


**PLUVIOMETER  
PLV400**

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# 1 SAFETY INSTRUCTIONS

 : WARNING: This devices must be powered by a LIMITED POWER SOURCE.  
 If this devices are used in an unspecified manner, the protection provided by these devices may be compromised.  
 A suitable cut-off device must be planned outside the equipment.  
 Details of symbols and safety markings are provided on the last page of this documentation (§7).

## 2 DESCRIPTION

The PARATRONIC PLV400 pluviometer is designed to measure precipitations collected at ground level.  
 The following options are available for the pluviometer:

- PLV400CHAUF: Integrated heating system which melts precipitations down to -30°C.
- PLV400PIED: Base which positions the collection ring of the PLV400 1 metre from the ground.
- PLV400PAREOISEAU: Ring around the collector which dissuades birds from perching on it.

## 3 TECHNICAL DATA

### 3.1 METROLOGICAL DATA

Collection area	400 cm <sup>2</sup>
Sensitivity:	0.2 mm / pulse

### 3.2 MECHANICAL DATA

Collection area	400 cm <sup>2</sup>
Structural materials	anodised aluminium
Bolting materials	stainless steel
Dimensions	dia.=234 x H=460 mm
Weight without heating option	5.2 kg
Weight with heating option	5.6 kg
Attachment	Female flange for tube dia. 50 mm
Protection rating	IP54

### 3.3 ELECTRICAL DATA

Dry contact output	10 V AC/15 V DC, 250 mA
Pulse duration	50 to 200 ms
Power supply to heating option	24V AC/DC, 130W (6A)
Connection	contact: 2 disconnectable screwed terminals for wires of cross-section up to 2.5 mm <sup>2</sup>
	ground: 1 disconnectable screwed terminal for wires of cross-section up to 2.5 mm <sup>2</sup>
	heating: 2 disconnectable screwed terminals for wires of cross-section up to 2.5 mm <sup>2</sup>

### 3.4 ENVIRONMENT, STANDARDS

Protection rating	IP54
Operating temperature	-20°C to 60°C (with heating option)
Storage temperature	-20°C to 60°C
EC marking	directives 2014/30/EU, 2014/35/EU and 2011/65/EU
RoHS	compliant

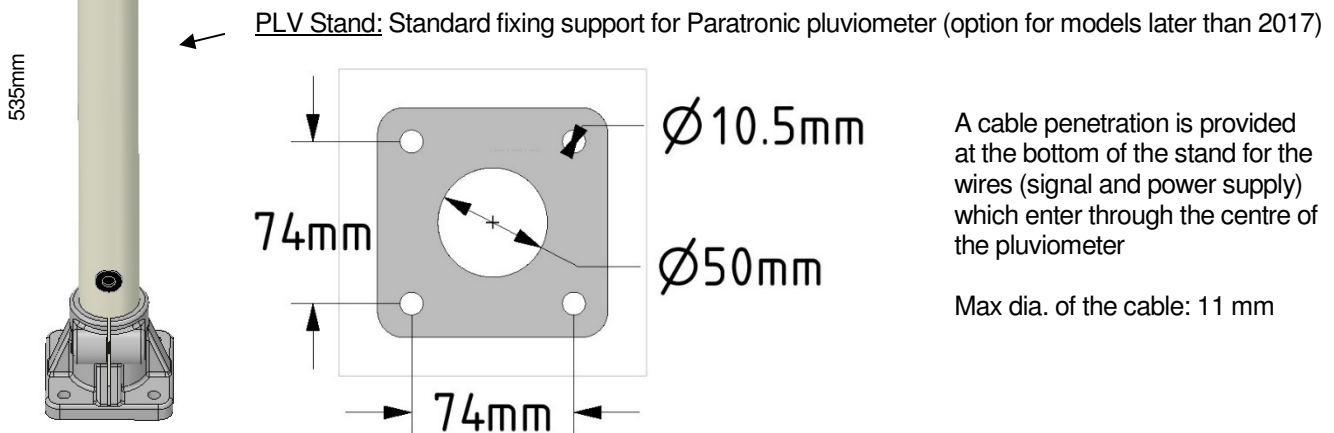
## 4 OPERATION

The device include a collector with a ring surface area of 400 cm<sup>2</sup>.  
 The precipitations collected are directed towards tipping trays, calibrated to measure the quantity of precipitation during a given rainfall.  
 The incremental volume each time a tray tips is 0.2 litre/m<sup>2</sup> or 0.2mm of rain.  
 Every time a tray tips, a contact is actuated thus returning the measurement.

