

June 4, 2008

**THE WATT STOPPER, INC.**  
Quick Design Rules of Thumb - **ESCO's**  
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 minutes. Must include Power Pack.

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 15 minutes. Factory pre-set at 18 minutes Must include power pack.

Small conference room – same as above.

Large conference room – One **DT-205** - Mount same as above. Rooms over 30' in length, add additional sensor. Time delays no less than 15 minutes. Factory pre-set at 18 minutes. Must include power pack.

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 15 minutes. Factory pre-set at 18 minutes. Must include power pack.

Classrooms over 30' in length – One **DT-205** - Same as above. Add 2<sup>nd</sup> sensor opposite end of room. Time delays no less than 15 minutes. Factory pre-set at 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 15 minutes. Factory pre-set at 18 minutes. Add more sensors to overcome obstructions.

Computer Classrooms – Two **DT-205** - Corner mounted on ceiling, same wall as corridor. Time delays to 30 minutes. Must include power pack.

Corridors - **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. 1<sup>st</sup> unit half the distance off the wall. (Just like high bays in a warehouse) Stay 6' from supply registers. (Hi-low or on-off) Time delays 15 minutes for on/ off. 10 minutes for hi / low. Must include power pack.

Stairwells – One **W500A** at each landing or one **WT-2255** wall mounted between floors with receivers aimed at same angle as stairwell. (Hi-low or on-off) Time delays for on / off 15 minutes. 10 minutes for hi / low. Must include power pack.

Restrooms with 2 to 3 stalls – One **W500A** - 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.

Restrooms with 4 to 6 stalls – One **W1000A** - Mount central to the stall area with receivers aimed toward corridor entry. Time delays of no less than 15 minutes. Must include power pack.

#### Library Stacks

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

Larger stacks 16' – 30' - Two **WPIR** & 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.

Warehouse Aisles –**HB150** on each fixture for individual fixture control or **HB350** with power pack linking multiple fixtures together in a control zone or one **CX105-4** at each aisle entry point. 40' coverage.

Use one or more **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** sensor industrial mounting bracket per sensor.

Warehouse Open Storage / Exterior Lighting Control - LP-8 Panel. Control all lighting circuits through the relays in the panel. Allow the astro-clock to schedule the lights on & off based on the scheduled usage of the space. Larger panels with more than 8 relays are available if needed.

For HID hi / low retrofit applications, add one **DM-100** per fixture to be controlled. Recommended Time Delays: 15 minutes for on / off. 10 minutes for hi / low.

Storage closet – **TS-400** - Set delay for 15 minutes.

Open Office – **W2000A** or **DT-305** on 25' X 25' spacing. Ceiling heights up to 12'. Time delays of no less than 15 minutes. Stay 6' from supply registers. Use **DT-205** in corners of room. Must include power packs.

Walk-in Freezer or Cooler. **TS-400** - Set delay for 15 minutes. Select “Time Scrolls Up” and “Flash On” feature options.

**NOTES:**

- 1) The above design notes are intended for average spaces. Irregular shaped spaces may require more than what is indicated. When in doubt, add or call for assistance.
- 2) Avoid designing with wall switch sensors. Use them only as a cost savings measure when needed. (vandalism, furniture obstructions, book cases, file cabinets)  
**Limit wall switch sensor applications to rooms UNDER 150 square feet**
- 3) Always include the recommended time delays in the spec. Never let your client tell you what it should be.
- 4) If you want to interface with an HVAC system (set back thermostat or VAV box), use sensors with the spare set of dry contacts, 1 normally open & 1- normally closed. (DT200 VS. DT205 or CX-100 VS CX-105 etc.) This becomes a low cost point of control for other systems in the facility today or sometime in the future. (Unit ventilators, VAV boxes, EMS)
- 5) Remember that there is always more than one way to design a space with sensors. Whenever possible, the above recommendations should simply be your first choice.
- 6) All ceiling mounted occupancy sensors require a power / switch pack. One power / switch pack is required per circuit or per control zone.  
**Catalog #'s: 120 volt - #B120E-P 277 volt – #B277E-P Dual Voltage – #BZ-100**
- 7) Most ceiling sensors that have dip switches are shipped from the factory with an 18 minute time delay. Please use this factory default setting when ever possible. Laboratories and computer rooms set to 30 minutes.
- 7) Don't be afraid to contact us. **The Watt Stopper will ALWAYS help you!**

**Technical Support:**  
**Day Lighting**  
**Lighting Control panels**  
**MIRO**  
**Occupancy Sensors:**  
**800-879:8585**

**DBM-6/4/08**

