WEATHER STATION COMPACT WSC 11

Thies CLIMA

The economical model for acquisition of meteorological measuring data in the:

- Building technology
- Building automation
- Greenhouse control

THE WORLD OF WEATHER DATA

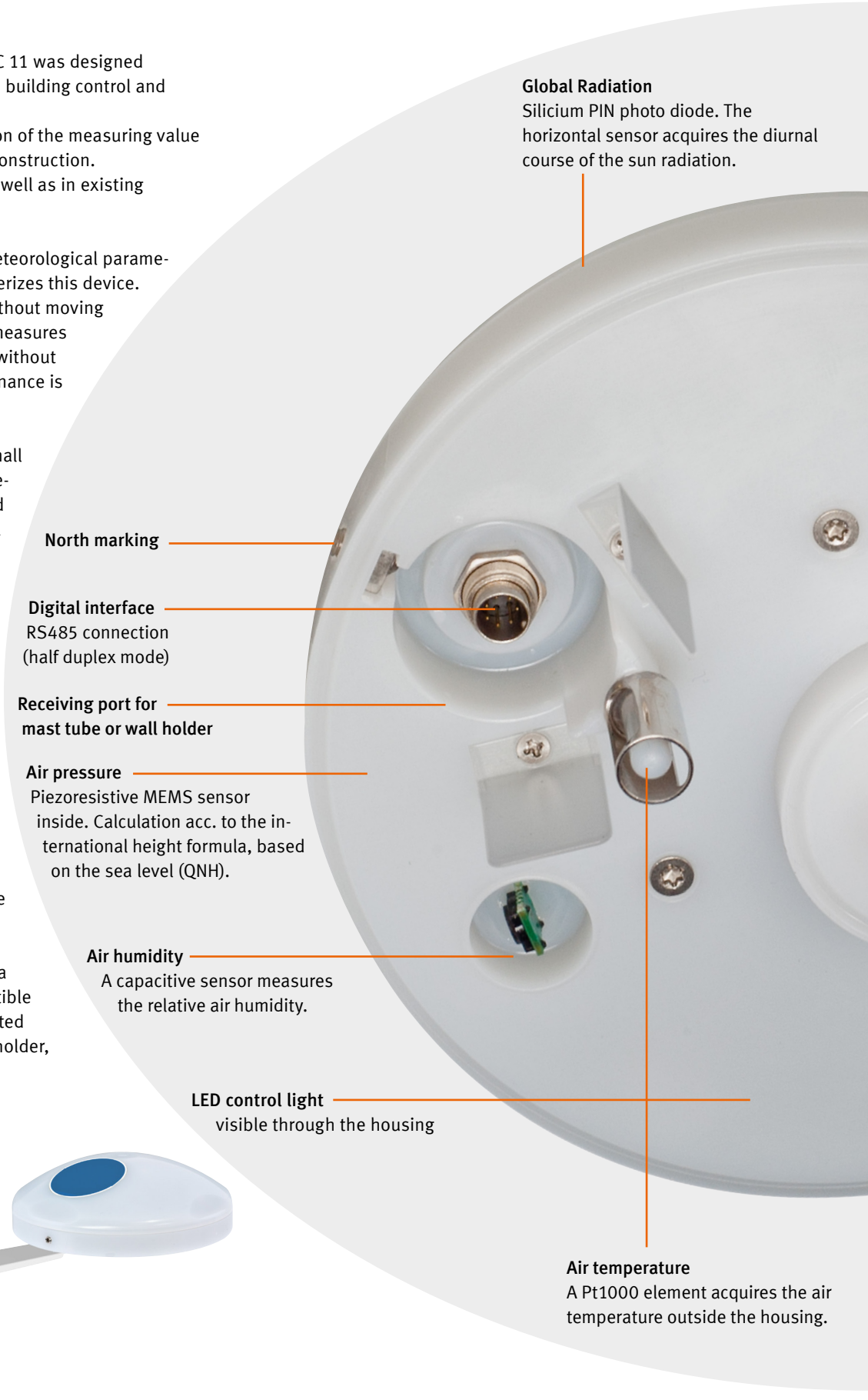
The weather station compact WSC 11 was designed for the varied requirements of the building control and automation technology.
The instrument combines precision of the measuring value acquisition with a very compact construction.
A smooth integration into new as well as in existing installations is guaranteed.

The acquisition of a total of 11 meteorological parameters on a minimum space characterizes this device. 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.

A ceramic sensor detects even small amounts of precipitation. The integrated heating liquefies snow and soft hail, and provides for a quick surface drying.

The integrated GPS receives automatically date, time, station height, and the geographic position. A manual setting of time is not necessary. The WSC 11 determines the azimuth and the elevation of the sun position from the parameters. The reduced air pressure is calculated by means of the altitude above sea level and the measured air pressure.
All parameters are output over the serial output.

The data output occurs serially via MODBUS RTU, or in THIES compatible data format. The WSC 11 is mounted on a mast or, by means of a wall holder, directly at the building.



WSC 11 with wall holder

Brightness
Silicium photo sensors in the medium elevation angle for all four cardinal directions.

Twilight
Mean value from the four direction-dependent brightness sensors.

Precipitation
Sensor in the housing cover with integrated heating, indicates the precipitation status.

