Distributed Low-Voltage Power System

Overview

The DLVP power module provides an onboard time clock input, that can be used to control lighting normally or implement partial on/ partial off controls. The power module provides inputs for an external dry contact closure.

Time clock commands can be sent to the power module via dry contact input. The table below defines the system actions based on various input conditions and settings.
## DLVP Time Clock / Occupancy State

<table>
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<th>Time Clock Status</th>
<th>Settings</th>
<th>Space Condition</th>
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<td><strong>Mode (DIP - 1)</strong></td>
<td><strong>Partial On (DIP - 2)</strong></td>
<td><strong>Occupied</strong></td>
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<td>Open (After Hours)</td>
<td>Occupancy (O)</td>
<td>Disabled (N)</td>
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<td>Occupancy (O)</td>
<td>Enabled (Y)</td>
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<td>Vacancy (V)</td>
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<td>Closed (Business Hours)</td>
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<td>Alert Mode Closed</td>
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<td>Alert Mode Open</td>
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</table>
**Time Clock Wiring**

Connect the dry contact closure to the appropriate terminal for the application. The terminal block is removable for ease of wiring. Use 18 AWG unshielded, 2 conductor twisted pair wiring for connection. Maximum distance must not exceed 1000ft. (300m).

Note: time clock contact closer source may be simple time clocks, lighting control panels, etc.

Note: DLVP does not support time sweeps

**Time Clock Settings**

The DLVP system may behave differently based on time clock input (during or after business hours) and settings established by switches on the low-voltage power module.
How time clock functions work
Out of the box, the time clock contact closure is open (after hours mode) and the system is in vacancy mode.
Occupancy mode, Time clock open

- When the space becomes occupied, receptacles become energized and lighting transitions to Scene 6 (default = 100%)
- A user may manually change the light level in the space through a wall station or personal remote (LVHH-02)
- When the space becomes unoccupied, light levels fade to off after the sensor delay time expires. Receptacle are de-energized 30-seconds after lighting turns off.
**Occupancy mode, partial ON enabled, Time clock open**

- When the space becomes occupied, receptacles become energized and lighting transitions to the partial ON level (50%).
- A user may manually change the light level in the space through a wall station or personal remote (LVHH-02).
- When the space becomes unoccupied, light levels fade to off after the sensor delay time expires. Receptacle are de-energized 30-seconds after lighting turns off.
Vacancy mode, Time clock open

- When the space becomes occupied, receptacles become energized, however lighting will remain OFF until a manual action occurs.
- A user may manually select the light level in the space through a wall station or personal remote (LVHH-02).
- When the space becomes unoccupied, light levels fade to off after the sensor delay time expires. Receptacle are de-energized 30-seconds after lighting turns off.
Occupancy mode, Time clock closed

- When the space becomes occupied, receptacles become energized and lighting transitions to Scene 6 (default = 100%)
- A user may manually change the light level in the space through a wall station or personal remote (LVHH-02)
- When the space becomes unoccupied, light levels fade to Scene 5 (default = 20%) providing partial OFF functionality
Vacancy mode, Time clock closed

- When the space becomes occupied, receptacles become energized, however lighting will remain OFF until a manual action occurs.
- A user may manually select the light level in the space through a wall station or personal remote (LVHH-02).
- When the space becomes unoccupied, light levels fade to off after the sensor delay time expires. Receptacle are de-energized 30-seconds after lighting turns off.
Example – Full day, occupancy mode

• Time clock contact OPEN with no occupancy, the lighting is OFF and receptacles are de-energized.

• The business day begins (time clock contact CLOSED), receptacles are energized and lighting fades to Scene 5 (default = 20%)

• The space becomes occupied, lighting transitions to Scene 6 (default = 100%)

• The space becomes unoccupied, light levels fade to Scene 5 (default = 20%) after the sensor delay time expires, providing partial OFF functionality

• The space becomes occupied, lighting transitions to Scene 6 (default = 100%)

• The business day ends (time clock contact OPEN), no changes are immediately noticed with lighting or receptacles

• The space becomes unoccupied, light levels fade to OFF after the sensor delay time expires. Receptacle are de-energized 30-seconds after lighting turns off.

