TECHNICAL NOTE

Ultra-Low Temperature Freezer

ULT Freezer external monitoring: Wi-Fi connections

Analog is a thing of the past, and although you want your samples frozen in time, the technology that keeps them there shouldn't be. Newer ultra-low temperature (ULT) models freezers such as the Thermo Scientific™ TSX Ultra-Low Temperature Freezers come standard with not only remote connection options like 4-20mA and dry contacts, but also built-in Wi-Fi connectivity that sends freezer data 24-7 to the cloud for real-time remote monitoring.

Key takeaways/benefits/separating features

- The TSX ULT Freezers have monitoring sensors for the refrigeration system as well as the control sensor.
- These sensors are logged continuously (every 60 seconds) for the life of the unit.
- Along with these temperature readings, all events (alarms, setpoint changes, user log in/out, etc) are recorded for the life of the unit.
- This unit temperature and event information is transmitted to the cloud via the Wi-Fi connection.
 Alarm status includes the type of alarm to aid in assessment of severity and urgency.
- Thermo Scientific[™] InstrumentConnect[™] enables online and mobile management of unit data for either a single unit or fleet.
- Wi-Fi connection is a one-way communication. No settings or unit operation can be manipulated via the monitoring system.

In review

Nothing is more worrisome than the phone ringing at 2AM because your life's work appears to be in jeopardy due to an equipment issue. With DeviceLink™ embedded technology, Thermo Scientific brings the details to your fingertips. Unlike a typical remote alarm system, DeviceLink provides specific information about each situation that way you understand the severity and urgency of all notifications. With the ability to access your equipment information via both mobile and web based platforms using InstrumentConnect applications, temperatures and events are continuously sent to the cloud based system for 24-7 monitoring. This capability is not just for a single unit, but rather your entire lab of connected products. Review and monitor your full fleet to promote better uptime of your equipment and ultimately improve productivity in the lab.

While not available yet today, Thermo Fisher Scientific is also working on predictive technology through the DeviceLink system. The goal, depending on the situation, is the ability to notify our customers of impending issues before sample security is ever threatened. DeviceLink is the next step on the road to true peace of mind for our customers.



