

June 4, 2008

THE WATT STOPPER / LEGRAND
Quick Design Layout Guide For Stocking Distributors
Common Applications

APPLICATION:

Small Office 10' X 12' or less – Use one **WPIR** - Corner Mount on ceiling same wall as the corridor. Time delays no less than 15 – 20 minutes. Must include Power Pack.

2nd option: Wall switch sensors **WS-200 / PW-100, WA-200, DW-100, WI-200** series may also be used. Be aware of obstructions such as a book case or file cabinet.

Larger office larger than 10' X 12' - One **CX-105** - Corner Mount on ceiling on same wall as the corridor. Time delays no less than 18 minutes. Must include power pack.

2nd option: **CI-205** . Adjust sensitivity back to limit detection outside the intended area of control. Must include power pack.

3rd option: **DW-100**. Room size no larger than 15' X 18'. Must have neutral available.

Small conference room – same as above.

Large conference room – One **DT-205** - Mount same as above. For rooms over 30' in length, add additional sensor. Time delays no less than 18 minutes. Must include power pack. Add auxiliary relay to control 2nd lighting load of a different voltage.

Classroom under 30' in length – One **DT-205** - Corner mounted on ceiling, same wall as corridor & favor end of room with teacher's desk. Time delays no less than 18 minutes. Must include power pack.

Classrooms over 30' in length – Two **DT-205** - Same as above. Add 2nd sensor opposite end of room. Time delays no less than 18 minutes. Must include power pack.

Kindergarten Classrooms – Two **CX-105** - Corner mounted on ceiling, same wall as corridor. One in each corner. Add more sensors to overcome obstructions. Time delays no less than 30 minutes. Must include power pack.

Art Rooms – **Same as above**. Time delays no less than 30 minutes. Add more sensors to overcome obstructions.

Computer Classrooms – Two **DT-205** - Corner mounted on ceiling, same wall as corridor. Time delays to no less than 30 minutes. Must include power pack.

Corridors - **W-2000H / WT2255** - Mount on ceiling or pendant mount below obstructions. Aim receivers to point long ways down corridor. Maintain spacing of no more than 60' on center. 1st unit half the distance off the wall. (Just like high bays in a warehouse) Stay 6' from supply registers. Time delays no less than 15 - 18 minutes Must include power pack.

Stairwells – One **W500A / WT-605 / UT-305-1** at each landing. Time delays no less than 15 – 18 minutes. Must include power pack.

Restrooms with 1 to 2 stalls - One **W500A** with power pack. Place on ceiling central to stall area with receiver aimed at entry door. Time delay no less than 15 minutes.

2nd Option: **UW-100/UW-200**. Replace single pole switch with Ultrasonic wall switch sensor. Do not use with more than 2 stalls. Set to Automatic-on. Use factory setting for time delay of 20 minutes.

Restrooms with 2 to 3 stalls – One **W500A / WT-605 / UT-305-1** Place on the ceiling over the centermost stall with the receiver aimed towards the corridor entry. Time delays of no less than 15 minutes. Must include power pack. Sensitivity setting (2 - 3)

Restrooms with 4 to 6 stalls – One **W1000A / WT-1105 / UT-305-2** Mount central to the stall area with receivers aimed toward corridor entry. Time delays of no less than 15 minutes. Must include power pack. Sensitivity setting (3 – 4)

Library Stacks

Short stacks 16' - One **WPIR** & power pack at main entry end, one foot in.

Larger stacks 16' – 30' - Two **WPIR** & 1 power pack. Mount on ceiling at each end one foot in. (Providing lighting follows stacks) Call for assistance if otherwise. Time delays of no less than 15 minutes.

2nd option: Where single pole switches are used at the end of each stack, replace switches with **TS-400** Digital Timer Switch. Set time delay for 10 minutes. Enable flash warn option.

Warehouse Aisles –One **CX105-4** at each aisle entry point. 40' coverage.

Use one **CX105-3** in centermost part of aisle. (Max. spacing 60')

Must use one **CX105-4** at each side of cross aisles. Each cross aisle represents the beginning of a new control zone. Add one power pack per control zone.

Add one **MB-1** mounting bracket per sensor.

For HID hi / low retrofit applications, add one **DM-100** per fixture to be controlled. Recommended Time Delays: 18 minutes for on / off. 10 minutes for hi / low.

Storage closet – **TS-400** - Set delay for 10 minutes.

Open Office – **W2000A / WT-2250 / UT-305-3** or **DT-305** on 25' X 25' spacing. Ceiling heights up to 12'. Time delays of no less than 15 – 18 minutes. Stay 6' from supply registers. Use **DT-205** in corners of room if needed. Must include power packs. Refer to sensor cut sheet for quantity of sensors that may be powered from a single power pack. No less than one power pack per control zone.

Walk-in Freezer or Cooler. **TS-400** – Replace existing single pole switch located on outside of cooler box. Set delay for 15 minutes. Select “Time Scrolls Up” and “Flash On” feature options with fluorescent or incandescent loads.

2nd option: CB-100 cold box sensor. Must include power pack. (Maximum time delay for this product is 10 minutes)

Parking Lot / Exterior Lighting – **LP-8** “Peanut Panel” Can control up to 8- single pole circuits (120 or 277 volt) or can be ordered with up to 8- 4 pole contactors for multi-phase loads. (208 or 480 volt) 4 pole contactors may also control larger single phase loads (beyond 8 circuits). Up to 4 single phase loads may be controlled by one 4 pole contactor.

NOTES:

- 1) The above design recommendations are intended for average spaces. Irregular shaped spaces may require more sensors than what is indicated above. When in doubt about an application, include additional sensors or call for assistance.**
- 2) When designing with controls, just like in lighting, put your best foot forward. Always recommend ceiling sensors. Use wall switch sensors as a cost savings measure when needed or only suggest them in the smallest of spaces. They are subject to vandalism (pushed-in lenses) and their ability to detect is hampered by furniture obstructions such as file cabinets or book cases.**
- 3) Always suggest the factory recommended time delays to your customer. Your customer is relying on you to direct them to the right choice of sensor and the time delay that is best suited for their application. Most problems on jobs with occupancy sensors are because delays were below 15 minutes.**
- 4) Remember that there is always more than one way to design a space with occupancy sensors. Whenever possible, the above recommendations should simply be your first choice.**
- 5) All ceiling mounted occupancy sensors require a power / switch pack. One power / switch pack is required per circuit or per control zone.**

Catalog #'s: Dual Voltage BZ-100, 120 volt - #B120E-P 277 volt – #B277E-P

- 6) For many of the above applications, several models of occupancy sensors are listed. You may choose to use any one of them. Please review your inventory and use as many products from your shelf as possible.**
- 7) Please contact Watt Stopper/Legrand Tech Support or our Local Manufacturers Representative for applications that you are not sure about.**
- 8) Exhaust fans located in restrooms may also be controlled by the occupancy sensor. If you are using ceiling sensors and the lighting voltage is 120 volt, you may add this load to the same relay as the lighting. If the lighting is 277 volt, you may need to add an auxiliary relay to control the fan as it is most likely 120 volt and may not be mixed with a 277 volt load.**
- 9) Within each area to be controlled, power packs should always be wired into the circuit before the switch/s. Multiple switches or “switch legs” may be controlled with one common power pack providing they are all on the same circuit. Wiring the power pack in after the switch will require the use of one power pack for each switch in a room.**

Technical Support:
Occupancy Sensors / Day Lighting Controls Lighting Control Panels
1-800-879:8585

DBM-6-4-08