The version described in this manual is fitted with an automatic thermostatically-controlled heater (available as an option), for operation with snow or ice.  
 This heating option requires a 130W 24 V AC or 24 V DC power supply (depending on model).

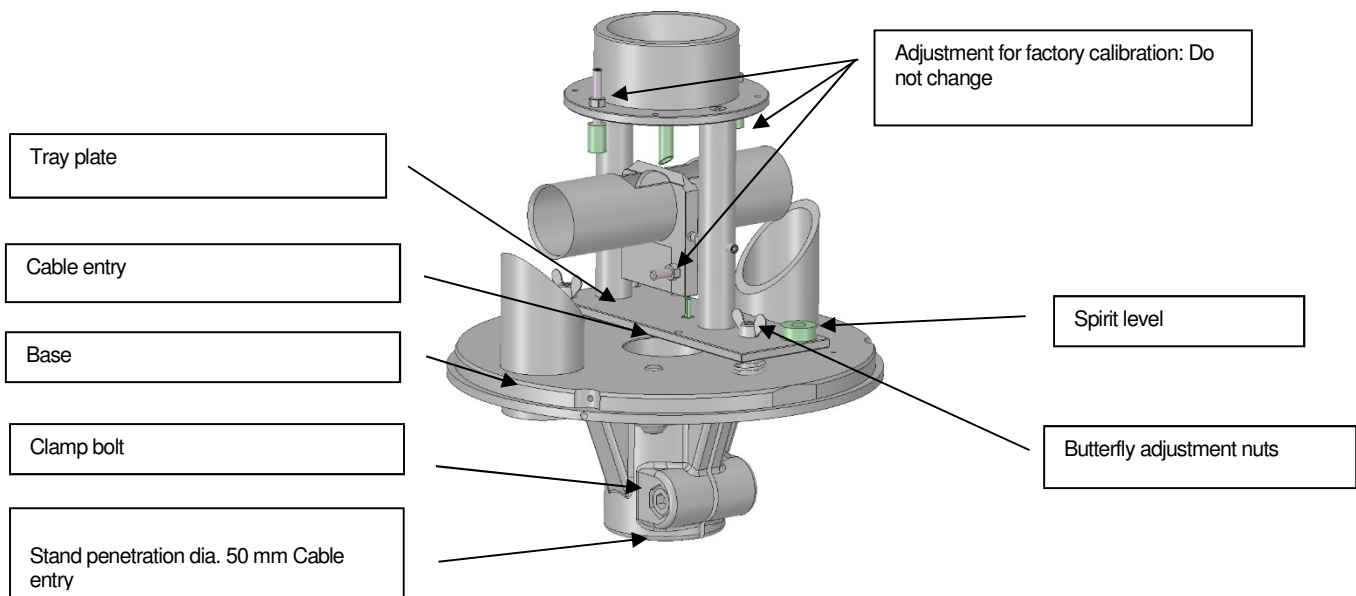
## 5 IMPLEMENTATION

The pluviometer must be installed on a stand (vertical tube of diameter 50 mm).  
The collecting ring must be horizontal in order to take advantage of the full surface area available.  
We recommend positioning the collecting ring at a height of 1 metre from the ground.  
Clearly, no object must obstruct the rain falling on to the collecting ring.  
Installation near a tree or building should be avoided.

