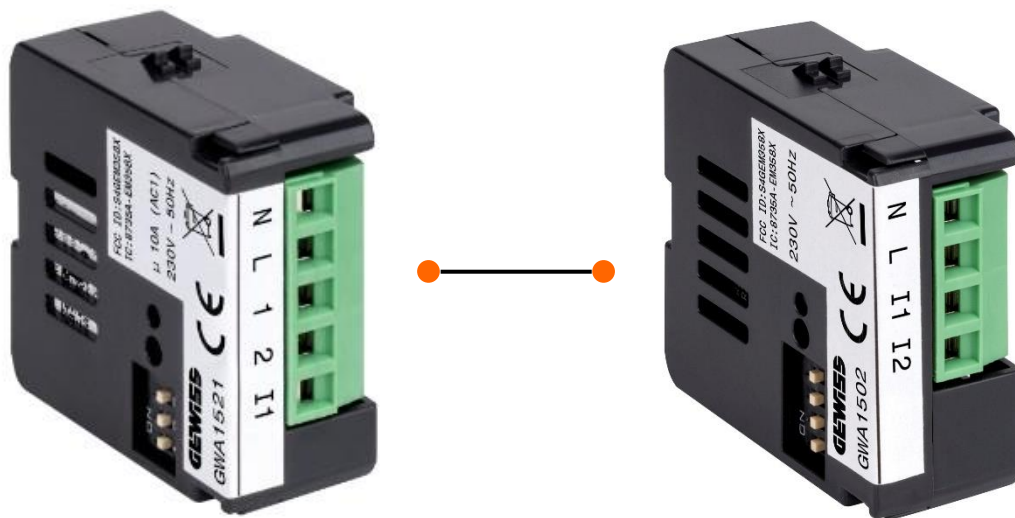


## MANUAL ZIGBEE CONFIGURATION

BINDING BETWEEN THE GWA1521 ACTUATOR AND THE GWA1502 INTERFACE



TECHNICAL MANUAL



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## AIM OF THIS PUBLICATION

This manual is designed for the installer responsible for configuring the ZigBee system.

It explains how to make the binding between the GWA1521 and GWA1502 devices.

## ZIGBEE KEY – USEFUL TERMS

Binding:	The association between an actuator and a sensor in order to carry out a certain function
Coordinator:	The ZigBee device that carries out the following tasks: <ol style="list-style-type: none"> <li>1. Create the ZigBee network</li> <li>2. Define the optimal frequencies that the network will use</li> <li>3. Generate the PAN (Personal Area Network)</li> <li>4. Generate the decoding key used by that specific network</li> <li>5. Assign a short address to all the devices which are part of that ZigBee network</li> <li>6. Transmit the decoding key to those devices</li> </ol>
End device:	Battery-controlled ZigBee devices
Joining:	Operation via which a ZigBee device becomes part of a ZigBee network
Permit Join:	Operation via which a ZigBee network coordinator opens that network so that one ZigBee device or more (not yet part of the network) can become part of it
Router:	Any device of a ZigBee system that is not the coordinator or an end device (battery-controlled). Router devices forward messages within the ZigBee network, facilitating communication between devices.

