

Energy Code for the State of Michigan

The State of Michigan uses ASHRAE 90.1-1999 as its State specific energy code for commercial applications.

The following are highlights of the Michigan State Energy Code which pertain to lighting controls.

INTERIOR LIGHTING.

LOCAL SHUTOFF CONTROL. Each space enclosed by ceiling-height partitions shall have least one control device to independently control its general lighting. Each device shall be activated manually by an occupant or automatically by sensing an occupant. Each device shall control a maximum 2,500 ft² of floor area for a space 10,000 ft² or less or a maximum of 10,000 ft² for larger spaces, be capable of overriding automatic shutoff controls for no more than 4 hours, be readily accessible, and located so occupant can see the controlled lighting.

AUTOMATIC SHUTOFF CONTROLS. Interior lighting in buildings greater than 5,000 ft² shall be controlled with an automatic control device to shut off lighting in all spaces. Automatic controls can be:

- a time-of-day operated control device that turns lighting off at specific programmed times. An independent program shall be provided for areas no more than 25,000 ft² on the same floor (or)
- an occupant sensor that turns off lights within 30 minutes of an occupant leaving a space (or)
- by occupant intervention.

Lighting intended for 24-hour operation is exempted.

ADDITIONAL CONTROLS. Separate control devices are required in the following cases:

1. Display or accent lighting;
2. Case lighting;
3. Hotel and motel guest room lighting, with control device to be located near entry;
4. Task lighting;
5. Nonvisual lighting;
6. Demonstration lighting.

TANDEM WIRING. Luminaires designed for use with one or three linear fluorescent lamps less than 30W each shall each use 2-lamp tandem-wired ballasts in place of single lamp ballasts when two or more luminaires are in the same space and on the same control device.

EXIT SIGNS. Exit sign luminaires operating at greater than 20W shall have a minimum source efficacy of 35lm/W.

INTERIOR POWER ALLOWANCE. The interior lighting power allowance for a building shall be determined by either the building area method (building area times allowed power density for building type) or by the space-by-space method (sum of individual space allowances as determined by building type).

Power density factors for the building area method are in Table 9.3.1.1 and power density factors for the space-by-space method are in Table 9.3.1.2.

EXTERIOR LIGHTING.

GENERAL. Lighting for exterior applications shall be controlled by a photo sensor or an automatic time switch that is capable of automatically turning off the exterior lighting when sufficient daylight is available or when the lighting is not required.

Exceptions are lighting for covered vehicle entrances or exits from the building or for parking structures where required for safety or security.

EXTERIOR POWER ALLOWANCES. The exterior power allowance is the sum of the individual power densities. The individual power densities are:

- Building entrances with canopy or free standing canopy: 3W/ft² of canopied area;
- Building entrance without canopy: 33W/lin ft. of door width;
- Building exit: 20W/ lin ft. of door width;
- Building facades: 0.25 w/ft² of illuminated facade area.

Exceptions are -when equipped with an independent control device- specialized lighting associated with transportation, lighting used to highlight monuments or historical structures, or lighting that is integral to advertising signage.

The above is a very brief guideline as interpreted by Douglas Lighting Controls. Refer to the Michigan State Energy Code for details applicable to your lighting control project.

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