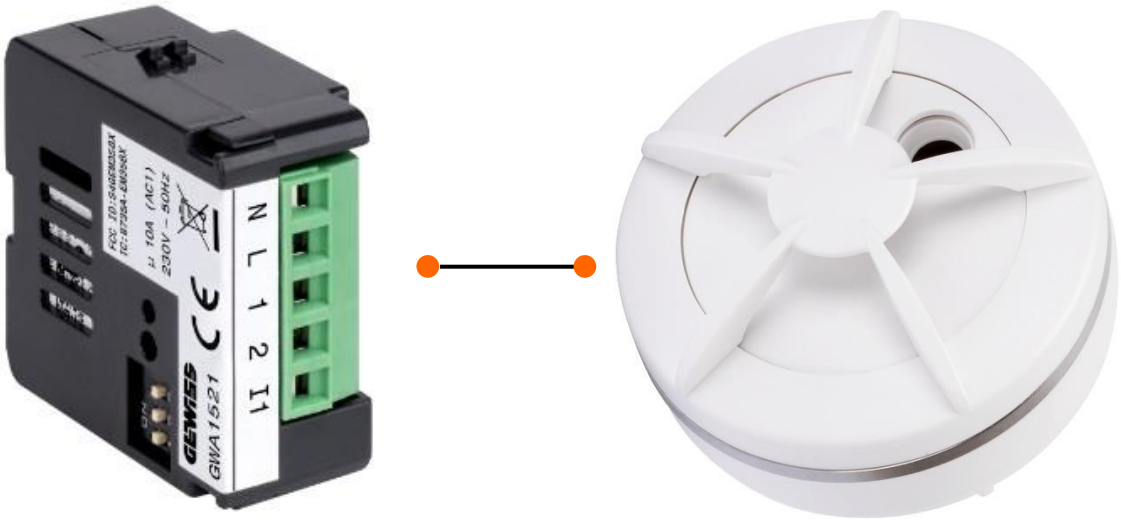
CHORUS

MANUAL ZIGBEE CONFIGURATION

BINDING BETWEEN THE GWA1521 ACTUATOR AND THE GWA1514 H_2O SENSOR



zigbee

TECHNICAL MANUAL

CONTENTS

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 GWA1415 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:

1. Create the ZigBee network
2. Define the optimal frequencies that the network will use
3. Generate the PAN (Personal Area Network)
4. Generate the decoding key used by that specific network
5. Assign a short address to all the devices which are part of that ZigBee network
6. Transmit the decoding key to those devices

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.

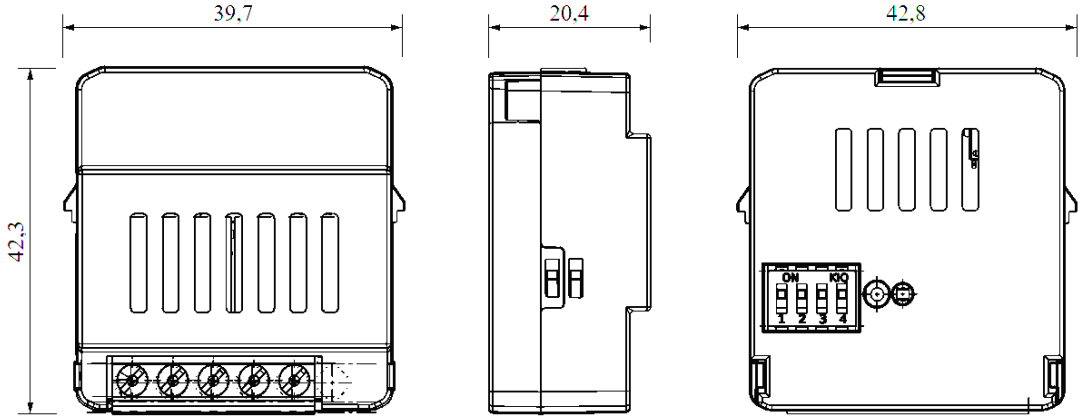
TECHNICAL FILES

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

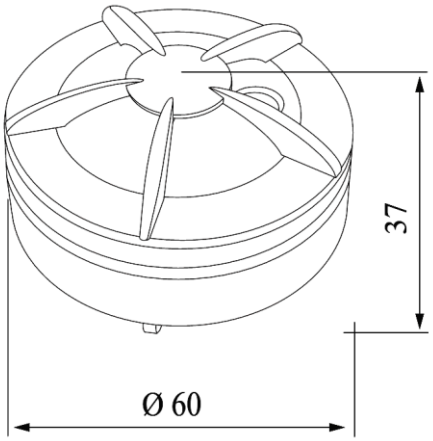
GWA1514	
CATEGORY:	Water sensor
COLOUR:	White
SUPPLY VOLTAGE:	Battery-controlled
SUPPLY BATTERIES:	CR123 replaceable
OUTPUT POWER:	8 dBm
SIREN:	85 dB/3m
TEMPERATURE SENSOR:	[0°; 50°C]
DEGREE OF PROTECTION:	IP20
STORAGE TEMPERATURE:	[-20°; +80°C]
OPERATING TEMPERATURE:	[0°; 50°C]
RELATIVE HUMIDITY (NON-CONDENSATIVE):	[10%; 95%]
DIMENSIONS (MM):	Ø 60x37
COMMUNICATION PROTOCOL:	ZigBee (IEEE 802.15.4)
REFERENCE STANDARDS:	2014/53/EU, EN 60669-2-1, ETSI EN 300 328

