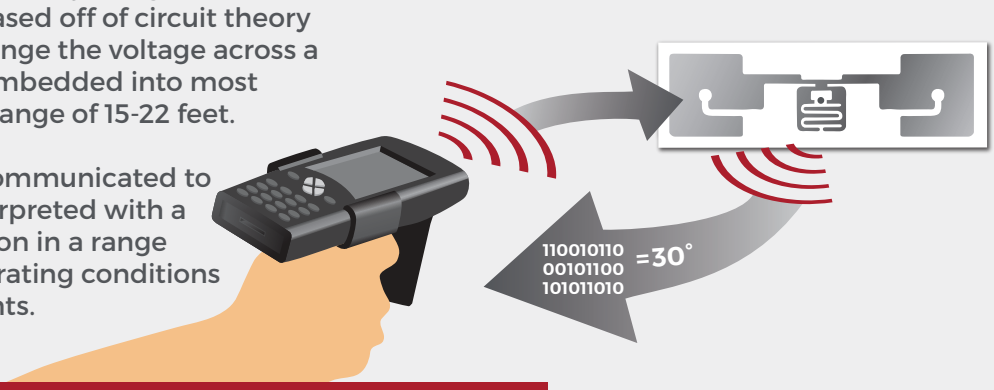
PASSIVE RFID TEMPERATURE SENSING

WHAT ARE PASSIVE TEMPERATURE SENSORS?

Passive temperature sensors use a specially designed microchip to identify temperature based off of circuit theory and the ability of temperature to change the voltage across a diode. These tags can be affixed or embedded into most materials and have an average read range of 15-22 feet.

Impedance changes are wirelessly communicated to standard EPC Gen 2 readers and interpreted with a software application. The tags function in a range between 40˚C to +85˚C, covering operating conditions for most equipment and environments.



Investing in passive RFID sensor tags creates powerful new efficiency and competitive advantage at a significantly lower cost of ownership.

ADVANTAGES OF PASSIVE TEMPERATURE SENSORS

- Smaller, thinner, more flexible than other current temperature sensing tags
- More economical than current active and semi passive moisture sensing tags
- Transmit data with error correction codes helping ensure accurate data
- Sensor tethering and ability to operate in wider temperature extremes
- Data can be logged and alarms set when temperatures fall outside a specified range
- Viable cost-effective option for high-volume or disposable sensing applications

PASSIVE SENSOR TAG
A00001

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Passive Sensor Tag — A00001

COMMON APPLICATIONS

Passive temperature sensors reduce the hurdles of implementing a sensor application by offering an affordable, disposable sensor option that lowers the initial cost barriers that are inherent with battery powered sensors. Passive sensors also eliminate the long-term labor costs of battery powered sensors that need replacement and maintenance.

INDUSTRIES:

Industrial and Manufacturing: Temperature monitoring protects motors, bearings, and other parts embedded in industrial equipment or exposed to variable electrical systems.

Healthcare: A wearable, disposable sensor tag can travel with the patient, monitoring and recording temperature across a campus.

Warehousing and Data Centers: Passive RFID supports monitoring environmental and bulk material temperatures, as well as data center chiller and cooling monitoring.

Cold Chain Applications: RFID temperature tags can live in trucks, refrigerators or thermal bags, supporting long term monitoring of food and medicine.

Agriculture: Monitor temperature in greenhouses and other growing environments, and monitor livestock temperature to manage breeding stock and separate sick animals from the herd.

For more information about passive temperature sensors and how they could work for you, contact one of our Metalcraft ID specialists.

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