BY TECHDESIGN S.L.

USER GUIDE
NÜO SYSTEM

Content

Introduction > Technical Specifications and General Features

⚠️

This manual must be read completely in order to avoid problems and confusion during installation which could cause irreparable failures to the system.

The installation and wiring of this product should be supervised by qualified personnel and treated with caution. Follow the instructions at all times.

Do not use abrasive materials to clean the product such as bleach or ammonia. Clean it using a damp cloth with water and/or mild soap.

1. NÜO SYSTEM

NÜO SYSTEM – GENERAL FEATURES

NÜO One is the solution to control your employees access to your building and to manage non-accredited visits.

Identify each user with a high security card, mobile credential or biometric data and establish a security profile for each user deciding who enters, when and where. Restrict access by schedule, date, zones, user, etc.

Cancel permissions in real time preventing access to employees who leave the company. No more uncontrolled access to sensitive areas of your company or products disappearing from warehouses. Nothing will escape your control.

Manage users in an agile way by creating user groups, for example, by departments and levels. Every time a new user needs to be added, it will be as easy as including him/her in a pre-existing group and... That's it!

1.1. EQUIPMENT REFERENCES
- Ref. MTA42697 – FLY1

1.2. PROXIMITY AND BIOMETRIC READERS

NÜO FLY1 - CONTACTLESS BIOMETRIC READER BUS TYPE Y (REF. 42697)		
	INPUT VOLTAGE	24 VDC
	POWER	Standby: 2.5 W Maximum: 3.1 W
	OPERATING TEMPERATURE	-10ºC a 50ºC
	BIOMETRIC SENSOR	Image Sensor, Combined Light (non-contact) 1000 Users (1: N identification)
	COMMUNICATIONS	Bus Type Y - BB4 Wire Encrypted Proprietary Protocol

	BLUETOOTH	Low Energy BLE full compliant Smart v5.0
	DIMENSIONS	Height: 188 mm, Width: 60 mm, Depth: 57 mm
	WEIGHT	213 g

1.3. WIRING
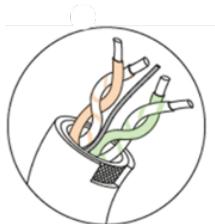
BB2 Wire
BB2 (RS-485) 2 x 2 x (stranded 7x0.19mm copper + 1.3HDPE) + drain wire (stranded 7x0.19mm) AWG24, twisted and shielded
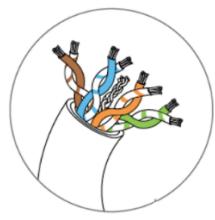
BB4 Wire
BB4 (Ethernet and RS-485) 4 x 2 x (stranded 7x0.19mm copper + 0.9HDPE) + drain wire (stranded 7x0.19mm) AWG24, twisted and shielded

BB2 piped cable: Piped and shielded FTP data cable with 2 twisted pairs of 99.99% stranded pure copper wire (2 x 2 x (7*0.19 copper 99.99% + Ø1.3HDPE) + stranded drain wire). AWG24 resistance. External V0 fire retardant PVC sheath.

BB4 piped cable: Piped and shielded FTP data cable with 4 twisted pairs of 99.99% stranded pure copper wire (4 x 2 x (7*0.19 copper 99.99% + Ø0.9HDPE) + stranded drain wire). AWG24 resistance. External V0 fire retardant PVC sheath.

⚠️ Use the cables provided. A low-quality cable can seriously affect the performance of the equipment.

1.4. DIAGRAM CONNECTION OF FLY 1 WITH THE SECURE DOOR UNIT

SDU Y+
SDU Y+ PoE

SDU Y+ SECURE DOOR UNIT (Ref. 42764)
SDU Y+ PoE SECURE DOOR UNIT (Ref. 42765)
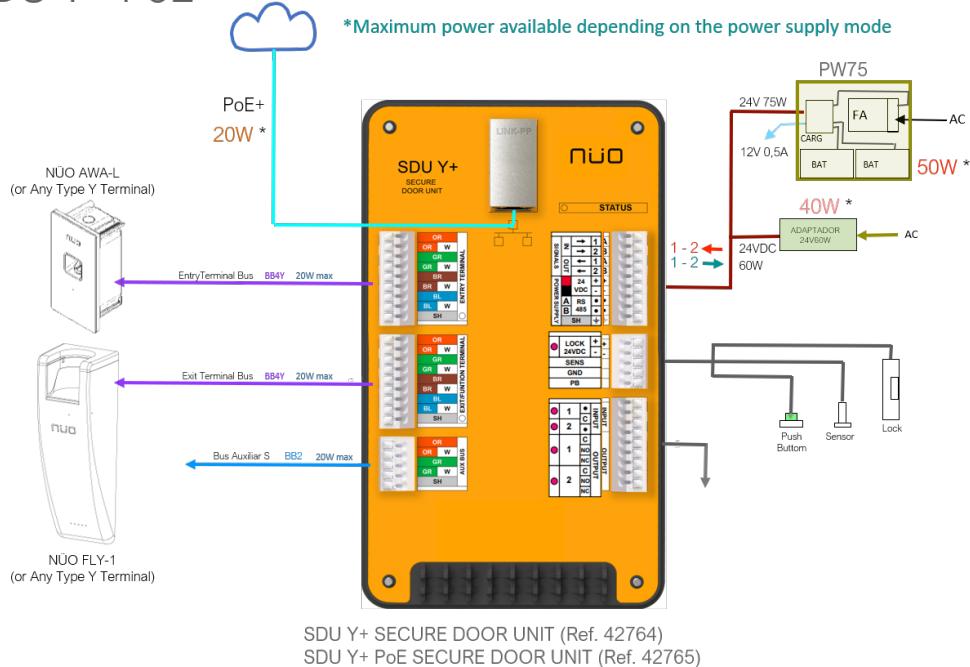
1.5. OPERATION MODE OF NÜO FLY-1 READER

