

## Greenspec AFP Nano Meteo

Art. nr. 1202.2 AFP Nano Meteo

Art. nr. 3001.1 Thies WSC11

### Greenspec AFP Nano Meteo

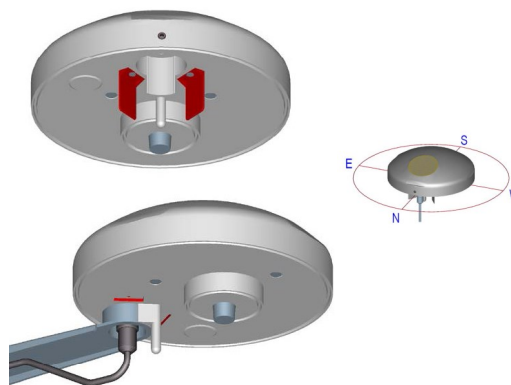
**Art.nr. 1202.2 (AFP Nano Meteo) and 3001.1(WSC11 meteo station) New: the WSC11 Thies integrated meteo with the AFP Nano Meteo including a line repeater : quick connection and automatic data recognition**

**The Thies WSC 11** is a good compromise between reading many meteo data, having only one measurement unit and a reasonable price. In total 10 meteorological parameters are monitored on a minimal space. The **wind** measurement occurs without moving parts. The thermal anemometer measures wind velocity and wind direction without mechanical wear. A costly maintenance is not necessary. For many parameters the time resolution is 1-2 min. The integrated GPS module receives automatically date, time, station height, and the geographic position. Manual time setting not necessary. The WSC11 determines the azimuth and the elevation of the sun position from the GPS parameters. The reduced air pressure is calculated by means of the altitude above sea level, and measured air pressure. **See also the extended Thies instruction leaflet.**

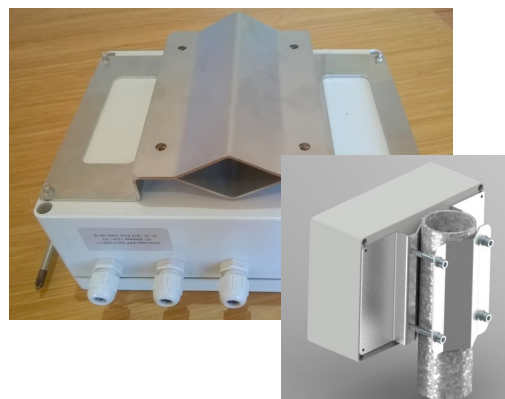
#### Installation of the Thirs WSC11 with the AFP Nano:

Greenspec proposes an easy installation of the WSC11 with the special AFP Nano Meteo. This unit can read in the data of the WSC directly into your system. It saves time in installation and in setting up the meteo data in the GSC. (Note: ask for instructions if the WSC11 has been in use connected directly to

Mounting on side arm : orient the arm towards the North and remove side flaps

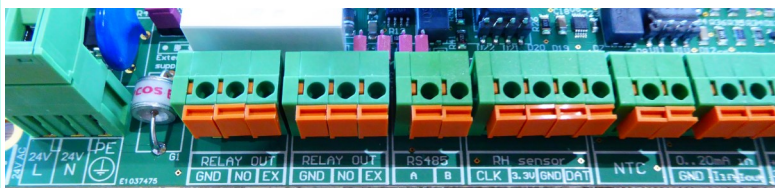


Option: Mounting bracket to fix Nano WSC11 box also on pole



**Mounting of the Thies WSC unit:** Mount it on the side arm. Remove the side flaps on the downside, if you use the side arm. Mount the **AFP Nano WSC11** : provide 24V AC or DC power supply to L and N. Connection to the AFP Nano: lead the cable from the Thies into the Nano, take of protecting mantle and use 4 of the wires, see below. Shield the not used cables of the Thies cable. **Do not connect the WSC to an external 24V**

Either connect put the AFP Nano box in the greenhouse, or mount it with the bracket on the pole.



