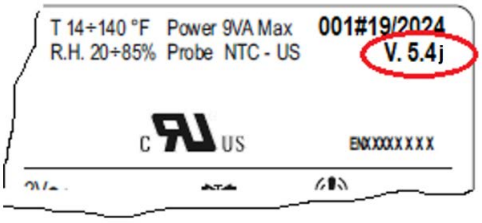
XM600 Case Controllers XM670K, XM678D, and XM679K

Firmware Release 5.4j Bulletin

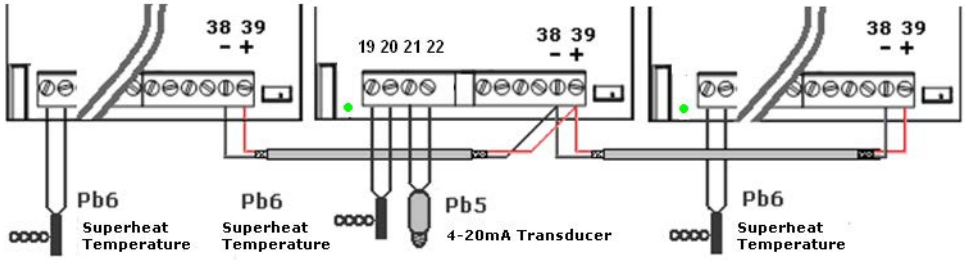
Copeland is committed to the continuous improvement of our controllers to meet both customer expectations and evolving market demands. In line with this commitment, we are pleased to announce the release of the new firmware update v5.4j affecting the following models and part numbers:



Part Number	Description	Model	Control Valve Type
318-6519	XM670K -5N1C1 RS485 NTC 230V EMRS V5.4j	XM670K	Thermostatic Temp Control
318-6521	XM670K -4D1FDB RS485 NTC CPC V5.4j 110V	XM670K	Thermostatic Temp Control
318-6601	XM678D -2C1GDB RS CPC+4.20 DOUBLE GND V5.4j	XM678D	Stepper
318-6702	XM679K -4D1FDB RS485 CPC+4.20 V5.4j 110V	XM679K	Pulse

Key Enhancements

1. **Pressure Sharing via LAN:** The update improves pressure sharing in PSI over LAN. Now, a single pressure sensor can serve each LAN, with the pressure value being shared across connected controllers.



2. **Simultaneous Light Activation:** It is now possible to activate lighting through both the keyboard and digital input simultaneously. Previously, the keyboard had priority, and the light status could not be changed by digital input.
3. **Average Temperature Display for LAN-Connected Controllers:** Controllers connected via LAN can now display the average temperature used by the master controller for regulation.
   Example: Master: LdS = y; rPd = rAb (regulation probe based on the average temperature (rPE= 50) between probe 1 (rPA= P1) and probe 2 (rPb= P2)). Controllers with LSd = yes will display the temperature used by the master.

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4. **Enhanced Fan Management During Cleaning:** When fan speed is controlled by an analog output (trA= rEg), this setting will now be maintained during the cleaning cycle. With FCL= Y, the fan will continue to run during cleaning.
5. **Improved Fan Management During Defrost:** When the fan speed is controlled by analog output (trA= rEg), the fan will automatically turn off during defrost if FnC= C-n or o-n is selected.
   Example: With FCn= C-n, the fan will be stopped during defrost.
6. **Extended Pressure Parameter Range:** The range of the parameter P20 has been extended from 870 to 999 PSI, allowing for a wider range of pressure transducers to be used in CO2 applications.

Additional Notes

- Any firmware iteration of v5.4 can be updated to v5.4j. However, v5.4j cannot be applied to systems prior to v5.4.
- Use Hot Key Part# DK00000310- PROGRAM KEY DIXELL 512K and follow the instructions in Addendum 1 to update to v5.4j. Ensure updates are made only to the Hardware/Part numbers listed on Page 1.
- Only two versions of the XM600 controllers can coexist on the same LAN circuit. However, it is crucial to configure the emulation parameter with the correct value. For example, if there are three XM controllers in a circuit, you can have one with version 5.4j and the other two with either 2.8 or 4.2, but you cannot have 2.8, 4.2, and 5.4j together in the same circuit. Please refer to the instruction manual for further guidance.

Addendum 1: How to use a Hot Key to Download Firmware to an XM Device

1. Turn off the controller by pressing the **ON/OFF** button for five (5) seconds. **OFF** will be displayed.
2. Insert the Hot Key into the 5-pin connector labeled HOT-KEY, and then turn the controller back **ON** by pressing the **ON/OFF** button again for five (5) seconds.
3. The parameter list of the Hot Key is downloaded into the controller memory automatically and "**dLA**" will be displayed.
   After 10 seconds, the controller will start working with the new parameters.
   - If **End** is displayed on the screen, the controller is programmed with the new firmware.
   - If **Err** is displayed on the screen, a failure in programming has been detected.
4. Remove the Hot Key.
5. The 5.4j firmware can be verified in programming mode by checking that parameter **SrL** is set to **10**.
   a. Hold **SET** and **DOWN** arrows together until the units "**°F**" and "**PSI**" LEDs start flashing.
   b. Push the DOWN arrow until **Pr 2** is shown on the screen.
   c. Push **SET**. **Pr 2** requires a password.
   d. **PAS** shows on the display.
   e. **0_ _** is displayed.
   f. Use the arrow **UP** to enter 3 for the first flashing digit then push **SET**.
   g. Enter **2** for the next digit followed by **SET**, then **1** and **SET**.
   h. Use the arrow **DOWN** to navigate to parameter **SrL**.
   i. Push **SET**.
   j. **10** is displayed and indicates the controller has firmware 5.4j

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For Technical Support call **833-409-7505** or email **ColdChain.TechnicalServices@Copeland.com**

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