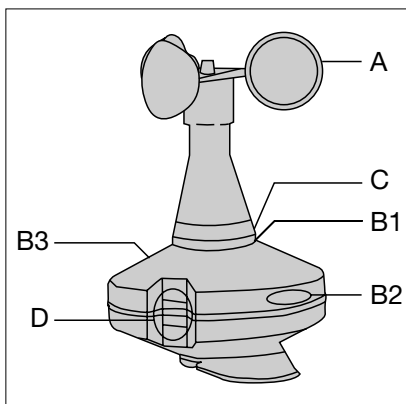


Combi sensor

1



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

2

	Ref.-No.
Combi sensor	WS 10 KS
- with DCF77 receiver	WS 10 KSDCF
(No KNX device)	

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

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

Sensor signals

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

Brightness

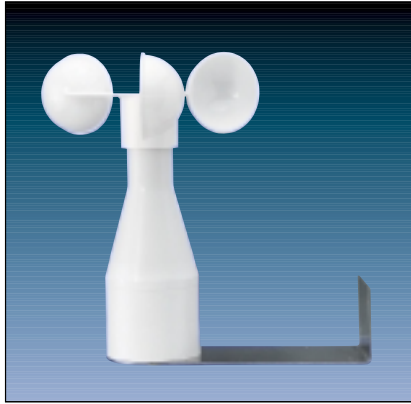
Range:	0 ... 110 KLux
Spectral range:	700 ... 1050 nm
Resolution:	10 bit
Direction:	east, south, west

Dawn

Range:	0 ... 674 Lux
Resolution:	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

Wind sensor
(No KNX device)

Ref.-No.

WS 10 W

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).

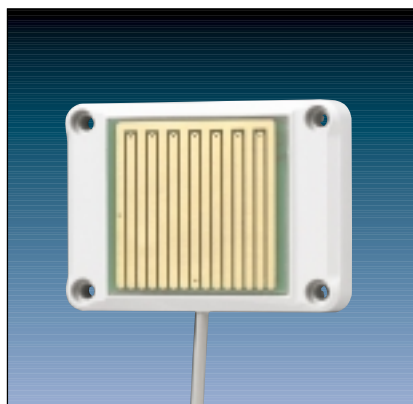
4

Technical data

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

Analog Sensors for Weather Station

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

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 Ω load)

Lead wire:

3 m (LIYY 5 x 0.25 mm²)

Plasting housing with sealed electronics

**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

Plasting housing

with PG7 thread + screw and pressure respectively moisture compensation (recommended cable 3 x 0.25 mm²)

**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

Plasting housing

with PG7 thread + screw and pressure respectively moisture compensation (recommended cable 3 x 0,25 mm²)

1



Connections:

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

2

Temperature sensor
(No KNX device)

Ref.-No.
WS 10 T

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.

4

Technical data

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

Plasting housing

with PG7 thread + screw and pressure respectively moisture compensation (recommended cable 3 x 0.25 mm²)