

## Verdict® 2K: T (the multipurpose datalogger)

The Verdict® 2K: T datalogger is a rugged, self-sufficient system that measures temperature and records the result in a protected memory section. The recording is done at a user-defined rate, both as a direct storage of temperature values as well as in the form of a histogram. Up to 2048 temperature values taken at equidistant intervals ranging from 1 to 255 minutes can be stored. The histogram provides 63 data bins with a resolution of 2.0°C. If the temperature leaves a user-programmable range, the Verdict® 2K: T will also record when this happened, for how long the temperature stayed outside the permitted range, and if the temperature was too high or too low. An additional 512 bytes of read/write NV memory allow storing information pertaining to the object to which the Verdict 2K: T is associated. Data is transferred serially via the 1-Wire® protocol, which requires only a single data lead and a ground return. Every Verdict® is factory-lasered with a guaranteed unique electrically readable 64-bit registration number that allows for absolute traceability. The durable stainless steel package is highly resistant to environmental hazards such as dirt, moisture, and shock. Accessories permit the Verdict® 2K: T to be mounted on almost any object, including containers, pallets, and bags.

### Key Features

- Digital thermometer measures temperature 0.5°C increments
- Accuracy  $\pm 1^\circ\text{C}$  from  $-30^\circ\text{C}$  to  $+70^\circ\text{C}$ .
- Built-in real-time clock (RTC) and timer has accuracy of  $\pm 2$  minutes per month per month from  $0^\circ\text{C}$  to  $45^\circ\text{C}$
- Water resistant or waterproof if placed inside capsule (Exceeds Water Resistant 3 ATM requirements)
- Automatically wakes up and measures temperature at user-programmable intervals from 1 to 255 minutes
- Logs up to 2048 consecutive temperature measurements in protected nonvolatile (NV) random access memory
- Records a long-term temperature histogram with 2.0°C resolution
- Programmable temperature-high and low alarm trip points
- Records up to 24 time stamps and durations when temperature leaves the range specified by the trip points
- 512 bytes of general-purpose read/write NV random access memory
- Communicates to host with a single digital signal at 15.4kbits or 125kbits per second using 1-Wire protocol

### Common iButton Features:

- Digital identification and information by momentary contact
- Unique, factory-lasered and tested 64-bit registration number (8-bit family code + 48-bit serial number + 8-bit CRC tester) assures absolute traceability because no two parts are alike
- Multidrop controller for 1-Wire net
- Chip-based data carrier compactly stores information
- Data can be accessed while affixed to object
- Button shape is self-aligning with cup-shaped probes
- Durable stainless-steel case engraved with registration number withstands harsh environments
- Presence detector acknowledges when reader first applies voltage
- Meets UL#913 (4th Edit.). Intrinsically Safe Apparatus: approved under Entity Concept for use in Class I, Division 1, Group A, B, C, D Locations

### Applications / Uses

- Environmental studies / monitoring
- Temperature logging in food preparation and processing
- Transportation of temperature sensitive goods like Flowers, seeds
- Warehouse and cold store monitoring systems

