

Manual de instalación, operación y mantenimiento
Installations-, Betriebs- und Wartungsanleitung
Installation, operation and maintenance manual
Manuel d'installation, d'exploitation et maintenance
Manuale di installazione, operativo e manutenzione
Manual de instalação, operação e manutenção



66577 Wind Control Sensor



66578 Wind Control Unit

EQUIPOS PARA FUENTES
FOUNTAIN UNITS

Made in
SPAIN



Wind Control Sensor

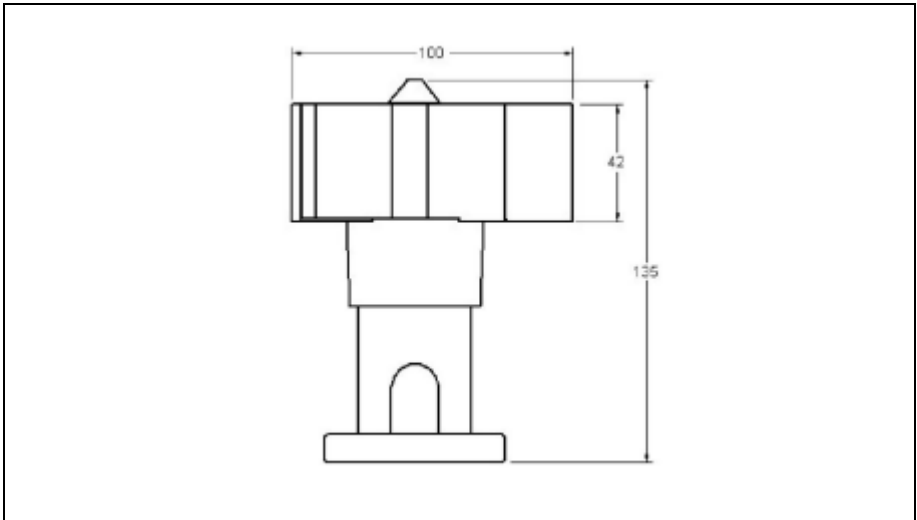


Fig. 1

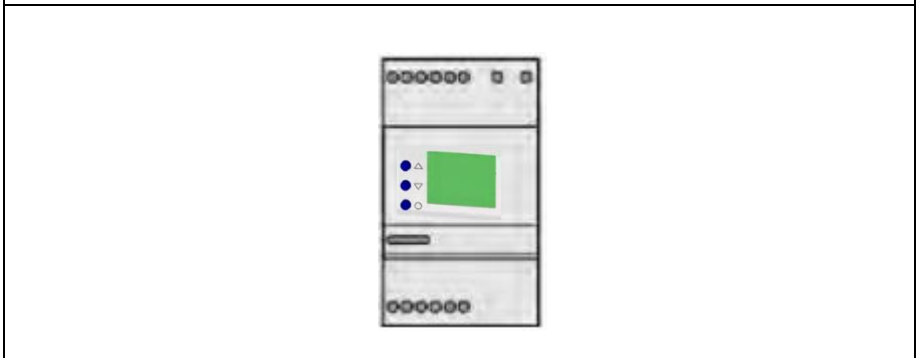
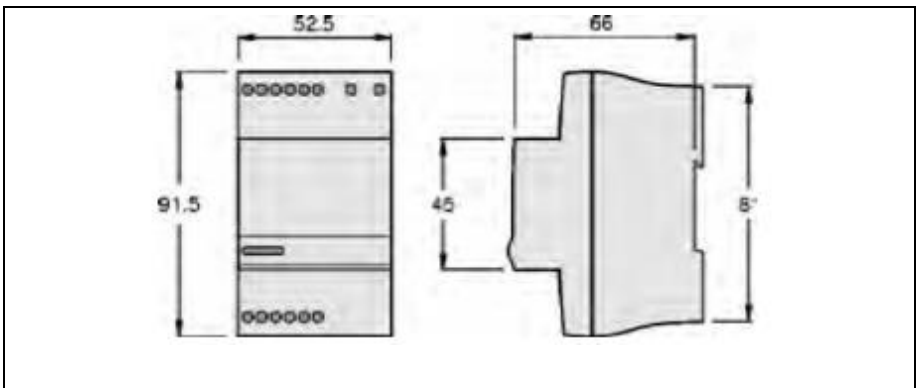


