

# **KNX W**

## **Wind Sensor**

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KNX W 12...40 V DC / 12...28 V AC  
No. 70123

KNX W 230 V  
No. 70122

|   |           |
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Installation, inspection, commissioning and troubleshooting of the device must only be carried out by a competent electrician.

This manual is amended periodically and will be brought into line with new software releases. The change status (software version and date) can be found in the contents footer. If you have a device with a later software version, please check **www.elsner-elektronik.de** in the menu area "Service" to find out whether a more up-to-date version of the manual is available.

## Clarification of signs used in this manual



Safety advice.



Safety advice for working on electrical connections, components, etc.

### **DANGER!**

... indicates an immediately hazardous situation which will lead to death or severe injuries if it is not avoided.

### **WARNING!**

... indicates a potentially hazardous situation which may lead to death or severe injuries if it is not avoided.

### **CAUTION!**

... indicates a potentially hazardous situation which may lead to trivial or minor injuries if it is not avoided.



**ATTENTION!** ... indicates a situation which may lead to damage to property if it is not avoided.

### ETS

In the ETS tables, the parameter default settings are marked by underlining.

# 1. Description

The **Wind Sensor KNX W** measures wind speed and transfers the values to the KNX system. Three switching outputs with adjustable threshold values as well as additional AND and OR logic gates are available. The sensor system, the evaluation electronics and the electronics of the bus connection are mounted in a compact housing.

## Functions:

- **Wind measurement:** The wind strength measurement takes place electronically and thus noiselessly and reliably, even during hail, snow and sub-zero temperatures. Even turbulent air and anabatic winds in the vicinity of the weather station are recorded
- **3 switching outputs** with adjustable threshold values (Threshold values can be set by parameter or via communication objects)
- **8 AND and 8 OR logic gates** with each 4 inputs. Every switching incident as well as 8 logic inputs (in the form of communication objects) may be used as inputs for the logic gates. The output of each gate may optionally be configured as 1 bit or 2 x 8 bits

Configuration is made using the KNX software ETS. The **product file** can be downloaded from the Elsner Elektronik homepage on **[www.elsner-elektronik.de](http://www.elsner-elektronik.de)** in the "Service" menu.

## 1.1. Technical specifications

|                     |  |
|---------------------|--|
| Housing             | Plastic material   |
| Colour              | White / translucent  |
| Mounting            | On-wall  |
| Protection category | IP 44  |
| Dimensions          | approx. 96 x 77 x 118 (W x H x D, mm)  |
| Weight              | 230 V AC version: approx. 240 g,<br>12...40 V DC / 12...28 V AC version approx. 170 g  |
| Ambient temperature | Operation -30...+50°C, storage -30...+70°C   |
| Operating voltage   | Available for 230 V AC or 12...40 V DC (12...28 V AC).<br>An appropriate power supply unit can be obtained from Elsner Elektronik. |
| Cable cross-section | Massive conductors of up to 1.5 mm <sup>2</sup> or conductors with fine wires  |
| Current             | 230 V AC version max. 20 mA.<br>12...40 V DC / 12...28 V AC version:<br>at 12 V DC max. 30 mA., max. 0,4 W.<br>Residual ripple 10% |
| Data output         | KNX +/- bus terminal plug  |
| BCU type            | Own micro controller   |
| PEI type            | 0  |
| Group addresses     | max. 254   |

|                        |  |
|------------------------|--|
| Allocations            | max. 255   |
| Communication objects  | 80   |
| Measurement range Wind | 0...35 m/s   |
| Resolution (wind)      | 0,1 m/s  |
| Accuracy (wind)        | at ambient temperature -20...+50°C:<br>±22% of the measurement value when incident flow is from 45...315°<br>±15% of the measurement value when incident flow is from 90...270°<br>(Frontal incident flow corresponds to 180°) |

The product conforms with the provisions of EU directives

## 2. Installation and commissioning

### 2.1. Installation notes



Installation, testing, operational start-up and troubleshooting should only be performed by an electrician.



#### **DANGER!**

#### **Risk to life from live voltage (mains voltage)!**

There are unprotected live components within the device.

- VDE regulations and national regulations are to be followed.
- Ensure that all lines to be assembled are free of voltage and take precautions against accidental switching on.
- Do not use the device if it is damaged.
- Take the device or system out of service and secure it against unintentional use, if it can be assumed, that risk-free operation is no longer guaranteed.

