

Dry Contact Alerts on T10+ with EIM

ADDENDUM

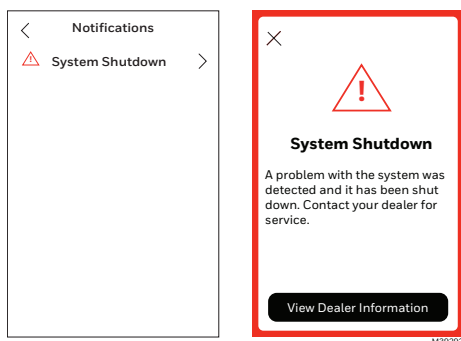
Applies to the following Model Numbers:

YTHM1004R3000: Kit with T10+ Thermostat, EIM, Wireless Indoor Sensor, & Wired Discharge and Return Sensors

YTHM1004R3001: Kit with T10+ Thermostat, EIM, Wireless Indoor Sensor, wireless outdoor sensor, & Wired Discharge and Return Sensors

Dry Contact Alerts

A Dry Contact device such as a wet switch can be connected to the S1, S2, S3, or S4 terminals at the Equipment Interface Module. When the dry contact device detects a problem, the thermostat displays an alert on the home screen along with the dealer information.



When the user presses the alert for more information, the notification screen is displayed, prompting them to contact their dealer.

The following dry contact alerts are available for the T10+ with EIM:

Full Drain Pan Alert

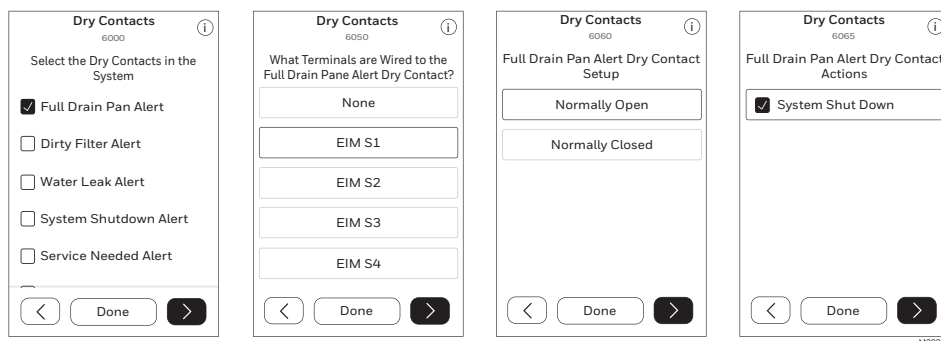
When the dry contact device detects that the condensation drain pan is full, the thermostat provides an alert to the user.

NOTE: When a full drain pan alert is selected, there is a follow up setting asking if you want to shut off the system when this alert is active or just send the alert message.

Dirty Filter Alert

When the dry contact device detects a dirty air filter (pressure drop across the filter), the thermostat alerts the user to replace the filter.

Dry Contact Setup Example



Water Leak Alert

When the dry contact device detects a water leak, the thermostat alerts the user.

NOTE: When a water leak alert is selected, and the T10+ is configured to control a humidifier there is a follow up setting asking if you want to shut off the humidifier when this alert is active or just send the alert message.

System Shutdown Alert

When the dry contact device detects a critical problem with the system, the thermostat alerts the user that the system was shut down. When the dry contact device detects a problem with the system (for example, smoke detection), the thermostat will not call for heating, cooling, fan or IAQ equipment until the dry contact is deactivated or the feature is no longer configured at the thermostat.

Service Needed Alert

When the dry contact device detects an issue that requires service, the thermostat provides an alert to the user.

Fan Failure Alert

The Fan Failure Alert protects the equipment when there is no airflow. When the dry contact device (for example, sail switch) detects no airflow for 5 minutes after a call for forced air heat, cool, or fan, the thermostat alerts the user that the system was shut down due to a lack of airflow. The thermostat will call for the fan and lock out all other equipment until the dry contact device senses air flow again or the feature is no longer configured at the thermostat.

Custom Alert

Allows the dealer to enter a custom alert to be displayed when a dry contact device is activated. For example, a float switch can detect when your sump pump is not working.

Custom Alerts 1 through 4

Allows the dealer to enter a custom alert to be displayed when a dry contact device is activated. For example, a float switch can detect when your sump pump is not working.

