BeanAir
WIRELESS IOT SENSORS

IoT

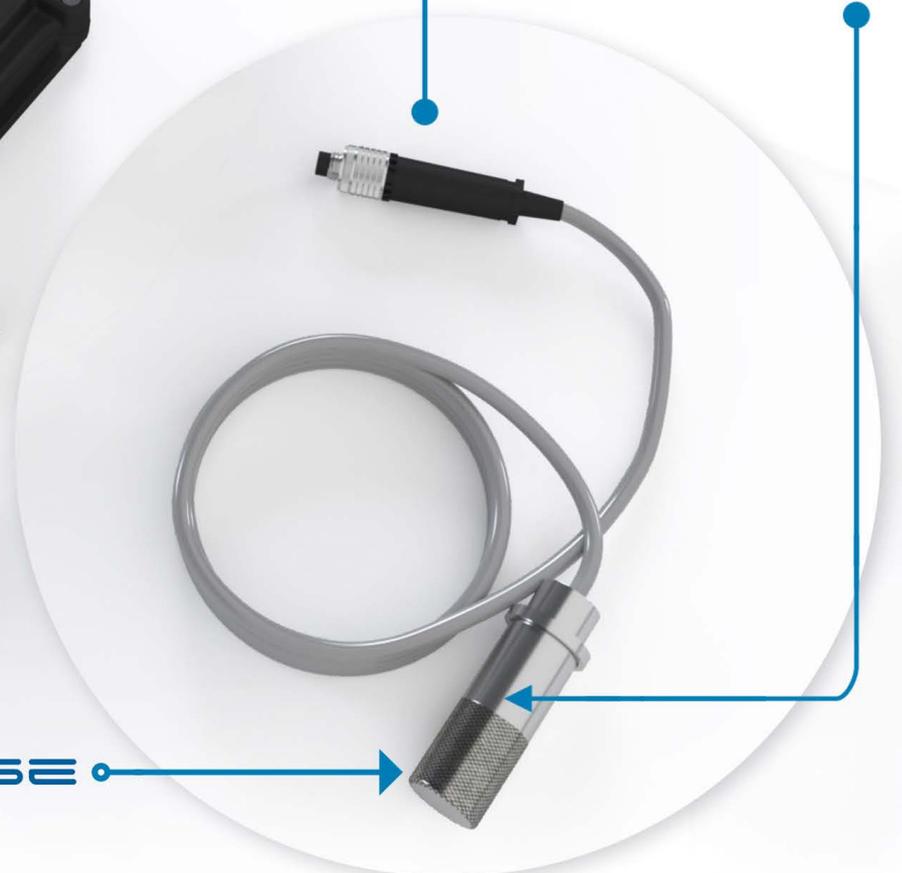CE FC **2year** Warranty MADE IN GERMANY

DRAWING
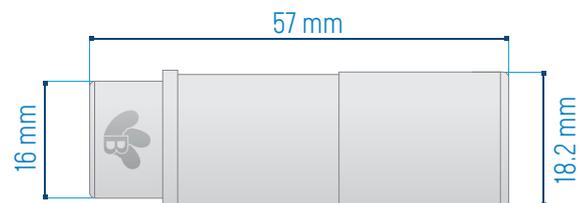
STEP FILE

Compatible with Satevis® Alpha-INC

Temperature & Humidity Sensors

EASY SENSE
FUNCTION

OVERVIEW

The EasySense T/H Sensors EASY-SENSE-TH is dedicated to Temperature and Air Humidity Measurement for dusty environment.

It comes with digital I2C output, and ESD +15kV protection.

57 mm

16 mm

18.2 mm

APPLICATIONS

Agriculture & Greenhouse

Environmental Monitoring

Medical lab & clean room

Cold chain traceability

Heating, ventilation, and air conditioning

MAIN FEATURES

High Precision Temperature and Humidity sensor with Easy-Sense Function
• Fully calibrated, linearized, and temperature compensated digital output:
  - Temperature measuring range: -40°C to +85°C , typical accuracy ±0.1 °C
  - Humidity measuring range: 0 to 100%, Typical accuracy of ±1.5 %RH
• Easy-Sense function with automatic reading of sensor calibration settings, alarms thresholds and sensor type,
• Very fast start-up and measurement time
• Sensor Housing : Waterproof (IP66) stainless steel with 30-45µm of pore size, Diameter: 18 mm,
  Length: 57 mm
• Mounting options: Screw mounting or Magnetic Mounting

