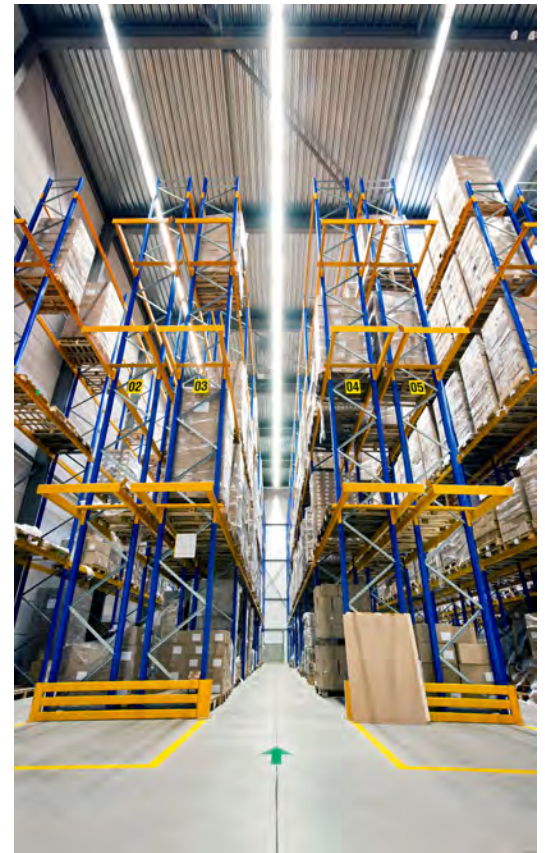


# Sprinkler Activation in Refrigerated Storage Areas

Protectowire Confirmed Temperature Initiation (CTI) Series Linear Heat Detector provides the most dependable and cost-effective fire detection option for refrigerated storage applications. Protectowire FireSystems provides the only Digital Linear Heat Detector that offers short circuit discrimination. Unlike conventional digital linear heat detectors, damage to the CTI Series Linear Heat Detector will not cause a false alarm. The CTI Series uses multi-criteria detection to eliminate false alarms and assures only heat activated alarms are reported. Most freezers and cold storage facilities are double interlocked pre-action systems, which makes the CTI Series an ideal linear heat detector for this particular type of suppression system.

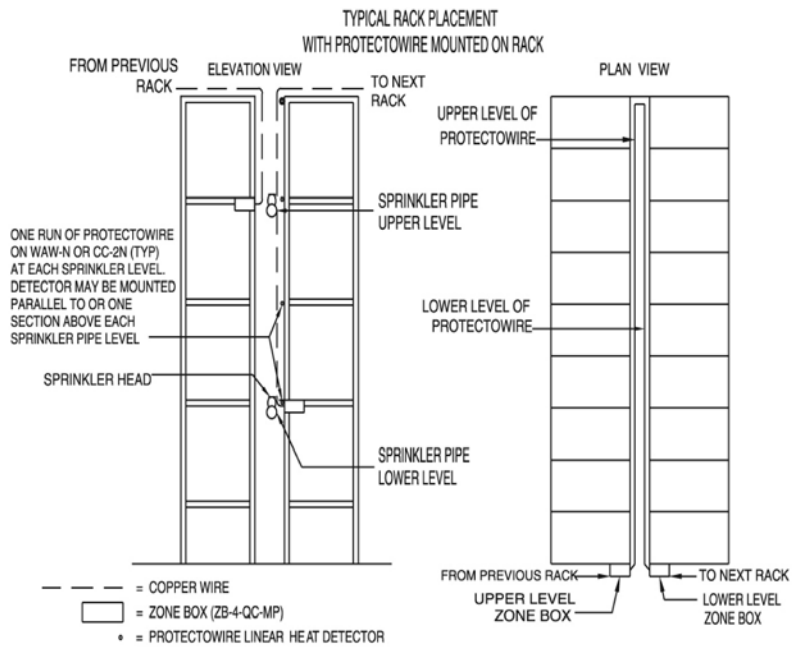
## Protectowire CTI Series Features:

- Detector model CTI-155 has been FM approved and UL listed to -40°F (-40°C) and is specifically designed for the harsh environment of refrigerated storage applications.
- Must be supervised by a Protectowire CTM-530 control module. The CTM-530(E) is listed to -20°F (-29°C) while the CTM-530LT(E) has been tested to -40°F (-40°C).
- The CTM-530 is a 4-wire control module compatible with most control panels and/or addressable modules.
- Meets FM Loss Prevention Data Sheet 8-29 guidelines for Refrigerated Storage Facilities.
- The location and temperature of an over-heat can be displayed on the CTM-530(E) module's LCD screen or communicated via 4-20mA outputs.
- Mechanical damage (pinching or crushing) to the CTI Series Linear Heat Detector will only cause a short fault.
- As a fixed temperature detector, the heat sensitive polymers avoid the common problems caused by condensation and temperature fluctuations.
- Quick installation saves both labor and material costs.
- Annual testing is easy with the CTI test probe.



The Protectowire CTI Series is a fixed temperature continuous Linear Heat Detector and not rate compensated or rate of rise actuated. However, the CTI Series must be supervised by a CTM-530 module which must be connected to a listed or approved fire alarm control panel. Each CTM-530 module can support up to 4000 feet (1220 meters) of the CTI Series Linear Heat Detector.

When used in refrigerated storage areas protected by sprinklers, the Protectowire CTI Series should be installed adjacent to the sprinkler heads. If the system is rack mounted, the vertical spacing should be 20 feet (6 meters) or less. (See typical rack and ceiling installation image.) When installing feed cable from the control module to a zone box at the beginning of ceiling protection or rack system, attach feed cable for connection between runs of Protectowire CTI Series (e.g., to connect numerous racks). Protectowire CTI Series should be run within rack channels away from fork-lifts and pallets. When properly installed, Protectowire CTI Series avoids all common causes of unwanted alarms.



It is recommended that Protectowire CTI Series be installed at every level of the sprinkler piping. The CTM module contains a LCD display that shows the current status as well as the temperature and alarm point location for a short fault or alarm conditions. The LCD will present the location of any heat source in feet (or meters) from the start of the zone to the location of the alarm source. A major problem in refrigerated areas is the danger of a false alarms from mechanical damage. Prior to the release of the CTI Series, Digital Linear Heat Detectors could not differentiate between a short caused by heat and a short from mechanical damage. In a pre-action or double interlocked pre-action system, a false alarm could cause water to flow in the pipes, leading to a costly accidental discharge.

With the multitude of rack systems in use today, configuring the correct placement may pose a challenge when installing a Linear Heat Detection Systems for electrical actuation of sprinkler valves. As a minimum requirement, adhere to the guidelines from Factory Mutual Loss Prevention Data Sheet 8-29 for Refrigerated Storage Facilities in conjunction with the manufacturer's recommendation.

Protectowire CTI Series Linear Heat Detector is just one of the many products offered by Protectowire FireSystems. For over 75 years, many of the world's largest companies have chosen Protectowire to protect their valuable assets and business operations.

