MANNUALEITHEROPERATION

WIEGAND

Model: WIE01

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SPECS

Power supply	Input: 127/220VAC 50-60Hz Output: 12VDC
Transmitter power consumption in standby mode[1]	
Maximum power consumption of the transmitter (transmitting)	
Receiver power consumption in standby mode[1]	
Contact features	2A
center frequency	915 MHz
Maximum transmission power	27 dBm
Reception sensitivity	- 132 dBm
Temperature range	-40 to 85 °C
Line of sight range[2]	3 kilometers
Max. No. of linked receptors.	1
Output relay capacity.	2A
Cabinet dimensions	100mm x 100mm x 50mm
Wiegand Protocols	8, 26, 34 bits of

1. Standby: standby or sleep mode.

2. Line of sight: For maximum transmission range, a clear, unobstructed path is needed between the transmitting and receiving antennas.

CONTENT

Congratulations on your new and innovative purchase!

Yonusa Wiegand Wireless Communicator.

1. GENERAL INFORMATION

Welcome to a new experience in Yonusa automation solutions®.
It is a great pleasure for us to offer new and innovative devices for your service, therefore, we would like to congratulate you on your new acquisition of:

WIEGAND WIE01 ACCESS CONTROLLER

Device.

- WIEGAND kit (transmitter and receiver).

Box contents.

Upon opening your box, you will find the following items:

- 1 Master module (transmitter).
- 1 Slave module (Receiver).
- 2 power supplies.
- 2 omnidirectional dipole antennas

2. EQUIPMENT DESCRIPTION

This wireless system communicates Wigand protocol information existing in access control systems, such as card readers, biometric systems, or keyboards.

Furthermore, it features the ability to transmit the on/off status of dry contact relays to both the transmitter and receiver. It replaces the wiring of a new or existing system, saving time and money on access control system installations.

The equipment consists of two modules, each with an RF transceiver and features encryption security.

2.1. Master Module (transmitter)

It is responsible for receiving data from a device; it will connect to an access control device, either through a keyboard, a card, or a biometric system. Upon receiving this data, it will transmit it wirelessly to the slave module (receiver) to perform the relevant task.

Figure 2.1 Master module (transmitter)

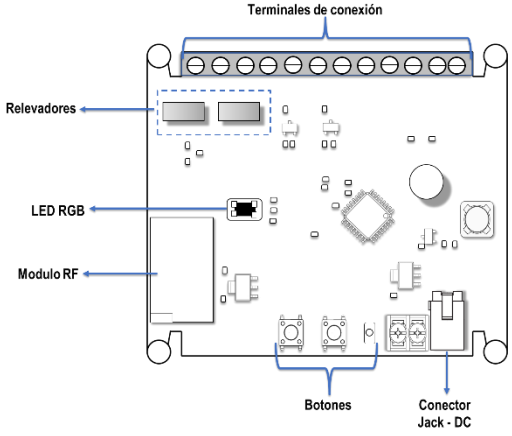


Figure 2.1 Master module (transmitter) board

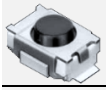
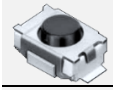
Component		Function
	VIN button	• Press and hold to delete any previous links • Press once to link to the slave module
	BTN button	• Press once to perform the TEST function
	LED STATE RGB	• White: * Flashing: Link deletion * Fixed: Card erased • Blink inBlueThis means the device is working correctly. • Green: * Flashing: The master and slaves are being linked * Fixed: The master and slave modules were Once successfully linked, payment will be processed after 5 seconds; this process is performed every time the card is connected to power. • BlinkingRed: Damaged device
	LED Indicator ColorOrange	• Flashing: Indicates that the card is performing the Test function. • Fixed: Indicates that the slave card relay is on.
	Buzzer	• - Beep for each function tone: * * Linkage * * Termination * * Test
	Jack DC	• Power supply voltage input: – Minimum voltage: 12V DC – Maximum voltage: 15V DC • Minimum current: 500 mA (0.5 A)
	Terminal block DC (Auxiliary)	• Power supply voltage input: – Minimum voltage: 12V DC – Maximum voltage: 15V DC • Minimum current: 500 mA (0.5 A) • Connection terminals for sensor or alarm signal (electrical signal between 12VDC and 24VDC)

Table 1: Operation of the main components of the transmitter.

