

Outdoor installation



PM- 11 PHYTOMONITOR

A specialized data logger with the wide range of proprietary sensors for monitoring crop growth and environment

Components of the Open-field set

1. Mast with mounting accessories:
 - a. Ground part of the pole with has pointed end for hammering into the ground.
 - b. Top part of the pole.
 - c. Bolt, which fastens two pole parts together.
 - d. Mast base.
 - e. Mast braces with fixing screws.
2. Holder for PAR sensor.
3. Solar panel
4. Holder for Solar panel with fixing screws and brackets.
5. Three anchors, 30-cm long.
6. Three anchors, 50-cm long.
7. RTH-48 Meter
8. Heavy-duty cabinet with the PM-11 Phytomonitor and other parts inside.
9. Phytomonitoring Sensors (optional)

Tools needed

- Flat bladed screwdriver
- Phillips screwdriver
- 10-mm wrench
- Lump hammer

Mast installation

1. Place the Mast base on the ground and install Mast braces as shown in the Photo 1. Fasten the Mast base and the braces as shown in the Photo 2



Photo 1



Photo 2

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2. Insert the Top part of the pole into the Mast base and mount the Solar panel, the Holder for PAR sensor, and the RTH-11 Meter on it as shown in the Photo 3 below:

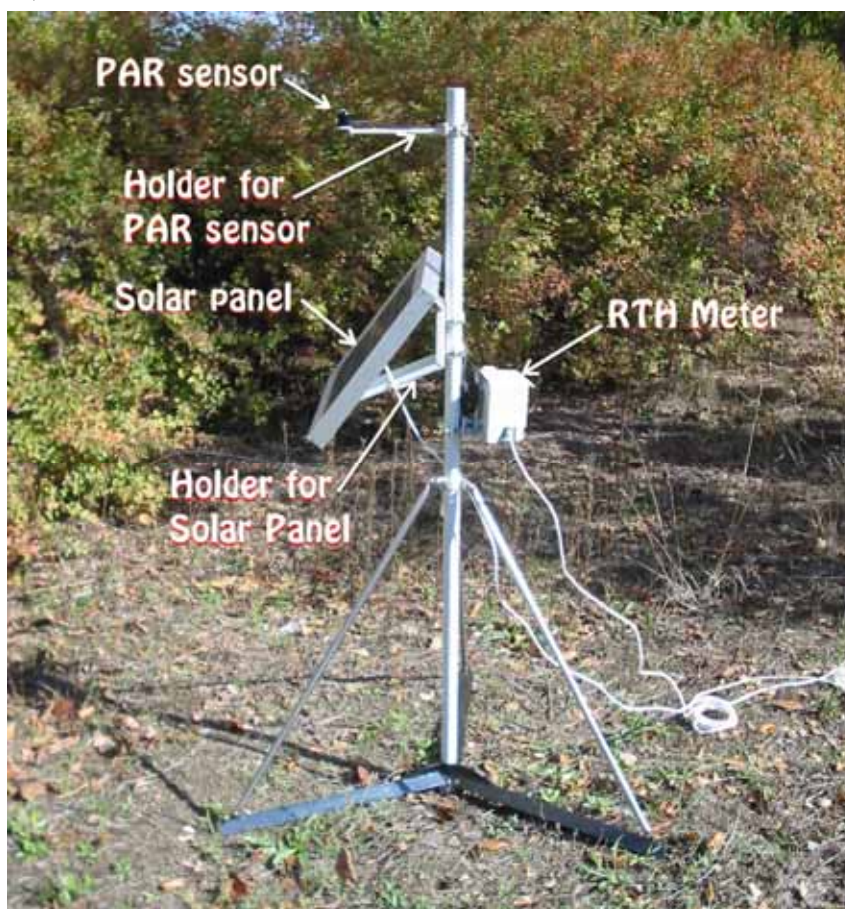


Photo 3

3. Take out the assembled top part of the mast and keep it carefully for further mounting operations.
4. Insert the Ground part of the pole into the Mast base (Photo 4), and hammer it into the soil by using a lump hammer and an occasional woody plate to prevent damage of the pole (Photo 5).



Photo 4



Photo 5

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- Anchor the Mast base to the ground using appropriate anchors. Use the shorter 30-cm anchors for hard soil and the longer 50-cm anchors for softer soil.



Photo 6

- Mount the Heavy-duty cabinet with the PM-11 Phytomonitor on the ground part of the mast as shown in the Photo 7 below:



Photo 7

- Take the Top part of the mast and joint with the Ground part. Fasten the joint with the Bolt inserted into the square hole as shown in the Photo 8 and Photo 9 below:



Photo 8



Photo 9

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8. Aim the panel toward the sun. If you are in the northern hemisphere, it needs to be pointed south. If you are in the southern hemisphere, it needs to be pointed north.



Photo 10

9. Fasten the pole in the Mast base by tightening the bracket bolt.



Photo 11

Power connection

1. Open the door of the Cabinet. Thread the Solar panel cable through the cable gland located at the back side of the Cabinet (Photo 12). Connect the cable ends to the contact terminal (Photo 13). Connect battery leads (Photo 14). Strictly follow the indications of polarity.



Photo 12



Photo 13



Photo 14

IMPORTANT NOTES:

- Below connection, please check the battery voltage. If it is below 12.5 V, please charge it with the 1A current during approximately 5 hours. Most of commercial 12V battery chargers may be used for this purpose. Alternatively, you may complete connection and leave the system for charging from solar power during at least one sunny day. The PM-11 must be switched off for effective charging.
- **Disconnect a battery every time when the system is not in use during several or more days.**

Connecting sensors

1. Open the lid of the fitting for sensors' cables (Photo 15). Thread the cables through the fitting and fix the cables along the fixing columns located above the PM-11 enclosure (Photo 16). Connect sensors' plugs to the sockets as required.



Photo 15



Photo 16

How to connect RS485 cable

1. Open the door of the Cabinet. Thread the RS485 cable through the cable fitting (Photo 17).
2. Open the PM-11 front lid by unscrewing for screws. Thread the RS485 cable through the cable gland into the PM-11 enclosure (Photo 18) and connect accordingly as shown in the Photo 18.
3. Install and fix the front lid of the PM-11 enclosure.



Photo 17



Photo 18

For enquires and assistance please contact the manufacturer at
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