DIEBOLD NIXDORF

Modular Waiter Lock

Reader

User Manual

We would like to know your opinion on this publication.

Please send us a copy of this page if you have any constructive criticism.
We would like to thank you in advance for your comments.
With kind regards.

Your Opinion:

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Order-No.: ***01750276702 D***

Modular Waiter Lock

Reader

User Manual

Edition September 2018

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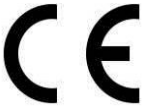
Manufacturer’s Declaration And Approval

General Authorization



This device complies with the requirements of the di rective 2014/30/EU with regard to “Electro-magnetic Compatibility” and 2014/35/EU "Low Voltage Directive" and RoHS directive 2011/65/EU.

Therefore, you will find the CE mark on the device or packaging.

FCC-Class A Declaration

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Modifications not authorized by the manufacturer may void users authority to operate this device.

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, including interference that may cause undesired operation.

CAN ICES-3 (A)/NMB-3(A)

Note: ® 1-Wire and iButton are registered trademarks of Maxim Integrated

Supplier's Declaration of Conformity

Product Description: I-Button
Model: BA9x WL

Party issuing Supplier's Declaration of Conformity
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Singapore 556741

Phone: +65 6747 3828

Responsible Party – U.S. Contact Information
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Phone: +1 330 490 5049

FCC Compliance Statement (for products subject to Part 15)

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.

Warranty

Diebold Nixdorf guarantees generally a warranty engagement for 12 months beginning with the date of delivery. This warranty engagement covers all those damages which occur despite a normal use of the product.

Damages because of

- improper or insufficient maintenance,
- improper use of the product or unauthorized modifications of the product,
- inadequate location or surroundings

will not be covered by the warranty.

For further information of the stipulation look at your contract.

All parts of the product which are subject to wear and tear are not included in the warranty engagement.

Please order spare parts at the Diebold Nixdorf customer service.

About This Manual

This manual informs you about everything you might need to know how to use the Modular Waiter Lock Reader.

Notes in the manual are marked by this symbol.

This symbol is used for warnings.

Note: ® 1-Wire and iButton are registered trademarks of Maxim Integrated

About the Device

The Modular Waiter Lock is a magnetic reader for the reading of magnetic ID-type iButton®. One common application is as an access control device to POS terminal where each operator is assigned an ID iButton® with a unique 64-bit ID. The strong magnetic receptacle of the device pulls the iButton® into position and quickly establishes electrical contact with the probe. Setting up of the device is easy. Simply connect to any standard USB port of the system and secure the device to the counter-top by either the adhesive fasteners or using screws.

Note: ® 1-Wire and iButton are registered trademarks of Maxim Integrated

The parts in the kit

The kit contains the following:

Parts	Description	Quantity
	Waiter lock reader	1
	Fasteners	2

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Software installation

The Modular Waiter Lock reader is a HID class device and therefore does not require the installation of device driver for normal operation. However, for firmware updates it is necessary to install a DFU device driver if the user system OS is not the OEM OS image from Diebold Nixdorf.

User has the following choices for application interface with the device:

- JavaPOS 1.13 with OPOS UDM adapter (ProBASE/POS)

  The installer for this middleware can be found in the Retail\Software folder.

  The logical device name is “WN_iButton_USB”

- VirtualCOM driver

  The installer for this driver can be found in Retail\Software folder

- Programming the device directly. For this option the user can refer to the chapter “Programmer guide” for the supported commands and sample codes.

Programming guide

The Waiter Lock reads 64-bit ID type electronic key only. When enabled, the reader reads the key and detects the presence and transmits the ID to the host. On removal of the Electronic Key the reader will also report to the host with a status packet asynchronously.

Commands

Enable

Enable the detection of electronic keys. A detection of an electronic key will trigger an asynchronous event.

Command:	11h, 00h, "Option"
Response:	00h, 04h, "Status byte 1", "Status byte 2", "Status byte 3"

Option

Bit	***Meaning***
1	enable/disable Electronic Key (1 = enabled / 0 = disabled)
5-8	reserved

Disable

Disable the detection of electronic keys. The asynchronous event is suppressed.

Command:	12h, 00h
Response:	00h, 04h, "Status byte 1", "Status byte 2", "Status byte 3"

Read Key ID

Return the key identifier which is a unique number.

