TEC3000 Color Series Field-Selectable BACnet MS/TP or N2 Networked and Wireless Thermostats Technical Bulletin

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Introduction

This document describes how to configure the various wireless and wired TEC3000 Series Thermostats for BACnet MS/TP or N2 networked applications, including how to:

- Connect to the MS/TP or N2 bus and map a thermostat into a network engine
- Add a thermostat
- Add points
- Command and configure from a network engine
- Troubleshoot the thermostat

Product overview

The technologically-advanced TEC3000 Series Thermostats feature a Building Automation System (BAS) BACnet MS/TP or N2 connectivity that enables remote monitoring and programming for efficient space temperature control. The TEC3000 Series Thermostats feature an intuitive user interface with backlit color display that makes setup and operation quick and easy. The programming memory of all TEC3000 Series Thermostats is non-volatile.

In addition, the configuration can be backed up to a USB drive and restored to like models to help expedite the commissioning process. Refer to the *TEC3000 Series On/Off or Floating Fan Coil Thermostats Installation Guide (LIT-12013161), TEC3000 Series Proportional Fan Coil Thermostats Installation Guide (LIT-12013162), or TEC3000 Series Thermostats for Packaged Rooftop and Heat Pump with Economizer Installation Guide (LIT-12013163)* for information on using the USB drive.

The TEC3000 Series Thermostats are BACnet MS/TP, N2, or ZFR Wireless networked devices that provide control of:

- Rooftop units (with or without economizers, dehumidification, or hot gas bypass)
- Heat pumps
- Single- and multi-stage heating and cooling equipment
- Humidification and dehumidification equipment
- Two- or four-pipe fan coils
- Cabinet unit heaters
- Local hydronic reheat valves
- Other individual zone equipment using an on/off, floating, or proportional 0 VDC to 10 VDC control input

Proportional Fan Coil and Individual Zone Thermostats

The TEC3000 Series Proportional Fan Coil and Individual Zone Thermostats are field-selectable BACnet MS/TP, N2, or ZFR Wireless networked devices that provide control of:

- Local hydronic reheat valves
- pressure-dependent VAV equipment with or without local reheat
- Two- or four-pipe fan coils
- Cabinet unit heaters
- Other individual zone equipment using a proportional 0 VDC to 10 VDC control input

The networked models feature a BAS BACnet MS/TP, N2, or ZFR Wireless communication capability that enables remote monitoring and programming for efficient space temperature control.

Some models have occupancy-sensing capability built into the device. These thermostats maximize up to 30% energy savings in high-energy usage, light commercial buildings, such as schools and hotels. Savings occur during occupied times by using additional standby setpoints when occupants are not in the room.

All models feature an intuitive UI with backlit display that makes setup and operation quick and easy. Multiple fan configurations are supported for all equipment types.

- Single-speed
- Multi-speed (two or three discrete speeds)
- Variable-speed/EC motors (0 VDC to 10 VDC control)

All models contain a built-in humidity sensor to support dehumidification on two-pipe fan coil units with reheat and four-pipe fan coil units with individual coils or single coil with heating and cooling valves installed. When no heating is required, the thermostats monitors space humidity and activates dehumidification control as necessary. Heat, reheat, or both are used as required to prevent over-cooling while achieving humidity setpoint and maintain the space temperature. For optimal dehumidification performance, use a fan coil unit that has a multi-speed or variable-speed fan.

On/Off or Floating Fan Coil and Individual Zone Thermostats

The TEC3000 Series On/Off or Floating Fan Coil and Individual Zone Thermostats are field-selectable BACnet MS/TP, N2, or ZFR Wireless networked devices that provide control of:

- Local hydronic reheat valves
- Pressure-dependent VAV equipment with or without local reheat
- Two- or four-pipe fan coils
- Cabinet unit heaters
- Other individual zone equipment using an on/off or floating control input

The networked models feature a BAS BACnet MS/TP, N2, or ZFR Wireless communication capability that enables remote monitoring and programming for efficient space temperature control.

Some models have occupancy sensing capability built into the device. These thermostats maximize up to 30% energy savings in high-energy usage, light commercial buildings, such as schools and hotels. Savings occur during occupied times by using additional standby setpoints.

All models feature a UI with backlit color display that makes setup and operation quick and easy. Multiple fan configurations are supported for all equipment types.

- Single-speed
- Multi-speed (two or three discrete speeds)
- Variable-speed/EC motors (0 VDC to 10 VDC control)

All models contain a built-in humidity sensor to support dehumidification on two-pipe fan coil units with reheat and four-pipe fan coil units with individual coils or single coil with heating and cooling valves installed. When no heating is required, the thermostat monitors space humidity and activates dehumidification control as necessary. Heat, reheat, or both are used as required to prevent over-cooling while achieving humidity setpoint and maintain the space temperature. For optimal dehumidification performance, use a fan coil unit with a multi-speed or variable-speed fan.

Packaged Rooftop and Heat Pump with Economizer Thermostats

The TEC3000 Series Packaged Rooftop and Heat Pump with Economizer Thermostats are fieldselectable BACnet MS/TP, N2, or ZFR Wireless networked devices that provide control of the following unitary devices:

- Rooftop units (RTUs)
- RTUs with economizers
- RTUs with heat pumps
- RTUs with economizers and heat pumps
- RTUs with hot gas reheat
- RTUs with hot gas reheat and economizers
- RTUs with simple dehumidifier

The networked models feature a BAS BACnet MS/TP, N2, or ZFR Wireless communication capability that enables remote monitoring and programming for efficient space temperature control.

Some models have occupancy sensing capability built into the device. These thermostats maximize up to 30% energy savings in high-energy usage, light commercial buildings, such as schools and hotels. Savings occur during occupied times by using additional standby setpoints.

All models feature an intuitive UI with backlit color display that makes setup and operation quick and easy. Only the single-speed fan configuration is supported for RTU equipment types.

All models contain a build-in humidity sensor to support dehumidification on RTUs with hot gas reheat and RTUs with auxiliary dehumidifier installed. When no heating is required, the thermostat monitors the space humidity and activates dehumidification control as necessary. The thermostat uses heat, reheat, or both as required to prevent over-cooling while it achieves the humidity setpoint and maintains the space temperature.

Model names and code numbers

| Name | Code number | Name | Code number |
|------------|-------------|------------|-------------|
| TEC3012-13 | 30 | TEC3313-14 | 05 |
| TEC3012-14 | 31 | TEC3322-13 | 08 |
| TEC3012-16 | 33 | TEC3322-14 | 09 |
| TEC3013-14 | 35 | TEC3322-16 | 0B |
| TEC3022-13 | 38 | TEC3323-14 | 0D |
| TEC3022-14 | 39 | TEC3330-13 | 10 |
| TEC3022-16 | 3B | TEC3330-14 | 11 |
| TEC3023-14 | 3D | TEC3330-16 | 13 |
| TEC3030-13 | 40 | TEC3331-14 | 15 |
| TEC3030-14 | 41 | TEC3612-13 | 18 |
| TEC3030-16 | 43 | TEC3612-14 | 19 |
| TEC3031-14 | 45 | TEC3612-16 | 1B |
| TEC3112-14 | 49 | TEC3613-14 | 1D |
| TEC3113-14 | 4D | TEC3622-13 | 20 |
| TEC3122-14 | 51 | TEC3622-14 | 21 |
| TEC3123-14 | 55 | TEC3622-16 | 23 |
| TEC3130-14 | 59 | TEC3623-14 | 25 |
| TEC3131-14 | 5D | TEC3630-13 | 28 |
| TEC3312-13 | 00 | TEC3630-14 | 29 |
| TEC3312-14 | 01 | TEC3630-16 | 2B |
| TEC3312-16 | 03 | TEC3631-14 | 2D |

| Table 1. TECSOOD Infoact mannes and coac manifers | Table 1: | TEC3000 | model | names | and | code | numbers |
|---|----------|---------|-------|-------|-----|------|---------|
|---|----------|---------|-------|-------|-----|------|---------|

Determining correct pairing of CPU board and base board

Important: Make sure you attach the cover that corresponds to its correct base. The CPU board number needs to match the Base board number. Otherwise you encounter an operation error after you reattach a cover and base that do not belong together, see Figure 1.

Figure 1: Error code indicating mismatched boards

| Board Mismatch | |
|----------------|--|
| | |
| Error 400C0002 | |
| | |

(i) **Note:** The example shown in Figure 1 indicates a TEC3612-16 CPU board that is mounted on the base of a TEC3312-16.

Wireless TEC3000 networks

The TEC3000 includes an embedded wireless router and can only be used on a ZFR182x or ZFR183x Pro Series Wireless Network.

The WRG1830/ZFR183x Pro Series Wireless Field Bus System is similar to the WNC1820/ZFR182x Series wireless system in many ways. But there are several important differences.

- The wireless networks (PANs) formed by the ZFR183x and ZFR182x systems are not compatible.
- The ZFR182x Series Routers and TEC3000 are not field upgradeable to be compatible with the ZFR1830 Series System.
- **Important:** ZFR182x Pro Series Wireless System compatible TEC30xx-1x-000 models and ZFR183x Pro Series Wireless System compatible TEC31xx-1x-000 models are not compatible with each other and cannot be used under the same PAN ID (network address).

Table 2: ZFR183x Pro Series indoor transmission ranges

| Range type | Transmission distance | | | | | | | | |
|------------------------|-----------------------|-------------------|----------------|--|--|--|--|--|--|
| | ZFR to ZFR | TEC to ZFR | WRZ to ZFR | | | | | | |
| | | TEC to TEC | | | | | | | |
| Recommended | 250 ft (75 m) | 250 ft (75 m) | 50 ft (15.2 m) | | | | | | |
| Maximum, Line of Sight | 1000 ft (304.8 m) | 1000 ft (304.8 m) | 100 ft (30 m) | | | | | | |

In ZFR182x Pro Series networks, place every wireless TEC3000 within 50 ft (15 m) of at least two other TEC3000 or ZFR182x wireless devices.

In ZFR183x Pro Series networks, place every wireless TEC3000 within 250 ft (76.2 m) of at least two other ZFR183x Pro Series wireless TEC3000.

If any wireless TEC3000 is not within 50 ft (15 m) of a ZFR182x Pro Series, or 250 ft (76.2) of a ZFR183x Pro Series system with other compatible wireless TEC, use compatible ZFR182x or ZFR183x Routers as repeaters with applicable accessories to provide multiple wireless data pathways.

(i) **Note:** Change the address of the wireless TEC. The address on the wireless TEC is invalid from the factory so it must be changed when installed.

A wireless network requires a network coordinator/gateway. See the WNC1800/ZFR182x Pro Series Wireless Field Bus System Technical Bulletin (LIT-12012356) and WRG1830/ZFR183x Pro Series Wireless Field Bus System Technical Bulletin (LIT-12013553) for more information about the layout of a ZFR182x or ZFR183x Pro Series Network.

Configuring a wired TEC3000 for MS/TP or N2 bus

The TEC3000 supports network connectivity to a BAS using a BACnet MS/TP or N2 bus. You select BACnet MS/TP or N2 communication through the software.

Wiring the network

N2 and BACnet MS/TP protocols use the same physical connections for an RS-485 connection, that requires three conductors:

- NET +
- NET -
- NET COM

Connect the TEC3000 in line with other devices on the network.

End-of-Line termination

When the TEC3000 is the last device on the bus, make sure the end-of-line (EOL) switch on the I/O board is in the On position.

(i) **Note:** If the EOL switch is not on the I/O board, the thermostat is a stand-alone model.

Figure 2: EOL switch positions



Setting the network parameters

All network configuration is done through the software. On the home screen, click the menu icon. Scroll down to Network Setup for the network settings. Out of the box, the thermostat is configured in BACnet MS/TP mode. To change to the N2 mode, select FC Comm Mode and change to N2. This change restarts the device when you click the save icon.

| Menu parameter | Description |
|-----------------------|--|
| BACnet Instance ID | This is the instance ID of the device on the BACnet MS/TP bus. BACnet MS/TP systems use the instance ID for identification of the device. It can be set from 1 to 4,194,302 and is unique to that site. The default is 1. |
| BACnet Device Address | This is the physical MAC address of the BACnet MS/TP device on the bus. It can be set from 4 to 127. Two devices on the same bus cannot have the same BACnet MS/TP device address. The default is 4. |
| MSTP Baud Rate | This is the baud rate that the TEC communicates on the network. The default value is Auto, which allows the device to automatically detect the baud rate of the BACnet MS/TP bus and operate at that speed. An incorrect value causes the device to not communicate on the network, and can potentially cause the network to fail. Options for this setting are Auto, 1,200, 9,600, 19,200, 38,400, and 76,800 Baud. |

Table 3: Setup menus

| Menu parameter | Description |
|----------------------|---|
| BACnet Encoding Type | This is the method of data encoding and is used by the BACnet MS/TP bus. The default value, ISO 10646 (UCS-2), is the encoding used by the Metasys® platform. When operating on a third-party BAS, refer to the documentation provided with the BAS for the correct encoding type. |
| N2 Device Address | This is the physical MAC address of the N2 device on the bus and can be set from 1 to 255. Two devices on the same bus cannot have the same N2 device address. |

Connecting the MS/TP or N2 bus

About this task:

To connect the MS/TP or N2 bus, complete the following steps:

- 1. Set the MS/TP or N2 address of the TEC3000 Series BACnet MS/TP or N2 Network Temperature and Humidity Thermostat according to the engineering drawings.
 - (1) **Note:** For more details on wiring the MS/TP Communications bus, refer to the *MS/TP Communications Bus Technical Bulletin (LIT-12011034).*
- 2. Observe the polarity when connecting the bus wires to the thermostat controller.
- 3. After the bus wires are connected to the first thermostat, continue in a daisy-chained fashion to the next thermostat.
 - (i) **Note:** The bus wiring must be twisted-pair lines. Do not run the bus wiring in the same conduit as line voltage wiring (30 VAC or above) or other wiring that switches power to highly inductive loads (such as contactors, coils, motors, or generators).

Result

Configure the thermostat for automatic baud rate detection. Do not exceed the maximum number of devices allowed on a field bus. Ensure that the wiring terminations are set correctly and that all communication wiring is daisy-chained with no T taps.

MS/TP or N2 thermostat mapping

Preparation

About this task:

Before you map a TEC3000 Series field-selectable BACnet MS/TP or N2 Network Thermostat into a network engine:

 Decide which points within the thermostat need to be mapped. Only map the points that need to be viewed or commanded on a regular basis. Excessive point mapping lowers system performance. Suggested points for mapping include Zone Temp, System Mode, Fan Mode, Manual Occupancy Mode, Occupied Heating Setpoint, Occupied Cooling Setpoint, Unoccupied Heating Setpoint, and Unoccupied Cooling Setpoint. In addition, alarm points can be mapped if they are used, and other points can be mapped if required. Use the Engineering view of the MS/TP trunk on the network engine to examine infrequently used points.

- (1) **Note:** Set all thermostat configuration parameters as required before you map the points into the network engine. If you alter any thermostat configuration parameters after you mapped the points into the thermostat, re-map all points individually, because some exposed points might have been added or removed. Be careful when you map configuration parameters, because they should only be mapped if the operator is fully familiar with their use.
- 2. Verify that a Field bus is defined in the network engine. BACnet MS/TP or N2 devices attach to a Field bus. Refer to the *Metasys N2 Communication Bus Technical Bulletin (LIT-636018)* for instructions on how to define a Field bus.
- 3. For Metasys system software earlier than Release 4.0, verify that a BACnet Integration is defined for the Field bus. The thermostats are mapped as BACnet MS/TP devices under a Field bus BACnet Integration. Refer to the *BACnet Controller Integration with NAE/NCE Technical Bulletin (LIT-1201531)* or the *Metasys N2 Communication Bus Technical Bulletin (LIT-636018)* for instructions on how to define a BACnet Integration.
 - (i) **Note:** Metasys system Release 7.0.7 or later software is required for correct support of text strings on all network points.

Result

You can now map the thermostat and the required points inside the thermostat.

Adding a thermostat

You must add the thermostat before you can map its points. To add the thermostat, select either the Field or N2 bus, depending on the selected configuration, and choose Field Device from the Insert menu.

Assisted Definition using Auto Discovery is the easiest way to add a new thermostat online; however, this method requires that the thermostat that you want to add is connected and ready to communicate. Device addresses must be unique from 4 to 127 for the BACnet MS/TP and 1 to 255 for the N2 network.

(i) **Note:** Do not use the MAP-ALL functionality when you add the thermostat to a Supervisory device, because this adds all TEC3000 Trend Objects which cannot be viewed in the Supervisory device. These trends update every 15 min which could cause issues in the Supervisory device.

Adding BACnet MS/TP points

You must map the required points under the thermostat device. To map the points, select the thermostat device under the BACnet Integration (if required, refresh the tree view to see a newly added thermostat device) and choose Field Point from the Insert menu.

Assisted Definition using Auto Discovery is the easiest way to add new points online; however, this function requires that the thermostat that you want to map is connected and ready to communicate. When mapping points offline, the point type must match the BACnet object type (for example, AV, MV, BI), and the point instance number must match the point BACnet instance number.

Adding N2 points

You must map the required points under the thermostat device. To map the points, select the thermostat device under the N2 Integration (if required, refresh the tree view to see a newly added thermostat device) and choose Field Point from the Insert menu.

Then you need to add the appropriate PRN file based on the TEC model in use as an extension to the device. Multi-state points are defined as ADI points in the PRN file. You must map these using either MI or MO network engine object types. Following the field point addition, you may need

to adjust object units units and enum set values. See Table 4, Table 5 or Table 6 for the enum set values.

MS/TP or N2 bus points tables

The bold items in the unit (IP), enum set/range columns of Table 4, Table 5, and Table 6 indicate the default values. A default is not applicable where no default value is provided.

Thermostats

| Point description | Point name | Object | Instance | N2 Point | N2 Point | Unit (IP), enum set/range |
|-------------------|-------------|--------|----------|-----------|----------|---------------------------------------|
| | | type | ID | type | address | |
| Control Mode | SYSTEM-MODE | MV | 29500 | MI, ADI | 1 | TEC3000 Unit Control Mode |
| | | | | | | 1. Auto |
| | | | | | | 2. Cooling |
| | | | | | | 3. Heating |
| Unit Enable | UNITEN-MODE | MV | 29501 | MI, ADI | 2 | Shutdown/Enable |
| | | | | | | 1 Shutdown |
| | | | | | | 2 Enable |
| Occupied Cooling | | AV | 29502 | AO, ADF | 1 | 60°F to 100°F (15.05°C to 37.78°C) |
| Setpoint | | | | 1.077.001 | | *This point only shows when Heat Cool |
| | | | | | | Setpoint Mode = Individual Setpoints |
| | | | | | | Default: 72°F (22.2°C) |
| Occupied Heating | HTGOCC-SP | AV | 29503 | AO, ADF | 2 | 45°F to 85°F (7.22°C to 29.44°C) |
| Setpoint | | | | | | *This point only shows when Heat Cool |
| | | | | | | Setpoint Mode = Individual Setpoints |
| | | | | | | Default: 68°F (20°C) |
| Unoccupied | CLGUNOCC-SP | AV | 29504 | AO, ADF | 3 | 60°F to 100°F (15°C to 38°C) |
| Cooling Setpoint | | | | | | Default: 80°F (26.6°C) |
| Unoccupied | HTGUNOCC-SP | AV | 29505 | AO, ADF | 4 | 45°F to 85°F (7°C to 30°C) |
| Heating Setpoint | | | | | | Default: 65°F (18.3°C) |
| Standby Cooling | CLGSTBY-SP | AV | 29506 | AO, ADF | 5 | 60°F to 100°F (15°C to 38°C) |
| Setpoint | | | | | | Default: 74°F (23.3°C) |
| Standby Heating | HTGSTBY-SP | AV | 29507 | AO, ADF | 6 | 45°F to 85°F (7°C to 30°C) |
| Setpoint | | | | | | Default: 66°F (18.8°C) |
| Setpoint Offset | WC-ADJ | AV | 29508 | AO, ADF | 7 | (Negative) Max Setpoint Offset. |
| | | | | | | *When Occ Setpoint Select = Setpoint |
| | | | | | | Offset. Otherwise, see Table 11 for |
| | | | | | | constraints |
| | | | 0.0500 | | | Default: 0 |
| Hold/Run | HOLDRUN- | MV | 29509 | MI, ADI | 3 | Hold/Run |
| | NODE | | | | | 1. Hold |
| | | | | | | 2. Run |
| Humidity Setpoint | ZNH-SP | AV | 29510 | AO, ADF | 8 | 20% RH to 80% RH |
| | | | | | | Default: 50% RH |
| Network Override | NET-OAT | AV | 29513 | AO, ADF | 11 | -50°F to 125°F (-46°C to 52°C) |
| Outdoor Air | | | | | | |
| Temperature | | A.) (| 20544 | 40.455 | 4.2 | |
| Network Override | NET-OAH | AV | 29514 | AU, ADF | 12 | U% KH to 100% KH |
| Humidity | | | | | | |
| inannuity | | | | | | |

| Point description | Point name | Object type | Instance ID | N2 Point type | N2 Point address | Unit (IP), enum set/range |
|---|-----------------------|----------------|----------------|------------------|---------------------|--|
| Network Override Supply Air Temperature | NET-SAT | AV | 29515 | AO, ADF | 13 | 0°F to 150°F (-18°C to 65°C) |
| Network Override Zone Humidity | NET-ZNH | AV | 29516 | AO, ADF | 14 | 0% RH to 100% RH |
| Reset PID Tuning | TUNING-RESET | MV | 29517 | MI, ADI | 4 | No/Yes 1. No 2. Yes |
| Manual Occupancy Mode | OCCOVRD-MODE | MV | 29518 | MI, ADI | 5 | UI Occ Override 1. No Override 2. Occupied 3. Unoccupied |
| Supervisor Occupancy | NET-OCC | MV | 29519 | MI, ADI | 6 | Occ Schedule 1. Occupied 2. Unoccupied 3. Standby 4. Not set |
| Occupancy Schedule Source | OCC-CONFIG | MV | 29520 | MI, ADI | 7 | SE Occupancy Mode 1. Schedule 2. External |
| Changeover Mode | CGOVR-MODE | MV | 29523 | MI, ADI | 8 | TEC3000 Unit Control Mode 1. Auto 2. Cooling 3. Heating |
| Passcode | PASSCODE ¹ | AV | 29522 | AO, ADF | 15 | 00000 to 99999 |
| Fan Mode | FAN-MODE | MV | 29524 | MI, ADI | 9 | TEC3000 Fan Mode 1. On 2. Auto 3. Smart *This point only shows if the unit type is 2-pipe or 4-pipe and the fan type is single- or variable-speed |
| Fan Override | FANOVRD-MODE | MV | 29525 | MI, ADI | 10 | UI Fan Override 1. On 2. Auto 3. Quiet *This point only shows if the unit type is 2-pipe or 4-pipe and the fan type is single- or variable-speed |

| Point description | Point name | Object | Instance | N2 Point | N2 Point | Unit (IP), enum set/range |
|---------------------|--------------|--------|----------|----------|----------|--|
| | | type | ID | type | address | |
| Aux Mode | AUX-MODE | MV | 29527 | MI, ADI | 11 | TEC3000 Aux Mode |
| | | | | | | 1. Not Used |
| | | | | | | 2. Occupied NO |
| | | | | | | 3. Occupied NC |
| | | | | | | 4. Occupied Fan NO |
| | | | | | | 5. Occupied FAN NC |
| | | | | | | 6. On |
| | | | | | | 7. Off |
| Units | TEMP-UNITS | MV | 29528 | MI, ADI | 12 | Unit Set |
| | | | | | | 1. IP |
| | | | | | | 2. SI |
| Max Setpoint Offset | MAXSP-OFFSET | AV | 29529 | AO, ADF | 29 | 0 to 20 delta °F (0 to 11 delta °C) |
| | | | | | | Default: 5 delta °F (2.8 delta °C) |
| Changeover | CGOVR-SP | AV | 29530 | n/a | n/a | 40°F to 200°F (4°C to 93°C) |
| Setpoint | | | | | | *This point only shows when Supply |
| | | | | | | Temp Type = Analog Sensor |
| | | | | | | Default: 55°F (12.7°C) |
| Unit Status | UNIT-S | MV | 29700 | MI, ADI | 13 | TEC3000 Detailed Control Status2 |
| | | | | | | 1. System Fault |
| | | | | | | 2. Airflow Fault |
| | | | | | | 3. Open Window |
| | | | | | | 4. Control Off |
| | | | | | | 5. Unreliable Temperature |
| | | | | | | 6. Dehumidification |
| | | | | | | 7. Idle |
| | | | | | | 8. Cooling |
| | | | | | | 9. Heating |
| | | | | | | 10. Cooling Unavailable |
| | | | | | | 11. Heating Unavailable |
| | | | | | | 12. Cooling Unavailable due to |
| | | | | | | Changeover |
| | | | | | | 13. Cooling Unavailable due to OA |
| | | | | | | 14. Cooling Unavailable due to Control |
| | | | | | | Mode 15. Heating Unavailable due to |
| | | | | | | Changeover |
| | | | | | | 16. Heating Unavailable due to OA Temp |
| | | | | | | 17. Heating Unavailable due to Control Mode |
| | | | | | | 18. Load Shed Active |
| | | | | | | 19. Dehumidifying – Reheat |
| | | | | | | 20. Dehumidifving – Fan Only |
| | | | | | | 21. Dehum Unavail By Dew Point |
| Operational Space | EFF-ZNT | AV | 29701 | AO, ADF | 16 | n/a |
| Temperature | | | | | | |
| Zone Humidity | EFF-ZNH | AV | 29702 | AO, ADF | 17 | n/a |

| Point description | Point name | Object type | Instance ID | N2 Point type | N2 Point address | Unit (IP), enum set/range |
|---|--------------|----------------|----------------|------------------|---------------------|---|
| Supply Air Temperature | EFF-SAT | AV | 29703 | AO, ADF | 18 | n/a |
| Operational Outdoor Air Temperature | EFF-OAT | AV | 29704 | AO, ADF | 19 | n/a |
| Active Setpoint | EFF-SETPOINT | AV | 29705 | AO, ADF | 20 | n/a |
| CV Operating Cooling Setpoint | EFFCLG-SP | AV | 29706 | AO, ADF | 21 | n/a |
| CV Operating | EFFHTG-SP | AV | 29707 | AO, ADF | 22 | n/a |
| Occupancy Status | EFF-OCC | MV | 29708 | MI, ADI | 14 | TEC3000 Occupancy Status Occupied Temp Occupancy Unoccupied Standby Occupied-Override Unoccupied-Override |
| Occupancy Input Source | OCCSOURCE-S | MV | 29709 | MI, ADI | 15 | TEC3000 Occupancy Source Occupancy BI Temp Occ BI Temp Occ Occ Override Local Schedule BAS Schedule Occupancy Sensor |
| Changeover State | CGOVR-S | MV | 29572 | MA, ADI | 16 | TEC3000 Changeover Status 1. Changeover Disabled 2. Cooling Mode 3. Heating Mode 4. Supply Temperature Unreliable *This point only shows if Unit Type = 2-pipe or VAV. |
| Fan % Command | FANSPD-% | AV | 29711 | AO, ADF | 23 | 0% to 100% |
| Fan Speed | FANSPD-S | MV | 29712 | MI, ADI | 18 | Supply Fan Status 1. Off 2. On 3. Low 4. Medium 5. High |
| Cool/Dehum PID Cmd | CLGPID-% | AV | 29714 | AO, ADF | 25 | 0% to 100% |
| Heat PID Cmd | HTGPID-% | AV | 29717 | AO, ADF | 26 | 0% to 100% |
| Reheat PID Cmd | RHPID-% | AV | 29720 | AO, ADF | 27 | 0% to 100% *This point only shows when Reheat Installed = Yes |
| Load Shed Active | LOADSHED-EN | MV | 29728 | MI, ADI | 19 | No/Yes 1. No 2. Yes |

