

Single Chiller Room Applications



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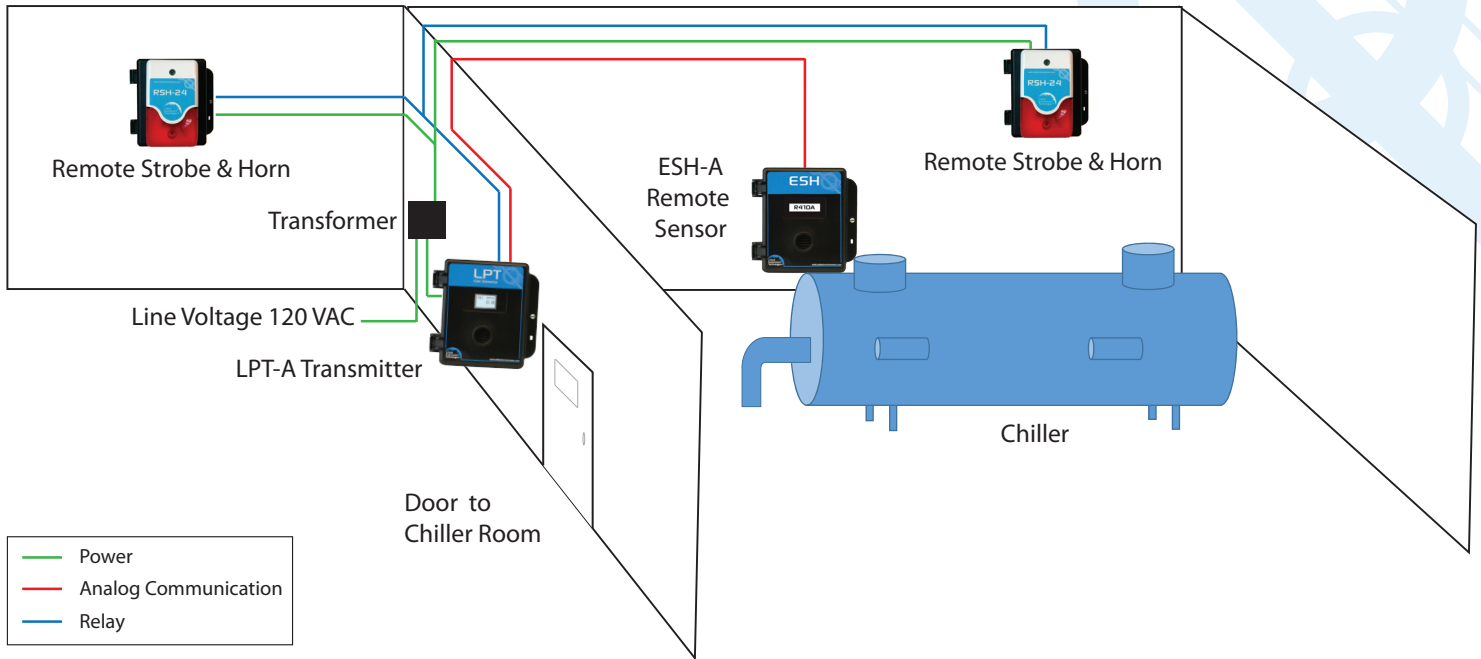
Continuous monitoring of refrigerants in mechanical rooms with a single chiller.

Refrigerant monitoring in mechanical equipment rooms with a chiller provides early detection in the event of a leak and can help prevent significant loss of refrigerant, excess energy costs, emergency response costs and danger to people who are inside or want to enter the room.

Critical Environment Technologies Canada Inc. (CETCI)'s **LPT-A** Analog Transmitter plus a remote **ESH-A** with the appropriate solid state refrigerant sensor is the solution. The placement of a remote sensor inside the room provides continuous monitoring of potential leaks. The information gathered by the remote sensor is viewable on the LCD display of the LPT-A transmitter - which should be mounted on the outside of the door so that a status update on the air quality conditions inside the room are available to view prior to entry.

If a leak is detected, an audible alarm will sound, the display will indicate an alarm condition and the relay will activate a preset response, such as turning on a remote alarm device or turning off the chiller or actuating the mechanical ventilation system.

Typical Single Chiller Room Monitoring System



The ESH-A remote solid state refrigerant sensor should be placed in an area where a refrigerant leak is most likely to concentrate. Refrigerant gases are heavier than air and will concentrate closer to the floor and in areas with less air current. The remote sensor should be mounted 10" to 18" off the floor so it is at an appropriate height for detection, accessible for routine calibration and not likely to come in contact with water from flooding or minor washdown during routine cleaning of equipment.

The LPT-A transmitter should be placed outside the equipment room, close to the door so the display is easily viewable prior to entering the room. Remote visual and audible alarm devices should be set up inside the room and outside each entrance to the room.

The trip point (alarm level) for solid state refrigerants is 250 ppm. In normal operation, the LPT-A LCD display will show the ppm concentration and in the event of a leak, when the alarm set point is reached, the LED will indicate a high gas level, the buzzer will sound and the display will indicate an alarm condition by flashing. The dry contact relay should be used to trigger a preset response, such as activate the remote visual and audible alarm devices. The LPT-A has an analog output signal that may be used to interface with a Building Automation System (BAS) which in turn might be used to trigger the mechanical ventilation equipment, shut down the chiller or other alarm procedures as appropriate.

Remote visual and audible alarm devices such as the Remote Strobe & Horn (RSH-24VDC) should be set up inside the room and outside the door to the chiller room.