TECHNICAL SPECIFICATIONS

PRODUCT REFERENCE
EASY-SENSE-TH-CL-MSW
CL : Cable length in cm (minimum cable length 20 cm, maximum cable length 150 cm)
MNT: Mounting option -M: for Magnetic Mounting - SW: for screw Mounting Leave it blank for no mounting option
Example 1: EASY-SENSE-TH-20 Easy Sense Temperature Humidity sensor with 20 cm cable length Example 2: EASY-SENSE-TH-150-M Easy Sense Temperature Humidity sensor with150 cm cable length, Magnetic Mounting Option Example 3: EASY-SENSE-TH-150-SW Easy Sense Temperature Humidity sensor with150 cm cable length, screw Mounting Option

TEMPERATURE SENSOR SPECIFICATIONS	
Temperature Sensor technology	Thermistor
Measurement range	-40°C to +85°C
Accuracy Tolreance	±0.1 °C , for temperature range +20°C to +60°C See Figure 3 more information
Repeatability	±0.04 °C
Sensor resolution	0.01 °C
Long term drif	< 0.03 °C / year
Response time	< 20s with sensor cap

HUMIDITY SENSOR SPECIFICATIONS

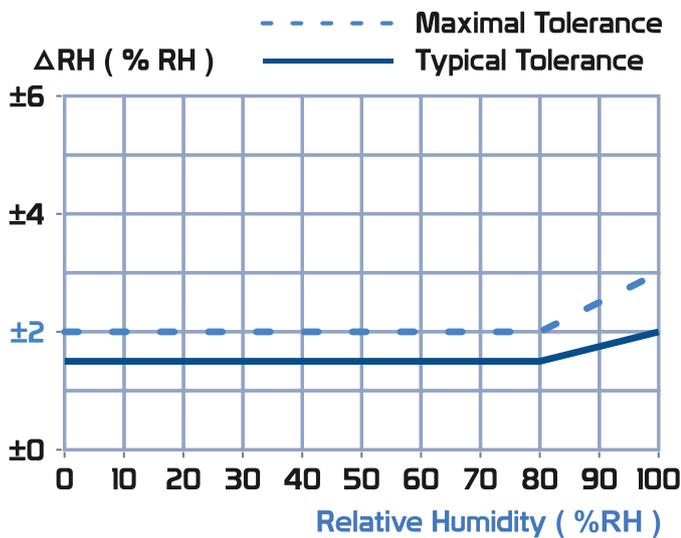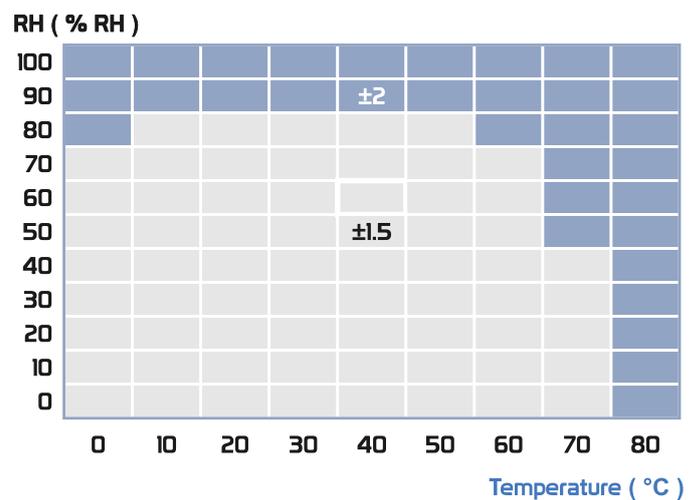|	
Humidity Sensor technology	Capacitive polymer humidity sensor
Measurement range	0 to 100 %RH
Accuracy Tolerance	±1.5 %RH for Humidity range 0 to 90 %RH and temperature range +10°C to +60°C See Figures 1 and 2 for more information
Repeatability	±0.08 %RH
Sensor resolution	0.01% RH
Hysteresis (10 %RH to 70 %RH)	< ±0.8% RH
Response time	<20s with sensor housing
Long term drif	0.25 % RH / year

