

WiSensys, the Wireless Sensing System

Wisensys is a wireless easy to install, ready to use sensing system with data logging capability. Wisensys is ESTEDE's product family for accurately measuring, securely transmitting and logging the output signals from a variety of sensors. The wireless sensing system consists of sensor units and a base station. The Sensors measure input values like temperature, humidity and process signals, and transmit the measured data over a secure wireless link to the base station. Measurement and transmit intervals can be set by means of the Sensorgraph software or Websense software running on any Desktop computer or notebook with Microsoft Windows XP or higher.

The sensor can locally store up to 10.000 measurements in non-volatile memory. This storage is used when a connection to the base station is not available to ensure that measurements are not lost. Whenever the sensor and base station are in range again, the data is transmitted to the base station. Overwrites oldest data when full. Trip values can be set in each sensor for monitoring alarm conditions. The sensor is powered by a 3.6 V battery with an average life span of 3 years.

The Wisensys base station receives sensing data from all sensors, and automatically transfers this data to the sensorgraph software on a computer, or to ESTEDE Websense server through an GPRS or internet connection. The base station can optionally store measurements on a SD memory card. This storage can be used when a computer or internet connection is not available. The Standard base station has an RS232 interface,

but can upgraded with optional I/O boards like a GPRS or Ethernet module. A Switched relay can be made available for connecting an external alarm indicator to the base station.

During installation the Sensorgraph software is used to set up the system. Friendly names can be assigned to each sensor and base station and intervals for transmission an measurement can be set. The Sensorgraph software is also used to configure alarm thresholds en send an SMS or Email whenever a trip value is reached.




The coverage of the system is determined by the distance between the Wisensys base station and the sensors. If the coverage area of one base station is not enough two additional base station can be added to increase the coverage area. All base stations can be networked to enable data to be collected on a single location.

Features:

- Measuring quantities
- Generating alarms
- Take action in case of an alarm
- Prevent unsafe situations
- Prevent product loss due to malfunctions
- Monitor process trends
- Store data for future quality auditing
- Low installation costs
- Adding / removing sensors during operation
- Temporary placement for measurements
- No data loss through data storage in sensor and Base
- Long range through advanced radio / antenna design
- Can be used without computer connected
- Storage of data inside the base station for later retrieval
- Multiple base stations
- Use of external antenna



Wisensys Base station

Specificatie	Type Sensor					
						
	WS-DLTi	WS-DLTa	WS-DLTc	WS-DLXa	WS-DLXv	WS-DLXc
function	Sensor	Sensor	Sensor	Sensor	Sensor	Sensor
Type	Temperature	Temperature	Temperature and humidity	Process	Process	Switch
Sensor	Internal	External	Internal	External	External	External
Measurement range	-20°C to 80°C	-50°C to 200°C	-20° .. 80°Celsius 10% .. 95% RH Non-condensing	0 – 25 mA	0 – 30 V	Open / close
External sensor		Pt10, Pt1000		Standard	Standard	Switch
Measurement Accuracy	± 0.5°C from -10°C en +80°C	± 0.1°C	± 0.5° C @ 25°C ± 1°C 0 to 40°C ± 2°C -20 to 80°C ± 3.5% 20% to 80%	± 0.25% of range	± 0.25% of range	
Resolution	0.2°Celsius	0.1°Celsius	0.1°C , 0.1% RH	25 µA	30 mV	
					Industrial housing for WS-DLXv en WS-DLXa with external power	