Fig. 2

INSTALATION, OPERATION AND MAINTENANCE MANUAL

Wind Control Sensor

ÍNDICE

| | | |
|----------|--|-----------|
| 1 | GENERAL SAFETY | 4 |
| 1.1 | ELECTRICAL SAFETY | 4 |
| 1.2 | SAFETY IN USE..... | 4 |
| 1.3 | OPERATION AND MAINTENANCE SAFETY | 4 |
| 2 | INSTALATION AND ASSEMBLY | 4 |
| 2.1 | SENSOR FASTNING AND LEVELLING | 4 |
| 2.2 | CONTROL UNIT FASTENING | 5 |
| 2.3 | WIRING DIAGRAM | 5 |
| 2.4 | SETTINGS..... | 6 |
| 2.5 | CONTROL UNIT OPERATION DIAGRAM..... | 11 |
| 3 | OPERATION AND MAINTENANCE | 11 |
| 3.1 | SAFE MANAGEMENT OF WASTE..... | 12 |
| 4 | TECHNICAL SPECIFICATIONS | 12 |
| 5 | FAQS | 12 |
| 6 | PRODUCT LABELLING..... | 12 |
| 7 | WARRANTY | 12 |

1 GENERAL SAFETY

1.1 ELECTRICAL SAFETY

- Disconnect the unit from the power supply before doing any assembly or maintenance job.
- Do not touch the water or get into the water while the unit is connected to the power supply.
- Connect the unit to a power supply with an earth connection, protected by the following components:
 - An RCD safety switch with a maximum residual current of 30 mA.
 - A circuit breaker fuse for 10 A current.

1.2 SAFETY IN USE

- The anemometer installation must be under the following conditions:

| Anemometer characteristics | Minimum value | Maximum value |
|----------------------------|--|----------------------|
| Temperature | -20°C | 80 °C |
| Measuring range | 2 m/s | 55 m/s |
| Accuracy | +- 2 m/s | |
| Output Accuracy | 0...210 Hz, a 55m/s = 200 km/h 0.26 m | |
| Weight | 0.154 kg (sin cable) | 1.265 kg (con cable) |
| Protection class | IP 65 | |

- In case of frost and -20°C or bellow temperatures, remove the unit to avoid breakage.
- Do not handle the enclosures, otherwise the unit could lose its warranty.

1.3 OPERATION AND MAINTENANCE SAFETY

- Do not handle any component beyond the current manual instructions.
- Don not handle the unit with wet hands.
- The unit may only be handled by authorised personnel or qualified service engineers. Do not allow unauthorised personnel or unqualified service engineers to handle it.

2 INSTALATION AND ASSEMBLY

IMPORTANT:

- Read the whole of the manual carefully before installing the unit.
- Upon receiving the product, check that the unit is in good conditions.
- Identify all components prior to their installation.

2.1 SENSOR FASTNING AND LEVELLING

Necessary components fixing the unit:

| Components | Qty |
|--------------------|-----|
| Plastic straps | - |
| Adequate fasteners | - |
| Bracket support | 1 |
| | |

- 1) Fix the anemometer to the desired surface using fasteners:

IMPORTANT: Level the anemometer in order to ensure a proper operation:

- Place it at a minimum height of 10 metres, a clear area without any obstructions around and exposed to wind.
- Ensure the perpendicularity to the floor of the sensor, the wire must be set to any surface in order to avoid damage caused by high wind speeds. (Fig. 3)

