

# LCN-WIH

## Weather Station with DIN Rail Indoor Unit

The weather station consists of an outdoor unit with build-in wind-, rain-, light-, temperature- and GPS-sensor and an indoor interface unit with a microcomputer and power supply in a 2-TE case. The outdoor unit is mounted either on the roof or on a wall (south side) and is connected with a 4 wire low voltage-cable with the interface unit. The indoor unit itself connects to the LCN bus via the I-Port of a LCN-SHS, -SH, -HU, -LD or -UPP, -UPS from serial number 160101 (since Jan 2012).

Due to the GPS-receiver LCN-WIH transfers the precise time and date into the LCN bus. The interface unit supports all time zones as well as local daylight saving times - worldwide.

### Description:

LCN-WIH is a complete weather station for controlling all weather-depending units and processes in a building.

The parameters of all functions are being set in the LCN module connected.

### Hardware equipment::

Weather station (outdoor unit)

Indoor unit (2-TE),

Multi-function mounting bracket (for wall- or pole-mounting)

### Note:

#### Attention: Connect without power!

A parallel operation with a LCN-IV (working as pulse counter / counting input) or IOS-periphery is not possible.

The weather station is wired with a common telephone cable (0,8mmØ). The maximum length of the cable is 50m.

Detailed information is included in the installation manual.



### Functional Specifications:

#### Outdoor unit

##### Wind sensor

The wind sensor works without moving parts: A measurement resistor is heated electrically. The wind blowing by cools the resistor. The wind speed is calculated with help of the temperature loss and written into the T-variable.

##### Rain detector

The resistance between the electrodes on the lid of the rain detector is reduced by rain drops. The sensor activates the binary input 8 of the LCN module. When the sensor surface dries again, it takes approx. five minutes until the sensor reports "dry".

##### Light sensor

The sensor value is transferred to the R2-variable. The light can be handled for example with threshold values. The sensor is embedded into the lid of the case. The measured light values are handled logarithmically in order to allow a large range of values.

##### Temperature sensor

The sensor value is transferred into the R1-variable.

##### GPS-receiver

The embedded GPS-receiver provides the current time at nuclear clock precision. The interface unit calculates the local time considering possible daylight saving time and sends it to the LCN-bus.

#### Indoor unit

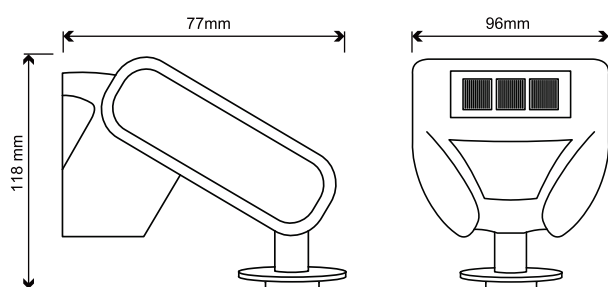
The interface unit converts the data of the weather station and transfers it to its LCN module via the I-Port. It supplies the outdoor unit and needs 110-230V line voltage.

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## Weather Station with DIN Rail Indoor Unit

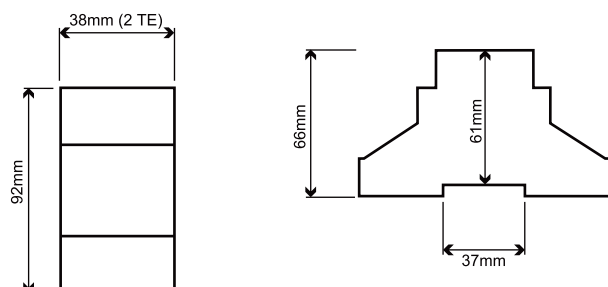
### Dimensions:

**Outdoor Unit (L x W x H):** 96mm x 77mm x 118mm



**Assembly:** screw mounting

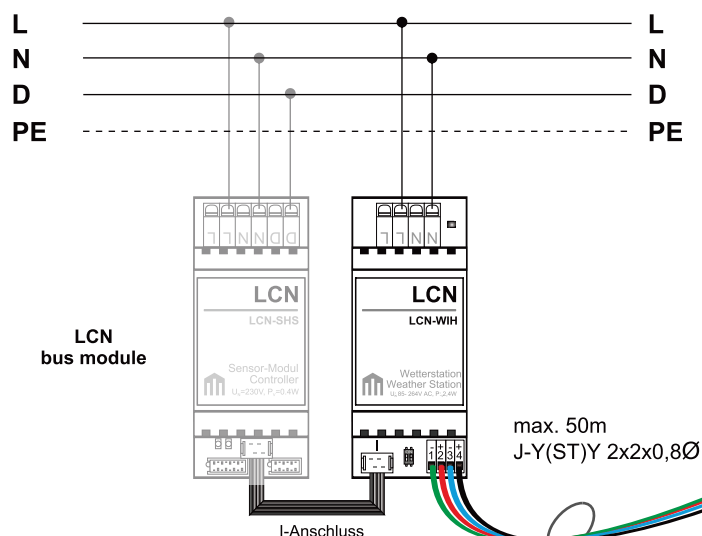
**Indoor unit (W x L x H):** 38mm x 92mm x 66mm



**Space requirement:** 2TE

**Assembly:** REG on 35 mm mounting rail (DIN 50022)

### Circuit Diagram



### Technical Data:

#### Connection:

**Wind sensor**  
Record range: 0...60m/s  
Resolution: ±25% of measurement value at inflow angle of 45°  
Accuracy:

**Rain detector**  
Power consumption: 1,2W (heating)

**Light sensor**  
Measurement range: 0-100.000Lx  
Resolution: 2lx at 0...1046lx  
423lx at 1047...100.000lx  
Accuracy: ±35%

**Temperature sensor**  
Measurement range: -30°C...+50°C  
Resolution: 0,1°C  
Accuracy: max. ±1,5°C

**General Data:**  
Operating temperature: -30°C...+50°C  
Environmental conditions: Stationary installation according to VDE632, VDE637  
Safety classification: IP 44  
Case: plastics  
Colours: white / translucent

### Technical Data Evaluation Unit

**Connection:**  
Power supply: 85-260V AC, 50/60Hz  
Power consumption: 2,4W  
Conductor type (supply): screwless, massive max. 2,5mm<sup>2</sup> or litz wire with wire end ferrules max. 1,5mm<sup>2</sup>, loop through power max. 16A

Conductor type (sensor): screwless, massive or litz wire max. 0,2-1,5mm<sup>2</sup>/0,5-1,38mmØ

LCN-connection: I-Port 300mm

**General Data:**  
Operating temperature: -10°C...+ 40°C  
Environmental conditions: Stationary installation according to VDE632, VDE637  
Safety classification: IP 20