| Point description | Point name | Object | Instance | N2 Point | N2 Point | Unit (IP), enum set/range |
|--------------------|----------------|--------|----------|----------|----------|---|
| - | | type | ID | type | address | _ |
| Load Shed Rate | LOADSHED-RL | AV | 29725 | AO, ADF | 30 | 0°F to 1°F/min (0°C to 0.5°C/min) |
| Limit | | | | | | Default: 0.1°F (0.56°C) |
| Load Shed Adjust | LOADSHED-ADJ | AV | 29726 | AO, ADF | 31 | 0 to 8 delta °F (0 to 5 delta °C) |
| | | | | | | Default: 4 delta °F (2.2 delta °C) |
| Occupancy | TEMPOCC-LEN | AV | 29727 | AO, ADF | 32 | 0 min to 300 min |
| Override Duration | | | | | | Default: 120 min |
| Lockout Level | LOCK-LVL | MV | 29531 | MI-ADI | 20 | States (0-2) |
| | | | | | | 1. State 0 |
| | | | | | | 2. State 1 |
| | | | | | | 3. State 2 |
| Unoccupied Off | UNOCC-OFF-DLY | AV | 29532 | AO, ADF | 33 | 0 min to 10 min |
| Delay | | | | - , | | Default: 10 min |
| Heat Prop Band | HTG-PROP-BAND | AV | 29535 | AO, ADF | 34 | 5 to 30 delta °F (2.8 to 16.7 delta °C) |
| | | | | | | Default: 5 delta °E (2.8 delta °C) |
| Heat Integral Time | HTG-INT-TIME | AV | 29536 | AO, ADF | 35 | 300 seconds to 1600 seconds |
| | | | | | | Default: 300 seconds |
| Heat Process Range | HTG-PROC- | AV | 29537 | AO, ADF | 36 | 10 to 100 delta °F (5.6 to 56 delta °C) |
| | RANGE | | | | | Default: 10 delta °E (5.6 delta °C) |
| Heat Saturation | HTG-SAT-TIME | AV | 29538 | AO, ADF | 37 | 60 seconds to 900 seconds |
| Time | | | | | | Default: 300 seconds |
| Heat Time Constant | HTG-TIME- | AV | 29539 | AO, ADF | 38 | 360 seconds to 1440 seconds |
| | CONST | | | | | Default: 360 seconds |
| Heat Process Dead | HTG-DEAD-TIME | AV | 29540 | AO, ADF | 39 | 20 seconds to 120 seconds |
| Time | | | | | | Default: 20 seconds |
| Heat Period | HTG-PERIOD | AV | 29541 | AO, ADF | 40 | 30 seconds to 120 seconds |
| | | | | | | Default: 60 seconds |
| Cool Prop Band | CLG-PROP-BAND | AV | 29542 | AO, ADF | 41 | 5 to 30 delta °F (2.8 to 16.7 delta °C) |
| | | | | | | Default: 5 delta °F (2.8 delta °C) |
| Cool Integral Time | CLG-INT-TIME | AV | 29543 | AO, ADF | 42 | 300 seconds to 1600 seconds |
| | | | | | | Default: 300 seconds |
| Cool Process Range | CLG-PROC- | AV | 29544 | AO, ADF | 43 | 10 to 100 delta °F (5.6 to 56 delta °C) |
| | RANGE | | | | | Default: 10 delta °F (5.6 delta °C) |
| Cool Saturation | CLG-SAT-TIME | AV | 29545 | AO, ADF | 44 | 60 seconds to 900 seconds |
| Time | | | | | | Default: 300 seconds |
| Cool Time Constant | CLG-TIME-CONST | AV | 29546 | AO, ADF | 45 | 360 seconds to 1440 seconds |
| | | | | | | Default: 360 seconds |
| Cool Process Dead | CLG-DEAD-TIME | AV | 29547 | AO, ADF | 46 | 20 seconds to 120 seconds |
| Time | | | | | | Default: 20 seconds |
| Cool Period | CLG-PERIOD | AV | 29548 | AO, ADF | 47 | 30 seconds to 120 seconds |
| | | | | | | Default: 60 seconds |
| Deadband | DEADBAND | AV | 29556 | AO, ADF | 55 | 1.4 to 3 delta °F (0.78 to 1.66 delta °C) |
| | | | | | | Default: 2 delta °F (1.12 delta °C) |

| Point description | Point name | Object | Instance | N2 Point | N2 Point | Unit (IP), enum set/range |
|-------------------------|------------|--------|----------|----------|----------|--|
| | | type | ID | type | address | |
| Min Heating Setpoint | MINHTG-SP | AV | 29559 | AO, ADF | 56 | 45°F (7.22°C) to Max Heating Setpoint Present Value ² |
| | | | | | | *This point only shows when Occ Setpoint Select = Min and Max Setpoint and Heat Cool Setpoint Mode = Individual Setpoints |
| | | | | | | Default: 60°F (15.5°C) |
| Max Heating Setpoint | MAXHTG-SP | AV | 29560 | AO, ADF | 57 | Present value of Min Heating Setpoint (MINHTG-SP) to present value of Min Cooling Setpoint (MINCLG-SP)minus 1 ² |
| | | | | | | *This point only shows when Occ Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint Mode = Individual Setpoints |
| Min Cooling | | ۵\/ | 29561 | | 58 | Default: 68°F (20°C) Present value of Max Heating Setpoint |
| Setpoint | MINCLG-3P | AV | 29301 | AU, ADF | 20 | (MAXHTG-SP) plus 1 to present value of Max Cooling Setpoint (MAXCLG-SP) ² *This point only shows when Occ Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint Mode = Individual Setpoints |
| | | | | | | Default: 72°F (22.2°C) |
| Max Cooling Setpoint | MAXCLG-SP | AV | 29562 | AO, ADF | 59 | Min Cooling Setpoint present to 100°F (37.78°C) ² *This point only shows when Occ Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint Mode = Individual |
| | | | | | | Setpoints |
| | | | | | | Default: 80°F (26.6°C) |
| Occ Setpoint Select | OCCSP-SEL | MV | 29563 | AO, ADF | 60 | Occ Setpoint Select |
| | | | | | | Setpoint Offset Min and Max Setpoint |
| Min Setpoint | MIN-SP | AV | 29564 | AO, ADF | 61 | 45°F to 85°F (7°C to 30°C) ³ |
| | | | | | | *This point only shows when Occ Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint Mode = Common Setpoints Default: 45°F (7°C) |
| Max Setpoint | MAX-SP | AV | 29565 | AO, ADF | 62 | 60°F to 100°F (16°C to 38°C) ³ |
| | | | | | | *This point only shows when Occ Setpoint Select = Min and Max Setpoint and Heat Cool Setpoint Mode = Common Setpoints |
| Heat Cool Setpoint | HTGCI GSP- | MV | 29566 | MI, ADI | 24 | Heat Cool Setpoint Mode |
| Mode | MODE | | | | - | Common Setpoint Individual Setpoints |

| Point description | Point name | Object type | Instance ID | N2 Point type | N2 Point address | Unit (IP), enum set/range |
|--------------------|-----------------|----------------|----------------|------------------|---------------------|---|
| Common Setpoint | COMMON-SP | AV | 29567 | AO, ADF | 62 | 55°F to 90°F (12.77°C to 32.22°C) |
| | | | | | | Default: 72°F (22.2°C) |
| Fan Mode 2 | FAN-MODE2 | MV | 29568 | MI, ADI | 27 | TEC3000 Fan Mode 2 |
| | | | | | | 1. Auto |
| | | | | | | 2. Smart |
| | | | | | | 3. Low |
| | | | | | | 4. Medium |
| | | | | | | 5. High |
| | | | | | | *This point only shows if the unit type |
| | | | | | | is 2-pipe or 4-pipe and the fan type is |
| Ean Override 2 | | MV | 29569 | | 28 | III Ean Override 2 |
| | | | 25505 | | 20 | |
| | | | | | | 1. Auto |
| | | | | | | 2. Quiet |
| | | | | | | 3. LOW |
| | | | | | | 4. Medium |
| | | | | | | 5. High |
| | | | | | | is 2-pipe or 4-pipe and the fan type is |
| | | | | | | multispeed |
| Temp Control Setup | TEMPCTRL- | MV | 29533 | MI, ADI | 21 | TEMP_CONTROL_SETUP |
| | SETUP | | | | | 1. Automatic PID Tuning |
| | | | | | | 2. Deadband Override |
| | | | | | | 3. Manual PID Tuning |
| | | | | | | 4. On Off Control (available on units |
| | | | | | | with single-speed fan and On/Off |
| Control State | TEMPCTRL- | MV | 29570 | MI, ADI | 26 | TEMP CONTROL SETUP SUBSET |
| | SETUP2 | | | | | 1. Automatic PID Tuning |
| | | | | | | 2. Deadband Override |
| | | | | | | 3. Manual PID Tuning (available on |
| | | | | | | units with a multi-speed, variable |
| | | | | | | speed fan, or floating actuators |
| Notwork Override | | A)/ | 20571 | | 62 | $\frac{\text{configured}}{\text{configured}}$ |
| Zone Temperature | | AV | 29571 | AU, ADF | 03 | -50 F to 120 F (-45 C to 49 C) |
| Signal Strength | Signal Strength | MV | 29724 | n/a | n/a | Wireless Signal Strength |
| | | | | | | 1. None |
| | | | | | | 2. Weak |
| | | | | | | 3. Average |
| | | | | | | 4. Strong |
| PAO1 Output / | CLG-O | AO | 86914 | AO, AO | 1 | 0% to 100% |
| Cooling Valve % | | | | | | |
| | HTG-O | 40 | 86915 | | 2 | 0% to 100% |
| Heating Valve % | | , | | | - | |
| Command | | | | | | |

| Point description | Point name | Object type | Instance ID | N2 Point type | N2 Point address | Unit (IP), enum set/range |
|---|--------------|----------------|----------------|------------------|---------------------|--|
| AO1 Output / Fan Speed Percent Command | VSF-O | AO | 86905 | AO, AO | 3 | 0% to 100% |
| BO1 Command / BO1 Cool NO/ Open⁴ | CLGO-C | BO | 86908 | BO, BO | 1 | Inactive/Active 1. Inactive 2. Active |
| BO2 Command / BO2 Fan Low Command | FANL-C | во | 86909 | BO, BO | 2 | Inactive/Active 1. Inactive 2. Active |
| BO3 Command / BO3 Fan Medium Command | FANM-C | BO | 86910 | во, во | 3 | Inactive/Active 1. Inactive 2. Active |
| BO4 Command / BO4 Fan High Command | FANH-C | BO | 86911 | BO, BO | 4 | Inactive/Active 1. Inactive 2. Active |
| BO5 Command / BO5 Heat NO/ Open⁴ | HTGO-C | BO | 86912 | BO, BO | 5 | Inactive/Active 1. Inactive 2. Active |
| BO6 Command / BO6 Cool NC/Close⁵ | CLGC-C | BO | 87101 | BO, BO | 6 | Inactive/Active 1. Inactive 2. Active |
| BO7 Command / BO7 Heat NC/ Close ^s | HTGC-C | во | 87102 | BO, BO | 7 | Inactive/Active 1. Inactive 2. Active |
| AUX Command / BO8 AUX | AUX | BO | 86913 | BO, BO | 8 | Inactive/Active 1. Inactive 2. Active |
| BI1 Sensor / Binary Input 1 | BI1-S | BI | 30827 | BI, BI | 1 | Inactive/Active 1. Inactive 2. Active |
| BI2 Sensor / Binary Input 2 | BI2-S | BI | 30828 | BI, BI | 2 | Inactive/Active 1. Inactive 2. Active |
| Schedule | Schedule | Schedule | 10133 | n/a | n/a | n/a |
| Local Occupancy | LOCAL-OCC | MV | 6 | n/a | n/a | Occ Schedule 1. Occupied 2. Unoccupied 3. Standby 4. Not Set |
| Calendar | Calendar | Calendar | 10019 | n/a | n/a | n/a |
| Dehumidification Enable | DEHUM-ENABLE | MV | 29736 | MI, ADI | 36 | No/Yes 1. No 2. Yes *This point only shows if the unit type is 2-pipe or 4-pipe or TEC controls the RTU |

| Point description | Point name | Object | Instance | N2 Point | N2 Point | Unit (IP), enum set/range |
|-------------------|---------------|--------|----------|----------|----------|--|
| | | type | ID | type | address | |
| Unocc Dehum | UNOCC-DEHUM- | MV | 29737 | MI, ADI | 37 | No/Yes |
| Enable | ENABLE | | | | | 1. No |
| | | | | | | 2. Yes |
| | | | | | | *This point only shows if |
| | | | | | | Dehumidification Enable = Yes |
| Chilled | EFF-CHWST | AV | 29734 | AO, ADF | 69 | n/a |
| Water Supply | | | | | | |
| Temperature | | | | | | |
| Chilled | CHWST-SP | AV | 29735 | AO, ADF | 70 | 0°F to 250°F (-17°C to 121°C) |
| Water Supply | | | | | | *This point only shows if there is neither |
| Temperature | | | | | | a CHWST sensor wired to TEC nor a |
| Setpoint | | | | | | Network override value setup and |
| | | | | | | Dehum Enable is set to Enable |
| | | | | | | Default: 44°F (6.6°C) |
| Network | NET-CHWST | AV | 29736 | AO, ADF | 71 | 0°F to 250°F (-17°C to 121°C) |
| Override Chilled | | | | | | |
| Water Supply | | | | | | |
| Outdoor Air | | ۸\/ | 20727 | | 72 | n/a |
| Humidity | | Αv | 29737 | AU, ADF | 12 | 11/ a |
| Cooling Valve | CLGVLV-MIN- | AV | 29738 | AO, ADF | 73 | 50% to 75% |
| Minimum Position | POS | | | | | *This point only shows if |
| | | | | | | Dehumidification Sequence Mode is |
| | | | | | | setup as Individual Coils or 2-pipe with |
| | | | | | | reheat and Dehum Enable is set to |
| | | | | | | Enable |
| | | | | | | Default: 75% |
| Cooling Valve | CLGVLV-START- | AV | 29739 | AO, ADF | 74 | 50% to 100% |
| Starting Position | POS | | | | | *This point only shows if |
| | | | | | | Dehumidification Sequence Mode is |
| | | | | | | setup as Individual Coils or 2-pipe with |
| | | | | | | reheat and Dehum Enable is set to |
| | | | | | | |
| Heating Value | | ۸\/ | 20740 | | 75 | $E_{0}^{0} = 100\%$ |
| Starting Position | POS | AV | 29740 | AU, ADF | /5 | This point only shows if |
| starting rosition | | | | | | Debumidification Sequence Mode is |
| | | | | | | setup as Individual Coils and Dehum |
| | | | | | | Enable is set to Enable |
| | | | | | | Default: 50% |
| Coil Tempering | COIL-TPR-TIME | AV | 29741 | AO, ADF | 76 | 3 min to 10 min |
| Time | | | | | | *This point only shows if |
| | | | | | | Dehumidification Sequence Mode is |
| | | | | | | setup as Single Coil and Dehum Enable is |
| | | | | | | set to Enable |
| | | | | | | Default: 5 min |

| Point description | Point name | Object | Instance | N2 Point | N2 Point | Unit (IP), enum set/range |
|----------------------|----------------|--------|----------|----------|----------|---|
| | | type | ID | type | address | |
| Dehumidification | DEHUM- | AV | 29742 | AO, ADF | 77 | 1 to 5 delta °F (xx delta °C) |
| Overcool Limit | OVRCLG-LIM | | | | | *This point only shows if |
| | | | | | | Dehumidification Sequence Mode is |
| | | | | | | set to Enable |
| | | | | | | Default: 2 delta °E (1 12 delta °C) |
| Dehumidification | 4PIPE-DEHUM- | MV | 29729 | MI. ADI | 29 | TEC3000 FCU Dehum Seg Mode |
| Sequence Mode | SEQ-MODE | | | , | | |
| | - | | | | | 1. Individual Colls |
| | | | | | | 2. Single Coll *This point only shows if Unit Type |
| | | | | | | is 4-pipe and Dehum Enable is set to |
| | | | | | | Enable |
| Dehumidification | 2PIPE-DEHUM- | MV | 29730 | MI, ADI | 30 | TEC3000 Dehum Sequence |
| Sequence Mode | SEQ-MODE | | | | | 1 Individual Coils |
| | | | | | | 2 Single Coil |
| | | | | | | 3 2-Pine With Reheat |
| | | | | | | *This point only shows if Unit Type |
| | | | | | | is 2-pipe and Dehum Enable is set to |
| | | | | | | Enable |
| Scheduled | SCH-CIR-EN | MV | 29731 | MI, ADI | 31 | Disable/Enable |
| Circulation Enable | | | | | | 1. Disable |
| | | | | | | 2. Enable |
| Scheduled | SCH-CIR-ONLY- | MV | 29732 | MI, ADI | 32 | Disable/Enable |
| Circulation Only | occ | | | | | 1. Disable |
| when Occupied | | | | | | 2. Enable |
| | | | | | | *This point shows Unreliable if |
| | | | | | | Scheduled Circulation Enable is set to |
| | | | | | | Disable |
| Minimum Hourly | MIN-HR-FAN | AV | 29743 | AO, ADF | 78 | 5 min to 30 min |
| Fan Runtime | | | | | | *This point shows Unreliable if |
| | | | | | | Disable |
| | | | | | | Default: 5 min |
| Variable Speed Fan | VAR-FAN-CIR-SP | AV | 29744 | AO, ADF | 79 | 0% to 100% |
| Circulation Setpoint | | | | | | *This point only shows if Fan Type is |
| | | | | | | Variable Speed and Scheduled Circulation |
| | | | | | | Enable is True |
| | | | 00700 | | | Default: 25% |
| Multi-Speed Fan | MULTI-FAN-CIR- | MV | 29733 | MI, ADI | 33 | Sensitivity |
| | SF | | | | | 1. Low |
| | | | | | | 2. Medium |
| | | | | | | 3. High |
| | | | | | | *This point only shows if Supply Far Type |
| | | | | | | is Multi Speed and Scheduled Circulation |
| | | | | | | Enable is True |

| Point description | Point name | Object | Instance | N2 Point | N2 Point | Unit (IP), enum set/range |
|----------------------|----------------|--------|----------|----------|----------|--|
| | | type | ID | type | address | |
| Medium Fan On | MED-FAN-ON-SP | AV | 29900 | AO, ADF | 80 | 1 to 2 delta °F (0.55 to 1.1 delta °C) |
| Diff Sp | | | | | | *This point only shows when Fan Type is |
| | | | | | | Multi Speed and Temp Control Setup is |
| | | | | | | On Off Control |
| | | | | | | Default: 1.5 delta °F (0.84 delta °C) |
| Medium Fan Off | MED-FAN-OFF-SP | AV | 29901 | AO, ADF | 81 | 0 to 1 delta °F (0 to 0.55 delta °C) |
| Diff Sp | | | | | | *This point only shows when Fan Type is |
| | | | | | | Multi Speed and Temp Control Setup is |
| | | | | | | On Off Control |
| | | | | | | Default: 0.5 delta °F (0.28 delta °C) |
| High Fan On Diff Sp | HIGH-FAN-ON-SP | AV | 29902 | AO, ADF | 82 | 1 to 3 delta °F (0.55 to 1.67 delta °C) |
| | | | | | | *This point only shows when Fan Type is |
| | | | | | | Multi Speed and Temp Control Setup is |
| | | | | | | On Off Control |
| | | | | | | Default: 2 delta °F (1.12 delta °C) |
| High Fan Off Diff Sp | HIGH-FAN-OFF- | AV | 29903 | AO, ADF | 83 | 0.5 to 2 delta °F (0.28 to 1.1 delta °C) |
| | SP | | | | | *This point only shows when Fan Type is |
| | | | | | | Multi Speed and Temp Control Setup is |
| | | | | | | On Off Control |
| | | | | | | Default: 1 delta °F (0.56 delta °C) |

The passcode cannot be changed from BAS. The passcode can only be defined by the local display or through Mobile 1 Access Portal (MAP) version 4.0 or later. The Occ Setpoint Select is set to the Min and Max Setpoint and Heat Cool Setpoint Mode is set to the Individual Setpoint. The Occ Setpoint Select is set to the Min and Max Setpoint and Heat Cool Setpoint Mode is set to the Common Setpoint. This is the output used when wired to the Normally Open (N.O.) terminal. This is the output used when wired to the Normally Closed (N.C.) terminal.

2

3

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| Point description | Point name | Object | Instance | N2 Point | N2 Point | Unit (IP), enum set/range |
|--------------------|-------------|--------|----------|----------|----------|---------------------------------------|
| | | type | ID | type | address | |
| Control Mode | SYSTEM-MODE | MV | 29500 | MI, ADI | 1 | TEC3000 Unit Control Mode |
| | | | | | | 1. Auto |
| | | | | | | 2. Cooling |
| | | | | | | 3. Heating |
| Unit Enable | UNITEN-MODE | MV | 29501 | MI, ADI | 2 | Shutdown/Enable |
| | | | | | | 1. Shutdown |
| | | | | | | 2. Enable |
| Occupied Cooling | CLGOCC-SP | AV | 29502 | AO, ADF | 1 | 60°F to 100°F (15.05°C to 37.78°C) |
| Setpoint | | | | | | *This point only shows when Heat Cool |
| | | | | | | Setpoint Mode = Individual Setpoints |
| | | | | | | Default: 72°F (22.2°C) |
| Occupied Heating | HTGOCC-SP | AV | 29503 | AO, ADF | 2 | 45°F to 85°F (7.22°C to 29.44°C) |
| Setpoint | | | | | | *This point only shows when Heat Cool |
| | | | | | | Setpoint Mode = Individual Setpoints |
| | | | | | | Default: 68°F (20°C) |
| Unoccupied Cooling | CLGUNOCC-SP | AV | 29504 | AO, ADF | 3 | 60°F to 100°F (15°C to 38°C) |
| Setpoint | | | | | | Default: 80°F (26.6°C) |
| Unoccupied | HTGUNOCC-SP | AV | 29505 | AO, ADF | 4 | 45°F to 85°F (7°C to 30°C) |
| Heating Setpoint | | | | | | Default: 65°F (18.3°C) |

| Point description | Point name | Object | Instance | N2 Point | N2 Point | Unit (IP), enum set/range |
|-------------------|-----------------------|--------|----------|----------|----------|--------------------------------------|
| | | type | ID | type | address | |
| Standby Cooling | CLGSTBY-SP | AV | 29506 | AO, ADF | 5 | 60°F to 100°F (15°C to 38°C) |
| Setpoint | | | | | | Default: 74°F (23.3°C) |
| Standby Heating | HTGSTBY-SP | AV | 29507 | AO, ADF | 6 | 45°F to 85°F (7°C to 30°C) |
| Setpoint | | | | | | Default: 66°F (18.8°C) |
| Setpoint Offset | WC-ADJ | AV | 29508 | AO, ADF | 7 | (Negative) Max Setpoint Offset. |
| | | | | | | *When Occ Setpoint Select = Setpoint |
| | | | | | | Offset. Otherwise, see Table 11 for |
| | | | | | | constraints |
| | | | | | | Default: 0 |
| Hold/Run | HOLDRUN- | MV | 29509 | MI, ADI | 3 | Hold/Run |
| | MODE | | | | | 1. Hold |
| | | | | | | 2. Run |
| Dehumidification | ZNH-SP | AV | 29510 | AO, ADF | 8 | 20% RH to 80% RH |
| | | | | | | Default: 50% |
| Network Override | NET-OAT | AV | 29513 | AO, ADF | 11 | -50°F to 125 °F (-46°C to 52 °C) |
| Outdoor Air | | | | | | |
| Temperature | | | | | | |
| Network Override | NET-OAH | AV | 29514 | AO, ADF | 12 | 0% RH to 100% RH |
| Outdoor Air | | | | | | |
| Humidity | | | | | | |
| Network Override | NET-SAT | AV | 29515 | AO, ADF | 13 | 0°F to 150°F (-18°C to 65°C) |
| | | | | | | |
| Network Override | NET-ZNH | AV | 29516 | AO, ADF | 14 | 0% RH to 100% RH |
| Zone Humidity | | | | / | | |
| Reset PID Tuning | TUNING-RESET | MV | 29517 | MI, ADI | 4 | No/Yes |
| | | | | | | 1 No |
| | | | | | | 2 Yes |
| Manual Occupancy | OCCOVRD- | MV | 29518 | MI. ADI | 5 | UI Occ Override |
| Mode | MODE | | | | | |
| | | | | | | 1. No Override |
| | | | | | | 2. Occupied |
| | | | 20510 | | | 3. Unoccupied |
| Supervisory | NET-OCC | MV | 29519 | MI, ADI | 6 | Occ Schedule |
| Occupancy | | | | | | 1. Occupied |
| | | | | | | 2. Unoccupied |
| | | | | | | 3. Standby |
| | | | | | | 4. Not set |
| Occupancy | OCC-CONFIG | MV | 29520 | MI, ADI | 7 | SE Occupancy Mode |
| Schedule Source | | | | | | 1. Schedule |
| | | | | | | 2. External |
| Changeover Mode | CGOVR-MODE | MV | 29523 | MI, ADI | 8 | TEC3000 Unit Control Mode |
| | | | | | | 1 Auto |
| | | | | | | 1. Auto |
| | | | | | | 2. Cooling |
| Desseeds | | | 20522 | | 1 5 | 3. Heating |
| Passcode | PASSCODE ¹ | AV | 29522 | AU, ADF | 15 | 00000 10 99999 |

| Table 5: Points for proportional fan coil models TEC3622-1x-000, TEC3623-1x-000 |
|---|
| TEC3022-1x-000, TEC3023-1x-000, TEC3122-14-000, and TEC3123-14-000 |

| Point description | Point name | Object | Instance | N2 Point | N2 Point | Unit (IP), enum set/range |
|---------------------|--------------|--------|----------|----------|----------|---|
| F M I | 54NL MODE | type | ID | type | address | |
| Fan Mode | FAN-MODE | | 29524 | MI, ADI | 9 | TEC3000 Fan Mode |
| | | | | | | 1. On |
| | | | | | | 2. Auto |
| | | | | | | 3. Smart |
| | | | | | | *This point only shows if the unit type |
| | | | | | | single- or variable-speed |
| Fan Override | FANOVRD- | MV | 29525 | MI, ADI | 10 | UI Fan Override |
| | MODE | | | | | 1. On |
| | | | | | | 2. Auto |
| | | | | | | 3. Quiet |
| | | | | | | *This point only shows if the unit type |
| | | | | | | is 2-pipe or 4-pipe and the fan type is |
| | | | | | | single- or variable-speed |
| Aux Mode | AUX-MODE | MV | 29527 | MI, ADI | 11 | TEC3000 Aux Mode |
| | | | | | | 1. Not Used |
| | | | | | | 2. Occupied NO |
| | | | | | | 3. Occupied NC |
| | | | | | | 4. Occupied Fan NO |
| | | | | | | 5. Occupied Fan NC |
| | | | | | | 6. On |
| | | | | | | 7. Off |
| Units | TEMP-UNITS | MV | 29528 | MI, ADI | 12 | Unit Set |
| | | | | | | 1. IP |
| | | | | | | 2. 2-SI |
| Max Setpoint Offset | MAXSP-OFFSET | AV | 29529 | AO, ADF | 29 | 0 to 20 delta °F (0 to 11 delta °C) |
| | | | | | | Default: 5 delta °F (2.8 delta °C) |
| Changeover | CGOVR-SP | AV | 29530 | n/a | n/a | 40°F to 200°F (4°C to 93°C) |
| Setpoint | | | | | | *This point only shows when Supply |
| | | | | | | Temp Type = Analog Sensor |
| | | | | | | Derault: 55°F (12.7°C) |

| Point description | Point name | Object | Instance | N2 Point | N2 Point | Unit (IP), enum set/range |
|-------------------|------------|--------|----------|----------|----------|--|
| | | type | ID | type | address | |
| Unit Status | UNIT-S | MV | 29700 | MI, ADI | 13 | TEC3000 Detailed Control Status2 |
| | | | | | | 1. System Fault |
| | | | | | | 2. Airflow Fault |
| | | | | | | 3. Open Window |
| | | | | | | 4. Control Off |
| | | | | | | 5. Unreliable Temperature |
| | | | | | | 6. Dehumidification |
| | | | | | | 7. Idle |
| | | | | | | 8. Cooling |
| | | | | | | 9. Heating |
| | | | | | | 10 Cooling Unavailable |
| | | | | | | 11 Heating Unavailable |
| | | | | | | 12 Cooling Unavailable due to |
| | | | | | | Changeover |
| | | | | | | 13. Cooling Unavailable due to OA Temp |
| | | | | | | 14. Cooling Unavailable due to Control Mode |
| | | | | | | 15. Heating Unavailable due to Changeover |
| | | | | | | 16. Heating Unavailable due to OA |
| | | | | | | 17. Heating Unavailable due to Control Mode |
| | | | | | | 18 Load Shed Active |
| | | | | | | 19 Dehumidifying – Reheat |
| | | | | | | 20 Dehumidifying – Fan Only |
| | | | | | | 21 Dehum Unavail By Dew Point |
| Operational Space | FFF-7NT | AV | 29701 | AO ADE | 16 | n/a |
| Temperature | | | 25701 | 10,101 | | |
| Zone Humidity | EFF-ZNH | AV | 29702 | AO, ADF | 17 | n/a |
| Supply Air | EFF-SAT | AV | 29703 | AO, ADF | 18 | n/a |
| Temperature | | | | | | |
| Operational | EFF-OAT | AV | 29704 | AO, ADF | 19 | n/a |
| Outdoor Air | | | | | | |
| Active Setpoint | | A\/ | 20705 | | 20 | |
| CV Operating | | | 29705 | | 20 | n/a |
| Cooling Setpoint | LFFCLG-SF | AV. | 29700 | AU, ADF | 21 | 11/a |
| CV Operating | EFFHTG-SP | AV | 29707 | AO, ADF | 22 | n/a |
| Heating Setpoint | | | | | | |
| Occupancy Status | EFF-OCC | MV | 29708 | MI, ADI | 14 | TEC3000 Occupancy Status |
| | | | | | | 1. Occupied |
| | | | | | | 2. Temp Occupancy |
| | | | | | | 3 Unoccupied |
| | | | | | | 4 Standby |
| | | | | | | Standby |
| | | | | | | 5. Occupied-Override |
| 1 | 1 | | | | | o. Onoccupied-Override |

