Wind Monitor ST

WIND MONITOR ST – Sensor Technology for Automated Sun Protection and Façade Control

The WIND MONITOR ST is a compact building sensor designed for automated sun protection and façade control. It combines thermal wind measurement with brightness and twilight detection as well as color temperature,

thereby providing the relevant environmental data for the intelligent control of blinds, awnings, and roller shutters, as well as interior lighting. Thermal wind measurement enables wind speed measurement without moving parts.

This method ensures reliable, low-maintenance operation and long-term measurement stability.

In addition to wind speed, the WIND MONITOR ST also measures brightness and twilight and determines the correlated color temperature (CCT) of outdoor light.

These parameters provide a comprehensive data foundation for automated shading control and daylight-adaptive building applications.

The sensor communicates via ASCII or Modbus RTU over RS485; a version with a KNX interface is also available. This enables easy integration into building management and automation systems.

Configurable green and red LEDs indicate the status and can be disabled if necessary. With its unobtrusive, matte-white architectural design, compact dimensions, and power consumption of less than 1 W,

the WIND MONITOR ST is designed for discreet integration into modern facades and building automation systems.

Measurement Parameters

• Wind speed: Thermal measurement method using a PID-controlled, heated sensor.

• Measurement accuracy: ±1 m/s or ±5%.

• Illuminance: Silicon-based light sensor for measuring illuminance and spectral components.

• Color temperature (K): The sensor also calculates the correlated color temperature of outdoor lighting and transmits the value via Modbus and Thies telegram.

• Twilight: Detection of lighting conditions during the transition from day to night.

• Power consumption is less than 1 watt, enabling extremely energy-efficient operation; the operating voltage is 18–30 VDC.

Interfaces

• ASCII

• Modbus RTU (RS485)

• Optional KNX

Specification

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Part number: 4.3450.00.xxx

Wind speed

Measuring range	0 ... 40m/s
Resolution	0.1 m/s
Accuracy	1 m/s or ± 5% (worst case) RMS - average over 270°

Brightness

Measuring range	0 ... 150 kLux
Resolution, Brightness	1 lux
Accuracy	±3% (± 4.5kLux)

Interface

Operation mode	Half-duplex mode
Data	ASCII (command interpreter: THIES / MODBUS RTU)
Baud rate	1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200 Baud

Operating voltage

Electronic	18 ... 30 VDC
Current consumption	100mA @ 24 V

General

Ambient conditions	-30 to +60 °C, non-condensing.
Electr. connection	4-pole plug-in terminals
Mounting	Wall mounting, wall adapter included in delivery.
Protection	IP 54
Weight	0,150kg

Versions

As per 4.3450.00.xxx, but:

Product number 4.3450.00.000

Interface

Data	ASCII (command interpreter: THIES)

Product number 4.3450.00.001

Interface

Data	ASCII (command interpreter: MODBUS RTU)

Accessories

No accessories are available for this product.