The device is only to be used for its intended purpose. Any improper modification or failure to follow the operating instructions voids any and all warranty and guarantee claims.

After unpacking the device, check it immediately for possible mechanical damage. If it has been damaged in transport, inform the supplier immediately.

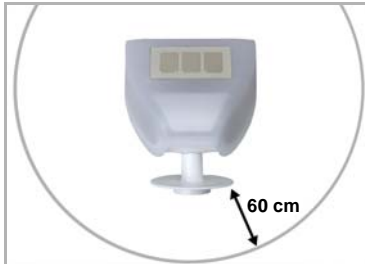
The device may only be used as a fixed-site installation; that means only when assembled and after conclusion of all installation and operational start-up tasks and only in the surroundings designated for it.

Elsner Elektronik is not liable for any changes in norms and standards which may occur after publication of these operating instructions.

## 2.2. Location

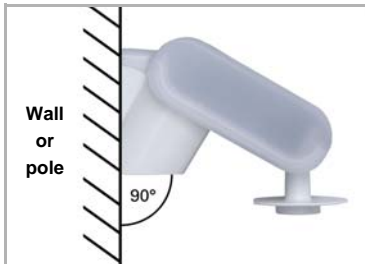
Select an assembly location at the building where wind speed may be collected by the sensor unobstructed.

At least 60 cm of clearance must be left all round the device. This facilitates correct wind speed measurement without eddies. The distance concurrently prevents spray (raindrops hitting the device) or snow (snow penetration) from impairing the measurement. It also does not allow birds to bite it.



*Fig. 1*

*There must be at least 60 cm of space below, to the sides and in front of the sensor left from other elements (structures, construction parts, etc.).*



*Fig. 2*

*The wind sensor must be mounted on a vertical wall (or a pole).*



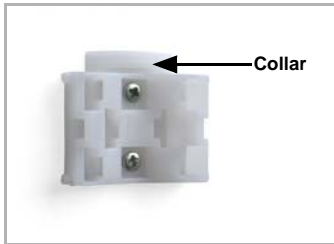
*Fig. 3*

*The wind sensor must be mounted in the horizontal transverse direction (horizontally).*

## 2.3. Mounting the sensor

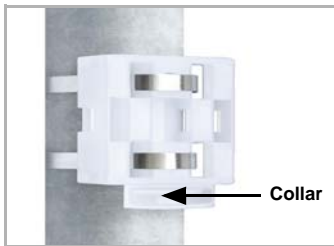
### 2.3.1. Attaching the mount

The sensor comes with a combination wall/pole mount. The mount comes adhered by adhesive strips to the rear side of the housing. Fasten the mount vertically onto the wall or pole.



*Fig. 4*

*When wall mounting: flat side on wall, crescent-shaped collar upward.*



*Fig. 5*

*When pole mounting: curved side on pole, collar downward.*



*Fig. 6*

*Different mounting arms are available from Elsner Elektronik as additional, optional accessories for flexible installation of the weather station on a wall, pole or beam.*

*Example of the use of a mounting arm:  
Due to flexible ball joints, the sensor can be brought into ideal position.*



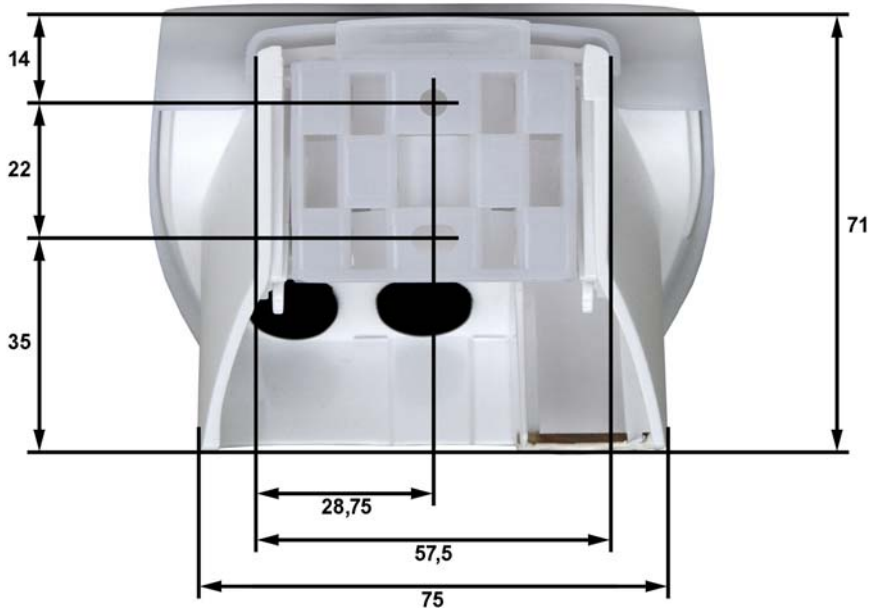
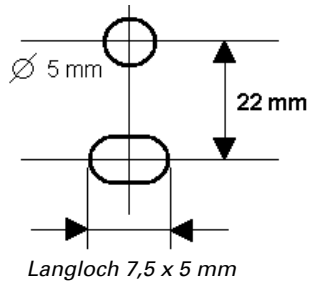
*Fig. 7*