When Custom Alert 1 through Custom Alert 4 is selected in ISU 6005, the T10+ asks you to name the alert and then gives options for additional settings related to the alert. These settings are:

- **Which set of S terminals on the EIM the dry contact alert is wired to (ISU 6190).**

There are four (4) sets of configurable S terminals on the EIM. If a set of S terminals is already configured for use by a different dry contact alert (or sensor), it will not be configurable.

- **Whether the switch wired to these terminals is normally open or closed (ISU 6200).**

The switch wired to the S terminals could either be open in normal (not alert) conditions or closed.

- **Enter the dry contact alert name (ISU 6210).**
- **Whether there is an alert message displayed when the alert is active (ISU 6215).**

In most cases, the installer would want an alert message to appear on the T10+ if there was a dry contact alert active. However, the installer may be using the “alert” to do some other action (like running a ventilator when a sensor is reading high CO2). This may be normal operation and they may not wish to show an alert.

- **Lock Out Heat or Lock Out Cool (ISUs 6230, 6340, 6440, 6540)**

If the installer previously chose to lock out heat or cool on a custom dry contact alert condition, The T10+ will then ask if:

- » You want a delay before the lockout (ISU 6600 or 6620).
For example, if someone was using a door sensor to lock out cooling, you wouldn't want to short cycle the cooling every time someone enters or exits. But if the door is left open for a certain length of time, you may wish to shut down the heat or cooling.
- » If you still want a maximum temperature for cool (ISU 6610) or minimum indoor temperature for heat (ISU 6630). Example: If someone had a heat lockout configured when the window was open, they left the window open, and the indoor temperature dropped to 40°F, you probably still want the heat to run because the danger of pipes freezing overrides the inefficient use of heating with a window open

- **Activate Fan (ISUs 6230, 6340, 6440, 6540)**

If selected, this setting turns on the fan when the selected custom dry contact alert (custom dry contact 1 through 4) is active.

- **Activate Custom U terminal (ISUs 6230, 6340, 6440, 6540)**

If you choose to activate a custom U terminal during a custom alert, the T10+ will ask you to name the U terminals used. That way the T10+ equipment status menu can show what is being turned on or locked out. For example, you could wire a shut off valve to the U contacts and the status would then show “Shut off valve energized” under equipment status

- **Humidifier Lockout (ISU 8095)**

If the T10+ and EIM are set for a custom dry contact alert and to control a humidifier, you can choose to lock out the humidifier during a custom dry contact alert (the water leak alert option also offers this setting)

- **Dehumidifier Lockout (ISU 9145)**

If the T10+ and EIM are set for a custom dry contact alert and to control a dehumidifier, you can choose to lock out the dehumidifier during a custom dry contact alert.

- **Turn On Ventilator (ISU 10065)**

If the T10+ and EIM are set for a custom dry contact alert and to control a ventilator, you can choose to turn on the ventilator during a custom dry contact alert.

- **Lockout Ventilator (ISU 10140)**

If the T10+ and EIM are set for a custom dry contact alert and to control a ventilator, you can choose to lock out the ventilator during a custom dry contact alert

Installer Setup (ISU)

NOTES:

- For this file, only the dry contact ISU settings are shown. Full ISU settings are found in the product data sheets located at : <https://customer.resideo.com/resources/Techlit/TechLitDocuments/33-00000s/33-00462.pdf>.
- The firmware is occasionally updated over the air (OTA) from the factory. To ensure the latest firmware updates are installed, confirm the thermostat is connected to a stable WiFi connection. Some ISU settings may not be shown on models that don't have the latest firmware.



