

NO: MB2008CC-22
DATE: 6/1/2008
TO: Refrigeration Original Equipment Manufacturers
FROM: Emerson Climate Technologies, Inc. – Refrigeration Division
SUBJECT: Copeland PerformanceAlert™
EFFECTIVE DATE: Immediate

We are pleased to announce the launch of Copeland PerformanceAlert™ refrigeration diagnostics for 3-phase refrigeration scroll and reciprocating compressors, and Copeland® brand condensing units, for walk-in cooler and supermarket applications.

The Copeland PerformanceAlert diagnostics module monitors compressor operation and provides advanced protection and diagnostics, making it easier to accurately diagnose and prevent refrigeration system failures. It also maintains a history of faults that have occurred in the system. Designed for use in new and existing refrigeration systems with Copeland brand compressors, it can also communicate the fault conditions with other devices internal or external to the refrigeration system. This innovative product combines diagnostics, control, and communication benefits with unique features that protect Copeland compressors and the system from failures.

Protection

Copeland PerformanceAlert diagnostic module detects adverse situations that can affect the compressor behavior and flashes alert codes when those faults are detected. The Copeland PerformanceAlert module also has the capability to protect the compressor from potentially harmful operating conditions and premature compressor failure. When the compressor experiences severe conditions such as high discharge temperature, locked rotor, missing phase or reverse phase, the Copeland Performance Alert module takes action, and shuts down the compressor and prevents permanent compressor failure and damage. In addition Copeland PerformanceAlert refrigeration diagnostics has a built-in phase protection feature which protects the compressor against adverse power conditions such as single phasing and reverse phase. A built-in anti-short-cycling feature, which guarantees the compressor remains deactivated for a specified time each time it cycles off, is another benefit to this device.

Diagnostics

Using the compressor as a sensor, Copeland PerformanceAlert module provides 11 fault codes, key compressor attributes, and compressor history that help contractors improve speed and accuracy of system diagnostics. This allows the contractor to solve problems more accurately and in a timely manner. Getting the equipment repaired correctly on the first visit is a key objective for every contractor.

For more information, please contact your Emerson Climate Technologies field sales managers or your application engineer or visit our website: emersonclimate.com/copelandperformancealert

Table 1: Alert Codes

Alert Codes	System Conditions
Code 1	High Discharge Temperature
Code 2	System Pressure Trip
Code 3	Short Cycling
Code 4	Lock Rotor
Code 5	Open Circuit
Code 6	Missing Phase
Code 7	Reverse Phase (Scroll Only)
Code 8	Welded Contactor
Code 9	Low Voltage
Code 10	Lost Communications
Code 11	DLT Sensor Failure