2.2. Receiver Module.

The receiver is the device responsible for receiving the encrypted commands sent by the master module (transmitter) and reproducing the information in Wiegand protocol, as well as activating the relays required to switch the connected load. It can also use an actuator to open a door or connect the Wiegand protocol to the desired location.

Figure 2.2 Slave Module (receiver)

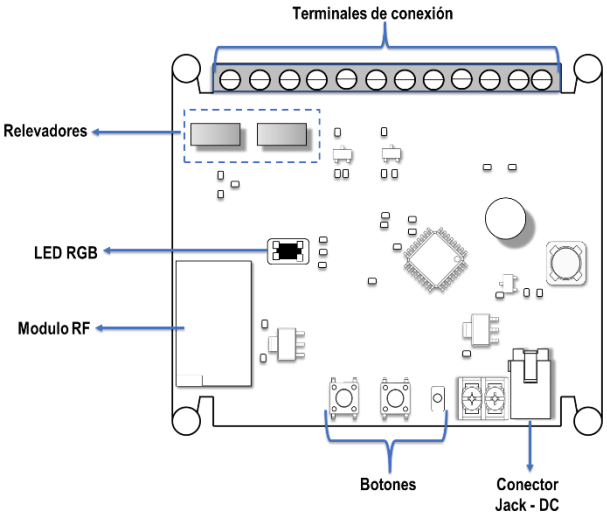


Figure 2.3 Receiver card

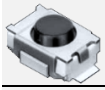
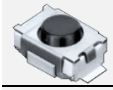
Component		Function
	VIN button	• Press and hold to delete any previous links • Press once to link to the slave module
	BTN button	• Press once to perform the TEST function
	LED STATE RGB	• White: * Flashing: Link deletion * Fixed: Card erased • Blink inBlueThis means the device is working correctly. • Green: * Flashing: The master and slaves are being linked * Fixed: The master and slave modules were Once successfully linked, payment will be processed after 5 seconds; this process is performed every time the card is connected to power. • BlinkingRed: Damaged device
	LED Indicator ColorOrange	• Flashing: Indicates that the card is performing the Test function. • Fixed: Indicates that the slave card relay is on.
	Buzzer	• - Beep for each function tone: * * Linkage * * Termination * * Test
	Jack DC	• Power supply voltage input: – Minimum voltage: 12V DC – Maximum voltage: 15V DC • Minimum current: 500 mA (0.5 A)
	Terminal block DC (Auxiliary)	• Power supply voltage input: – Minimum voltage: 12V DC – Maximum voltage: 15V DC • Minimum current: 500 mA (0.5 A) • Connection terminals for sensor or alarm signal (electrical signal between 12VDC and 24VDC)

Table 2-2Operation of the main components of the receiver.

Do not tamper with the electronic components, the RF module, or the antenna of either module; otherwise, the operation of the modules will be affected and the warranty will not be valid.

3. IMPORTANT SAFETY INSTRUCTIONS

- Keep this instruction manual; this manual contains important instructions that can help you during the installation and maintenance of the Wiegand Wireless Communicator.
- Please make the connections as indicated in the manual.
- Use appropriate protective equipment to avoid electrocution.
- Do not short circuit.
- Do not exceed the maximum supply voltage.
- Do not handle the antenna improperly.

4. INSTALLATION GUIDE

4.1. Installation of the Master (transmitter) and Slave (receiver) module.

The master and slave modules have a cabinet that can be installed in two ways:

1- DIN Rail Type
2- Wall mounting

Choose and identify the installation method that best suits you and follow the steps below.

