

## WEATHER STATION

### Weather Station Compact Advanced WSCA



## Part number

The WSC Advanced weather station and professional weather maintenance offers a long service life. With its compact design, it can be easily integrated into any system. A wired connection is possible via LoRaWAN or WLAN. It is also possible to connect it to a WLAN network, such as



most compact weather station measures a long service life. With its compact design, it can be easily integrated into any system. A wired connection is possible via LoRaWAN or WLAN. It is also possible to connect it to a WLAN network, such as

values are available at MODBUS and ASCII level for various weather stations. It is possible to realise intelligent models in the control system taking into account developments into account.

A thermal wind sensor enables measurement without moving parts, ensuring low maintenance and a long service life. The Thies THERMACERN® measures the precipitation status as well as the weather condition (frost, ice, snow).

The WSC Advanced weather station records values directly and can be connected to a cloud.

- Wind speed
- Wind direction
- 3-fold brightness (south, east, west)
- Twilight
- Global radiation
- Precipitation status
- Precipitation quantity\*
- Precipitation intensity\*
- Hail
- Weather condition (frost, ice, snow)
- Air temperature
- Absolute air pressure
- Relative air pressure
- Relative humidity
- Absolute humidity
- Dew point temperature
- Indoor temperature
- Time / date
- Geostationary data/GPS
- Solar position (elevation / azimuth)

\*Available after SW upgrade

With Thies Cloud connection, 24 hourly forecast values are also available for the following parameters:

- Wind speed
- Maximum wind speed (gust)
- Wind direction
- Air temperature
- Perceived temperature
- Rel. Humidity
- Air pressure
- Cloud cover
- Visibility
- Amount of precipitation

## Specification

Part number: 4.906x.0x.00x

### Wind speed

Measuring range	0 ... 40 m/s
Accuracy	±1 m/s rms ( 10 m/s) ±5 % rms (> 10 m/s)

### Wind direction

Measuring range	0 ... 360 °
Accuracy	±10 °

### Precipitation

Precipitation types	Precipitation Rain Frost Hail Snow Ice
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### Moisture

Measuring range rel. humidity	0 ... 100%
Relative humidity accuracy	±10% rel. F @ 20°C @ WS > 2 m/s

### Radiation

Measuring range	0 ... 1300 W/m²
Accuracy	±10 % of meas. range

### Temperature

Measuring range	-30 ... +60 °C
Accuracy	±1 K @ -5 ... 25 °C ( WS > 2 m/s )

### Brightness

Measuring range	0 ... 150 kLux
Accuracy	±3 % of meas. range

### Twilight

Measuring range	0 ... 999 Lux
Accuracy	±10 Lux of meas. range

### Air pressure

Measuring range	300 ... 1100 hPa
Accuracy	±0.5 hPa @ 20 °C

#### Data output digital

Interface	RS485 ( half duplex )
Baudrate	1200 ... 115200 Baud
Protocol	ASCII; Modbus RTU

#### Interface

Wireless	WIFI + MQTT, WIFI + LoRaWAN
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#### Operating voltage

Electronic	18 ... 30VDC, 18 ... 28VAC
Current consumption	120mA @ 24 V (max. 1,5A AC, max 0,5A DC)

#### General

Time synchronization	GPS
Ambient temp.	-30 ... +60 °C
Electr. connection	7 pol. Stecker
Mounting	on mast tube Ø 25mm`
Dimension	Ø 130 x 132 mm
Weight	0.22 kg

#### Precipitation level

Precipitation level	No to minimal drop (0.01 mm per min) Light precipitation (0.01...0.04 mm per min) Moderate precipitation (0.04...0.2 mm per min) Heavy precipitation (0.2...0.8 mm per min)
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## Versions

As per 4.906x.0x.00x, but:

Product number 4.9061.01.000

#### Data output digital

Protocol	ASCII
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#### Interface

Wireless	WIFI + LoRaWAN
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#### General

Country	EU
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**Product number 4.9061.01.001**
**Data output digital**

Protocol	Modbus RTU
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**Interface**

Wireless	WIFI + LoRaWAN
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**General**

Country	EU
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**Product number 4.9061.11.001**
**Data output digital**

Protocol	Modbus RTU
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**Interface**

Wireless	WIFI + LoRaWAN
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**General**

Country	USA
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**Product number 4.9060.01.001**
**Data output digital**

Protocol	Modbus RTU
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**Interface**

Wireless	WIFI + MQTT
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**General**

Country	EU
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**Product number 4.9061.11.000**
**Data output digital**

Protocol	ASCII
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**Interface**

Wireless	WIFI + LoRaWAN
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**General**

Country	USA
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**Product number 4.9060.01.000**
**Data output digital**

Protocol	ASCII
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Interface

Wireless	WIFI + MQTT
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General

Country	EU
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Accessories

Product	Product name	Brief description	
	Mounting angle 509564	Serves for the lateral mounting of the Weather Station at a vertical surface.	
		<b>General</b>	
		Material	stainless steel 1.4301
		Dimension	250 x 42 mm
	Cable for WSC 510023	Assembled 7-pole connecting cable for Weather Station Equipment:	
		<ul style="list-style-type: none"><li>• cable socket, instrument-site</li><li>• open ends, receive-site</li><li>• shielded</li><li>• lenght: 5 m</li><li>• with Silicon spout</li></ul>	
		<b>General</b>	
		Cable length	5 m
	Cable for WSC 510024	Assembled 7-pole connecting cable for Weather Station Equipment:	
		<ul style="list-style-type: none"><li>• cable socket, instrument-site</li><li>• open ends, receive-site</li><li>• shielded</li><li>• lenght: 10 m</li><li>• with Silicon spout</li></ul>	
		<b>General</b>	
		Cable length	10 m

	<div>Cable for WSC 510197</div>	<div>Assembled 7-pole connecting cable for Weather Station Equipment:</div> <div><ul style="list-style-type: none"><li>• cable socket, instrument-site</li><li>• open ends, receive-site</li><li>• shielded</li><li>• lenght: 20 m</li><li>• with Silicon spout</li></ul></div> <div><div>General</div><table><tr><td>Cable length</td><td>20 m</td></tr></table></div>	Cable length	20 m				
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	<div>Thies Device Utility 9.1700.81.000</div>	<div>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.</div> <div><div>General</div><table><tr><td>Function</td><td>searching for Thies-sensors settings for the communication monitor-presentation of instantaneous measuring values and settings</td></tr></table><div>Compatibility</div><table><tr><td>Connectable instruments</td><td>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.</td></tr><tr><td>System requirements</td><td>PC with Windows 7 or higher</td></tr></table></div>	Function	searching for Thies-sensors settings for the communication monitor-presentation of instantaneous measuring values and settings	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
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System requirements	PC with Windows 7 or higher							
	<div>LoRaWAN- Gateway 9.1704.20.000</div>	<div>For sending LoRaWan data to the Thies Cloud.</div>						