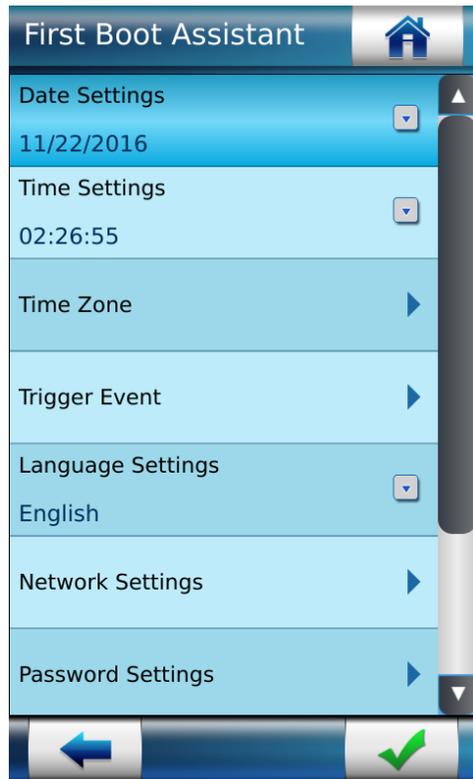
Main settings managed by FBA

Date & Time & Time Zone Settings

Trigger Event: select event(s) to be processed as an access request by a user

Language Settings: user interface language selection,

Network Settings: LAN or WLAN parameters

Password Settings: terminal administration password modification

Boot assistant at next boot: Display this screen on next boot.

Step five: administration

Local Administration – Using Touch Screen Menu

Press on [lock icon] to access to administrator menu (default security code is 12345).

⚠️ For security reasons, it is highly recommended to change the devices default password to a custom password.

Frequently used icons

[back arrow]	[home]
Back (and Cancel)	Exit or Go Home
✖	✔
Cancel or refuse	Validation or confirmation

Administration with MorphoBioToolBox application

The Morpho*Wave* Compact terminal can be configured using a dedicated (Windows) application :
MorphoBioToolBox
Please note that this application has an embedded User Guide (Help menu).
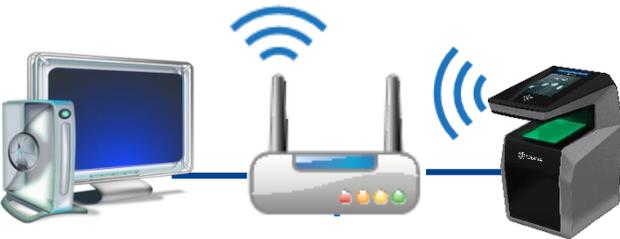
Terminal administration with MorphoBioToolBox (MBTB) application

Step five: administration

Software for Terminal Remote Administration

Morpho*Wave* Compact terminals are fully compatible with:

◆ MorphoManager application (version 13 or higher)

Step six : software

Local Enrollment Process 1/2

A new user can easily be added by using the administration menu of the Morpho*Wave* Compact terminal.
This "local enrolment" is recommended only for small or stand alone installations or testing purposes. For professional systems enrolment should be performed remotely with an enrolment station, which is a PC with a dedicated application such as MorphoManager.

This menu allows a user's record to be added in the local database, with the option of creating a user RF card, with the user's reference data.

Enrolment gathering user's data listed :
◆ User's first name and last name
◆ User's fingerprints (for biometric check)
◆ User's administration rights (none, settings, database)
◆ User's PIN (for PIN check)
◆ User's duress fingerprint
◆ User's access schedule and holiday schedule
◆ User's dynamic message setting
◆ User's record expiry date
◆ User to include in white list or in VIP list
◆ User specific access rules definition

Morpho*Wave* Compact terminal allows you to capture up to 8 fingers per user.

Note: Refer to User enrollment section in Morpho*Wave* Compact Administration Guide.

Step seven: capture basics

Enrollment information

| First Name |
| Last Name |
| Capture Hands |
| Administration rights — No Admin rights |
| User PIN |
| Job code |
| Access Schedule — 63 : All Access |

Local Enrollment Process 2/2

Right hand enrollment settings	Right hand enrolled	Left hand enrollment settings	Left Hand enrolled
Click on finger to change, bandaged fingers must be declared	Expected / Enrolled	Click on finger to change, bandaged fingers must be declared	Expected / Enrolled
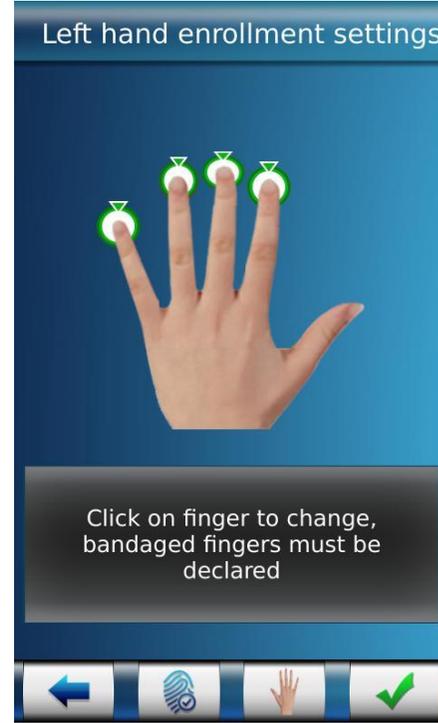
 Allow to set the quality threshold

 Allow to change the current hand to enroll (left /right)

NB: To complete enrollment, minimum of two waves are required.

