Emerson's
E2 RX Series:
Refrigeration Control System

For the next generation of refrigeration control

EMERSON™
Climate Technologies

Complete refrigeration control

The days of a refrigeration control system simply staging compressors on and off are a thing of the past. Instead, today's modern control systems must be able to operate systems economically, communicate directly with compressors, safeguard valuable perishable products, seamlessly interface to third-party devices, and save both energy and maintenance dollars. Also gone are the days of simple energy management controls, replaced with sophisticated enterprise-wide facility management systems. At the heart of this new generation of controllers is the E2 RX from Emerson Climate Technologies.

Maximizing control

E2 RX controllers are easy to work with. Thanks to context sensitive help screens and a familiar QWERTY keypad, anyone can navigate like a pro. Programming any configuration, from simple suction applications to complicated variable speed split condenser groups, is manageable from either the local display or remote interface. Installation is easy too. While most E2 units are factory mounted on refrigeration systems and functional before arriving at a store, it is easy to upgrade from the REFLECS series of controllers by simply replacing the older controllers with E2.

Enterprise facility management

- Alarm   - Dispatch
- Energy   - Refrigerant
- Food quality   - Condition based
- Setpoint verification

Our monitoring and facility management services are designed specifically to cut energy and maintenance costs and to provide easy access to vital enterprise-wide information. That's why we are trusted by over 5,000 sites, 24/7, to keep facilities running at optimum levels.

Remote communications

- Automatic data collection
- Alarm receiving and multi-setpoint changes
- Security safeguards

E2 RX is accessible on site or through our remote-access software from any LAN, WAN or standard modem connection. You have access to full-color animated graphics, color-coded alarm indicators and real-time equipment displays.

Anti-condensate control

- Energy savings

Uncontrolled anti-condensate heaters on glass door style cases normally operate 24 hours per day, even though 100% operation is only required when dewpoint levels are high. Anti-condensate controllers minimize heater ON time based on dewpoint measurements – reducing energy usage without sacrificing the effectiveness of door heaters. Controllers are available for as little as one channel, or as many as 28.

VeriFresh sensors

- Food safety
- Wireless temperature monitoring

Part of any food safety initiative, Emerson's VeriFresh™ system allows you to quickly and easily install air temperature sensors and product simulators for food quality monitoring and control applications. Installation can be completed while customers shop since VeriFresh sensors are internally powered and do not require a costly "wired" communications network. No more hassling with miles of wires. No more time consuming and expensive retrofits.

Refrigerant leak detection

- Code compliance   - safety   - Maintenance savings

Emerson's refrigerant detection systems, part of the Intelligent Store architecture, continuously monitor multiple areas for low levels of CFC, HCFC, and HFC refrigerants that are most commonly used in commercial refrigeration systems. The system meets or exceeds all refrigerants of ASHRAE 15-2004. Knowing that your employees and customers are safe gives you peace-of-mind. Detecting a leak early saves you money in refrigerant and maintenance costs, as well as potential government fines. Emerson's systems can monitor any sized facility requiring anything from one to 16 zones.

ESR technology

- Energy Savings   - Maintenance savings   - Reduced product shrink   - Improved food quality

Emerson's ESR technology, part of the Intelligent Store architecture, is the "intelligent" alternative to mechanical suction pressure regulation in refrigerated case circuits. When used with the E2 RX, the ESR products allow you to replace traditional mechanical evaporator pressure regulators (EPRs) with variable-position ESR valves. This combination provides greater precision in controlling temperature--precision you can use to reduce product shrinkage and energy expenses. Since ESRs are computer controlled, the need for costly valve adjustments has been eliminated. This capability also helps you attain additional energy savings since seasonal adjustments are made continuously where mechanical valves would previously have been adjusted only a couple of times per year. When used with the E2, special patent pending algorithms detect clogged valves and broken wires--notifying you as soon as when a problem occurs, not when your product spoils.

The "Intelligent" compressor advantage

Now there's another way to reduce maintenance costs through Emerson's Intelligent Store™ architecture. A new compressor controller, designed in collaboration with Copeland, allows the new Intelligent Store Discus compressor to connect directly with the E2 RX. This allows users to do far more than just view and adjust set points. It enables users to receive asset information, as well as see and understand data that was previously unavailable. Additional control algorithms and error messages, designed to minimize compressor downtime and maximize asset life, as well as unparalleled compressor protection, are also enabled with the E2. It's just one more way we give you added insight into your business.

Control Link™ RSC

- Maximum uptime
- Food safety
- Maintenance efficiency
- Energy savings

Control Link™ RSC is Emerson's standalone refrigeration controller for reach-in coolers, reach-in freezers, and standalone merchandisers. Built on a common hardware platform, Control Link eliminates older mechanical controls. Control Link is even capable of being networked with the E2 RX for remote accessibility and alarm management, which is critical for food safety. Patented compressor relay algorithms extend relay life far beyond industry averages – maximizing system uptime. All maintenance codes are clearly listed on the front label, reducing troubleshooting time even for technicians unfamiliar with the platform. The direct temperature control algorithms deliver smarter compressor cycling, which increase energy savings, reduce product shrink, maximize product quality, and reduce your operational cost.

E2 RX Capabilities

Capabilities	RX-300	RX-400
Suction Groups	4	4
Condensers	1	2
Standard Circuits	48	64
Case Control Circuits	48	64
Power Monitoring	16 circuits	16 circuits
Anti-Condensate Circuits	16	64
Analog Sensor Modules	64	72
Digital Sensor Modules	64	72
Time Schedules	64	64
I/O Board Capacity	62	62
Echelon Device Capacity	441	441
Specifications	QWERTY keypad, color display, modem/LAN/WAN remote communications, Internet accessibility, open protocol capabilities, operating temperatures -40° F to 149° F, operating humidities 5 to 90%, non-condensing	

Intelligent Store™ architecture

Emerson Climate Technologies now offers the industry's most innovative approach to providing you a single view into your entire network of facilities: Intelligent Store architecture. For the first time, you can truly understand what your facilities cost to operate and maintain, information you can use to make decisions about where and when to spend your resources.

Emerson's Intelligent Store architecture delivers advanced electronic control and monitoring of your stores' refrigeration, HVAC, lighting and other systems, all the way down to the component level. By integrating these systems and having them deliver actionable information to you, Emerson can help you substantially lower your capital, engineering and operating costs.

OEM integration

Because Emerson works closely with all major HVAC, refrigeration and electrical distribution-panel original equipment manufacturers (OEMs) – who often factory install our products – we can minimize on-site installation and cost. And because of that across-the-board cooperation, you can count on a complete system that performs at optimum levels, right from installation.

Upgrading Compatibility

Because the EX RX uses the same RS-485 network as Emerson's REFLECS and Einstein controller series, it's easy to upgrade an existing unit. Just mount the controller and transfer the power and communications connections. The program-backup capabilities of Emerson's remote-access software let you download Einstein programs, then upload them to the E2 RX. When you power up, the E2 RX automatically assumes control of the connected I/O network.

INTELLIGENT STORE

COMPATIBLE

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