Growatt Weather Station
Installation Manual

CONTENT

1 Sensors

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Sensor list:
1. Wind speed sensor
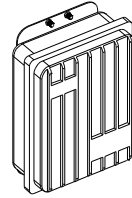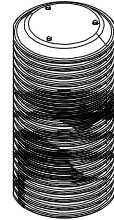2. Wind direction sensor
3. Data acquisition equipment box
4. Total radiation sensor
5. PV module temperature sensor
6. Environment temperature sensor screen

2 Overview

Wind speed sensor

Environment temperature sensor screen

Wind direction sensor

Total radiation sensor

Data acquisition equipment box

tripod
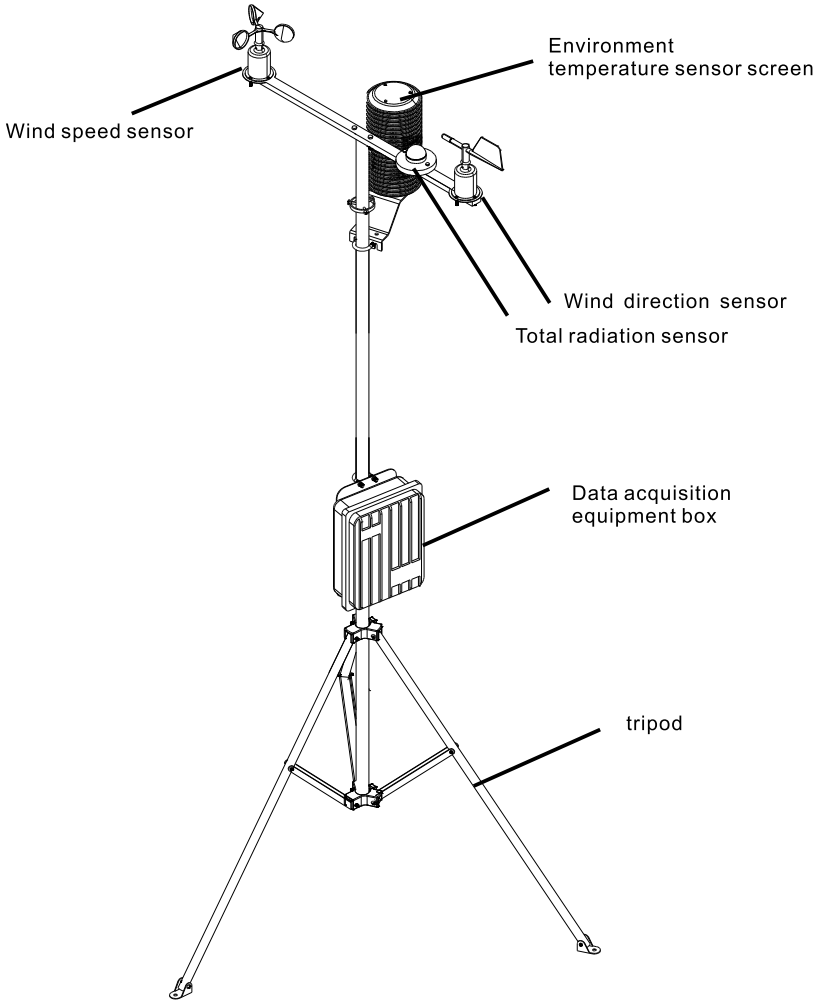
Automatic weather station installation diagram

Installation tools

1. Flat and plum screwdriver
2. Wrench, adjustable wrench, sockets
3. Pliers, needle-nose pliers, wire stripper
4. Multimeter, electric soldering iron
5. Impact Drill