Time/date and geostationary data
GPS receiver with integrated RTC. The backup condenser saves its data w/o power supply up to 3 days.

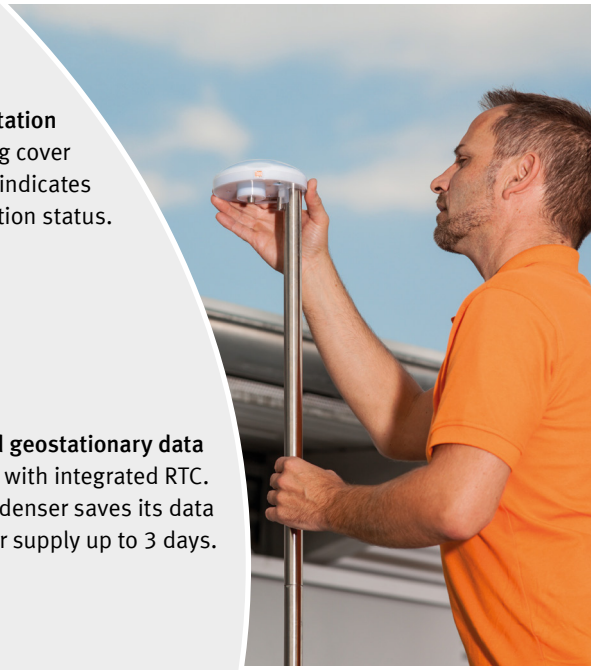
Sun position elevation and azimuth
The sun position is calculated automatically from the received data.

LED control light
visible through the housing

Wind velocity, wind direction
Thermal anemometer, measuring resistances inside acquire the inflowing wind.

At a glance

- integrable into existing control systems
- with digital interface
- precise and reliable
- wear-free
- easy installation



WEATHER STATION COMPACT WSC 11
TECHNICAL DATA

Order no.: 4.9056.10.00x

Wind velocity	
Type	Thermal anemometer
Measuring range	0 ... 40 m/s
Resolution	0.1 m/s
Accuracy	Up to 10 m/s: ±1 m/s
Laminar airflow	From 10 m/s: ±5 % RMS mean over 360 °

Wind direction	
Type	Thermal anemometer
Measuring range	1 ... 360 °
Resolution	1 °
Accuracy at Laminar airflow	±10 °

Brightness	
Type	Silicon sensor (North, East, South, West)
Measuring range	0 ... 150 kLux
Resolution	0.1 kLux
Accuracy	±3 % (±4.5 kLux)
Spectral range	475 ... 650 nm

Twilight	
Type	Silicon sensor
Measuring range	0 ... 999 Lux
Resolution	1 Lux
Accuracy	±10 Lux

Global radiation	
Type	Silicon sensor
Measuring range	0 ... 1300 W/m²
Resolution	1 W/m²
Accuracy	±10 % (±130 W/m²)
Spectral range	350 ... 1100 nm

Global radiation	
Type	Ceramic, capacitance measurement
Measuring range	0/1 (precipitation no/yes)
Heating capacity Sensor dry Sensor wet	 0.1 W (anti-condensation) 1.1 W (active drying)

Temperature	
Type	PT1000
Measuring range	-30 ... +60 °C
Resolution	0.1 °C
Accuracy	±1 °C @ WV › 2 m/s and temperature -5 ... +25 °C

Rel. air humidity	
Measuring range	0 ... 100 %
Resolution	0.1 %
Accuracy	› 2m/s, ±10 %, 20 °C

Air pressure	
Type	Piezo-resistive
Measuring range	300 ... 1100 hPa
Resolution	0.01 hPa
Accuracy	±0.5 hPa @ 20 °C
Long-term stability	±0.1 hPa/year

GPS receiver	
Received data	Latitude, longitude
Positional accuracy	date/time, station height 3 m (50 % CEP)

Digital interface	
Type	RS485
Operating mode	Half duplex mode
Data format	8N1
Baud rate	1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200

Protocol	
4.9056.10.000	ASCII (THIES-Format)
4.9056.10.001	Binary (MODBUS RTU)

General	
Operating voltage	18 ... 30 V DC; 18 ... 28 V AC
Power consumption	120 mA @ 24 V DC max. 1.5 A AC, max. 0.5 A DC
Temperature range	-30 ... +60 °C
Humidity range	Non-condensing
Time	GPS receiver with battery buffered real time clock for approx. 3 days

Housing	
Material	PC
Reception opening for mast	25 mm tube diameter
Dimensions	ø 130 mm x 67.5 mm
Weight	0.22 kg
Protection	IP65 only with correct operating position
Connection	7pole plug

Accessoriess (optional)

Order no.	Description
509564	Wall holder 250 mm long
9.1702.40.002	Level Converter RS-422/RS-485
9.1700.98.001	PC visualization software MeteoOnline
510488	5 m Connection cable
509585	10 m Connection cable
510197	20 m Connection cable
9.1700.81.000	Device utility tool for configuring the WSC11

Please contact us for your system requirements. We advise you gladly.

ADOLF THIES GMBH & CO KG
Meteorology and Environmental Technology
Box 3536 + 3541 · 37025 Göttingen · Germany
Phone +49 551 79001-0
info@thiesclima.com
www.thiesclima.com