

Protero-868

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e l e r o



CE 0682

EN

**Operating instructions (translation)**

Keep the operating instructions in a safe place!

EN

**Translation from the original German version.**

All other documents in different languages are translations of the original version.

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## 1 General information

### 1.1 Notes on the Operating Instructions



Please read these Operating Instructions carefully prior to the first commissioning and observe the safety instructions! All activities on and with this device may only be performed as they are explained in these Operating Instructions. Please store this document for the Protero-868 for later use. If you pass the device on to someone else, please hand them these Operating Instructions as well.

Warning symbols and signal words used in these Instructions.

| Warning symbols and signal words used  |   |
|--|---|
|  | <b>Warning!</b><br>Warning of danger by electric shock!                           |
|  | <b>Caution!</b><br>Observe instructions to prevent injuries and material damages! |
|  | <b>Important:</b><br>Observe instructions!  |
|  | <b>Important:</b><br>Further information on the use of this device!               |

The manufacturer reserves the right to make changes to the Specifications stated in these Operating Instructions at any time. These may, in individual cases, be different from the respective device version, however the functional information will not undergo significant changes or become invalid. The current version of the Specifications may be requested from the manufacturer at any time. No claims may be as-

serted against the manufacturer as a result of the preceding sentence. Deviations from text or picture statements are possible and depend on the technical development, features, and accessories of the device. Deviating information on special versions will be explained by the manufacturer in the sales documentation. Other information shall remain unaffected by these provisions.

## 1.2 Standards and Directives

During the design process, the basic health and safety requirements of the applicable laws, Standards and Directives were complied with. All safety information in these Operating Instructions refer to the laws and regulations currently applicable in Germany. All instructions in the Operating Instructions shall be observed without limitation and at any time. Beside the safety instructions contained in these Operating Instructions, the provisions for accident prevention, environmental protection and occupational safety, which are applicable for the operating site, must be observed. Provisions and Standards for the safety rating can be found in the EC Declaration of Conformity which also confirms the safety herein.

## 1.3 Intended use

The device is a battery-operated, wireless vibration sensor for retractable arm awnings.

The Protero-868 can be operated with the following radio receivers:

- Radio tubular drives SunTop-868
- Radio tubular drives VariEco-868
- External radio receiver Combio-868 RM
- External radio receiver Revio-868

Detailed information on compatibility with **elero** receivers can be found in chapter 3.5 Functional Principle.

Further fields of application have to be arranged with the manufacturer, **elero** GmbH Antriebstechnik (see Chapter 8, Manufacturer's Address).

The operator will be solely responsible for damages resulting from improper use of the device. The manufacturer cannot be held liable for personal or material damages caused by misuse or procedural errors, and by improper operation and commissioning.

A use which deviates from the intended use stated by the manufacturer, **elero** GmbH Antriebstechnik, is deemed as foreseeable misuse.

## 1.4 Warranty and liability

Principally, the General Terms and Conditions of the manufacturer, **elero** GmbH Antriebstechnik (see Chapter 8, Manufacturer's Address for address), apply. Liability claims for personal or material damages are excluded when they can be attributed to one or more of the following causes:

- Unintended use of the device
- Improper installation, commissioning, or operation of the device
- Structural modifications to the device without the written consent of the manufacturer
- Operation of the device with improperly installed connections, defective safety devices or improperly installed safeguards
- Non-observance of the safety provisions and instructions of these Operating Instructions
- Operation of the device outside the limits specified in the Specifications.

## 2 Safety

Only use radio systems if they are allowed and can be operated without interference.

- The remote control is only approved for devices and systems for which any malfunction of the sensor system or receiver would not result in a risk for persons, animals or property, or if such a risk is covered by other safety equipment.
- Before installing the unit at the required position, check the proper function of the Protero-868 and the receiver.

### 2.1 General safety instructions

The Operating Instructions contain all safety instructions which must be observed in order to prevent dangers inherent to handling the device in connection with the drives and components to be controlled. A safe use of the device can only be ensured when all given safety instructions are observed.

### 2.2 Requirements for the personnel

- Each person who is tasked to work with the device must have read the complete Operating Instructions and have understood the dangers resulting from the use of device before performing any activities.

### 2.3 Safety instructions for operation

- You have to check the casing for damages and tightness prior to the commissioning and regularly afterwards as well. Never commission a damaged device.

## 3 Product description

### 3.1 General information

The Protero-868 recognises vibrations (e.g. caused by wind) at an awning. The wind sensitivity can be adjusted in 10 stages by a threshold switch.