| Point description | Point name | Object | Instance | N2 Point | N2 Point | Unit (IP), enum set/range |
|-----------------------|--------------|--------|----------|----------|----------|---|
| | | type | ID | type | address | |
| Occupancy Input | OCCSOURCE-S | MV | 29709 | MI, ADI | 15 | TEC3000 Occupancy Source |
| Source | | | | | | 1. Occupancy BI |
| | | | | | | 2. Temp Occ BI |
| | | | | | | 3. Temp Occ |
| | | | | | | 4. Occ Override |
| | | | | | | 5. Local Schedule |
| | | | | | | 6. BAS Schedule |
| | | | | | | 7. Occupancy Sensor |
| Fan % Command | FANSPD-% | AV | 29711 | AO, ADF | 23 | 0% to 100% |
| Fan Speed | FANSPD-S | MV | 29712 | MI, ADI | 18 | Supply Fan Status |
| | | | | | | 1 Off |
| | | | | | | 3 02 |
| | | | | | | 2. 01 |
| | | | | | | 3. LOW |
| | | | | | | 4. Medium |
| | | A) (| 2074.4 | 40.455 | 25 | 5. High |
| Cool/Denum PID Cmd | CLGPID-% | AV | 29714 | AU, ADF | 25 | 0% to 100% |
| Heat PID Cmd | HTGPID-% | AV | 29717 | AO, ADF | 26 | 0% to 100% |
| Reheat PID Cmd | RHPID-% | AV | 29720 | AO, ADF | 27 | 0% to 100% |
| | | | | | | *This point only shows when Reheat |
| | | | | | | Installed = Yes |
| Load Shed Active | LOADSHED-EN | MV | 29728 | MI, ADI | 19 | No/Yes |
| | | | | | | 1. No |
| | | | | | | 2. Yes |
| Load Shed Rate | LOADSHED-RL | AV | 29725 | AO, ADF | 30 | 0°F to 1°F/min (0°C to 0.5°C/min) |
| Limit | | | | | | Default: 0.1°F (0.56°C) |
| Load Shed Adjust | LOADSHED-ADI | AV | 29726 | AO, ADF | 31 | 0 to 8 delta °F (0 to 5 delta °C) |
| | | | | | | Default: 4 delta °F (2.2 delta °C) |
| Occupancy | TEMPOCC-LEN | AV | 29727 | AO, ADF | 32 | 0 min to 300 min |
| Override Duration | | | | | | Default: 120 min |
| Lockout Level | LOCK-LVL | MV | 29531 | MI, ADI | 20 | States (0 to 2) |
| | | | | | | 1 State 0 |
| | | | | | | 2 State 1 |
| | | | | | | 2. State 1 |
| | | ۵\/ | 20532 | | 33 | 0 min to 10 min |
| Delav | | | 25552 | 70,701 | 55 | Default: 10 min |
| Heat Prop Band | HTG-PROP- | AV | 29535 | ao ade | 34 | 5 to 30 delta °E (2.8 to 16.7 delta °C) |
| licael rop Balla | BAND | | 23333 | 10,101 | | Default: 5 delta °E (2.8 delta °C) |
| Heat Integral Time | HTG-INT-TIME | | 29536 | AO ADE | 35 | 300 seconds to 1 600 seconds |
| incut integral time | | | 25550 | 10,101 | 55 | Default: 300 seconds |
| Heat Process Range | HTG-PROC- | ۵۷ | 29537 | AO ADE | 36 | 10 to 100 delta $^{\circ}$ E (5.6 to 56 delta $^{\circ}$ C) |
| Theat Trocess Range | RANGE | | 25557 | 70,701 | 50 | Default: 10 delta $^{\circ}$ E (5.6 delta $^{\circ}$ C) |
| Heat Saturation | HTG-SAT-TIME | | 29538 | AO ADE | 37 | 60 seconds to 900 seconds |
| Time | | | 25550 | 10,101 | 57 | Default: 300 seconds |
| Heat Time Constant | HTG-TIMF- | AV | 29539 | AO ADE | 38 | 360 seconds to 1 440 seconds |
| | CONST | | | | 50 | Default: 360 seconds |
| Heat Process Dead | | AV | 29540 | | 39 | 20 seconds to 120 seconds |
| Time | | / \ V | 2,540 | | | Default: 20 seconds |
| L | | | | | | Derault. 20 Secultus |

| Heat Period HTG-PERIOD AV 29541 AO, ADF 40 30 seconds to 120 seconds Cool Prop Band CLG-PROP- BAND AV 29542 AO, ADF 41 5 to 30 defa "F (2.8 to 15.7 defta "C) Default: 5 defta "F (2.8 defta "C) Cool Integral Time CLG-INT-TIME AV 29543 AO, ADF 42 300 seconds to 1,600 seconds Cool Process Range CLG-PROC- RANCE AV 29544 AO, ADF 43 10 to 100 defta "F (5.6 to 55 defta "C) Cool Saturation CLG-SAT-TIME AV 29545 AO, ADF 43 00 seconds to 1,400 seconds Cool Time Cool Time AV 29546 AO, ADF 45 360 seconds to 1,400 seconds Cool Porcess Dead CLG-DEAD-TIME AV 29547 AO, ADF 46 20 seconds 20 seconds Cool Porcess Dead CLG-DEAD-TIME AV 29548 AO, ADF 47 30 seconds to 120 seconds Cool Porcess Dead CLG-DEAD-TIME AV 29556 AO, ADF 56 45 to 1,60 defta "C) Default: 60 seconds Default: 60 seconds Default: 50 seconds Default: 60 seconds Cool Porcess Dead < | Point description | Point name | Object type | Instance ID | N2 Point type | N2 Point address | Unit (IP), enum set/range |
|--|-------------------------|---------------|----------------|----------------|------------------|---------------------|---|
| Cool Prop Band CLG-PROP- BAND AV 29542 AO, ADF 41 5 to 30 defta *F (2.8 to 16.7 defta *C) Cool Integral Time CLG-INT-TIME AV 29543 AO, ADF 42 300 seconds to 1,600 seconds 300 seconds 300 seconds | Heat Period | HTG-PERIOD | AV | 29541 | AO, ADF | 40 | 30 seconds to 120 seconds |
| Cool Prop Band Cl.G-PROP- BAND AV 29542 AO, ADF 41 S to 30 delta * (2.8 to 16.7 delta *C) Default: 5 delta *F (2.8 delta *C) Cool Integral Time CLG-INT-TIME AV 29543 AO, ADF 42 300 seconds to 1.600 seconds 300 seconds Cool Process Range CLG-PROC- RANGE AV 29544 AO, ADF 43 10 to 100 delta *F (5.6 delta *C) Cool Saturation CLG-SAT-TIME AV 29545 AO, ADF 44 60 seconds to 1.400 seconds Cool Time Constant CLG-TIME- CONST AV 29546 AO, ADF 45 360 seconds to 120 seconds Cool Process Dead CLG-DEAD-TIME AV 29547 AO, ADF 46 20 seconds to 120 seconds Cool Process Dead CLG-DEAD-TIME AV 29548 AO, ADF 47 30 seconds to 120 seconds Cool Period CLG-PERIOD AV 29559 AO, ADF 55 1.4 to 3 delta *F (1.12 delta *C) Min Heating MINHTG-SP AV 29559 AO, ADF 57 14 to 3 delta *F (1.12 delta *C) Max Hea | | | | | | | Default: 60 seconds |
| BANDPerfault: 5 delta *f (2.8 delta *C)Cool Integral TimeCLG-INT-TIMEAV29543AO, ADF42300 seconds300 secondsCool Process RangeCLG-PROC- RANGEAV29544AO, ADF4310 to 100 delta *F (5.6 delta *C) Default: 10 delta *F (5.6 delta *C)Cool SaturationCLG-SAT-TIME CONSTAV29546AO, ADF4460 seconds to 900 secondsCool Process Dead Cool Process DeadCLG-DEAD-TIME CONSTAV29546AO, ADF45360 seconds to 120 secondsCool Process Dead Cool Process DeadCLG-DEAD-TIME AVAV29547AO, ADF4620 seconds to 120 secondsCool PeriodCLG-DEAD-TIME CONSTAV29548AO, ADF4730 seconds to 120 secondsDeadbandDEADBAND AV29556AO, ADF551.4 to 3 delta *F (0.78 to 1.66 delta *C) Default: 20 secondsDeadbandDEADBAND AV29559AO, ADF5645°F (7.22°C) to Max Heating Setpoint Value'Min Heating SetpointMAXHTG-SP AVAV29560AO, ADF57Present value of Min Cooling Setpoint (MINCLG-SP)minus 1' *This point only shows when Occ Setpoint Setect = Min and Max Setpoint and Heat Cool Setpoint Mode = Individual Setpoint (MINCLG-SP)Min Cooling SetpointMINCLG-SPAV29561AO, ADF58Present value of Min Cooling Setpoint (MAXCLG-SP)' *This point only shows when Occ Setpoint Setect = Min, and Max Setpoint and Heat Cool Setpoint Mode = Individual Setpoint (MAXCLG-SP)' *This po | Cool Prop Band | CLG-PROP- | AV | 29542 | AO, ADF | 41 | 5 to 30 delta °F (2.8 to 16.7 delta °C) |
| Cool Integral Time CLG-INT-TIME AV 29543 AO, ADF 42 300 seconds to 1,600 seconds 300 seconds Cool Process Range CLG-PROC- RANGE AV 29544 AO, ADF 43 10 to 100 deta °F (5.6 to 56 deta °C) Cool Saturation CLG-SAT-TIME AV 29545 AO, ADF 44 60 seconds to 100 seconds Cool Time Constant CLG-TIME- CONST AV 29546 AO, ADF 45 360 seconds to 1,440 seconds Cool Process Dead CLG-DEAD-TIME AV 29547 AO, ADF 46 20 seconds to 120 seconds Cool Process Dead CLG-DEAD-TIME AV 29548 AO, ADF 47 30 seconds to 120 seconds Default: 20 seconds Default: 30 seconds 14 to 3 deta °F (0.78 to 1.66 deta °C) Default: 20 seconds Default: 2 deta °F (1.72 to 1.66 deta °C) AO, ADF 55 1 at 0 3 deta °F (0.78 to 1.66 deta °C) Default: 30 seconds to 120 seconds Default: 60 seconds 10 deta °F (0.78 to 1.66 deta °C) Default: 40 to 120 seconds Default: 60 seconds 10 deta °F (1.72 to 1.66 deta °C) Default: 60 second | | BAND | | | | | Default: 5 delta °F (2.8 delta °C) |
| Cool Process Range RANGEAV29544AO, ADF4310 to 100 delta *F (5.6 to 56 delta *C) Default: 10 delta *F (5.6 to 56 delta *C) Default: 300 secondsCool SaturationCLG-SAT-TIME CONSTAV29545AO, ADF4460 seconds to 900 secondsCool Time ConstantCLG-TIME- CONSTAV29546AO, ADF45360 seconds to 1,440 secondsCool Time ConstantCLG-DAD-TIME CONSTAV29547AO, ADF4620 seconds to 120 secondsCool PeriodCLG-DEAD-TIME CONAV29548AO, ADF4730 seconds to 120 secondsCool PeriodCLG-PERIOD CONAV29556AO, ADF551.4 to 3 delta *F (0.78 to 1.66 delta *C) Default: 20 secondsDeadbandDEADBAND | Cool Integral Time | CLG-INT-TIME | AV | 29543 | AO, ADF | 42 | 300 seconds to 1,600 seconds |
| Cool Process Range RANGELG-PROC- RANGEAV29544AO, ADF4310 to 100 delta * f (5.6 to 56 delta *C) Default: 10 delta * f (5.6 delta *C) Default: 300 secondsCool SaturationCLG-SAT-TIME CONSTAV29545AO, ADF4460 seconds to 900 seconds Default: 300 secondsCool Process DeadCLG-TIME- CONSTAV29547AO, ADF45360 seconds to 120 secondsCool Process DeadCLG-PREIODAV29548AO, ADF4730 seconds to 120 secondsCool PeriodCLG-PREIODAV29556AO, ADF551.4 to 3 delta * f (0.78 to 1.66 delta *C) Default: 20 secondsDeadbandDEADBANDAV29556AO, ADF551.4 to 3 delta * f (0.78 to 1.66 delta *C) Default: 20 secondsMin Heating SetpointMINHTG-SPAV29559AO, ADF551.4 to 3 delta * f (1.12 delta *C) More have hen Occ Setpoint Select = Min and Max Setpoint Value*Max Heating SetpointMAXHTG-SPAV29560AO, ADF57Present value of Min Heating Setpoint Cooling Setpoint Mode = Individual Setpoints Default: 60* fc0* f1.5 s*C)Min Cooling SetpointMINCLG-SPAV29561AO, ADF58Present value of Min As Setpoint and Heat Cool Setpoint Mode = Individual Setpoints Default: 60* fc0* fc0* fo0* Min cooling Setpoint Mode = Individual Setpoints Default: 60* fc0* fc0* fc0* fc0* Min Cooling Setpoint Mode = Individual Setpoint Mode | | | | | | | 300 seconds |
| Cool SaturationCLG-SAT-TIME AVAV2954 2954AO, ADF44G0 seconds to 900 seconds Default: 300 secondsCool SaturationCLG-TIME- CONSTAV29546AO, ADF45360 seconds to 900 secondsCool Process DeadCLG-DEAD-TIME CONSTAV29547AO, ADF4620 seconds to 120 secondsCool Process DeadCLG-PERIODAV29548AO, ADF4730 seconds to 120 secondsCool PeriodCLG-PERIODAV29556AO, ADF4730 seconds to 120 secondsDefault: 300 secondsDefault: 300 secondsDefault: 30 secondsDefault: 30 secondsDefault: 300 secondsClG-PERIODAV29556AO, ADF551.4 to 3 deta °F (0.78 to 1.66 deta °C)Default: 300 secondsDefault: 300 secondsDefault: 30 secondsDefault: 30 secondsDefault: 30 secondsDefault: 300 secondsClG-PERIODAV29556AO, ADF551.4 to 3 deta °F (0.78 to 1.66 deta °C)Default: 300 secondsDefault: 300 secondsSecondsDefault: 300 secondsSecondsDefault: 300 secondsSecondsSecondsDefault: 300 secondsSecondsDefault: 300 secondsDefault: 300 secondsSecondsSecondsDefault: 300 secondsSecondsSecondsDefault: 300 secondsDefault: 300 secondsSecondsSecondsSecondsSetpointMINHTG-SPAV29550AO, ADFSecondsMax HeatingMAXHTG-SPAV29560 | Cool Process Range | CLG-PROC- | AV | 29544 | AO, ADF | 43 | 10 to 100 delta °F (5.6 to 56 delta °C) |
| Cool saturationCLG-SAI-TIMEAV29545AO, ADF44Bot SecondsCool Time ConstantCLG-TIME- CONSTAV29546AO, ADF45360 seconds to 1,440 seconds Default: 300 secondsCool Process DeadCLG-DEAD-TIME AVAV29547AO, ADF4620 seconds to 120 secondsCool Process DeadCLG-PERIOD AVAV29548AO, ADF4730 seconds to 120 seconds Default: 30 secondsCool ProiodCLG-PERIOD AVAV29556AO, ADF551.4 to 3 delta "F (0.78 to 1.66 delta "C) Default: 2 delta "F (1.72 delta "C)DeadbandDEADBAND AVAV29559AO, ADF5645°F (7.22°C) to Max Heating Setpoint Value"Min Heating SetpointMINHTG-SP AVAV29550AO, ADF5645°F (7.22°C) to Max Heating Setpoint Value"Max Heating SetpointMAXHTG-SP AVAV29560AO, ADF57Thersent value of Min Cooling Setpoint Mode = Individual Setpoints Default: 60°F (15.5°C)Min Cooling SetpointMINCLG-SPAV29561AO, ADF58Present value of Max Asteprint and Heat Cool Setpoint Mode = Individual Setpoints Default: 68°F (20°C)Min Cooling SetpointMINCLG-SPAV29561AO, ADF58Present value of Max Setpoint (MAXHTG-SP) plus 1 to present value of Max Asteprint and Heat Cool Setpoint Made = Individual Setpoints Default: 68°F (20°C)Min Cooling SetpointMAXCLG-SPAV29561AO, ADF58Present val | Caral Cata matian | | A) (| 205.45 | | 4.4 | Default: 10 delta °F (5.6 delta °C) |
| Cool Time Constant CONSTCLG-TIME- CONSTAV29546AO, ADF45360 seconds to 1,440 seconds Default: 20 secondsCool Process Dead TimeCLG-DEAD-TIME COAV29547AO, ADF4620 seconds to 120 secondsCool PeriodCLG-PERIOD CLG-PERIODAV29548AO, ADF4730 seconds to 120 seconds Default: 20 secondsDeadbandDEADBAND ParticipationAV29556AO, ADF551.4 to 3 delta "F (0.78 to 1.66 delta "C) Default: 2 delta "F (1.12 delta "C)Min Heating SetpointMINHTG-SPAV29559AO, ADF5645"F (7.22"C) to Max Heating Setpoint Value' * This point only shows when Occ Setpoint Setpoint Setpoint Setpoint Setpoint Setpoint Setpoint Setpoint Setpoint Setpoint Mode = Individual Setpoints Default: 60"F (15.5"C)Max Heating SetpointMAXHTG-SPAV29560AO, ADF57Present value of Min Heating Setpoint Cool setpoint Mode = Individual Setpoints Default: 60"F (15.5"C)Min Cooling SetpointMINCLG-SPAV29561AO, ADF58Present value of Max Heating Setpoint (MINTG-SP) plus 1 to present value of Min Kax Cooling Setpoint Mode = Individual Setpoints Default: 68"F (20"C)Min Cooling SetpointMINCLG-SPAV29561AO, ADF58Present value of Max Heating Setpoint (MAXHTG-SP) plus 1 to present value of Max Cooling Setpoint Mode = Individual Setpoints Default: 68"F (20"C)Min Cooling SetpointMINCLG-SPAV29561AO, ADF58Present value of Max Heating Setpoint | Time | CLG-SAT-TIME | AV | 29545 | AU, ADF | 44 | Default: 300 seconds |
| CONSTCONSTDefault: 360 secondsCool Process Dead TimeCLG-DEAD-TIME Cool PeriodAV29547AO, ADF4620 seconds to 120 seconds Default: 20 secondsCool PeriodCLG-PERIOD DEADBANDAV29556AO, ADF4730 seconds to 120 seconds Default: 60 secondsDeadbandDEADBAND DEADBANDAV29556AO, ADF551.4 to 3 cleta °F (0.78 to 1.66 delta °C) Default: 2 delta °F (1.12 delta °C)Min Heating SetpointMINHTG-SPAV29559AO, ADF5645°F (7.22°C) to Max Heating Setpoint Value' *This point only shows when Occ Setpoint Select = Min and Max Setpoint Default: 2 delta °F (1.5°C)Max Heating SetpointMAXHTG-SPAV29560AO, ADF57Present value of Min Heating Setpoint (MINHTG-SP) to present value of Min Cooling Setpoint (MINCLG-SP) This point only shows when Occ Setpoint Setpoint Setpoint12Min Cooling SetpointMINCLG-SPAV29561AO, ADF58Present value of Max Heating Setpoint (MINVHTG-SP) to present value of Max XECG-SP)Max Cooling SetpointMINCLG-SPAV29561AO, ADF58Present value of Max Heating Setpoint (MaX Cooling Setpoint Mode = Individual Setpoint Mode = | Cool Time Constant | CLG-TIME- | AV | 29546 | AO, ADF | 45 | 360 seconds to 1,440 seconds |
| Cool Process Dead TimeCLG-DEAD-TIME AVAV29547AO, ADF4620 seconds to 120 seconds Default: 20 secondsCool PeriodCLG-PERIODAV29548AO, ADF4730 seconds to 120 secondsDeadbandDEADBANDAV29556AO, ADF551.4 to 3 delta °F (0.78 to 1.66 delta °C) Default: 2 delta °F (1.12 delta °C)Min Heating SetpointMINHTG-SPAV29559AO, ADF551.4 to 3 delta °F (0.78 to 1.66 delta °C) Default: 2 delta °F (1.12 delta °C)Min Heating SetpointMINHTG-SPAV29559AO, ADF5645°F (7.22°C) to Max Heating Setpoint Value' *This point only shows when Occ Setpoint Mode = Individual Setpoint Mode = <br< td=""><td></td><td>CONST</td><td></td><td></td><td></td><td></td><td>Default: 360 seconds</td></br<> | | CONST | | | | | Default: 360 seconds |
| TimeCool PeriodCLG-PERIODAV29548AO, ADF4730 seconds to 120 seconds Default: 60 seconds to 120 seconds Default: 60 secondsDeadbandDEADBANDAV29556AO, ADF551.4 to 3 delta °F (0.78 to 1.66 delta °C) Default: 2 delta °F (0.78 to 1.66 delta °C)Min Heating SetpointMINHTG-SPAV29559AO, ADF5645°F (7.22°C) to Max Heating Setpoint Value' *This point only shows when Occ Setpoint Setpoint Mode = Individual Setpoints Default: 50°F (15.5°C)Max Heating SetpointMAXHTG-SPAV29560AO, ADF57Present value of Min Heating Setpoint (MINCIG-SP) to present value of Min Cooling Setpoint Mode = Individual Setpoint Cooling Setpoint Mode = Individual Setpoint Mode = | Cool Process Dead | CLG-DEAD-TIME | AV | 29547 | AO, ADF | 46 | 20 seconds to 120 seconds |
| Cool PeriodCLG-PERIODAV29548AO, ADF4730 seconds to 120 seconds Default: 60 secondsDeadbandDEADBANDAV29556AO, ADF551.4 to 3 delta °F (0.78 to 1.66 delta °C) Default: 2 delta °C (1.12 delta °C)Min Heating SetpointMINHTG-SPAV29559AO, ADF5645°F (7.22°C) to Max Heating Setpoint Value3Wax Heating SetpointMAXHTG-SPAV29559AO, ADF5645°F (7.22°C) to Max Heating Setpoint and Heat Cool Setpoint Mode = Individual Setpoints Default: 60°F (15.5°C)Max Heating SetpointMAXHTG-SPAV29560AO, ADF57Present value of Min Heating Setpoint (MINHTG-SP) to present value of Min Cooling Setpoint (MINCLG-SP) minus 12° *This point only shows when Occ SetpointMin Cooling SetpointMINCLG-SPAV29561AO, ADF58Present value of Max Heating Setpoint (MAXHTG-SP) plus 1 to present value of Max Cooling Setpoint (MAXCLG-SP)° *This point only shows when Occ Setpoint Setpoint (MAXCLG-SP)° *This point only shows when Occ Setpoint setect = Min, and Max Setpoint (MAXHTG-SP) plus 1 to present value of Max Cooling Setpoint (MAXCLG-SP)° *This point only shows when Occ Setpoint Setpoint Setpoint Mode = Individual Setpoints Default: 72°F (22.2°C)Max Cooling SetpointMAXCLG-SPAV29562AO, ADF59Min Cooling Setpoint present to 100°F (37.78°C)° *This point only shows when Occ Setpoint Setpoint Setpoint Max Setpoint and Heat Cool Setpoint | Time | | | | | | Default: 20 seconds |
| DeadbandDEADBANDAV29556AQ, ADF551.4 to 3 delta °F (0.78 to 1.66 delta °C) Default: 2 delta °F (1.12 delta °C)Min Heating SetpointMINHTG-SPAV29559AQ, ADF5645°F (7.22°C) to Max Heating Setpoint Value² * This point only shows when Occ Setpoint Select = Min and Max Setpoint and Heat Cool Setpoint Mode = Individual Setpoints Default: 60°F (15.5°C)Max Heating SetpointMAXHTG-SPAV29560AQ, ADF57Present value of Min Heating Setpoint (MINHTG-SP) to present value of Min Cooling Setpoint (MINCLG-SP) minus 12° * This point only shows when Occ SetpointMin Cooling SetpointMINCLG-SPAV29561AQ, ADF58Present value of Max Heating Setpoint (MINCLG-SP) to present value of Min Cooling Setpoint Mode = Individual Setpoints Default: 68°F (20°C)Min Cooling SetpointMINCLG-SPAV29561AQ, ADF58Present value of Max Heating Setpoint (MAXHTG-SP) plus 1 to present value of Max Setpoint and Heat Cool Setpoint (MAXCLG-SP)* *This point only shows when Occ Setpoint Setpoint (MAXCLG-SP)AV29561AQ, ADF58Present value of Max Heating Setpoint (MAXHTG-SP) plus 1 to present value of Max Setpoint and Heat Cool Setpoint Mode = Individual Setpoint (MAXCLG-SP)* *This point only shows when Occ Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint Mode = Individual Setpoint (MAXCLG-SP)Max Cooling SetpointMAXCLG-SPAV29562AQ, ADF59Min Cooling Setpoint present to 100°F (37.78°C)* *This point only shows when Occ Setpoint Select = Min, and Max Setpoint< | Cool Period | CLG-PERIOD | AV | 29548 | AO, ADF | 47 | 30 seconds to 120 seconds |
| DeadbandDEADBANDAV29556AO, ADF551.4 to 3 delta °F (0.78 to 1.66 delta °C) Default: 2 delta °F (1.12 delta °C)Min Heating SetpointMINHTG-SPAV29559AO, ADF5645°F (7.22°C) to Max Heating Setpoint Value* *This point only shows when Occ Setpoint Select = Min and Max Setpoint and Heat Cool Setpoint Mode = Individual SetpointsMax Heating SetpointMAXHTG-SPAV29560AO, ADF57Present value of Min Heating Setpoint Cooling Setpoint (MINLFG-SP) to present value of Min Cooling Setpoint (MINLFG-SP) to present value of Min Cooling Setpoint (MINLCG-SP) minus 12Min Cooling SetpointMINCLG-SPAV29561AO, ADF58Present value of Max Heating Setpoint (MAXHTG-SP) plus 1 to present value of Max Cooling Setpoint (MAXCLG-SP)* *This point only shows when Occ SetpointMin Cooling SetpointMINCLG-SPAV29561AO, ADF58Present value of Max Heating Setpoint (MAXHTG-SP) plus 1 to present value of Max Cooling Setpoint (MAXCLG-SP)* *This point only shows when Occ Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint Mode = Individual Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint Mode = Individual Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint Mode = Individual Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint Mode = Individual Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint Mode = Individual Setpoint Mode = Individual Setpoint Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint Mode = Individual Setpoint present to 100°F (37.78°C)* *This point only shows when Occ Setpoint Setpoi | | | | | | | Default: 60 seconds |
| Min Heating SetpointMINHTG-SPAV29559AO, ADF5645°F (7.22°C) to Max Heating Setpoint Value² *This point only shows when Occ Setpoint and Heat Cool Setpoint Mode = Individual Setpoints Default: 60°F (15.5°C)Max Heating SetpointMAXHTG-SPAV29560AO, ADF57Present value of Min Heating Setpoint (MINHTG-SP) to present value of Min Cooling Setpoint Mode = Individual Setpoints Default: 60°F (15.5°C)Max Heating SetpointMAXHTG-SPAV29560AO, ADF57Present value of Min Heating Setpoint (MINHTG-SP) to present value of Min Cooling Setpoint (MINCLG-SP)minus 1² *This point only shows when Occ Setpoint Mode = Individual Setpoints Default: 68°F (20°C)Min Cooling SetpointMINCLG-SPAV29561AO, ADF58Present value of Max Heating Setpoint (MAXHTG-SP) pour present value of Max Setpoint and Heat Cool Setpoint (MAXCLG-SP)² *This point only shows when Occ Setpoint Setpoint Setpoint (MAXCLG-SP)² *This point only shows when Occ Setpoint Setpoint Setpoint Setpoint Setpoint Setpoint and Heat Cool Setpoint Max Setpoint and Heat Cool Setpoint Setpoint Setpoint SetpointMax Cooling SetpointMAXCLG-SPAV29562AO, ADF59Min Cooling Setpoint present to 100°F (37.78°C)² *This point only shows when Occ Setpoint point only shows when Occ Setpoint and Heat Cool Setpoint present to 100°F (37.78°C)² *This point only shows when Occ Setpoint and Heat Cool Setpoint present to 100°F (37.78°C)² *This point only shows when Occ Setpoint and Heat Cool Setpoint Mode = Individual Setpoint and Max Setpoint and Heat Cool Setpoint present to 100°F (37.78°C)²< | Deadband | DEADBAND | AV | 29556 | AO, ADF | 55 | 1.4 to 3 delta °F (0.78 to 1.66 delta °C) |
| Min Heating SetpointMINHTG-SPAV29559AO, ADF5645°F (7.22°C) to Max Heating Setpoint Value2 *This point only shows when Occ Setpoint Select = Min and Max Setpoint and Heat Cool Setpoint Mode = Individual Setpoints Default: 60°F (15.5°C)Max Heating SetpointMAXHTG-SPAV29560AO, ADF57Present value of Min Heating Setpoint (MINHTG-SP) to present value of Min Cooling Setpoint (MINCLG-SP)minus 12 *This point only shows when Occ Setpoint de = Individual Setpoint (MINCLG-SP)minus 12 *This point only shows when Occ Setpoint Select = Min, and Max Setpoint Default: 68°F (20°C)Min Cooling SetpointMINCLG-SPAV29561AO, ADF58Present value of Max Heating Setpoint (MAXHTG-SP) plus 1 to present value of Max Cooling Setpoint (MAXCLG-SP)2 *This point only shows when Occ Setpoint (MAXCLG-SP)2 *This point only shows when Occ Setpoint (MAXCLG-SP)2 *This point only shows when Occ Setpoint Select = Min, and Max Setpoint (MAXCLG-SP)2 *This point only shows when Occ Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint Mode = Individual Setpoint (MAXCLG-SP)2 *This point only shows when Occ Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint Mode = Individual Setpoint Mode = Individual Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint Mode = Individual Setpoint select = Min, and Max Setpoint and Heat Cool Setpoint present to 100°F (37.78°C)2 *This point only shows when Occ Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint Max S | | | | | | | Default: 2 delta °F (1.12 delta °C) |
| Setpoint Value ² *This point only shows when Occ Setpoint Select = Min and Max Setpoint and Heat Cool Setpoint Select = Min and Max Setpoint and Heat Cool Setpoint Select = Min and Max Setpoint Default: 60°F (15.5°C) Max Heating Setpoint MAXHTG-SP AV 29560 AO, ADF 57 Present value of Min Heating Setpoint (MINHTG-SP) to present value of Min Cooling Setpoint (MINLG-SP) to present value of Min Cooling Setpoint (MINLG-SP) is point select = Min, and Max Setpoint and Heat Cool Setpoint Mode = Individual Setpoints Min Cooling MINCLG-SP Setpoint AV Setpoint Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint Mode = Individual Setpoints Min Cooling MINCLG-SP Setpoint AV Setpoint Setpoint Select = Min, and Max Setpoint (MAXHTG-SP) plus 1 to present value of Max Cooling Setpoint (MAXCLG-SP) ² Setpoint AV Setpoint Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint Mode = Individual Setpoints Default: 72°F (22.2°C) Max Cooling Setpoint (MAXCLG-SP) ² Max Cooling MAXCLG-SP Setpoint AV Setpoint Setpoint present to 100°F (37.78°C) ² *T | Min Heating | MINHTG-SP | AV | 29559 | AO, ADF | 56 | 45°F (7.22°C) to Max Heating Setpoint |
| Max Heating SetpointMAXHTG-SPAV29560AO, ADF57Present value of Min Heating Setpoint Cooling Setpoint (MINLLG-SP) to present value of Min Cooling Setpoint Mode = Individual Setpoints Default: 60°F (15.5°C)Min Cooling SetpointMINCLG-SPAV29561AO, ADF57Present value of Min Heating Setpoint (MINHTG-SP) to present value of Min Cooling Setpoint Mode = Individual Setpoints Default: 68°F (20°C)Min Cooling SetpointMINCLG-SPAV29561AO, ADF58Present value of Max Heating Setpoint (MAXHTG-SP) plus 1 to present value of Max Cooling Setpoint (MAXCLG-SP)² *This point only shows when Occ Setpoint Setpoint Setpoint Mode = Individual Setpoint (MAXCLG-SP)² *This point only shows when Occ Setpoint Setpoint Mode = Individual Setpoint Mode = <td>Setpoint</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Value²</td> | Setpoint | | | | | | Value ² |
| Max Heating SetpointMAXHTG-SP AVAV29560 29560AO, ADF AO, ADF57Setpoint Select = Min and Max Setpoint and Heat Cool Setpoint Mode = Individual Setpoints Default: 60°F (15.5°C)Max Heating SetpointMAXHTG-SP AVAV29560AO, ADF57Present value of Min Heating Setpoint (MINHTG-SP) to present value of Min Cooling Setpoint (MINCLG-SP)minus 1² *This point only shows when Occ Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint Mode = Individual Setpoints Default: 68°F (20°C)Min Cooling SetpointMINCLG-SPAV29561AO, ADF58Present value of Max Heating Setpoint (MAXHTG-SP) plus 1 to present value of Max Cooling Setpoint (MAXCLG-SP)² *This point only shows when Occ Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint Mode = Individual Setpoints Default: 72°F (22.2°C)Max Cooling SetpointMAXCLG-SPAV29562AO, ADF59Min Cooling Setpoint present to 100°F (37.78°C)² *This point only shows when Occ Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint Mode = Individual Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint Mode = Individual Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint Select = Min, and Max Setpoint < | | | | | | | *This point only shows when Occ |
| and Heat Cool Setpoint Mode = Individual Setpoints Default: 60°F (15.5°C)Max Heating SetpointMAXHTG-SPAV29560AO, ADF57Present value of Min Heating Setpoint (MINHTG-SP) to present value of Min Cooling Setpoint (MINCLG-SP)minus 1² *This point only shows when Occ SetpointMin Cooling SetpointMINCLG-SPAV29561AO, ADF58Present value of Max Heating Setpoint (MINHTG-SP) to present value of Max Setpoint and Heat Cool Setpoint Mode = Individual Setpoints Default: 68°F (20°C)Min Cooling SetpointMINCLG-SPAV29561AO, ADF58Present value of Max Heating Setpoint (MAXHTG-SP) plus 1 to present value of Max Setpoint Setpoint for any shows when Occ Setpoint Setpoint Setpoint (MAXCLG-SP)² *This point only shows when Occ Setpoint Setpoint Setpoint Mode = Individual Setpoints Default: 72°F (22.2°C)Max Cooling SetpointMAXCLG-SPAV29562AO, ADF59Min Cooling Setpoint present to 100°F (37.78°C)² *This point only shows when Occ Setpoint Setpoint Setpoint Mode = Individual Setpoint Setpoint Setpoint Mode = Individual Setpoint Setpoint Mode = Individual Setpoint Setpoint Mode = Individual Setpoint Setpoint Setpoint Present to 100°F (37.78°C)² *This point only shows when Occ Setpoint Setpoint Present to 100°F (37.78°C)² *This point only shows when Occ Setpoint Setpoint | | | | | | | Setpoint Select = Min and Max Setpoint |
| Max Heating SetpointMAXHTG-SP SetpointAV29560 AVAO, ADF57Present value of Min Heating Setpoint (MINHTG-SP) to present value of Min Cooling Setpoint (MINCLG-SP)minus 12 *This point only shows when Occ Setpoint SetpointMin Cooling SetpointMINCLG-SP MINCLG-SPAV29561AO, ADF58Present value of Max Heating Setpoint and Heat Cool Setpoint Mode = Individual Setpoints Default: 68°F (20°C)Min Cooling SetpointMINCLG-SPAV29561AO, ADF58Present value of Max Heating Setpoint (MAXHTG-SP) plus 1 to present value of Max Cooling Setpoint Mode = Individual Setpoint Max Setpoint and Heat Cool Setpoint Mode = Individual Setpoint Max Clg-SP)2 *This point only shows when Occ Setpoint Setpoint SetpointMax Cooling SetpointMAXCLG-SPAV29562AO, ADF59Min Cooling Setpoint present to 100°F (37.78°C)2 *This point only shows when Occ Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint present to 100°F (37.78°C)2 *This point only shows when Occ Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint present to 100°F (37.78°C)2 *This point only shows when Occ Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint Mode = | | | | | | | and Heat Cool Setpoint Mode = |
| Max Heating SetpointMAXHTG-SPAV29560AO, ADF57Present value of Min Heating Setpoint (MINHTG-SP) to present value of Min Cooling Setpoint (MINCLG-SP)minus 1² *This point only shows when Occ Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint Mode = Individual Setpoints Default: 68°F (20°C)Min Cooling SetpointMINCLG-SPAV29561AO, ADF58Present value of Max Heating Setpoint (MAXHTG-SP) plus 1 to present value of Max Cooling Setpoint (MAXCLG-SP)² *This point only shows when Occ SetpointMax Cooling SetpointMAXCLG-SPAV29561AO, ADF58Present value of Max Heating Setpoint (MAXHTG-SP) plus 1 to present value of Max Cooling Setpoint (MAXCLG-SP)² *This point only shows when Occ Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint Mode = Individual Setpoints Default: 72°F (22.2°C)Max Cooling SetpointMAXCLG-SPAV29562AO, ADF59Min Cooling Setpoint present to 100°F (37.78°C)² *This point only shows when Occ Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint Mode = | | | | | | | Individual Setpoints |
| Max Heating SetpointMAXHIG-SPAV29560AO, ADF57Present value of Min Heating Setpoint (MINHTG-SP) to present value of Min Cooling Setpoint (MINCLG-SP) minus 1² *This point only shows when Occ Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint Mode = Individual Setpoints Default: 68°F (20°C)Min Cooling SetpointMINCLG-SPAV29561AO, ADF58Present value of Max Heating Setpoint (MAXHTG-SP) plus 1 to present value of Max Cooling Setpoint (MAXCLG-SP)² *This point only shows when Occ Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint Mode = Individual Setpoints Default: 72°F (22.2°C)Max Cooling SetpointMAXCLG-SPAV29562AO, ADF59Min Cooling Setpoint present to 100°F (37.78°C)² *This point only shows when Occ Setpoint Setpoint present to 100°F (37.78°C)² *This point only shows when Occ Setpoint Setpoint Mode = Individual Setpoint only shows when Occ Setpoint Setpoint only shows when Occ Setpoint Select = Min, a | | | | 00560 | | | Default: 60°F (15.5°C) |
| Setpoint(MINTIG-SP) to present value of MIN Cooling Setpoint (MINCLG-SP)minus 12 *This point only shows when Occ Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint Mode = Individual Setpoints Default: 68°F (20°C)Min Cooling SetpointMINCLG-SPAV29561AO, ADF58Present value of Max Heating Setpoint (MAXHTG-SP) plus 1 to present value of Max Cooling Setpoint (MAXCLG-SP)2 *This point only shows when Occ Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint Mode = Individual Setpoint Mode = Individual Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint Mode = Individual Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint present to 100°F (37.78°C)2 *This point only shows when Occ Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint present to 100°F (37.78°C)2 *This point only shows when Occ Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint Mode = Individual Setpoint present to 100°F (37.78°C)2 *This point only shows when Occ Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint Mode = Min Cooling Setpoint Mode = | Max Heating | MAXH1G-SP | AV | 29560 | AO, ADF | 57 | (MINHEC SP) to proceed value of Min |
| Cooling Sectoring Sectoring Sectoring Sectoring Sectoring Sectoring Sectoring Sectoring (MAXCLG-SP) (Max Sectoring Secto | Setpoint | | | | | | Cooling Setpoint (MINCLG-SP)minus 1 ² |
| And Prime point Select = Min, and Max Setpoint and Heat Cool Setpoint Mode = Individual Setpoints Default: 68°F (20°C)Min Cooling SetpointMINCLG-SPAV29561AO, ADF58Present value of Max Heating Setpoint (MAXHTG-SP) plus 1 to present value of Max Cooling Setpoint (MAXCLG-SP)2 *This point only shows when Occ Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint Mode = Individual Setpoints Default: 72°F (22.2°C)Max Cooling SetpointMAXCLG-SPAV29562AO, ADF59Min Cooling Setpoint present to 100°F (37.78°C)2 *This point only shows when Occ Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint present to 100°F (37.78°C)2 *This point only shows when Occ Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint Mode = | | | | | | | *This point only shows when Occ |
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| Min Cooling SetpointMINCLG-SPAV29561AO, ADF58Present value of Max Heating Setpoint (MAXHTG-SP) plus 1 to present value of Max Cooling Setpoint (MAXCLG-SP)² *This point only shows when Occ Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint Mode = Individual Setpoints Default: 72°F (22.2°C)Max Cooling SetpointMAXCLG-SPAV29562AO, ADF59Min Cooling Setpoint present to 100°F (37.78°C)² *This point only shows when Occ Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint present to 100°F (37.78°C)² *This point only shows when Occ Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint Mode = | | | | | | | Individual Setpoints |
| Min Cooling SetpointMINCLG-SPAV29561AO, ADF58Present value of Max Heating Setpoint (MAXHTG-SP) plus 1 to present value of Max Cooling Setpoint (MAXCLG-SP)2 *This point only shows when Occ Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint Mode = Individual Setpoints Default: 72°F (22.2°C)Max Cooling SetpointMAXCLG-SPAV29562AO, ADF59Min Cooling Setpoint present to 100°F (37.78°C)2 *This point only shows when Occ Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint present to 100°F (37.78°C)2 *This point only shows when Occ Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint Mode = | | | | | | | Default: 68°F (20°C) |
| Max Cooling MAXCLG-SP Max Cooling MAXCLG-SP Max Cooling MAXCLG-SP Max Cooling MAXCLG-SP AV 29562 AO, ADF 59 Min Cooling Setpoint only shows when Occ Setpoint Setpoint Graduation Max Cooling MAXCLG-SP AV 29562 AO, ADF 59 Min Cooling Setpoint present to 100°F (37.78°C) ² *This point only shows when Occ Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint Mode = | Min Cooling Setpoint | MINCLG-SP | AV | 29561 | AO, ADF | 58 | Present value of Max Heating Setpoint (MAXHTG-SP) plus 1 to present value of |
| Max Cooling MaxCLG-SP AV 29562 AO, ADF 59 Min Cooling Setpoint (in victor of r) *This point only shows when Occ Setpoint Mode = Individual Setpoints Default: 72°F (22.2°C) Max Cooling MAXCLG-SP AV 29562 AO, ADF 59 Min Cooling Setpoint present to 100°F (37.78°C)² *This point only shows when Occ Setpoint Setpoint Setpoint Setpoint only shows when Occ Setpoint only shows when Occ Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint Mode = | Serpoint | | | | | | Max Cooling Setpoint (MAXCI G-SP) ² |
| Max Cooling MAXCLG-SP AV 29562 AO, ADF 59 Min Cooling Setpoint present to 100°F (37.78°C)² *This point only shows when Occ Setpoint Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint present to 100°F (37.78°C)² | | | | | | | *This point only shows when Occ |
| Max Cooling MAXCLG-SP AV 29562 AO, ADF 59 Min Cooling Setpoint present to 100°F (37.78°C)² *This point only shows when Occ Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint Mode = AO, ADF 59 | | | | | | | Setpoint Select = Min, and Max Setpoint |
| Max Cooling MAXCLG-SP AV 29562 AO, ADF 59 Min Cooling Setpoint present to 100°F (37.78°C)² Setpoint AV 29562 AO, ADF 59 Min Cooling Setpoint present to 100°F (37.78°C)² Max Cooling AV 29562 AO, ADF 59 Min Cooling Setpoint present to 100°F (37.78°C)² Setpoint AV 29562 AO, ADF 59 Min Cooling Setpoint only shows when Occ Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint Mode = | | | | | | | and Heat Cool Setpoint Mode = |
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| Setpoint (37.78°C) ² *This point only shows when Occ Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint Mode = | Max Cooling | MAXCLG-SP | AV | 29562 | AO, ADF | 59 | Min Cooling Setpoint present to 100°F |
| *This point only shows when Occ Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint Mode = | Setpoint | | | | | | (37.78°C) ² |
| Setpoint Select = Min, and Max Setpoint and Heat Cool Setpoint Mode = | | | | | | | *This point only shows when Occ |
| and Heat Cool Setpoint Mode = | | | | | | | Setpoint Select = Min, and Max Setpoint |
| Individual Saturiates | | | | | | | anu Heat Cool Setpoint Mode = |
| | | | | | | | Default: 80°E (26.6°C) |

