

## STANDARD FUNCTIONS (all relay packs)

### A-LEVEL FUNCTIONS

- 1 Button Mode
- 4 100 Hour Burn-in
- 9 Restore Factory Defaults
- 20 LED Operation

### B-LEVEL FUNCTIONS

- 1 Name Unit w/ Number
- 2 Semi-Auto Grace Period
- 3 Predictive Exit Time
- 4 Predictive Grace Time
- 11 Occupancy Tracking
- 12 Occupancy Tracking Channel
- 13 Photocell Tracking
- 14 Photocell Tracking Channel
- 15 Switch Tracking
- 16 Switch Tracking Channel
- 17 Override (Relay / Dimming)
- 18 Special Operating Mode
- 19 Invert Relay Logic
- 23 Special Switch Tracking Mode
- 27 Relay Always On
- 29 Occupancy Expiration of Manual Off
- 30 Timed Expiration of Manual Off

## DIMMING FUNCTIONS (nPP16 D, nPP16 D ER, nSP5 PCD units)

### A-LEVEL FUNCTIONS

- 3 Idle Time Until Dim
- 17 Secondary Zone Dimming Offset
- 23 Occupied Bright Level
- 24 Unoccupied Dim Level
- 26 Follow Photocell Mode

### B-LEVEL FUNCTIONS

- 21 WallPod Dimming Adjustments
- 22 Infinite Dimming Time Delay
- 26 PCD Frequency<sup>1</sup>
- 28 Dimming Always On
- 31 High End Trim
- 32 Low End Trim

Note 1: nSP5 PCD units only

## A-LEVEL PROGRAMMING INSTRUCTIONS

### PLEASE READ ALL 7 STEPS BEFORE PROGRAMMING

1. Enter programming mode by pressing & holding button until LED flashes rapidly. Release button.
2. Enter a specific programming function by pressing button the number of times as the desired function number from the *A-Level Detailed Function Tables* (e.g., press 3 times for function 3, *Idle Time Until Dim*).
3. LED will flash back the selected function's current setting (e.g., four flashes for 7.5 min). To change setting, proceed to step 4 before flash back sequence repeats 10 times. To exit the current function or to change to a different function, wait for sequence to repeat 10 times then return to step 1.
4. Press button the number of times indicated in the particular function's detailed table for the NEW desired setting (e.g., press twice for 2.5 min). As confirmation of setting change, LED flashes back the NEW setting 10 times before exiting.
5. Exit programming mode by pressing and holding button again until LED flashes rapidly. Release button.
6. Re-enter function number as final confirmation that its setting changed.
7. LED will flash twice indicating acceptance of NEW settings. If two flashes are not seen, repeat 7 step process.

## A-LEVEL SHORT-CUT PROGRAMMING INSTRUCTIONS

A-Level Functions 3, 4, 17, 20, 23, 24, & 26 do not require above steps 1 or 5-7. Note that after the function number has been entered (step 2) the current function will blink back confirmation three times instead of 10. To exit, wait for new setting to blink back 3 times.

## A-LEVEL DETAILED FUNCTION TABLES

### 1 = Button Mode

- |           |               |
|-----------|---------------|
| 4 Normal* | 5 Button Mode |
|-----------|---------------|

### 3 = Idle Time Until Dim

- |           |            |            |            |          |
|-----------|------------|------------|------------|----------|
| 1 30 sec  | 3 5 min    | 5 10 min   | 7 15 min   | 9 20 min |
| 2 2.5 min | 4 7.5* min | 6 12.5 min | 8 17.5 min |          |

### 4 = 100 Hour Burn-In

- |             |           |
|-------------|-----------|
| 1 Disabled* | 2 Enabled |
|-------------|-----------|

### 9 = Restore Factory Defaults

- |                     |                    |
|---------------------|--------------------|
| 1 Maintain Current* | 2 Restore Defaults |
|---------------------|--------------------|

### 17 = Secondary Zone Dimming Offset

- |         |         |         |        |         |
|---------|---------|---------|--------|---------|
| 1 -100% | 6 -50%  | 11 0% * | 16 50% | 21 100% |
| 2 -90%  | 7 -40%  | 12 10%  | 17 60% |         |
| 3 -80%  | 8 -30%  | 13 20%  | 18 70% |         |
| 4 -70%  | 9 -20%  | 14 30%  | 19 80% |         |
| 5 -60%  | 10 -10% | 15 40%  | 20 90% |         |

