

Dusk sensor	5WG1 258-3AB11
Temperature sensor	5WG1 258-3AB21
Light sensor	5WG1 258-3AB31
Rain sensor heated	5WG1 258-3AB41
Wind sensor n.W heated	5WG1 258-7AB02
Wind sensor n.W heated	5WG1 258-7AB03
Wind sensor unheated	5WG1 258-7AB13
Heating transformer for Wind sensor heated	5WG1 258-8AB01

Product and Applications Description

Dusk sensor

The dusk sensor has the task of converting the current light intensity at dusk into a corresponding electrical signal. This electrical signal is detected by the central controller and compared with the set dusk threshold values. If the value falls below this limit, blinds can be lowered for example or the exterior light can be switched on.

Installation

The dusk sensor is mounted vertically on the mast fixing provided. Due to the angle of illumination, the device should be mounted so that the Siemens label is located at the front of the device. The dusk sensor should be aligned northwards. To ensure the faultless recording of measured values, the sensor must not lie in the shadow of a building or tree during the course of the day.

Temperature sensor

The temperature sensor has the task of converting the current external temperature into a corresponding electrical signal. This electrical signal is detected by the central controller and compared with the set temperature threshold values. The primary task of the temperature sensor is to protect the awning from frost damage.

Installation

The temperature sensor is installed in a location that is protected from direct sunlight. Ideal locations are under the eaves but not in areas where warm air can accumulate.



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Light sensor

The light sensor has the task of converting the current light intensity into a corresponding electrical signal. This electrical signal is detected by the central controller and compared with the set light threshold values. If the light intensity is too high, the awning is lowered, so that the lighting conditions inside the building are improved and the rooms do not start to warm up.

Installation

The light sensor is installed vertically on the mast mounting provided. Due to the angle of illumination, the device should be mounted so that the Siemens label is located at the front of the device. The light sensor must be aligned so that its surface points in the direction of the façade that the sensor is controlling. To guarantee the faultless recording of measured values, the sensor should not lie in the shadow of a building or tree during the course of the day.



Rain sensor

During rainfall, the raindrops create a conductive connection between the electrodes on the surface of the sensor and thus trigger a switching signal which is evaluated by the central controller. An output voltage of approx. 1 V corresponds to "no rain" while 9 V signifies rain.

The surface of the sensor is heated in 2 stages. The first heating level is continually switched on and prevents dew and ice from forming. The second level is switched on for the duration of the rain shower and ensures that the surface is dried quickly.

Cleaning

Due to pollutants in the atmosphere, a layer of dirt gradually forms on the surface of the sensor which can lead to insulation or short circuits. The rainfall can then no longer trigger the correct signal. Maintenance is therefore required on the sensor. The surface must be regularly cleaned with a mild cleaning agent while ensuring that no damage is caused to the sensor.

The connection is carried out on a 5 metre long, 3-core connection cable. The colours of the cores for the measuring signal are white (+15 V), green (sensor signal) and brown (GND). They are positioned according to the wiring plans of the control devices.

Installation

The rain sensor is fixed to the mast using a mounting bracket (e.g. with a clip, max. 22 mm wide, not supplied with the device) or to a wall of the house in a westerly direction. The device should be aligned so that it is continually exposed to rainfall.



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Wind sensor generally 5WG1 258-7ABxx

Function

The wind sensor has the task of converting the current wind speed into a corresponding electrical signal. This signal is detected by the central controller and compared with the set threshold values for the wind. If this value exceeds the limit value, the awning is retracted for example to protect the sun blinds from damage. The wind sensor is equipped with a function monitoring. In case of a fault in one of the wind sensors (bearing damage, interruption in voltage to the heating transformer or the signal line) the fault will be automatically signaled after 60 hours and the safety objects linked to the wind speed will be triggered. The controller must only ever be reset once the fault has been remedied (replacement of the wind sensor or the wing). To reset, switch off the 230V voltage supply to the weather central controller and the heating transformer for at least 10 minutes.