| Point description | Point name | Object | Instance | N2 Point | N2 Point | Unit (IP), enum set/range |
|---------------------|------------|--------|----------|----------|----------|---|
| | | type | ID | type | address | |
| Occ Setpoint Select | OCCSP-SEL | MV | 29563 | AO, ADF | 60 | Occ Setpoint select |
| | | | | | | 1. Setpoint Offset |
| | | | | | | 2. Min and Max Setpoint |
| Min Setpoint | MIN-SP | AV | 29564 | AO, ADF | 61 | 45°F to 85°F (7°C to 30°C) ³ |
| | | | | | | *This point only shows when Occ |
| | | | | | | Setpoint Select = Min, and Max Setpoint |
| | | | | | | and Heat Cool Setpoint Mode = Common |
| | | | | | | Setpoints |
| | | | 0.05.65 | 10.155 | 60 | Default: 45°F (7.2°C) |
| Max Setpoint | MAX-SP | AV | 29565 | AO, ADF | 62 | 60°F to 100°F (16°C to 38°C) ³ |
| | | | | | | *This point only shows when Occ |
| | | | | | | Setpoint Select = Min and Max Setpoint |
| | | | | | | Setpoints |
| | | | | | | Default: 85°F (29.4°C) |
| Heat Cool Setpoint | HTGCLGSP- | MV | 29566 | MI, ADI | 24 | Heat Cool Setpoint Mode |
| Mode | MODE | | | | | 1. Common Setpoint |
| | | | | | | 2 Individual Setpoints |
| Common Setpoint | COMMON-SP | AV | 29567 | AO, ADF | 62 | 55°F to 90°F (12.77°C to 32.22°C) |
| | | | | -, | | Default: 72°F (22.2°C) |
| Fan Mode 2 | FAN-MODE2 | MV | 29568 | MI, ADI | 27 | TEC3000 Fan Mode 2 |
| | | | | | | 1. Auto |
| | | | | | | 2 Smart |
| | | | | | | 3 Low |
| | | | | | | 4 Medium |
| | | | | | | 5. High |
| | | | | | | *This point only shows if the unit type |
| | | | | | | is 2-pipe or 4-pipe and the fan type is |
| | | | | | | multispeed |
| Fan Override 2 | FAN-OVRD2 | MV | 29569 | MI, ADI | 28 | UI Fan Override 2 |
| | | | | | | 1. Auto |
| | | | | | | 2. Quiet |
| | | | | | | 3. Low |
| | | | | | | 4. Medium |
| | | | | | | 5. High |
| | | | | | | *This point only shows if the unit type |
| | | | | | | is 2-pipe or 4-pipe and the fan type is |
| | | | | | | multispeed |
| Control State | TEMPCTRL- | MV | 29570 | MI, ADI | 26 | TEMP_CONTROL_SETUP_SUBSET |
| | SETUP2 | | | | | 1. Automatic PID Tuning |
| | | | | | | 2. Deadband Override |
| | | | | | | 3. Manual PID Tuning |
| Network Override | NET-ZNT | AV | 29571 | AO, ADF | 63 | -50°F to 120°F (-45°C to 49°C) |
| Zone Temperature | | | | | | |

| Point description | Point name | Object | Instance | N2 Point | N2 Point | Unit (IP), enum set/range |
|--|-----------------|----------|----------|----------|----------|--|
| | | type | ID | type | address | |
| Signal Strength | Signal Strength | MV | 29724 | n/a | n/a | Wireless Signal Strength |
| | | | | | | 1. None |
| | | | | | | 2. Weak |
| | | | | | | 3. Average |
| | | | | | | 4. Strong |
| Cooling Valve % Command | CLG-O | AO | 86907 | AO, AO | 5 | 0% to 100% |
| Heating Valve % Command | HTG-O | AO | 86906 | AO, AO | 4 | 0% to 100% |
| AO1 Output / Fan Speed Percent Command | VSF-O | AO | 86905 | AO, AO | 3 | 0% to 100% |
| BO2 Command / | FANL-C | BO | 86909 | BO, BO | 2 | Inactive/Active |
| BO2 Fan Low | | | | | | 1. Inactive |
| Command | | | | | | 2. Active |
| BO3 Command / | FANM-C | BO | 86910 | BO, BO | 3 | Inactive/Active |
| BO3 Fan Medium | | | | | | 1. Inactive |
| Command | | | | | | 2. Active |
| BO4 Command / | FANH-C | BO | 86911 | BO, BO | 4 | Inactive/Active |
| BO4 Fan High | | | | | | 1. Inactive |
| Command | | | | | | 2. Active |
| AUX Command / | AUX | во | 86913 | BO, BO | 8 | Inactive/Active |
| BO8 AUX | | | | | | 1. Inactive |
| | | | | | | 2. Active |
| BI1 Sensor / Binary | BI1-S | BI | 30827 | BI, BI | 1 | Inactive/Active |
| Input 1 | | | | | | 1 Inactive |
| | | | | | | 2 Active |
| BI2 Sensor / Binary | BI2-S | BI | 30828 | BI. BI | 2 | Inactive/Active |
| Input 2 | | | | | | |
| | | | | | | |
| Schedule | Schedule | Schedule | 10133 | n/a | n/a | n/a |
| Local Occupancy | LOCAL-OCC | MV | 6 | n/a | n/a | Occ Schedule |
| | | | | | | 1 Occupied |
| | | | | | | 2 Upaccupied |
| | | | | | | 2. Standby |
| | | | | | | 4 Not Sot |
| Calendar | Calendar | Calendar | 10019 | n/a | n/a | n/a |
| Dehumidification | DEHUM-ENABLE | MV | 29736 | MI. ADI | 36 | No/Yes |
| Enable | | | | | | 1 No |
| | | | | | | |
| | | | | | | *This point only shows if the unit type is |
| | | | | | | 2-pipe or 4-pipe or TEC controls the RTU |

| Point description | Point name | Object | Instance | N2 Point | N2 Point | Unit (IP), enum set/range |
|-------------------|-----------------|--------|----------|----------|----------|--|
| | | type | ID | type | address | |
| Unocc Dehum | UNOCC- | MV | 29737 | MI, ADI | 37 | No/Yes |
| Enable | DEHUM-ENABLE | | | | | 1. No |
| | | | | | | 2. Yes |
| | | | | | | *This point only shows if |
| | | | | | | Dehumidification Enable = Yes |
| Chilled | EFF-CHWST | AV | 29734 | AO, ADF | 69 | n/a |
| Water Supply | | | | - / | | |
| Temperature | | | | | | |
| Chilled | CHWST-SP | AV | 29735 | AO, ADF | 70 | 0°F to 250°F (-17°C to 121°C) |
| Water Supply | | | | | | *This point only shows if there is neither |
| Temperature | | | | | | a CHWST sensor wired to TEC nor a |
| Setpoint | | | | | | Network override value setup and |
| | | | | | | Dehum Enable is set to Enable |
| | | | | | | Default: 44°F (6.6°C) |
| Network | NET-CHWST | AV | 29736 | AO, ADF | 71 | 0°F to 250°F (-17°C to 121°C) |
| Override Chilled | | | | | | |
| Water Supply | | | | | | |
| Temperature | | | | | | |
| Outdoor Air | EFF-OAH | AV | 29737 | AO, ADF | 72 | n/a |
| Humidity | | A)/ | 20729 | | 72 | E00/ to 750/ |
| Minimum Position | | AV | 29/30 | AU, ADF | /3 | |
| | r O S | | | | | * This point only shows if |
| | | | | | | Denumidification Sequence Mode is |
| | | | | | | Reheat and Dehum Enable is set to |
| | | | | | | Fnable |
| | | | | | | Default: 75% |
| Cooling Valve | CI GVI V-START- | AV | 29739 | AO, ADF | 74 | 50% to 100% |
| Starting Position | POS | | 23733 | | <i>.</i> | *This point only shows if |
| | | | | | | Dehumidification Sequence Mode is |
| | | | | | | setup as Individual Coils or 2-pipe with |
| | | | | | | Reheat and Dehum Enable is set to |
| | | | | | | Enable |
| | | | | | | Default: 100% |
| Heating Valve | HTGVLV-START- | AV | 29740 | AO, ADF | 75 | 0% to 100% |
| Starting Position | POS | | | | | *This point only shows if |
| | | | | | | Dehumidification Sequence Mode is |
| | | | | | | setup as Individual Coils and Dehum |
| | | | | | | Enable is set to Enable |
| | | | | | | Default: 50% |
| Coil Tempering | COIL-TPR-TIME | AV | 29741 | AO, ADF | 76 | 3 min to 10 min |
| Time | | | | | | *This point only shows if |
| | | | | | | Dehumidification Sequence Mode is |
| | | | | | | setup as Single Coil and Dehum Enable is |
| | | | | | | set to Enable |
| | | | | | | Default: 5 min |

| Point description | Point name | Object | Instance | N2 Point | N2 Point | Unit (IP), enum set/range |
|----------------------|------------------|--------|----------|----------|----------|---|
| | | type | ID | type | address | |
| Dehumidification | DEHUM- | AV | 29742 | AO, ADF | 77 | 1 to 5 delta °F, delta °C |
| Overcool Limit | OVRCLG-LIM | | | | | *This point only shows if Dehumidification Sequence Mode is setup as Single Coil and Dehum Enable is set to Enable |
| | | | | | | Default: 2 delta °F (1.12 delta °C) |
| Dehumidification | 4PIPE-DEHUM- | MV | 29729 | MI, ADI | 29 | TEC3000 FCU Dehum Seq Mode |
| Sequence Mode | SEQ-MODE | | | | | 1. Individual Coils |
| | | | | | | 2. Single Coil |
| | | | | | | *This point only shows if Unit Type is 4- pipe and Dehum Enable is set to Enable |
| Dehumidification | 2PIPE-DEHUM- | MV | 29730 | MI, ADI | 30 | TEC3000 Dehum Sequence |
| Sequence Mode | SEQ-MODE | | | | | 1. Individual Coils |
| | | | | | | 2. Single Coil |
| | | | | | | 3. 2-Pipe With Reheat |
| | | | | | | |
| | | | | | | *This point only shows if Unit Type is 2- |
| Scheduled | SCH-CIR-EN | MV | 29731 | MI. ADI | 31 | Disable/Fnable |
| Circulation Enable | | | 25,5. | | | |
| | | | | | | 1. DISADIE |
| Schodulad | | N/1\/ | 20722 | | 20 | 2. Eliable |
| Circulation Only | | | 23132 | | 52 | |
| When Occupied | | | | | | 1. Disable |
| | | | | | | 2. Enable |
| | | | | | | Scheduled Circulation Enable is set to |
| | | | | | | Disable |
| Minimum Hourly | MIN-HR-FAN | AV | 29743 | AO, ADF | 78 | 5 min to 30 min |
| Fan Runtime | | | | | | *This point shows Unreliable if |
| | | | | | | Scheduled Circulation Enable is set to |
| | | | | | | Disable |
| | | | | | | Default: 5 min |
| Variable Speed Fan | VAR-FAN-CIR-SP | AV | 29744 | AO, ADF | 79 | 0% to 100% |
| Circulation Setpoint | | | | | | *This point only shows if Fan Type is |
| | | | | | | Variable speed and Scheduled Circulation |
| | | | | | | |
| Multi Speed Fan | MIII TI-FAN-CIR- | MV | 29733 | | 12 | Cencitivity |
| Circulation Setpoint | SP | | 25755 | | | |
| | | | | | | 1. LOW |
| | | | | | | 2. Medium |
| | | | | | | 3. High |
| | | | | | | *This point only shows if Fan Type is |
| | | | | | | Multi Speed and Scheduled Circulation |
| | | | | | | Enable is True |

The passcode cannot be changed from BAS. The passcode can only be defined by the local display or through MAP 1 version 4.0 or later.

The Occ Setpoint Select is set to the Min and Max Setpoint and Heat Cool Setpoint Mode is set to the Individual Setpoint. The Occ Setpoint Select is set to the Min and Max Setpoint and Heat Cool Setpoint Mode is set to the Common Setpoint.