### 20 = LED Operation

- |           |                        |
|-----------|------------------------|
| 1 Normal* | 2 Inhibited (Disabled) |
|-----------|------------------------|

### 23 = Occupied Bright Level

- |       |       |       |       |          |
|-------|-------|-------|-------|----------|
| 1 10% | 3 30% | 5 50% | 7 70% | 9 90%    |
| 2 20% | 4 40% | 6 60% | 8 80% | 10 100%* |

### 24 = Unoccupied Dim Level

- |        |       |       |       |         |
|--------|-------|-------|-------|---------|
| 1 10%* | 3 30% | 5 50% | 7 70% | 9 90%   |
| 2 20%  | 4 40% | 6 60% | 8 80% | 10 100% |

### 26 = Follow Photocell Mode

- |            |                    |  |
|------------|--------------------|--|
| 1 Disable* | 2 Enabled (- only) | 3 Enabled +/- (default for all nEPP5- units) |
|------------|--------------------|--|

\*Indicates Factory Default

## B-LEVEL PROGRAMMING INSTRUCTIONS

### PLEASE READ ALL 4 STEPS BEFORE PROGRAMMING

1. Enter B-Level programming mode by holding down button until LED flashes rapidly, release, hold down until rapid flash again, release, then immediately enter programming function as described in step 2.
2. Enter a programming function by pressing button the number of times as the desired function number from the table labeled B-Level Functions (e.g., press twice for function 2, *Semi-Auto Grace Period*).
3. LED will flash back the selected function's current setting (e.g., 3 flashes for 15 sec). To change setting, proceed to step 3 before flash back sequence repeats 3 times. To exit the current function or to change to a different function, wait for sequence to repeat 3 times then return to step 1.
4. Press button the number of times indicated in the particular function's detailed table for the NEW desired setting (e.g., press 1 time for 0 sec). As confirmation of setting change, LED flashes back the NEW setting 3 times before exiting.

\*Indicates Factory Default

## B-LEVEL DETAILED FUNCTION TABLES

### 1 = Name Unit w/ Number

- |     |     |     |     |                |
|-----|-----|-----|-----|----------------|
| 1 1 | 3 3 | 5 5 | 7 7 | 9 9            |
| 2 2 | 4 4 | 6 6 | 8 8 | 10 Unassigned* |

### 2 = Semi-Auto Grace Period

- |         |           |
|---------|-----------|
| 1 0 sec | 3 15 sec* |
|---------|-----------|

### 3 = Predictive Exit Time

- |         |         |           |          |          |
|---------|---------|-----------|----------|----------|
| 1 5 sec | 3 7 sec | 5 9 sec   | 7 15 sec | 9 30 sec |
| 2 6 sec | 4 8 sec | 6 10 sec* | 8 20 sec |          |

### 4 = Predictive Grace Time

- |          |          |          |          |
|----------|----------|----------|----------|
| 1 0 sec  | 3 10 sec | 5 30 sec | 7 50 sec |
| 2 5 sec* | 4 20 sec | 6 40 sec | 8 60 sec |

### 11 = Occupancy Tracking

- |           |           |
|-----------|-----------|
| 1 Disable | 2 Enable* |
|-----------|-----------|

### 12 = Occupancy Tracking Channel

- |  |
|--|
| 1 - 16 (e.g., 1 = Channel 1*; 2 = Channel 2; etc.) |
|--|

### 13 = Photocell Tracking

- |           |           |
|-----------|-----------|
| 1 Disable | 2 Enable* |
|-----------|-----------|

### 14 = Photocell Tracking Channel

- |  |
|--|
| 1 - 16 (e.g., 1 = Channel 1*; 2 = Channel 2; etc.) |
|--|

### 15 = Switch Tracking

- |           |           |
|-----------|-----------|
| 1 Disable | 2 Enable* |
|-----------|-----------|

### 16 = Switch Tracking Channel

- |  |
|--|
| 1 - 16 (e.g., 1 = Channel 1*; 2 = Channel 2; etc.) |
|--|

### 17 = Override (Relay / Dimming)

- |                          |               |                |
|--------------------------|---------------|----------------|
| 1 Disabled (not forced)* | 2 Override On | 3 Override Off |
|--------------------------|---------------|----------------|

### 18 = Special Operating Mode

- |                       |                         |                    |
|-----------------------|-------------------------|--------------------|
| 1 Normal*             | 4 Manual to Full Auto   | 7 Manual to Normal |
| 2 Manual On           | 5 Predictive Off        |                    |
| 3 Auto to Override On | 6 Manual to Override On |                    |

