Description

This guide describes how to set features on the TT-L Series 0-10 Vdc dimmer. The settable features include:

Occupancy Sensor Input Auto On: This feature provides the capability to integrate the low voltage occupancy sensor with the TT-L so when an occupant enters the room the lights will automatically turn on (See page 2). When this feature is disabled the occupant will have to press the "ON" push button to turn on the lights.

Occupancy Sensor Input Auto Off: This feature provides the capability to integrate the low voltage occupancy sensor with the TT-L so when an occupant exits the room the lights will automatically turn off. When this feature is disabled the occupant will need to press the "OFF" push button to turn off the lights (See page 2).

Ramp Time: This feature provides the capability to set the time it takes to go from minimum to maximum voltage output while pressing and holding the "Up Arrow" or "Down Arrow". The ramp time options are 2, 3 (factory default), 4, 5, 6 or 7 seconds. (See page 2).
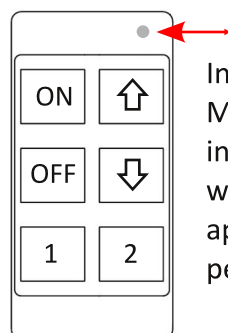
Auto-On Output Level: This feature provides the capability to automatically turn on the lights between 20-100% when the occupancy sensor detects an occupant in the room. ASHRAE 90.1 2010 requires 50% power level for Auto On devices. The factory default is 100%. (See page 3).

Minimum Voltage Output: This feature provides the capability to set the minimum voltage of the 0-10 Vdc dimming output to 0.5v (factory default), 1.0v, 1.5v, 2.0v, 2.5v or 3V. This will provide better control for the user by matching the dimming range of the different dimmable drivers. (See page 3).

Maximum Voltage Output: This feature provides the capability to set the maximum voltage of the 0-10 Vdc dimming output to 10v (factory default), 9.5v, 9.0v, 8.5v, 8.0v or 7.5V. This will provide better control for the user by matching the dimming range of the different dimmable drivers (See page 3).
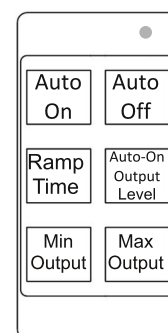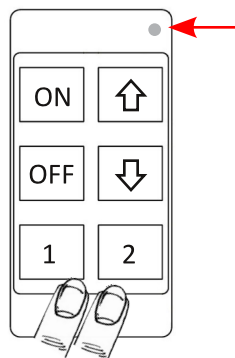
Normal Operating Mode

In Normal Operating Mode the green LED in upper right corner will flash approximately 1 time per second.
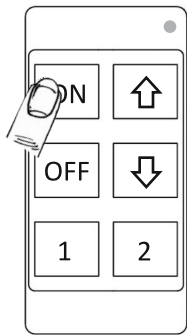
Feature Setting Mode

To enter the Feature Setting Mode, simultaneously press and hold the "1" and "2" push buttons (approx. 4 seconds) or until the green LED in upper right corner flashes quickly, approximately 3 times per second.
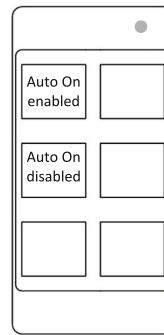
After entering the Feature Setting Mode the push buttons are assigned different functions from the Normal Operating Mode as shown here.

Feature Setting Mode - Enable "Auto On" for Occupancy Sensor Input
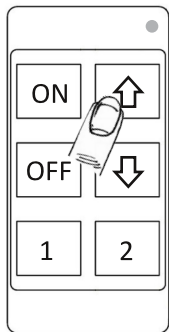
To enable or disable the Auto On feature while in the Feature Setting Mode press the "ON" push button. If the "ON" button LED is illuminated then Auto On is enabled and if the "OFF" button LED is illuminated the feature is disabled. To enable, press the "ON" push button. To disable, press the "OFF" push button.
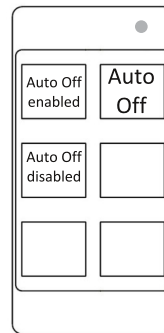
To exit the "Auto On" feature, simultaneously press and release the "1" and "2" push buttons and proceed to the next feature you want to set. To exit Feature Setting Mode simultaneously press and release the "1" and "2" push buttons again. The green LED in upper right corner changes its flash sequence to Normal Operating Mode.

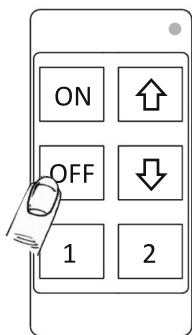## Feature Setting Mode - Enable "Auto Off" for Occupancy Sensor Input

To enable or disable the Auto Off feature while in the Feature Setting Mode press the "Up Arrow" push button. If the "ON" button LED is illuminated then Auto Off is enabled and if the "OFF" button is illuminated the feature is disabled. To enable, press the "ON" push button. To disable, press the "OFF" push button.
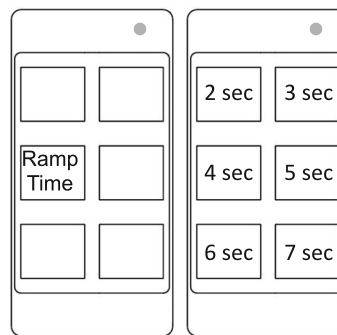
To exit the "Auto Off" feature, simultaneously press and release the "1" and "2" push buttons and proceed to the next feature you want to set. To exit Feature Setting Mode simultaneously press and release the "1" and "2" push buttons again. The green LED in upper right corner changes its flash sequence to Normal Operating Mode.