2 3

| Point description | Point name | Object | Instance | N2 point | N2 Point | Enur | n Set/Range |
|----------------------------------|------------------|--------|----------|----------|----------|------|--|
| | | type | ID | type | address | | |
| Unit Status | UNIT-S | MV | 29700 | MI, ADI | 13 | TEC3 | 000 Detailed Control Status 2 |
| | | | | | | 1. | System Fault |
| | | | | | | 2. | Airflow Fault |
| | | | | | | 3. | Open Window |
| | | | | | | 4. | Control Off |
| | | | | | | 5. | Unreliable Temperature |
| | | | | | | 6. | Dehumidification |
| | | | | | | 7. | Idle |
| | | | | | | 8. | Cooling |
| | | | | | | 9. | Heating |
| | | | | | | 10. | Cooling Unavailable |
| | | | | | | 11. | Heating Unavailable |
| | | | | | | 12. | Cooling Unavailable due to |
| | | | | | | | Changeover |
| | | | | | | 13. | Cooling Unavailable due to OA Temp |
| | | | | | | 14. | Cooling Unavailable due to Control Mode |
| | | | | | | 15. | Heating Unavailable due to Changeover |
| | | | | | | 16. | Heating Unavailable due to OA Temp |
| | | | | | | 17. | Heating Unavailable due to Control Mode |
| | | | | | | 18 | Load Shed Active |
| | | | | | | 19. | Dehumidifying – Reheat |
| | | | | | | 20. | Dehumidifying – Fan Only |
| | | | | | | 21. | Dehum Unavail By Dew Point |
| Operational Space | EFF-ZNT | AV | 29701 | AO, ADF | 16 | n/a | , |
| Temperature | | A) (| 20704 | | 10 | | |
| Air Temperature | EFF-UAT | AV | 29704 | AU, ADF | 19 | n/a | |
| Active Setpoint | EFF- SETPOINT | AV | 29705 | AO, ADF | 20 | n/a | |
| CV Operating Cooling Setpoint | EFFCLG-SP | AV | 29706 | AO, ADF | 21 | n/a | |
| CV Operating Heating Setpoint | EFFHTG-SP | AV | 29707 | AO, ADF | 22 | n/a | |
| Occupancy Status | EFF-OCC | MV | 29708 | MI, ADI | 14 | TEC3 | 000 Occupancy Status |
| | | | | | | 1. | Occupied |
| | | | | | | 2. | Temp Occupancy |
| | | | | | | 3 | Unoccupied |
| | | | | | | 4. | Standby |
| | | | | | | 5. | Occupied-Override |
| | | | | | | 6. | Unoccupied-Override |

| Point description | Point name | Object | Instance | N2 point | N2 Point | Enum Set/Range |
|--------------------|-----------------------|--------|----------|-----------|----------|--|
| | | type | ID | type | address | |
| Occupancy Input | OCCSOURCE- | MV | 29709 | MI, ADI | 15 | TEC3000 Occupancy Source |
| Source | S | | | | | 1. Occupancy B1 |
| | | | | | | 2. Temp Occ B1 |
| | | | | | | 3. Temp Occ |
| | | | | | | 4. Occ Override |
| | | | | | | 5. Local Schedule |
| | | | | | | 6. BAS Schedule |
| | | | | | | 7. Occupancy Sensor |
| Econ Command | OAD-O | AV | 86905 | AO, AO | 3 | n/a |
| Cool Cmd | CLGPID-% | AV | 29714 | AO, ADF | 25 | 0% to 100% |
| Cool Stage 1 | Y1-C | BO | 86911 | BO, BO | 4 | Inactive/Active |
| | | | | | | 1. Inactive |
| | | | | | | 2. Active |
| Cool Stage 2 | Y2-C | BO | 86910 | BO, BO | 3 | Inactive/Active |
| | | | | | | 1. Inactive |
| | | | | | | 2. Active |
| Heat Cmd | HTGPID-% | AV | 29717 | AO, ADF | 26 | 0% to 100% |
| Heat Stg 1 | W1OB-C | BO | 87102 | BO, BO | 7 | Inactive/Active |
| | | | | | | 1. Inactive |
| | | | | | | 2 Active |
| Heat Stg 2 | W2SUP-C | BO | 87101 | BO. BO | 6 | Inactive/Active |
| | | | | -, - | | 1 Inactivo |
| | | | | | | |
| Manual Occupancy | OCCOVRD- | MV | 29518 | MI ADI | 5 | LI Occ Override |
| Override | MODE | | | | | |
| | | | | | | 1. No Override |
| | | | | | | 2. Occupied |
| Suponvisony | | NAV/ | 20510 | | 6 | 3. Unoccupied |
| Occupancy | NET-OCC | | 29519 | IVII, ADI | 0 | |
| | | | | | | 1. Occupied |
| | | | | | | 2. Unoccupied |
| | | | | | | 3. Standby |
| | | | | | | 4. Not Set |
| Occupancy Schedule | OCC-CONFIG | MV | 29520 | MI, ADI | 7 | SE Occupancy Mode |
| Source | | | | | | 1. Schedule |
| | | | | | | 2. External |
| Passcode | PASSCODE ¹ | AV | 29522 | AO, ADF | 15 | 0000 to 9999 |
| Fan Mode | FAN-MODE | MV | 29524 | MI, ADI | 9 | TEC3000 Fan Mode |
| | | | | | | 1 On |
| | | | | | | 2 Auto |
| | | | | | | 3 Smart |
| | | | | | | *This point only shows if the unit type is |
| | | | | | | 2-pipe or 4-pipe and the fan type is single- |
| | | | | | | or variable-speed |

| Point description | Point name | Object | Instance | N2 point | N2 Point | Enum Set/Range |
|----------------------|------------|--------|----------|----------|----------|--|
| | | type | ID | type | address | |
| Fan Override | FANOVRD- | MV | 29525 | MI, ADI | 10 | UI Fan Override |
| | MODE | | | | | 1. On |
| | | | | | | 2. Auto |
| | | | | | | 3 Quiet |
| | | | | | | *This point only shows if the unit type is |
| | | | | | | 2-pipe or 4-pipe and the fan type is single- |
| | | | | | | or variable-speed |
| Aux Mode | AUX-MODE | MV | 29527 | MI, ADI | 11 | TEC3000 Aux Mode |
| | | | | | | 1. Not Used |
| | | | | | | 2. Occupied NO |
| | | | | | | 3 Occupied NC |
| | | | | | | 4. Occupied Fap NO |
| | | | | | | 4. Occupied Fail NO |
| | | | | | | 5. Occupied Fail NC |
| | | | | | | 6. On |
| | | | | | | 7. Off |
| Temperature Units | TEMP-UNITS | MV | 29528 | MI, ADI | 12 | Unit Set |
| | | | | | | 1. IP |
| | | | | | | 2. SI |
| Max Setpoint Offset | MAXSP- | AV | 29529 | AO, ADF | 29 | 0°F to 20°F (0°C to -11°C) |
| | OFFSET | | | | | |
| B1 Sensor | BI1-S | BI | 30827 | BI, BI | 1 | Inactive/Active |
| | | | | | | 1. Inactive |
| | | | | | | 2. Active |
| B2 Sensor | BI2-S | BI | 30828 | BI, BI | 2 | Inactive/Active |
| | | | | | | 1. Inactive |
| | | | | | | 2 Active |
| BO2 Command | FAN-C | BO | 86909 | BO, BO | 2 | Inactive/Active |
| | | | | 20,20 | - | |
| | | | | | | 1. Inactive |
| | | | | | | 2. Active |
| Load Shed Active | LOADSHED- | MV | 29728 | MI, ADI | 19 | No/Yes |
| | EN | | | | | 1. No |
| | | | | | | 2. Yes |
| Load Shed Rate limit | LOADSHED- | AV | 29725 | AO, ADF | 30 | 0°F to 1°F/min (0°C to 0.5°C/min) |
| | RL | | | | | Default: 0.1°F (0.56°C) |
| Load Shed Adjust | LOADSHED- | AV | 29726 | AO, ADF | 31 | 0°F to 8°F (-17.78°C to -13.33°C) |
| | ADJ | | | | | Default: 4 delta °F (2.2 delta °C) |
| Fan Speed Status | FANSPD-S | MV | 29712 | MI, ADI | 18 | Supply Fan Status |
| | | | | | | 1 Off |
| | | | | | | 2 On |
| | | | | | | 2. On 2. Low |
| | | | | | | 4 Madium |
| | | | | | | |
| | | | | | | 5. High |

| Point description | Point name | Object type | Instance ID | N2 point type | N2 Point address | Enum Set/Range |
|--|-------------|----------------|----------------|------------------|---------------------|--|
| Local Occupancy | LOCAL-OCC | MV | 6 | n/a | n/a | Occ Schedule |
| | | | | | | 1. Occupied |
| | | | | | | 2. Unoccupied |
| | | | | | | 3. Standby |
| | | | | | | 4. Not Set |
| Control Mode | SYSTEM- | MV | 29500 | MI, ADI | 1 | TEC3000 Unit Control Mode |
| | MODE | | | | | 1 Auto |
| | | | | | | 2 Cooling |
| | | | | | | 3 Heating |
| Unit Enable | UNITEN- | MV | 29501 | MI ADI | 2 | Shutdown/Enable |
| | MODE | | 25501 | 111,7101 | | |
| | | | | | | |
| Common Cotropint | | A) (| 205.67 | | 62 | 2. Enable |
| Common Setpoint | COMINION-SP | AV | 29567 | AU, ADF | 62 | 55°F (0 90°F (12.77°C (0 32.22°C) |
| Opening Cooling | | A) (| 20502 | | 1 | Default: /2°F (22.2°C) |
| Setpoint | CLGOCC-SP | AV | 29502 | AU, ADF | 1 | 60°F (0 100°F (15.05°C (0 37.78°C) |
| Setpoint | | | | | | * This point only snows when Heat Cool Setpoint Mode – Individual Setpoints |
| | | | | | | Default: $72^{\circ}E(22,2^{\circ}C)$ |
| Occupied Heating | HTGOCC-SP | AV | 29503 | AO ADE | 2 | 45°F to 85°F (7 22°C to 29 44°C) |
| Setpoint | | | 25505 | 10,101 | - | *This point only shows when Heat Cool |
| | | | | | | Setpoint Mode = Individual Setpoints |
| | | | | | | Default: 68°F (20°C) |
| Unoccupied Cooling | CLGUNOCC- | AV | 29504 | AO, ADF | 3 | 60°F to 100°F (15.05°C to 37.78°C) |
| Setpoint | SP | | | | | Default: 80°F (26.6°C) |
| Unoccupied Heating | HTGUNOCC- | AV | 29505 | AO, ADF | 4 | 45°F to 85°F (7.22°C to 29.44°C) |
| Setpoint | SP | | | | | Default: 65°F (18.3°C) |
| Standby Cooling | CLGSTBY-SP | AV | 29506 | AO, ADF | 5 | 60°F to 100°F (15.05°C to 37.78°C) |
| Setpoint | | | | | | Default: 74°F (23.3°C) |
| Standby Heating | HTGSTBY-SP | AV | 29507 | AO, ADF | 6 | 45°F to 85°F (7.22°C to 29.44°C) |
| Setpoint | | | | | | Default: 66°F (18.8°C) |
| Setpoint Offset | WC-ADJ | AV | 29508 | AO, ADF | 7 | (Negative) Max Setpoint Offset |
| | | | | | | *When Occ Setpoint Select = Setpoint |
| | | | | | | Offset Otherwise, see Table 11 for |
| | | | | | | constraints |
| | | | 0.0500 | | | Default: 0 |
| Hold/Run | HOLDRUN- | IVIV | 29509 | MI, ADI | 3 | Hold/Run |
| | NODE | | | | | 1. Hold |
| | | | | | | 2. Run |
| Reset PID Tuning | TUNING- | MV | 29517 | MI, ADI | 4 | No/Yes |
| | RESET | | | | | 1. No |
| | | | | | | 2. Yes |
| Network Override | NET-OAT | AV | 29513 | AO, ADF | 11 | -50°F to 125°F (-45.55°C to 51.66°C) |
| Outdoor Air | | | | | | |
| Temperature | | | | | | |
| Network Override Outdoor Air Humidity | NET-OAH | AV | 29514 | AO, ADF | 12 | 0% RH to 100% RH |
| Network Override | NET-ZNH | AV | 29516 | AO, ADF | 14 | 0% RH to 100% RH |
| Zone Humidity | | | | | | |
| Point description | Point name | Object type | Instance ID | N2 point type | N2 Point address | Enum Set/Range |
|--------------------------------|-------------------|----------------|----------------|------------------|---------------------|---|
| Network Override Supply Air | NET-SAT | AV | 29515 | AIO, ADF | 13 | 0°F to 150°F (-17.78°C to 65.56°C) |
| Temperature | | | | | | |
| Supplemental % Command | SUPHTGPID- % | AV | 29723 | AO, ADF | 28 | 0% to 100% |
| Economizer PID Cmd | OADPID-% | AV | 29713 | AO, ADF | 24 | 0% to 100% |
| Schedule | Schedule | Schedule | 10133 | n/a | n/a | n/a |
| Calendar | Calendar | Calendar | 10019 | n/a | n/a | n/a |
| Occupancy Override | TEMPOCC- | AV | 29727 | AO, ADF | 32 | 0 min to 300 min |
| Duration | LEN | | | | | Default: 120 min |
| Unoccupied Off Delay | UNOCC-OFF- DLY | AV | 29532 | AO, ADF | 33 | 0 min to 10 min Default: 10 min |
| Occ Setpoint Select | OCCSP-SEL | MV | 29563 | MI. ADI | 23 | Occ Setpoint Select |
| | | | | , | | |
| | | | | | | 1. Setpoint Offset |
| | | | | | | 2. Min and Max Setpoint |
| Heat Cool Setpoint | HTGCLGSP- | MV | 29566 | MI, ADI | 24 | Heat Cool Setpoint Mode |
| Mode | MODE | | | | | 1. Common Setpoint |
| | | | | | | 2. Individual Setpoint |
| Max Heating Setpoint | MAXHTG-SP | AV | 29560 | AO, ADF | 57 | Present value of Min Heating Setpoint |
| | | | | | | (MINHTG-SP) to present value of Min |
| | | | | | | Cooling Setpoint (MINCI G-SP) minus 1^2 |
| | | | | | | *This point only shows when Occ Setpoint |
| | | | | | | Select = Min, and Max Setpoint and Heat |
| | | | | | | Cool Setpoint Mode = Individual Setpoints |
| | | | | | | Default: 68°F (20°C) |
| Min Heating Setpoint | MINHTG-SP | AV | 29559 | AO, ADF | 56 | 45°F (7.22°C) to Max Heating Setpoint |
| 5 | | | | | | Present Value ² |
| | | | | | | *This point only shows when Occ Setpoint |
| | | | | | | Select = Min, and Max Setpoint and Heat |
| | | | | | | Cool Setpoint Mode = Individual Setpoints |
| | | | | | | Default: 60°F (15.5°C) |
| Max Cooling Setpoint | MAXCLG-SP | AV | 29562 | AO, ADF | 59 | Min Cooling Setpoint Present Value to |
| | | | | | | 100°F (37.78°C) ² |
| | | | | | | *This point only shows when Occ Setpoint |
| | | | | | | Select = Min, and Max Setpoint and Heat |
| | | | | | | Cool Setpoint Mode = Individual Setpoints |
| | | | | | | Default: 80°F (26.6°C) |
| Min Cooling Setpoint | MINCLG-SP | AV | 29561 | AO, ADF | 58 | Present value of Max Heating Setpoint |
| | | | | | | (MAXHTG-SP) plus 1 to present value of |
| | | | | | | Max Clg Setpoint (MAXCLG-SP) ² |
| | | | | | | *This point only shows when Occ Setpoint |
| | | | | | | Select = Min, and Max Setpoint and Heat |
| | | | | | | Cool Setpoint Mode = Individual Setpoints |
| | | | | | | Default: 72°F (22.2°C) |
| Max Setpoint | MAX-SP | AV | 29565 | AO, ADF | 61 | 60°F to 100°F (15.05°C to 37.78°C) ³ |
| | | | | | | *This point only shows when Occ Setpoint |
| | | | | | | Select = Min and Max Setpoint and Heat |
| | | | | | | Cool Setpoint Mode = Common Setpoints |
| | | | | | | Default: 85°F (29.4°C) |

| Point description | Point name | Object | Instance | N2 point | N2 Point | Enum Set/Range |
|----------------------|------------|--------|----------|----------|----------|---|
| | | type | ID | type | address | |
| Min Setpoint | MIN-SP | AV | 29564 | AO, ADF | 60 | 45°F to 85°F (7.22°C to 29.44°C) ³ |
| | | | | | | *This point only shows when Occ Setpoint |
| | | | | | | Select = Min, and Max Setpoint and Heat |
| | | | | | | Cool Setpoint Mode = Common Setpoints |
| | | | | | | Default: 45°F (7°C) |
| Aux On/Off | AUX-C | во | 86913 | BO, BO | 8 | Inactive/Active |
| Command | | | | | | 1. Inactive |
| | | | | | | 2. Active |
| Temp Control Setup | TEMPCTRL- | MV | 29533 | MI, ADI | 21 | TEMP_CONTROL_SETUP |
| | SETUP | | | | | 1. Automatic PID Tuning |
| | | | | | | 2 Deadband Override |
| | | | | | | 3 Manual PID Tuning |
| | | | | | | 4 On/Off Control (available on units |
| | | | | | | without economizer damper) |
| Control State | TEMPCTRL- | MV | 29570 | MI. ADI | 26 | TEMP CONTROL SETUP SUBSET |
| | SETUP2 | | | , | | 1 Automatic DID Tuning |
| | | | | | | 2. Deadhand Override |
| | | | | | | 2. Deauband Overnde |
| | | | | | | 3. Manual PID Tuning (available on |
| Auto Economizer | AUTO-ECON- | MV | 29557 | MI ADI | 22 | Disable/Enable |
| Tuning | EN | | 25557 | | | |
| | | | | | | 1. Disable |
| D | | A) (| 20556 | | | 2. Enable |
| Deadband | DEADBAND | AV | 29556 | AU, ADF | 55 | 1.4 to 3 delta $^{\circ}$ F (0.78 to 1.66 delta $^{\circ}$ C) |
| List Dury hand | | A) (| 20525 | | 24 | Default: 2 delta °F (1.12 delta °C) |
| Heat Prop band | HIG-PROP- | AV | 29535 | AU, ADF | 34 | S to 30 delta $^{\circ}$ F (2.8 to 16.7 delta $^{\circ}$ C) |
| Lleat Interval Times | | A) (| 20526 | | 25 | Default: 5 delta °F (2.8 delta °C) |
| Heat Integral Time | TIME | AV | 29550 | AU, ADF | 55 | Default 200 seconds |
| Host Process Pango | | ۸\/ | 20527 | | 26 | 10 to 100 dolta °E (5.6 to 56 dolta °C) |
| neat Process Range | RANGE | AV | 29557 | AU, ADF | 50 | Default: 10 delta $F(5.0 \text{ to 50 delta } C)$ |
| Heat Saturation Time | | ۸\/ | 20520 | | 27 | 60 soconds to 000 soconds |
| | TIME | AV | 29550 | AU, ADF | 57 | Defaulty 200 seconds |
| Host Time Constant | | ۸\/ | 20520 | | 20 | 260 seconds to 1 440 seconds |
| | CONST | AV | 29339 | AU, ADF | 20 | Default: 260 seconds |
| Heat Process Dead | HTG-DEAD- | ۵۷ | 29540 | | 30 | 20 seconds to 120 seconds |
| Time | TIME | | 23340 | A0, ADI | | Default: 20 seconds |
| Heat Period | HTG-PERIOD | AV | 29541 | AO ADE | 40 | 30 seconds to 120 seconds |
| | | | 25511 | /(0,//01 | | Default: 60 seconds |
| Cool Prop Band | CI G-PROP- | AV | 29542 | AO ADE | 41 | 5 to 30 delta °E (2.8 to 16.7 delta °C) |
| | BAND | | | | | Default: 5 delta °F (2 8 delta °C) |
| Cool Integral Time | CLG-INT- | AV | 29543 | AO, ADF | 42 | 300 seconds to 1.600 seconds |
| | TIME | | | - / | | Default: 300 seconds |
| Cool Process Range | CLG-PROC- | AV | 29544 | AO, ADF | 43 | 10 to 100 delta °F (5.6 to 56 delta °C) |
| | RANGE | | | - / | | Default: 10 delta °F (5.6 delta °C) |
| Cool Saturation Time | CLG-SAT- | AV | 29545 | AO, ADF | 44 | 60 seconds to 900 seconds |
| | TIME | | | | | Default: 300 seconds |
| Cool Time Constant | CLG-TIME- | AV | 29546 | AO, ADF | 45 | 360 seconds to 1,440 seconds |
| | CONST | | | | | Default: 360 seconds |

| Point description | Point name | Object type | Instance ID | N2 point type | N2 Point address | Enum Set/Range |
|-------------------------------------|----------------------------|----------------|----------------|--------------------|---------------------|--|
| Cool Process Dead | CLG-DEAD- | AV | 29547 | AO, ADF | 46 | 20 seconds to 120 seconds |
| Time | TIME | | | | | Default: 20 seconds |
| Cool Period | CLG-PERIOD | AV | 29548 | AO, ADF | 47 | 30 seconds to 120 seconds |
| | | | | | | Default: 60 seconds |
| Econ Prop Band | ECON-PROP- BAND | AV | 29549 | AO, ADF | 48 | 5 to 30 delta °F (2.8 to 16.7 delta °C) |
| Econ Integral Time | ECON-INT- TIME | AV | 29550 | AO, ADF | 49 | 300 seconds to 1,600 seconds |
| Econ Process Range | ECON-PROC- RANGE | AV | 29551 | AO, ADF | 50 | 10 to 100 delta °F (5.6 to 56 delta °C) |
| Econ Saturation Time | ECON-SAT- TIME | AV | 29552 | AO, ADF | 51 | 60 seconds to 900 seconds |
| Econ Time Constant | ECON-TIME- CONST | AV | 29553 | AO, ADF | 52 | 360 seconds to 1,440 seconds |
| Econ Process Dead Time | ECON-DEAD- TIME | AV | 29554 | AO, ADF | 53 | 20 seconds to 120 seconds |
| Econ Period | ECON- PERIOD | AV | 29555 | AO, ADF | 54 | 30 seconds to 120 seconds |
| Lockout Level | LOCK-LVL | MV | 29531 | MI, ADI | 20 | States (0-2) |
| | | | | | | State 0 State 1 State 2 |
| Dehumidification Enable | DEHUM- ENABLE | MV | 29736 | MI, ADI | 36 | No/Yes 1. No 2. Yes *This point only shows if the unit type is 2-pipe or 4-pipe or TEC controls the RTU |
| Unocc Dehum Enable | UNOCC- DEHUM- ENABLE | MV | 29737 | MI, ADI | 37 | No/Yes 1. No 2. Yes *This point only shows if Dehumidification Enable = Yes |
| Outdoor Air Humidity | EFF-OAH | AV | 29737 | AO, ADF | 72 | n/a |
| Indoor Air Quality | EFF-ZN-CO2 | AV | 29728 | AO, ADF | 64 | n/a |
| Damper Feedback Network Override | EFF-DPR NET-ZN-CO2 | AV AV | 29729 29730 | AO, ADF AO, ADF | 65 66 | n/a 0 ppm to 2000 ppm |
| Network Override Damper Feedback | NET-DPR | AV | 29731 | AO, ADF | 67 | 0% to 100% |
| Economizer Minimum | ECONMINPO | AV | 29732 | AO, ADF | 68 | 0% to 100% |
| Position Setpoint | S-SP | | | | | *This point only shows when Economizer Installed = Yes |
| Dehumidification Sequence Mode | DEHUM-SEQ- MODE | MV | 29734 | MI, ADI | 34 | TEC3000 RTU Dehum Sequence 1. Simple Dehum 2. Hot Gas Reheat Dehum 3. None *This point only shows if Dehum Enable is set to Enable |

| Point description | Point name | Object type | Instance ID | N2 point type | N2 Point address | Enum Set/Range |
|---|----------------------|----------------|----------------|------------------|---------------------|--|
| Aux Out | DEHUM-AUX- MODE | MV | 29735 | MI, ADI | 35 | TEC3000 RTU Aux Mode |
| | | | | | | Denumininer Hot Gas Reheat *This point only shows if Dehum Enable is set to Enable, Aux Mode is set to Not Used, and Dehumidification Sequence Mode is not set to None |
| Scheduled Circulation Enable | SCH-CIR-EN | MV | 29731 | MI, ADI | 31 | Disable/Enable 1. Disable |
| | | | | | | 2. Enable |
| Scheduled Circulation Only When Occupied | SCH-CIR- ONLY-OCC | MV | 29732 | MI, ADI | 32 | Disable/Enable 1. Disable 2. Enable *This point shows Upreliable if Scheduled |
| | | | | | | Circulation Enable is set to Disable |
| Minimum Hourly Fan Runtime | MIN-HR-FAN | AV | 29743 | AO, ADF | 78 | 5 min to 30 min *This point shows Unreliable if Scheduled Circulation Enable is set to Disable |
| | | | | | | Default: 5 min |
| Network Override Zone Temperature | NET-ZNT | AV | 29571 | AO, ADF | 63 | -50°F to 120°F (-45°C to 49°C) |
| Low OA Damper Position | LOW-OA- DPR-POS | AV | 29907 | AO, ADF | 87 | 0% to 100% *This point only shows when Economizer Installed = Yes, and DCV or OCV or ECV = Enabled |
| | | | | | | Default: 0% |
| Damper Pos Error | DPR-POS-ERR | AV | 29904 | AO, ADF | 98 | 2% to 10% *This point only shows when Economizer Installed = Yes, and DCV or OCV or ECV = Enabled |
| Domand Control | | N 4) / | 20720 | | 42 | Default: 8% |
| Ventilation Enable | DCV-ENABLE | | 23736 | | 45 | Disable Enable Enable Enable *This point only shows when Economizer Installed = Yes, or Unit Type = VAV and CO₂ input source is reliable and Damper Pos input source is reliable and Occupancy Sensor is not active. |
| Occupant Sensor | OCV-ENABLE | MV | 29745 | MI, ADI | 45 | Disable/Enable |
| Ventilation Enable | | | | | | Disable Enable This point only shows when Economizer Installed = Yes, or Unit Type = VAV and CO₂ input source is reliable and Damper Pos input source is reliable and Occupancy Sensor is active |

| Point description | Point name | Object | Instance | N2 point | N2 Point | Enum Set/Range |
|---|--------------------------------------|--------|-------------|----------|----------|--|
| | | туре | 1D 20005 | type | address | |
| Time | PRE-OCC- PURGE-TIME | AV | 29905 | AU, ADF | 85 | *This point only shows when DCV Enable = Enable or OCV Enable = Enable |
| | | | | | | Default: 60 min |
| Allow Min Ventilation During Occ | VENT-AT-OCC | MV | 29744 | MI, ADI | 44 | 1. Disable 2. Enable *This point only shows when DCV Enable |
| | | | | | | = Enable or OCV Enable = Enable |
| Epidemic Control Ventilation Enable | EPIDEMIC- VENTILATION -EN | MV | 29746 | MI, ADI | 46 | Disable/Enable 1. Disable 2. Enable |
| Enable Minimum Ventilation When Unocc | UNOCC-MIN- VENTILATION -EN | MV | 29747 | MI, ADI | 47 | Disable/Enable 1. Disable 2. Enable *This point only shows when Epidemic Control Ventilation Enable = Enable |
| Unoccupied Damper Minimum Position | UNOCC-DPR- MIN-POS | AV | 29906 | AO, ADF | 86 | 0% to 100% *This point only shows when Epidemic Control Ventilation Enable = Enable |
| Inc Ventilation Pre Occ Purge Time | INC-VENT- PRE-OCC- PURGE-TIME | AV | 29915 | AO, ADF | 95 | 0 min to 600 min *This point only shows when Epidemic Control Ventilation is Enable = Enable Default: 240 min |
| Inc Ventilation Post Occ Purge Time | INC-VENT- POST-OCC- PURGE-TIME | AV | 29920 | AO, ADF | 100 | 0 min to 240 min * This point only shows when Epidemic Control Ventilation is Enable = Enable. Default: 120 min |
| Enable Humidity Alarm | ENABLE- HUM-ALM | MV | 27948 | MI, ADI | 48 | Disable/Enable 1. Disable 2. Enable *This point only shows when Epidemic Control Ventilation Enable = Enable |
| Zone CO ₂ Setpoint | ZN-CO2-SP | AV | 29914 | AO, ADF | 94 | 400 ppm to 2000 ppm *This point only shows when DCV Enable = Enable or OCV Enable = Enable or Epidemic Control Ventilation Enable = Enable Default: 800 ppm |
| Low OA Temperature Setpoint | LOW-OA- TEMP-SP | AV | 29909 | AO, ADF | 89 | 0°F to 60°F (-17°C to 15°C) *This point only shows when TEC controls the RTU Default: 45°F (7.5°C) |
| Supply Air Temperature Low Limit | SAT-LOW-LIM | AV | 29910 | AO, ADF | 90 | 40°F to 65°F (4°C to 18°C) *This point only shows when TEC controls the RTU Default: 55°F (12.8°C) |

| Point description | Point name | Object | Instance | N2 point | N2 Point | Enum Set/Range |
|-------------------------------------|----------------------------------|--------|----------|----------|----------|--|
| | | type | ID | type | address | |
| Supply Air | SAT-HIGH- | AV | 29911 | AO, ADF | 91 | 40°F to 65°F (4°C to 18°C) |
| Limit | | | | | | *This point only shows when TEC controls the RTU |
| | | | | | | Default: 65°F (18.3°C) |
| Zone Dew Point Temperature | ZN-DPT- TEMP | AV | 29912 | AO, ADF | 92 | |
| Free Cooling Available | FREE-CLG- AVAIL | MV | 29739 | MI, ADI | 38 | No/Yes 1. No 2. Yes *This point only shows when Economizer Installed = Yes |
| Mixed Air Low Limit Cycle | MAT-LLT- ACTIVE | MV | 29743 | MI, ADI | 42 | No/Yes 1. No 2. Yes *This point only shows when Economizer Installed = Yes |
| Not Economizing When Should | NOT-ECON- FLT | MV | 27949 | MI, ADI | 49 | No/Yes 1. No 2. Yes *This point only shows when Economizer Installed = Yes |
| Economizing When Should Not | ECON-WHEN- SHOULD- NOT-FLT | MV | 27950 | MI, ADI | 50 | No/Yes 1. No 2. Yes *This point only shows when Economizer Installed = Yes |
| Damper Not Modulating | ECON-DAMP- FLT | MV | 27951 | MI, ADI | 51 | No/Yes 1. No 2. Yes *This point only shows when Economizer Installed = Yes |
| Excess Outdoor Air | EXCESS-OUT- AIR-FLT | MV | 27952 | MI, ADI | 52 | No/Yes 1. No 2. Yes *This point only shows when Economizer Installed = Yes |
| Air Temperature Sensor Failure | AIR-TEMP- SEN-FAIL | MV | 27953 | MI, ADI | 53 | No/Yes 1. No 2. Yes *This point only shows when Economizer Installed = Yes |
| Economizer Enabled for Operation | ECON-EN | MV | 29740 | MI, ADI | 39 | No/Yes 1. No 2. Yes |

| Point description | Point name | Object type | Instance ID | N2 point type | N2 Point address | Enum Set/Range |
|---------------------------------------|-------------------|----------------|----------------|------------------|---------------------|---------------------------|
| Compressor Enable | COMPRESSO R-EN | MV | 29741 | MI, ADI | 40 | No/Yes 1. No 2. Yes |
| Heating Enable | HTG-EN | MV | 29742 | MI, ADI | 41 | No/Yes 1. No 2. Yes |
| Economizer Fault Detection Enabled | ECON-FAULT- EN | MV | 29748 | BD | 1 | No/Yes 1. No 2. Yes |

1 The passcode cannot be changed from BAS. The passcode can only be defined by the local display or through MAP

version 4.0 or later. The Occ Setpoint Select is set to the Min and Max Setpoint and Heat Cool Setpoint Mode is set to the Individual Setpoint. The Occ Setpoint Select is set to the Min and Max Setpoint and Heat Cool Setpoint Mode is set to the Common Setpoint. 2 3

Table 7: Multi-State event points for TEC361x-1x-000, TEC362x-1x-000, TEC363x-1x-000, TEC301x-1x-000, TEC302x-1x-000, and TEC303x-1x-000 (BACnet MS/TP only)

| Point name | Thermostat point (type/ instance ID) | Supported events |
|---|--|---|
| MV Critical Active Event Critical Active Event NTF MV Critical Inactive Event Critical Inactive Event NTF | MV30000 Notification 10 MV29999 Notification 11 | Board Mismatch Controller Fault Display Failure Zone Temp Unreliable Open Window Fan Lock Zone Temperature Too Cold Zone Temperature Too Hot Supply Fan Fault |
| MV Service Priority Active Event Service Priority Active Event NTF MV Service Priority Inactive Event Service Priority Inactive Event NTF | MV29998 Notification 12 MV29997 Notification 13 | Zone CO₂ Too High Heating Ineffective Cooling Ineffective Supply Fan Runtime Exceeded Firmware Mismatch |
| MV Service Active Event Service Active Event NTF MV Service Inactive Event Service Inactive Event NTF | MV29996 Notification 14 MV29995 Notification 15 | Firmware Mismatch Calibration Corrupt USB Malfunction Remote Zone Temp Fail Supply Temp Fail Outdoor Temp Fail Outdoor Temp Fail Internal Sensor Fail OA Lockouts Disabled Econ Unavailable Dehum Unavailable Service Dirty Filter Changeover Fail Humidity Unreliable USB Malfunction Zone Humidity Too High Zone Humidity Too Low Not Economizing When Should Economizing When Should Not Damper Not Modulating |
| | | Excess Outdoor Air Air Temperature Sensor Failure Pre-Occupancy Ventilation Disabled |

Event reporting of the Fault Status for each of the above Multistate Value Objects is configured through its corresponding Notification object (for example, MV Critical Active Event corresponds to Critical Active Event NTF). The Active MV objects are set up to send Off Normal events while the Inactive MV objects are set up to send Normal events. These events and their routing by the Notification object are pre-configured to go to the FC bus supervisor. The Ack Required setting should be checked when pop-up alarms are required on the network engine. For additional details on this object, refer to the *Notification Class/BACnet Notification Class* chapter of the *Metasys*® *Common Object (LIT-694020)*.