### 19 = Invert Relay Logic

- |                 |                 |
|-----------------|-----------------|
| 1 Normal Logic* | 2 Inverse Logic |
|-----------------|-----------------|

### 21 = WallPod Dimming Adjustments

- |              |             |                                |
|--------------|-------------|--------------------------------|
| 1 Permanent* | 2 Temporary | 3 Photocell Temporary Override |
|--------------|-------------|--------------------------------|

### 22 = Infinite Dimming Time Delay

- |            |          |
|------------|----------|
| 1 Disable* | 2 Enable |
|------------|----------|

### 23 = Special Switch Tracking Mode

- |            |               |              |                     |
|------------|---------------|--------------|---------------------|
| 1 Disable* | 2 Ignore Offs | 3 Ignore Ons | 4 Ignore Ons & Offs |
|------------|---------------|--------------|---------------------|

### 26 = PCD Frequency

- |          |         |
|----------|---------|
| 1 60 HZ* | 2 50 HZ |
|----------|---------|

### 27 = Relay Always On

- |       |       |
|-------|-------|
| 1 No* | 2 Yes |
|-------|-------|

### 28 = Dimming Always On

- |       |       |
|-------|-------|
| 1 No* | 2 Yes |
|-------|-------|

### 29 = Occupancy Expiration of Manual Off

- |            |          |
|------------|----------|
| 1 Disable* | 2 Enable |
|------------|----------|

### 30 = Timed Expiration of Manual Off

- |            |          |
|------------|----------|
| 1 Disable* | 2 Enable |
|------------|----------|

## 0-10V Option Devices

### 31 = High End Trim (0-10V option devices)

- |       |      |      |         |
|-------|------|------|---------|
| 1 .7V | 4 3V | 7 6V | 10 9V   |
| 2 1V  | 5 4V | 8 7V | 11 10V* |
| 3 2V  | 6 5V | 9 8V |         |

### 32 = Low End Trim (0-10V option devices)

- |       |      |      |        |
|-------|------|------|--------|
| 1 .7V | 4 3V | 7 6V | 10 9V  |
| 2 1V* | 5 4V | 8 7V | 11 10V |
| 3 2V  | 6 5V | 9 8V |        |

## PCD Option Devices

### 31 = High End Trim (PCD option devices)

- |       |       |       |         |
|-------|-------|-------|---------|
| 1 10V | 4 40V | 7 70V | 10 100V |
| 2 20V | 5 50V | 8 80V | 11 110V |
| 3 30V | 6 60V | 9 90V | 12 120V |

### 32 = Low End Trim (PCD option devices)

- |       |       |       |         |
|-------|-------|-------|---------|
| 1 10V | 4 40V | 7 70V | 10 100V |
| 2 20V | 5 50V | 8 80V | 11 110V |
| 3 30V | 6 60V | 9 90V | 12 120V |



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## RELAY PACK PROGRAMMING INSTRUCTIONS

Technical Support: 1.800.535.2465

**31 HIGH END TRIM**  
Maximum voltage level of the device's dimming output. Commonly used for task tuning where absolute light level is not to be increased via a Wallpod or scene. When output is at high end trim, the reported control percentage will be 100%. Corresponding lumen output % is dependent on ballast/driver capabilities.

**32 LOW END TRIM**  
Minimum voltage level of the device's active dimming range. Level can not be reduced via a WallPod or scene. When output is at low end trim, the reported control percentage will be 1%. Corresponding lumen output % is dependent on ballast/driver capabilities.

**NOTE:**

All settings can be configured via **SensorView** software.

**19 INVERT RELAY LOGIC**  
Reverses functionality of relays

**21 WALLPOD DIMMING ADJUSTMENTS**  
Defines whether user dimming adjustments are maintained after lights are cycled, whether they revert to default levels, or whether they temporarily disable a connected dimming photocell (until lights cycle)

**22 INFINITE DIMMING TIME DELAY**  
When enabled, lights will remain at the *Low Dimming Range* level after a sensor's *Idle Time Until Dim* timer expires instead of turning off after the sensor's *Occupancy Time Delay* expires

**23 SPECIAL SWITCH TRACKING MODE**  
Defines unique behavior related to how relays respond to particular switch information

**26 PCD FREQUENCY**  
Defines the frequency of the signal being dimmed

**27 RELAY ALWAYS ON**  
Forces relay to stay closed even in off state

**28 DIMMING ALWAYS ON**  
Maintains unoccupied dim level when in off state. Does not affect relay.

**29 OCCUPANCY EXPIRATION OF MANUAL OFF**  
When enabled, operation of device will revert from a push-button triggered override off state to Normal mode once the Occupancy Time Delay (adjustable via SensorView or push-button) expires. Not used with Manual On operating modes.

