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TO: Refrigeration Original Equipment Manufacturers
FROM: Emerson Climate Technologies, Inc. – Refrigeration
SUBJECT: Launch of CoreSense™ Communications on 13HP – 15HP Copeland Scroll™ Compressors

New Product Launch

Emerson Climate Technologies, Inc. is pleased to announce the transition of Copeland Scroll™ compressor models to include its award-winning CoreSense™ Communications. Starting May 1st, 2014, Emerson will transition 13HP to 15HP ZB*KCE, ZR*KCE, ZP*KCE, ZB*KCP and associated Tandem scroll compressors to CoreSense Communications Technology. (See Table 1 below for complete list of models.) The Z***KCE-TW* and ZB107KCP-TW* models will no longer be available for this model range.

Table 1 – Model Availability

	Model Family	Model	New Electricals With CoreSense			
			TED	TEE	TE5	TE7
Models with CoreSense Communications Available May 1, 2014	ZB*KCE	ZB95KCE	√	√	√	√
		ZB114KCE	√	√	√	√
	ZR*KCE	ZR160KCE	√	√	√	√
		ZR190KCE	√	√	√	√
	ZRT*KCE	ZRT320KCE	√	√	√	√
		ZRT380KCE	√	√	√	√
	ZP*KCE	ZP154KCE	√	√	√	√
		ZP181KCE	√			
		ZP182KCE	√	√	√	√
	ZPT*KCE	ZPT308KCE	√	√	√	√
		ZPT364KCE	√	√	√	√
	ZB*KCP	ZB107KCP	√	√		

CoreSense Communications, on the models in Table 1, is identified by an “E” in place of the “W” that indicates enhanced external motor protection, as demonstrated in the model name below:

Example:

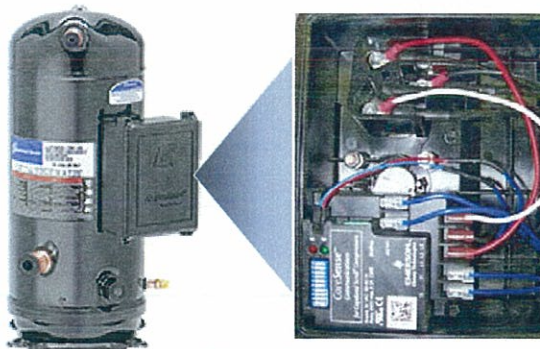
Today’s Model		New Model
ZB114KCE-TW <u>D</u> -265	⇒	ZB114KCE-TE <u>D</u> -265

Complete model cross reference information is available through your Emerson Climate Technologies field sales manager or application engineer.

The CoreSense Communications module, shown in Figure 1, delivers a number of critical compressor protection and diagnostics features, including motor temperature protection. CoreSense Communications also provides advanced capabilities such as Modbus communication, compressor operation diagnostics and verification.



**Figure 1 –
CoreSense Communications
Module**



**Figure 2 –
Copeland Scroll Compressor with
CoreSense Communications Module**

13HP to 15HP Copeland Scroll compressors will now feature the CoreSense Communications module, shown in Figure 2, as a standard feature will have compressor asset information, such as module revision and compressor model and serial numbers, loaded into the CoreSense Communications module for access through the Modbus RTU communication protocol. The communication feature provides remote compressor real time run status monitoring and remote reset capability. Refer to Application Engineering Bulletin [AE4-1318](#) for further product details on functionality and wiring instructions.

Below is a summary of the features provided by the CoreSense Communications module for Copeland Scroll compressors:

Table 2 – CoreSense Communications Features

Features	Advantages	Benefits
Motor overheat protection and motor trip notification	Prevents majority of motor failures	<ul style="list-style-type: none"> • Less system downtime • Prevents compressor damage
Missing and reverse phase protection	Eliminates need to install separate phase monitor	<ul style="list-style-type: none"> • Increases compressor reliability
Low control circuit voltage protection	Notifies loss of power to compressor	<ul style="list-style-type: none"> • Increases compressor reliability • Faster uptime
Short cycling detection and alert	Notifies of repetitive short run time	<ul style="list-style-type: none"> • Improves oil management • Prevents compressor damage
Operational and fault history storage	Helps contractor troubleshoot system	<ul style="list-style-type: none"> • Faster uptime
Modbus RTU communication	Enables connection with system controller and remote alarm monitoring	<ul style="list-style-type: none"> • Enables system control • Enables remote monitoring • Faster uptime
Remote reset	Enables alarm reset from alternate locations	<ul style="list-style-type: none"> • Reduce on site visits • Faster uptime
Compressor asset information and compressor run status	Improves speed and accuracy of diagnosis and troubleshooting system issues	<ul style="list-style-type: none"> • Faster uptime • Reduces contractor callbacks



For onsite communication, the CoreSense Communications module clearly indicates the status of the compressor in the form of “Normal Operation”, “Warning”, “Trip” and “Lockout” conditions differentiated by color and flashing LEDs. The color indicates the severity of the compressor status and the LED flash count identifies the specific fault.

Service replacement kits and components for the CoreSense Communications module will be offered through the Emerson Climate Technologies distribution center and authorized wholesalers.

Additional product performance, electrical, and mechanical information can be accessed online at the Emerson Climate Technologies website, www.EmersonClimate.com, and by logging into Online Product Information. The HVACR Fault Finder App, available for Android and iPhone, can also be used as an informative tool to aid in interpreting error codes. Please contact your Field Sales Manager, Application Engineer, or Customer Service Representative for additional information.