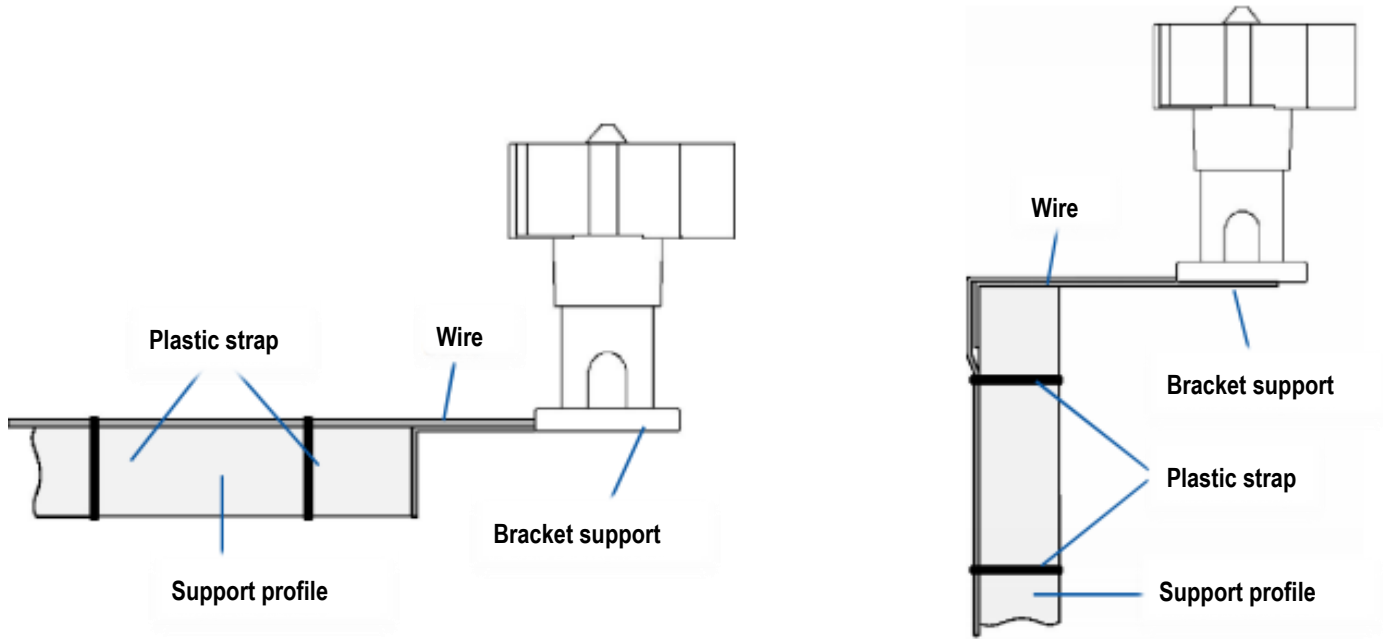


Fig. 3

IMPORTANT: Prevent any friction or oxide slags that could damage the wire cover.

2.2 CONTROL UNIT FASTENING

IMPORTANT: *Risck of damage.* Fix the control unit out of the fountain within a enclosure or electrical cabinet. The protection class of the control unit is IP-20.

A DIN rail is provided with the unit for assembling in the electrical cabinet.

2.3 WIRING DIAGRAM

Connect the sensor to the terminals Y1 and Z1. The output will be connected to terminals 15-18 / 25-28 / 35-38 of the control unit, depending on the relay whose operation would be required, relay 1 (R1), el relay 2 (R2) o el relay 3 (R3) respectively. (Fig. 4)



Fig. 4

- 1) Connect main power supply (230 V AC) to the terminals A1 and A2 of the control unit. (Fig. 5) If the connection has been made correctly, the green LED must be on.