ISU #	Heading	Question	Options	Contingent Previous Setting?	EIM Needed?	T10, T10+, or Both	Notes
6000	Dry Contact Alerts	Select dry contact alerts	Full Drain Pan Alert, Dirty Filter Alert, Water Leak Alert, System Shutdown Alert, Service Needed Alert, Fan Failure Alert.		Yes	T10+	See dry contact alert for operation details
6005	Dry Contact Alerts	Select dry contact alerts	Custom Alert 1, Custom Alert 2, Custom Alert 3, Custom Alert 4		Yes	T10+	See dry contact alert for operation details
6050	Dry Contacts	What terminals are wired to the full drain pan alert dry contact?	None, EIM S1, EIM S2, EIM S3, EIM S4	6000 has full drain pan selected	Yes	T10+	See dry contact alert for operation details
6060	Dry Contacts	Full drain pan alert dry contact setup	Normally Open, Normally Closed		Yes	T10+	
6065	Dry Contacts	Full drain pan alert dry contact actions	System shutdown (select or de-select)		Yes	T10+	
6070	Dry Contacts	What terminals are wired to the Dirty filter alert dry contact?	None, EIM S1, EIM S2, EIM S3, EIM S4	6000 has dirty air filter selected	Yes	T10+	See dry contact alert for operation details
6080	Dry Contacts	Dirty filter alert dry contact setup	Normally Open, Normally Closed		Yes	T10+	
6090	Dry Contacts	What terminals are wired to the water leak alert dry contacts?	None, EIM S1, EIM S2, EIM S3, EIM S4	6000 has water leak selected	Yes	T10+	See dry contact alert for operation details
6100	Dry Contacts	Water leak alert dry contact setup	Normally Open, Normally Closed		Yes	T10+	
6110	Dry Contacts	What terminals are wired to the system shutdown alert dry contact?	None, EIM S1, EIM S2, EIM S3, EIM S4	6000 has system shutdown alert selected	Yes	T10+	See dry contact alert for operation details
6120	Dry Contacts	System shutdown alert dry contact setup	Normally Open, Normally Closed		Yes	T10+	
6130	Dry Contacts	What terminals are wired to the service needed alert dry contact?	None, EIM S1, EIM S2, EIM S3, EIM S4	6000 has service needed alert selected	Yes	T10+	See dry contact alert for operation details
6140	Dry Contacts	Service needed alert dry contact setup	Normally Open, Normally Closed		Yes	T10+	
6150	Dry Contacts	What terminals are wired to the fan failure alert dry contact?	None, EIM S1, EIM S2, EIM S3, EIM S4	6000 has fan failure alert selected	Yes	T10+	See dry contact alert for operation details
6160	Dry Contacts	Fan failure alert dry contact setup	Normally Open, Normally Closed		Yes	T10+	
6190	Dry Contacts	What terminals are wired to the custom alert 1 dry contact?	None, EIM S1, EIM S2, EIM S3, EIM S4	6005 has custom alert 1 selected	Yes	T10+	See dry contact alert for operation details
6200	Dry Contacts	Custom alert 1 dry contact setup	Normally Open, Normally Closed		Yes	T10+	
6210	Dry Contacts	Custom alert 1 name	Type in the alert name		Yes	T10+	
6215	Dry Contacts	Show custom alert 1 message	Yes, No		Yes	T10+	Will an alert message be shown on display when alert 1 is active?
6220	Dry Contacts	Custom alert 1 message	Type in the message displayed when this alert is active	6215 is set to Yes	Yes	T10+	See dry contact alert for operation details
6230	Dry Contacts	Custom alert 1 actions	Lockout Heat, Lockout Cool, Activate Fan, Activate Custom U Terminal	6005 has custom alert 1 selected	Yes	T10+	