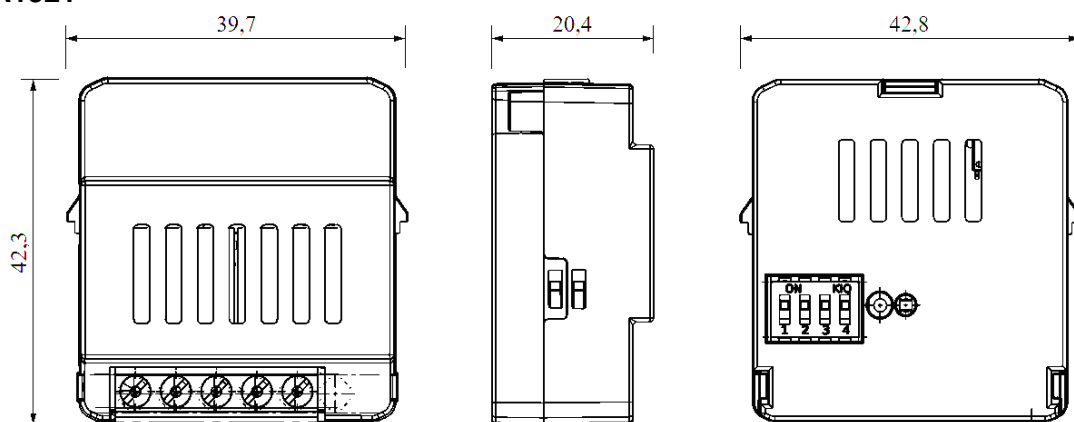
## TECHNICAL FILES

GWA1521	
<b>CATEGORY:</b>	General loads actuator
<b>SUPPLY VOLTAGE:</b>	230V AC / 50Hz
<b>OUTPUT CONTACTS:</b>	1 NO 10A (AC1) 230V AC
<b>NO. OF OUTPUT CHANNELS:</b>	1
<b>MAX. DISPERSIBLE POWER (W):</b>	2W
<b>MAX. MOTOR POWER:</b>	500W
<b>OUTPUT POWER:</b>	3 dBm
<b>CFL LAMPS:</b>	150W
<b>LOADS CONTROLLED BY TOROIDAL TRANSFORMERS:</b>	450W
<b>LOADS CONTROLLED BY ELECTRONIC TRANSFORMERS:</b>	600W
<b>230V HALOGEN INCANDESCENT LAMPS:</b>	2300W
<b>230V LED LAMPS</b>	150W
<b>DEGREE OF PROTECTION:</b>	IP20
<b>OPERATING TEMPERATURE:</b>	[-5°; +45°C]
<b>STORAGE TEMPERATURE:</b>	[-25°; +70°C]
<b>RELATIVE HUMIDITY (NON-CONDENSATIVE):</b>	Max. 93%
<b>DIMENSIONS L x H x D (MM):</b>	42x40x20
<b>COMMUNICATION PROTOCOL:</b>	ZigBee (IEEE 802.15.4)
<b>REFERENCE STANDARDS:</b>	2014/53/EU

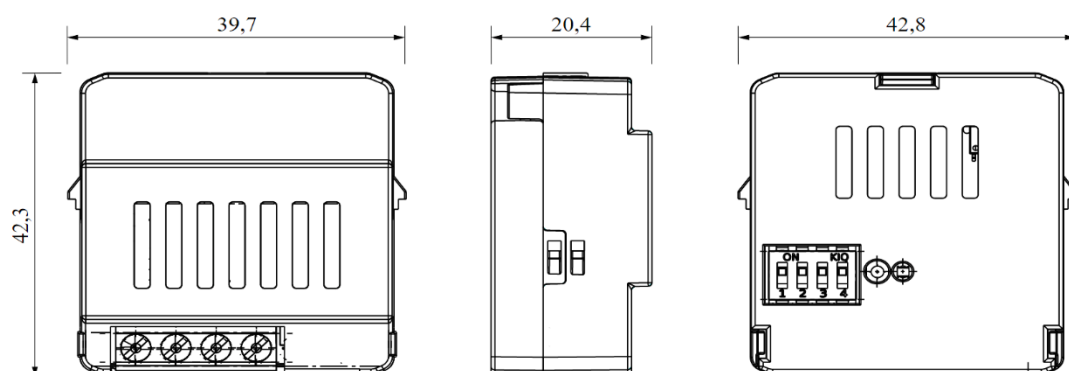
GWA1502	
<b>CATEGORY:</b>	Contact interface
<b>SUPPLY VOLTAGE:</b>	230V AC – 50 Hz
<b>INPUT VOLTAGE:</b>	230V AC
<b>OUTPUT POWER:</b>	8 dBm
<b>NO. OF INPUT CHANNELS:</b>	2
<b>MAX. CABLE LENGTH:</b>	/
<b>DEGREE OF PROTECTION:</b>	IP20
<b>STORAGE TEMPERATURE:</b>	[-25°; +70°C]
<b>OPERATING TEMPERATURE:</b>	[-5°; +45°C]
<b>RELATIVE HUMIDITY (NON-CONDENSATIVE):</b>	Max. 93%
<b>DIMENSIONS L x H x D (MM):</b>	42x40x20
<b>COMMUNICATION PROTOCOL:</b>	ZigBee (IEEE 802.15.4)
<b>REFERENCE STANDARDS:</b>	2014/53/EU, EN 60669-2-1, EN 60669-1, ETSI EN 300-328