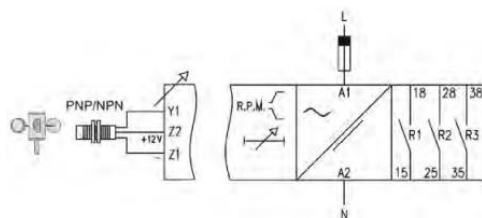


Fig.5

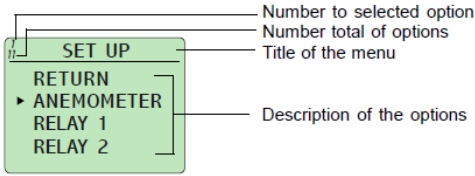
2.4 SETTINGS

The control unit has a display to visualize the values of wind speed, as well as a set up menu for the output activations in function of the wind detected by the anemometer.

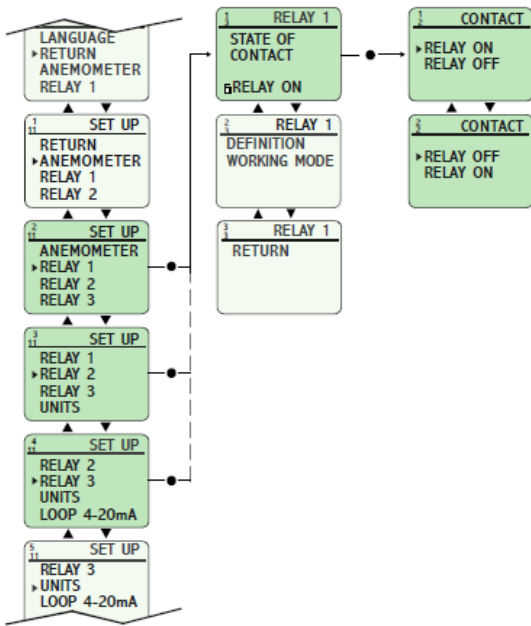
NAVIGATION BY MENU

To navigate by the menus and realize the set up, the control unit has three keys:

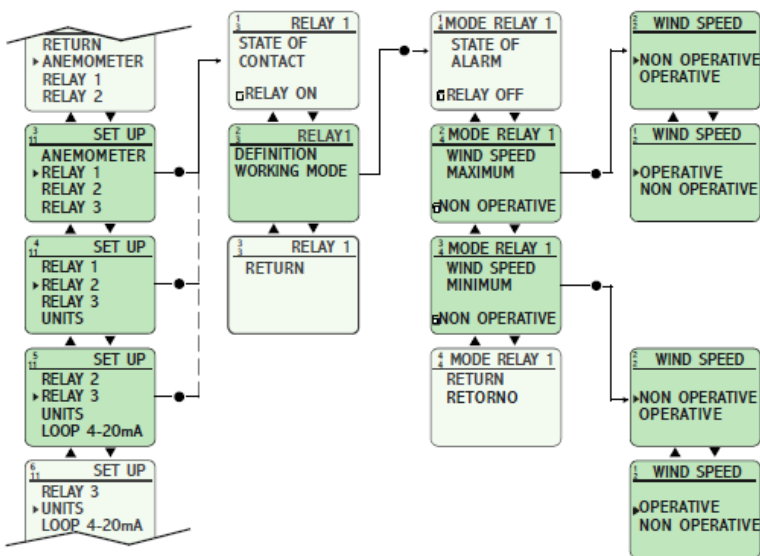
- ▲ ▼ Keys to navigate through menus and modify values.
- ● Key to enter and exit menus, and validate the introduced values.