Step seven: capture basics

Acquisition guidelines 1/2

Insert your hand flat, palm down, from the front of the scanner

Slightly spread apart your fingers

Place your hand between the cover and the optical sensor

Slide your hand from right to left or left to right

Step seven: capture basics

Acquisition guidelines 2/2

Do not cross your fingers

Do not place your hand with fingers spread wide

Do not place your fingers tightly together

Do not place 2 hands inside

Do not touch the cover

Do not place your hand on the optical sensor

Do not place your hand on the edge of the optical sensor

Do not tilt your hand (left to right or fingertip to palm)

Do not insert your hand fingers first from either the left or right side of the scanner

Step seven: capture basics

Contactless Card Position – PIN input

Contactless Card Position

This action is required once during the user enrolment process (generation / encoding of a user RF card), and at each authentication.

Place user's RF card in front of embedded contactless card reader which is located behind the contactless logo.

The authentication process is initiated by the detection of a user card by the contactless card reader.

The terminal reads the user data stored in the card (at least the User ID), and starts the authentication process, as defined by the terminal settings.

NB : Time to read all data from the card would be more or less long depending on the quantities of data to extract and type of card.

Input PIN

Enter user PIN

1234

1	2	3
4	5	6
7	8	9
*	0	#

When defined by terminal settings, the user is required to enter his PIN code, once during enrolment process, and at each authentication (in addition or instead of biometric check).

The PIN code is entered using a numeric keypad displayed on the LCD touch screen.

Step seven: capture basics

Time and Attendance feature

MorphoWave Compact terminals support an optional Time and Attendance (T&A) feature.

For this, the terminal adds a specific T&A information to each identification or authentication record stored in the embedded event log database.

This information is provided by the user through a specific screen displayed during identification or authentication process.

The new screen contains 4 dedicated function keys :
◆Entry
◆Exit
◆Beginning of a task
◆Ending of a task

The user is expected to press one of the keys to provide the specific Time & Attendance information to the terminal.

Depending on terminal settings, this screen is displayed before or after the user waves his/her hand in the sensor or his/her card in front of the reader.
An extended mode is also available with 16 function keys.

Time and Attendance

IN

OUT

IN DUTY

OUT DUTY

Step eight: optional features

Recommendations

The manufacturer cannot be held responsible in case of non-compliance with the following recommendations or incorrect use of the terminal.

Repair and Accessories
◆Do not attempt to repair the Morpho*Wave* Compact terminal yourself. The manufacturer cannot be held responsible for any damage/accident that may result from attempts to repair components. Any work carried out by non-authorized personnel will void your warranty.
◆Only use the terminal with its original accessories. Attempts to use unapproved accessories with your terminal will void your warranty.

Standalone terminals (not connected to a network)
◆For terminals used in standalone mode, it is strongly recommended to regularly backup the local database, and at least after significant changes in the database (add, remove or modification of user's records), on an external support such as a mass storage key

Date / Time synchronization
◆The Morpho*Wave* Compact terminal clock has a +/- 10 ppm typical time deviation at +25°C (roughly +/- 1sec per day). At lower and higher temperature, deviation may be greater (maximum : 8 seconds per 48 hours).
◆When the terminal is used for applications requiring high time precision, it is strongly recommended to synchronize the terminal with an external clock.

Cleaning & Disinfection precautions
◆**To clean the terminal**, a dry cloth is recommended, especially the biometric sensor.
◆**To remove the dust** out of the sensor glass, use dry air spray
◆**To disinfect the terminal**, moisten a non-abrasive wipe with the disinfectant Windex® Multi-Surface (or similar product containing L-Lactic acid) or hydrogen peroxide (<3%) and wipe the device's surface and leave the surface wet with disinfectant for at least 5 minutes. Any other practices (bleach, chlorine, soda, alcohol, quaternary ammonium etc) permanently damage and/or negatively impact the performances of the device.

Firmware release
◆To get the best of our technology, we recommend you to download and install the last firmware release (please refer to last page)

Documentation

Documents about installing the terminal

Quick Installation Guide
This document describes the main step for wall mounting.

Installation Guide
This document describes the terminals physical mounting procedure, electrical interfaces and connection procedures.

Documents about administrating / using the terminal

Quick User Guide
This document gives a quick overview of the product and the basics of configuration and use.

Administration Guide
This document describes the different functions available on the terminal and the procedures for configuring the terminal.

Parameters Guide
This document contains the full description of all the terminal configuration parameters.

Documents for the developer

Host System and Remote Message Interfaces
This document describes the commands supported by the terminal and the format of messages sent by the terminal to a distant system.

Release note : for each firmware version, a release note is published describing the new features, the supported products, the potential known issues, the upgrade / downgrade limitations, the recommendations, the potential restrictions…

Notes

Notes

Notes

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For the latest firmware, software, document releases, and news, please check our website
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To get your login and password please contact your sales representative.

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