

ERC 21X temperature controller series

Simple temperature and defrost management – **countless** functions and benefits

ERC 21X is a smart multipurpose refrigeration controller designed to fulfill today's requirements of commercial refrigeration applications.

The family of ERC controllers consists of:

ERC 211: Single relay output for refrigeration and heating application

ERC 213: Three relay outputs for ventilated refrigeration applications

ERC 214: Four relay outputs for ventilated refrigeration applications

4 push buttons,
a big display and
an intuitive menu
structure ensure
superior ease of use.



Innovative technologies and intelligent refrigerant functions

Thermostat

- On/Off thermostat
- Day/night, continuous cycle, emergency mode
- Pre-installed applications
- Compatible with wide range of sensors (NTC 5K and 10K, Pt1000, PTC)

Defrost

- Natural, electrical and hot gas defrost
- Defrost on demand
- Start via front button, DI input or time interval
- Stop on time, temperature or front button

Compressor

- Zero cross switching technology
- Voltage protection
- Anti-cycle timers for optimum compressor protection
- High-effect 16A relays for connection of compressors

Evaporator Fan

- Zero cross switching technology
- Fan delay function
- Smart evaporator fan management for energy saving
- Fan stop at high evaporator temperature

Alarms

- High and low temperature alarm
- Sensor failure alarm
- High and low voltage alarm
- Condenser cleaning alarm
- Door open alarm
- External alarm input

Multi-purpose DI input

- Two Multipurpose DI input for defrost start
- Day/night control, main switch
- Reference displacement
- Continuous cycle control

Display & Programming

- Bigger and high efficient LED display
- Display temperatures in °C /°F
- Parameter settings/readouts and alarm conditions can be read on the display

Other functions

- Password protection
- Door function with alarm monitoring
- Delay of outputs at power up
- Keypad lock and unlock feature
- Galvanic Isolation

Advantages



Ease of use

Four push buttons, easy menu structure, pre-installed application solutions ensure superior usability.



Energy efficiency

Defrost on demand and smart evaporator fan management ensure energy efficiency.



Unit Protection

Special software features like compressor protection from fluctuation in power supply or from high condensing temperature ensure the safety operation of the unit.



Simple Installation

High effect 16A relay enable direct connection of heavy loads, such as 2 Hp compressor without use of intermediate relays. A wide range of compatible types of sensors ensure high flexibility in installation.

Applications and electric connections

Below example is showing four relay version (ERC-214) pre-installed applications and electrical wiring diagram. User can select the standard applications for the quick configuration or can make standard parametric setup for customized applications.

APP	Description	Temperature	Defrost type	Defrost end
1	Medium temp. (2÷6°C) ventilated refrigeration units with timed natural defrost	MT	Natural	Time
2	Medium temp. (0÷4°C) ventilated refrigeration units with timed electrical defrost	MT	Electrical	Time
3	Low temp. (-26÷-20°C) ventilated refrigeration units with timed electrical defrost	LT	Electrical	Time
4	Medium temp. (0÷4°C) ventilated refrigeration units with electrical defrost (by temperature)	MT	Electrical	Temp
5	Low temp. (-26÷-20°C) ventilated refrigeration units with electrical defrost (by temperature)	LT	Electrical	Temp