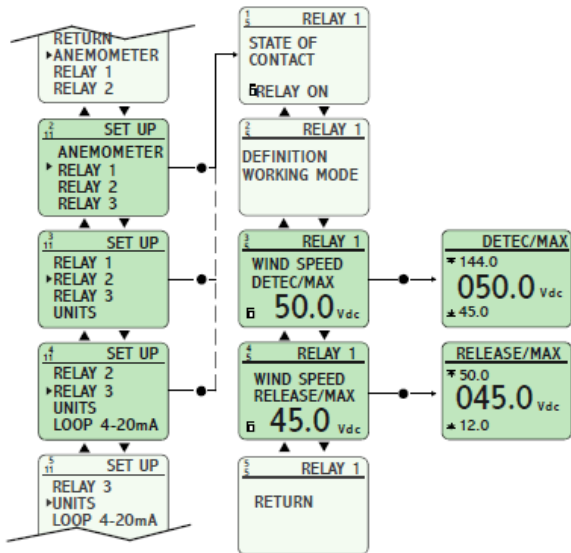
RELAY STATE CONFIGURATION



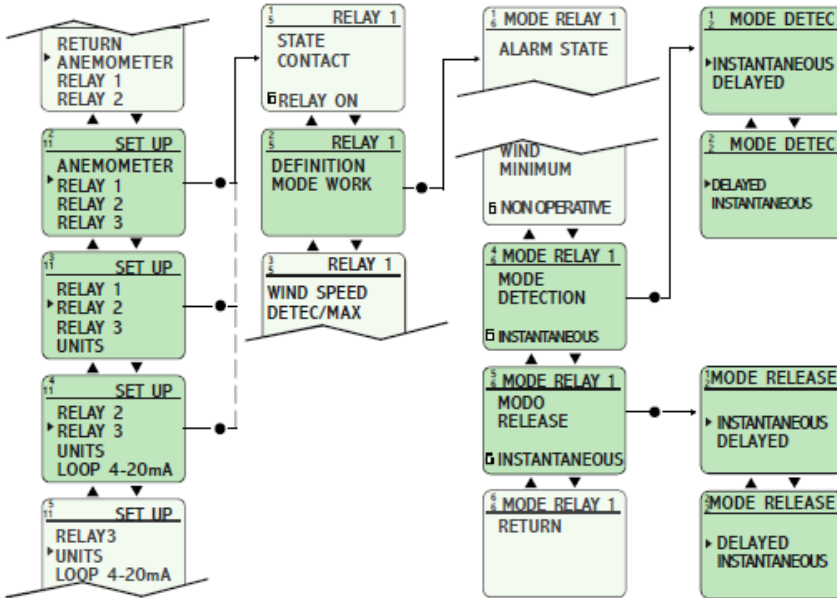
SET UP MIN/MAX WIND SPEED

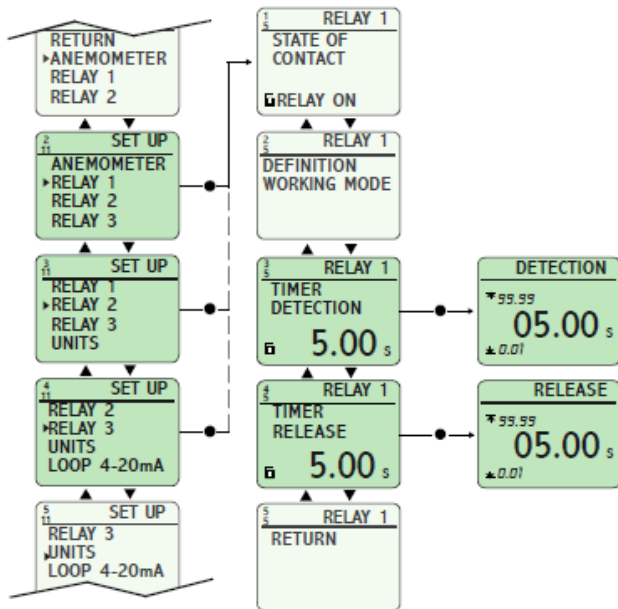


SET UP MIN/MAX WIND SPEED VALUES



SET UP DELAY ON DETECTION AND/OR ON RELEASE





A practical example of control unit setting is given below.

Let us assume that there is an installation where our objective is to decrease the pump flow when the wind is between 10 Km/h and 20 Km/h and for winds faster than 20km/h, switching the unit off to prevent equipment damage and for safety reason.