Installation

- The connection cables between the central device and the sensor should not exceed 20 m.
- The wind sensor may not be mounted in the slip-streams of a building (e.g. chimney, lift shaft).
- There are two different fixing options available when installing the wind sensor:
 - The base of the wind sensor is designed for insertion into a mast pipe (inner diameter = 36mm). The mast must be connected to lightning protection or must be connected to earth ground.
 - To mount the wind sensor on a wall a bracket arm is required

Note

Screw of the wind wing (wind sensor heated) is sealed. When unscrewing goes out the IP 65 protection!

especially Wind sensor heated 5WG1 258-7AB02

Function

This wind sensor has a wing-breakage-detection. In case of wing breakage (pendulum movement 5x that of the wing) a 100 km/h signal is issued immediately, which likewise triggers the safety objects linked to the wind speed.

Connection

The connection of the wind sensor is carried out on a 5 meter long, 4-core connection cable. The colours for the measuring signal is *white* (sensor signal) and *brown* (GND). The colours of *green* and *yellow* are intended for the connection of the heating transformer. They are connected according to the wiring plan (in the cover of the heating transformer for wind).

Installation

The Wind sensor heated 5WG1 258-7AB02 (with wing-breakage-detection) must not be installed at a facade, or near thermal lifts. The wind sensor must be installed using a mast, 1.5m beyond the roof.

Note

Wind sensor 5WG1 258-7AB02 need always a heating transformer

especially Wind sensor n.w heated 5WG1 258-7AB03

Connection

The connection of the wind sensor is carried out on a 5 meter long, 4-core connection cable. The colours for the measuring signal is *white* (sensor signal) and *brown* (GND). The colours of *green* and *yellow* are intended for the connection of the heating transformer. They are connected according to the wiring plan (in the cover of the heating transformer for wind).

Note

Wind sensor 5WG1 258-7AB03 need always a heating transformer

especially Wind sensor n.w unheated 5WG1 258-7AB13

Connection

The connection of the wind sensor is carried out on a 5 metre long, 3-core connection cable. The cores for the measuring signal are *white* (sensor signal), *brown* (GND) and *green* (+ 12-24V DC).

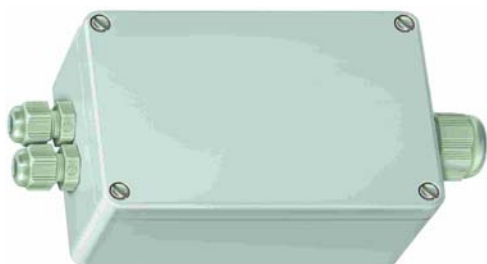
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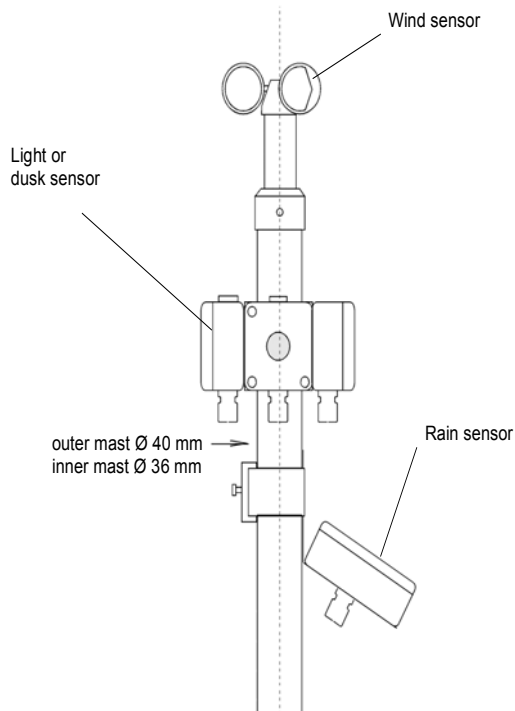
Heating transformer

The heating transformer required for the heated wind sensor should be mounted next to the central controller. The heat transformer needs a 230 V AC supply; slow-blowing fuse 80 mA. Output: 24 V AC;

