E2

Refrigeration control, monitoring and System management

The E2 refrigeration control & temperature monitoring system is a versatile platform for a modular system which is able to offer monitoring and/or control for refrigeration applications.

A QWERTY keyboard and backlit LCD screen enables users to easily navigate though the status, alarm, logs and configuration pages.

In the simplest form the E2 can be the heart of a temperature and condition monitoring system with extensive alarm and logging features.

By adding input/output boards and/or autonomous controllers the system can be developed to provide complete management and control of a large refrigeration system.

An ethernet interface enables the E2 to remotely communicate across a LAN/WAN to PC's which can provide real time visibilty of system operation and performance.

Intelligent monitoring and alarm systems can provide an extremely powerful tool in maintaining an efficient refrigeration system.

In addition to the legal requirements to monitor temperatures in coldrooms and display cases it is now essential to maintain optimum system performance to minimise power consumption.

An E2 has the ability to provide detailed power monitoring in addition to optimising the operation of the component parts of the refrigeration system. Dynamic set-points managed within the E2 enable product temperatures to be maintained whilst minimising power consumed.

Features at a glance

» Full colour display and QWERTY keypad
» System management of Emerson and third party products
» Refrigeration control and temperature monitoring
» Power monitoring with hourly, daily and monthly consumption statistics
» Modular system architecture
» 'Hot Keys' for quick access
» Ethernet, Echelon, Modbus networks supported
» Remote system visibility with animated graphics available with Ultrasite

Technical Overview

The E2 resides at the centre of the system and is able to act as a controller as well as a system manager and communications portal for refrigeration systems.

The E2 has both RS485 and Ethernet communication ports and supports Modbus and Echelon communications protocols in addition to Emerson proprietary protocols. Input boards and output boards can be used to monitor equipment and where appropriate to control directly from the E2.

Alternatively autonomous refrigeration controllers can be used which network back to the E2 to provide additional control features, alarming and data logging. These autonomous devices could provide control of display case/ coldroom evaporators, condensing units, multi compressor packs and condensers.

An ethernet port on the E2 enables remote communications across a LAN/WAN where data can be viewed using Ultrasite, a windows based outstation software or via a web browser. Within Ultrasite custom layouts can be generated which provide animated and real time status information regarding the refrigeration system.

Accessories

IR-em2

The IR-em2 can interface with the E2 to provide visibilty of refrigerant leak concentrations.

Alarms can be logged within the E2 together with supplementary actions such as shutting down refrigeration plant or just a central alarm listing.
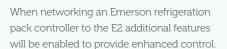

Case/Coldroom Control

Individual case and coldroom controllers can be networked to the E2.

A range of controllers to suit various applications are available which include TEV, Pulse width modulating and Stepper expansion valves.

Refrigeration Pack Control

The E2 can provide compressor and condenser control directly or autonmous controllers can be used which communicate with the E2.

When networking an Emerson refrigeration pack controller to the E2 additional features will be enabled to provide enhanced control.

Ultrasite

The Windows based outstation software allows remote connection to an E2 from which the controller can be viewed and totally configured.

The real time status indication can be overlayed on to custom site layouts and include animated graphics to provide the operator with an easy to read overview of status and operation of their refrigeration system.