3 Installation Process

3.1 Tripod Mount

upper triangular

Round head Phillips screws 5 * 40 (3pcs)
Non-slip nut M5 (3pcs)
Flat pad φ5 (6pcs)

tube brace

Round head Phillips screws
5 * 35 (3pcs)
Non-slip nut M5 (3pcs)
Flat pad φ5 (6pcs)

main pole

lever tube

ground pin

Round head Phillips
screws 5 * 35 (3pcs)
Nut M5 (3pcs)

lower triangular

Round head Phillips
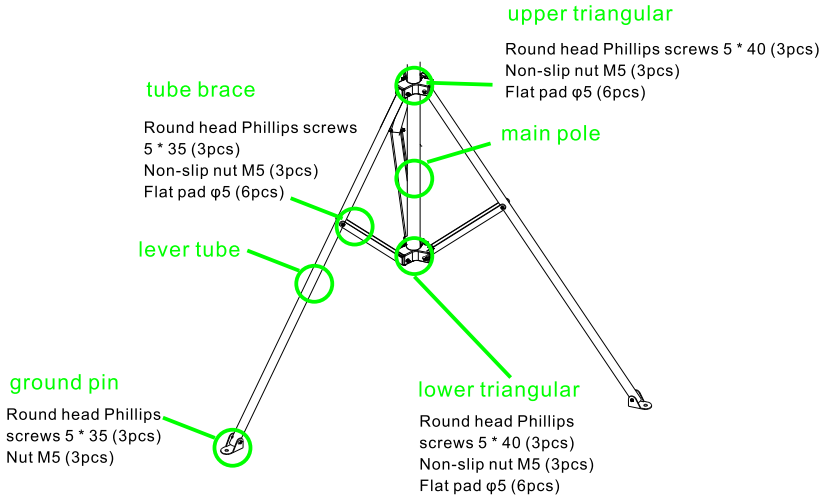screws 5 * 40 (3pcs)
Non-slip nut M5 (3pcs)
Flat pad φ5 (6pcs)

Figure 1

Main parts of the tripod includes main lever tube, ground pin, tube brace, upper triangular, lower triangular. First fix lever tubes to ground pins and upper triangular, then fix tube braces to lever tubes and lower triangular, last fix the main pole to lower triangular.
Use protect cover 1 when fixing the main pole to upper triangular, and protect cover 2 when fixing the main pole to lower triangular, lower triangular should be fixed with outer or inner hexagon 6 * 20 screw or equal size.
Details of screws and installation shown in Figure 1.

3.2 Overarm, Main Pole and Sensors Installation

Hexagonal screws 8 * 35 (2)
Nut M8 (2 unit)
Flat pad φ8 (2 unit)
The spring pad φ8 (2 unit)

Flathead Phillips screws 6 * 35 (2)
Nut M6 (2 unit)
Flat pad φ6 (2 unit)
The spring pad φ6 (2 unit)

Wind Sensor
Gasket

Flathead Phillips screws 3 * 25 (2)
Flathead Phillips screws 3 * 16 (2)
Nut M3 (8 unit)

Wind Sensor Gasket

Flathead Phillips screws 3 * 25 (2)
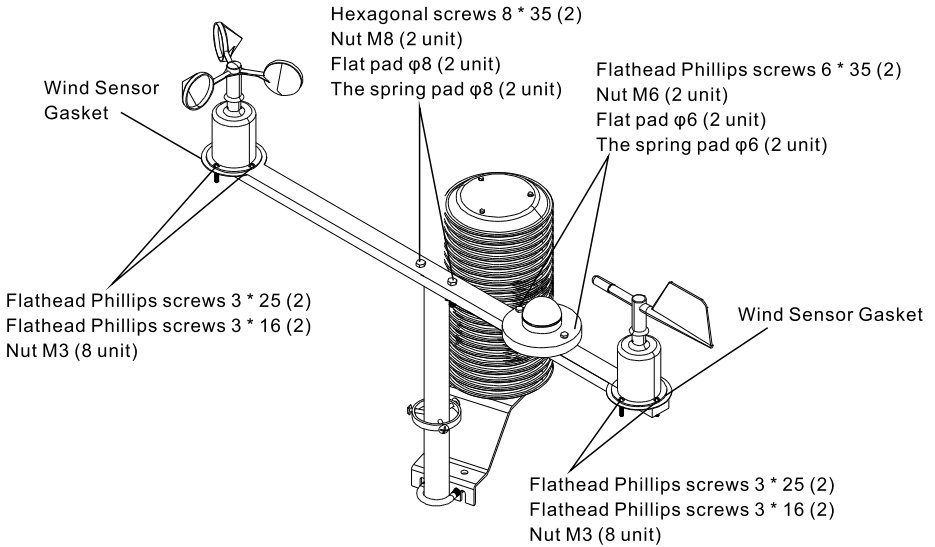Flathead Phillips screws 3 * 16 (2)
Nut M3 (8 unit)

