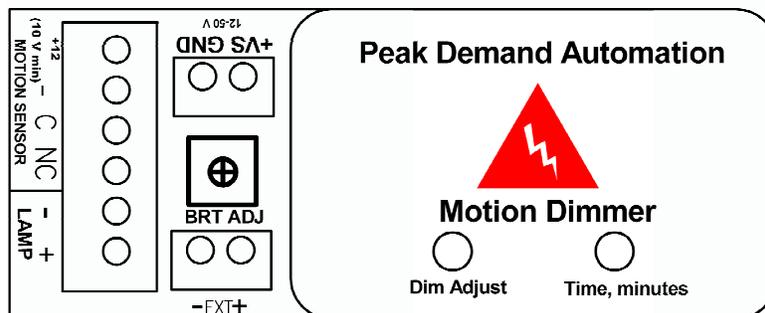


Peak Demand Automation

Zone/Motion Dimmer Manual



The PDA Zone/motion dimmer has adjustments for both full brightness and for occupancy based dimming brightness.

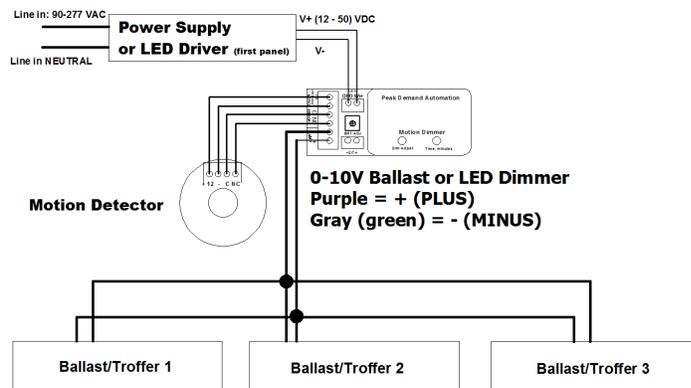
It is compatible with most 0-10V dimming ballasts or LED drivers. (Make sure that dimming is done with 0-10 V. NOT compatible with line or triac dimmers). Constant current or constant voltage LED supplies may be used. Make sure that the output voltage (constant current range) is between 12 and 45 Volts DC. Dimming level can be preset, even though the light goes dim, it does not go dark, and the room still can be entered safely.

Spaces may be over lit due to design, reallocation of space use, or by using older lighting design standards appropriate to spaces dominated by paperwork without computers. LED lighting can make matters worse, as high efficiency LEDs can increase the light on the workspace to unnecessarily high levels.

The motion dimmer can save up to 80% of the electric power required to runs lights by dimming if there is no occupancy and by reducing to appropriate levels during occupied periods.

It is compatible with most manual and motion occupancy switches, which can be used in conjunction to maximize savings. It is also compatible with existing 0-10V wall dimmers, which connect via the external switch terminal. The motion dimmer sends the lowest (dimkest) signal to the ballast.

Light comes on instantly, but dims slowly to avoid sudden changes in light level. It takes about 20 seconds for the light to fully dim. Each dimmer can control up to 10 ballasts (troffers or fixtures).



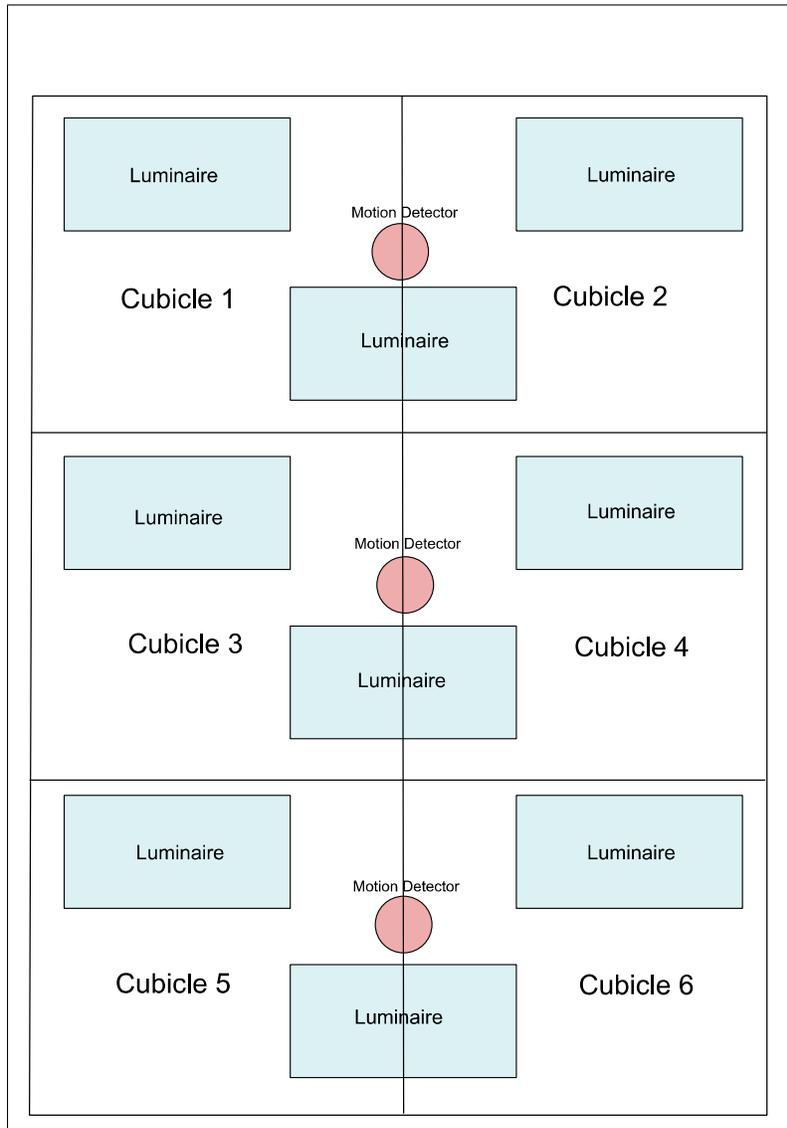
If LED drivers are used, power the Motion Dimmer from the first driver only, and supply dimming control to all fixtures in the zone.

