

Portable Temperature Monitoring

Temperature Lances and Handheld Readers

The temperature lance and handheld reader combination make it easy and affordable to monitor the temperature of grains, hay, or silage in locations where suspending cables is either impossible or cost prohibitive. This solution requires no power, no installation, and can be set up quickly and easily. Since it is highly portable, very little equipment is needed, making it extremely cost-effective.

A common application is to use temperature lances in permanent or temporary piles. A single lance attached to a handheld reader is inserted into the pile and a reading appears on the handheld display a short time later. Alternatively, one or multiple lances can be inserted and daisy-chained together and left in place in the pile for long term monitoring. The handheld device is plugged in to a termination cable to view temperature readings for up to 20 lances in a single network.



Affordable. Flexible. Portable.

Measure Grain, Hay, or Silage Temperature Anywhere

- Bins
- Piles
- Warehouses
- Barns
- Bodegas
- Railcars
- Wagons
- Trucks
- Ships

Temperature lances can be similarly used in flat storage warehouses or bodegas, either inserted as monitoring is needed, or left in place. Grain in railcars, wagons, trucks, or loaded on ships can be conveniently monitored prior to loading or unloading to ensure the temperature is in compliance for the next destination.



Monitor temperature in temporary or permanent storage piles.

Sensor Lance

The sensor lance is a rugged spear used to monitor temperature by inserting it into the material. It can be left in place or is easily portable to any location where temperature readings are needed. The lance contains digital sensors encased in a flexible fiberglass rod that has a super smooth surface for easy insertion. It has a rugged handle with a substantial grip for ease of use and its bright red color makes it easy to locate.

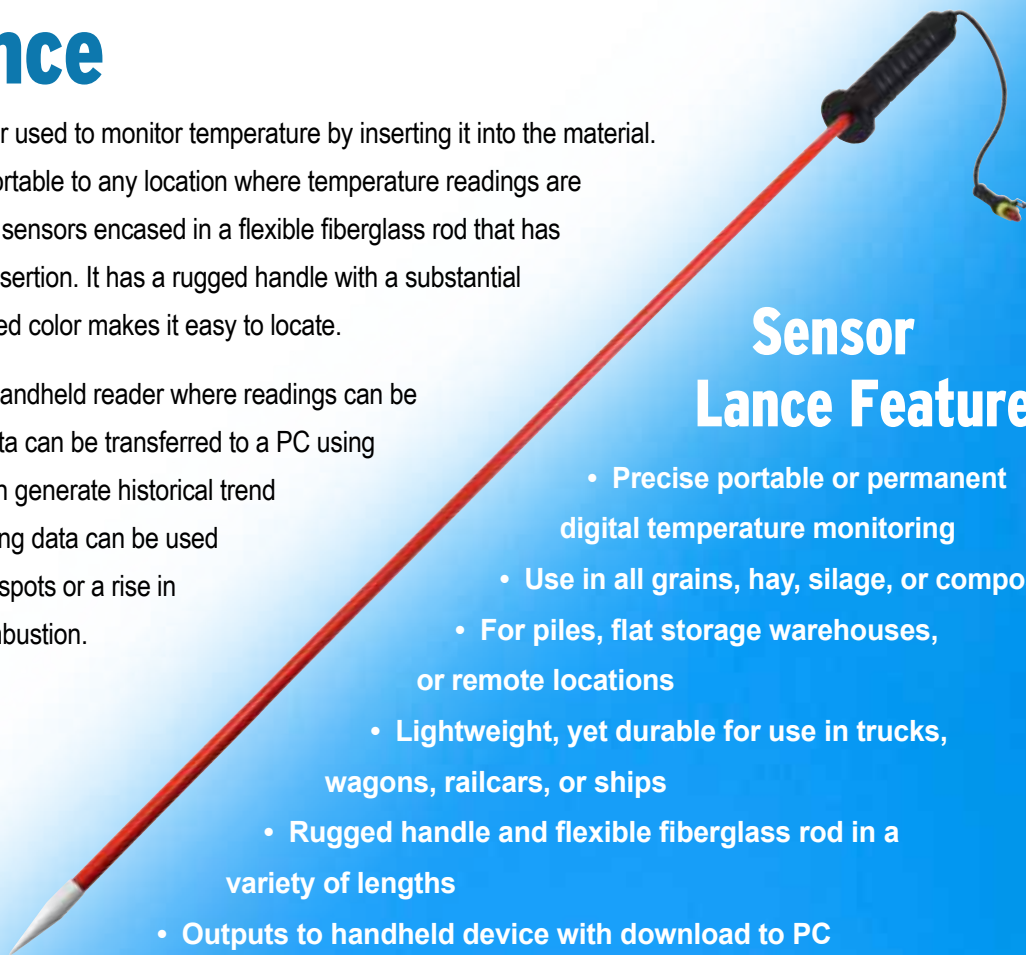
The lance connects to a portable handheld reader where readings can be viewed for up to 20 lances. The data can be transferred to a PC using a memory stick where software can generate historical trend reports for each sensor. The trending data can be used to indicate the development of hot spots or a rise in temperature that could lead to combustion.



