

Operating Instructions Wind Sensor with Heating Heating Transformer Rain Sensor



1. Safety instructions

Attention: Electrical equipment must be installed and fitted by qualified electricians only.

2. Wind Sensor Function

Wind sensor ① serves for detecting and evaluating the wind velocity and is provided for outdoor installation. It can be installed by means of the attached mounting bracket.

Via a reed contact, the rotating speed is detected and converted into an analogue output signal (0 ... 10 V).

An integrated heating (heating transformer option required) facilitates operation during frost periods.

2.1. Wind Sensor Connection

Where:

1:	white	reference potential (earth)
2:	brown	24 V DC operating voltage
3:	green	0 .. 10 V + output
4:	yellow	0 .. 10 V - output (earth)
5 + 6:	grey / pink	24 V AC/DC heating transformer supply

3. Rain Sensor Function

Rain sensor ② serves for detecting and evaluating the precipitation and is provided for outdoor installation. It can be installed by means of the attached 110° mounting bracket.

Via a meander and by utilising the conductivity of water, wetting by precipitation is detected, evaluated and converted into an output signal (dry = 0 V, rain = 10 V).

Intermediate values are not detected.

The output signal is reset only after the sensor surface has dried and when an OFFdelay of 4 minutes has elapsed. The integrated heating (additional heating transformer required as an accessory) accelerates the drying process and melts ice and snow.

3.1. Rain Sensor Connection

Where:

1:	white	reference potential (earth)
2:	brown	24 V DC operating voltage
3:	green	0 .. 10 V + output
4 + 5:	yellow/grey	24 V AC/DC heating transformer supply

4. Installation Instructions

- To supply the sensors (24 V DC) and to evaluate the sensor signals an additional electronic device (e. g. the *instabus* weather station) is required that can send measured value or command telegrams to the *instabus* EIB, depending upon the analogue signals.
- Install the sensors in an accessible place to facilitate possibly necessary cleaning.
- Do not install sensors in the vicinity of transmitting equipment (e. g. mobile radio converters).
- Do not install sensor lines in parallel with lines carrying mains voltage or loads.
To avoid electromagnetic irradiation keep a distance of a few centimetres from such lines.

Note additionally for the wind sensor:

- Ensure correct positioning of the sensor (e. g. position not sheltered from the wind).

Note additionally for the rain sensor:

- Do not damage the sensing surface and wipe with a mild cleaning agent at a regular intervals.
- When installing the sensor, ensure unobstructed exposure to rain (do not install under eaves).

5. Heating Transformer Function

The heating transformer serves for the power supply of the heating devices integrated into the rain sensors and wind sensors. Short-circuit protection is implemented by means of an automatically resetting thermal overload cut-out.

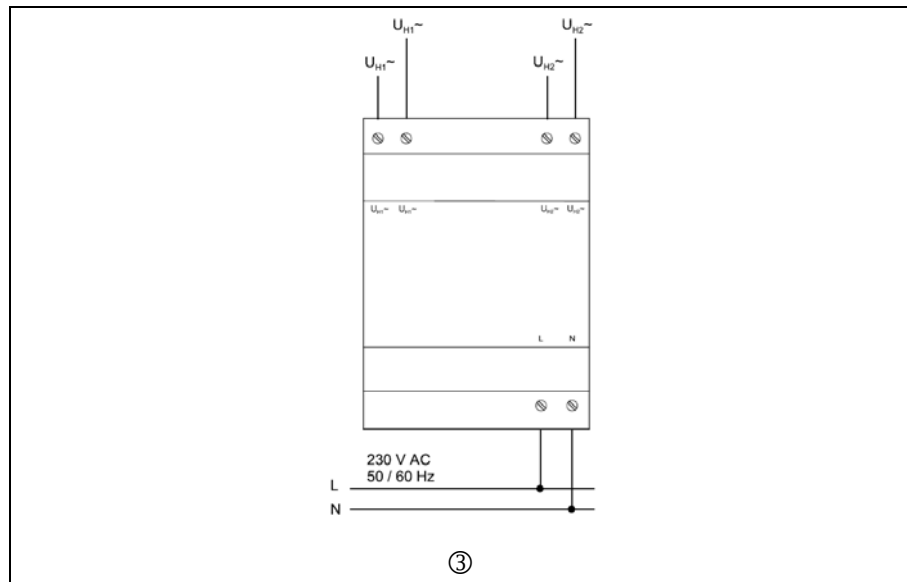
One rain sensor and one wind sensor, in each case, can be connected to a heating transformer.

5.1. Heating Transformer Connection (Refer to Fig. ③)

$U_{H1\sim}$: Sensor 1 connecting terminals.

$U_{H2\sim}$: Sensor 2 connecting terminals.

Subject to technical modifications.



6. Technical Data

Wind Sensor

External supply	
Supply voltage :	24 V DC (18 – 32 V DC)
Current consumption :	Approx. 12 mA (without heating)
Heating :	24 V DC/AC PTC element (80 °C)
Supply line :	3 m, LiYY 6 x 0.25 mm ² , extendable to 100 m max. (please observe installation instructions)
Measuring range :	0.7 ... 40 m/s, linear
Max. wind velocity :	60 m/s momentary
Output :	0 ... 10 V DC (1.5 k Ω min. load)
Ambient temperature :	- 25 to + 60 °C
Protective system :	IP 65
Mounting position :	Vertically upright (vertical)
Type of fixing :	Mounting bracket
Weight :	Approx. 300 g

Heating Transformer

Primary supply :	230 V AC
Output voltage :	24 V AC
Output current :	500 mA max.
Prim./sec. connection :	0.25 – 2.5 mm ² screw terminals
Ambient temperature :	-5°C to +40°C
Max. enclosure temperature :	TC = 60 °C
Protective system :	IP 20 as per DIN 40 050 (IEC 529)
Mounting position :	Any
Minimum spacings :	None
Mounting width :	4 PUs (pitch units)
Weight :	600 g

Rain Sensor

External supply	
Supply voltage :	24 V DC (15 – 30 V DC)
Current consumption :	Approx. 10 mA (without heating)
Heating :	24 V DC/AC, 4.5 W max.
Supply line :	3 m, LiYY 5 x 0.25 mm ² , extendable to 100 m max. (please observe installation instructions)
Output	
Dry :	0 V
Rain :	10 V DC (1 k Ω min. load)
Ambient temperature :	- 30 to + 70 °C
Protective system :	IP 65
Mounting position :	determined by 110° fitting bracket
Dimensions (LxWxH) :	58 x 83 x 17 mm
Weight :	Approx. 300 g

7. Guarantee

Our products are under guarantee within the scope of the statutory provisions.

Please return the unit postage paid to our central service department giving a brief description of the fault:

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