

<b>Dusk sensor</b>	<b>5WG1 258-3AB11</b>
<b>Temperature sensor</b>	<b>5WG1 258-3AB21</b>
<b>Light sensor</b>	<b>5WG1 258-3AB31</b>
<b>Rain sensor heated</b>	<b>5WG1 258-3AB41</b>
<b>Wind sensor heated</b>	<b>5WG1 258-7AB02</b>
<b>Wind sensor n.w heated</b>	<b>5WG1 258-7AB03</b>
<b>Wind sensor n.w unheated</b>	<b>5WG1 258-7AB13</b>
<b>Heating transformer</b>	<b>5WG1 258-8AB01</b>

As at: April 2006

## Product and functional description

### Dusk sensor 5WG1 258-3AB11

**Function:** 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 mounting provided (5WG1 258-8AB21). 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 5WG1 258-3AB21

**Function:** 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.

### Light sensor 5WG1 258-3AB31

**Function:** 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 (5WG1 258-8AB21). 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 heated 5WG1 258-3AB41

**Function:** 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.

**Connection:** 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.

**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.

**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.

### 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 slipstreams 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

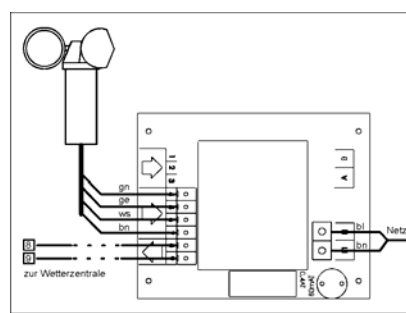
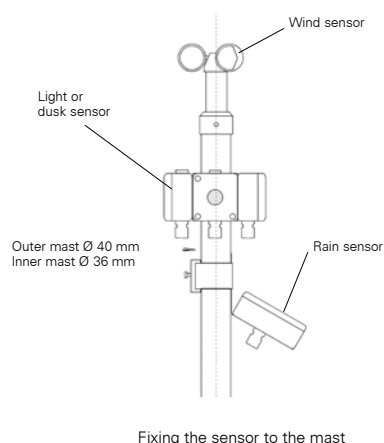
**Connection:** The connection of the wind sensor is carried out on a 5 metre long, 3-core connection cable. The cores for the measuring signal are *white* (sensor signal), *brown* (GND) and *green* (+ 12-24V DC).

### Heating transformer 5WG1 258-8AB01

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

## Technical data

	<b>5WG1 258-3AB11</b> <b>Dusk sensor</b>	<b>5WG1 258-3AB21</b> <b>Temperature sensor</b>	<b>5WG1 258-3AB31</b> <b>Light sensor</b>	<b>5WG1 258-7AB41</b> <b>Rain sensor, heated</b>	<b>5WG1 258-7AB02</b> <b>Wind sensor heated</b>	<b>5WG1 258-7AB03</b> <b>Wind sensor n.w heated</b>	<b>5WG1 258-7AB13</b> <b>Wind sensor n.w unheated</b>
Weight approx.	95g	95g	95g	255g	575g	575g	575g
Housing	Plastic	Plastic	Plastic	Plastic	Aluminium	Aluminium	Aluminium
Type of protection (in accordance with EN 60529)	IP 65	IP 65	IP 65	IP 65	IP 65	IP 65	IP 65
Measuring range	0 – 255 lux (linear)	-20°C - +40°C	0 – 40 klux (linear)	-	approx. 2 – 35 m/s	approx. 2 – 35 m/s	approx. 2 – 35 m/s
Tolerance	+/- 5%	+/- 0,5K	+/- 5%				
Ambient operating range	-30°C - +70°C	-30°C - +70°C	-30°C - +70°C	-30°C - +50°C	-30°C - +70°C	-30°C - +70°C	-30°C - +70°C
Operating voltage	12 – 24V DC	12 – 24V DC	12 – 24V DC	15V DC / max. 4W	15 – 24 V AC	15 – 24 V AC	12 – 24V DC
Output voltage	0 – 10V DC	0 – 10V DC	0 – 10V DC	0 – 10V DC	Optokoppler Bi-polar	Optokoppler Bi-polar	NPN – open Kollektor
Angle of reception	140° - 160°	-	140° - 160°	-	-	-	-
Dimensions (WxHxD) approx.	58x64x38mm	58x64x38mm	58x64x38mm	64x98x38.5mm	Ø35/178x150mm	Ø35/178x150mm	Ø35/178x150mm



Heating transformer required for the wind sensor heated

## WARNING

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

## 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](http://www.siemens.de/automation/support-request)