Emerson® Electronic Unit Controller
**Key Functions**

- Controls Unit Based On Suction Pressure
- Fan Cycling With Mid Coil Temperature*  
- Discharge Line Protection*

* Feature Dependent On System Design

**Key Benefits**

- Quick & Easy Set-Up
- Improved Set-Point Accuracy
- Enables Multi-Refrigerant Product
- Trouble Shooting Diagnostics
- Added System Safeguards
Emerson® Electronic Unit Controller Delivers System Value On Many Fronts…

- Low Pressure Control
- DLT Protection
- Fan Cycling

2011

- Reduced SKUs
- 25 min. → 30 seconds
- Improved, more stable and tighter set-point Tolerance
- Compr / Motor run time
- Compr, DLT, HPC trips
- Cond T, Suct P Display
- DLT & Perf Alert Display

Today

- Less Inventory on the Shelf
- Quick, Accurate Setup & Service
- Faster Service & Reduced Callbacks
- Fewer Service Calls & Extended System Life

Mechanical Controls

- 50 Year Old Technology

Step-Change In Technology Significantly Improves Service And Lifecycle Costs
Mechanical Vs Electronics
Ease Of Use – Adjusting Pressure Controls

**Mechanical**

- Coarse Adjustments
- Drift Over Time

**Steps For Adjusting Mech. Low Pressure Control**

1. Hook Up Gage Set
2. Read System Pressure
3. Adjust The Mechanical Pressure Control With A Wrench Or Screwdriver
4. Allow System Pressures To Settle
5. Read System Pressures
6. Final Adjustment To The Mechanical Pressure Control
7. Remove The Gage Set

Up To 25 Minutes!

**Electronics**

- Fine Adjustments
- 1.5% Accuracy Over Life

**Steps For Adjusting Electronic Low Pressure Control**

1. Hold 3 Seconds To Enter Menu (PSI Light Flashing)
2. Cycle Through Menu Options
3. Select Value
4. Adjust Value
5. Store Value

Less Than 1 Minute!
# Feature Details

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Emerson® Electronic Unit Controller
Customer Implementation

- Implementation Will Begin February 2011
- Distribution Services Will Start Transitioning Late March
- Phase-In Of All Units Complete By December 2011
- All Units With The Controller Will Have The Following Label On The Outside Of The Package:
Electronic Pressure Control Service Parts

- Kit Including Controller, Sensors, and Instructions Will Be Available At The Distribution Center For Wholesalers To Stock.

- Controllers Provided To Wholesalers Will Have A Basic Program And Be Able To Be Configured To Exactly Match The Previous Controller. Detailed Instructions Will Be Provided – See Example Label Below.

**EMERSON Climate Technologies**

**Electronic Unit Controller**

- Hold 3 Seconds to Enter Menu (PSI Light Will Flash)
- Cycle Through Menu Options
- Select Function
- Adjust Value
- Store Function
- Exit Menu

**Functions**

- Low Pressure Cut-In
- Low Pressure Cut-Out

**Alarm**

- PoF: Keypad locked
- Pon: Keypad unlocked
- P1: Suction probe failure
- P2: Condenser probe failure
- P3: DLT probe failure
- HA: High condenser temperature alarm

**Alarm**

- dlt: DLT temperature alarm
- dLL: DLT lock alarm
- HP: High pressure trip alarm
- HPL: High pressure trip lock-out alarm
- EE: Module Failure

**Example Label**

- Note: Fan Cycling (If Present) is controlled by the Saturated Condenser Temperature for equal runtime

**Default Factory Settings For Replacement Controller**

- Cm = 25
- AC = 6
- PE = 135
- dly = 0
- BEn = 4
- SP1 = 54
- spa = Fan
- ColU = 15
- czo = 0
- Pl1 = 15
- bmp = no
- Dll = yes
- HF1 = 11
- oA2 = FNo
- LS = 7
- Con = 5
- Unit = PSI
- On = 2
- HP = CE
- SF2 = 94
- P2P = YES
- US = 135
- CF = F
- OFF = 5
- Di2 = no
- HF2 = 15
- P2C = HC
- oDs = 2
- Pi1 = 15
- RES = In
- Nub = 3
- 12P = CE
- npA = 2
- P3C = CPA

**Controller Part Number:** 543-0135-00
**Program Part Number:** Field Test
Call 1-888-367-9950 or see www.EmersonClimate.com/EUJC for more details.
Quick Start Guide – 2010ECT-143

