



## First and only compact weather sensor with integrated Kipp & Zonen CMP10 Pyranometer with secondary standard quality

- **Parameters measured**  
Temperature, relative humidity, air pressure, radiation
- **Measurement technology**  
NTC/T, Capacitive/RH, MEMS capacitive/Pressure, Kipp&Zonen/Radiation
- **Product highlights**  
Compact all-in-one weather sensor, low power, heater, aspirated radiation shield, maintenance-free operation, open communication protocol
- **Interfaces**  
RS485 with supported protocols UMB-Binary, UMB-ASCII, Modbus-RTU, Modbus-ASCII, XDR and SDI-12
- **Article number**  
8374.5

From the WS product family of professional intelligent measurement transducers with digital interface for environmental applications. Integrated design with ventilated radiation protection for measuring: Air temperature, relative humidity, air pressure and radiation. One external temperature or rain sensor is connectable.

| General    |   |
|------------|---|
| Dimensions | Ø approx. 150 mm, height approx. 332 mm |
| Weight     | Approx. 1.5 kg                          |

|                            |   |
|----------------------------|---|
| Interface                  | RS485, 2 - wire, half - duplex                                  |
| Power supply               | 11...32 VDC   |
| Power supply               | 5...11 VDC (electronics with limited precision of measurements) |
| Power supply               | 24 VDC +/- 10% (heater)   |
| Power consumption          | 40 VA (heater)  |
| Operating temperature      | -50...60 °C (with heater)                                       |
| Operating rel. humidity    | 0...100 % RH  |
| Cable length               | 10 m  |
| Protection level housing   | IP66  |
| Mast mounting suitable for | Mast diameter 60 - 76 mm  |

## Temperature

|                 |  |
|-----------------|--|
| Principle       | NTC  |
| Measuring range | -40 ... 80 °C                                      |
| Unit            | °C   |
| Accuracy        | ±0.2 °C (-20...50 °C), otherwise ±0.5 °C (>-30 °C) |

## Relative humidity

|                 |                |
|-----------------|----------------|
| Principle       | Capacitive     |
| Measuring range | 0 ... 100 % RH |
| Unit            | % RH           |
| Accuracy        | ±2 % RH        |

## Air pressure

|                 |                      |
|-----------------|----------------------|
| Principle       | MEMS capacitive      |
| Measuring range | 300 ... 1200 hPa     |
| Unit            | hPa                  |
| Accuracy        | ±0.5 hPa (0...40 °C) |

## Radiation

|   |                        |
|---|------------------------|
| Response time                                 | < 5 s                  |
| Zero offset A                                 | < 7 W/m <sup>2</sup>   |
| Zero offset B                                 | < 2 W/m <sup>2</sup>   |
| Directional error (at 1000 W/m <sup>2</sup> ) | < 0.2 %                |
| Temperature dependence of sensitivity         | < 1 % (-10 °C...40 °C) |
| Spectral range                                | 285 to 2,800 nm        |
| Measuring range                               | 4000 W/m <sup>2</sup>  |