• The space becomes occupied after hours, receptacles are energized and lighting fades to Scene 6 (default = 100%)

• The space becomes unoccupied for the remainder of the time clock open (after hours) period, light levels fade to OFF after the sensor delay time expires. Receptacle are de-energized 30-seconds after lighting turns off.
Example – Full day, occupancy mode with partial ON enabled

- Time clock contact OPEN with no occupancy, the lighting is OFF and receptacles are de-energized.
- The business day begins (time clock contact CLOSED), receptacles are energized and lighting transitions to Scene 5 (default = 20%)
- The space becomes occupied, lighting fades to the partial ON level (50%)
- A user manually changes the light level in the space through a wall station or personal remote (LVHH-02)
- The space becomes unoccupied, light levels fade to Scene 5 (default = 20%) after the sensor delay time expires
- The space becomes occupied, lighting transitions to the partial ON level (50%)
- A user manually changes the light level in the space through a wall station or personal remote (LVHH-02)
- After business day ends (time clock contact OPEN), no changes are immediately noticed with lighting or receptacles
- The space becomes unoccupied, light levels fade to OFF after the sensor delay time expires. Receptacle are de-energized 30-seconds after lighting turns off.
- The space becomes occupied after hours, receptacles become energized and lighting fades to the partial ON level (50%)
- The space becomes unoccupied for the remainder of the time clock open (after hours) period, light levels fade to OFF after the sensor delay time expires. Receptacle are de-energized 30-seconds after lighting turns off.
Example – Full day, vacancy mode

- Time clock contact OPEN with no occupancy, the lighting is OFF and receptacles are de-energized.
- The business day begins (time clock contact CLOSED), receptacles are energized and lighting transitions to Scene 5 (default = 20%)
- The space becomes occupied, however lighting will remain at Scene 5 until a manual action occurs
- A user manually select the light level through a wall station or personal remote (LVHH-02)
- The space becomes unoccupied, light levels fade to Scene 5 after the sensor delay time expires
- The space becomes occupied, however lighting will remain at Scene 5 until a manual action occurs
- A user manually changes the light level through a wall station or personal remote (LVHH-02)
- After business day ends (time clock contact OPEN), no changes are immediately noticed with lighting or receptacles
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- The space becomes occupied after hours, receptacles become energized, however lighting will remain OFF until a manual action occurs
- A user manually changes the light level through a wall station or personal remote (LVHH-02)
- The space becomes unoccupied for the remainder of the time clock open (after hours) period, light levels fade to OFF after the sensor delay time expires. Receptacle are de-energized 30-seconds after lighting turns off.
Example – Full day, No motion sensors

- Time clock contact OPEN with no occupancy, the lighting is OFF and receptacles are de-energized.
- The business day begins (time clock contact CLOSED), receptacles are energized and lighting transitions to Scene 5 (default = 20%)
- The space becomes occupied, however lighting will remain at Scene 5 until a manual action occurs
- A user manually selects the light level through a wall station
- After the business day ends (time clock contact OPEN), the lighting will blink five minutes prior to automatically turning OFF
- A user may delay the automatic OFF by one hour by manually pressing a button on a wall station
- Without manual action during the one hour delay, lighting blink-warns five minutes prior to fading to OFF. Receptacle are de-energized 30-seconds after lighting turns off.
- The space becomes occupied after hours, however lighting will remain OFF and receptacles de-energized until a manual action occurs
- A user manually changes the light level through a wall station providing the requested light level for one hour (receptacles become energized)
- The one hour lighting period may be extended by a manual action (lighting will blink five minutes prior to automatically turning OFF)
- Lighting fades to off either by manually pressing a button on a wall station or allowing the automatic OFF to occur. Receptacle are de-energized 30-seconds after the one hour lighting period ends