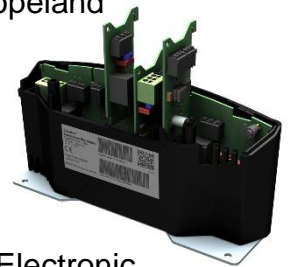


NO: 09-21
DATE: 28.05.2021
TO: All customers
FROM: Emerson Commercial & Residential Solutions – Europe
 Emerson Climate Technologies GmbH
SUBJECT: Copeland™ Compressor Electronics Plug-In Modules for Semi-Hermetic Compressors

Emerson is pleased to announce the launch of the Plug-In Modules for Copeland Compressor Electronics used on Semi-Hermetic Compressors.

Two New Extension Modules are being released:

- Module C: Liquid injection & Head fan control
- Module D: Unloaded start & Digital control



These Modules will extend the functionality of the Copeland Compressor Electronic Basic Module and the Modbus Communication (Module E) already available.

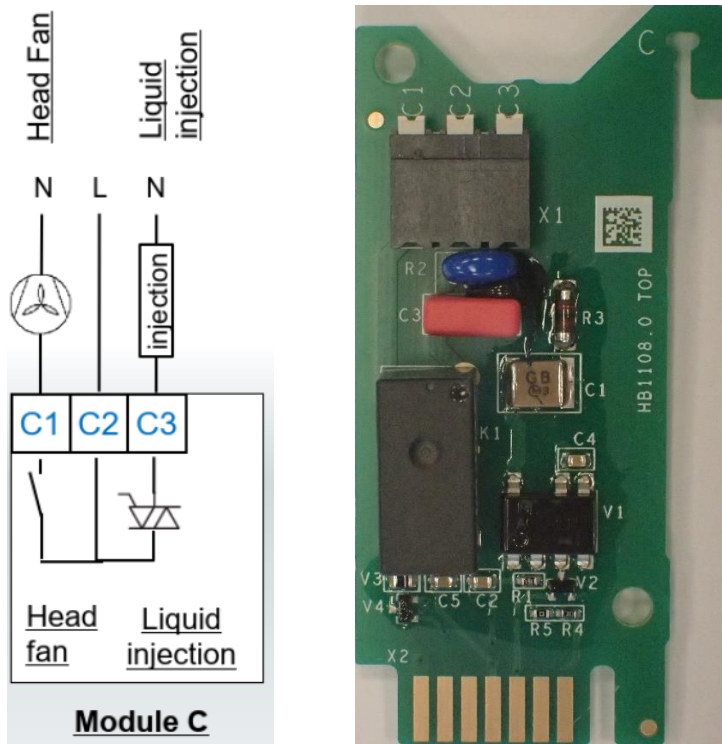
		CoreSense™ Protection	CoreSense™ Diagnostic	Copeland™ Compressor Electronics basic board	Copeland™ Compressor Electronics extension modules
Basic Protection	Oil Pressure	✓	✓	✓	
	Motor Temperature	✓	✓	✓	
Advanced Protection	Discharge Gas Temperature		✓	✓	
	Current Monitoring		✓*	✓	
	Voltage Monitoring			✓	
	Oil Level Monitoring			✓	
	Part Winding Monitoring			✓	
	Welded Contactor			✓	
	Switching Frequency			✓	
Communication	DataPort			✓	
	Modbus		✓		✓
Advanced Functions	Oil Heater Control		✓	✓	
	Power Consumption		✓	✓	
	Variable Frequency Drive Operation		✓	✓	
	<i>Liquid Injection & Head Fan Control (Module C)</i>				✓
	<i>Unloaded Start & Digital Control (Module D)</i>				✓

Module E

* only locked rotor protection

Module C: Head Fan and Liquid Injection

- Controlling additional compressor cooling, injection starts when 130°C Discharge Line Temperature is reached
- Replacing XEV01D driver and system controller functions



Module C Ident is **3281560** or can be ordered as a Compressor Variation 5023937.

Full Kit of demand Cooling are also available, including the new Plug-In Module but also the injection valve, tubing (together with brackets & clamps) sight glass and filter dryer:

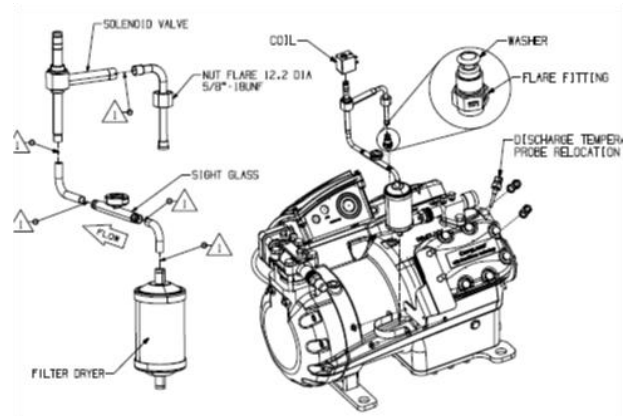
KIT DEMAND COOLING 4M 3285868

KIT DEMAND COOLING 6M 3285879

Or also available as Variations:

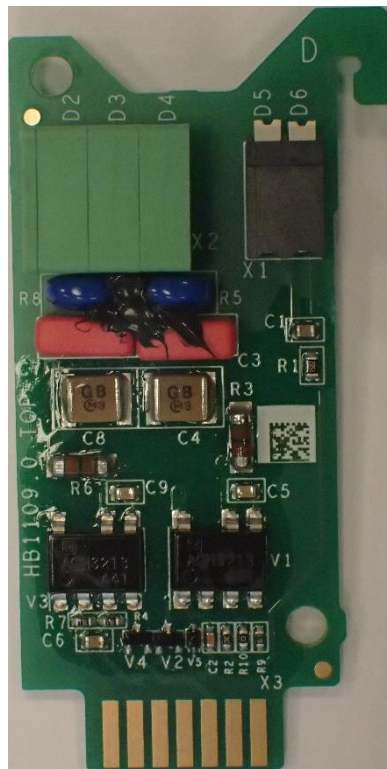
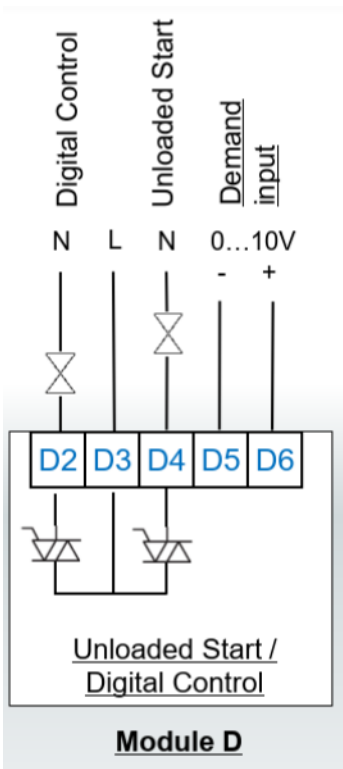
5023926 Variation Demand Cooling 4M

5023960 Variation Demand Cooling 6M

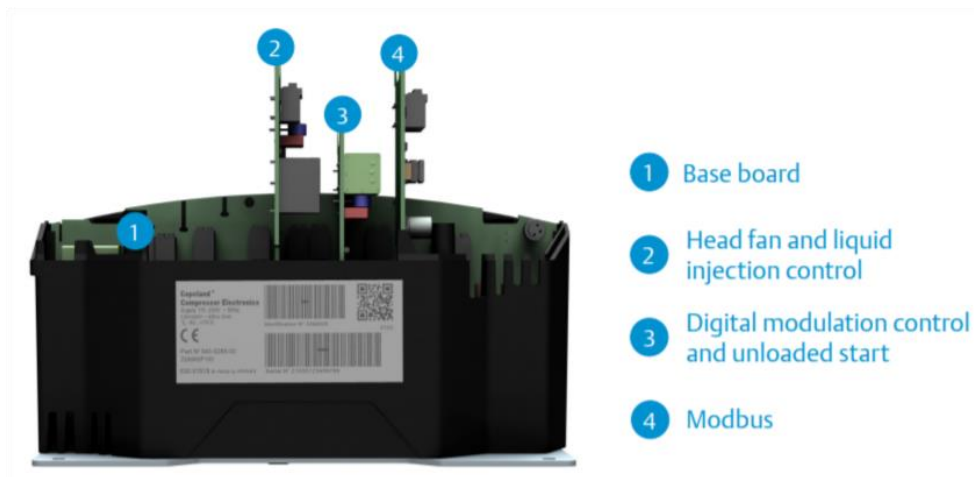


Module D: Unloaded start & Digital control

- Unloaded start
 - Activates unloading of cylinder bank
 - Controlled over Modbus or by compressor start signal received on terminals
- Digital modulation
 - Different voltage inputs can be configured in range 0 to 10 V
 - Modulation signal can be sent over Modbus – 0 to 100%



Module D Ident is **3281571** or can be ordered as a Compressor Variation 5023948.



Those New Modules can only operate with the latest Copeland Compressor Electronic Firmware which has been implemented in production on Semi-Hermetic Compressors with serial number starting 21E 59371 M. At the same time, module name has been updated from “Next Gen Coresense” to “Copeland™ Compressor Electronics”.

In case a customer wants to use the New Plug-In Modules on compressors with serial number before 21E 59371 M, a transition kit needs to be ordered:

- Going from Next Gen Coresense to New Copeland Compressor Electronic Module: 5406727
- Going from Coresense Diagnostic Electronic to New Copeland Compressor Electronic Module: 5406738 (or 3271343 for small CO2 compressors).

Application bulletin, technical information and installation guides are available on the dedicate Web page which has been created to gather all info:

<https://climate.emerson.com/en-gb/products/refrigeration/commercial-electronics/compressor-electronics>

For any additional information, or further support about the **Copeland compressor electronics Plug-In Modules**, please contact your local Sales or Application Engineering representative.