Command:	13h, 00h
Response:	00h, XXh, “Status byte 1”, “Status byte 2”, “Status byte 3”, “Key ID”

Key ID

Data	***Key state***
0x2D (“-“ ASCII)	Disabled
0x21 (“!“ ASCII)	None key present
Key ID bytes	Key present

Read Config

Return the current connection state of the key interface (not the key itself).

Command:	21h, 00h
Response:	00h, 05h, “Status byte 1”, “Status byte 2”, “Status byte 3”, “Electronic key interface presence”

Electronic Key Presence

Value	***Meaning***
0x00	Electronic key interface is **not** present
0x01	Electronic key interface is present
0x02…0xFF	reserved

Status

Return the current connection state of the key interface (not the key itself).

Command:	20h, 00h
Response:	00h, 04h, "Status byte 1", "Status byte 2", "Status byte 3"

Asynchronous Events

If a key is attached successfully or detached, an IN report with the key id is sent to the host. See "Read Key ID" response above for more details.

Command/Response Formats

Command Format

Command

Byte	*Name*	*Number of bytes*	*Description*
0	Report ID	1	
1	Command byte 1	1	
2	Command byte 2	1	
3 to n	Data / Pad bytes		

Response

Byte	*Name*	*Number of bytes*	*Description*
0	Report ID	1	Report ID
1	Response Length	1	length of this report w/o pad bytes
2	Status byte 1	1	see status byte 1 description below
3	Status byte 2	1	see status byte 2 description below
4	Status byte 3	1	see status byte 3 description below
5 to n	Data / Pad bytes		

Status definition

Status Byte 1

Bit	*Meaning*
1	Flash in Progress
2-5	reserved
6	Hardware error
7	reserved
8	Device not ready to receive commands

Status Byte 2

Bit	*Meaning*
1-7	reserved
8	Undefined command received (command reject)

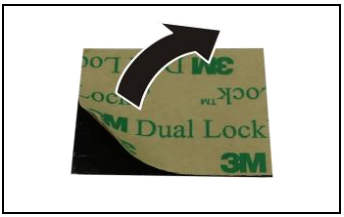
Status Byte 3

Bit	*Meaning*
1-8	reserved

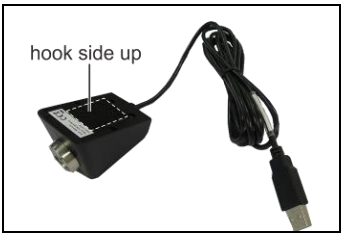
Using the Modular Waiter Lock Reader

Installation of the reader

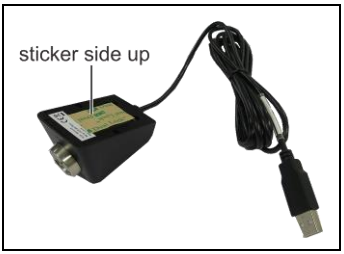
Via fasteners (provided)



1. Remove the sticker backing paper from the back of one of the fasteners.



2. Stick it to the back of the reader(within the space provided) with the mounting surface exposed.



3. Get the second fastener and stick them (hook sides matching) together.

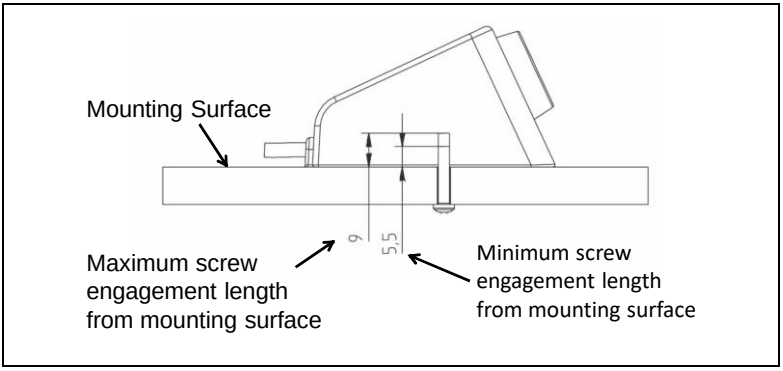
The second fastener should have the sticker side up.

