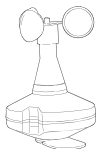


Weather combi-sensor DCF-77

Operating instructions



Art. no. MTN663692

Necessary accessories

- Weather station REG-K/4-gang (Art. no. MTN682991)
- Power supply REG, AC 24 V/1 A (Art. no. MTN663529)

For your safety



DANGER

Risk of fatal injury from electrical current.

The unit may only be installed and connected by skilled electricians. Observe the regulations valid in the country of use, as well as the valid KNX guidelines.

Getting to know the weather combi-sensor

The weather combi-sensor is used for measuring wind speed, precipitation, brightness and twilight. It is possible to measure brightness for the East, South and West compass points separately.

The combi-sensor comprises a DCF77 receiver with which German legal time (CET) can be received and sent to the bus (e.g. to synchronise bus clocks).

The combi-sensor is heated to guarantee fault-free operation in frosty weather.

The combi-sensor requires an external 24 V power supply.

This can additionally also supply or heat other sensors and supply the bus weather station or a connected analogue input module.

The weather combi-sensor is connected directly to a bus weather station (art. no. MTN682991) which then further processes the measured data and sends it to the bus as switching or value telegrams. This enables bus devices (info displays, visualisation software, measured-value displays) to access the control processes, generate signals or control weather-dependent processes. Areas of application include building technology, control technology, greenhouse technology or the further processing of measured data in control and operating units.

Mounting the weather combi-sensor



Note

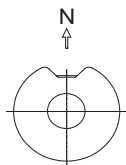
The sensor should not be influenced by obstructions or shadowing effects on any side.



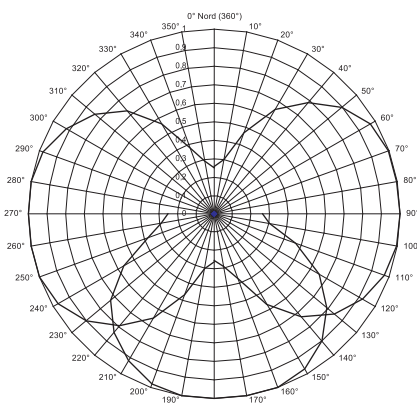
Note

When installing the device in front of a wall, a minimum distance of 0.5 m should be maintained so that the sensors are not influenced and inaccurate measurement values are avoided

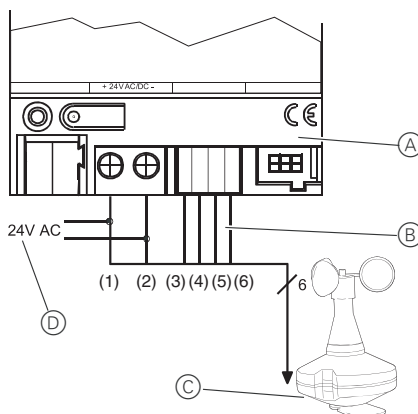
- ① Orient the combi-sensor using a compass such so that the precipitation window faces North.



The allocation of the brightness sensors according to the compass points is thus guaranteed.



- ② Fasten the combi-sensor on a tubular mast (Ø 35 – 50 mm) using the Nirosta mounting bracket supplied.
- ③ Connect the combi-sensor to the bus weather station.

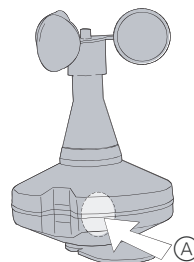


- (A) Weather station REG-K/4-gang
(B) System bus
(C) Weather combi-sensor/DCF-77
(D) Power supply REG, AC 24 V/1 A

- (1) pink: 24 V AC, 600 mA power supply
(2) grey: Earth power supply
(3) green: System voltage 24 V DC, > 15 mA
(4) yellow: data
(5) white: bus clock
(6) brown: System earth

How to put the weather combi-sensor into operation

After connecting and switching on voltage, the combi-sensor must be logged on to the bus weather station.



- (A) Reed contact

- ① Hold the magnets supplied against the integral reed contact (A), so that five short tones are heard.

The combi-sensor now sends data to the weather station. The weather station and combi-sensor then carry out a reset. The combi-sensor signals this with a short tone. The devices are now ready for operation.

Antenna orientation

After registering the combi-sensor on the weather station check the reception of the DCF77 time signal.

- ① Hold the magnets supplied against the integral reed contact (A), so that five short tones are heard. Hold the magnets in position.

The combi-sensor now signals fault-free reception of the time signal with short tones (one every second; a brief pause for each full minute).

If the tones cannot be heard, or can only be heard irregularly, the receiving antenna must be aligned. The antenna can be accessed underneath the combi-sensor. The antenna can be rotated by 45°.



- ② Align the antenna with a small screwdriver so that a signal sounds every second.
- ③ Remove the magnets. The combi-sensor then acknowledges this with a 5 second-long tone.



Note

as part of the maintenance of the combi-sensor make sure that the housing area where the brightness and precipitation sensors are located (side and upper section of the device) is kept as free of dust as possible so that inaccurate measurement values are not recorded. Rain mainly ensures that the housing surfaces remain clean.



Note

In order to guarantee fault-free wind speed measurements, the wind wheel must turn freely. This can be checked and will be apparent at low wind speeds. We recommend you have the wind wheel checked by the manufacturer if it does not turn, or only turns at higher wind speeds.

Technical data

Power supply

Sensor unit (incl. heating):	24 V AC/DC \pm 15%, 50/60 Hz
Power consumption: max.	600 mA
Power consumption: max.	14,4 W (sensors and heating)
Incoming cable:	max. 14,4 W (sensors and heating)
	28 mA max. (14 bus loads)

Connection

Connecting cable:	LiYCY, 6 x 0.25 mm ²
Length:	10 m, 50 m max.

Ambient conditions

Ambient temperature:	-40 °C to +60 °C, non-icing
Storage/transport temperature:	-40 °C to +60 °C
Humidity:	outside the building

Housing

Type of protection:	IP 65 in working position as per DIN EN 60529
Protection class:	III
Dimensions (ØxH):	130 x approx. 130 mm (without mounting bracket)

Type of installation: Mounting bracket on mast or wall

Weight: approx. 330 g (without mounting bracket)

Sensor signals

Wind speed

Measuring range:	1 – 40 m/s
Accuracy:	0.5 m/s

Precipitation

Measuring range:	Precipitation yes / no
Sensitivity:	Fine drizzle
Switch-on delay:	approx. 3 droplets of precipitation
Switch-off delay:	approx. 2 minutes

Brightness

Measuring range:	0 – 110 k lux
Spectral range:	700 – 1050 nm
Resolution:	10 bit
Cardinal points:	East, South, West

Twilight

Measuring range:	0 - 674 lux
Resolution:	10 bit

Schneider Electric Industries SAS

If you have technical questions, please contact the Customer Care Center in your country.

www.schneider-electric.com

This product must be installed, connected and used in compliance with prevailing standards and/or installation regulations. As standards, specifications and designs develop from time to time, always ask for confirmation of the information given in this publication.