ISU #	Heading	Question	Options	Contingent Previous Setting?	EIM Needed?	T10, T10+, or Both	Notes
6240	Dry Contacts	What terminals are wired to Custom U contact?	EIM U1, EIM U2, EIM U3	6230 has Custom U terminal selected	Yes	T10+	When the switch wired to S1 for dry contact alert activates, the Custom U contacts will change state to activate or shut off whatever is wired to those terminals.
6250	Dry Contacts	Custom U dry contact name	Type in the name of what the Custom U dry contact is controlling		Yes	T10+	
6260	Dry Contacts	Custom U dry contact setup	Normally Open, Normally Closed		Yes	T10+	
6300 - 6340	These are duplicate settings to 6200-6260, but for dry contact alert 2 (if selected)			6005 has custom alert 2 selected	Yes	T10+	
6400- 6440	These are duplicate settings to 6200-6260, but for dry contact alert 3 (if selected)			6005 has custom alert 3 selected	Yes	T10+	
6500 - 6540	These are duplicate settings to 6200-6260, but for dry contact alert 4 (if selected)			6005 has custom alert 4 selected	Yes	T10+	
6600	Dry Contacts	Cool Lockout Delay Time	Off, 5-60 minutes in 5 minute increments	6230, 6340, 6440, or 6540 set to lock out cool	Yes	T10+	See dry contact alert section for operation details
6610	Dry Contacts	Cool lockout maximum indoor temperature	None, 80°F - 99°F		Yes	T10+	
6620	Dry Contacts	Heat Lockout Delay Time	Off, 5-60 minutes in 5 minute increments	6230, 6340, 6440, or 6540 set to lock out heat	Yes	T10+	See dry contact alert section for operation details
6630	Dry Contacts	Heat lockout minimum indoor temperature	None, 40°F - 60°F		Yes	T10+	
6640	Dry Contacts	Custom U Contact Minimum Off Time	Off, 1-5 minutes	6240 set to U1, U2, or U3.	Yes	T10+	
8095	Humidification	Humidifier Lockout Dry Contacts	Full drain pan, water leak, Custom Alert 1 - 4 (options depend on 6000 or 6005 settings)	8000 = steam, bypass or fan powered. 6000 = full drain pan, water leak. 6005 = custom dry contact alert	Yes	T10+	This will lock out the humidifier when the associated dry contact alert is active
9145	Dehumidification	Dehumidifier Lockout Dry Contact	Custom Alert 1 - 4 (options depend on 6005 settings)	ISU 6005 is set for a custom dry contact alert	Yes	T10+	If enabled, the dehumidifier will lock out whenever the selected dry contact alert is active
10065	Ventilation	Turn on ventilation dry contacts	Custom Alert 1 - 4 (options depend on 6005 settings)	ISU 6005 is set for a custom dry contact alert & ISU 10145 is not selected for the same custom alert.	Yes	T10+	If enabled, the ventilator will come on whenever the selected dry contact alert is active
10145	Ventilation	Ventilation lockout dry contacts	Custom Alert 1 - 4 (options depend on 6005 settings)	ISU 6005 is set for a custom dry contact alert & ISU 10065 isn't selected for the same custom alert.	Yes	T10+	If enabled, the ventilator will be locked out whenever the selected dry contact alert is active.

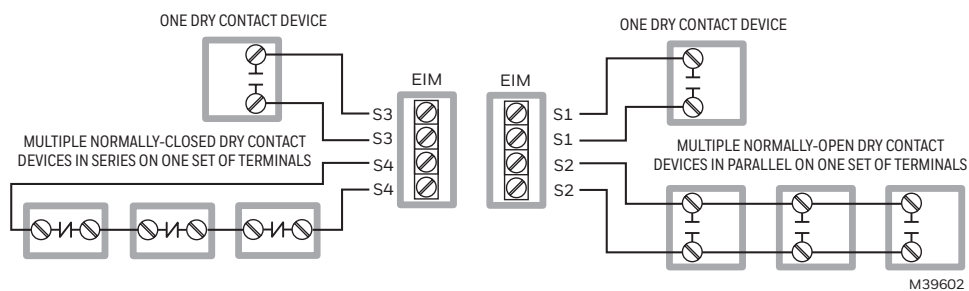


Figure 1. Wiring the Dry Contact Alert Switch to the EIM

Setting Custom Dry Contact Alerts for the T10+ with EIM

Dry Contacts6000

Select the Dry Contacts in the System

☐ Full Drain Pan Alert

☐ Dirty Filter Alert

☐ Water Leak Alert

☐ System Shutdown Alert

☐ Service Needed Alert

<

Done

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M39294

Dry Contacts6000

Select the Dry Contacts in the System

☐ Water Leak Alert

☐ System Shutdown Alert

☐ Service Needed Alert

☐ Fan Failure Alert

☒ Custom Alert 1

<

Done

>

M39295

Dry Contacts6000

Select the Dry Contacts in the System

☐ Fan Failure Alert

☒ Custom Alert 1

☐ Custom Alert 2

☐ Custom Alert 3

☐ Custom Alert 4

<

Done

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M39296

Dry Contacts6190

What Terminals are Wired to the Custom Alert 1?