If the device registers that a set threshold is reached or exceeded, it will emit a signal to the awning control which retracts the awning.

### 3.2 Scope of supply

The purchased product includes the following:

- Protero-868
- 2 batteries of type LR03 (AAA) (enclosed separately)
- Assembly kit  
(2 screws, washers, keys each)
- Operating instructions

### 3.3 Bidirectional radio system

The term bidirectional radio system means the transmission of radio signals to radio receivers and the response option for the radio receivers to the transmitter. The radio signal can be sent directly to the target receiver. If this is not possible, the radio signal will be routed via other bidirectional participants until it reaches the target receiver. The target receiver carries out the command and sends a confirmation back to the transmitter. The prerequisite for a bidirectional radio system is hence the radio transmitting capability as well as the radio reception capability of all participating components.

### 3.4 Unidirectional radio system

The term unidirectional radio system means the transmission of radio signals to radio receivers. As compared to the bidirectional radio system, the radio receiver cannot return any feedback to the transmitter. It is also not possible to pass on the radio signal from one radio receiver to another.

### 3.5 Principle of function

The Protero-868 can either be taught in bidirectionally or unidirectionally. In unidirectional function, it can also be taught to plants that use the predecessor model and thus is fully backwards compatible.

#### Note:

The Protero-868 works only in connection with compatible radio receivers of the **elero** radio system ProLine-868 (ProLine and ProLine 2), radio tubular drives SunTop-868, VariEco-868, Combio-868 RM, Revio-868.

The Protero-868 can be taught to the following **elero** receivers bidirectionally:

- SunTop-868: as of Version V25
- VariEco-868: as of Version V20
- Combio-868 RM: as of Version V79
- Revio-868: as of Version V12

Older receivers: can only be taught in unidirectionally

The Protero-868 may only be programmed for the receiver on the same awning.

#### 3.5.1 Mounting options

The Protero-868 is attached on the inside of the drop profile of the retractable arm awning with the enclosed accessories from the assembly kit.

Ensure before installation that the Protero-868 is not caught even when the awning is closed.

Extend the awning with a taught hand-held transmitter until you can install the Protero-868 at the drop profile.

Power down the receiver (drive) during assembly of the Protero-868.

Open the Protero-868 and carefully remove the upper part of the housing with the integrated PCB.

Attach the bottom of the housing to the drop profile at approximately a right angle to its horizontal base line.

Recover the voltage supply for the drive.

#### 3.5.2 Schematic figure Protero-868

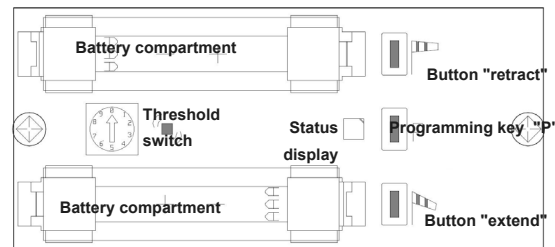


Fig. 1 PCB Protero-868

#### 3.5.3 Teaching the Protero-868 to a receiver with a taught-in manual or wall transmitter

1. Insert the enclosed batteries correctly.
2. Push the button **retract** (UP), **extend** (DOWN) and the teaching button **Pat** at the same time (for 3 seconds) on a transmitter already taught to the awning.  
The status indicator is lit briefly. The receiver (awning drive) is now in programming mode.

3. On the Protero-868 to be taught, keep the teaching button **P** pushed for at least 1 second (until the status display lights up briefly). The receiver is now in teaching mode and signals this by extending and retraction.
4. Push the button **retract** at the Protero-868 at once (no later than 1 second) after retraction starts. The status indicator is lit briefly. The awning stops and then continues to extend.
5. Push the button **extend** at the Protero-868 at once (no later than 1 second) after extension starts. The status indicator is lit briefly. The awning stops.

The Protero-868 is taught to the receiver.

Carefully insert the upper part of the housing with the PCB into the lower part of the housing and screw the housing together.

#### **Behaviour of the Protero-868 when taught bidirectionally to a receiver that is not prepared yet:**

After pushing the P button, the drive will not move. The Protero-868 still is immediately in bidirectional mode. This can be recognised by the orange light of the status display when pushing the button at the Protero-868. The drive doesn't move when a button is pushed.