Electrical connections, single zone with multiple fixtures (fluorescent or LED). For LEDs use the LED power supply.

Dimmer is compatible with most low cost security grade motion detectors, "Form A" relay, normally closed (NC). The relay is closed when there is no motion, and opens if there is motion. Markings for relay are "C" and "NC", however markings at the motion detector may indicate alarm relay only. Tamper relay is not used.

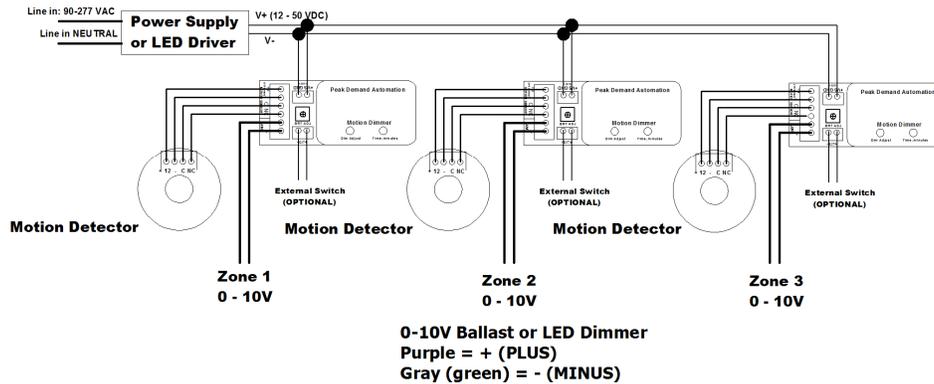
Multiple zones

For larger rooms or facilities, multiple dimmers can be used. Generally one motion detector and one dimmer are used for each zone. An external power supply (required for fluorescent fixtures) can power multiple zones. Wire the dimmers to the power supplies as indicated and wire one motion detector to each zone/motion dimmer.



Typical cubicles divided into three zones

If an LED driver is used, power the Motion Dimmer from the same low voltage input to the LED panel.



Electrical connections for multiple zones. For LEDs use one LED power supply.

Each power supply can power up to 10 Dimmer/Motion combinations. For LED fixtures, use only one power supply to power the dimmer and motion detector.-

For each zone:

1. Preset time to "ON." Use the "BRT ADJ" adjustment to turn the lights down the correct level for occupancy. If you are using an external switch dimmer, that dimmer should be on full brightness.
2. Preset time to "DIM." Use the "dim level" adjustment to adjust the light level when the light is dim. Tripping the motion detector will make the light go bright temporarily. If you cannot prevent the motion dimmer from tripping, short the C - NC screw terminals with a wire.
3. Use the "Time Adjust" knob to adjust the length of time that the light is bright without motion, Preset values are 5, 10, 20 30 and 40 minutes.

The dim setting sets the light to the dim level so that it can be adjusted.

The "ON" setting sets the light to the brightest level. The light will never dim while the switch is "ON."

The zone diameter of a ceiling mounted motion sensor is approximately 28 feet. Lights controlled outside this zone will not be responsive to the motion dimmer.

If an external wall switch dimmer is used, the dimmer of the two inputs (BRT or wall) is automatically chosen as the brightest light level. Please carefully observe the polarity of the external dimmer (+ and -) to avoid damage and to have the dimmer work correctly. Most wall dimmers have a purple and gray wire. Purple is + (plus) and gray (or green) is – (negative). Damage caused to the dimmer or switch by reversing wire polarity or placing high voltage (110 to 277 VAC) on the external terminals and is not covered under warranty. Active (sourcing or sinking) dimmers are supported; passive (resistive) external switches may not work correctly. Please consult the manual for the external switch you are using. Depending on the wall switch chosen, a separate external relay or power pack may be required for lights to turn completely "off."

Installation by a knowledgeable and experienced lighting specialist is advised. Customer is responsible for compatibility with other manufacturer's products.

Technical Specifications

Specifications, Zone Motion Sensor	
Power Input	12-50 VDC
Current, no motion Detector	12 mA
Outputs	
Dimmer control output	0-10 V
	±20mA
Motion Detector Supply	12V
Max Current	40 mA
Adjustments	
External input (switch)	0-10V (sourcing or sinking)
Max allowable input (EXT)	20V
Caution: Reversing polarity on external input may damage dimmer or external switch	

Warranties

All Peak Demand Automation ("PDA") products are covered under a limited warranty against defects in workmanship and materials for a period of five years. PDA will repair or replace any product found to be defective in the warranty period. Of course the customer is responsible to ensure that the PDA products are suitable for the installation and compatible with products from other manufacturers which may be used in conjunction with the PDA products. PDA will not be responsible to incidental or consequential damages arising from any defects in its products. For the full text of the warranty and complete terms please visit: <http://www.peakdemandautomation.com/product-warranties.html>.