*Example use of the hinge arm mounting:  
Fitting to a pole with worm drive hose clips*

### 2.3.2. View of rear side and drill hole plan

Fig. 8 a+b  
Drill hole plan

Dimensions of rear side of housing with bracket. Subject to change for technical enhancement.





### 2.3.3. Preparing the sensor

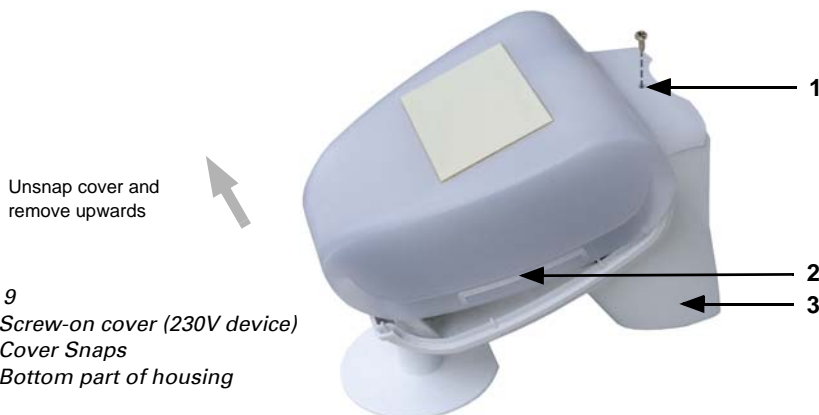


Fig. 9

- 1 Screw-on cover (230V device)
- 2 Cover Snaps
- 3 Bottom part of housing

The sensor cover snaps in on the left and right along the bottom edge (see Fig.). The cover of the 230V model is also screwed on top. Remove the cover. Proceed carefully, so as not to pull off the wire connecting the PCB in the bottom part with the cover (soldered cable connection in case of 230 V AC version, cable with plug in case of 12...40 V DC / 12...28 V AC version).

Lead the cable for the voltage supply and bus connection through the rubber seals on the bottom of the device and connect Voltage L/N and Bus +/- to the terminals provided.

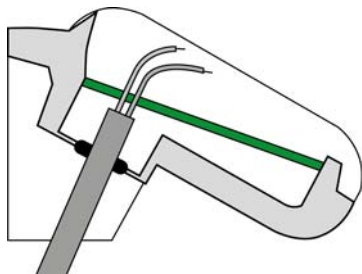


Fig. 10

Remove the cable shielding under the circuit board and only feed the connector cables upwards through the openings in the circuit board.

For 12...40 V DC / 12...28 V AC devices the connection cable must be plugged in between the cover and circuit board.

