

Separate monitoring and control system functions

APPLICATION A145

Type of Company: [Manufacturer, Pharmaceuticals](#)

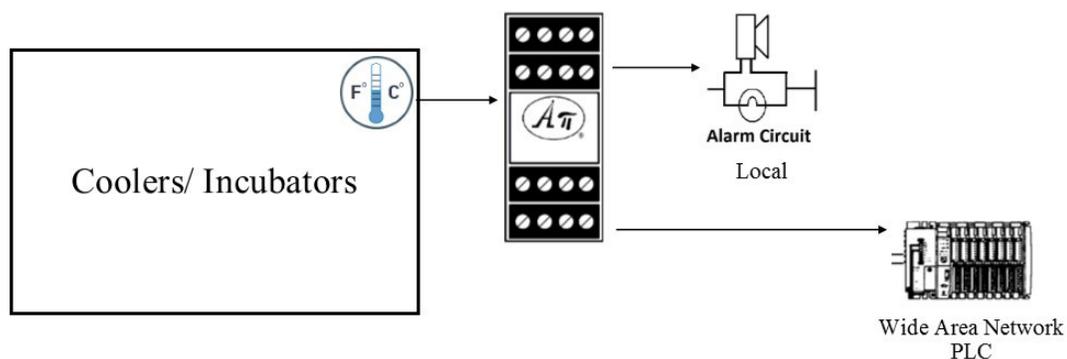
Location: [Illinois](#)

A reagent is a substance or compound added to a system to cause a chemical reaction, or added to see if a reaction occurs. In synthetic chemistry, reagents are used to cause a desired transformation of an organic compound. The biotech revolution grew from developing reagents to identify and manipulate the chemical matter of cells. A large pharmaceutical manufacturer is developing diagnostic reagents that are extremely expensive to produce.



The Engineering Issue

- The company needs a reliable system to monitor coolers at +2° to +8°C and incubators at +35°C to +38°C. A total of 32 temperature points need to be measured. RTDs are being used.
- When temperatures are outside the required temperature band, a local alarm triggers and an alarm signal (contact open) is sent to an Allen Bradley PLC. The PLC interfaces with a wide area network to a 24/7 monitoring facility. If the alarm is not resolved locally in 15 min, a technician is sent to investigate the out-of-tolerance temperature.



The APD 1430 accepts RTD signals and has dual Form C SPDT relay outputs. The company used one for the coolers and one for the incubators. Each was configured as a “band” alarm in order to provide the required out-of-tolerance notifications. One relay on each unit was used for a local light/horn and the other went to the PLC monitoring circuit. The API factory also saved field time by pre-configuring the units with the customer’s set points.

Problem. Solved.