* * For DIN rail type installation

The cabinet is correctly shaped to fit the DIN rail, as shown in image 2.5

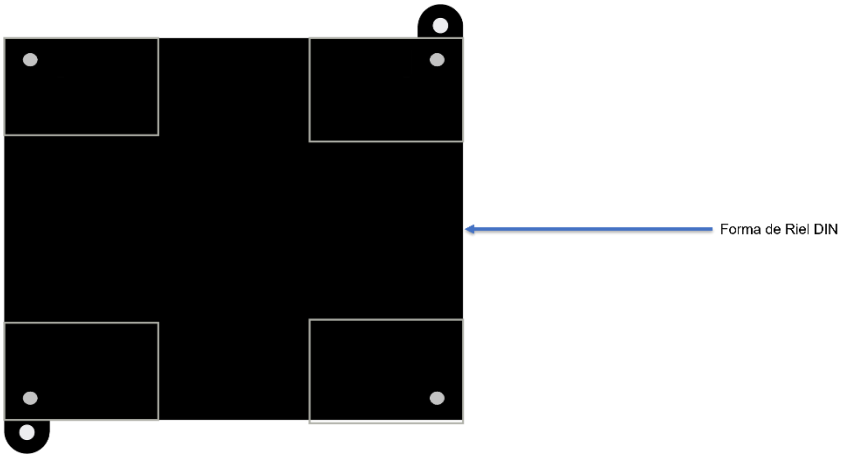


Figure 2.5 Cabinet rear view.

Image 2.6 shows how the cabinet would look mounted on the rail.

Figure 2.6 Rail-mounted cabinet

* * To be able to fix it to the wall

1.-The cabinet has two tabs, identify them.

2. Drill the hole where the cabinet will be placed.

3.-Place the cabinet where you made the holes and fix it to the wall.

4.2. Linking of modules.

To link the modules, they must be separated by at least one meter from each other, and the following steps must be followed:

1 Connect the power supply to a 127VAC or 220VAC outlet on the transmission module; the STATE LED should light up in white.

If the LED does not light up, go to the connection section.

2 Press the VIN button for 3 seconds or until the buzzer gives a tone; this must be done on both cards.

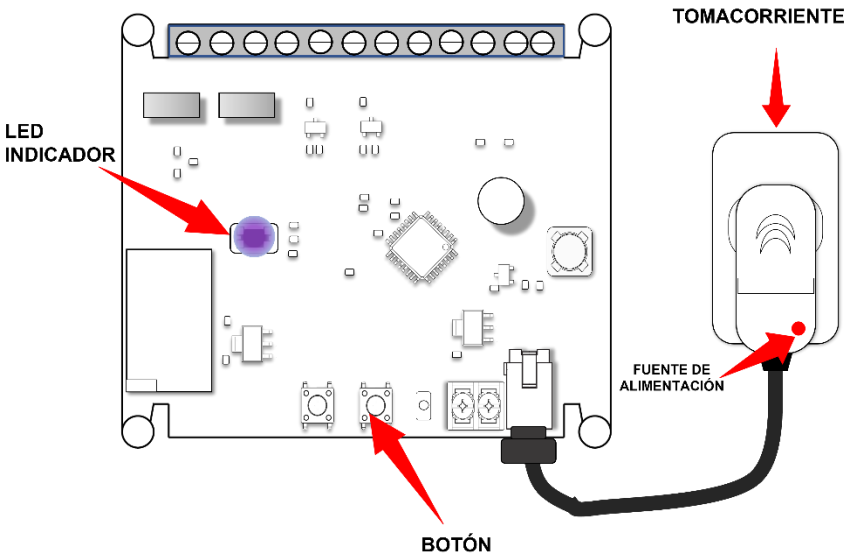


Figure 2.7 Connection between the module and voltage source, and initial state of the LED.

3 Connect the power supply to a 127VAC or 220VAC outlet on the slave module; the indicator LED should light up in white.

If the LED turns green, go to the default settings restoration section (section X).

4 Wait until the indicator LED starts flashing, the buzzer will make a sound, and then the module's indicator LED should change to a solid green color.

Congratulations! You have now configured the Wiegand Wireless Communicator and ready for use.

If step 4 is not completed, please de-energize both modules and repeat the steps in this section (4.2).

4.3 General installation of an access control to the Yonusa WIE01 Wiegand Wireless Communicator

The following table lists the description of each connection terminal of the master and slave modules.

Abbreviation	Description
GND	Land
GND	Land
R1	Activation of relay R1
R2	Activation of relay R2
D1	Wiegand Terminal
D0	Wiegand Terminal
NC1	Normally closed Relay 1
COM1	Relay 1 Common
N01	Normally open relay 1
COM2	Relay 2 Common
NC2	Normally closed relay 2
N02	Normally open relay 2

Image 2.8 shows the general installation of any Wiegand wireless communicator access control.