In this case, the Protero-868 must be deleted again by concurrent pushing and holding of the button **retraction** and **extension** (see chapter 3.5.4). The Protero-868 can then be taught only unidirectionally to this receiver. Please observe: For this, the hand-held transmitter must be taught unidirectionally as well. The Protero-868 must be pre-set for unidirectional operation. For this, the Protero-868 must be empty (no receiver taught) and the receiver must not be in teaching mode (e.g. powered down). By pushing the P button, the Protero-868 switches to unidirectional operation. This can be recognised by the green light of the transmitter LED when pushing the button at the Protero-868.

### **3.5.4 Deleting the programmed Protero-868**

Push the buttons **extract** and **retract** on the Protero-868 concurrently for at least 6 seconds

The Protero-868 is deleted from all receivers.

### **3.5.5 Threshold values**

|                              |   |   |   |      |   |   |   |   |   |    |
|------------------------------|---|---|---|------|---|---|---|---|---|----|
| Position Threshold switch    | 1 | 2 | 3 | 4 *) | 5 | 6 | 7 | 8 | 9 | 0  |
| Sensitivity (wind threshold) | 1 | 2 | 3 | 4    | 5 | 6 | 7 | 8 | 9 | 10 |

\*) Basic factory setting

Fig. 2 Table Protero-868 threshold values

For a higher setting of the threshold switch, the awning must vibrate strongly before retracting; for a lower setting of the threshold switch, the awning only needs to move slightly to retract.

### **3.5.6 Setting wind sensitivity**

The Protero-868 is delivered with a factory-side basic setting of the threshold switch in level 4.

After assembly and commissioning, it is necessary to adjust the wind sensitivity of the awning to the situation on site. There must be no wind when doing this.

1. Extend the awning all the way.
2. Now manually vibrate the drop profile with the installed Protero-868 to a degree that is comparable to the one at which the awning is to retract.
3. Depending upon the result (too sensitive or too insensitive) please change the basic factory setting of the threshold switch.

Here, the upper part of the housing with integrated printed circuit board must be unscrewed from the lower part of the housing.

Observe:

Each new setting must be checked again!

**Note:**



The awning is likewise protected against the wind during extension and retraction.

### 3.5.7 Waiting time after alarm

If the awning is retracted following a wind alarm, extension is only possible again after a time-out of approx. 15 minutes. During the time-out, any extension command is stopped automatically after approximately 3 seconds and an automatic forced retraction takes place.

This time-out can be terminated prematurely by the following procedure.

During the time-out, an intended extension is stopped automatically after approximately 3 seconds and an automatic forced retraction takes place. During this retraction the **STOP** button on the taught-in hand-held transmitter must be pressed and subsequently a retract command must be given with the **UP** button (according to retraction). If the awning is fully retracted, the drive will switch off. The waiting time has then ended.



After each forced retraction due to a wind alarm, extension is only possible again after a time-out of approx. 15 minutes.

### 3.5.8 Battery replacement

If the extension of the awning is interrupted twice, this is a sign that the batteries are nearly empty and should be replaced soon. Wind monitoring then is no longer active.

If the blind can no longer be extended (short extension, then retraction), then the batteries must be replaced.

Proceed as follows to replace the batteries:

1. As soon as the awning has retracted, press the **extension** button on the hand-held transmitter.
2. The awning now extends for approx. 3 seconds and stops briefly due to the deactivated wind monitoring.
3. Then the awning retracts again. Press the **STOP** button at once.  
The awning now stops in this position.
4. Disconnect the drive from the power supply!
5. Unscrew the upper part of the housing with the integrated printed circuit board from the lower part of the housing and replace the batteries.

After that the Protero-868 is ready for operation again.

Batteries can be removed easily by the end user according to the battery directive 2013/56/EU.

Dispose of used batteries environmentally compatibly.

## 3.6 System conversion to unidirectional radio mode

Use of the Protero-868 at an awning into which the Protero-868 cannot be bidirectionally taught yet:

1. Deleting the Protero-868  
Push the buttons extract and retract concurrently for at least 6 seconds
2. Deleting the hand-held transmitter of the awning.  
Push the buttons UP, DOWN; STOP and P on the hand-held transmitter concurrently for at least 6 seconds



3. If pushing the button briefly, both the hand-held transmitter and the Protero-868 must flash orange (transmitters are empty).
4. Disconnect the awning from the supply grid.
5. Push the P button on the hand-held transmitter for at least one second. The hand-held transmitter then switches to unidirectional operation.
6. When pushing a button on the hand-held transmitter, it lights up green (transmitter unidirectional).
7. Connect the awning with the supply grid again.
8. Push the P button on the hand-held transmitter. The awning is now in teaching mode and signals this by extending and retraction.
9. Push the UP button at the hand-held transmitter at once (no later than 1 second) after retraction starts. The status indicator is lit briefly. The awning stops and then continues, stops and then extends again.
10. Push the DOWN button at the hand-held transmitter at once (no later than 1 second) after extension starts. The status indicator is lit briefly. The awning stops.
11. The awning can now be controlled via the hand-held transmitter.
12. Push the teaching button P at the Protero-868 for at least one second. Then the Protero-868 switches to unidirectional operation.
13. Recover the readiness of the awning for operation. Disconnect the awning from the supply grid for a few seconds, for example.
14. Push the P button on the Protero-868. The awning is now in teaching mode and signals this by extending and retraction.

