IMPORTANT INFORMATION

For any installation problem please contact our Customer Serviceat the number +39-0172.812411 operating Monday to Fridayfrom 8:30 to 12:30 and from 14:00 to 18:00

V2 reserves the right to make modifications to the product without any prior warning; furthermore, the company declines all responsibility for damages to people or property resulting from improper use or incorrect installation.

⚠ **Read the following instruction manual thoroughly prior to proceeding with installation and programming of the system.**

- This instruction manual is intended solely for use by technical staff, qualified in the field of installation of automation devices
- None of the information contained in the manual is of interest or use to end users.
- All maintenance or programming operations should be conducted exclusively by qualified staff.

The installation, testing and commissioning of door and gate automation devices should be performed by qualified and skilled personnel, who must assume responsibility for setting up the tests envisaged depending on the risks present; and verify compliance in accordance with legal and regulatory requirements.

- V2 accepts no responsibility for injuries and damage resulting from improper use of the product; other than that described in this manual.
- Packing materials must be disposed of in full compliance with local regulations.

DECLARATION OF CONFORMITY

The undersigned representing the following manufacturer:
V2 S.p.A.
Corso Principi di Piemonte 65, Racconigi (CN), ITALY

herein declares that the product **WES**

is in compliance with the provisions of the following community directives (including all applicable amendments)

99/5/CE
Directive regarding radio equipment and telecommunication terminal equipment and reciprocal recognition of their conformity

98/37/CE
concerning the harmonisation of legislation from member states regarding machinery

and that the technical standards indicated below have been applied:

EN 301 489-3: 2002
Electromagnetic compatibility and questions relating to the radiofrequency spectrum (ERM); electromagnetic compatibility (EMC) standards for radio equipment and services.
Part 3: specific conditions for short range devices (SRD) operating between the frequencies of 9 kHz and 40 GHz.

EN 300,328-1: 2001
Electromagnetic and radio spectrum compatibility (ERM); Broadband transmission systems. Data transmission equipment operating in the ISM band at 2.4 GHz using broad spectrum modulation techniques.

EN 12978 : 2003
Industrial, commercial and garage doors and gates - Safety devices for motorised doors and gates - Test methods and requirements

Racconigi, 12/10/2009
V2 S.p.A. Legal Representative
Cosimo De Falco

TECHNICAL INFORMATION

Sensor	
Power supply:	2 LR6/AA batteries (1.5 V-2600 mAh)
Stand-by time:	>2 years
Dimensions:	170,5x45x19,5 mm
Operating temperature:	-15/+50 °C
Inputs:	2 mechanical or resistive edges
Maximum range:	10 m

DESCRIPTION

WES (Wireless Edge System) is the new V2 system allowing safety edges to be controlled by radio.
The system consists of a base unit connected directly to the control unit, and one or more sensors (up to 8 per base unit) connected to the safety edges.