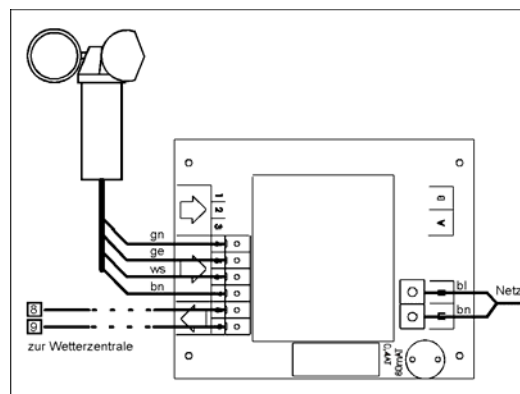
When replacing the fuse, only the indicated fuses should be used.



Example of Operation



Fixing the sensor to the mast



Heating transformer required for the heated wind sensor

⚠ WARNING

- Lightning protection: Please observe general regulation for lightning protection!

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Technical Specifications

	Dusk sensor
Weight approx	95g
Housing	Plastic
Type of protection (in accordance with EN 60529)	IP 65
Measuring range	0 255 lux (linear)
Tolerance	+/- 5 %
Ambient operating range	-30°C - +70°C
Operating voltage	12 – 24V DC
Output voltage	0 – 10V DC
Angle of reception	140° - 160°
Dimensions (WxHxD) approx.	58x64x38mm

	Temperature sensor
Weight approx	95g
Housing	Plastic
Type of protection (in accordance with EN 60529)	IP 65
Measuring range	-20°C - +40°C
Tolerance	+/- 0,5 K
Ambient operating range	-30°C - +70°C
Operating voltage	12 – 24V DC
Output voltage	0 – 10V DC
Angle of reception	-
Dimensions (WxHxD) approx.	58x64x38mm

	Light sensor
Weight approx	95g
Housing	Plastic
Type of protection (in accordance with EN 60529)	IP 65
Measuring range	0 – 40 klux (linear)
Tolerance	+/- 5 %
Ambient operating range	-30 - +70°C
Operating voltage	12 – 24V DC
Output voltage	0 – 10V DC
Angle of reception	140° - 160°
Dimensions (WxHxD) approx.	58x64x38mm

	Rain sensor, heated
Weight approx	255g
Housing	Plastic
Type of protection (in accordance with EN 60529)	IP 65
Measuring range	-
Ambient operating range	-30°C - +50°C
Operating voltage	15V DC / max. 4W
Output voltage	0 – 10V DC
Angle of reception	-
Dimensions (WxHxD) approx.	64x98x38,5mm

	Wind sensor heated
Weight approx	575g
Housing	Aluminium
Type of protection (in accordance with EN 60529)	IP 65
Measuring range	approx 2 – 35m/s
Ambient operating range	-30°C - +70°C
Operating voltage	: 12 – 24 V AC
Output voltage	Optokoppler – Bi-polar
Angle of reception	-
Dimensions (WxHxD) approx.	35/178x150mm

	Wind sensor n.w. heated
Weight approx	575g
Housing	Aluminium
Type of protection (in accordance with EN 60529)	IP 65
Measuring range	approx 2 – 35m/s
Ambient operating range	-30°C - +70°C
Operating voltage	: 12 – 24 V AC
Output voltage	Optokoppler – Bi-polar
Angle of reception	-
Dimensions (WxHxD) approx.	35/178x150mm

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	Wind sensor n.w. unheated
Weight approx	575g
Housing	Aluminium
Type of protection (in accordance with EN 60529)	IP 65
Measuring range	approx 2 – 35m/s
Ambient operating range	-30°C - +70°C
Operating voltage	12 – 24V DC \square
Output voltage	NPN – open Kollektor
Angle of reception	-
Dimensions (WxHxD) approx.	35/178x150mm

Notes

General Notes

- Any faulty devices should be returned to the local Siemens office.
- If you have further questions about the product, please contact our Technical Support:

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 ☐ www.siemens.de/automation/support-request