For this, there is one anemometer and one control unit, that unit will be set following below control parameters:

- Relay 1 will be disabled if wind is faster than 10km/h during 5 seconds of detection time.
- Relay 1 will be activated again when wind is slower than 8 Km/h during a release time longer than 5 seconds.
- Relay 2 will be disabled if wind is faster than 20 km/h during 5 seconds of detection time
- Relay 2 will be activated again when wind is slower than 15 km/h during a release time longer than 5 seconds.

Note: In this case, both relays Will be set as NC.

Control unit setting:

Relay 3

In this case, Relay 3 is not necessary, then, it will be set as out of order, thus both minimum and maximum configurable wind speed must be disabled.

Procedure:

- Press the key with a circle.
- Press the arrows to reach *Relay 3* and press the circle's key.
- Press the arrows until *Definition working mode* and press the circle's key.
- Press the arrows to reach *Wind speed minimum* and press the circle's key.
- Press the arrows to reach *Operative* and press the circle's key.
- Press the arrows to reach *Return* and press the circle's key.
- Press the arrows to reach *Wind speed detection minimum* and press the circle's key. Type 0.0 and validate.
- Press the arrows to reach *Wind speed release minimum* and press the circle's key. Type 0.1 and validate.
- Press the arrows to reach *Definition working mode* and press the circle's key.
- Press the arrows to reach *Wind speed maximum* and press the circle's key.
- Press the arrows to reach *Non operative* and press the circle's key.
- Press the arrows to reach *Wind speed minimum* and press the circle's key.
- Press the arrows to reach *Non operative* and press the circle's key.

How to change the anemometer release set point in explained below.

Relay 1 (Strong wind)

This relay's role is to detect strong gusts of wind. It will be set this way:

- Press the key with a circle.
- Press the arrows to reach *Relay 1* and press the circle's key.
- Press the arrows until *Definition working mode* and press the circle's key.
- Press the arrows to reach *Wind speed minimum* and press the circle's key.
- Press the arrows to reach *Operative* and press the circle's key.
- Press the arrows to reach *Return* and press the circle's key.
- Press the arrows to reach *Wind speed detection minimum* and press the circle's key. Type 0.0 and validate.
- Press the arrows to reach *Wind speed release minimum* and press the circle's key. Type 0.1 and validate.
- Press the arrows to reach *Definition working mode* and press the circle's key.
- Press the arrows to reach *Wind speed minimum* and press the circle's key.
- Press the arrows to reach *Non operative* and press the circle's key.
- Press the arrows to reach *Wind speed maximum* and press the circle's key.
- Press the arrows to reach *Operative* and press the circle's key.
- Press the arrows to reach *Return* and press the circle's key.
- Press the arrows to reach *Wind speed detection maximum* and press the circle's key. Type 10.0 and validate. (Adequate the detection strong wind value (km/h) to the installation).
- Press the arrows to reach *Wind speed release maximum* and press the circle's key. Type 8.0 and validate. (Adequate the deactivation detection strong wind value (km/h) to the installation).
- Press the arrows until *Definition working mode* and press the circle's key.
- Press the arrows to reach *Mode release* and select *Delay*. Press Return.
- Press the arrows to reach *Timer release*. Select 5 seconds and validate.
- Press the arrows until *Definition working mode* and press the circle's key.
- Press the arrows to reach *Detection Mode* and press the circle's key.
- Press the arrows to reach *Delay* and press the circle's key.
- Press the arrows to reach *Return* and press the circle's key.
- Press the arrows to reach *Timer detection*. Select 5 seconds and validate.
- Press the arrows to reach Return and press the circle's key.
- Press the arrows to reach *Return* and press the circle's key.

Relay 2 (very strong wind)

In case of having very strong winds, of more than 20 km/h, we want that our fountain will completely off.