Figure 1 : Tolerance of %RH over Temperature

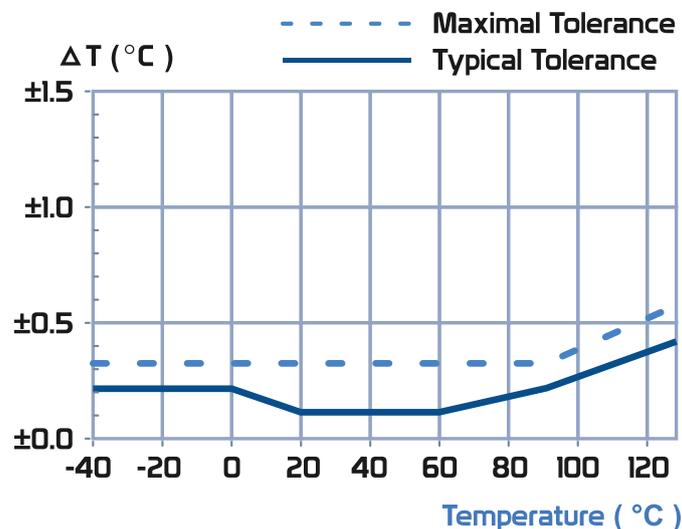Figure 2 : Typical Accuracy Tolerance of %RH over Temperature

Figure 3 : Temperature Tolerance accuracy

TECHNICAL SPECIFICATIONS

SENSOR HOUSING	
Dimensions	Diameter 18 mm, Length: 57 mm
Sensor housing	Waterproof (IP66) stainless steel with 30-45µm of pore size
Pressure Resistant	Up to 16 bar
Operating Temperature	-40°C to +85°C
Weight	40g
Dew formation resistant	Yes

EASY-SENSE FUNCTION	
Internal Flash Memory	Automatic Readout of Sensor Settings: • Sensor Type. • Sensor Calibration settings and date of calibration. • Alarms Thresholds Values
Calibration	Calibration performed at Beanair Lab.
Alarms Management	Three level of Alarms: Critical/Severe/Minor With High/low and Mixed Alarms Thresholds

ENVIRONMENTAL AND MECHANICAL	
Operating Temperature	-40°C to +75°C
Norms	FCC & CE compliant ROHS - Directive 2002/95/EC

POWER SUPPLY	
Power Supply Volatge	2.4V to 5.5V
Supply Current	1.5 mA during measurement 45 uA during idle state
ESD Protection	+15kV
Power Up time	1ms max

The hysteresis value is the difference between an RH measurement in a rising and falling RH environment, at a specific RH point

EASY-SENSE | Temp. and Humidity Sensors

WHAT IS EASY-SENSE FUNCTION ?

How often have you experienced false alarms due to incorrect sensor configuration or calibration?

Easy-Sense helps address this issue by automatically storing and displaying the sensor settings:
• Sensor Type and Measurement Range.
• Sensor Calibration settings and date of calibration.
• Alarms Thresholds Values (Three levels: Critical, Severe, Minor).

Enhanced Traceability

The sensor's calibration settings are securely stored in its internal Flash memory, allowing for easy re-calibration using the Satevis® Link software.

Simplified Maintenance

Users can keep the temperature & Humidity sensor on-site and easily swap the Satevis® Alpha-Inc in case of sensor redeployment. There's no need to adjust the displacement sensor settings, such as alarm thresholds or zero-offset values.
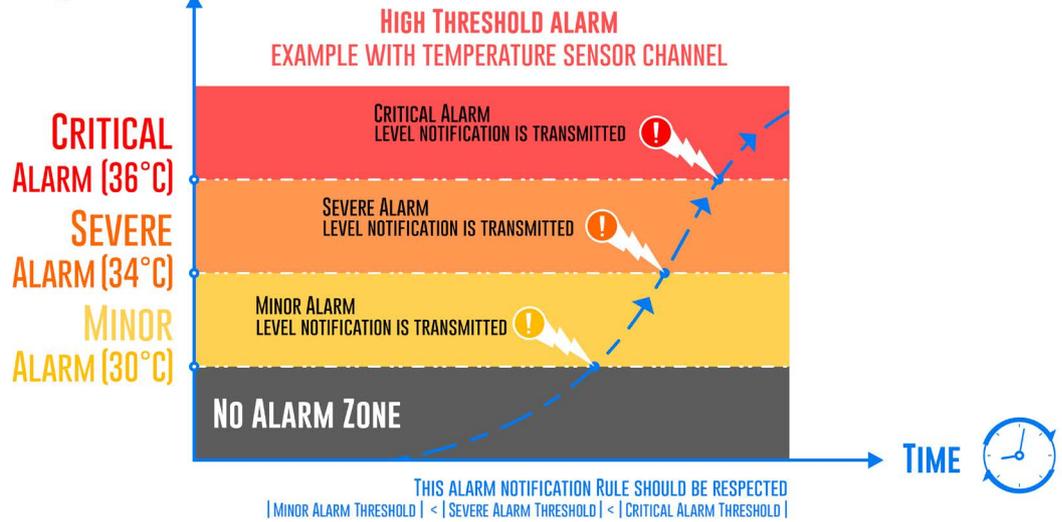
ADVANCED ALARM MANAGEMENT