### 2.3.4. PCB layout

#### 230 V AC version

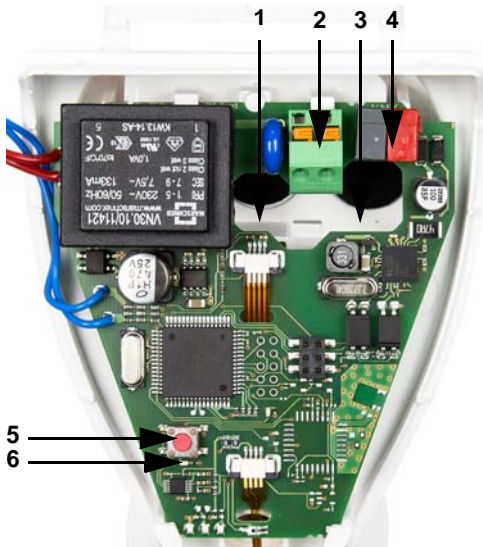


Fig. 11

- 1 Opening for the cable for the voltage supply
- 2 Tension clamp for voltage supply (230 V AC), suitable for massive conductors of up to 1.5 mm<sup>2</sup> or conductors with fine wires
- 3 Opening for bus cable
- 4 Slot for KNX clamp +/-
- 5 Programming pushbutton for the teach-in of the device
- 6 Programming LED

#### 12...40 V DC / 12...28 V AC version

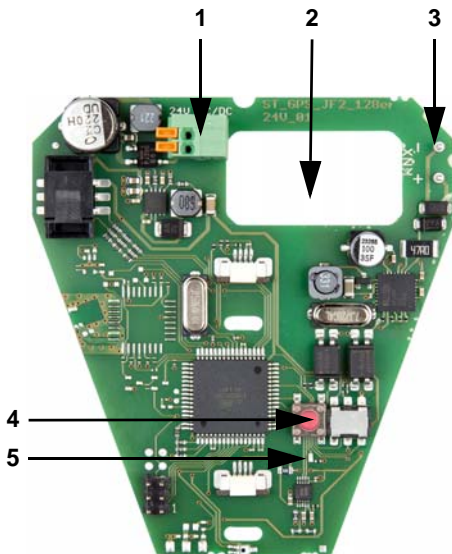


Fig. 12

- 1 Tension clamp for voltage supply (12...40 V DC, 12...28 V AC). Massive conductors of up to 1.5 mm<sup>2</sup> or conductors with fine wires. Terminal configuration independent from polarity (+/- or -/+).
- 2 Opening for the cable for the voltage supply and for bus cable
- 3 Slot for KNX clamp +/-
- 4 Programming pushbutton for the teach-in of the device
- 5 Programming LED

### 2.3.5. Mounting the weather station

Close the housing by putting the cover back over the bottom part. The cover must snap in on the left and right with a definite "click".

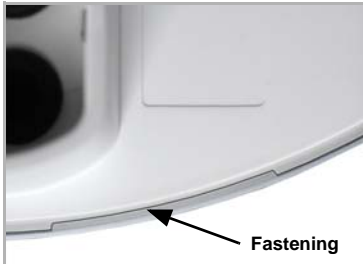


Fig. 13

*Make sure the cover and bottom part are properly snapped together! This picture is looking at the closed sensor from underneath.*



Fig. 14

*With the 230V model, screw the cover on to the underpart, to prevent unauthorised or accidental opening.*



#### **DANGER!**

**There is a risk to life from the live voltage on a 230 V device!**

- The cover must be screwed on in operation.



Fig. 15

*Push the housing from above into the fastened mount. The bumps on the mount must snap into the rails in the housing.*

To remove it, the weather station can be simply pulled upwards out of the mount, against the resistance of the fastening.

## 2.4. Notes on mounting and commissioning

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Do not open the device if water (rain) might ingress: even some drops might damage the electronic system.

Observe the correct connections. Incorrect connections may destroy the sensor or connected electronic devices.

The measured wind value and thus all other wind switching outputs may only be supplied 60 seconds after the supply voltage has been connected.

After the auxiliary voltage has been applied, the device will enter an initialisation phase lasting a few seconds. During this phase no information can be received or sent via the bus.

## 3. Addressing of the device at the bus

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The device is supplied with the bus address 15.15.250. You can program another address into the ETS by overwriting the 15.15.250 address or by teaching via the programming key on the circuit board inside the housing.



### **DANGER!**

#### **Risk to life from live voltage (mains voltage)!**

- With the 230V model, bus addressing via the programming key should only be done by an accredited electrician.
  - Do not touch any components on the circuit board while pressing the key.
- 

## 4. Maintenance

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### **DANGER!**

#### **There is a risk to life from the live voltage (mains voltage)!**

If you come into contact with live components in the device, (e.g. caused also by a jet of water) there is the risk of an electric shock with 230 V devices.

#### **Risk of injury caused by components moved automatically!**

The automatic control can start system components and place people in danger (e.g. moving windows/awnings if a rain/wind alarm has been triggered while cleaning).