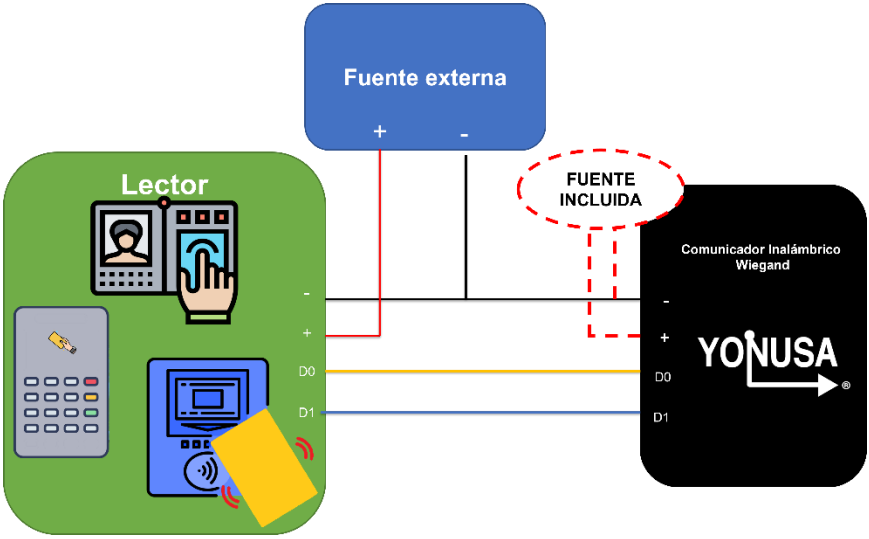


Figure 2.8 General description of a communicator access control Wiegand wireless WIE01

4.4 Installation for RFID Access Control and Compact Numeric Keypad.

To perform the installation, follow these steps:

1 To install the Slave Module on the keyboard, you need to identify the 4 cables shown in image 2.9: D0, D1, positive and negative

The wiring colors shown in image 2.8 of the device are for informational purposes only; please check the colors in the user manual of the equipment you are using.

