

MISCELLANEOUS DEVICES

Clima Sensor US

Part number: 4.921x.x0.00x

This instrument has a GPS receiver. It serves for the determination of position and time, the sun position is additionally calculated herefrom. Position, Time and sun position are transmitted serially.

The compact construction, easy mounting, and diverse options of data output are the basis for the use in several fields:

- Building control system
- Traffic engineering
- Meteorology
- Energy supply
- Ecological monitoring

If necessary, the housing is automatically heated in case of critical ambient temperatures. The possibility of malfunction, caused by icing, is minimized. Thanks to the additionally embedded converter heating, the instrument is suitable even under challenging conditions at locations where frequently icing is to be expected.



Specification

Part number: 4.921x.x0.00x

Wind speed

| | |
|-----------------|---|
| Measuring range | 0 ... 60 m/s |
| Resolution | 0.1 m/s (standard) |
| Accuracy | 0 ... 10 m/s \pm 0.25 m/s (rms - mean over 360 °) 10 ... 30 m/s \pm 2.5 % (rms - mean over 360 °) 30 ... 60 m/s \pm 3.5 % (rms - mean over 360 °) |

Wind direction

| | |
|-----------------|-----------------------------------|
| Measuring range | 0 ... 360 ° |
| Resolution | 1 ° 0.1 ° in special telegrams |
| Accuracy | \pm 2 ° WS > 2 m/s |

Data output digital

| | |
|--------------|---|
| Interface | RS485 / RS422 |
| Baudrate | 1200 ... 921600 Baud |
| Data values | div. meas. data, date, time, check sum etc. |
| Output range | 1 per 10 msec up to 1 per 60sec |

| | |
|---------------------------|--|
| Status signals | heating, Meas section error, Temperature of meas section |
| Protocol | ASCII (preselected) |
| Data output analog | |
| Type | max. 8 x 0 ... 10 V |
| Wind speed | 0 ... 10 V |
| Stromausgang | max. 400 |
| Wind direction | 0 ... 10 V |
| Voltage output | min. 2000 |
| Operating voltage | |
| Electronic | 6 ... 40V DC or 10 ... 28 V AC / 1.2 W |
| Heating | 24 V AC/DC, typ 25W |
| General | |
| Bus operation | up to 98 sensors |
| Electr. connection | 19 pol. connector |
| Mounting | on a mast tube 1,5`` |
| Housing | Plastic LEXAN (Polycarbonat, UV-stabilised) |
| Protection | IP 67 |

Versions

As per 4.921x.x0.00x, but:

Product number 4.9210.20.001

Precipitation

| | |
|-----------------|---------------------|
| Measuring range | 0.001 ... 10 mm/min |
| Accuracy | typ. 95% |

Radiation

| | |
|-----------------|--|
| Measuring range | 0 ... 2000 W/m ² |
| Accuracy | ± 30 W/m ² compared to a Class B pyranometer, calculated from brightness and sun position |

Temperature

| | |
|-----------------|--------------------|
| Measuring range | -50 ... +80 °C |
| Accuracy | ±0,3 K (@ 25 °C) |

Rain Temperature

| | |
|----------------------------|---|
| Measuring range | 5 ... 50 °C |
| Accuracy | 0,5 °C |
| Rel. Humidity | |
| Measuring range | 0 ... 100 % rel. h. |
| Accuracy | ± 1.8 % rel. h. (10 ... 90 % rel. H.) |
| Brightness | |
| Measuring range | 0 ... 150 kLux |
| Accuracy | 3 % of measuring value |
| Twilight | |
| Measuring range | 0 ... 250 Lux |
| Accuracy | 3 % of measuring value |
| Air pressure | |
| Measuring range | 260 ... 1260 hPa |
| Accuracy | ±0.25 hPa @ - 20 ... +80 °C @ 800 ... 1100 hPa ±0.50 hPa @ - 20 ... +80 °C @ 600 ... 800 hPa ±1.00 hPa @ - 50 ... -20 °C @ 600 ... 1100 hPa |
| Data output digital | |
| Protocol | MODBUS RTU (preselected) |
| Data output analog | |
| Output parameters | wind speed, wind direction, brightness, precipitation, rel. humidity, air temperature, air pressure , etc. |
| General | |
| Dimension | Ø 150 x 220 mm |
| Weight | 0.9 kg |

Accessories

| Product | Product name | Brief description | | | | |
|---------|-------------------------------------|---|-------|--------------------------------|--------|------|
| | Cable for Clima Sensor US 509311 | Cable assembled, 16-core connecting cable for Clima Sensor US • length 10 m General <table border="1"> <tr> <td>Cable</td> <td>FRNC 16 x 0,25 mm²</td> </tr> <tr> <td>Length</td> <td>10 m</td> </tr> </table> | Cable | FRNC 16 x 0,25 mm ² | Length | 10 m |
| Cable | FRNC 16 x 0,25 mm ² | | | | | |
| Length | 10 m | | | | | |

Cable for Clima
Sensor US
509427

Cable assembled, 8-core connecting cable for Clima Sensor US.

- length 10 m

General

| | |
|--------------|--------------------------------|
| Cable length | 10 m |
| Cable | LiYCY 8 x 0,25 mm ² |

Thies Device
Utility
9.1700.81.000

The PC program “Thies Device Utility” serves for the initial operation and configuration of Thies sensors with serial interface.
The program can find all sensors connected to the PC, and facilitates an initial operation via terminal function. Thanks to a user-friendly surface design the communication with the sensors is very easy.

General

| | |
|----------|--|
| Function | searching for Thies-sensors settings for the communication monitor-presentation of instantaneous measuring values and settings |
|----------|--|

Compatibility

| | |
|-------------------------|---|
| Connectable instruments | Weather Station Compact WSC11 4.9056.00.000 Clima Sensor US 4.920x.00.000 US-Anemometer 2D 4.38xx.xx.xxx US-Anemometer 3D 4.3830.xx.xxx US-Anemometer 2D compact 4.3875.xx.xxx etc. |
| System requirements | PC with Windows 7 or higher |



Power supply Unit
9.3389.20.000

Serves for the power supply of the ClimaSensor US as well as for the connection and distribution of cable resp. cable wires.

- primary:
- 230 V AC
- secondary:
- 24 V AC / 30 W

Operating voltage

| | |
|-----------|---------------------|
| Primary | 230 V AC / 115 V AC |
| Secondary | 24 V AC / 30 W |

Electrical connection

| | |
|------------------|----------------------------|
| Series terminals | 16 |
| Cable gland | 3 x M16x1.5 1 x M20x1.5 |

General

| | |
|------------|--------------------------|
| Housing | plastic |
| Protection | IP 66 |
| Dimension | ca. 125 x 112.5 x 104 mm |
| Weight | approx. 1.5 kg |