None

EIM S1

EIM S2

EIM S3

EIM S4

<

Done

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M39297

Dry Contacts6200

Custom Alert 1 Setup

Normally Open

Normally Closed

<

Done

>

M39298

Dry Contacts6210

Custom Alert 1 Name

Custom Alert

<

Done

>

M39299

Enter custom alert name

Window Open

Cancel

Done

q w e r t y u i o p

a s d f g h j k l

↑ z x c v b n m ↵

123 Space Next

M39300

Dry Contacts6210

Custom Alert 1 Name

Window Open

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Done

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M39301

Dry Contacts6215

Show Custom Alert 1 Message

Yes

No

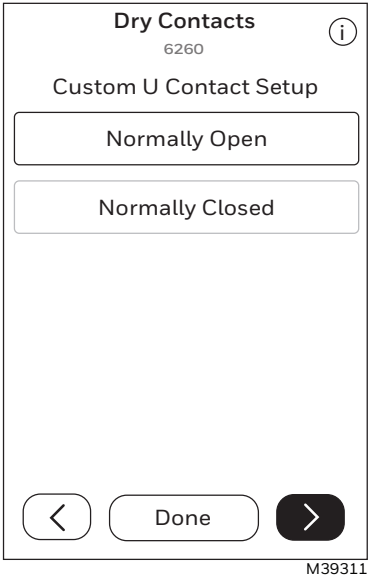
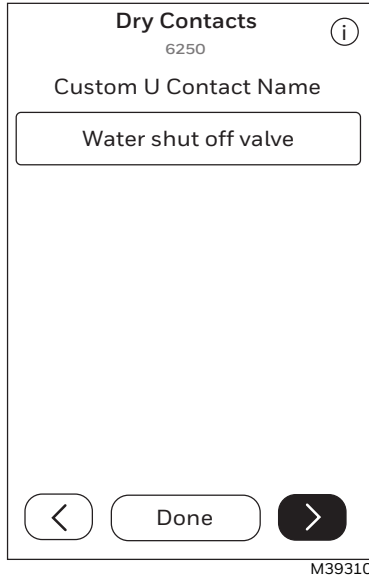
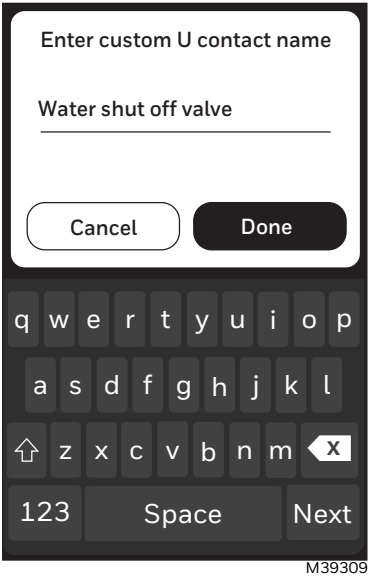
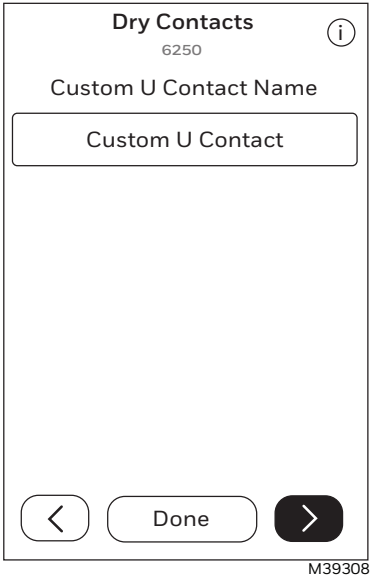
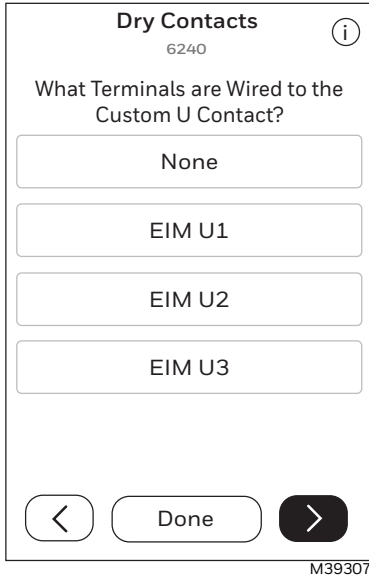
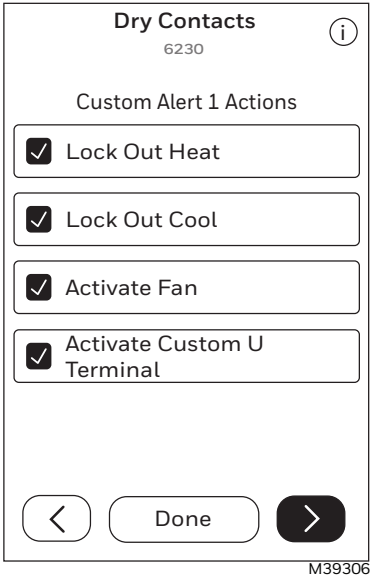
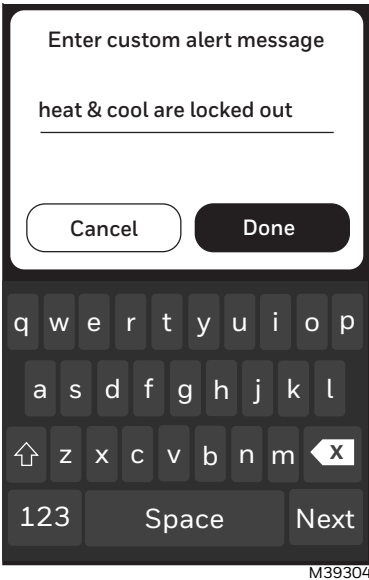
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Done