Scheduling

The TEC3000 Series Thermostat can operate as a stand-alone unit with an internal schedule or configured to operate from an external schedule. The OCC-CONFIG object sets the method that is used for scheduling.

If the OCC-CONFIG is set to External, the NET-OCC object is used to control the unit externally.

If the OCC-CONFIG is set to Schedule, the internal schedule commands the LOCAL-OCC object, which sets the Occupancy Schedule command.

(i) **Note:** If you do not have a schedule in the Schedule object and you have the OCC-CONFIG set to Schedule, you can control the unit with the LOCAL-OCC object externally; however, we do not recommend this method. See Table 8 for scheduling information.

Once the Occupancy Schedule command is set the effective occupancy is determined by settings shown in the Occupancy Determination table. See Table 9.

| BAS objects for schee | BAS objects for scheduling | | | | | |
|-----------------------|--|----------------------|--|--|--|--|
| OCC-CONFIG | LOCAL-OCC (commanded by internal schedule) | NET-OCC | Occupancy schedule command ¹ | | | |
| External | Any State (External | Occupied | Occupied | | | |
| | Schedule in Control) | Unoccupied | Unoccupied | | | |
| | | Standby | Standby | | | |
| | | Not Set | Not Set | | | |
| Schedule | Occupied | Any State (Internal | Occupied | | | |
| | Unoccupied | Schedule in Control) | Unoccupied | | | |
| | Standby | | Standby | | | |
| | Not Set | | Not Set | | | |

Table 8: BAS objects for scheduling

1 The effective occupancy can be affected by other factors listed in Table 9.

Table 9: Occupancy determination

| Sequence of | operation (| Resulting status value | | | | |
|---|--|---------------------------------------|---|-------------------|-------------------------------------|--------------------------------------|
| Manual occupancy mode (OCCOVRD- MODE) | Occupancy BI (BI1-S, BI2-S) ¹ | Temporary occupancy ^{2,3} | Occupancy schedule (external or schedule) (OCC- CONFIG, NET-OCC) | Motion sensor⁴ | Effective occupancy (EFF-OCC) | Occupancy source (OCCSOURCE-S) |
| Occupied | - | - | - | - | Occupied- Override | Occ Override |
| Unoccupied | | | | | Unoccupied- Override | |
| No Override | Closed ¹ | | | | Occupied | Occupancy BI |
| | Open ¹ | | | | Unoccupied | |
| | Not Configured | True ² | NOT Occupied | - | Temp Occupancy | Temp Occ |
| | 1 | True ³ | NOT Occupied | | Temp Occupancy | Temp Occ BI |
| | | False | Occupied | True | Occupied | Occupancy |
| | | | | False | Standby | Sensor |
| | | | | Disabled | Occupied | Occupancy |
| | | | Unoccupied | - | Unoccupied | Schedule |
| | | | Standby | | Standby | |
| | | | Not Set⁵ | True | Occupied | Occupancy Sensor |
| | | | | False | Unoccupied | |
| | | | | Disabled | Occupied | Occupancy Schedule |

Not Configured means that neither BI1 Config nor BI2 Config is set to Occupancy BI. Open and Closed refer to the 1

current state of the BI when configured as Occupancy. True is triggered by interacting with the screen during a scheduled unoccupied period. A value of True can only occur 2 when the schedule is not Occupied.

3 When triggered by a BI configured for Temp Occ, the input is ignored when the schedule is Occupied, the Manual Occupancy Mode is NOT No Override, or an Occupancy BI is configured. Built-in occupancy sensing (PIR) or BI configured for Motion NO or Motion NC. Not Set occurs when no events are scheduled through the local scheduler, or the schedule source is set to Schedule and

4

5 the Schedule is writing Not Set as the schedule.

Commanding objects from a supervisory controller

From a network engine, use the Change Default command to command analog and multistate value objects. The last command that is received by the controller, is executed. Use the default to implement commands to these value objects in other features. Commands to TEC hardware output objects support overrides and priority.

User lockout

You can create three different levels of access at the local display to manage functionality through the supervisory controller. This lockout is independent of any display settings or passcode settings. This feature does not affect the existing temporary occupancy capability. User lockout hides the icons that are not operable. The lockout levels are described in Table .

Table 10: User lockout levels

| Lockout level | Capability |
|---------------|--|
| State 0 | Allows full access to Home Screen Display Adjustments and icons (default). |
| State 1 | Hides the Menu icon. |
| State 2 | Only allows the screen to trigger temporary occupancy. Menu, Unit Power, the Up and Down arrows, and Run/Hold are hidden. |

Menu and submenu descriptions

The following sections describe the menu and submenus for the TEC3000 Series Thermostat. Refer to the *TEC3000 Series On/Off or Floating Fan Coil Thermostats Installation Guide (LIT-12013161), TEC3000 Series Proportional Fan Coil Thermostats Installation Guide (LIT-12013162), or TEC3000 Series Thermostats for Rooftop Package and Heat Pump with Economizer Installation Guide (LIT-12013163)* for more information based on your thermostat model.

Setpoints

When the TEC is in Min/Max mode (Setpoints/Occ Setpoint Select are equal to Min and Max Setpoint), the TEC rejects any attempts to change the present value outside of the valid range. If the present value is outside of the valid range (for example, if the Occ Setpoint Select is switched from Setpoint Offset to Min and Max Setpoint), the present value is reset to be in the center of the valid range.

The four modes of setpoint operation are described in Table 11.

Table 11: Setpoint operation

| Mode of setpoint | |
|--|--|
| operation | Details |
| Occ Setpoint Select = Setpoint Offset and Heat Cool Setpoint Mode = Individual Setpoints | This is the default mode and the original mode of operation that the TEC was released with, while the next three modes are new. In this mode, the TEC has a heating setpoint and a cooling setpoint. A common Setpoint Offset (warmer/cooler adjust) is applied to each setpoint simultaneously. The range of setpoint adjustment is two-fold: |
| | large constant ranges bounding the individual heating and cooling setpoints. |
| | smaller configurable range limit set to the Setpoint Offset point. Control Setup > General > Max Setpoint Offset. |
| Occ Setpoint Select = Min and Max Setpoints and Heat Cool Setpoint Mode = Individual Setpoints | In this mode, the TEC has a heating setpoint and a cooling setpoint. Each setpoint has a configurable range. Setpoints > Temperature > Min Cooling Setpoint , Max Cooling Setpoint , Min Heating Setpoint , and Max Heating Setpoint . The configurable range values are bounded by the larger constant bounds used in Setpoint Offset mode and are constrained in the following manner: Min must be below Max and Heating must be below Cooling, so in order from least to greatest, the values are: Min Heating Setpoint, Max Heating Setpoint, Min Cooling Setpoint, and Max Cooling Setpoint. |
| Occ Setpoint Select = Setpoint Offset and Heat Cool Setpoint Mode = Common Setpoint | In this mode, the TEC has one setpoint, Common Setpoint, for heating and cooling. There is also a common Setpoint Offset (warmer/cooler adjust) that is only applied to Common Setpoint. Otherwise, this setting works the same as when Occ Setpoint Select = Setpoint Offset and Heat Cool Setpoint Mode = Individual Setpoints. |
| Occ Setpoint Select = Min and Max Setpoints and Heat Cool Setpoint Mode = Common Setpoint | In this mode, the TEC has one setpoint, Common Setpoint, for heating and cooling. There is a configurable range for Common Setpoint, Min Setpoint, and Max Setpoint. |

A fixed differential of 2°F exists between heating and cooling setpoints for occupied, unoccupied, and standby modes. If a setpoint is set within 2 degrees of the corresponding setpoint, the controller automatically adjusts the corresponding setpoint to be 2 degrees away from the manually adjusted setpoint.

Dehumidification

Dehumidification - the thermostat operates dehumidification control to maintain the setpoint when the zone humidity rises above the setpoint. This option is available only when Dehum Enable is set to Enable under Control Setup menu.

Cooling Valve Minimum Position - user configurable value for the minimum position the cooling valve can go to during active dehumidification, defaulted to 30%. The valve closes beyond this value upon overcooling of the zone as determined by the dehumidification algorithm. This option is available only when the unit type is 4-pipe or 2-pipe with reheat installed and Dehumidification Sequence Mode is set to individual coils or 2-pipe with reheat.

Cooling Valve Starting Position - user configurable value for the position to which the cooling valve can open at the start of dehumidification, defaulted to 100%. This option is available only

when the unit type is 4-pipe or 2-pipe with reheat installed and Dehumidification Sequence Mode is set to individual coils or 2-pipe with reheat.

Heating Valve Starting Position - user configurable value for the position to which the heating valve can open at the start of dehumidification in order to maintain the zone temperature when dehumidification is active, defaulted to 50%. This option is available only when the unit type is 4-pipe and Dehumidification Sequence Mode is set to individual coils.

Coil Tempering Time - user configurable value for the length of time to wait before the transition from opening the cooling or heating valve to opening the heating or cooling valve in the case of fan coils with single coil setup, that is a single sheet of fins for both heating coil and cooling coil. This option is available only when the unit type is 4-pipe and Dehumidification Sequence Mode is set to single coil.

Dehumidification Overcool Limit - user configurable value to set the overcool limit for active dehumidification, applicable in the case of fan coils with single coil setup, that is a single sheet of fins for both heating coil and cooling coil. Active dehumidification of the zone stops if the zone temperature drops below the overcool limit. This option is available only when the unit type is 4-pipe and Dehumidification Sequence Mode is set to single coil.

Chilled Water Supply Temperature Setpoint - this is the CHWST setpoint of the chilled water supply to the fan coil. This option is available only if there is no chilled water supply temperature sensor connected to the TEC or there is no value registered at NET-CHWST, that is when EFF-CHWST is Unreliable.

Temperature

Occupied Cooling - setpoint that the thermostat holds the zone at when cooling is needed in the Occupied state, present when Heat Cool Setpoint Mode = Individual Setpoints.

Occupied Heating - setpoint that the thermostat holds the zone at when heating is needed in the Occupied state, present when Heat Cool Setpoint Mode = Individual Setpoints.

Common Setpoint - setpoint that the thermostat holds the zone at when heating or cooling is needed in the Occupied state, present when Heat Cool Setpoint Mode = Common setpoint.

Auto Changeover - differential that is used to limit switching between heating and cooling, present when Heat Cool Setpoint Mode = Common Setpoint.

Unoccupied Cooling - setpoint that the thermostat holds the zone at when cooling is needed in the Unoccupied state

Unoccupied Heating - setpoint that the thermostat holds the zone at when heating is needed in the Unoccupied state

Occ Setpoint Select - option of using the setpoint offset method to limit setpoint adjustment or using a discrete Min and Max setpoint to limit setpoint adjustment

Heat Cool Setpoint Mode - allows for a configuration by using discrete heating and cooling setpoints or a common setpoint

Maximum Cooling Setpoint - maximum value for the cooling setpoint, present when Heat Cool Setpoint Mode = Individual Setpoints and Occ Setpoint Select = Min and Max Setpoint.

Maximum Heating Setpoint - maximum value for heating setpoint, present when Heat Cool Setpoint Mode = Individual Setpoints and Occ Setpoint Select = Min and Max Setpoint.

Minimum Cooling Setpoint - minimum value for the cooling setpoint, present when Heat Cool Setpoint Mode = Individual Setpoints and Occ Setpoint Select = Min and Max Setpoint.

Minimum Heating Setpoint - minimum value for the heating setpoint, present when Heat Cool Setpoint Mode = Individual Setpoints and Occ Setpoint Select = Min and Max Setpoint.

Max Setpoint - maximum value for the common setpoint, present when Heat Cool Setpoint Mode = Common Setpoint and Occ Setpoint Select = Min and Max Setpoint.

Min setpoint - minimum value for the common setpoint, present when Heat Cool Setpoint Mode = Common Setpoint and Occ Setpoint Select = Min and Max Setpoint.

Standby Cooling - setpoint that the thermostat holds the zone at when cooling is needed in the Standby state

Standby Heating - setpoint that the thermostat holds the zone at when heating is needed in the Standby state

Warmer Cooler Adjustment (Setpoint Offset) - degree amount that is added to the current Setpoint that results in the Effective Setpoint

Maximum Setpoint Offset - maximum value for the Warmer Cooler Adjustment

Ventilation setpoints

Zone CO₂ Setpoint - this is a user configurable setpoint for the Zone CO_2 value. This option is available only when a carbon dioxide sensor is installed and either Demand Control Ventilation Enable, Occupant Sensor Ventilation Enable or Epidemic Control Ventilation Enable is set to Enabled.

Low OA Temperature Setpoint - this is a user configurable setpoint for Low Outdoor Air temperature, below which the economizer damper does not bring in outdoor air. This option is available only when Equipment Type is RTU.

Supply Air Temperature Low Limit - this is a user configurable value for the lower limit of supply air temperature below which SAT tempering activates. This option is available only when Equipment Type is RTU.

Supply Air Temperature High Limit - this is a user configurable value for the higher limit of supply air temperature above which SAT tempering activates. This option is available only when Equipment Type is RTU.

Schedule options

Optimal Start Enable - this enables or disables the Optimal Start algorithm to automatically start the equipment before the scheduled occupancy period in order to reach the occupied setpoint at the same time the schedule transitions from Unoccupied to Occupied. Setting this option to Yes only has an effect when the local schedule is used.

The Optimal Start feature provides preconditioning of a zone ahead of a scheduled change to its occupancy mode. The feature uses schedule times of the Local Occupancy object to determine when it is the correct time to command equipment based on the next occupancy mode changes. The most energy savings is derived by operating on the earliest change to occupancy and the latest change to unoccupied.

Temp Occ Duration - this is the length for which the thermostat remains in a temporary occupancy period when triggered during an unoccupied period. Interact with the touch screen while unoccupied to trigger temporary occupancy, or activate a binary input configured for temporary occupancy. Set the value to 0 min to disable temporary occupancy.

Motion Sensor Timeout - this sets how long the thermostat waits to return to Standby mode after the last detection of motion while in a scheduled Occupied period. Setting the timeout to 0 min disables the motion sensor and standby mode.

Manual Occupancy Mode - with this mode you can override all schedules and other sources of occupancy and put the controller indefinitely into an Occupied or Unoccupied state.

Schedule Source - this sets the source of the occupancy schedule on the TEC. Setting to Schedule (Local) uses the internal 7-day programmable schedule, and setting to External (BAS) uses the command from a building automation system if the BAS is online. If the BAS is offline, the schedule reverts to the onboard schedule.

Display settings

Passcode Enabled - enable a 4-digit passcode to enter the configuration menu when you set this to True. The TEC prompts you for the passcode upon saving this setting to True. Passcodes can only be defined on the local display.

Change Passcode - provides a means of changing the passcode. Requires you to enter the current passcode before you can change the password.

Brightness Setting - sets the brightness of the display when you interact with the display

Enable Backlight Timeout - sets whether the backlight should timeout and go to low brightness after 3 min

Enable Display Timeout - sets whether the display times out and goes blank after 3 min

Units - sets Imperial (IP) or Metric (M) units on the display and exposed to a BAS

Time - sets the time on the thermostat

Time Zone - sets the time zone where you install the thermostat

Set Time Format - sets the display time format on the thermostat

Date - sets the date on the controller

Set Date Format - sets the display date format on the thermostat

Change Color Theme - sets the current theme used for the home screen

Show Fan Button On Home - this sets whether the user fan override option is available on the home screen. With this option you select the following fan mode overrides from the home screen for single- and variable-speed fans:

- **On** this turns and keeps the fan on. This option overrides shutdown requests, with the exception of Airflow Fault shutdowns.
- Auto follows the Fan Mode set under the General Settings menu
- **Quiet** this follows the Fan Mode set under the General Settings menu, but keeps variablespeed fans at their lowest speeds. this option is no different from Auto for single-speed fans.

For multi-speed fans, the following fan mode overrides are available from the home screen:

- Low the fan is continuously on low.
- Medium the fan is continuously on medium.
- **High** the fan is continuously on high.
- **Auto** this follows the behavior set as Fan Mode.
- **Quiet** this follows the behavior set as Fan Mode but prevents the fan from going above the minimum speed.

Show Temp On Home - sets whether the current zone temperature displays on the home screen **Show Humidity On Home** - sets whether the current zone humidity displays on the home screen

Show Off Button On Home - sets whether the master control On/Off icon displays on the home screen

Show Hold Button - sets whether the Hold/Run icon displays on the home screen

Show Setpoint On Home - sets whether the current zone temperature setpoint displays on the home screen

Show Alarms On Home - sets whether the current alarm symbol displays on the home screen when warnings or alarms are active

Show Occ Status - sets whether the current occupancy status shows on the home screen

Show Unit Status - sets whether the operational status of the thermostat shows on the home screen

Show Date/Time - sets whether the date and time show on the home screen

Show Control Mode - sets whether the control mode shows on the home screen

Show Damper Pos on Home - this is a user configurable value to either show or hide the Damper position Feedback icon and value on the TEC home screen. This option is available only when damper feedback sensor is installed.

Show CO₂ on Home - this is a user configurable value to either show or hide the Carbon Dioxide icon and value on the TEC home screen. This option is available only when a CO₂ sensor is installed.

Setup

General

Control Mode - sets the thermostat to operate only in Cooling or Heating modes, or to automatically switch between cooling and heating based on the zone temperature.

Unit Enable - this enables or disables the control. This option is linked to the Off/On icon on the home screen. The home screen fan override can still turn the fan on when Unit Enable = False.

Fan Mode - this sets the operational mode of the fan. For single- and variable-speed fans the options include:

- **On** the fan runs continuously unless control is disabled.
- **Auto** the fan switches between On and Low, Med, and High based on Fan Mode and Fan Mode 2 criteria. The fan cycles with heating or cooling demand in the zone on fan coil equipment, or with the equipment stages on rooftop or heat pump equipment.
- **Smart** the fan operates continuously while occupied, and follows the Auto behavior when unoccupied.
- (i) Note: The Fan Mode can be overridden by the fan button on the Home screen. Refer to the TEC3000 Series On/Off or Floating Fan Coil Thermostats Installation Guide (LIT-12013161), TEC3000 Series Proportional Fan Coil Thermostats Installation Guide (LIT-12013162), or TEC3000 Series Thermostats for Rooftop Package and Heat Pump with Economizer Installation Guide (LIT-12013163) for more information on the Fan mode.

For multi-speed fans the options include:

- Low the fan is continuously on low.
- Medium the fan is continuously on medium.
- **High** the fan is continuously on high.
- **Auto** the fan cycles on demand with the thermostat entering cooling, heating, or dehumidification modes.
- **Smart** the fan cycles on demand with the thermostat entering cooling or heating modes.

Max Setpoint Offset - sets the maximum deviation above or below the active programmed setpoint that the user can set from the home screen.

Fan On Delay - sets how long the fan waits to turn on after turning on a stage of heating or cooling.

Fan Off Delay - sets how long the fan waits to turn off after turning off the last stage of heating or cooling.

Frost Protection - turns on heating when the zone temperature drops below 42 degrees Fahrenheit, regardless of whether the control is enabled.

Dehum Enable - enables dehumidification control when the zone humidity rises above the humidity setpoint.

Dehumidification Sequence Mode - runs the dehumidification sequence based on the type of equipment available. For models TEC3x1x and TEC3x2x with unit type set to 2-pipe or 4-pipe fan coil, the options include:

- **Individual Coils** select when the fan coil type is 4-pipe with separate heating and cooling coils and both heating and cooling valves installed.
- **Single Coil** select when the fan coil type is 4-pipe with a single sheet of fins for both the heating and cooling coils and both heating and cooling valves installed.
- **2-pipe with Reheat** select when the fan coil type is 2-pipe with reheat installed and changeover setup as cooling.

For models TEC3x3x with unit type set to RTU, the options include:

- **Simple Dehum** select when an auxiliary dehumidifier is installed.
- Hot Gas Reheat Dehum select when the equipment type is unitary RTU with hot gas reheat installed.
- None select when no dehumidification equipment present.

Aux Mode - this sets the mode that the Auxiliary output runs in. The auxiliary port is reserved for Reheat control on Fan Coil and VAV units with reheat enabled. The options include:

- Not Used opens the contact.
- **Occupied NO** closes the contact when the thermostat is occupied.
- **Occupied NC** opens the contact when the thermostat is occupied.
- Occupied Fan NO closes the contact when the thermostat is occupied and the fan is running.
- **Occupied Fan NC** opens the contact when the thermostat is occupied and the fan is running.
- **Off** opens the contact.
- **On** closes the contact.

Dehumidification Aux Mode - this feature is available only on TEC3x3x models when Dehum Enable is set to Enable, Aux Mode is set to Not Used, and Dehumidification Sequence Mode is set to either Simple Dehum or Hot Gas Reheat Dehum. This feaure sets the mode that the auxiliary output runs in based on the connected equipment. The options include:

- **Dehumidifier** select when an external or auxiliary dehumidifier is connected to Aux BO.
- Hot Gas Reheat select when HGR valve is connected to Aux BO.

Load Shed Rate Limit - sets that rate at which the operating setpoint increases when cooling or decreases when heating after a load shed command is issued.

Load Shed Adjust - limit at when the operating setpoint increases when cooling or decreases when heating after a load shed command is issued.

Fan Alarm Delay - amount of time that the Fan Status Input has to verify that the fan is on. If the fan operation is not verified in the specified timeframe, the TEC3000 issues an alarm. You must also define BI1 or BI2 as a Supply Fan Status using the BI1 or BI2 Config setting.

Fan Alarm Action - this sets the thermostats reaction to the fan alarm. Shutdown turns the unit off until the fan alarm reset is triggered. Enable keeps the unit operating.

Fan Alarm Reset - turns the unit on if it was turned off by a fan alarm.

Supply Air Temperature Alarm Delay - when the Supply Air Temperature Alarm Delay > 0, the supply air temperature alarm diagnostics are enabled. An alarm is issued when the supply air temperature does not drop a set number of degrees in a set number of min after a cooling

command is issued. An alarm is issued when the supply air temperature does not rise a set number of degrees within a set number of min after a heating command is issued.

Supply Air Temperature Alarm Offset - the supply air temperature alarm triggers if the supply air temperature has not changed by the offset value within the supply air temperature alarm delay time.

Fan Runtime Limit - when the fan runtime limit > 0, fan runtime monitoring is enabled. When the fan runtime > fan runtime limit, an alarm is generated.

Fan Runtime Reset - resets the current fan runtime statistics.

Unocc Low Speed Fan - runs fan at low speed in Unoccupied mode. This feature can be enabled or disabled.

Schedule Circulation Enable - schedule to run the fan for a minimum duration per hour in order to maintain circulation.

Scheduled Circulation Only when Occupied - schedule to run the fan for a minimum duration per hour when the zone is occupied in order to maintain circulation.

Minimum Hourly Fan Runtime - user configurable value to set the minimum fan runtime per hour in min.

Variable Speed Fan Circulation Setpoint - user configurable value to set the speed at which a variable speed fan runs to satisfy the scheduled minimum hourly runtime. This option is available only if the fan type is set to variable speed.

Multi-Speed Fan Circulation Setpoint - user configurable value to set the speed at low, medium, or high at which a multi-speed fan runs to satisfy the scheduled minimum hourly runtime. This option is available only if the fan type is set to multi speed fan.

Economizer Fault Detection Enable- user configurable value to enable or disable Title-24 economizer faults.

Input

BI1 Config - sets the mode that the first binary input operates in.

BI2 Config - sets the mode that the first binary input operates in.

AI1 Input Selection - sets the input process for AI1.

- Relative Humidity 0 VDC to 10 VDC
- Remote Zone Temperature resistive or 0 VDC to 10 VDC, adjust AI1 Setup In to configure
- Carbon Dioxide 0 VDC to 10 VDC
- Damper Feedback 2 VDC to 10 VDC
- Outdoor Air Temperature resistive or 0 VDC to 10 VDC, adjust AI1 Setup In to configure

AI1 Offset - sets the offset for the AI1 input, the range varies based on the process configured for AI1 Input Selection.

- Temperature processes -5 to 5 delta °F (-2.8 to 2.8 delta °C)
- Damper Feedback and Humidity Processes -15% to 15%
- Carbon Dioxide -200 ppm to 200 ppm

AI2 Input Selection - sets the input process for AI2.

- Relative Humidity 0 VDC to 10 VDC
- Remote Zone Temperature resistive or 0 VDC to 10 VDC, adjust AI2 Setup In to configure
- Carbon Dioxide 0 VDC to 10 VDC
- Damper Feedback 2 VDC to 10 VDC

• Outdoor Air Temperature - resistive or 0 VDC to 10 VDC, adjust AI2 Setup In to configure

AI2 Offset - sets the offset for the AI2 input, the range varies based on the process configured for AI2 Input Selection.

- Temperature processes -5 to 5 delta °F (-2.8 to 2.8 delta °C)
- Damper Feedback and Humidity Processes -15% to 15%
- Carbon Dioxide -200 ppm to 200 ppm

AI3 Input Selection - sets the input process for AI3 (only available on TEC3x3x-1x-000 models).

- Relative Humidity 0 VDC to 10 VDC
- Remote Zone Temperature resistive or 0 VDC to 10 VDC, adjust AI3 Setup In to configure
- Carbon Dioxide 0 VDC to 10 VDC
- Damper Feedback 2 VDC to 10 VDC
- Outdoor Air Temperature resistive or 0 VDC to 10 VDC, adjust AI3 Setup In to configure

AI3 Offset - sets the offset for the AI3 input, the range varies based on the process configured for AI3 Input Selection.

- Temperature processes -5 to 5 delta °F (-2.8 to 2.8 delta °C)
- Damper Feedback and Humidity Processes -15% to 15%
- Carbon Dioxide -200 ppm to 200 ppm

Humidity Offset - sets the offset applied to the onboard zone humidity sensor.

Zone Temp Offset - sets the offset applied to the onboard zone temperature sensor.

Reset Sensors - resets the sensor inputs back to factory state. This clears any alarms for sensors which were connected at one point and are no longer connected.

Zone Temp Alarm Enabled - enables high and low temperature alarms.

Zone Temp Low Limit - sets the low alarm limit.

Zone Temp High limit - sets the high alarm limit.

Tuning

Temp Control Setup - sets Automatic PID Tuning, Manual PID Tuning, Deadband Override, or On/ Off Control (On/Off Control is available for units with staged control outputs only).

- Automatic PID Tuning uses PRAC+ (all units) and PMAC (staged units only) to satisfy zone demand. Works best with proportional equipment. Also works with staged equipment in large zones (500 sq ft or greater) with a single piece of equipment operating that space.
- Manual PID Tuning uses manual tuning parameters to satisfy zone demand, similar to Automatic PID Tuning, but parameters need to be manually adjusted per zone.
- Deadband Override uses PRAC+ (all units) and PMAC (staged units only) to satisfy zone demand. You can specify the Deadband parameter that PRAC+ and PMAC use.
- On/Off Control uses a simple deadband and timer to satisfy zone demand (staged equipment only).

Reset PID Tuning - when Reset Tuning is True, causes the PID to reset the Effective Proportional Band and the Effective Integral Time to the values in Proportional Band and Integral Time.

Deadband - sets the Effective Deadband.

Auto Economizer Tuning - determines if the adaptive tuning is allowed to operate for the OA damper.

Heat Prop Band - sets the initial Effective Proportional Band.

Heat Integral Time - sets the initial Effective Integral Time.

Heat Process Range - indicates the magnitude of the range that the process variable traverses as the Present Value of the PID varies between its minimum and maximum values.

Heat Saturation Time - sets the Effective Saturation Time.

Heat Time Constant - indicates the time required for a system to reach 63% of its final magnitude given a 100% step change.

Heat Process Dead Time - indicates the time required for the process to begin to reflect the results of a step change.