15. Push the retraction button at the Protero-868 at once (no later than 1 second) after retraction starts. The status indicator is lit briefly. The awning stops and then continues, stops and then extends again.
16. Push the extension button at the Protero-868 at once (no later than 1 second) after extension starts. The status indicator is lit briefly. The awning stops.
17. The awning can now be controlled via the Protero-868. If the Protero-868 is moved too much, the awning retracts.

### 3.7 Technical Data

| Technical Data Protero-868                   |   |
|--|---|
| Operating voltage [V]                        | 3   |
| Batteries                                    | 2 x 1.5 V AAA, LR3                          |
| Protection type                              | IP44  |
| Permissible ambient temperature [°C]         | -20 to 60                                   |
| Radio frequency [MHz]                        | 868 (alternatively 915 for diff. countries) |
| Colour selection                             | traffic white, traffic grey                 |
| Dimensions (L x W x H)<br>Hole distance [mm] | 133.3 x 46.5 x 26.5<br>100.5                |
| Weight [g]                                   | 186   |

Fig. 3 Technical Data Protero-868

## 4 Cleaning and maintaining the device

- Clean the device surface with a soft, clean, and dry cloth only.
- Avoid using chemical solvents or detergents since these may damage the surface and/or labels of the Protero-868.

## 5 EC declaration of conformity

**elero GmbH** hereby declares that the Protero-868 P complies with the basic prerequisites and the other relevant provisions of the EC directives. The complete declaration of conformity can be found in the download area of our website.

## 6 Troubleshooting

| Fault  | Cause                               | Remedy                     |
|--|-------------------------------------|----------------------------|
| Awning retracts even in the case of small vibrations           | Step is set too low                 | Set the step higher        |
| Awning does not retract in the case of vibrations              | Step is set too high                | Set the step lower         |
| Awning does not react to the Protero-868 key commands          | Protero-868 not programmed          | Program the Protero-868    |
| Awning extends instead of retracting in the case of vibrations | Protero-868 programmed incorrectly. | Re-program the Protero-868 |

| Fault   | Cause                         | Remedy                                   |
|---|-------------------------------|--|
| Awning stalls twice during extension                | Batteries are nearly flat     | Replace the batteries in the Protero-868 |
| Awning extends only briefly and then retracts again | Batteries are completely flat | Replace the batteries in the Protero-868 |

Fig. 4 Troubleshooting Protero-868

## 7 Repair

If you have any questions, contact your specialist dealer from whom you bought the Protero-868.

Always indicate the following:

- Item number and name on the type plate
- Type of fault
- Previous and unusual events
- Surrounding circumstances
- Own assumption

## 8 Manufacturer's address

**elero GmbH**  
Antriebstechnik  
Linsenhofer Str. 65  
72660 Beuren  
Germany  
Phone: +49 7025 13-01  
Fax: +49 7025 13-212  
[info@elero.de](mailto:info@elero.de)  
[www.elero.com](http://www.elero.com)

Please visit our website if you require a contact outside Germany.

## 9 Disposal

When disposing of the device you must comply with the applicable international, national, and local laws and regulations.



Please make sure to consider material recyclability, ease of dismantling, and separability of materials and components as well as environmental and health hazards during recycling and disposal.

### Packaging

Your Protero-868 is packed to protect it against transport damage. Packagings are raw materials and can be recycled or returned to the raw material cycle.

### Dispose electrical and electronic components

Disposal and recycling of electric and electronic components must comply with the applicable national laws and regulations.

Never dispose of the Protero-868 in the regular household waste. If in doubt, ask your local city or community authority for information on environmentally compatible and proper disposal.

## 10 Legal Notes

The information contained in this documentation and the software are subject to changes due to technical improvements.

Designations such as **elero**, Protero-868, SunTop-868, VariEco-868, Combio-868 RM are protected brands of **elero** GmbH. All other trademarks (such as product names, logos, commercial designations) are protected for the benefit of their respective owners.