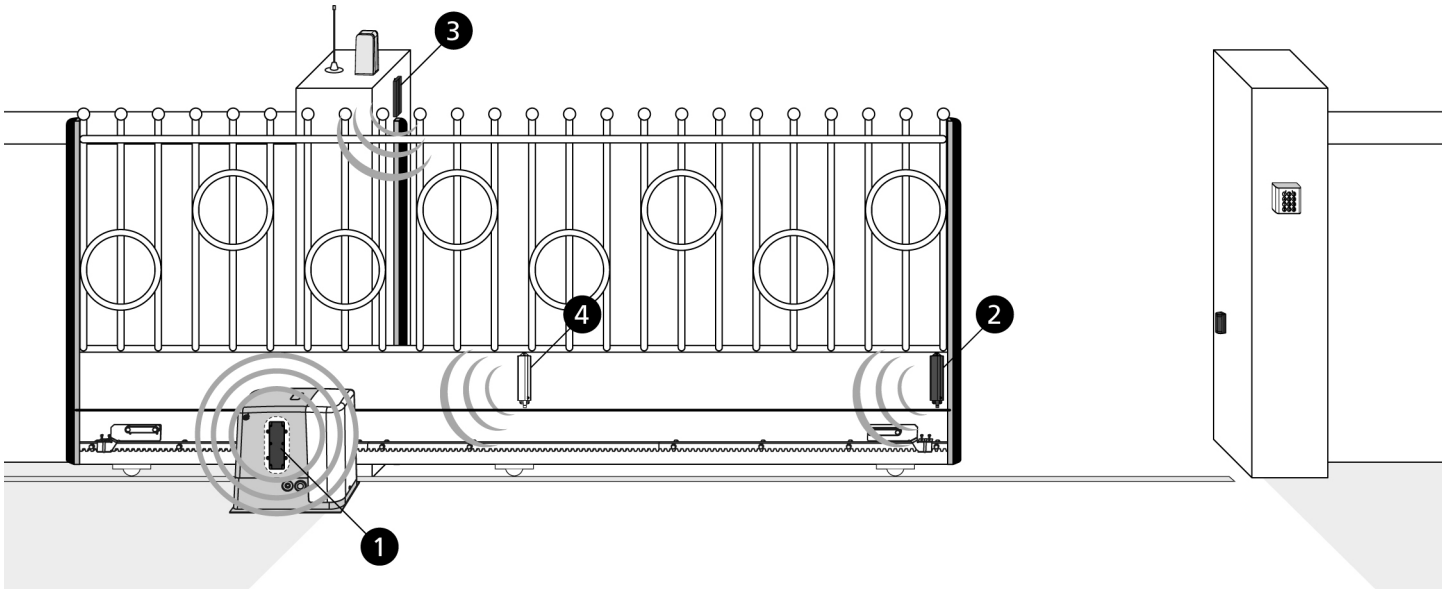
The base unit is powered from the control unit and constantly monitors the status of the sensors connected.
Up to a maximum of 8 sensors may be connected to each base unit.
The system is compatible with standard safety edges with NC breakers, resistive safety edges (8k2).

The system is compatible with all control unit models.

System operation

The system operates independently of the status of the control unit. The relay corresponding to each sensor unit is kept closed if no edges are activated.
If an edge is pressed, the relay opens, signalling the anomaly to the control unit.
The base unit communicates with each sensor every 15 seconds, so as to verify their presence and function.

INSTALLATION LAYOUT



NOTE: in order to guarantee optimal system operation, it is important that the distance between the sensors and the base be as short as possible and never exceed the maximum permitted distance.
In addition, it is important to avoid positioning metal surfaces between the base and sensors.

1 WES base (installed inside the motor)
2 WES sensor controlling 2 edges
3 WES sensor
4 WES sensor: recommended position for large gates

SENSOR INSTALLATION

⚠ **WARNING: Sensors should be installed with the system in operation, hence with the control unit on: make sure the automation device cannot start a manoeuvre during installation.**

In the case of open air installations, the sensor must be fitted vertically, with the cable outlet facing downwards.

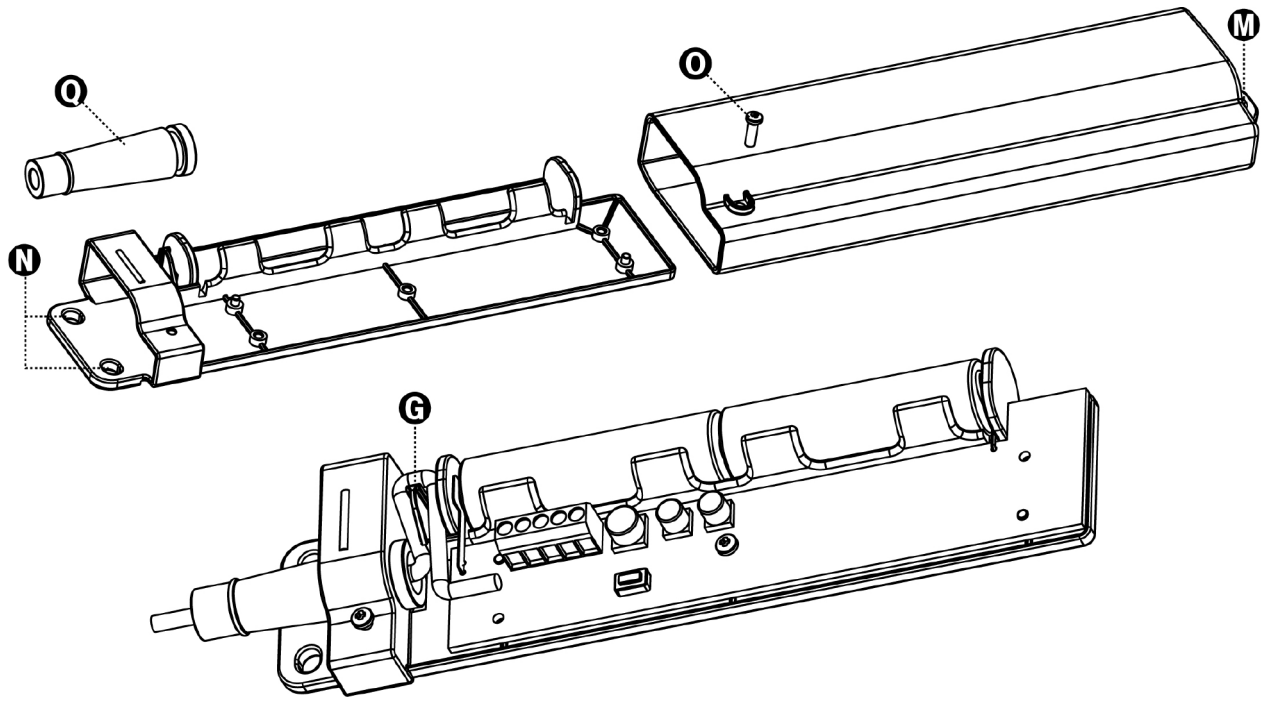
1. Use fixing lug **M** on the cover and the two fixing lugs **N** on the base to fix the sensor.

