

Climate sensors

Ensure high hatchability rates with accurate and reliable monitoring

CLIMATE



Accurate Climate Sensors

Optimized Environmental Control: Your Path to Superior Hatchery Outcomes

Ensuring optimal conditions for hatchery operations is essential for achieving high hatchability rates and healthy chick development. The success of hatcheries hinges on maintaining a stable environment that supports the complex process of embryo growth and maturation.

Effective hatchery management involves precise and continuous monitoring of critical environmental factors, including temperature, humidity, and CO2 levels, to create a controlled setting conducive to optimal development.

Temperature plays a significant role in embryonic development, influencing metabolic rates and ensuring that embryos mature uniformly. Even slight variations in temperature can lead to developmental issues, making accurate monitoring indispensable for successful hatch rates. Similarly, humidity is vital to prevent eggs from becoming too dry or overly saturated, both of which can result in compromised chick health or hatching complications.

CO2 levels must also be carefully regulated, as excessive concentrations can limit oxygen exchange, leading to impaired embryo growth and increased risk of developmental problems. By integrating high-precision sensors and reliable monitoring equipment, hatchery operators can ensure that all environmental factors are balanced, supporting robust embryo development and improving overall hatchability rates.

A well-monitored and controlled environment provides the foundation for healthy, viable chicks, ultimately leading to more successful hatchery operations and higher productivity.

dol-sensors manufactures both single-function and multifunction climate sensors for monitoring:

- Temperature
- Humidity
- CO2

All sensors from dol-sensors are accurate and robust. They are well-tested and have long service lives as they are originally designed for the harsh environment in livestock houses and greenhouses, where high humidity, high levels of ammonia, as well as temperature swings are constantly affecting the sensors.



DOL 114 Humidity and Temperature Sensor



Humidity and Temperature



DOL 104 Humidity Sensor

The DOL 104 is a high-precision sensor for measuring relative humidity designed for use in harsh environments. The sensor has an analogue output with a very low output resistance and full protection against short circuits and wiring failures.

The special sensor element and the built-in filter enable application in environments like greenhouses with high humidity.

A microprocessor controls the sensor and has a two-colour light emitting diode (LED) for communication of operation status and error diagnostics.

A protective cap is available, eliminating the need to remove the sensor when cleaning the greenhouse. DOL 104 is available in various output versions, such as 0-5V, 0-10V, and 4-20mA.

[Read more about DOL 104 Humidity Sensor here.](#)



DOL 114 Humidity and Temperature Sensor (2-in-1 Sensor)

The DOL 114 is a high-precision **2-in-1 sensor** for measuring both relative humidity and temperature simultaneously. Combined with a climate control system, DOL 114 help keeping a more consistant environment with no extreme temperature swings or too high humidity levels.

Due to its robust design, the sensor is well suited for a number of industrial applications where temperature swings and high humidity are present factors.

The sensor has the same excellent properties as the DOL 104 digital humidity sensor. Like DOL 104, the DOL 114 sensor is available in various output versions, such as 0-5V, 0-10V, and 4-20mA.

[Read more about DOL 114 Humidity and Temperature Sensor here.](#)



Temperature



DOL 112 Temperature Sensor

DOL 112 is a simple cost-effective temperature sensor that comes in three different versions; PT100, PT1000 and NTC.

The sensor is robust standard temperature sensor with the high quality known from other dol-sensors' sensor solutions. Thus, DOL 112 is well suited for use in environments where a sturdy design is required.

The temperature sensor can operate in temperatures between -40 and +100 °C and can be used for measuring both inside and outside temperatures.

DOL 112 is IP 68 protected, which means that it is dust tight and has total protection against water ingress, up to and including complete submersion below one meter and for more than 30 minutes.

In accuracy, the DOL 112 PT100 and PT1000 stands out with a precision of ± 0.5 °C. The NTC comes in a 1K version with an accuracy of 3% at 25°C and a 10K version with an accuracy of 1% at 25°C.

[Read more about DOL 112 Temperature Sensor here.](#)



DOL 115 Temperature Sensor

DOL 115 is a precision sensor for temperature measurement which comes with a 2-meter cable. It is intended for use in livestock houses but is also well suited for a number of industrial applications.

The sensor features two analogue outputs with very low output resistances and full protection against short-circuits and wiring failures.

DOL 115 temperature sensor is microprocessor-controlled and has a two-color light emitting diode (LED) to communicate the operation status and the error diagnostic.

[Read more about DOL 115 Temperature Sensor here.](#)



Humidity, Temperature, and CO₂

DOL 139 Humidity, Temperature, and CO₂ Sensor (3-in-1 Sensor)

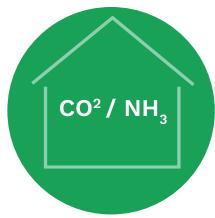
DOL 139 is a smart **3-in-1 sensor** combining measurement of both relative humidity, temperature, and carbon dioxide (CO₂). Since DOL 139 measures 3 important elements of the environment it makes for an easier installation, less maintenance and a more cost-effective solution.

No need for multiple sensors when you can use a single sensor to measure 3 elements!

DOL 139 is protected by a sturdy casing and behind a carefully selected filter. It is supplied with a protection cap for protection of the sensor during washing and disinfection, even during high-pressure cleaning.

[Read more about DOL 139 Humidity, Temperature, and CO₂ Sensor here.](#)





CO₂



DOL 119 CO₂ Sensor

DOL 119 is a new generation innovative CO₂ sensor with an IP67 protection rating. It withstands a harsh environment and doesn't have to be taken down during high pressure cleaning if protection cap is applied.

Exposure of plants to lower levels of CO₂ even for a short period can reduce rate of photosynthesis and plant growth. Thus, monitoring and collecting data about the CO₂ level is vital to the plant growth.

[Read more about DOL 119 CO₂ Sensor here.](#)

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