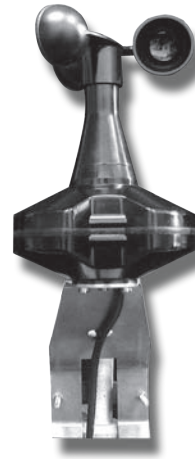


Weather sensor compact

General

The Weather sensor is designed to measure meteorological parameters. Condensation (yes/no), horizontal wind speed and brightness in Eastern, Southern, Western direction. These will be expended as electr. analog current- or voltage signals for further processing via the ISYGLT system by using the weather sensor terminal box or the WSM-module. The measuring values serves e.g. to control backend security devices for marquees, outside blinds and so on. The electronic of this sensor is heated as a protection against condensation, but a heating for the impeller is not present. For that reason the sensor

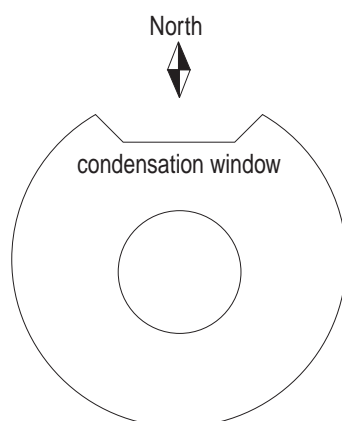


should be used in applications in which the operation won't be impaired by ice and frozen rain. If you have to realize these applications, we advise to use of wind speed sensor compact. By using of mounting adapters (angles, traverse etc.) a possible interference by turbulences must be observed.

Selection of setup site

In general wind measurement instruments should be able to detect the wind conditions of a large area. In order to obtain comparable values when determining the surface wind, measurements should be taken at a height of 10 meters over an even area with no obstacles. An area with no obstacles means that the distance between the wind direction transmitter and an obstacle should be at least 10 times the height of the obstacle. If it is not possible to fulfil this condition then the wind direction transmitter should be set up a height where local obstacles do not influence the

measured values to any significant extent (approx. 6-10 m above the obstacle). The wind direction transmitter should be set up in the centre of flat roofs not on the roof side in order to avoid bias in the direction (privileged directions). So the brightness sensors can acquire the state of the sun unequivocally, the weathersensor must be aligned that the condensation window looks to north by using a compass. In that case the allocation of the brightness sensors is assured by the sky directions.



Mounting

The sensor is designed for mounting on a mast tube ($\varnothing 35 \dots 50$ mm). This way of mounting facilitate the above-mentioned alignment of the sensor without problems. Please take care that the sunshine reaches the sensor all-day without shadow. The mounting near buildings or trees can affect the measuring value in a negative manner. In case of wall mounting please care for a distance to the wall of at least 0,5 m, so that the function of the precipitation-/brightness sensors is not interfered.

Maintenance

After proper mounting the instrument works maintenance free. Heavy pollution can clog up the slit between the rotating and the stationary parts of the wind transmitter. This slit must be kept clean. The cup star must rotate already at a low starting velocity in order to guarantee an accurate wind speed measurement. This can be checked visually with slight wind flow. In case the cup star seems not to start or to start only

with higher wind speeds, please contact the manufacturer for maintenance. Moreover, the area of the brightness- and precipitation sensors (the dark part of the instrument) should possibly free of dust so that the measuring values are not affected in a negative manner. A layer of dirt as a result of atmospheric pollution is usually washed off by the precipitation.

Condensation protection

This device disposes an internal condensation protection. It is used to protect the housing against condensation. It is not able to protect the housing against ice.

Technical data

Type	Weather sensor
Art. Nr.	80086030
Operating voltage	24V DC +/- 25% or 24V AC +/- 15%
Current consumption	≤ 150mA without condensation protection Approximately 600mA with condensation protection
Wind speed	Measuring range 1...40m/s Measurement accuracy ≤ 0,5m/s Electr. output 0...10V (=0...40m/s) Resistance ≥ 10kΩ
Condensation detection	Measuring range condensation yes/no Sensitivity fine scotch mist Electr. output 0V = condensation; 10V = no condensation Switch on delay ca. 3 condensation particles Switch off delay ca. 2min Resistance ≥ 100kΩ
Brightness detection	Measuring range 0...100kLux Spektral range 700...1.050nm Accuracy +/- 10% of the measuring value Electr. output 3x 0...10V (= 0...100kLux), Eastern, Southern and Western direction
Dimensions (HxD)	335x130mm
Weight	1500g
Ambient temperature	-40°C ... +60°C
Storage temperature	-40 ...+70°C
Humidity	0 ...100 % r.F. non condensing
Cable	10m long, LiYCY 12 x 0,14 mm², UV proof, maximum 100m at supply with nom. 24V
Mounting	Niro retainer bracket to mast
EMV immunity	EN 61326-1 with ENV 61000-4-3
CE sign	yes

Terminal assignment

Number	wire colour	description
1	white	operating voltage + at 24V DC or 24V AC
2	brown	operating voltage - at 24V DC or 24V AC
3	green	condensation detector (+)
4	yellow	common GND
5	grey	brightness sensor; West (+)
6	orange	brightness sensor; Süd (+)
7	blue	brightness sensor; Ost (+)
8	red	wind speed (+)
9	black	reserve
10	mauve	reserve
11	white/brown	reserve (twilight value)
12	black/brown	common analogue GND
13	white/yellow	reserve (TXD-)
14	white/orange	reserve (TXD+)
15	white/red	reserve (RXD-)
16	white/black	reserve (RXD+)
	green/yellow	grounding

Wiring diagram