- Always isolate the device from the mains for servicing and cleaning (e. g. switch off or remove the fuse).
- 

The device must regularly be checked for dirt twice a year and cleaned if necessary. In case of severe dirt, the sensor may not work properly anymore.

**ATTENTION**

The device can be damaged if water penetrates the housing.

- Do not clean with high pressure cleaners or steam jets.
-

## 5. Transmission protocol

### Units of measurement:

*Wind in metre per second*

### 5.1. List of all communication objects

#### EIS types:

- 1 Switching 1/0
- 5 Floating point value
- 6 8 bit value

#### Abbreviations Flags:

- C Communication
- R Read
- W Write
- T Transmit

| No. | Name                              | Function                         | EIS type | Flags   |
|-----|-----------------------------------|----------------------------------|----------|---------|
| 0   | Wind force measured value         | Output                           | 5        | C R T   |
| 1   | Request maximum wind force        | Input                            | 1        | C R W   |
| 2   | Maximum wind force measured value | Output                           | 5        | C R T   |
| 3   | Reset maximum wind force          | Input                            | 1        | C R W   |
| 4   | Wind sensor malfunction           | Output                           | 1        | C R T   |
| 5   | Wind threshold value 1            | 16 bit value                     | 5        | C R W T |
| 6   | Wind threshold value 1            | 1 = Increment  <br>0 = Decrement | 1        | C R W   |
| 7   | Wind threshold value 1            | Increment                        | 1        | C R W   |
| 8   | Wind threshold value 1            | Decrement                        | 1        | C R W   |
| 9   | Wind threshold value 1            | Switching output                 | 1        | C R T   |
| 10  | Wind threshold value 1            | Switching output block           | 1        | C R W   |
| 11  | Wind threshold value 2            | 16 bit value                     | 5        | C R W T |
| 12  | Wind threshold value 2            | 1 = Increment  <br>0 = Decrement | 1        | C R W   |
| 13  | Wind threshold value 2            | Increment                        | 1        | C R W   |
| 14  | Wind threshold value 2            | Decrement                        | 1        | C R W   |
| 15  | Wind threshold value 2            | Switching output                 | 1        | C R T   |
| 16  | Wind threshold value 2            | Switching output block           | 1        | C R W   |
| 17  | Wind threshold value 3            | 16 bit value                     | 5        | C R W T |
| 18  | Wind threshold value 3            | 1 = Increment  <br>0 = Decrement | 1        | C R W   |

| No. | Name                   | Function               | ElStype | Flags |
|-----|------------------------|------------------------|---------|-------|
| 19  | Wind threshold value 3 | Increment              | 1       | C R W |
| 20  | Wind threshold value3  | Decrement              | 1       | C R W |
| 21  | Wind threshold value 3 | Switching output       | 1       | C R T |
| 22  | Wind threshold value 3 | Switching output block | 1       | C R W |
|     |                        |                        |         |       |
| 23  | AND Logic 1            | Switching output       | 1       | C R T |
| 24  | AND Logic 1            | 8 bit output A         | 6       | C R T |
| 25  | AND Logic 1            | 8 bit output B         | 6       | C R T |
| 26  | AND Logic 2            | Switching output       | 1       | C R T |
| 27  | AND Logic 2            | 8 bit output A         | 6       | C R T |
| 28  | AND Logic 2            | 8 bit output B         | 6       | C R T |
| 29  | AND Logic 3            | Switching output       | 1       | C R T |
| 30  | AND Logic 3            | 8 bit output A         | 6       | C R T |
| 31  | AND Logic 3            | 8 bit output B         | 6       | C R T |
| 32  | AND Logic 4            | Switching output       | 1       | C R T |
| 33  | AND Logic 4            | 8 bit output A         | 6       | C R T |
| 34  | AND Logic 4            | 8 bit output B         | 6       | C R T |
| 35  | AND Logic 5            | Switching output       | 1       | C R T |
| 36  | AND Logic 5            | 8 bit output A         | 6       | C R T |
| 37  | AND Logic 5            | 8 bit output B         | 6       | C R T |
| 38  | AND Logic 6            | Switching output       | 1       | C R T |
| 39  | AND Logic 6            | 8 bit output A         | 6       | C R T |
| 40  | AND Logic 6            | 8 bit output B         | 6       | C R T |
| 41  | AND Logic 7            | Switching output       | 1       | C R T |
| 42  | AND Logic 7            | 8 bit output A         | 6       | C R T |
| 43  | AND Logic 7            | 8 bit output B         | 6       | C R T |
| 44  | AND Logic 8            | Switching output       | 1       | C R T |
| 45  | AND Logic 8            | 8 bit output A         | 6       | C R T |
| 46  | AND Logic 8            | 8 bit output B         | 6       | C R T |
| 47  | OR Logic 1             | Switching output       | 1       | C R T |
| 48  | OR Logic 1             | 8 bit output A         | 6       | C R T |
| 49  | OR Logic 1             | 8 bit output B         | 6       | C R T |
| 50  | OR Logic 2             | Switching output       | 1       | C R T |
| 51  | OR Logic 2             | 8 bit output A         | 6       | C R T |
| 52  | OR Logic 2             | 8 bit output B         | 6       | C R T |
| 53  | OR Logic 3             | Switching output       | 1       | C R T |
| 54  | OR Logic 3             | 8 bit output A         | 6       | C R T |
| 55  | OR Logic 3             | 8 bit output B         | 6       | C R T |
| 56  | OR Logic 4             | Switching output       | 1       | C R T |
| 57  | OR Logic 4             | 8 bit output A         | 6       | C R T |