## DIMENSIONS

### GWA1521

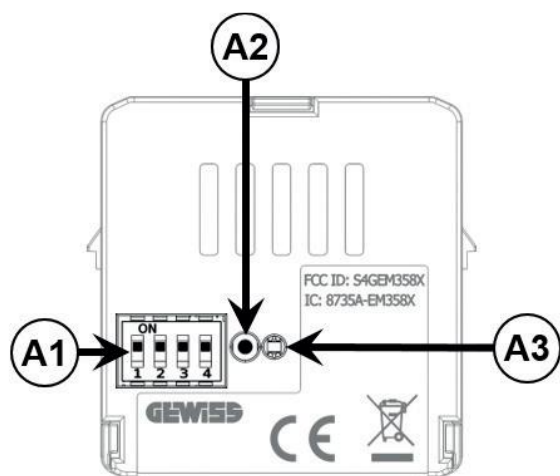


### GWA1502



## BREAKDOWN OF THE ZIGBEE DEVICES

### GWA1502

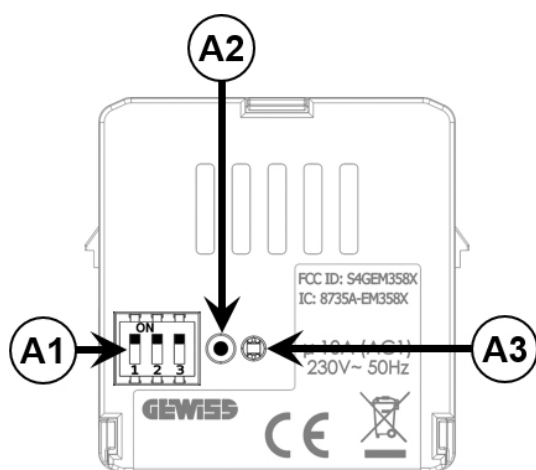


A1. DIP-switch with 4 one-way switches

A2. Miniature button key for joining functions

A3. Status LED

### GWA1521



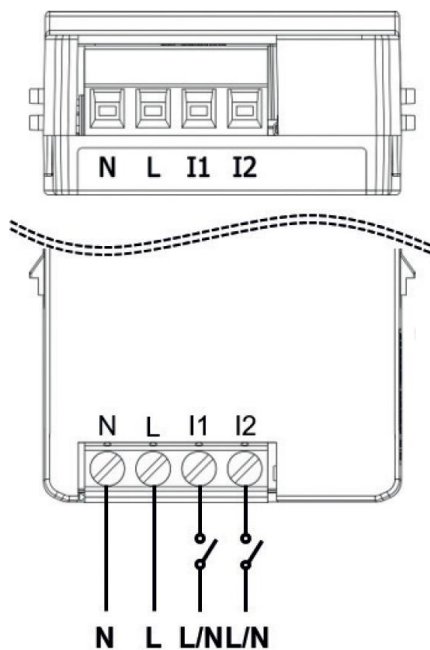
A1. DIP-switch with 3 one-way switches

A2. Miniature button key for joining functions

A3. Status LED

## ELECTRIC DIAGRAMS

### GWA1502



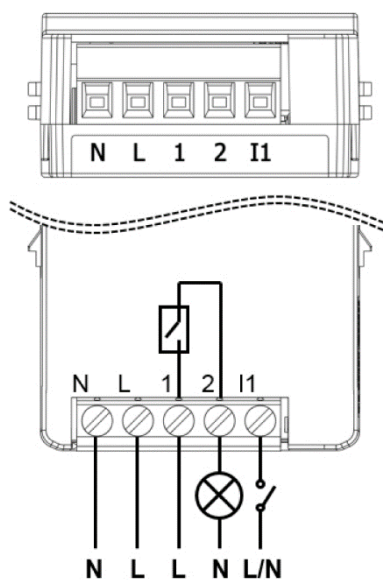
L. Power supply neutral

N. Power supply phase

I1. Channel 1 input

I2. Channel 2 input

### GWA1521



N. Power supply neutral

L. Power supply phase

1. Output common wire

2. NO output

I1. Local command input



## CONFIGURATION

If the ZigBee network hasn't yet been created, proceed as follows:

1. Choose which device will have the role of coordinator
2. Activate the procedure to create the ZigBee network via the coordinator
3. After creating the network, activate [Permit Join](#)
4. Power the devices that you want to join to the network (GWA1521 and GWA1502)
5. Make the [binding](#) between the GWA1521 and GWA1502 devices

If the ZigBee network has already been created, only the last three points of the list are required:

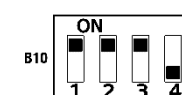
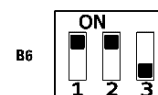
1. After creating the network, activate [Permit Join](#)
2. Power the devices that you want to join to the network (GWA1521 and GWA1502)
3. Make the [binding](#) between the GWA1521 and GWA1502 devices

### Creating and joining to the ZigBee network:

1. Make sure the actuator is in its factory-set condition (if it isn't, make a factory reset)
2. The LED on the device must have a fixed red light
3. Press the Permit Join activation button key quickly for 3 times. The LED will turn green for a few seconds and then begin flashing. From this moment, Permit Join is activated for 15 minutes (this device is now the network coordinator).