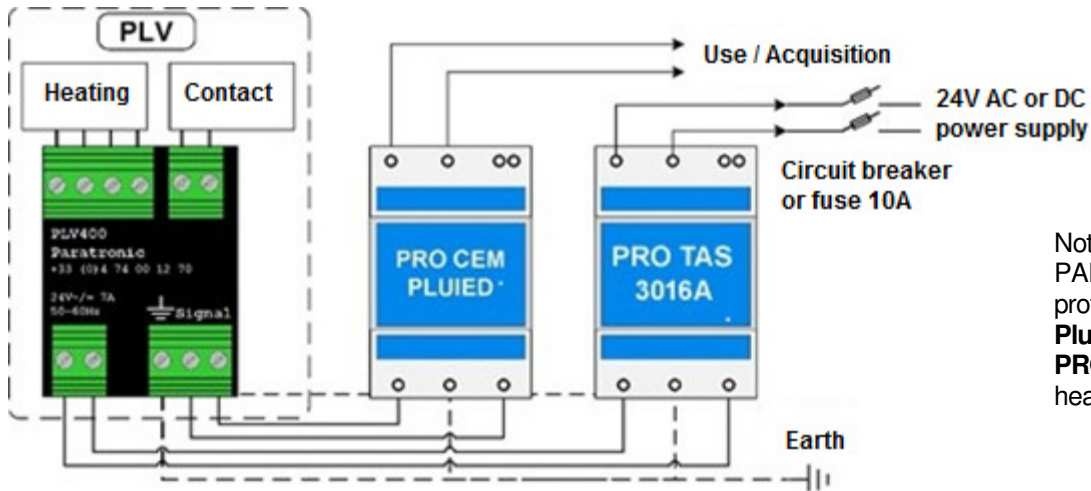


Note: Ensure the stand is strong and aligned vertically (sling if necessary).

1. Open the external cut-off device (for versions with heating device).  
Never work on the pluviometer when it is powered on.  
Some parts of this product (option PLV400CHAUF) may be very hot and cause burns, wait until these return to ambient temperature before working on the gauge.



2. Remove the collecting cylinder after loosening the three captive Allen screws located at the base.
3. Insert the wires (emerging from the stand) through the opening at the centre of the pluviometer under the trays.
4. While holding the cables taut so they are not accidentally crushed, insert the base of pluviometer as far as it will go on the stand.
5. Attach the sensor using the clamp bolt.
6. Connect the wires to the corresponding terminals: Signal and heating (the polarity is not relevant).



Note: Use the appropriate PARATRONIC lightning protectors: **PRO CEM PluieD** for the signal and **PRO TAS3016A** for the heating option.


7. Release the trays by removing the elastic band holding them in place (essential for transport).
8. Check the pluviometer is horizontal and, if necessary, adjust by turning the three butterfly nuts on the tray platform. Adjustment will ensure the measurement is accurate.
9. Reassemble and close the pluviometer. Check the horizontal alignment of the collector overall. Do not forget to tighten the three captive Allen screws.

## 6 HEATING SYSTEM OPERATION (OPTIONAL)


The thermostatically-controlled circuit activates the 130W (24V AC or DC, 6A) heating element when the temperature inside the collector is less than 2°C (+/- 1 °C) until it returns to a temperature of 4°C (+/- 1 °C).


Never work on the pluviometer while it is powered on. Remember also that the heating system comprises heating components. Ensure these have returned to ambient temperature before carrying out any work.


## 7 SAFETY SYMBOLS AND MARKINGS

 : Risk of danger: Important information. Refer to the instructions.

 : WARNING : Some parts of this product may become very hot and cause burns.

 : Read the instructions.

 : Complies with the European Union and EFTA directives.

 : European directive 2002/96/CE of 27 January 2003, concerning waste electrical and electronic equipment (WEEE Directive) has been transposed in France by Decree No. 2005-829 of 20 July 2005.

Electrical or electronic appliances, as well as their spare parts and consumables must never be disposed of in domestic waste.

**PARATRONIC** has undertaken to set up an Individual Collection System.

Customers (end users) are requested to return **PARATRONIC** electrical and electronic equipment waste to the following address:

**PARATRONIC** - Zone Industrielle - Rue des Genêts, 01600 REYRIEUX, France.  
**WEEE Recycling Department**

The manufacturer reserves the right to modify the characteristics described in this document without notice.