| No. | Name             | Function         | ElStype | Flags |
|-----|------------------|------------------|---------|-------|
| 58  | OR Logic 4       | 8 bit output B   | 6       | C R T |
| 59  | OR Logic 5       | Switching output | 1       | C R T |
| 60  | OR Logic 5       | 8 bit output A   | 6       | C R T |
| 61  | OR Logic 5       | 8 bit output B   | 6       | C R T |
| 62  | OR Logic 6       | Switching output | 1       | C R T |
| 63  | OR Logic 6       | 8 bit output A   | 6       | C R T |
| 64  | OR Logic 6       | 8 bit output B   | 6       | C R T |
| 65  | OR Logic 7       | Switching output | 1       | C R T |
| 66  | OR Logic 7       | 8 bit output A   | 6       | C R T |
| 67  | OR Logic 7       | 8 bit output B   | 6       | C R T |
| 68  | OR Logic 8       | Switching output | 1       | C R T |
| 69  | OR Logic 8       | 8 bit output A   | 6       | C R T |
| 70  | OR Logic 8       | 8 bit output B   | 6       | C R T |
|     |                  |                  |         |       |
| 71  | Logic input 1    | Input            | 1       | C R W |
| 72  | Logic input 2    | Input            | 1       | C R W |
| 73  | Logic input 3    | Input            | 1       | C R W |
| 74  | Logic input 4    | Input            | 1       | C R W |
| 75  | Logic input 5    | Input            | 1       | C R W |
| 76  | Logic input 6    | Input            | 1       | C R W |
| 77  | Logic input 7    | Input            | 1       | C R W |
| 78  | Logic input 8    | Input            | 1       | C R W |
|     |                  |                  |         |       |
| 79  | Software Version | readable         | 6       | CR    |



## 6. Setting of parameters

### 6.1. General settings

|                        |  |
|------------------------|--|
| Maximum telegram quota | 1 • 2 • 3 • <u>5</u> • 10 • 20 <u>telegrams per second</u> |
|------------------------|--|

#### **Wind force**

|   |  |
|---|--|
| Measured value  | <ul style="list-style-type: none"> <li>• do not send</li> <li>• <u>send periodically</u></li> <li>• send in case of change</li> <li>• send in case of change and periodically</li> </ul> |
| send periodically all<br>(only if sending "periodically") | <u>5 sec</u> ... 2 h   |
| From change in %<br>(only if sending "on change")         | 1 ... 50; <u>20</u>  |
| Send and reset of the maximum wind load value on request  | <u>do not release</u> • release  |
| Use malfunction object                                    | <u>No</u> • Yes  |

### 6.2. Threshold values

#### **Wind force**

|   |                      |
|---|----------------------|
| Use threshold value 1 / 2 / 3   | <u>No</u> • Yes      |
| Transmission delay of the switching output after power up and programming | <u>5 sec</u> ... 2 h |
| Transmission delay of the switching output after power up and programming | <u>5 sec</u> ... 2 h |