**30 TIMED EXPIRATION OF MANUAL OFF**  
When enabled, operation of device will revert from a push-button triggered override off state to Normal mode once the Timed Override Delay (adjustable via SensorView) expires. Not used with Manual On operating modes.

**17 OVERRIDE (RELAY / DIMMING)**  
Indicates whether a device's relay is forced on/off and/or dimming output is forced to max/min

**18 SPECIAL OPERATING MODE**  
Unique defined behaviors of relays and/or dimming outputs

**NORMAL**  
Operating Mode where occupancy sensors are capable of turning lights both on/off

**AUTO TO OVERRIDE ON**  
*Special Mode* where lights are turned on initially by occupant detection but then left in the *Override On* state

**MANUAL ON TO FULL AUTO**  
*Special Mode* that initially requires the occupant to manually turn on the lights, after which the sensor assumes full on/off control

**SEMI-AUTO (MANUAL ON)**  
*Special Mode* that always requires the occupant to manually turn the lights on, while having them turn off automatically by a sensor

**PREDICTIVE OFF**  
When lights are switched off, this *Special Mode* determines whether occupants remained or left the room, so as to leave the lights in either the *Override Off* or *Auto On* state

**MANUAL TO TIMED OVERRIDE ON**  
*Special Mode* where lights are initially turned on manually but remain in the *Override On* state for a pre-determined period (*Timed Override Delay*)

**MANUAL TO NORMAL**  
*Special Mode* where lights are initially turned on manually but remain in the *Normal State* (enabling auto-dimming) for a pre-determined period (*Timed Override Delay*)

### B-LEVEL FUNCTION DEFINITIONS

**1 NAME UNIT w/ NUMBER**  
Applies a number to the default name visible in SensorView

**2 SEMI-AUTO GRACE PERIOD**  
The time period after lights are automatically turned off that they can be reactivated with movement

**3 PREDICTIVE EXIT TIME** (valid for *Predictive Off* mode only)  
The time period after manually switching lights off for the occupant to leave the space

**4 PREDICTIVE GRACE TIME** (valid for *Predictive Off* mode only)  
The time period after the *Predictive Exit Time* that the sensor rescans the room for remaining occupants

**11 OCCUPANCY TRACKING**  
Indicates whether a device's relay and/or dimming output will react to occupancy information

**12 OCCUPANCY TRACKING CHANNEL**  
The local channel on which a device's relay and/or dimming output receives occupancy information

**13 PHOTOCELL TRACKING**  
Indicates whether a device's relay and/or dimming output will react to photocell information

**14 PHOTOCELL TRACKING CHANNEL**  
The local channel on which a device's relay and/or dimming output receives photocell information

**15 SWITCH TRACKING**  
Indicates whether a device's relay and/or dimming output will react to switch information

**16 SWITCH TRACKING CHANNEL**  
The local channel on which a device's relay and/or dimming output receives switch information

### A-LEVEL FUNCTION DEFINITIONS

**1 BUTTON MODE**  
Enables the push-button to toggle the device's relay

**3 IDLE TIME UNTIL DIM**  
The length of time after last detected occupancy that a dimming output will reduce lighting to *Unoccupied Dim Level* setting

**4 100 HOUR BURN-IN**  
Overrides relay on and/or dimming output to full bright (typically for lamp seasoning)

**9 RESTORE FACTORY DEFAULTS**  
Returns all functions to original settings

**17 SECONDARY ZONE DIMMING OFFSET**  
Percentage voltage difference of unit's dimming output from primary dimming output (Function 26, *Follow Photocell Mode*, must be enabled)

**20 LED OPERATION**  
Indicates behavior of device's status LED

**23 OCCUPIED BRIGHT LEVEL**  
The percentage of the controllable dimming range that the dimming output rises to when occupancy is detected. Setting is not applicable if *Follow Photocell Mode* is enabled. Note: Adjusting the dim level using a WallPod changes this setting when *Follow Photocell Mode* is disabled.

**24 UNOCCUPIED DIM LEVEL**  
The percentage of the controllable dimming range that a dimming output drops the lights to after the *Idle Time Until Dim* timer expires

**26 FOLLOW PHOTOCELL MODE**  
Directs how a device's dimming output reacts relative to a photocell (ADC)