Figure 2

The main pole and overarm are bolted together, on the overarm are equipped wind sensors and solar radiation sensor.
A gasket should be used in the Installation of the wind speed and direction sensor, and 2 flathead Phillips screws 3 * 25 are used to fix the wind sensor, gasket and overarm, positions where the wind sensors are not connected to the overarm, wind sensors should be fixed to the gasket with 2 flathead 3 * 16 Phillips screws, two M3 nuts on each flat head Phillips screws.
The solar radiation sensor are fixed by 2 flathead Phillips screws 6 * 35 to the overarm.
The mounting position of sensors is shown in Figure 2.

3.3 Installation of Environment Temperature Sensor Screen

Nut M5 (6 unit)
Flat pad φ5 (3 unit)

Nut M6 * 20 (2 unit)
Flat pad φ6 (2 unit)
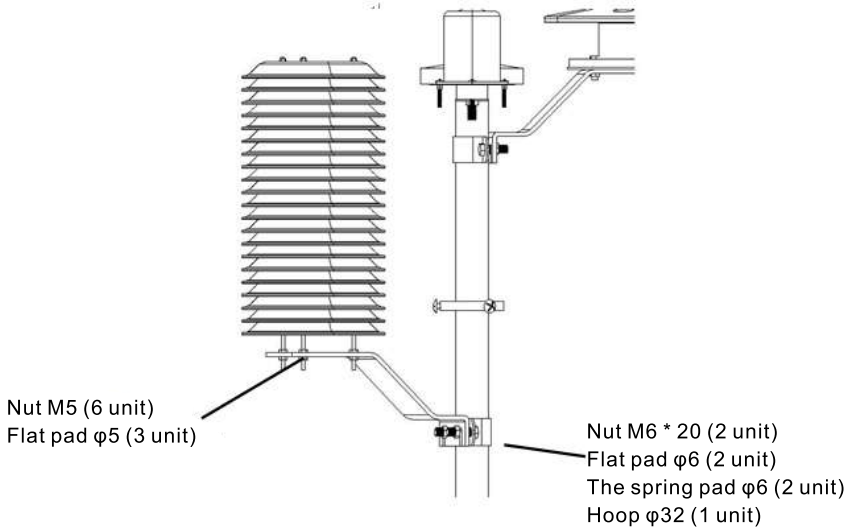The spring pad φ6 (2 unit)
Hoop φ32 (1 unit)

Figure 3

Install the environment temperature sensor screen bracket to the main pole, and then fix the screen to the bracket with screws shown in Figure 3.

3.4 Installation of Data Acquisition Equipment Box

Bracket to main pole

Nut M8 (8 unit)
Flat pad from φ8 (8 unit)
The spring pad φ8 (8 unit)
U-ring φ40 (4 unit)

