

Weather Station

Environment transmitter



DIGIcontrol-WT11, (-WT7, -WT4)

- Accurate high tech weather station
- 4(5) brightness sensors 0.1 to 150.000lux
- Ultrasonic wind sensor for speed & direction
- Precipitation measurement rainfall & intensity
- Barometric pressure sensor 600 to 1100hPa
- Humidity sensor 0-100%rH
- Temperature sensor $-52 - +60^{\circ}\text{C} \pm 0,3^{\circ}$
- GPS receiver for sun position & time sync
- SD-card slot for long term recording, no moving parts
- IBB interface

DIGIcontrol-WT11

Incorporating the latest sensor technology DIGIcontrol-WT11 Weather Transmitter is a high tech product that can measure wind speed and direction, liquid precipitation, barometric pressure, temperature, relative humidity and brightness from four directions and optional GPS time & position – all in one device.

It is specially designed to provide comprehensive environmental information for ATS lighting and building control systems. As the DIGIcontrol-WT11 has no moving parts, it is durable and has very long maintenance intervals.

Both wind speed and direction are measured using an advanced ultrasonic sensor system. An array of three equally spaced ultrasonic transducers are used to determine accurate horizontal wind speed (0-60m/s) and direction (0-360°) without blind angles or corrupted readings.

Precipitation measurement is based on a special acoustic technology, which detects the impact of individual raindrops. The signals exerting from the impacts are proportional to the volume of the drops. The sensor has no moving parts and therefore it requires practically no maintenance. The sensor gives detailed information about precipitation and measures accumulated rainfall, rain intensity and duration – all in real time.

Barometric pressure, temperature and humidity measurements are combined in an advanced PTU module utilizing capacitive measurement method for each parameter. The replaceable sensors are highly accurate and offers excellent long term stability in a wide range of environments and negligible hysteresis.

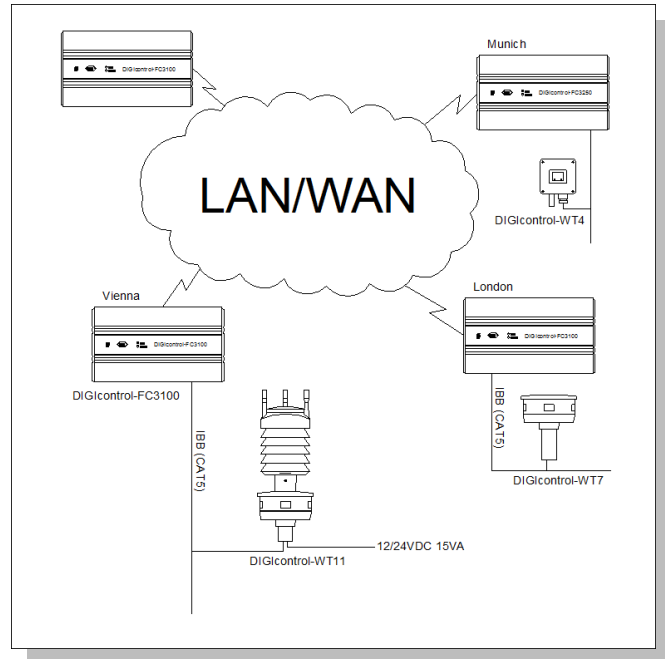
Four integral light sensors point North, South, East and West. Light levels from 0,1 to 150.000 lux are converted into values from 0 - 100%. Values from 0-10% are reserved for very low illumination as needed for street and garden light control.

The integrated GPS module allows time sync messages for the DIGIcontrol-3000 system and calculation of the sun's elevation und azimuth angle, to allow precise blind control.

A heating circuit ensures correct wind and rain measurement even for temperatures below zero and also during snowfall.

Up to 10,000 measurements are stored on the SD-card and automatically transferred to the host computer as soon as normal conditions return.

Environment transmitter



Technical Data:

ARM4 microprocessor with GPS and CMOS clock

SD-Card slot for offline data collection

1 ATS-IBB network interface (drain 40mA)

Supply voltage: 10-30 VDC / 50mA

Dimensions (overall): Ø127 x H 280 mm

Temperature range: -52° to 60°C

4 light sensors: 0.1 to 150,000 lux / 1-100%

GPS based calculation of sun elevation and azimuth angle

GPS based time sync signal

Air temperature: -52,0...+60,0°C ±0.3°

Relative humidity: 0-90% ±3% 90-100% ±5% Resolution 0,1%

Barometric Pressure:

Range 600...1100hPa ±0.5hPa at 0...30°C

Resolution 0,1hPa

Wind speed:

Range 0...60m/s ±0.3 or ±2%, Resolution 0,1m/s

Wind direction: Azimuth 0...360° ±2°, Resolution 1°

Rain fall:

Resolution 0,01mm 5% (doesn't include wind induced errors)

Rain intensity:

Range 0...200mm/h, Resolution 0,1mm

Hail:

Resolution 0,1 hits/cm²

Duration hailstone detected/10s

Intension hits/cm²h

Heating for wind and rain sensor

12VDC ±20% 1.1A max or 24VDC ±20% 0.6A

Variants:

DIGIcontrol-WT7

As DIGIcontrol-WT11 with an additional sky light sensor but without wind, rain and pressure sensor.

DIGIcontrol-WT4

Only dual brightness sensor, temperature and humidity

Information contained in this document is correct at the time of publication (150528) is subject to change without notice.

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