Emerson® Electronic Unit Controller for Copeland® condensing units

Key Functions
- Controls unit based on suction pressure
- Fan cycling with mild coil temperature
- Discharge line protection

Key Benefits
- Quick and easy setup
- Improved set point accuracy
- Enables multi-refrigerant product
-Troubleshooting diagnostics
- Added system safeguards

*Feature-dependent on system design

Quick Setup Guide

Adjusting Low Pressure Settings
- Hold DOWN and SET simultaneously for 3 seconds to enter menu (PS light will flash)
- Cycle through menu options – UP/DOWN
- Select function – SET
- Adjust value – UP/DOWN
- Store function – SET
- Exit menu – UP and SET

Low Pressure Cut-In Low Pressure Cut-Out

Accessing Alarm Code Information
- Press and release ALARM
- Cycle through menu options – UP/DOWN
- Press SET to see number of alarms
- Press SET again to return to menu options
- Exit menu – UP and SET

Accessing Service Menu
- Held SERVICE for 3 seconds
- Cycle through menu options – UP/DOWN
- Press SET to see number of alarms
- Press SET again to return to menu options
- Exit menu – UP and SET

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>STH</td>
<td>Compressor starts – 1000 -999999</td>
</tr>
<tr>
<td>ML</td>
<td>Compressor starts – 0 -999</td>
</tr>
<tr>
<td>CHH</td>
<td>Compressor hours – 1000 -999999</td>
</tr>
<tr>
<td>CHL</td>
<td>Compressor Hours – 0 -999</td>
</tr>
<tr>
<td>F1H</td>
<td>Fan 1 Hours – 1000 -999999</td>
</tr>
<tr>
<td>FL</td>
<td>Fan 1 Hours – 0 -999</td>
</tr>
<tr>
<td>F2H</td>
<td>Fan 2 Hours – 1000 -999</td>
</tr>
<tr>
<td>F2L</td>
<td>Fan 2 Hours – 0 -999</td>
</tr>
</tbody>
</table>

Example: if STH=12 and SLL=500, the total number of compressor starts=12,500

Note: After 15 seconds of inactivity the controller will revert to the default display.

For more information visit EmersonClimate.com/electronicunitcontroller

EmersonClimate.com
Technical Support
Toll Free Hotline

For All Technical Related Questions or Support
Please Contact The Following Toll Free Number

1-888-367-9950

Hours Of Operation (8:00am-5:00pm EST)
Monday Through Friday, (Excluding Holidays)

Or Visit www.emersonclimate.com/Electronicunitcontroller for on-line brochures, bulletins, instruction videos, and general product information
FAQ’s

- **What Changes Does The Customer Need To Make?**  *If They Change The Low Pressure Control Set Point, The Process Will Be Simpler But Require Power To Controller, See Previous Slides*

- **Will Model Numbers Change?**  *No, This Is A Running Change*

- **Will The Dimensions Of The Condensing Unit Change?**  *No*

- **Will We Still Offer Mechanical Pressure Controls If A Customer Requests?**  *No*

- **Are There Any UL Updates / Changes Needed?**  *Only In IPD’s File. Customers Will Not Need To Make Updates.*

- **Will This Affect The Performance Of The Unit?**  *No, But Set Points Will Be Held More Accurately*

- **If A Customer Has An Adjustable High Pressure Control Today, Will They Have It When Dixell Is Implemented?**  *No*

- **How Accurate Is The Product?**  *Improved, more stable and tighter set-point Tolerance*

- **What is the Default Setting – Can I have This Factory Set At IPD?**  *The default setting is the same as what you have today. We can set it at IPD as an optional and extra feature.*
FAQ’s Continued

- What Happens If The Midcoil Temp Sensor Fails? *Fans Will Run*

- Are The Sensors For Multi-ref Units Different From The Standard Sensor? *No*

- Will Bumpstart Be On Every Unit? *It Will Be Set To “Off” For Every Unit Except T-line Units.*

- What Are The Bumpstart Settings? *2 Seconds On, 5 Seconds Off – 3 Times*


- What Happens If The Plug Comes Off The Transducer? *The Unit Goes Into Limp Along Mode.*

- What Is “Limp Along” Mode? *The Unit Will Turn On For 5 Minutes And Then Off For 5 Minutes.*

- Can The Time Delay Function Be Used For Low Ambient When The Low Pressure Controll Needs To Be Pulled Out Of The Circuit? *No, But We Are Planning For This In The Next Generation.*

- Will This Be Available For Retrofit? *Not at this time because the temperature sensing required for accurate fan cycling requires a thermo well brazed on the condenser.*