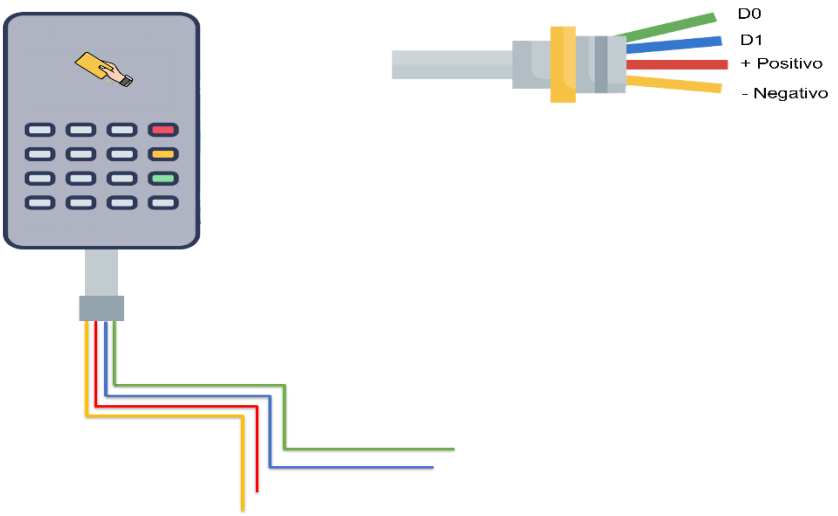


Figure 2.9Identifying the access controller cables using the keypad

2 As a next step, identify the connection terminals of your slave module

3 Connect the D0 of the access controller to the D0 of the master module, and so on with D1, positive and negative.

As shown in image 2.10

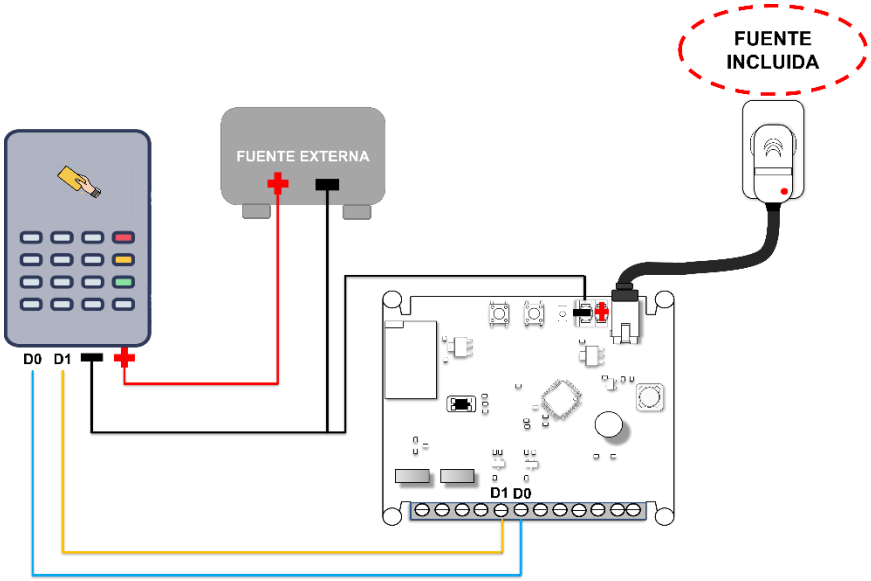


Figure 2.10Connection between the slave module and the keypad controller

4.4Biometric Access Control Installation

To perform the installation, follow these steps:

1 To install the Slave Module on the keyboard you need to identify the 4 cables shown in image 2.11: D0, D1, positive and negative.

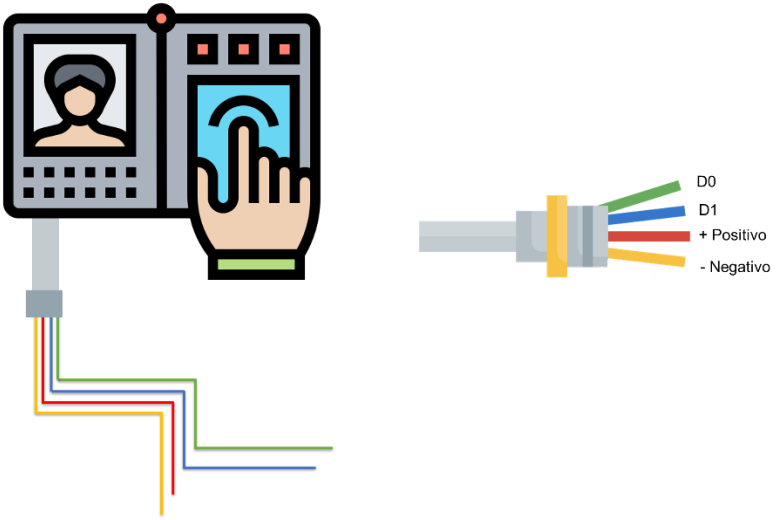


Figure 2.11 Identificationof the cables of the biometric access controller system

The wiring colors shown in Figure 2.11 of the device are for informational purposes only; please check the colors in the user manual of the equipment you are using.

2 As a next step, identify the connection terminals of your slave module

3 Connect the D0 of the access controller to the D0 of the master module, and so on with D1, positive and negative.

As shown in image 2.12

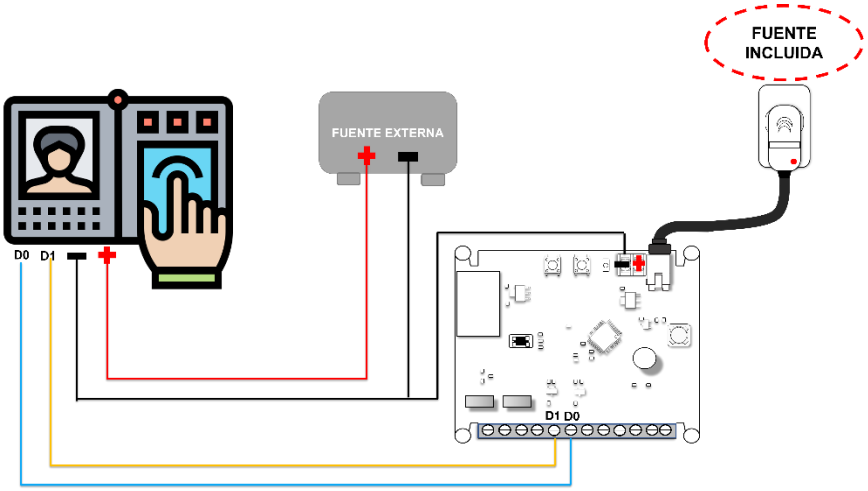


Figure 2.12 Connection between the slave module and the biometric access controller

4.5Installation for RFID card access control

To perform the installation, follow these steps:

1 To install the Slave Module on the keyboard, you need to identify the 4 wires shown in image 2.13: D0, D1, positive and negative.