#### 6.2.1. Wind threshold value 1 / 2 / 3

##### **Threshold value**

|                              |   |
|------------------------------|---|
| Threshold value setpoint per | <u>Parameter</u> • Communication object |
|------------------------------|---|

##### **If the threshold value is set per Parameter:**

|  |                      |
|--|----------------------|
| Threshold value in 0,1 m/s             | 0 ... 350; <u>40</u> |
| Hysteresis of the threshold value in % | 0 ... 250; <u>20</u> |

**If the threshold value is set per Communication object:**

|  |   |
|--|---|
| The value communicated last shall be maintained  | <ul style="list-style-type: none"> <li>• <u>not</u></li> <li>• after restoration of voltage<br/>(the changes threshold value may be saved at least 100,000 times)</li> <li>• after restoration of voltage and programming (<b>Attention: Do not use for first commissioning</b>)</li> </ul> |
| Start threshold value in 0,1 m/s valid until 1. communication<br>(only if the value communicated last is „not“ maintained or „after restoration of voltage“) | 0 ... 350; <u>40</u>  |
| Type of threshold change   | <ul style="list-style-type: none"> <li>• <u>Absolute value with a 16 bit communication object</u></li> <li>• Increment / decrement with one communication object</li> <li>• Increment / decrement with two communication objects</li> </ul>   |
| Step size<br>(only if sending „Increment/decrement“)   | 0,1 m/s ... 5 m/s; <u>1 m/s</u>   |
| Hysteresis of the threshold value in %   | 0 ... 250; <u>20</u>  |

**Switching output**

|   |   |
|---|---|
| Output is at<br>(TV = Threshold Value)                    | <ul style="list-style-type: none"> <li>• <u>TV</u> above = 1   TV - Hyst. below = <u>0</u></li> <li>• <u>TV</u> above = 0   TV - Hyst. below = 1</li> <li>• TV below = 1   TV + Hyst. above = 0</li> <li>• TV below = 0   TV + Hyst. above = 1</li> </ul>           |
| Switching delay from 0 to 1                               | <u>none</u> • 1 sec ... 2 h   |
| Switching delay from 1 to 0                               | <u>none</u> • 1 sec ... 2 h   |
| Switching output sends                                    | <ul style="list-style-type: none"> <li>• <u>not</u></li> <li>• on change</li> <li>• on change to 1</li> <li>• on change to 0</li> <li>• on change and periodically</li> <li>• on change to 1 and periodically</li> <li>• on change to 0 and periodically</li> </ul> |
| send periodically all<br>(only if sending „periodically“) | <u>5 sec</u> ... 2 h  |

**Blocking**

„Blocking“ only appears if using „Switching output sends on change“

|                                   |                 |
|-----------------------------------|-----------------|
| Use block of the switching output | Yes • <u>No</u> |
|-----------------------------------|-----------------|

If block of the switching output is used:

|  |  |
|--|--|
| Use block of the switching output  | <b>Yes</b>   |
| Evaluation of the blocking object  | <ul style="list-style-type: none"> <li>• if value 1: block   if value 0: release</li> <li>• if value 0: block   if value 1: release</li> </ul>   |
| Value of the blocking object before 1. communication                                       | <u>0</u> • 1   |
| Behaviour of the switching output with blocking  | <ul style="list-style-type: none"> <li>• <u>do not send telegram</u></li> <li>• send 0</li> <li>• send 1</li> </ul>  |
| Behaviour of the switching output with release (selection depends on settings made before) | <ul style="list-style-type: none"> <li>• do not send telegram</li> <li>• <u>send status of the switching output</u></li> <li>• if switching output = 1 =&gt; send 1</li> <li>• if switching output = 0 =&gt; send 0</li> </ul> |

## 6.3. Logic

|                                    |                                 |
|------------------------------------|---------------------------------|
| Communication objects logic inputs | <u>do not release</u> • release |
|------------------------------------|---------------------------------|

### AND Logic

|  |                            |
|--|----------------------------|
| Logic 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8  | <u>not active</u> • active |
| Transmission delay of the switching outputs after power up and programming | <u>5 sec</u> ... 2 h       |

### OR Logic

|  |                            |
|--|----------------------------|
| Logic 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8  | <u>not active</u> • active |
| Transmission delay of the switching outputs after power up and programming | <u>5 sec</u> ... 2 h       |