Three types of alarm thresholds are available:
• **Low Alarm Threshold:** Triggers an alarm when a data measurement falls below the set threshold.
• **High Alarm Threshold:** Triggers an alarm when a data measurement rises above the set threshold.
• **Mixed Alarm Threshold:** Triggers an alarm when a data measurement changes in two opposite directions.
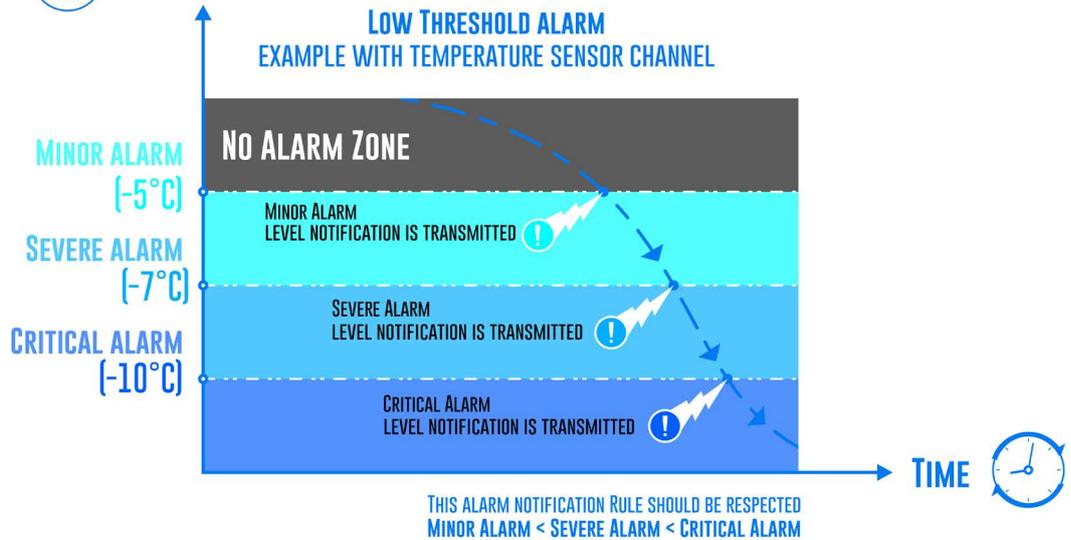
Additionally, three alarm severity levels are available, allowing users to direct notifications to different emails or activate a dry contact:
• **Minor Level:** The lowest level of alarm.
• **Severe Level:** Medium level of alarm notification.
• **Critical Level:** Highest level of alarm, requiring field intervention

Temperature

High Threshold alarm
example with temperature sensor channel

Critical Alarm (36°C)
Severe Alarm (34°C)
Minor Alarm (30°C)

Critical Alarm
level notification is transmitted

Severe Alarm
level notification is transmitted

Minor Alarm
level notification is transmitted

No Alarm Zone

Time

This alarm notification Rule should be respected
| Minor Alarm Threshold | < | Severe Alarm Threshold | < | Critical Alarm Threshold |

Temperature

Low Threshold alarm
example with temperature sensor channel

No Alarm Zone

Minor alarm (-5°C)
Severe alarm (-7°C)
Critical alarm (-10°C)

Minor Alarm
level notification is transmitted

Severe Alarm
level notification is transmitted

Critical Alarm
level notification is transmitted

Time

This alarm notification Rule should be respected
Minor Alarm < Severe Alarm < Critical Alarm

MOUNTING OPTIONS

Screw Mounting Option

Magnetic Mounting Option

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