

API-Cecom Group *n'fo*

Technical & Application Note A145

Application: Separate monitoring and control system functions

Type of Company: Pharmaceutical Manufacturer

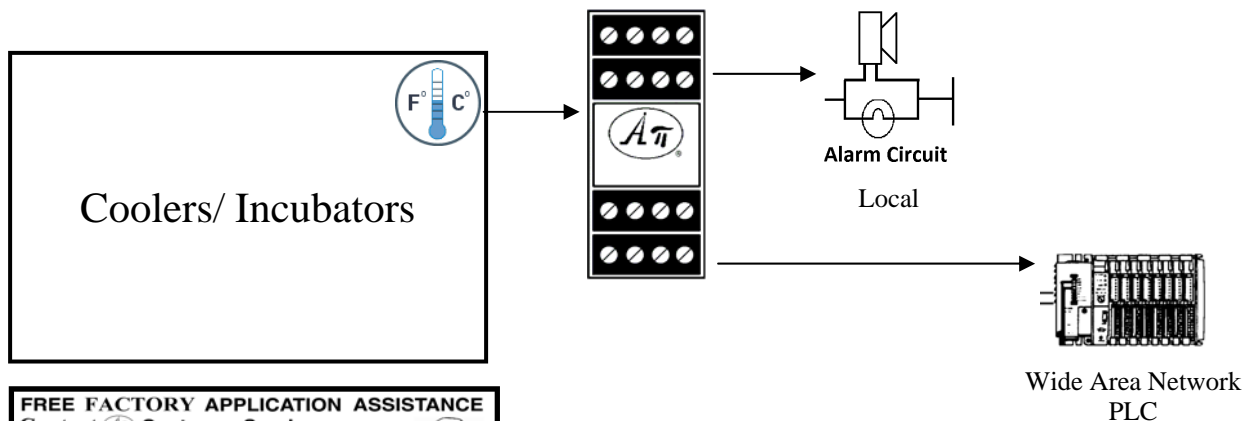
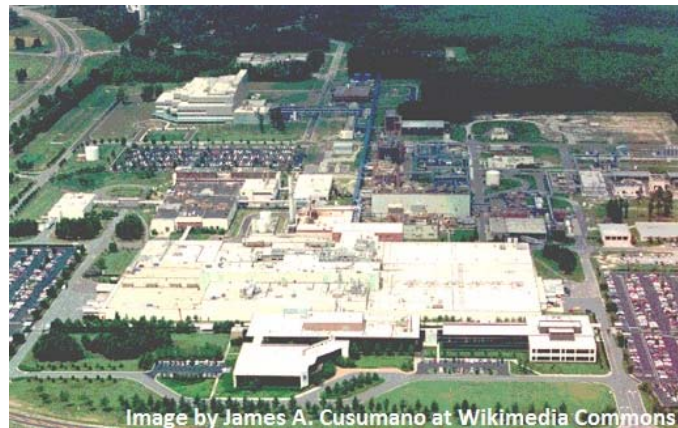
Location: Illinois

Problem: A large pharmaceutical manufacturer is developing diagnostic reagents that are extremely expensive to produce. They need a reliable system to monitor coolers at $+2^{\circ}$ to $+8^{\circ}\text{C}$ and incubators at $+35^{\circ}\text{C}$ to $+38^{\circ}\text{C}$. A total of 32 temperature points need to be measured. The temperatures are measured with RTD's and the specifications require both a local alarm and an alarm signal (contact open) sent to an Allen Bradley PLC whenever the temperatures are either above or below the required temperature band. The PLC interfaces the alarm status via a wide area network to a campus-wide 24/7 monitoring facility. If the alarm is not resolved locally in 15 minutes, a technician is sent out to investigate the out-of-tolerance temperature.

Solution: The Absolute Process Instruments APD 1430 accepts an RTD signal and has dual Form C SPDT relay outputs. It is configured as a "band" alarm so it can provide an alarm for out-of-tolerance temperature conditions. The logical solution was to use one relay for the local light/horn and the other for the Allen Bradley PLC monitoring circuit. Since the customer specified the set points, the factory pre-set them saving time with field set up. For the coolers an APD 1430 was set to trip the alarm contacts if the temperature went outside the $+2^{\circ}\text{C}$ to $+8^{\circ}\text{C}$ range. For the incubators an APD 1430 was set to trip the alarm contacts if the temperature went outside the $+35^{\circ}\text{C}$ to $+38^{\circ}\text{C}$ range. The APD 1430 had the exact features the customer required and provided an economical and reliable solution for monitoring out-of-tolerance temperatures.



APD 1430
RTD Factory Ranged
Alarm Trip



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