## 6.4. AND Logic 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8

|                         |  |
|-------------------------|--|
| 1. / 2. / 3. / 4. Input | <ul style="list-style-type: none"> <li>• do not use</li> <li>• all switching events which the sensor provides (see "Linkage inputs of the AND logic")</li> </ul> |
| Logic output sends      | <ul style="list-style-type: none"> <li>• <u>not</u></li> <li>• one 1 bit object</li> <li>• two 8 bit objects</li> </ul>  |

### Logic output sends "one 1 bit Object":

|                             |                         |
|-----------------------------|-------------------------|
| Logic output sends          | <b>one 1 bit object</b> |
| if logic = 1 → object value | <u>1</u> • 0            |
| if logic = 0 → object value | 1 • <u>0</u>            |

|   |   |
|---|---|
| Communication object<br>AND Logic 1 sends               | <ul style="list-style-type: none"> <li>• in case of the change of logic</li> <li>• in case of the change of logic to 1</li> <li>• in case of the change of logic to 0</li> <li>• in case of the change of logic and cyclically</li> <li>• in case of the change of logic to 1 and cyclically</li> <li>• in case of the change of logic to 0 and cyclically</li> </ul> |
| send cyclically every<br>(only if sending "cyclically") | <u>5 sec</u> ... 2 h  |

### Logic output sends "two 8 bit objects":

|   |   |
|---|---|
| Logic output sends                                      | <b>two 8 bit objects</b>  |
| if logic = 1 → object A value                           | 0 ... 255; <u>127</u>   |
| if logic = 0 → object A value                           | <u>0</u> ... 255  |
| if logic = 1 → object B value                           | 0 ... 255; <u>127</u>   |
| if logic = 0 → object B value                           | <u>0</u> ... 255  |
| Communication objects<br>AND Logic 1 A and B sends      | <ul style="list-style-type: none"> <li>• in case of the change of logic</li> <li>• in case of the change of logic to 1</li> <li>• in case of the change of logic to 0</li> <li>• in case of the change of logic and cyclically</li> <li>• in case of the change of logic to 1 and cyclically</li> <li>• in case of the change of logic to 0 and cyclically</li> </ul> |
| send cyclically every<br>(only if sending "cyclically") | <u>5 sec</u> ... 2 h  |

## 6.4.1. Linkage inputs of AND Logic

do not use

Communication object logic input 1

Communication object logic input 1 inverted

Communication object logic input 2

Communication object logic input 2 inverted

Communication object logic input 3

Communication object logic input 3 inverted

Communication object logic input 4

Communication object logic input 4 inverted

Communication object logic input 5

Communication object logic input 5 inverted

Communication object logic input 6

Communication object logic input 6 inverted

Communication object logic input 7

Communication object logic input 7 inverted

Communication object logic input 8  
 Communication object logic input 8 inverted  
 Malfunction wind  
 Malfunction wind inverted  
 Wind threshold value 1  
 Wind threshold value 1 inverted  
 Wind threshold value 2  
 Wind threshold value 2 inverted  
 Wind threshold value 3  
 Wind threshold value 3 inverted

### 6.4.2. OR Logic 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8

|                         |  |
|-------------------------|--|
| 1. / 2. / 3. / 4. Input | <ul style="list-style-type: none"> <li>• <u>do not use</u></li> <li>• all switching events which the sensor provides (see "Linkage inputs of the OR logic")</li> </ul> |
| Logic output sends      | <ul style="list-style-type: none"> <li>• <u>one 1 bit object</u></li> <li>• two 8 bit objects</li> </ul>   |

**All settings of the OR logic correspond to those of the AND logic.**

### 6.4.3. Linkage inputs of OR Logic

**The linkage inputs of the OR logic correspond with the parameters of the AND logic. The OR logic is additionally provided with the following inputs:**

AND Logic output 1  
 AND Logic output 1 inverted  
 AND Logic output 2  
 AND Logic output2 inverted  
 AND Logic output 3  
 AND Logic output 3 inverted  
 AND Logic output4  
 AND Logic output 4 inverted  
 AND Logic output 5  
 AND Logic output 5 inverted  
 AND Logic output 6  
 AND Logic output 6 inverted  
 AND Logic output 7  
 AND Logic output 7 inverted  
 AND Logic output 8  
 AND Logic output 8 inverted

