

COMPANY CONFIDENTIAL

New Product Release

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Firmware Version 3.0.0.0128 Enhancements for TEC3000 Wired Thermostat Controllers

TEC3000 Wired Thermostat Controllers Firmware Update 3.0.0.0128

This document provides instructions for downloading and installing firmware update version 3.0.0.0128 to wired TEC3000 Thermostat Controllers. The models include TEC331x, TEC332x, TEC333x, TEC361x, TEC362x, and TEC363x wired thermostat controllers, manufactured prior to February 10, 2017, with a current firmware version equal to or lower than 3.0.0.0128.

Apply this firmware upgrade **only** to the thermostat controller models listed previously with a current firmware version equal to or lower than 3.0.0.0128. To check your firmware version:

1. Press the **Menu** icon.
2. Press **Controller Info**.
3. Press **Software Version**.

The firmware version is shown.

Do not apply this upgrade to the wireless TEC3000 Thermostat Controllers since it will disable wireless communication.

Firmware Enhancements

- Spanish and French language support
- Fault Detection diagnostics:
 - An alarm is activated when the space is too hot or too cold based on user-defined zone temperature limits.
 - An alarm is set to indicate when the thermostat controller calls for heating or cooling and the supply temperature does not rise or fall within an adjustable timeframe when a supply temperature sensor is added.
 - A thermostat controller is set to issue an alarm when the Fan command does not match the commanded value within an adjustable timeframe when a current sensor or airflow switch is added to monitor the fan status on one of the binary inputs.
- Runtime Alarm Limit: As part of the Fan command, the user can receive maintenance reminders. When the Fan command runtime limit is exceeded, an alarm is present on the thermostat controller. The user can perform maintenance such as changing filters and overall checks. Once maintenance has occurred, the alarm can be reset.

- **Load Shedding:** This feature supports the state of California Title 24 requirement JA5.2.4 for an Occupant Controlled Smart Thermostat. The user can now command the thermostat through a building automation system to start spreading the heating and cooling setpoints to a limit at a controlled rate. When the setpoints are released, they ramp back to the original setpoints at the same rate as it was increased.
- **Built-in trending of critical object objects:** The analog inputs and outputs are viewable in either a graph or table format. The binary inputs and binary outputs are viewable in a table format only. The trends are accessible through the TEC display. Table 1 lists the objects with their correspond trends.

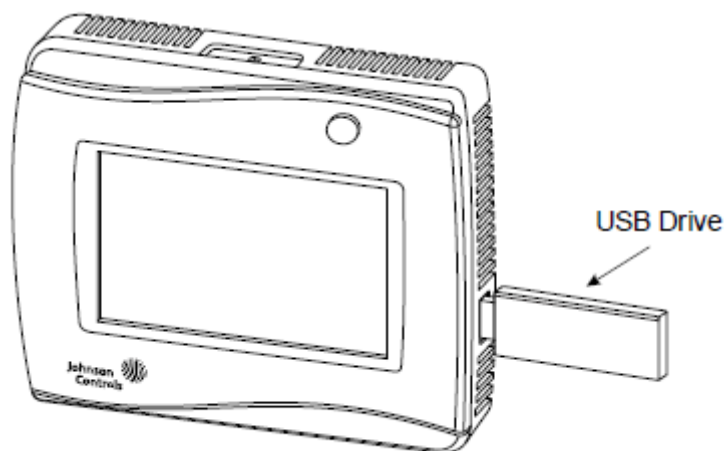
Table 1: Objects and Corresponding Trends

Object	Trend
Effective Zone Temperature	100 samples taken at 15-minute intervals
Active Setpoint	100 samples taken at 15-minute intervals
Humidity	100 samples taken at 15-minute intervals
BI1 Status	100 samples taken at 15-minute intervals
BI2 Status	100 samples taken at 15-minute intervals
Operational Outdoor Air Temperature	100 samples taken at 15-minute intervals
Supply Air Temperature	100 samples taken at 15-minute intervals
Fan Command	25 samples total, 1 sample taken every change of value
Cool Stage 1 On	25 samples total, 1 sample taken every change of value
Cool Stage 2 On	25 samples total, 1 sample taken every change of value
Heat Stage 1 On	25 samples total, 1 sample taken every change of value
Heat Stage 2 On	25 samples total, 1 sample taken every change of value
Economizer PID Cmd	100 samples taken at 15-minute intervals
Heat PID Cmd	100 samples taken at 15-minute intervals
Cool/Dehum PID Cmd	100 samples taken at 15-minute intervals

USB Port

The TEC3000 Thermostat Controller design incorporates a USB port. This new feature provides a way to load enhancements and updates, and back up or restore firmware settings without the need to replace the thermostat controller. This firmware upgrade is a method by which Johnson Controls provides updates to the field as they become available.

Figure 1: TEC3000 Thermostat Controller with Attached USB Drive



Accessing the Latest Firmware

Preparing the USB Drive for the Wired TEC3000 Thermostat Controller Upgrade

The TEC3000 Thermostat Controller identifies up to eight configuration files or firmware package files. The USB drive format must be FAT or FAT32. The drive cannot be NTFS or USB 3.0. If a passcode has been set up, you must have access to the TEC3000 passcode if you are upgrading firmware or copying configuration files. Do not remove the USB drive until the upgrade is complete. The TEC3000 may restart and go offline from the NAE after a firmware upgrade. The upgrade takes approximately 3 minutes.

Loading the Firmware to the Wired TEC3000 Thermostat Controller

1. Ensure that the TEC3000 screen is on.
2. Insert the USB drive into the right side of the TEC3000.
See Figure 1 for the USB port location.
3. Press the **Menu** icon.
4. Press **Update**.
5. Press **Load Firmware**.
6. Select firmware version **3.0.0.0128.tecusb.pkg**.
7. Press **Confirm** if you have the correct firmware version.

The firmware is loaded from the USB drive into the TEC3000 operating system. The TEC3000 locates the new firmware only if the new firmware is on the root directory of the USB.

8. Remove the USB drive from the TEC3000 when the update is complete. The TEC3000 firmware update is complete when the TEC3000 restarts and returns to the home screen.

Additional information is located on QuickLIT at <https://cgproducts.johnsoncontrols.com>. Refer to the *TEC3000 Series On/Off or Floating Fan Coil and Zoning Thermostat Controllers with Dehumidification Capability Installation Instructions (Part No. 24-10787-6)*, *TEC3000 Series Proportional Fan Coil and Zoning Thermostat Controllers with Dehumidification Capability Installation Instructions (Part No. 24-10788-0)*, and *TEC3000 Series Single- or Two-Stage Economizer Thermostat Controllers Installation Instructions (Part No. 24-10789-5)*.

Sincerely,

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