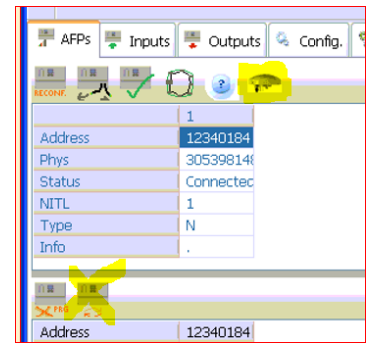
**Wire connections to the Nano: Separate power supply cable:** to L and N  
**Yellow:** Signal to A                      **Green:** Signal to B  
**Blue:** - to Relay out GND              **Pink:** + to Relay out NO  
 Use the connector on the left of the RS485, not on the right side

Picture of connecting nano with Thies WSC11



### Activate the AFP Nano in the software:

The AFP Nano versions will be recognised on the software as an AFP. The Nano meteo version is activated as a meteo before delivery. When you put an AFP Nano in the line, for the different types a different procedure is started by the automatic discovery wizard, and it will identify as WSC11. (if not, contact your distributor). **To add the the Nano WSC with inputs click on the WSC symbol on the top right side:**



The data from the Thies Meteo WSC11 are recognised and set in the software. See the manual chapter chapter 1251, 1314 on setting up the AFP system. Read 1400 on setting the meteo data.

The Thies gives data for 10 items, in the AFP Nano system you they appear as follows:

| Channel | Description   | Codeage | Min | Max   |
|---------|---------------|---------|-----|-------|
| 1       | Temperature   | 4095    | -15 | 394.5 |
| 2       | Windspeed     | 4095    | 0   | 409.5 |
| 3       | Winddirection | 4095    | 0   | 4095  |
| 4       | Irradiance    | 4095    | 0   | 4095  |
| 5       | Precipation   | 1       | 0   | 100   |
| 6       | Humidity      | 4095    | 0   | 409.5 |
| 7       | Sun north     | 4095    | 0   | 409.5 |
| 8       | Sun east      | 4095    | 0   | 409.5 |
| 9       | Sun south     | 4095    | 0   | 409.5 |
| 10      | Sun west      | 4095    | 0   | 409.5 |

|                            |   |
|----------------------------|---|
| Technical specifications   | Greenspec AFP Nano Meteo  |
| Mechanical construction    | Dimensions (L x BxH) 200x125x75 mm, Weight approx. 0,5 kg, Cable gland 4 x Pg 13.5  |
| Materials                  | Housing PB, Sensor PP, electronics  |
| Electrical connection data | Power supply 24 VDC, 24V AC Power consumption 5 W Nano + 8 W WSC11  |
| Process conditions         | Operating temperature range 0 ... +70 °C  |
| Ambient conditions         | Storage temperature -10 ... +50 °C, IP 52<br>Electromagnetic compatibility acc. to EN 61326:1997 / A1:1998 Subject to modification.   |
| Technical specifications   | Thies weather station Type WSC11, data provided by Thies  |
| Mechanical construction    | Dimensions Ø 130 mm x 67,5 mm Weight approx. 0,22 kg<br>Mounting diameter : 25 mm tube diameter Cable gland 5pole plug  |
| Materials                  | Housing PC, Protection type IP54  |
| Wind velocity              | Thermal anemometer Measuring range <b>0 30 m/s</b><br>Resolution 0,1 m/s Accuracy at Laminar inflow <b>±5%</b> (±1,5 m/s)   |
| Winddirection              | Thermal anemometer Measuring range 0..360° Resolution 1° Accuracy at Laminar inflow <b>±10°</b>   |
| Brightness                 | Silicium sensor Measuring range 0 500 Lux Resolution 1 Lux Accuracy ±10 Lux   |
| Global radiation           | Silicium sensor Measuring range 0 1300 W/m <sup>2</sup><br>Resolution 1 W/m <sup>2</sup> Accuracy <b>±10%</b> (±130 W/m <sup>2</sup> ) Spectral range <b>350 ... 1100 nm</b>                |
| Precipitation              | Conductivity measurement Measuring range 0/1 (Precipitation <b>yes/no</b> ) Heating capacity Sensor dry 0,1 W (anti-condensation) Drying phase Sensor wet 1,1 W (active drying) 3,5 minutes |
| Temperature                | PT1000 Meas. range -30+60 °C, Accuracy at WV 0,1 °C Resolution <b>±1 °C &gt; 2 m/s</b> and temperature -5 +25 °C  |
| Rel. Air humidity          | Measuring range 0 ... 100%, Accuracy <b>0,1% ±10% @ 10 ... 90%</b>  |
| Air pressure               | Piezo-resistive Meas. range 300 -1100 hPa Accuracy 01 hPa ±0,5 hPa @ 20 °C Long-term stability ±0,1 hPa/year  |
| GPS receiver               | Received data Latitude, longitude date/time, station height Positional accuracy 3 m (50% CEP)   |
| Electrical connect. data   | 18 . 30 V AC/DC 50/60 Hz . 15V from AFP only for short length, max 10 m. Power cons. < 300 mA @ 24 V DC   |
| Ambient conditions         | Storage temperature -10 +50 °C IP64 only with correct operating position. Operating temperature range -30+60C .   |