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M39302

Setting Custom Dry Contact Alerts for the T10+ with EIM (Continued)



Setting Custom Dry Contact Alerts for the T10+ with EIM (Continued)

Dry Contacts6300

What Terminals are Wired to the Custom Alert 2?

None

EIM S2

EIM S3

EIM S4

<

Done

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M39312

Dry Contacts6310

Custom Alert 2 Setup

Normally Open

Normally Closed

<

Done

>

M39313

Dry Contacts6320

Custom Alert 2 Name

Custom Alert 2

<

Done

>

M39314

Enter custom alert name

High CO2

Cancel

Done

q w e r t y u i o p

a s d f g h j k l

↑ z x c v b n m ↵

123 Space Next

M39315

Dry Contacts6320

Custom Alert 2 Name

High CO2

<

Done

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M39316

Dry Contacts6325

Show Custom Alert 2 Message

Yes

No

<

Done

>

M39317

Dry Contacts6330

Custom Alert 2 Message

Custom Alert Message 2

<

Done

>

M39318

Enter custom alert message

CO2 is high. Ventilator is on

Cancel

Done

q w e r t y u i o p

a s d f g h j k l

↑ z x c v b n m ↵

123 Space Next

M39319

Dry Contacts6330

Custom Alert 2 Message

CO2 is High. Ventilator is on

<

Done

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M39320

Setting Custom Dry Contact Alerts for the T10+ with EIM (Continued)

Dry Contacts6340

Custom Alert 2 Actions

☐ Lock Out Heat

☐ Lock Out Cool

☒ Activate Fan

☐ Activate Custom U Terminal

<

Done

>

M39321

Dry Contacts6600

Cool Lockout Delay Time

⌵

5Minutes

⌶

<

Done

>

M39322

Dry Contacts6610

Cool Lockout Maximum Indoor Temperature

⌵

80°

⌶

<

Done

>

M39323

Dry Contacts6620

Heat Lockout Delay Time

⌵

5Minutes

⌶

<

Done

>

M39324

Dry Contacts6630

Heat Lockout Minimum Indoor Temperature

⌵

40°

⌶

<

Done

>

M39325

Dry Contacts6640

Custom U Contact Minimum Off Time

⌵

5Minutes

⌶

<

Done

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M39326

Setting Custom Dry Contact Alerts for the T10+ with EIM (Continued)

Humidification

8095

i

Humidifier Lockout Dry Contacts

☒ Custom Alert 1

☐ Custom Alert 2

<

Done

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M39327

Dehumidification

9145

i

Dehumidifier Lockout Dry Contacts

☒ Custom Alert 1

☐ Custom Alert 2

<

Done

>

M39328

Ventilation

10065

i

Turn On Ventilation Dry Contacts

☒ Custom Alert 1

☐ Custom Alert 2

<

Done

>

M39329

Ventilation

10145

i

Ventilation Lockout Dry Contacts

☒ Custom Alert 2

<

Done

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M39330



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