Box to bracket

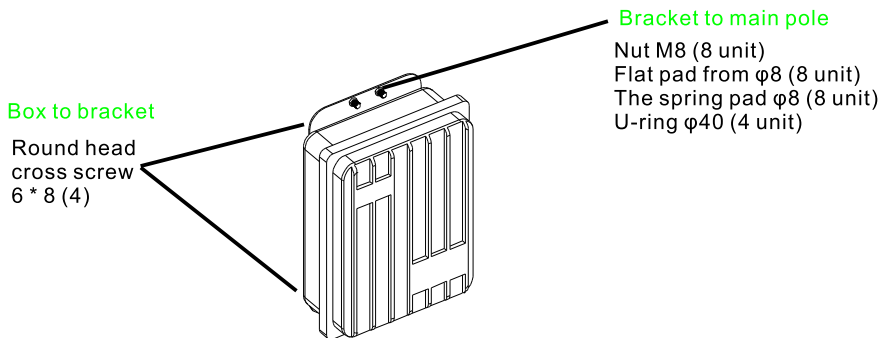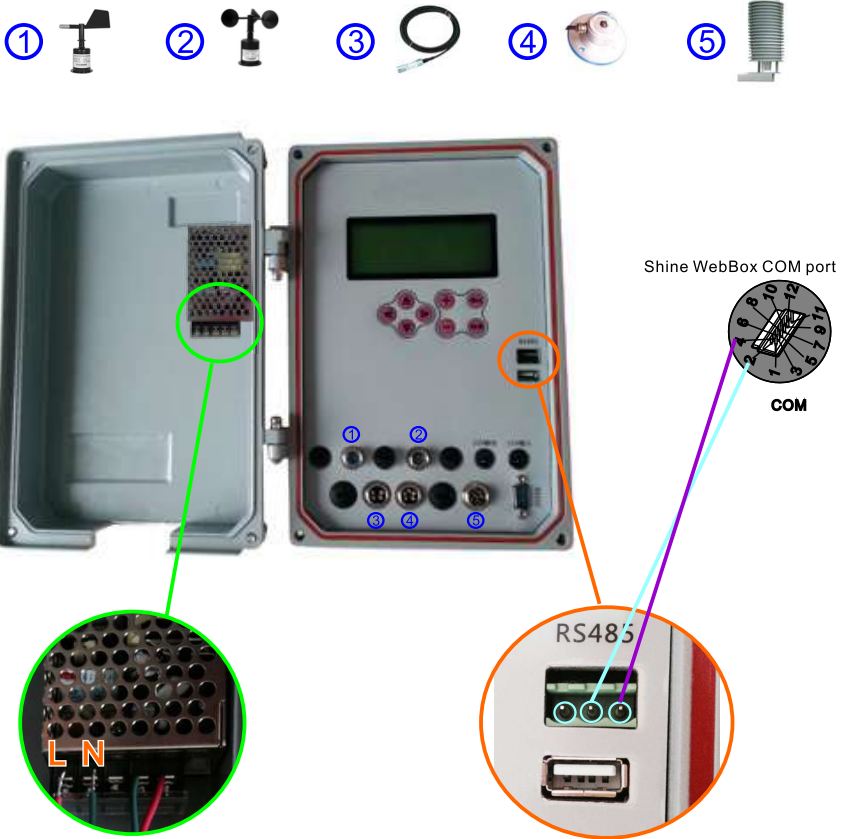Round head
cross screw
6 * 8 (4)

Figure 4

The data acquisition equipment box is a new collection instrument, install the bracket to the main pole, and then fix the box to the bracket.
Detail of screws and position is shown in Figure 6.

5

3.5 Data Acquisition Equipment Wiring Instruction

Shine WebBox COM port

COM

1. Connect sensor cables to data acquisition equipment according to above figure.
2. Connect power cable of data acquisition equipment and check whether the LCD screen works normally, sensors are connected correctly.
3. Connect RS485 cable to Growatt Shine webbox according to above figure.

3.6 Growatt ShineWebBox Setting

Please follow the steps to set parameters on weather station and ShineWebBox:
1. Refer to "ShineWebBox Manual"to access to ShineWebbox's internal management interface.
2. Enable "Environment Monitor" function.
   Choose page "Parameter" . set status of 'Environment add' from "OFF" to "On", and then click"Save" to enable weather station

3. The default "Environment(weather station) address" is 36, this value can be changed. the address of weather station should be set in accordance with ShineWebBox, so the address of weather station need to be changed on data acquisition equipment LCD, detail please refer to below figure