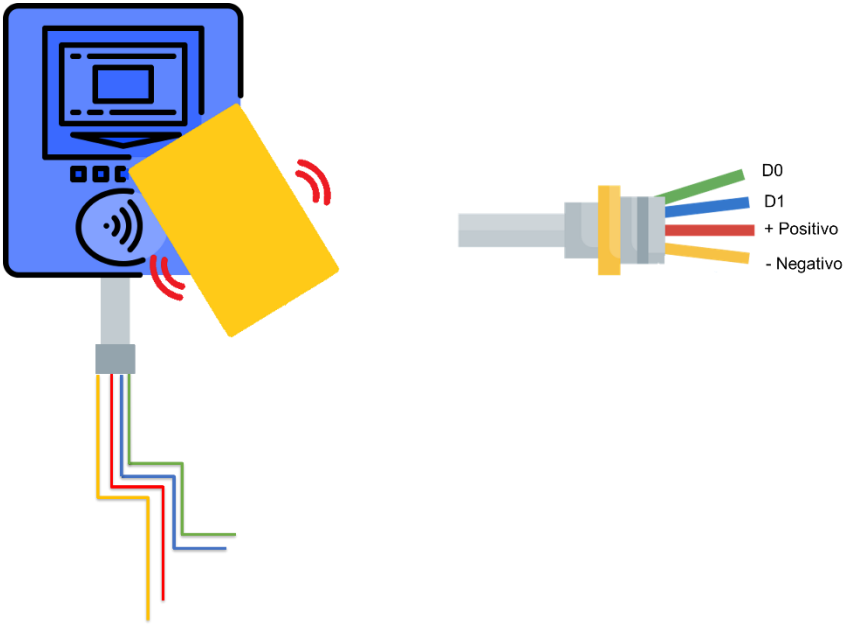


Figure 2.13 Identificationof the access controller cables via keyboard

The wiring colors shown in image 2.13 of the device are for informational purposes only; please check the colors in the user manual of the equipment you are using.

2 As a next step, identify the connection terminals of your slave module

3 Connect the D0 of the access controller to the D0 of the master module, and so on with D1, positive and negative.

As shown in image 2.14

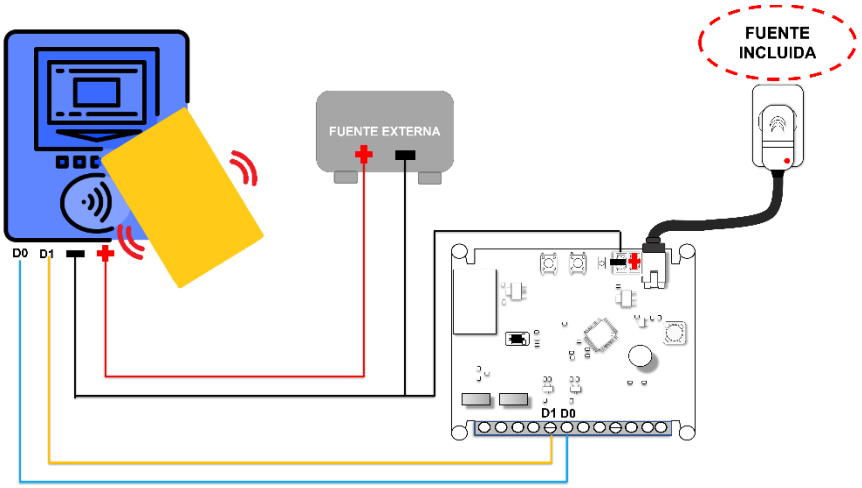


Figure 2.14 Connectionbetween the slave module and the card access controller

1.1. Other installation scenarios

The Yonusa WIEGAND WIE01 wireless communicator is compatible with any access control system that uses the 8, 26, and 34-bit WIEGAND protocol. Installation requires identifying the D0, D1, positive, and negative terminals of the device in order to connect it to the master module's board at the corresponding terminals.

2. TEST FUNCTION

The test function is used to verify that the master and slave modules are communicating.
To execute this function, you must perform the following steps:

1. Power the master and slave module by connecting the power supply to a 127Vac or 220Vac outlet.
2. Press the BTN button on the slave module or the master module.

The TEST function can be performed from the slave module to the master or from the master to the slave.