Por tanto, configuramos el Relay 2 de la siguiente manera:

Therefore, we configure the Relay 2 in the following way:

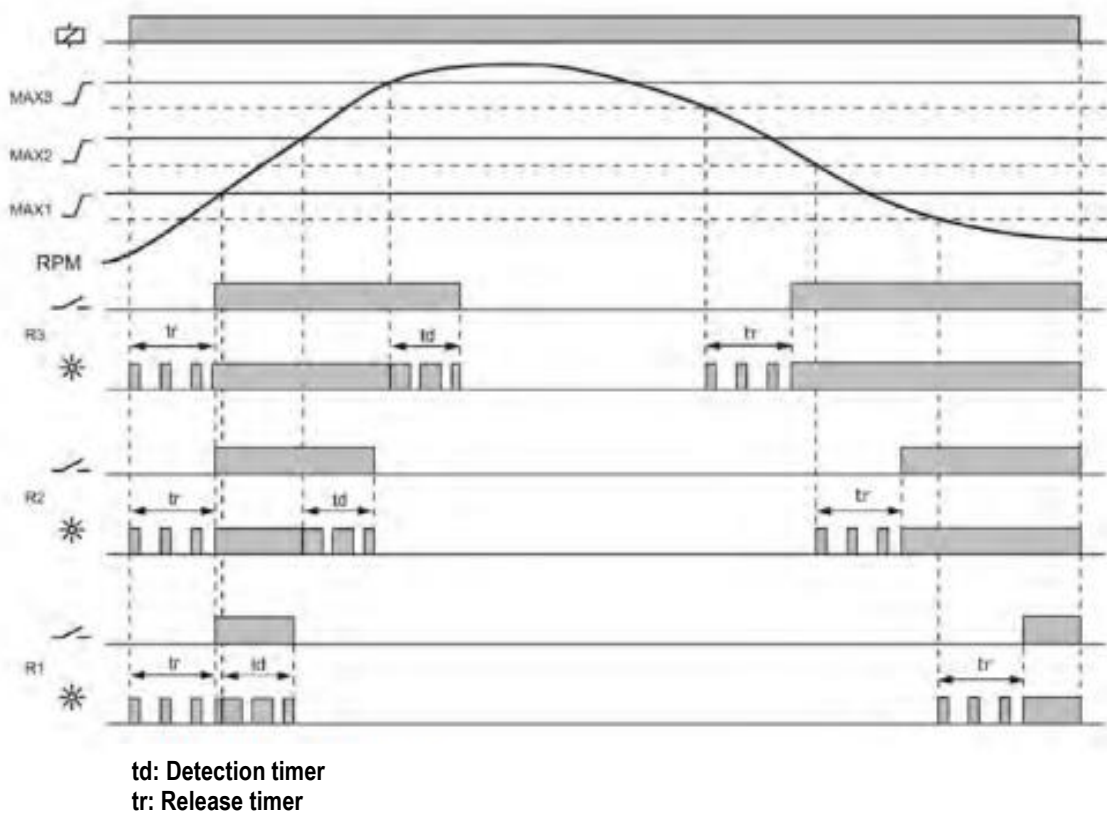
- Press the key with a circle.
- Press the arrows to reach Relay 3 and press the circle's key.
- Press the arrows until *Definition working mode* and press the circle's key.
- Press the arrows to reach *Wind speed minimum* and press the circle's key.
- Press the arrows to reach *Operative* and press the circle's key.
- Press the arrows to reach *Return* and press the circle's key.
- Press the arrows to reach *Wind speed detection minimum* and press the circle's key. Type 0.0 and validate.