4. Make sure the interface is in its factory-set condition (if it isn't, make a factory reset)
5. When the device is powered, a scan will be launched (red LED) to identify an open ZigBee network
6. When the association has been made, the status LED will begin flashing red (or it will switch off)
7. Briefly press the button key of the actuator (network coordinator) to close the network

### Association between devices:

1. On the GWA1521 actuator, bring the dip-switches to the positions shown **B6**
2. The status LED will have a fixed yellow light
3. Press the button connected to the actuator on local input I1
4. The status LED will make a double yellow flash and this will continue cyclically
5. On the GWA1502 interface, bring the dip-switches to the positions shown **B10**
6. The status LED will turn yellow
7. Now use the button key connected to the interface that you want to associate (I1 or I2).
8. The identification phase will normally terminate automatically (the LED will have a fixed yellow light again). If this doesn't happen, wait 3 minutes.
9. Set the dip-switches on the basis of the functions required



## ACTUATOR PARAMETERS (GWA1521)

To manually select the local input functions, bring the dip-switch to position B1, B2 or B3

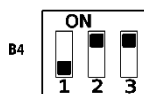
#	LOCAL INPUT OPERATING MODE	DESCRIPTION	IMAGE
B1	monostable (push-button)	<ul style="list-style-type: none"> <li>- when the contact closes, the current relay status is inverted</li> <li>- when the contact opens, no command is sent</li> </ul>	
B2	bistable (one-way switch)	<ul style="list-style-type: none"> <li>- the current relay status is inverted both when the contact closes and when it opens</li> </ul>	
B3	timing	<ul style="list-style-type: none"> <li>- when the contact closes, relay timing is activated</li> <li>- when the contact opens, no command is sent</li> </ul>	

The selected position merely determines the behaviour of the local input, it doesn't influence overall product operation.