2. To open the casing, loosen either the cover by unscrewing the screw in lug **M**, or the base by unscrewing the screws in lugs **N**, then unscrew screw **O** which joins both parts of the casing.

3. Remove the grommet **Q**; pass the edge connecting wires through the hole in the base and then through the grommet.

4. Pass the wires through the anti-slip channel **G** and connect them to the terminals.

5. Insert the narrow end of the grommet in the hole and pull outwards so that the grommet snaps into position.



SENSOR ELECTRICAL CONNECTIONS

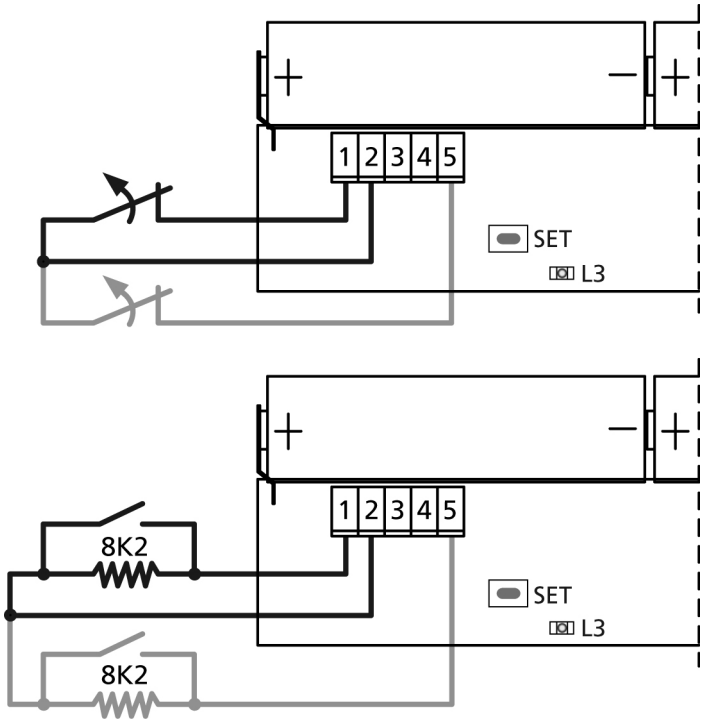
Mechanical or resistive edges

Connect the edge wires to terminals 1 and 2.

Optionally, a second edge of the same type may be connected to terminals 2 and 5.
If the first edge is associated with unit 1, the second will automatically be associated with unit 2, and vice versa.

It is also possible to connect several edges in cascade: in this case, they will all be associated with the same unit.

PLEASE NOTE: if the control unit has only one edge input, connect the edges in cascade and associate them all with UNIT 1.



ASSOCIATION WITH THE BASE UNIT

During association, the sensor communicates the installed configuration to the base.

NOTE: if a sensor is not connected to any edge, it cannot be associated with a base.

