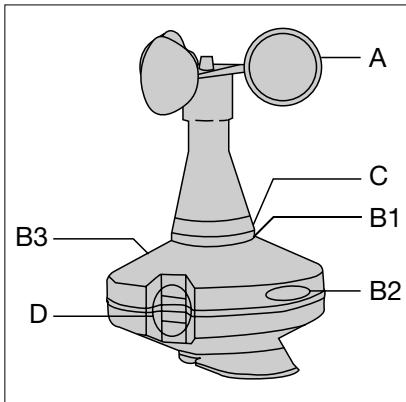


# Combi sensor

1



A: Wind wheel  
B1 ... B3: Brightness sensors west, east, south  
C: Dawn sensor  
D: Rain sensor

2

Ref.-No.

**Combi sensor**  
- with DCF77 receiver  
(No KNX device)

**WS 10 KS**

**WS 10 KSDCF**

3

The combi sensor serves for the measurement of the wind speed, brightness, dawn and rain.

The brightness can be measured for three directions, south, east and west, separately.

The combi sensor will be connected directly to the weather station (2224 REG W) which evaluates the measured data and transmits these as switching or value telegrams to the bus.

The combi sensor WS 10 KSDCF includes an additional DCF77 receiver for the official German time signal.

The combi sensor needs an external 24 V AC supply, e.g. power supply WSSV 10.

4

## Technical data

<b>Supply:</b>	24 V AC $\pm$ 15 %, 50/60 Hz
<b>Max. current consumption:</b>	600 mA
<b>Power consumption:</b>	max. 14.4 W (sensors and heating)
<b>Ambient temperature:</b>	-5°C ... +45°C
<b>Connection cable:</b>	LiCY, 6 x 0.25 mm, 10 m, max. 50 m
<b>Ambient temperature:</b>	-40°C ... +60°C, ice free
<b>Storage/transport temperature:</b>	-40°C ... +60°C
<b>Protection:</b>	IP 55, in standard purpose acc. to DIN EN 60592
<b>Safety class:</b>	III
<b>Dimensions:</b>	130 x 200 mm (without mounting bracket) mounting bracket for wall or mast
<b>Fastening:</b>	

### Sensor signals

<b>Wind speed:</b>	1 ... 40 m/s
<b>Accuracy:</b>	$\leq$ 0.5 m/s, -20°C ... +60°C
<b>Rain:</b>	Yes / No
<b>Sensitivity:</b>	fine drizzle
<b>Switch On delay:</b>	approx. 3 rain particles
<b>Switch Off delay:</b>	approx. 2 minutes

### Brightness

<b>Range:</b>	0 ... 110 KLux
<b>Spectral range:</b>	700 ... 1050 nm
<b>Resolution:</b>	10 bit
<b>Direction:</b>	east, south, west

### Dawn

<b>Range:</b>	0 ... 674 Lux
<b>Resolution:</b>	10 bit

# Analog Sensors for Weather Station

1



## Connections:

brown	operating volt. + 24 V
white	correspond. ground
green	output 0 V / 10 V
yellow	correspond. ground
pink	heating 24 V
grey	heating 24 V

2

Ref.-No.

**WS 10 W**  
(No KNX device)

3

The wind sensor converts the wind speed into electrical signals. These signals are generated by a Reed contact which closes under the influence of magnets.

The generated impulses are transformed into an output voltage proportional to the wind speed.

A PTC-heating element takes care for a trouble free winter operation (only in combination with heating transformer WSSV 10).

4

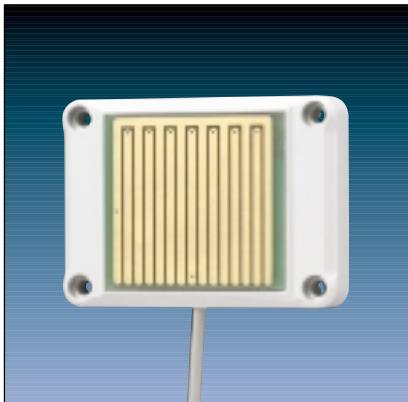
## Technical data

<b>Range:</b>	0,7 ... 40 m/s
<b>Electrical output:</b>	0 ... 10 V at 40 m/s
<b>Supply voltage:</b>	18 ... 32 V DC
<b>Current consumption:</b>	6 ... 12 mA
<b>Contact type:</b>	Reed contact
<b>Heating:</b>	PTC-element (800 C)
<b>Operating voltage heating:</b>	24 V AC/DC
<b>Lead wire:</b>	3 m (LIYY 6 x 0.25 mm <sup>2</sup> )

# Analog Sensors for Weather Station

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1



**Connections:**

brown	operating volt. + 24 V
white	correspond. ground
green	output 0 V / 10 V
yellow	heating 24 V
grey	heating 24 V

2

**Rain sensor  
(No KNX device)**

Ref.-No.

**WS 10 R**

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3

The rain sensor is used for the measuring and evaluation of the rainfall.  
With a meander shaped sensor the conductance of the rain water is evaluated.  
A micro processor controls the heating (only in combination with heating transformer WSSV 10) and offers an output signal of 0 V or 10 V.

4

**Technical data**

**Range of the electrical output:** 0 V dry / 10 V rain (min. 1 k $\Omega$  load)  
**Lead wire:** 3 m (LIYY 5 x 0.25 mm $^2$ )

**Plastic housing with sealed electronics**

1

**Connections:**

1	operating volt. + 24 V
2	correspond. ground
3	output 0 ... 10 V

2

**Brightness sensor**  
**(No KNX device)**

Ref.-No.

**WS 10 H**

3

The brightness sensor is used for the measuring and evaluation of the brightness.

The brightness measured by a photodiode is transmitted to an analog output signal of 0 V – 10 V by the electronics.

4

**Technical data**

**Range:** 0 ... 60.000 Lux, linear  
**Electrical output:** 0 V ... 10 V, short-circuit / proof  
**Protection:** IP 65

**Plastic housing**with PG7 thread + screw and pressure respectively moisture compensation (recommended cable 3 x 0.25 mm<sup>2</sup>)

1

**Connections:**

1	operating volt. + 24 V
2	correspond. ground
3	output 0 ... 10 V

2

**Dawn sensor**  
**(No KNX device)**

Ref.-No.

**WS 10 D**

3

The dawn sensor is used for the measuring and evaluation of the brightness (dawn/dusk).

The brightness measured by a photodiode is transmitted to an analog output signal of 0 V – 10 V by the electronics.

4

**Technical data**

**Range:** 0 ... 255 Lux, linear  
**Electrical output:** 0 V ... 10 V, short-circuit / proof  
**Protection:** IP 65

**Plastic housing**with PG7 thread + screw and pressure respectively moisture compensation (recommended cable 3 x 0,25 mm<sup>2</sup>)

1



**Connections:**

1	operating volt. + 24 V
2	correspond. ground
3	output 0 ... 10 V

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2

Ref.-No.

**Temperature sensor**  
**(No KNX device)**

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**WS 10 T**

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3

The temperature sensor is used for the measuring and evaluation of the temperature.

The temperature measured by a temperature sensor is transmitted to an analog output signal of 0 V – 10 V by the electronics.

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4

**Technical data**

**Range:** -30 °C ... +70 °C, linear  
**Electrical output:** 0 V ... 10 V, short-circuit / proof  
**Protection:** IP 65

**Plastic housing**

with PG7 thread + screw and pressure respectively moisture compensation (recommended cable 3 x 0.25 mm<sup>2</sup>)