### How to set the duration of the timing

The duration of the timing function activation time (stair raiser light) can be modified as follows:

1. Bring the dip-switches to the position shown configuration mode



to enter activation time

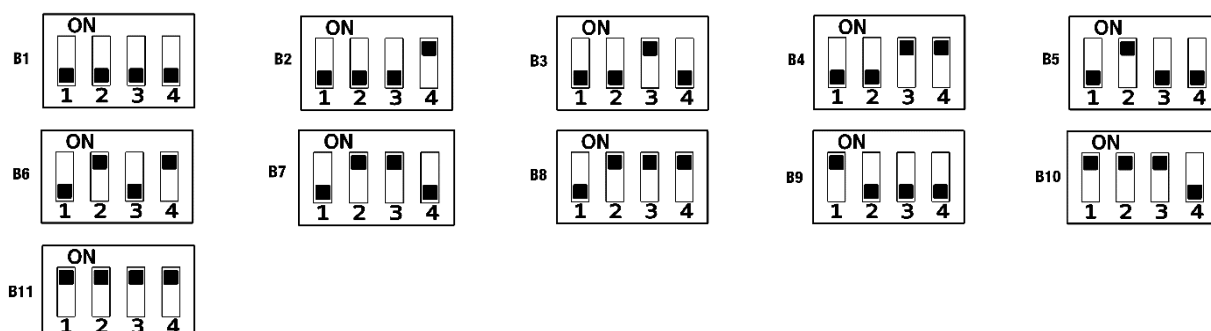
2. Wait for the output contact to open (if it was closed)
3. Briefly close the local input contact (I1) to start the activation time count; the output contact will be closed
4. When the required time has passed, briefly close the local input contact (I1) to end the count and save the new activation time value; the output contact will be opened

## INTERFACE PARAMETERS (GWA1502):

POSITION	CHANNEL 1 MODE (L1)	CHANNEL 2 MODE (L2)
B1	Independent push-button	Independent push-button
B2	Combined push-buttons	Combined push-buttons
B3	One-way switch (toggle)	One-way switch (toggle)
B4	One-way switch (on/off)	One-way switch (on/off)
B5	Scene	Scene
B6	Independent push-button	One-way switch (toggle)
B7	Scene	Independent push-button
B8	Timed push-button	Independent push-button

Depending on the operating mode selected and the actuators associated, the behaviour of each channel upon the closure/opening of the corresponding input is as follows:

MODE	ASSOCIATION WITH ON/OFF ACTUATOR
<b>Independent push-button</b>	<ul style="list-style-type: none"> <li>• Closure: inversion of current load status (toggle)</li> <li>• Opening: no effect</li> </ul>
<b>Combined push-button</b>	<ul style="list-style-type: none"> <li>• Closure: sends ON if channel 1, OFF if channel 2</li> <li>• Opening: no effect</li> </ul>
<b>Toggle switch</b>	<ul style="list-style-type: none"> <li>• Closure and opening: inversion of current load status (toggle)</li> </ul>
<b>On/Off switch</b>	<ul style="list-style-type: none"> <li>• Closure: sends ON</li> <li>• Opening: sends OFF</li> </ul>
<b>Scene</b>	<ul style="list-style-type: none"> <li>• Long press: scene 1 learning if channel 1 / scene 2 learning if channel 2</li> <li>• Short press: scene 1 execution if channel 1 / scene 2 execution if channel 2</li> </ul>
<b>Timed push-button</b>	<ul style="list-style-type: none"> <li>• Closure: starts timing</li> <li>• Opening: no effect</li> </ul>



## **INTERFACE (GWA1502) FACTORY RESET**

Press and hold the Permit Join activation push-button (A2) for at least 10 seconds. The status LED will flash red and green alternately for 3 seconds, then become red fixed.

## **ACTUATOR (GWA1521) FACTORY RESET**

Press and hold the Permit Join activation push-button (A2) for at least 10 seconds. The status LED will flash red and green alternately for 3 seconds, then become red fixed.

Punto di contatto indicato in adempimento ai fini delle direttive e regolamenti UE applicabili:

*Contact details according to the relevant European Directives and Regulations:*

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