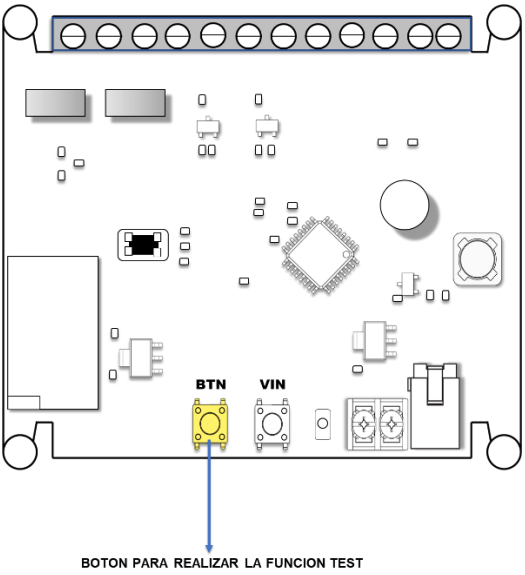


Figure 2.15 BTN button to perform the TEST function

3. RESTORING DEFAULT SETTINGS

If you wish, you can restore the default (factory) settings of your master and slave modules. This will erase all parameters configured when pairing the two modules with your Yonusa Wireless Communicator.

It should be noted that after restoring the default configuration, you will need to link the modules again.

3.1. Master Module (transmitter)

To restore the settings, you must follow these steps:

1. Power the master module by connecting the voltage source to a 127Vac or 220Vac outlet.

2. Press and hold the VIN button until the buzzer beeps and the STATE LED starts flashing red.

3. Wait approximately 30 seconds until the STATE LED begins to flash white; this indicates that all receiver modules have been removed and the default settings have been restored.

4. To complete the restoration, press the VIN button until the STATE LED turns solid white.

The Master module (transmitter) will then be ready to link to its Slave module (receiver).

3.2. Slave Module (receiver)

To restore the settings, you must follow these steps:

1. Power the Slave module by connecting the voltage source to a 127Vac or 220Vac outlet.

2. Press and hold the VIN button until the buzzer beeps and the STATE LED starts flashing red.

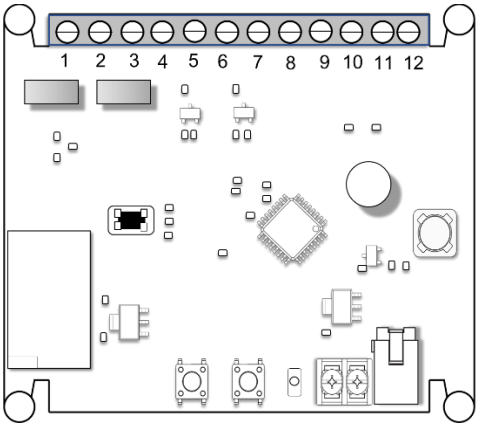
3. Wait approximately 30 seconds until the STATE LED begins to flash white; this indicates that all receiver modules have been removed and the default settings have been restored.

4 To complete the restoration, press the VIN button until the STATE LED turns solid white.
The Slave module (receiver) will immediately be ready to link to its Master module (transmitter).

4. Possible failures.

* * If any of your modules does not turn on, check if the positive or negative connection is on the correct terminal or if it needs to be connected.
Figure 16 shows the terminal number and what each of its inputs and/or outputs is for.

* * If the STATE LED on your module starts flashing red, perform a default restore.



Numero	Abreviatura	Descripción
1	N02	Normalmente abierto del relevador 2
2	COM2	Comun del relevador 2
3	NC2	Normalmente cerrado del relevador
4	N01	Normalmente abierto del relevador
5	COM1	Comun del relevador 1
6	NC1	Normalmente cerrado del relevador 1
7	D0	Terminal Wiegand
8	D1	Terminal Wiegand
9	R2	Activación del relevador 2
10	R1	Activación del relevador 1
11	GND	Tierra
12	GND	Tierra

Figure 4.16 Connection terminals

.

If you continue to experience problems after following the steps above, please contact YONUSA support or your nearest distributor.

Grades Date:

www.yonusa.com

Congratulations on completing our installation manual. Thank you for purchasing our Yonusa Wireless Electronic Level.

If you experience technical failures or problems
Please contact:

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engineeringanddevelopment@yonusa.com
repairs@yonusa.com

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