4. Pull out the sticker backing paper and stick the reader on the desired location.

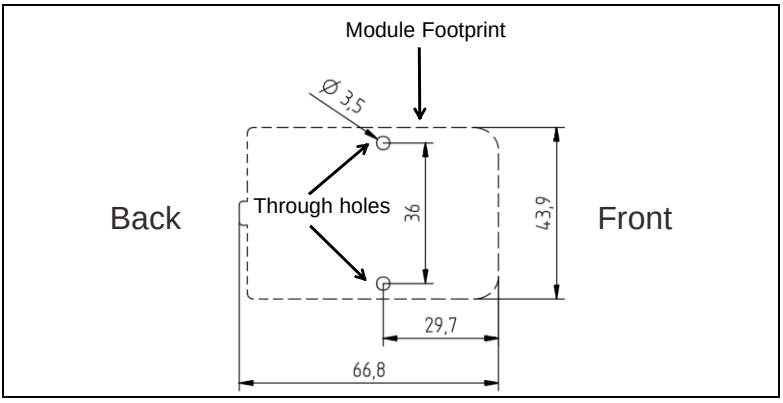
Via screws

You will need 2 pieces of M3 Plastite screws (not provided) of suitable length to secure the module.

Determine the suitable screw length by calculating the thickness of the mounting surface and the recommended engagement length (minimum of 5.5 mm, maximum of 9mm).



1. Determine the location to fix the reader.
2. Prepare a module footprint on the surface.
3. Drill two through holes of diameter 3.5 mm on the mounting surface. Refer to the details in the illustration below.



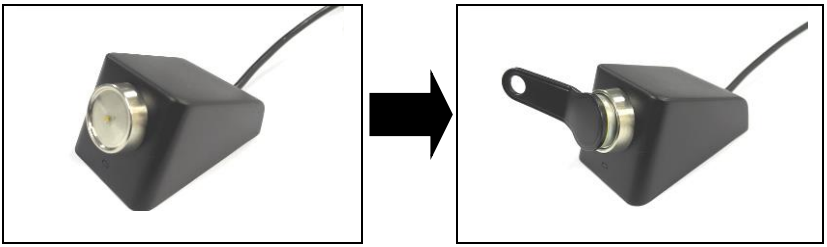
4. Tighten the screws from the other side of the surface through the reader.

Connect and use

Connect the reader to your system via the USB cable.

Place the security key over the magnetic probe. The key is held magnetically to the probe and transmits the data by an electrical USB interface.

The readout of the data may be integrated easily in a software application.



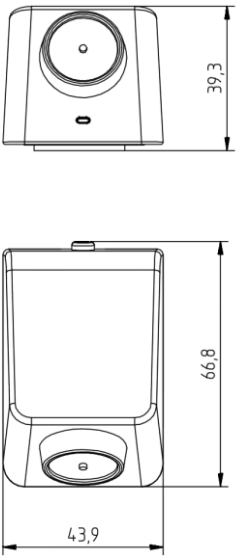
Cleaning instructions

In order to guarantee good reading results, the magnetic probe should be cleaned from time to time with a soft cloth to remove dust.

Technical Data

Model	WL-01
Rated Voltage	5V +/- 5%
Rated Current	80mA
Host Interface	USB 2.0, HID
Cable Length	2.5m
Magnetic Key interface	1-Wire®
Magnetic Key supported	99-L-01 (DS1990A), Olitronic GmbH
Operating Systems supported	Windows 7, 8.1, WNLPOS 3
Software options	JavaPOS 1.13/OPOS UDM (ProBASE/POS) VirtualCOM
Firmware	Upgradeable via USB DFU
Weight	Approx. 125 g
External dimensions	Refer to the illustration below

External dimensions (in mm)



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Abbreviations

CE	European symbol of Comformity
EC	European Community
EEC	European Economic Community
FCC	Federal Communications Commission
HID	Human Interface Device
ICES	Inteference-Causing Equipment Standard
IEC	International Electrotechnical Commission
ISO	International Organization for Standardization
PC	Personal Computer
POS	Point-Of-Sales
RF	Radio Frequency
RoHS	Restriction of Hazardous Substances
UID	Unique Identifier
USB	Universal Serial Bus

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Order No. / Bestell-Nr.: ***01750276702 D***