Feature Setting Mode - Set Ramp Time (Time it takes to change 0-10 Vdc signal from Min to Max)

To set the Ramp Time feature while in the Feature Setting Mode press the "OFF" push button. The "OFF" button LED will flash according to how many seconds are set. Two flashes=2 sec, three flashes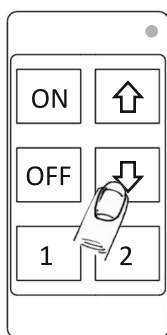=3 sec...seven flashes=7 sec. Press respective push button for the desired number of seconds. See drawing to the right for the values of each push button.

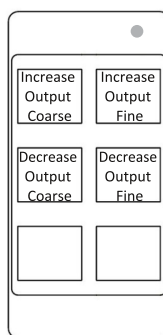To exit the "Ramp Time" feature, simultaneously press and release the "1" and "2" push buttons and proceed to the next feature you want to set. To exit Feature Setting Mode simultaneously press and release the "1" and "2" push buttons again. The green LED in upper right corner changes its flash sequence to Normal Operating Mode.

Feature Setting Mode - Auto-On Vdc Output Level

To set the Auto-On Output Level while in the Feature Setting Mode press the "Down Arrow" push button. The "ON" and "OFF" button LEDs will illuminate. Press "ON" for coarse and "Up Arrow" for fine increase adjustment or "OFF" for coarse an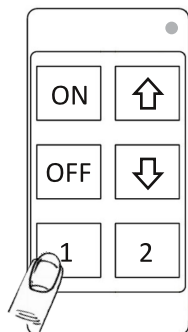d "Down Arrow" for fine decrease adjustment until the desired Auto-On Output Level is set. If you are trying to meet 50% Power Level energy code requirement be sure to verify from the LED fixture manufacture what Vdc signal on the LED fixture driver equates to 50% power level on the lighting fixtures.

To exit the "Auto-On Output Level" feature, simultaneously press and release the "1" and "2" push buttons and proceed to the next feature you want to set. To exit Feature Setting Mode simultaneously press and release the "1" and "2" push buttons again. The green LED in upper right corner changes its flash sequence to Normal Operating Mode.
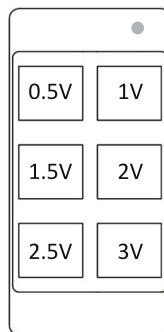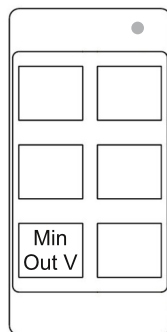
Feature Setting Mode - Minimum 0-10 Vdc Output Setting

To set the Minimum Voltage Output feature while in the Feature Setting Mode press the "1" push button and its button LED will flash to indicate the current Minimum Voltage Output setting. Each flash is 0.5V in value. As you set the value by pressing the associated push button shown to the right, the TT-L 0-10vdc output will go to that value. See drawing to the right for the values of each push button.
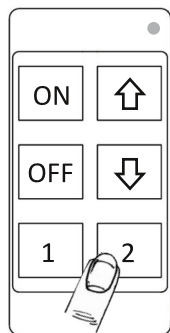
To exit the "Ramp Time" feature, simultaneously press and release the "1" and "2" push buttons and proceed to the next feature you want to set. To e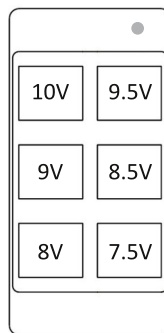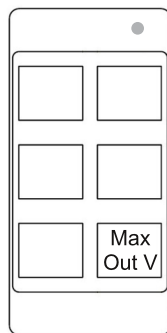xit Feature Setting Mode simultaneously press and release the "1" and "2" push buttons again. The green LED in upper right corner changes its flash sequence to Normal Operating Mode.

Feature Setting Mode - Maximum Voltage Output Setting

To set the Maximum Voltage Output feature while in the Feature Setting Mode press the "2" push button and its LED will flash to indicate the current Maximum Voltage Output setting. 1 flash = 10V, 2 flashes = 9.5V, 3 flashes = 9V, 4 flashes = 8.5V, 5 flashes = 8V and 6 flashes = 7.5V. To change the Maximum Voltage Output press the associated push button shown to the right for the desired voltage and the TT-L 0-10vdc output will go to that value.

To exit the "Ramp Time" feature, simultaneously press and release the "1" and "2" push buttons and proceed to the next feature you want to set. To exit Feature Setting Mode simultaneously press and release the "1" and "2" push buttons again. The green LED in upper right corner changes its flash sequence to Normal Operating Mode.