- Press the arrows to reach *Wind speed release minimum* and press the circle's key. Type 0.1 and validate.
- Press the arrows to reach *Definition working mode* and press the circle's key.
- Press the arrows to reach *Wind speed minimum* and press the circle's key.
- Press the arrows to reach *Non operative* and press the circle's key.
- Press the arrows to reach *Wind speed maximum* and press the circle's key.
- Press the arrows to reach *Operative* and press the circle's key.
- Press the arrows to reach *Return* and press the circle's key.
- Press the arrows to reach *Wind speed Maximum detection* and press the circle's key. Type 20.0 and validate.
(Adequate the detection strong wind value (km/h) to the installation).
- Press the arrows to reach *Wind speed Maximum release* and press the circle's key. Type 15.0 and validate.
(Adequate the detection strong wind value (km/h) to the installation).
- Press the arrows to reach *Definition working mode* and press the circle's key.
- Press the arrows to reach *Release mode* and select the *Delayed* option. Press *Return*.
- Press the arrows to reach *Timer Release* and press the circle's key. Type 5 seconds and validate.
- Press the arrows to reach *Definition working mode* and press the circle's key.
- Press the arrows to reach *Mode Detection* and press the circle's key.
- Press the arrows to reach *Definition working mode* and press the circle's key.
- Press the arrows to reach *Delayed* and press the circle's key.
- Press the arrows to reach *Return* and press the circle's key.
- Press the arrows to reach *Definition working mode* and press the circle's key.
- Press the arrows to reach *Timer Detection* and press the circle's key. Type 5 seconds and validate.
- Press the arrows to reach *Return* and press the circle's key.
- Press the arrows to reach *Return* and press the circle's key.

WARNING: A wind detection speed value less than the release speed value cannot be entered.

WARNING: To have the Relays NC, in the "Contact Status" option "Relay On" must be selected

2.5 CONTROL UNIT OPERATION DIAGRAM



Looking at our practical case explained above, our Relays, past a concrete Tr previously set up in the control unit, are set to 1.

Once the wind speed reaches $MAX2 = 10 \text{ km/h}$, our Relay 1, after a Td , is deactivated.

Arrived to $MAX3 = 20 \text{ km/h}$, and passed again a Td , our Relay 2 will be deactivated.

When the speed will go down again under $MAX2$, our Relay will activate again after a predetermined Tr . The same thing happens with the Relay 1, when the wind speed decreases below $MAX1$ during a Tr period.

3 OPERATION AND MAINTENANCE

WARNING: A very dense pollution may could arrive to deposit a solid layer of particles between the mobile sensor part and the fixed part, preventing the correct working of this. The slit that separates both parts must keep always clean.

3.1 SAFE MANAGEMENT OF WASTE

At the end of the useful time of this equipment, remember to correctly manage the different components according to the current regulations of waste management in your country.

4 TECHNICAL SPECIFICATIONS

| | |
|--------------------|----------|
| Input Voltage | 230 V AC |
| Total Power Supply | 2 W |

5 FAQs

Question

¿Why is the measurement not correct?





Answer

Measurement error may occur because the anemometer has been positioned at one end of the base, instead of at the center, resulting in errors due to the change in wind direction.

Check that the base is flat

In other case or if the answers don't resolve the detected problems, contact the technical service (see list of delegations in the product warranty document).

6 PRODUCT LABELLING

| | | | |
|---|--|--|---|
|  |  |  |  |
| Not operational T < -20 °C | Secure management of electrical and electronic waste Directive 2002/96/CE. (RAEE/WEEE) | The unit's documentation must be read before use | Danger of electric shocks |

7 WARRANTY

The unit's warranty is subject to the term and conditions on the "Warranty certificate for fountain units".

-
- [es]** Nos reservamos el derecho de cambiar total o parcialmente las características de nuestros artículos o el contenido de este documento sin previo aviso.
 - [de]** Wir behalten uns das Recht vor die Eigenschaften unserer Produkte oder den Inhalt dieses Prospektes teilweise oder vollständig, ohne vorherige Benachrichtigung zu ändern.
 - [en]** We reserve the right to change all or part of the features of the articles or contents of this document, without prior notice.
 - [fr]** Nous réservons le droit de modifier totalement ou en partie les caractéristiques de nos articles ou le contenu de ce document sans préavis.
 - [it]** Ci riserviamo il diritto di cambiare totalmente o parzialmente le caratteristiche tecniche dei nostri prodotti o il contenuto di questo documento senza nessun preavviso.
 - [pt]** Reservamo-nos no diereito de alterar, total ou parcialmente as características dos nossos artigos ou o conteúdo deste documento sem aviso prévio.