DIMENSIONS

GWA1521

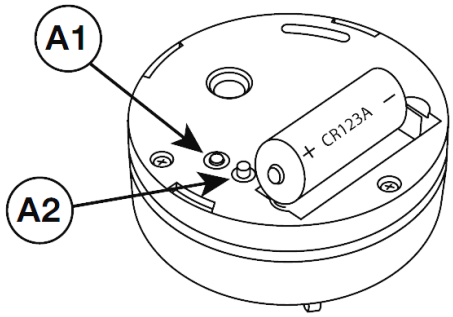


GWA1514



BREAKDOWN OF THE ZIGBEE DEVICES

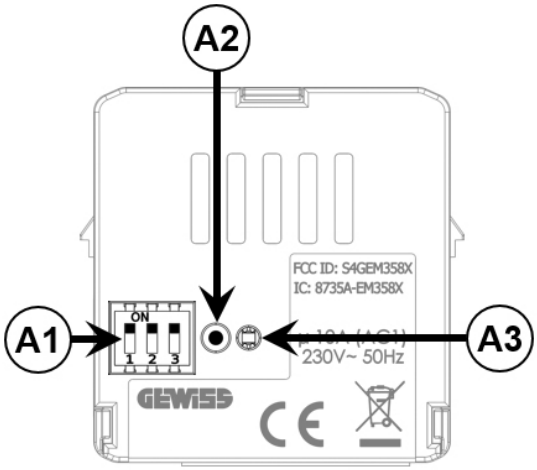
GWA1514



A1: Push-button/multi-purpose red LED

A2: Test and alarm silencer push-button/red alarm LED

GWA1521



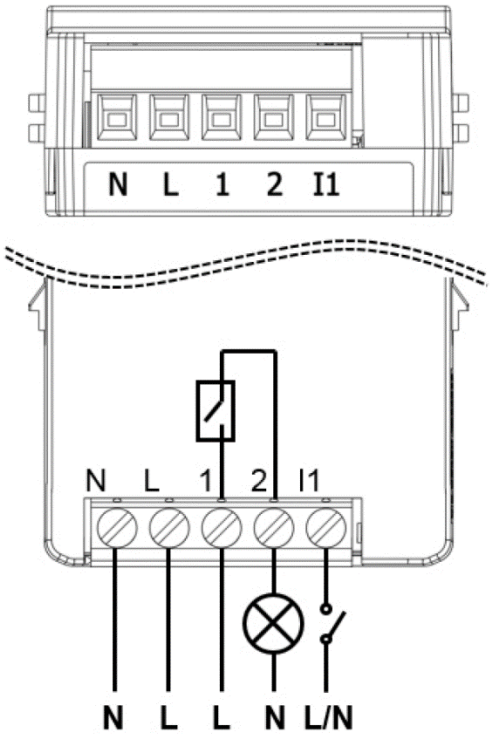
A1. DIP-switch with 3 one-way switches

A2. Miniature button key for joining functions

A3. Status LED

ELECTRIC DIAGRAMS

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 GWA1514)
5. Make the binding between the GWA1521 and GWA1514 devices

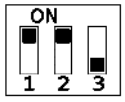
If the ZigBee network has already been created, only the last three points of the list are required:

1. After creating the network, activate Permit Join
2. Power the devices that you want to join to the network (GWA1521 and GWA1514)
3. Make the binding between the GWA1521 and GWA1514 devices

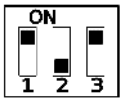
Creating and joining to the ZigBee network:

1. Make sure the actuator is in its factory-set condition (if it isn't, make a factory reset)
2. Make the connections on the GWA1521 actuator as shown in the diagram above
3. Power the actuator
4. The status LED will light up fixed red (if it's in the factory-set condition)
5. Press the Join button key 3 times, quickly
6. The status LED will turn fixed green for a few seconds, then begin flashing in green. The device is now the coordinator. Permit Join will stay open for 15 minutes.
7. Insert the battery in the GWA1514 water detector
8. The status LED (A1) of the H_2O sensor will flash initially and then switch off when the sensor has joined the ZigBee network of the actuator
9. The joining is indicated on the actuator by three quick flashes of the status LED, after which the actuator will flash once per second
10. Join the other water sensors, repeating the procedure in the previous point (and within 15 minutes of the activation of Permit Join)
11. The procedure to join the sensors with the actuator is now complete

Association between devices:



1. On the GWA1521 actuator, bring the dip-switches to the positions shown
2. The status LED will have a fixed yellow light
3. Press the push-button connected to input I1 of the actuator
4. The status LED of the actuator will make a double yellow flash and this will continue cyclically
5. Intervene on the GWA1514 water sensor, pressing and holding button A1 for at least 5 sec. until the sensor status LED flashes, then release it
6. The sensor LED will flash every 3 seconds until the sensor has been joined to the ZigBee network of the actuator. The joining is indicated on the actuator by a double yellow flash of the status LED
7. Repeat the procedure from point 3 for any other sensors
8. To end the procedure, wait 3 minutes or press the push-button connected to input I1 of the actuator again
9. On the GWA1521 actuator, bring the dip-switches to the positions shown



SENSOR (GWA1514) FACTORY RESET

Press and hold button/status LED A1 until the LED flashes continuously (it will first of all make a single flash, then a double one, then it will continue flashing).

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.

code 70194220

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