CAUTION: make sure edges are connected properly to the sensors prior to proceeding.
When association is complete, it is no longer possible to alter the sensor connections.

Insert the batteries taking care to observe the polarity: Positive pole towards the cable track (plate contact) and the negative pole towards the antenna (spring contact). Ensure the LED flashes faintly in the first seconds. If the LED flashes intensely, this means the sensor has already been configured; it is necessary to delete the old configuration (see the RESET SENSOR CONFIGURATION section)

To associate an edge with **unit 1**, proceed as follows:
1. Press the PROG button on the base unit once: the ALARM LED emits single flashes
2. Press and hold the sensor SET button until LED L3 flashes intensely and regularly, then release the button.
3. The base automatically exits acquisition mode and the sensor starts to transmit with a period of 15 seconds

To associate an edge with **unit 2**, proceed as follows:
1. Press the PROG button on the base unit twice: the ALARM LED emits dual flashes
2. Press and hold the sensor SET button until LED L3 flashes intensely and regularly, then release the button.
3. The base automatically exits acquisition mode and the sensor starts to transmit with a period of 15 seconds

To associate an edge with **both units**, proceed as follows:
1. Press the PROG button on the base unit 3 times: the ALARM LED emits triple flashes
2. Press and hold the sensor SET button until LED L3 flashes intensely and regularly, then release the button.
3. The base automatically exits acquisition mode and the sensor starts to transmit with a period of 15 seconds

PLEASE NOTE: Association must be completed within 15 seconds, otherwise the base unit exits acquisition mode.

4. On completion, close the sensor casing and tighten the screws once more.
5. Repeat the operation for the other sensors in the network. When all the sensors have been installed and associated, close the base unit casing.

RESET SENSOR CONFIGURATION

To delete the configuration of a sensor, it is necessary to press and hold the SET button on the sensor until the LED remains on.
Then release the button and repeat the radio channel configuration.

EDGE TESTING

Activate the base unit testing method by setting dip-switch 8 to ON. Press the edge to verify that:

1. the LED on the sensor remains fixed and on
2. the red (OUT1/OUT2) LED on the base unit comes on
3. The control unit recognises the alarm on the input where the output from the u

⚠ **PLEASE NOTE: Remember to return dip-switch 8 to OFF on completion of the test.**

REPLACING THE BATTERIES

When the batteries are charged, each transmission from the sensor is displayed by LED L3 flashing.
When the batteries are almost run down, LED L3 flashes for longer periods of time.

When the batteries are too low, the sensor signals this to the base which opens the relay connected to the LOW BAT output and switches on the relevant LED.

The batteries may be replaced without switching the system off. Proceed as follows:

1. Remove the screw **O** fixing the cover to the base.
2. Remove the screw **M** holding the cover and slide it off the base
3. Remove the batteries and insert new ones, observing the polarity **(ONLY USE MODEL LR6/AA BATTERIES – 1.5 V – 2600 mAh)**
4. Reclose the casing and fix it once more.

FAULT FINDING PROCEDURE

Conduct fault-finding with the system off (door closed).

STEP	Action	Test	Diagnosis
1.	Open the base cover and observe the red LED	Is the LOW BAT LED on?	A sensor has a low battery; find the sensor with the flashing LED
2.		Is the ALARM LED on and fixed?	Communication problems between the sensors and the base. Find the sensor with the LED off or flashing very faintly
3.	Set dip switch 8 to ON: the ALARM LED initially comes on	Are the three leds OUT1, OUT2 and BAT LOW off?	The system is operating normally. If the control unit does not show that the edge input has been closed, there is a connection problem (broken wire)
4.	Observe the LED for a sensor	Is the LED on and fixed?	The sensor detects that the edge has been activated; connection problem or faulty edge
5.	Operate the edge	Does the LED on the sensor come on?	The sensor does not detect the status of the edge; connection problem or faulty edge
6.	-	Does the control unit indicate the edge input is closed?	Connection problems between the control unit and the base (short circuit)
7.	Repeat steps 4, 5 and 6 for each sensor	Are all sensors operating normally?	A non-existent sensor is included in the network. It is necessary to delete the network and repeat assignment of the sensors

⚠ **PLEASE NOTE: Remember to set dip-switch 8 to OFF on completion of the procedure.**