Heat Period - sets the Effective Period.

Cool Prop Band - sets the initial Effective Proportional Band.

Cool Integral Time - sets the initial Effective Integral Time.

Cool Process Range - indicates the magnitude of the range that the process variable traverses as the Present Value of the PID varies between its minimum and maximum values.

Cool Saturation Time - sets the Effective Saturation Time.

Cool Time Constant - indicates the time required for a system to reach 63% of its final magnitude given a 100% step change.

Cool Process Dead Time - indicates the time required for the process to begin to reflect the results of a step change.

Cool Period - sets the Effective Period.

Econ Prop Band - sets the initial Effective Proportional Band.

Econ Integral Time - sets the initial Effective Integral Time.

Econ Process Range - indicates the magnitude of the range that the process variable traverses as the Present Value of the PID varies between its minimum and maximum values.

Econ Saturation Time - sets the Effective Saturation Time.

Econ Time Constant - indicates the time required for a system to reach 63% of its final magnitude given a 100% step change.

Econ Process Dead Time - indicates the time required for the process to begin to reflect the results of a step change.

Econ Period - sets the Effective Period.

Equipment Size - sets the internal zone temperature response, which can be Normal (slower) or Oversized (faster).

Ventilation

Demand Control Ventilation Enable - this is a user configurable value to enable or disable the Demand Control Ventilation feature. This option is available only when an economizer, damper feedback and CO_2 sensor are installed. This option is not available on units with a built-in occupancy sensor.

Occupant Sensor Ventilation Enable - this is a user configurable value to enable or disable the Occupant Sensor Ventilation feature. This option is available only when an economizer, damper feedback and CO₂ sensor are installed and on units that have a built-in occupancy sensor.

Pre Occupancy Purge Time - this is a user configurable value of purge time. Pre Occupancy Purge occurs only once a day before the first occupied period on the local schedule. The purge opens the damper to 100%. This option is available only when either Demand Control Ventilation Enable or Occupant Sensor Ventilation Enable is enabled.

Allow Min Ventilation During Occ - this is a user configurable value to setup minimum ventilation behavior during occupancy periods. Enable forces a minimum ventilation during Occ with the RTU opening the damper further for either free cooling or CO_2 reduction. Disable forces the damper shut during Occ with the RTU opening the damper only for free cooling or CO_2 reduction. This option is available only when either Demand Control Ventilation Enable or Occupant Sensor Ventilation Enable is Enabled.

Epidemic Control Ventilation Enable - this is a user configurable value to enable or disable the Epidemic Control Ventilation feature. This option is available only when an economizer is installed, damper feedback and CO_2 sensor are installed.

Enable Minimum Ventilation When Unocc - this is a user configurable value to enable or disable the minimum ventilation operation when a zone is unoccupied. This option keeps the outdoor air damper open to a user configured minimum value, even when a zone is unoccupied. This option is available only when Epidemic Control Ventilation Enable is Enabled.

Unoccupied Damper Minimum Position - this is a user configurable value of outdoor air damper minimum position to be maintained when Enable Minimum Ventilation when Unocc is enabled. This option is available only when Epidemic Control Ventilation Enable is Enabled.

Inc Ventilation Pre Occ Purge Time - this is a user configurable value of purge time. Increased Ventilation Pre Occupancy Purge occurs once a day only before the first occupied period on the local schedule. The purge opens the damper to 100% for the set purge time. This option is available only when Epidemic Control Ventilation is Enabled.

Enable Humidity Alarm - this is a user configurable value to enable or disable the low and high humidity alarms for the zone when purging is done. This option is available only when Epidemic Control Ventilation Enable is Enabled.

Network Setup (present in TEC30xx-1x-000, TEC36xx-1x-000, and TEC31xx-14-000 models)

FC Comm Mode - sets BACnet MS/TP or N2 communications mode (TEC36xx-1x-000 models) or displays Wireless Field Bus (TEC30xx-1x-000 and TEC31xx-1x-000 models).

Device OID - sets the instance ID of the thermostat when on a BACnet MS/TP network.

N2 Address - sets the physical network address on an N2 network (present in TEC36xx-1x-000 models only).

BACnet Address - sets the physical network address on a BACnet MS/TP network.

MS/TP Baud Rate - sets the baud rate of the BACnet MS/TP network (present in TEC36xx-1x-000 models only).

BACnet Encoding Type - sets the encoding type to use on the BACnet MS/TP network.

PAN ID - is the value used for the ZFR182x and ZFR183x Pro Series Wireless Personal Area Network. This value needs to be the same as the value set in the associated ZFR182x or ZFR183x Coordinator Radio. (present in TEC30xx-1x-000 and TEC31xx-14-000 models only).

Equipment Setup

General (Equipment Setup)

Unit Type - sets the type of fan coil or VAV system being controlled.

Htg/Clg Device Type - sets the output type to Floating (Incremental) or On-Off (2-position).

Actuator Stroke Time - sets the stroke time for a floating (Incremental) actuator to open or close.

Number of Compressors - sets the number of compressors in a rooftop unit or heat pump.

Runtime Equalization - when enabled, the thermostat alternates between Y1 and Y2 calls when cycling 2-stage compressors to ensure both compressors are equally used.

Number of Heating Stages - this sets the number of heat stages in a rooftop unit. This option does not exist on heat pumps. Heat Pumps support a single stage of supplemental heating on top of compressor heating.

Compressor Min On Time - sets the minimum time that a compressor runs under normal control conditions.

Compressor Min Off Time - sets the minimum time that a compressor must be off for before turning on again.

Cooling Min On Time - sets the minimum time that the cooling valve is open under normal control conditions.

Cooling Min Off Time - sets the minimum time that the cooling valve is closed before opening again.

Heating Min On Time - sets the minimum time that the heating valve/stage is open under normal conditions.

Heating Min Off Time - sets the minimum time that the heating valve/stage is closed before opening again.

Unoccupied Off Delay - sets the heating/cooling setpoint on time following the setpoint being reached.

Reheat Min On Time - sets the minimum time that the reheat device runs under normal conditions.

Reheat Min Off Time - sets the minimum time that the reheat device is off before starting again.

Supp Min On Time - sets the minimum time that the supplemental heating runs under normal conditions.

Supp Min Off Time - sets the minimum time that the supplemental heating is off before starting again.

Cooling Lockout Temp - sets the outdoor temperature below which cooling does not run regardless of zone temperature.

Heating Lockout Temp - sets the outdoor temperature above which heating does not run regardless of zone temperature (note: Frost Protection overrides this lockout).

Valve Open Voltage - sets the voltage at which the heating/cooling valve is fully opened.

Valve Closed Voltage - sets the voltage at which the heating/cooling valve is fully closed.

Unoccupied Off Delay- sets the off delay time that the unit will continue to heat or cool after demand has been met when in Unoccupied mode.

Supply fan

Supply Fan Type - sets the type of fan to Single-, Multi-, or Variable-Speed.

Start Voltage - sets the voltage at which the variable speed fan starts running.

Full Speed Voltage - sets the voltage at which the variable speed fan reaches its full speed.

Minimum Command - sets the minimum command (in units of percent of full speed) at which the variable speed fan runs when the thermostat runs the fan.

Medium Speed On Cmd - sets the load percentage at which the multi-speed fan switches to medium speed. Recommended settings are 33 for three-speed fans and 50 for two-speed fans.

High Speed On Cmd - this sets the load percentage at which the multi-speed fan switches to high speed. Recommended settings are 66 for three-speed fans and 100 for two-speed fans. Setting to 100% disables the third speed.

Medium Fan On Diff Sp - this sets the deltaT from active setpoint at which the multi-speed fan speed starts to run on medium speed. Available only when the supply fan type is set to multi-speed.

Medium Fan Off Diff Sp - this sets the deltaT from active setpoint at which the multi-speed fan speed stops to run on medium speed. Available only when the supply fan type is set to multi-speed.

High Fan On Diff Sp - this sets the deltaT from active setpoint at which the multi-speed fan speed starts to run on high speed. Available only when the supply fan type is set to multi-speed.

High Fan Off Diff Sp - this sets the deltaT from active setpoint at which the multi-speed fan speed stops to run on high speed. Available only when the supply fan type is set to multi-speed.

Reheat

Reheat Installed - sets if a staged reheat device is installed on the unit.

Reheat Min Damper Pos - this sets the minimum VAV damper position when reheat is active. This is used to ensure airflow across a box-mounted reheat device.

Reheat Fan Required - this sets whether the fan must be running whenever reheat is active. This would be True for box-mounted reheat devices and False for baseboard reheat devices.

Economizer

Economizer Installed - sets if economizer damper control is required on the rooftop or heat pump unit.

Minimum Position - sets the minimum economizer position when the fan is running.

Closed Voltage - sets the voltage corresponding to the damper being fully shut.

Opened Voltage - sets the voltage corresponding to the damper being fully opened.

Dry Bulb Setpoint - sets the outdoor air temperature above which economizer cooling does not operate when in dry bulb mode (present when the TEC only has a reliable outdoor temperature).

Outdoor Enthalpy Setpoint - sets the outdoor air enthalpy above which economizer cooling does not operate when in single enthalpy mode (present when the TEC has a reliable outdoor temperature and a reliable outdoor humidity).

Damper Minimum Position - user configurable value to set the outdoor air damper minimum position.

Damper Maximum Position - user configurable value to set the outdoor air damper maximum position.

Low OA Damper Position - user configurable value to setup the damper position with outdoor air temperature below threshold.

Damper Pos Error - user configurable value of tolerable damper position error.

Test Outdoor Air Damper - user configurable value to enable or disable the function to test outdoor air damper response and feedback status. Enabling this parameter exposes the Economizer Damper % Command and Outdoor Air damper test status points for damper test and feedback status monitoring.

Economizer Damper % Command - user configurable damper percent command test value.

Outdoor Air Damper Test Status - outdoor air damper test results status displayed as pass or fail. Test status is pass when Damper Feedback = Economizer Damper % Command +/- Damper Pos Error and Test status is fail otherwise.

Heat pump

Heat Pump Supported - this is set if the W1 output should be used to control a reversing valve (O/ B) and if Y1/Y2 should control compressors for both cooling and heating. Supp Heating Installed – Sets if a stage of supplemental heating is connected to the W2 output. Many heat pumps with integrated control units use traditional thermostat wiring (Y, W, and G inputs). Only set this option to **Yes** on the heat pump units where the thermostat controls an O/B input on the equipment.

Supp Heating Installed - sets if supplemental heating is installed on the unit.

Comp Low Lockout Temp - sets the temperature below which compressor heating does not run.

Supp High OA Lockout Temp - sets the temperature above which supplemental heating does not run.

Reversing Valve Polarity - sets if the reversing valve is cooling when the output is active (Active Cooling) or heating (Active Heating).

Changeover

Changeover Mode - this sets the changeover mode of the unit to Heating, Cooling or Auto. Automatic changeover requires a supply temperature sensor/switch to be installed. When set to Heating or Cooling, the COS input defaults to the analog sensor mode, and is set to be used as an optional temperature monitoring point. Changeover is available only when the unit type is two-pipe or VAV.

Supply Temp Type - this sets the type of supply temperature detection being used for changeover. The options include:

- Analog Sensor a temperature sensor connected to the COS input.
- Heating Closed Switch a switch which closes above a certain temperature is connected to the COS input.
- **Cooling Closed Switch** a switch which opens above a certain temperature is connected to the COS input.

Supply Temp Sensor - sets the type of analog supply temperature sensor connected to the thermostat.

Changeover Setpoint - this sets the temperature at which the TEC switches from cooling to heating mode. The TEC enters cooling below this setpoint, and once in cooling mode, does not switch back to heating mode until the temperature rises more than 10 degrees above the setpoint.

AI2 Setup In - sets the type of analog supply temperature sensor connected to the thermostat.

AI2 Offset - sets the offset applied to the supply/discharge temperature reading.

Commissioning

Commissioning - this starts the commissioning mode. Commissioning mode is used to verify hardware inputs and outputs.

Trend

Effective Zone Temperature - data sample taken every 15 min (100 samples stored).

Active Setpoint - data sample taken every 15 min (100 samples stored).

Return Air Humidity - data sample taken every 15 min (100 samples stored).

BI1 Status - data sample taken after each use (25 samples stored).

BI2 Status - data sample taken after each use (25 samples stored).

Operational Outdoor Air Temperature (if active) - data sample taken every 15 min (100 samples stored).

Supply Air Temperature (if active) - data sample taken every 15 min (100 samples stored).

Fan Command - data sample stored after each change (25 samples stored).

Cool Stage 1 On - data sample stored after each change (25 samples stored).

Cool Stage 2 On - data sample stored after each change (25 samples stored).

Heat Stage 1 On - data sample stored after each change (25 samples stored) Heat Stage 2 On - data sample stored after each change (25 samples stored).

Economizer PID CMD - this is the Economizer output % command. The data sample is taken every 15 min (100 samples stored).

Heat PID CMD - this is the Heating Loop % command. The data sample is taken every 15 min (100 samples stored).

Cool/Dehumid PID CMD - this is the Cooling and Dehumidification % command. The data sample is taken every 15 min (100 samples stored).

Status

System status

Occupancy Source - displays the current source of the TEC thermostat's occupancy.

Unit Status - displays if the thermostat is cooling, heating, idle, disabled, or the reason why cooling and heating is unavailable.

Outdoor Air Temperature - displays the outdoor air temperature value in the thermostat.

Supply Air Temperature - displays the supply temperature value in the thermostat.

Economizer Available - displays the status if the outdoor conditions are suitable for economizer cooling.

Cooling OAT Lockout - displays if cooling is being locked out due to low outdoor air temperature.

Heating OAT Lockout - displays if heating is being locked out due to high outdoor air temperature.

Comp Low OAT Lockout - displays if compressor heating is locked out due to low outdoor air temperature.

Supp High Lockout Temp - displays if supplemental heating is locked out due to high outdoor air temperature.

Changeover State - displays the current state of changeover detection.

Zone Temp Source - displays the source of the zone temperature reading in the TEC thermostat.

Fan Accumulated Runtime - displays the current runtime value of the supply fan.

BI1 Status - displays the current status of BI1.

BI2 Status - displays the current status of BI2.

Zone Dew Point Temperature - status point that displays the calculated Zone dew Point temperature.

Free Cooling Available - status point that indicates if free cooling is available based on internal calculations from configured humidity and temperature sensors.

Control status

Cooling % Command - displays the current PID controller percent command.

Heating % Command - displays the current PID controller percent command.

Reheat % Command - displays the current PID controller percent command.

Supplemental % Command - displays the current PID controller percent command.

Economizer % Command - displays the current PID controller percent command.

Cool Stage 1 - displays if the first stage of cooling is on.

Cool Stage 2 - displays if the second stage of cooling is on.

Heat Stage 1 - displays if the first stage of heating is on.

Heat Stage 2 - displays if the second stage of heating is on.

Reheat - displays if the reheat stage is on.

Supplemental Heat - displays if the supplemental heat stage is on.

Fan % Command - displays the current fan percent command.

Fan - displays the current fan status/speed.

Dehumidifier Command - displays the current status of the dehumidifier output. This option is available only on TEC3x3x models if Dehumidification Sequence Mode is set to Simple Dehum and Dehumidification Aux Mode is set to Dehumidifier.

Hot Gas Reheat Command - displays the current status of the hot gas reheat output. This option is available only on TEC3x3x models if Dehumidification Sequence Mode is set to Hot Gas Reheat Dehum and Dehumidification Aux Mode is set to Hot Gas Reheat.

Mixed Air Low Limit Cycle - indicates whether the supply air low limit tempering is active or not.

Thermostat info

Model Name - displays the TEC factory model name.

Software Version - displays the currently installed software version.

Unit Name - displays the TEC unit name.

Description - this is the description of the device. The description displays in the Device List for the mobile access portal (MAP), the device list for the wireless network coordinator.

Device Name - this is the description of the device. The description displays in the Device List for the MAP, the device list for the wireless network coordinator.

Comms status (wireless TECs only)

Radio Code Version - displays the current version of the radio code software.

PAN ID - displays the current PAN ID.

Active Channel - displays the active wireless network channel.

Signal Strength - displays the current wireless signal strength.

Connection Status - displays the current wireless connection status.

Network State - displays the current network state.

Supervisor Status - displays the current supervisor status.

IEEE Address - displays the wireless MAC address.

Short Address - displays the short address.

DCV status

Not Economizing When Should - Title 24 economizer fault condition that indicates Economizer Damper percentage command is less than minimum outdoor air damper position and damper position error (damper position tolerance).

Economizing When Should Not - Title 24 economizer fault condition that indicates Economizer Damper percentage command is greater than minimum outdoor air damper position and damper position error (damper position tolerance).

Damper Not Modulating - Title 24 economizer fault condition that indicates the damper is stuck, Economizer damper % command minus economizer damper position is less than the damper position error or tolerance.

Excess Outdoor Air - Title 24 economizer fault condition that indicates excess outdoor air being let in (Economizer damper percentage command is less than minimum OA position and damper minimum position tolerance and Ramp minimum OA) OR (economizer damper percentage command is less than damper minimum position tolerance and ramp closed).

Air Temperature Sensor Failure - outdoor air temperature sensor value is unreliable.

Economizer Enabled for Operation - status point that indicates if economizer damper is enabled.

Compressor Enable - status point that indicates if compressor is enabled and turned on.

Heating Enable - status point that indicates if any of the heating stage is enabled and turned on.

Update

View Version - displays the currently installed software version.

Load Firmware - you can upgrade the TEC firmware if there is a USB drive with an update connected to the TEC. The control is off following the TEC thermostat restart after the upgrade.

The configuration can be backed up to the USB drive and restored to like models in order to expedite the commissioning process.

Important: The control mode is set to Control Off following the TEC thermostat restart after a firmware update.

Restore - restores the configuration from either the internal memory or a USB drive.

Backup - backs up the current configuration to internal memory and a USB drive (when connected).

BAS only points

Effective Zone Temperature - zone temperature used for control after determining if it is the onboard or remote zone temperature sensor being used.

Effective Setpoint - setpoint used for control that results from the combination of the occupancy and control mode parameters.

Effective Cooling Setpoint - cooling setpoint that results from the combination of the occupancy and control mode parameters.

Effective Heating Setpoint - heating setpoint that results from the combination of the occupancy and control mode parameters.

Network Supply Air Temperature - supply air temperature provided by the bus supervisory controller.

Effective Supply Air Temperature - supply air temperature that results from a combination of the local SAT sensor and the NET-SAT value.

Network Outdoor Air Temperature - outdoor air temperature provided by the bus supervisory controller.

Effective Outdoor Air Temperature - outdoor air temperature that results from a combination of the local OAT sensor and the NET-OAT value.

Network Outdoor Air Humidity - outdoor air humidity provided by the bus supervisory controller.

Network Zone Humidity - zone humidity provided by the bus supervisory controller.

Effective Zone Humidity - zone humidity used for control operation to determine which input is used, either the onboard sensor, the remote zone temperature sensor, or network input.

Supervisor Occupancy - occupancy status provided by the bus supervisory controller.

Effective Occupancy - occupancy status that results from a combination of the local occupancy sensor and the NET-OCC value.

Lockout Level - lockouts that the bus supervisory controller can apply to the unit.

Calendar Object - the schedule and calendar object work together to determine the type of schedule that is in effect. It is recommended that you only use weekly schedules for the TEC.

Effective Outdoor Air Humidity - outdoor air humidity used for control operation after determining which input is used, either the remote outdoor air humidity sensor or network input.

Effective Air Quality - zone CO₂ used for control operation after determining which input is used, either the remote Zone CO₂ sensor or network input.

Network Air Quality - zone CO₂ network input provided by the bus supervisory controller.

Effective Damper Feedback - outdoor air damper feedback used for control operation after determining which input is used, either the remote outdoor air damper feedback sensor or network input.

Network Damper Feedback - outdoor air damper feedback network input provided by the bus supervisory controller.

Troubleshooting

| Faults | Probable causes | Solutions |
|-----------------------|---|---|
| Remote Zone Temp Fail | The External Zone Temperature sensor has been disconnected or has failed. | 1. Check the wiring of the sensor. |
| | | 2. If intentionally disconnected, reset the sensors |
| | | through the Inputs menu under Control Setup. |
| | | 3. If problems persist, order replacement units |
| | | and return the affected devices to Johnson |
| | | Controls under the RMA program. |
| Supply Temp Fail | The External Supply Temperature | 1. Check the wiring of the sensor. |
| | sensor has been disconnected or has | 2. If intentionally disconnected, reset sensors |
| | failed. | through the menu. |
| | | 3. If problems persist, order replacement units |
| | | and return the affected devices to Johnson |
| | | Controls under the RMA program. |
| Outdoor Temp Fail | The External Outdoor Air Temperature | 1. Check the wiring of sensor. |
| | sensor has been disconnected or has | 2. If intentionally disconnected, reset sensors |
| | failed. | through the menu. |
| | | 3. If problems persist, order replacement units |
| | | and return the affected devices to Johnson |
| | | Controls under the RMA program. |
| Internal Sensor Fail | An internal sensor has failed on the TEC. | If problems persist, order replacement units and |
| | | return the affected devices to Johnson Controls |
| | | under the RMA program. |

Table 12: Fault list

Table 12: Fault list

| Faults | Probable causes | Solutions |
|----------------------|--|--|
| OA Lockouts Disabled | The Local Outdoor Air Temperature sensor has become disconnected or failed or a network Outdoor Air | 1. If the source of outdoor air temperature was a locally connected sensor, follow the steps for the Outdoor Temp Fail alarm. |
| | Temperature sensor has timed out, and the TEC is no longer shutting down equipment based on the OA lockout setpoints. | 2. If the source of outdoor air temperature was a BAS, check the BAS to ensure that it is still online and providing the TEC with the temperature reading. If removal of the BAS mapping was |
| Econ Unavailable | The Outdoor Air Temperature concor | intentional, reset sensors through the menu. |
| | is not installed, has failed, or has been disconnected and the TEC can no longer control the economizer. | Check the wiring of sensor. If intentionally disconnected, reset sensors through the menu. If problems persist, order replacement units and return the affected devices to Johnson |
| Dehum Unavailable | Dehumidification is unavailable because the zone humidity sensor has failed. | Controls under the RMA program. If problems persist, order replacement units and return the affected devices to Johnson Controls |
| Service | Equipment connected to the BI configured for a Service alarm is triggering the alarm | under the RMA program. Service the equipment per the manufacturer's recommendation. |
| Dirty Filter | Equipment connected to the BI configured for a Dirty Filter alarm is triggering the alarm. | Replace the filter in the equipment per the manufacturer's instructions. |
| Calibration Corrupt | Factory calibration data is lost or is not installed. | If problems persist, order replacement units and return the affected devices to Johnson Controls under the RMA program. |
| Changeover Fail | The Supply Temperature Sensor is not installed, has failed, or has been disconnected and the TEC can no longer detect changeover mode to cool or heat. | Check the wiring of the sensor. If intentionally disconnected, reset sensors through the menu. If problems persist, order replacement units and return the affected devices to Johnson Controls under the RMA program. |
| Zone Temp Unreliable | All sources of zone temperature are unreliable, including the onboard sensor. | If problems persist, order replacement units and return the affected devices to Johnson Controls under the RMA program. |
| Open Window | The switch connected to the BI configured for Open Window is sensing that the window is opened, and control has shut down. | Close the window to resume control. Check sensor functionality with an ohmmeter, and verify the wiring to the TEC. If problems persist, order replacement units and return the affected devices to Johnson Controls under the RMA program. |
| Fan Lock | The switch connected to the BI configured for Fan Lock did not sense airflow within 10 seconds of starting the fan, and control has been shut down. | Inspect equipment to ensure fan functions. Check sensor functionality with an ohmmeter, and verify wiring to the TEC. Reset fault by entering the menu, selecting Fault Status, and selecting the Fan Lock. If problems persist, order replacement units and return the affected devices to Johnson Controls under the RMA program. |

Table 12: Fault list

| Humidity Unreliable The zone humidity reading was reliable 1. If the source of zone humidity was the onboard and has now failed. and has now failed. affected devices to Johnson Controls under the affected devices to Johnson Controls under the RMA program. Controller Fault The thermostathas detected an internal fault that it cannot recover. An unknown error has prevented the fault that it cannot recover. If problems persist, order replacement units and return the affected devices to Johnson Controls under the RMA program. Touchscreen Unavailable The touch screen components have failed to initialize. 1. Restart the thermostat. Touchscreen Unavailable The touch screen components have failed to initialize. 1. Restart the thermostat. Board Mismatch The baseboard and CPU board are papears on the TEC that indicates the model number of the baseboard and CPU board. 1. Upgrade the TEC3000 to the latest released version. Firmware Mismatch The previous upgrade has not completed because the previous version is no longer supported. 1. Netmet to diverse. USB Malfunction A USB drive has maffunctioned and drawn more than the maximum allowed. 1. Try a new USB drive. Zupgrade the TEC3000 to dear the fault. 2. If problems persist, order replacement units and return the affected devices to Johnson Controls under the RMA program. Wasth drive has maffunctioned and cream methalthe maximum all | Faults | Probable causes | Solutions |
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| | | | Controls under the RMA program. |

Table 12: Fault list

| Faults | Probable causes | Solutions | |
|-----------------------------|--|--|--|
| Cooling Ineffective | The supply air temperature does not fall | 1. Check the unit. | |
| | when the unit calls for cold. | 2. If problems persist, order replacement units | |
| | | and return the affected devices to Johnson | |
| | | Controls under the RMA program. | |
| Supply Fan Runtime Limit | The fan has run to the limit set in the | 1. Perform routine maintenance on the unit. | |
| | Control Setup menu. | 2. Reset the runtime using the Fan Runtime Reset | |
| | | object under Control Setup. The runtime is reset | |
| | | and an alarm is issued after the limit is reached | |
| | | again. | |
| | | 3. If problems persist, order replacement units | |
| | | and return the affected devices to Johnson | |
| | | Controls under the RMA program. | |
| Not Economizing When Should | Damper actuator failure abysical | Verify outdoor air damper functionality and verify | |
| Economizing When Should Not | blockage of the outdoor air damper or | | |
| Damper Not Modulating | feedback mismatch | the command and feedback signals | |
| Excess Outdoor Air | | | |

| Symptom | Probable causes | Solutions |
|--|--|--|
| The thermostat displays Idle with a Unit Status of Cooling Unavailable | The two-pipe fan coil/VAV system does not have a changeover sensor and | 1. Check the wiring of the supply temperature sensor/switch. |
| due to Changeover despite being above cooling setpoint, or with a status of Heating Unavailable | switch connected, or the sensor/switch has failed. | 2. Verify that the changeover is set up correctly for the type of sensor attached (sensor/switch). |
| due to Changeover despite being below the setpoint. (TEC3612-1x-000, TEC3613-1x-000, TEC3622-1x-000, TEC3623-1x-000 models only.) | The changeover temperature is sensing a hot supply but the thermostat is requesting cooling. | Verify that the supply is not in heating mode. If it is, nothing can be done from the TEC. Check the wiring of the supply |
| | | temperature sensor/switch. |
| | | 3. Check the placement of the supply temperature sensor/switch. |
| | | 4. Verify that the changeover is set up correctly for the type of sensor attached (sensor/switch). |
| | Changeover temperature is sensing a cold supply but the thermostat is requesting heating. | 1. Verify that the supply is not in cooling mode. If it is, nothing can be done from the TEC. |
| | | 2. Check the wiring of the supply temperature sensor/switch. |
| | | 3. Check the placement of supply temperature sensor/switch. |
| | | 4. Verify that the changeover is set up correctly for the type of sensor attached (sensor/switch). |
| The thermostat displays Idle with a | The outdoor air temperature is too | 1. If Cooling and Heating Lockout |
| Unit Status of Cooling Unavailable | warm for heating or too cold for | Setpoints are inadequate, adjust the |
| due to OA Temp despite being above | cooling. | setpoints. |
| Leasting Uppyrailable due to OA Temp | | 2. Wait for the outdoor conditions to be |
| despite being below the setpoint | | favorable for heating or cooling. |
| (TEC3630-1x-000, TEC3631-1x-000 | | |
| models only.) | | |