Ensure temperature compliance in rail cars before unloading.



Up to 20 sensor lances can be daisy-chained to a single handheld reader as a permanent or temporary temperature monitoring system for warehouses and bodegas.



Sensor Lance Features

- Precise portable or permanent digital temperature monitoring
- Use in all grains, hay, silage, or compost
- For piles, flat storage warehouses, or remote locations
- Lightweight, yet durable for use in trucks, wagons, railcars, or ships
- Rugged handle and flexible fiberglass rod in a variety of lengths
- Outputs to handheld device with download to PC
- Up to 20 lances in a single network for large storage facilities



Handheld Reader



Matrix view shows temperature of individual sensors in a cable.



Portable temperature monitoring is ideal for grain in transit in trucks, wagons, railcars, or ships.

The battery-operated handheld reader is a low cost, portable device that allows you to read and collect data from sensor lances or sensor cables permanently installed in a structure. Each sensor lance or cable is connected in a sequential series and assigned a location number.

Temperatures are read automatically and displayed by simply scrolling through each sensor location and viewing the temperature data for each sensor.

The handheld reader comes in a handy carrying case with accessories including a USB cable for charging the unit, a universal connector cable that works with either temperature cables or lances, and a flashlight. There is also the option of automatically transferring data to a PC using the software on the memory stick included in the kit.

Use Across the Supply Chain

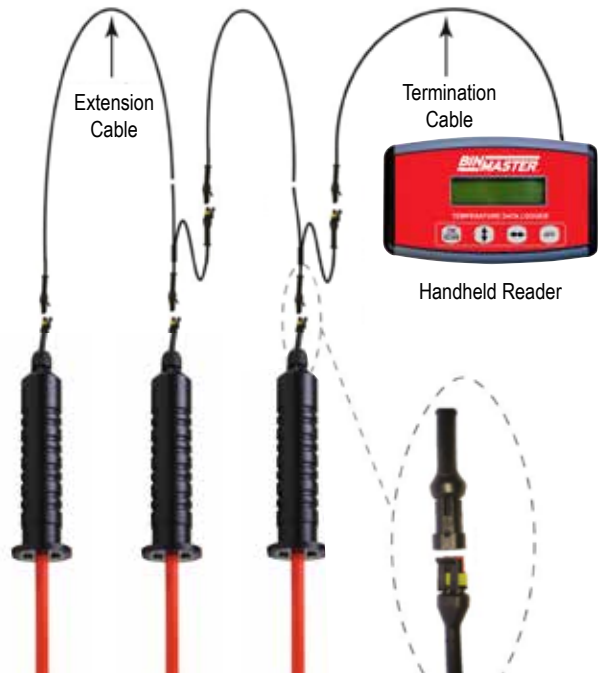
- Farmers
- Cooperatives
- Elevators
- Commercial Storage
- Ports
- Inspectors



Handheld Reader Features

- Battery-operated, light, and compact for ease of use
- Portable monitoring of data from temperature sensor cables or sensor lances
- Handy carrying case complete with USB charging cable, connector cable and flashlight
- Scroll with arrows between sensor cables/lances (LR arrow) and individual sensors (UD arrow)
- Memory stick for data transfer to PC software
- Matrix view with trend data can indicate development of hot spots

Spot Checking or Permanent Pile and Flat Storage Monitoring



Temperature sensor lances can detect high temperatures that can lead to diminished quality or combustion in hay and silage.



Sensor Lance Specifications

Temperature Range: -4°F to 158°F (-20°C to +70°C)

Resolution: 0.5°F (0.3°C)

Sensors per Network: Up to 20

Lance-to-Lance Connection Cables: 20 ft., 40 ft., 60 ft.

Lance-to-Handheld Reader: 3 ft. or 15 ft.

Lance Length	Number of Sensors
3 ft.	1
13 ft.	3
25 ft.	5



Handheld Reader with PC Data Option

MODEL	2500-PC
Maximum # of Cables	20
Maximum # of Temperature Sensors	600
Memory Data Transfer to PC	Yes
Matrix View with Trend Data	Yes

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