Technical data

Wind speed
- Measuring method: ultrasonic, 10 Hz
- Measuring range: 0 … 75 m/s (WS601: 0 … 30 m/s)
- Resolution: 0.1 m/s
- Accuracy: ±0.3 m/s or ±3 % (0 … 35 m/s), ±5 % (35 … 75 m/s) RMS
- Response threshold: 0.3 m/s
- Units: m/s, km/h, mph, kts

Wind direction
- Measuring method: 4x 10 Hz ultrasonic sensors
- Measuring range: 0 … 359,9°
- Resolution: 0.1°
- Accuracy: ±3° (> 1m/s) RMSE
- Threshold: 0.3 m/s

Compass
- Measuring method: built-in electronic compass
- Measuring range: 0 … 359°
- Resolution: 1°
- Accuracy: ±10°
- Measuring rate: 5 minutes

Air temperature
- Measuring method: NTC
- Measuring range: -50 … +60 °C
- Resolution: 0.1 °C (-20 … +50 °C), otherwise 0.2 °C
- Accuracy: ±0.2 °C (-20 … +50 °C), otherwise ±0.5 °C

Dew point temperature
- Measuring method: passive, calculated from air temperature and air humidity
- Measuring range: -50 … +60 °C
- Resolution: 0.1 °C
- Accuracy: ±0.7 °C

Air humidity
- Measuring method: capacitive
- Measuring range: 0 … 100 % R.H.
- Resolution: 0.1 % R.H.
- Accuracy: ±2 % R.H.

Barometric pressure
- Measuring method: MEMS sensor, capacitive
- Measuring range: 300 … 1200 hPa
- Resolution: 0.1 hPa
- Accuracy: ±0.5 hPa (0 … +40 °C)

Global radiation
- Measuring method: CMP3 thermopile pyranometer, Class 2
- Spectral range: 300 … 2800 nm
- Measuring range: 0 … 1400 W/m²
- Resolution: 1 W/m²
- Temperature error: ±5 % (-10 … +40 °C)

Precipitation (liquid)
- Measuring method: tipping bucket
- Type: rain
- Bucket orifice: 200 cm²
- Measuring range: 0 … 200 mm/h
- Resolution: 0.2 mm
- Accuracy: ±2 %

Precipitation (liquid/solid)
- Measuring method: Doppler radar
- Types: rain, snow
- Measuring range drop size: 0.3 … 5 mm
- Intensity: 0 … 200 mm/h
- Resolution (liquid): 0.01 mm
- Repeatability: > 90 %
- Accuracy: ±20 %
  (related to the annual precipitation and depending on weather and site specific conditions)

Electrical data

Interfaces*
- SDI-12, release 1.3 (factory setting)
- RS-485, galvanically isolated, half-duplex, baud rates 1200 … 19200
- RS-485 protocols: Binary, ASCII, TLS2002FG3, MODBUS

*May be selected using the Lufft-Config tool (PC software for Windows OS)

Power supply
- Input voltage: 4 … 32 VDC
- Power consumption, standard mode: 85 mA max. @ 12 VDC (fan)
- Power consumption, mode no. 1: 25 mA @12 VDC (WS200, WS500/501, WS600/601) 8 mA @ 12 VDC (WS300/301, WS400)
- Power consumption, mode no. 2: 2 mA @ 12 VDC
- Heater: 24 VDC/20 W 24 VDC/40 W (WS400/600)

Ambient

Operating temperature range
-50 … +60 °C

Storage temperature
-50 ... +70 °C

Relative humidity
0 … 100 % R.H.

General data

Dimensions (H x Ø)
194 to 445 mm (model) x 150 mm

Weight
0.8 to 1.7 kg (model)

Fastener
Ø 2" or 60 … 76 mm

Material
Plastic (PC) and
Stainless steel mounting clamp

Colour
White

Type of protection
IP66

Standards
- EMC directive: 2004/108/EC
- Emitted interference: EN 55011:2009, EN 61000-6-3
- Immunity: EN 61000-6-2 and EN 61000-4-2/3/4/5/6/8/16/29
- RoHS directive: 2011/65/EU
- IEC / CISPR 11
- prEN 50147-3

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97.960.307.P.E Version 02 – 03/2015