Table 13: Troubleshooting details

Table 13: Troubleshooting details

| The thermostat displays Idle with a Unit Status of Cooling Analysian in the Control Mode is set to Cooling Analysian in the Control Mode is set to Cooling Analysian is the Control Mode is set to Cooling Cooling Analysian is the Control Mode is set to Cooling Coo | Symptom | Probable causes | Solutions |
|---|--|--|--|
| Unit Status of Cooling Unavailable due to Control Mode despite being stopint, or with a status of Heating Unavailable due to Control Mode but the thermostat is requesting the Control Mode is set to Heating Cooling. Heating. (All models,) The Control Mode is set to Heating Status of Cooling Unavailable despite being below the steptiont. Cooling. Change the Control Mode to Auto or Cooling. (R1 models,) The Number of Compressors set to Nut Mode despite being below the steptiont. Cooling. Adjust the number of compressors and number of heating stages to match the configuration of the unit. (R1 codels,) The Number of Compressors set to Nut Used and the thermostat is requesting with a status of Heating Unavailable despite being below the setpoint. (R1CG330-1x-000, TEC3631-1x-00 models only.) The heat pump requires traditional wring (Y1, Y2, W1, W2, and G) and the theat pump Supported is set to Yes. Consult the equipment documentation to verify wring configuration, then set Heat Pump Supported to No. The heat pump pheats when it should be the cooling setpoint or below the setpoint or below the reaching setpoint when the PID is running on t | The thermostat displays Idle with a | The Control Mode is set to Cooling | Change the Control Mode to Auto or |
| due to Control Mode Casplic being above cooling setpoint, or with a status of Heating Unavailable due to Control Mode but the thermostat is requesting (All models.) Change the Control Mode to Auto or Cooling. Mode despite being below the setpoint. (Claimodels.) The Number of Compressors set to Not Unit Status of Heating Unavailable due soite being above cooling setpoint, or Number of Heating Unavailable despite being above cooling setpoint, or Number of Heating Stages is to NU Used. Consult the equipment documentation to verify wiring configuration, then set Heat Pump Supported to No. The heat pump does inty.) The heat pump requires thermostat is control the reversing valve (Y1, Y2, UR, DB, and G) but the Heat Pump Supported is set to Ves. Consult the equipment documentation to verify wiring configuration, then set Heat Pump Supported to No. The heat pump heats when it should heat. (TEC33630-1x-000, TEC3361-1x-000 motily.) The PID control algorithm minimizes est. Consult the equipment documentation to verify verify wiring configuration, then set Heat Pump Supported to Xes. The staged equipment shuts off above rapidly or too slowly when the PID is running on the FC1 if the unit is in on/(0). The PID control band around the setpoint. reaching setpoint. or for wire TC1 (TEC3631-1x-000, TEC3631-1x-000, TEC3631-1x-000, TEC3631-1x-000, TEC3631-1x-000, TEC3631-1x-000, TEC3 | Unit Status of Cooling Unavailable | Mode but the thermostat is requesting | Heating. |
| above cooling setpoint, or with a status of Heating Unavailable due to Control Mode despite being below the setpoint. (All models.) The thermostat displays Idle with a Unit Status of Cooling Unavailable despite being below the setpoint. (TEC3630-1x-00,TEC3631-1x-00 models only.) The heat pump does not, sequence correctly. (TEC3630-1x-00,TEC3631-1x-00 models only.) The heat pump heats when it should be cooling, and cools when it should be cooling, and cools when it should be to cooling setpoint when the PID is running on the FC. If the unit is set to No. The heat pump heats when it should be reaching setpoint when the PID is running on the TEC. If the unit is set torical approved to Ves. The heat pump heats when it should be reaching setpoint when the PID is running on the TEC. If the unit is set correctly. (TEC3630-1x-000, TEC3631-1x-00 models only.) The staged equipment shuts off above only.) The staged equipment toric Sing Valve polarity is incorrectly rec3631-1x-000, TEC3631-1x-000 reaching setpoint. TEC3630-1x-000, TEC3631-1x-000 reaching setpoint. TEC3630-1x-000, TEC3631-1x-000 reaching setpoint. TEC3630-1x-000, TEC3630-1x-000, TEC3631-1x-000 models only.) The staged equipment shuts off above value. The thermostat provides an error when trying to upgrade firmware. (All the terrorectly are minimum requipment wear frem increased cycling. The TEC3000 zone temperature does not change fast enough compared to value. The TEC3000 zone temperature does not change fast enough compared to verification device (a calibrated sensor). is active verification device (a calibrated sensor). is active verification | due to Control Mode despite being | heating. | |
| of Heating Unavailable due to Control Mode but the thermostat is requesting Cooling. Mode despite being below the setpoint. The thermostat displays Idle with a Mode despite being above cooling setpoint, or Cooling. or Number of Heating Stages Is Adjust the number of compressors and number of heating stages to match the configuration of the unit. with a stuss of Heating Unavailable despite being below the setpoint. The heat pump does not sequence correctly. Consult the equipment documentation to verify wiring configuration, then set Heat Pump Supported is set to Ves. The heat pump does not sequence correctly. The heat pump requires thermostat to consult the equipment documentation to control the reversing valve internally. Consult the equipment documentation to verify wiring configuration, then set Heat Pump Supported is set to No. The heat pump heats when it should be cooling and colos when it should be cooling setpoint or book the device to fact the equipment documentation to vershoot and energy usage for the eating stepoint or book the particular equipment heat or particular equipment before reaching setpoint. Consult the equipment minimum on/off the set correctly. The thetage equipment shuts off above rapid (trict) 11-x000. TEC3631-1x-000. The control algorithm minimizes on set correctly. Surt the equipment minimum on/off trips and set incorrectly for the reaching setpoint. Paylof (TEC3631-1x-000. TEC3631-1x-000. The control band around the setpoint is set to Noc. Surt off adove required the information to verify reversing valve polarity the equipment the required the set | above cooling setpoint, or with a status | The Control Mode is set to Heating | Change the Control Mode to Auto or |
| Node despite being below the setpoint. (All models.) cooling. The thermostat displays Idle with a Unit Status of Cooling Unavailable despite being below the setpoint. (TEC3630-1x-000,TEC3631-1x-00 models only.) The Number of Compressors set to Not despite being below the setpoint. (TEC3630-1x-000,TEC3631-1x-00 models only.) Adjust the number of compressors and under status of Heating Stages is configuration of the unit. The heat pump does only.) The heat pump coes into t sequence correctly. (TEC3630-1x-000,TEC3631-1x-00 models only.) The heat pump requires traditional wring (Y1, Y2, W1, W2, and G) and heat pump sequires thermostat to control the reversing valve (Y1, Y2, OJR, set to No. Consult the equipment documentation to verify wring configuration, then set Heat Pump Supported to Set. The heat pump heats when it should be running on the TEC_IF14b unit is in Or/Off Cortrol off wen it should be running on the TEC. (TE3613-1x-000, TEC3630-1x-000, TEC3631-1x-000, TEC3630-1x-000, TEC3613-1x-000, TEC3630-1x-000, TEC3613-1x-000, TEC3631-1x-00 models only.) The ontrol band around the setpoint may cycle the equipment document and zone, and may cycle the equipment monor/ of times and is set incorrectly for the equipment, zone, or user preference. A setpoint does not provide the required to clear the Firmware (All models.) The TeC3000 is configured by drafult for larger spaces with normal-iszed end equipment twear form increseed end equipment twear proportional device verifi | of Heating Unavailable due to Control | Mode but the thermostat is requesting | Cooling |
| (All models.) Consign The thermostat displays Idle with a Unit Status of Cooling Unavailable despite being above cooling setpoint, (FCS380-1x-000,TEC3831-1x-00 models only.) The Number of Compressors set to Not Used and the thermostat is requesting number of heating stages to match the configuration of the unit. The theat pump does only.) The heat pump requires traditional wring (Y1, Y2, W1, W2, and G) and wring (Y1, Y2, W1, W2, and G | Mode despite being below the setpoint. | cooling | coomig. |
| The thermostat displays Idle with a Unit Status of Cooling Unavailable despite being above cooling septoint. (TEC36301-x-000,TEC3631-1x-00 models only.) The Number of Compressors set to Not Used and the thermostat is requesting despite being below the septoint. (TEC36301-x-000,TEC3631-1x-00 models) only.) Adjust the number of compressors and unumber of heating Stages to configuration of the unit. The heat pump does only.) The heat pump requires traditional wring (Y1, Y2, W1, W2, and G) and treating value internally, but Heat Pump Supported is set to Ves. Consult the equipment documentation to wring voring value internally. Pump Supported to No. The heat pump heats when it should be rooling, and cools when it should heat. The Patter Pump Supported is set to No. Consult the equipment documentation to werify wiring configuration, then set Heat Pump Supported to Yes. The staged equipment shuts off above running on the TEC. (The unit is in Or/Off contrue mode, this does not apply (TEC3612-1x-000, TEC3631-1x-00 models) The PID control algorithm minimizes overshoot and energy usage for the part cultar equipment and zone, and may cycle the equipment before reaching setpoint. I. Verify that equipment minimum on/ off times and is set incorrectly for the equipment, zone, or user preferred and equipment were from increased end equipment were from increased and equipment were from increased and equipment were from increased and equipment were from increased and equipment were from increased end equipment were from increased and equipment were from increased end | (All models.) | coomig. | |
| The tentode optimum of the properties of the properis of the properties of the properties of the properties | The thermostat displays Idle with a | The Number of Compressors set to Not | Adjust the number of compressors and |
| Outs of control of control setpoint. Cooling, or Number of Heating Stages is configuration of the unit. with a status of Heating Unavailable despite being below the setpoint. Cooling, or Number of Heating Stages is configuration of the unit. (TEC3630-1x-000, TEC3631-1x-00 models only.) The heat pump nequires traditional wiring (Y1, Y2, W1, W2, and G) and (TEC3630-1x-000, TEC3631-1x-00 models is et to No. Consult the equipment documentation to wrify wiring configuration, then set Heat pump requires thermostat to control the reversing valve internally, but Heat Pump Supported is set to No. The heat pump heats when it should be reversing valve internally, but Heat Pump Supported is set to No. Consult the equipment documentation to wrify wiring configuration, then set Heat pump supported is set to No. The staged equipment shuts off above the cooling setpoint or below the heat ing setpoint. The PID control algorithm minimizes on the Site control stage and equipment documentation to wershoot and energy usage for the particular equipment documentation to wershoot and energy usage for the particular equipment documentation to set set tradeoff exists between refuced control before raphy (FTC3613-1x-000, TEC3631-1x-000, TEC3630-1x-000, TEC3631-1x-000, TEC3631-1x-000, TEC3631-1x-000, TEC3631-1x-000, TEC3630-1x-000, TEC3631-1x-000, TEC3630-1x-000, | Unit Status of Cooling Unavailable | Used and the thermostat is requesting | number of beating stages to match the |
| Bit is a status of if eating Unavailable despite being below the setpoint. (FEC3630-1x-000,TEC3631-1x-00 models only.) Set to Not Used. Consult the equipment documentation to verify wiring configuration, then set Heat Pump Supported to No. The heat pump does only.) The heat pump requires traditional wiring (Y1, Y2, W1, W2, and G) and handles the reversing valve (internally, only.) Consult the equipment documentation to verify wiring configuration, then set Heat Pump Supported to No. The heat pump neats when it should be recording setpoint or below the cooling setpoint or below the only.) The Plat pump requires thermostat to control the reversing valve (Y1, Y2, OB, werking valve (Y1, Y2, OB, and G) but the Heat Pump Supported to Yes. The heat pump heats when it should be recording setpoint or below the cooling setpoint or below the cooling setpoint or below the net cooling setpoint or below the apply (FEC3612-1x-000, The staged equipment dycles too rapidly or too slowly when the PID is running on the TEC. (Ff the uit is nopol, TEC3631-1x-000, TEC3631-1x-000, TEC3631-1x-000, The staged equipment cycles too rapidly or too slowly when the PID is running on the TEC. (FfC3612-1x-000, TEC3631-1x-000, TEC3631-1x-000, TEC3631-1x-000, TEC3631-1x-000, TEC3631-1x-000, TEC3631-1x-000, TEC3631-1x-000, TEC3631-1x-000, TEC3631-1x-000, TEC3631-1x-000, The staged equipment dycles too rapidly or too slowly when the PID is running on the TEC. (FfC3612-1x-000, running on the TEC. (FfC3612-1x-000, reaching setpoint. The control band around the setpoint. Stepetced behavior. TEC3631-1x-000 models only.) The control band around the setpoint. Stepetced behavior. Stepetced behavior. The thermo | despite being above cooling setpoint or | cooling or Number of Heating Stages is | configuration of the unit |
| The bast pump does only.) The heat pump constants Consult the equipment documentation to verify wiring configuration, then set Heat wiring (Y1, Y2, W1, W2, and G) and wiring (Y1, Y2, W1, W2, and G) an | with a status of Heating Unavailable | set to Not Used | |
| Description Description | despite being below the setpoint | | |
| The beat pump does The heat pump requires traditional Consult the equipment documentation to verify wiring configuration, then set Heat Pump Supported is set to Yes. The heat pump heats when it should beat. The heat pump requires therworks to control the reversing valve polarity is incorrectly set to No. Consult the equipment documentation to verify wiring configuration, then set Heat Pump Supported is set to Yes. The heat pump heats when it should heat. The Pate pump requires therworks to control the reversing valve polarity is incorrectly set. Consult the equipment documentation to verify wiring configuration, then set Heat Pump Supported is set to Yes. The staged equipment shuts off above the cooling setpoint or below the heating setpoint when the PID is running on the TEC. If the unit is in On/Off Control models this does not rapidly or too slowy when the PID is only.) The control band around the setpoint. The staged equipment cycles too rapidly or too slowy when the PID is running on the TEC (TEG361-1x-000, TEC3630-1x-000, TEC3630-1x | (TEC3630-1x-000 TEC3631-1x-00 models | | |
| The heat pump does not sequence correctly. The heat pump requires traditional wiring (Y1, Y2, W1, W2, and G) and Wiring (Y1, Y2, W1, W2, and G) and Wiring (Y1, Y2, W1, W1, W2, B, but Heat Pump Supported is set to Yes. Consult the equipment documentation to verify wiring configuration, then set Heat Pump Supported to No. The heat pump heats when it should be control the reversing valve polarity is incorrectly colling, and cools when it should heat. (TEC3630-1x-000, TEC3631-1x-00 models only.) Reversing Valve polarity is incorrectly set. Consult the equipment documentation to verify wiring configuration, then set Heat Pump Supported to Yes. The heat pump heats when it should heat. (TEC3630-1x-000, TEC3631-1x-00 models only.) The PID control algorithm minimizes vershoot and energy usage for the particular equipment and zone, and may cycle the equipment before ron/Off Control mode, this does not apply (TEC3613-1x-000, TEC3631-1x-000 off times and is set incorrectly or the again dequipment, zone, or user preference. A readoff size and increased energy usage and equipment, zone, or user preference. A readoff size and increased engry and equipment, zone, or user preference. A value. 1. Verify that equipment minimizes to clear the required times are set correctly. The thermostat provides an error when trying to upgrade firmware. (All models.) The TEC3000 is configured by default for larger spaces with normal-isized equipment when a proportional device verification device (a calibrated sensor). is active. Select Control Sett py Tumpa > to the different USB drive is default that occurs. | | | |
| The free pump requires transmission of sequence correctly. Internees pump requires transmission of wing (Y1, Y2, W1, W2, and G) and handles the reversing valve internally. Pump Supported to No. (TEC3630-1x-000, TEC3631-1x-00 models only.) The heat pump requires transmission of Consult the equipment documentation to control the reversing valve (Y1, Y2, O/B, werffy wiring configuration, then set Heat pump supported is set to Yes. The heat pump heats when it should be cololing, and cools when it should be to control the reversing Valve polarity, then adjust (TEC3630-1x-000, TEC3631-1x-00 models only.) Reversing Valve polarity is incorrectly set. Consult the equipment documentation to control algorithm minimizes overshoot and energy usage for the particular equipment and zone, and may cycle the equipment before reaching setpoint. Consult the equipment minimum on/off times and is set incorrectly for the staged equipment cycles too rapidy or too slowly when the PID is running on the TEC. If the unit is in Control band around the setpoint. I. Verify that equipment minimum on/off times and is set incorrectly for the required tradeoff exists between reduced control band size and increased energy usage for wine tradeoff exists between reduced control tades only.) I. Verify that equipment minimum on/off times and is set incorrectly for the reduired tradeoff exists between reduced control and equipment wear from increased energy usage for wine to the preferred. A tradeoff exists between reduced control band size and increased energy usage for the preferred. A tradeoff exists between reduced control the set or torol, set Temp Control band size and increased energy usage for the minimum on/off times and is set incorrectly for the control additic was the required tore the required to clear the firmware Mismatch | The heat nume doos | The best nump requires traditional | Consult the equipment documentation to |
| Inclease partice city. Initing (11, 12, 14, 14, 14, 12, 14, 16, 14, 14, 14, 14, 14, 14, 14, 14, 14, 14 | not soquence correctly | wiring (V1, V2, W1, W2, and G) and | vorify wiring configuration, then set Heat |
| ITEC3001 K400, TEC301 FX00 models Inathes the reversing value frequinally, and supported to two. only.) Ite at pump requires thermostat to control the reversing value (Y1, Y2,O/B, and G) but the Heat Pump Supported is set to Yes. Consult the equipment documentation to verify wiring configuration, then set Heat and G) but the Heat Pump Supported is set to Yes. The heat pump heats when it should be cooling, and cools when it should heat. Reversing Valve polarity is incorrectly cooling, and cools when it should heat. Consult the equipment documentation to verify reversing valve polarity, then adjust the Reversing Valve Polarity menu option accordingly. The staged equipment shuts off above the cooling setpoint or below the particular equipment and zone, and may cycle the equipment document to reaching setpoint. The PID control algorithm minimizes overshoot and energy usage for the particular equipment and zone, and may cycle the equipment document to reaching setpoint. On/y.) The control band around the setpoint is determined by the minimum on/ off times and is set incorrectly for the equipment topon. TEC3631-1x-000, TEC | (TEC2620 1x 000 TEC2621 1x 00 models | bandles the reversing value internally | Pump Supported to No |
| Only.) Duck hear pump requires thermostat to these Consult the equipment documentation to control the reversing valve (Y1, Y2,O/B, and G) but the Heat Pump Supported is set to No. Consult the equipment documentation to verify wring configuration, then set Heat Pump Supported is set to No. The heat pump heats when it should be actions, and cols when it should heat. Reversing Valve polarity is incorrectly set. Consult the equipment documentation to verify veresting valve Polarity, then adjust the Reversing Valve Polarity, then adjust the cooling setpoint or below the heating setpoint when the PID is rapidly or too slowly when the PID is rapidle or too slowly and the steppoint or too slowly when the PID is rapidle or | | but Host Pump Supported is set to Ves | |
| The field pump requires themostate to control the reversing value (Y1, Y2, OB) set to No. Consult the equipment documentation to werify wiring configuration, then set Heat Pump Supported to Yes. The heat pump heats when it should heat. (TEC3630-1x-00, TEC3631-1x-00 models only.) Reversing Valve polarity is incorrectly set. Consult the equipment documentation to verify reversing valve polarity, then adjust the Reversing Valve Polarity menu option accordingly. The staged equipment shuts off above the cooling setpoint or below the heating setpoint when the PID is orunning on the TEC. If the unit is in On/Off Control mode, this does not apply (TEC3612-1x-000, TEC3613-1x-000, TEC3630-1x-000, TEC3612-1x-000, TEC3630-1x-000, TEC3631-1x-00 The control band around the setpoint. Expected behavior. The staged equipment cycles too rapidly or too slowly when the PID is running on the TEC (TEC3612-1x-000, TEC3631-1x-000, TEC3612-1x-000, TEC3631-1x-000, TEC3612-1x-000, TEC3631-1x-000, TEC3612-1x-000, TEC3631-1x-000 models only.) The control band around the setpoint. 1. Verify that equipment minimum on/ off times and is set incorrectly for the equipment wear from increased and equipment wear f | oniy.) | The heat nume requires thermostat to | Concult the equipment decumentation to |
| Control the Peversing Valve (Y, 12,0/B)Vermp Supported to Yes.and G) but the Heat Pump Supported isPump Supported to Yes.The heat pump heats when it should be.Reversing Valve polarity is incorrectlyConsult the equipment documentation to verify reversing valve polarity, then adjust the Reversing Valve Polarity menu option accordingly.The staged equipment shuts off above the cooling setpoint or below the heating setpoint when the PID is rrunning on the TEC. If the unit is in CG3630-1x-000, TEC3631-1x-000, TEC3630-1x-000, TEC3631-1x-000, TEC3630-1x-000, TEC3631-1x-000, TEC3630-1x-000, TEC3630-1x-000, TEC3630-1x-000, TEC3630-1x-000, TEC3630-1x-000, TEC3630-1x-000, TEC3630-1x-000, TEC3630-1x-000, TEC3630-1x-000, TEC3630-1x-000, TEC3631-1x-000, TEC3630-1x-000, TEC3630-1x-000, TEC3630-1x-000, TEC3630-1x-000, TEC3630-1x-000, TEC3600-1x-000, TEC3630-1x-000, TEC3600-1x-000, TEC3630-1x-000 | | The neat pump requires thermostat to | Consult the equipment documentation to |
| and G) but the Heat Pump Supported is Pump Supported to Yes.The heat pump heats when it should beat. (TEC3630-1x-000,TEC3631-1x-00 models only.)Reversing Valve polarity is incorrectly set.Consult the equipment documentation to verify reversing valve polarity, men adjust the Reversing Valve polarity menu option accordingly.The staged equipment shuts off above the cooling setpoint or below the heating setpoint when the PID is running on the TEC. If the unit is in On/Off Control mode, this does not apply (TEC3612-1x-000, TEC3613-1x-000 may cycle the equipment and zone, and particular equipment and zone, and eaching setpoint.I. Verify that equipment minimum on/off times are set correctly.The staged equipment cycles too rranning on the TEC (TEC3612-1x-000, TEC3630-1x-000, TEC3630-1x-000, TEC3631-1x-000 models only.)The control band around the setpoint is determined by the minimum on/ off times and is set incorrectly for the equipment wear from increased cycling.1. Verify that equipment minimum on/off times are set correctly. 2. If the default deadband around the setpoint does not provide the required tradeoff exists between reduced control band size and increased energy usage and equipment wear from increased cycling.1. Verify that equipment minimum on/off times are set correctly. 2. If the default deadband around the set on to provide the required tradeoff exists between reduced control band size and increased energy usage and equipment wear from increased cycling.1. Verify that equipment minimum on/off times are set correctly. 2. If the default deadband around the set ont observe the provide the required to clar the Firmware Mismatch fault that occurs.The thermostat provides an error when tryi | | control the reversing valve (Y1, Y2,O/B, | Verify wiring configuration, then set Heat |
| Set to No.The heat pump heats when it should heat. (TEC3630-1x-000,TEC3631-1x-00 models only.)Consult the equipment documentation to verify reversing Valve polarity, then adjust the Reversing Valve polarity is incorrectly set.Consult the equipment documentation to verify reversing Valve Polarity, then adjust the Reversing Valve Polarity menu option accordingly.The staged equipment shuts off above the cooling setpoint or below the heating setpoint when the PID is running on the TEC. If the unit is in On/Off Control mode, this does not apply (TEC3612-1x-000, TEC3613-1x-000, TEC3630-1x-000, TEC3631-1x-000 models only.)The control band around the setpoint.Expected behavior.The staged equipment cycles too rapidly or too slowly when the PID is running on the TEC (TEC3612-1x-000, TEC3631-1x-00 models only.)The control band around the setpoint is determined by the minimum on/ off times and is ze and increased energy usage and equipment wear from increased cycling.1. Verify that equipment minimum on/ off times and is ze and increased energy usage and equipment wear from increased cycling.The thermostat provides an error when trying to upgrade firmware. (All models.)The firmware on the USB drive is below the minimum required version. Error code 1025.For wired TEC3000s, use firmware version 3.0.2.xxxx on higher. A restart is required to clear the Firmware Mismatch fault that occurs.The TEC3000 zone temperature does the measured zone temperature form a verification device (a calibrated sensor).The TEC3000 is configured by default for larger spaces with normal-sized equipment when a proportional device verification device (a calibrated sensor).The TEC3000 is configured by default <br< td=""><td></td><td>and G) but the Heat Pump Supported is</td><td>Pump Supported to Yes.</td></br<> | | and G) but the Heat Pump Supported is | Pump Supported to Yes. |
| The heat pump heats when it should be cooling, and cools when it should be inty.) Reversing valve polarity is incorrectly set. Consult the equipment documentation to verify reversing valve polarity, then adjust the Reversing valve polarity, then adjust the Reversing valve Polarity menu option accordingly. The staged equipment shuts off above the cooling setpoint or below the heating setpoint when the PID is running on the TEC. If the unit is in On/Off Control mode, this does not apply (TEC3612-1x-000, TEC3613-1x-000, TEC3630-1x-000, TEC3630-1x-000, TEC36331-1x-00 models only.) The control band around the setpoint is determined by the minimum on/ off times and is set incorrectly for the equipment, zone, or user preference. A tradeoff exists between reduced control band size and increased energy usage and equipment wear from increased cycling. 1. Verify that equipment minimum on/ off times are set correctly. The thermostat provides an error when trying to upgrade firmware. (All models.) The firmware on the USB drive is below the minimum required version. Error ode 1025. For wired TEC3000s, use firmware version 3.0.2xxxx or higher. A restart is required to clear the Firmware Mismatch fault that occurs. The TEC3000 zone temperature does not change fast enough compared to the measured zone temperature from a change fast enough compared to the measured zone temperature from a change fast enough compared to the measured zone temperature from a change fast enough compared to the measured zone temperature from a change fast enough compared to the measured zone temperature from a change fast enough compared to the measured zone temperature from a change fast enough compared to the measured zone temperature from a change fast enough compared to the measured zone temperature from a change fast enough com | | set to No. | |
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| trying to back up settings (All models) | trying to back up settings (All models) | | ny a different OSB di We. |

Table 13: Troubleshooting details

| Symptom | Probable causes | Solutions | |
|--|--|--|--|
| The thermostat provides an error when | The USB drive is defective. | Try a different USB drive. | |
| trying to restore settings from a backup. | The Restore file is corrupt. | Try restoring a different backup file. | |
| (All models.) | The Restore file is from an incompatible | Ensure that the backup file being restored | |
| | model TEC. | was from the same model TEC. | |
| The thermostat is unable to access a | The drive is formatted as NTFS or | Reformat the USB drive, or try a different | |
| USB drive. (All models.) | another unsupported format. The TEC supports FAT and FAT32 formats only. | USB drive with a supported format. | |
| | The USB drive is defective. | Try a different USB drive. | |
| The thermostat displays Board Mismatch. (All models.) | The I/O board that the display board is currently attached to does not match the one that initially shipped with the display board. | Attach the display board to the correctI/O board. | |
| | A hardware failure is causing the two boards to incorrectly identify themselves. | If problems persist, order replacement units and return the affected devices to Johnson Controls under the RMA program. | |
| The thermostat displays Controller Fault. (All models.) | An internal fault was detected and the thermostat was unable to recover. | If problems persist, order replacement units and return the affected devices to Johnson Controls under the RMA program. | |
| The Bell icon is displayed on the TEC home page. (All models.) | The fault has been detected on the TEC. | See Table for TEC fault causes and resolution. | |
| Partial Restore Complete is displayed | Not all of the items in the backup file | 1. Create a backup file on a USB drive for | |
| when trying to restore settings from a | have been restored. This error can | the TEC that is showing the issue. | |
| backup file. (All models.) | be caused by a value being out of the minimum or maximum range in the backup file. It may also occur if there | 2. Edit the backup file created in step 1 on a computer to reflect the preferred settings. | |
| | setting in the backup file and on the TEC device. | 3. Verify that the modified values are within minimum and maximum range in the backup file. | |
| | | 4. Restore the settings from the newly edited backup file on the TEC. | |
| The network engine field point mapping | Selecting Map All to map the field | Select the displayed field points | |
| process ends unexpectedly. | points. | individually through the Point Mapping Utility. There are 60 field points available. | |
| Some icons are hidden. | Lockout levels are used or the icons are hidden due to the display settings. | See Table 10 for lockout levels and access details. | |

(Note: For common MS/TP troubleshooting information, refer to the *MS/TP Communications Bus Technical Bulletin (LIT-12011034).*

Related documentation

See Table 14 to locate information in related documentation.

| For information about | See document | Document number |
|--|---|--------------------------------|
| Applications, Features, | TEC3000 Color Series Thermostats Product Bulletin | LIT-12013193 |
| and Benefits of the TEC3000 Series BACnet MS/TP or N2 Network Temperature and Humidity Thermostat | TEC3000 Color Series Thermostats Catalog Page | LIT-1901109 |
| Locating, Mounting, and Wiring a TEC3000 Series | TEC3000 Series On/Off or Floating Fan Coil Thermostats Installation Guide | LIT-12013161 |
| BACnet MS/TP or N2 Network Temperature | TEC3000 Series Proportional Fan Coil Thermostats Installation Guide | LIT-12013162 |
| and Humidity mermostat | TEC3000 Series Thermostat for Rooftop Package and Heat Pump with Economizer Installation Guide | LIT-12013163 |
| Installing, Wiring, and Setting up a TEC3000 Series BACnet MS/TP or N2 Network Temperature and Humidity Thermostat | TEC3000 Series On/Off or Floating Fan Coil Thermostats Quick Start Guide | Part No. 24-11353-000 01 |
| | TEC3000 Series Proportional Fan Coil Thermostats Quick Start Guide | Part No. 24-11353-000 28 |
| | TEC3000 Series Thermostat for Rooftop Package and Heat Pump with Economizer Quick Start Guide | Part No. 24-11353-000 36 |
| Wireless TEC Networks | WNC1800/ZFR182x Pro Series Wireless Field Bus System Technical Bulletin | LIT-12012356 |
| Wireless TEC Networks | WRG1830/ZFR183x Pro Series Wireless Field Bus System Technical Bulletin | LIT-12013553 |

Table 14: TEC3000 Series Field-Selectable BACnet MS/TP or N2 Networked and Wireless Thermostats related documentation

Product warranty

This product is covered by a limited warranty, details of which can be found at <u>www.johnsoncontrols.com/buildingswarranty</u>.

Software terms

Use of the software that is in (or constitutes) this product, or access to the cloud, or hosted services applicable to this product, if any, is subject to applicable end-user license, open-source software information, and other terms set forth at www.johnsoncontrols.com/techterms. Your use of this product constitutes an agreement to such terms.

Patents

Patents: <u>https://jcipat.com</u>

Single point of contact

| APAC | EU | UK | NA/SA |
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