NÜO FLY-1 is a contactless biometric fingerprint reader/controller, with high resolution CMOS sensor and capacity up to 1000 users. Communication with Android and iOS devices using Bluetooth® technology. Maximum security in data protection with encrypted communications. Connection to controllers and door units that have a type Y Bus (Ethernet + RS-485, BB4). Automatic firmware update from the application. Surface mounting and concealed self-closing with screwless interlocking. Housing made of zamak in black PVD coating. Designed for indoor applications. Dimensions 188 x 60 x 57 mm. (Ref. MTA: 42697).

The operation of the NÜO touchless-based fingerprint readers (Fly 1) is as follows:

- The readers remain on standby until a finger approaches the reader in a downward direction until the position indicated by the blue-line barrier (see Figure 4).
- As soon as the reader is activated, an image of the ridge pattern of the fingerprint is acquired, and subsequently, the fingerprint is processed in the device's processor to identify and/or verify the acquired fingerprint using minutiae-based matching algorithms.

NÜO FLY-1 reader also is equipped with Bluetooth® LE technology, which enables communication with Apple Smartphones in the following manner:

- A NÜO reader periodically advertises its presence waiting for a connection.
- When an Apple Smartphone with the NÜO APK enters the detection range of the reader, a connection is established and data is transmitted back and forth between the devices for just a few seconds. After this, the smartphone disconnects from the reader, which resumes publishing process waiting for another Apple smartphone device to come in range.

Touchless Fingerprint & BLE Reader

Figure 4. Operational description of NÜO FLY1 reader.

2.- GENERAL OPERATION MODE

In normal operation mode, the system equipment (readers, controllers and secure door units) does not need to be connected to a data network (that is, they can work in offline mode, autonomously and independently). Connection to a data network will only be necessary in the initial phase of device configuration (device discovery in the system, database transfer, firmware update) and report generation.

3.- WARNINGS

FCC:

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. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or 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 technician for help.

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 my cause undesired operation.

MODIFICATION: Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the device.

This equipment should be installed and operated with a minimum distance of 20cm between the radiator and your body.

CE:

1) The mains plug is used as disconnect device, the disconnect device shall remain readily operable.

2) Correct disposal of this product. This marking indicates that this product should not be disposed with other household wastes throughout the EU. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmental safe recycling.

3) The connections for the protective conductors shall be reliable.
4) The connections for the protective conductors shall make earlier and shall break later than the supply connections.

INSTALLATION AND OPERATION WARNINGS

Please follow the provided installation and operations instructions to prevent any risk of injury or property damage.

- Do not install indoor products in a place with direct sunlight, moisture, rain or dust.
- Do not install the product in a place with heat from an electric source
- The user should not install or repair the product independently
- Do not allow liquids or chemicals get into the product

− Do not use cables other than the provided ones.
− Disconnect AC power supply before battery installation
− Follow batteries disconnection procedure and do not remove batteries without system acknowledgement.

EU Declaration of Conformity (CE)

This manual covers the following products:

− NÜO Lu, NÜO Lu W and NÜO DC1 PoE, from now on referred to as GROUP 1.
− NÜO Fly 1 and NÜO SDU Y PoE, from now on referred to as GROUP 2.
− NÜO AWA L and NÜO SDU Y+ PoE, from now on referred to as GROUP 3.

All these products are CE marked according to the provisions of:

− EMC Directive (2014/30/UE) and Low Voltage Directive (2014/35/UE).
− Radio Equipment Directive (2014/53/UE).

Hereby, BY TECHDESIGN S.L. declares that each product is in compliance with the above indicated directives.

Please visit our website www.nuoplanet.com/CE for further information and contact details.

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