ASHRAE 90.1 (2013)

Commercial Lighting and Electrical Control Requirements

**Scope:** Indoor building spaces, exterior building features, exterior building grounds. Interior space lighting alterations where 10% or more of the connected lighting is altered.

**Exceptions:** Emergency lighting off during normal operation, lighting within dwelling units, lighting required by health or life safety, gas lighting.

### 9.4.1.1(a) Local Control Device

One or more manual control devices in a space:

- Readily accessible
- Can see lighting controlled from local device

**Primary Exceptions:** Manual control device permitted for safety or security, provided it has a status pilot light and is labeled to identify lights controlled.

#### 9.4.1.1(b) and 9.4.1.1(c) Manual or Partial Auto On

- Lighting shall auto on to no more than 50% of the general lighting
- Lighting shall auto off receptacles within 20 minutes of occupants leaving

**Primary Exceptions:** Manual or partial auto on is not required.

### 9.4.1.1(d) Bi-level Control

- Lighting on a single floor shall be bi-level dimmed or controlled with at least one step between 30% and 70% of full lighting power

**Primary Exceptions:** No bi-level control required.

### 9.4.1.1(e) and 9.4.1.1(f) Automatic Daylight Responsive Control

- Choose between bi-level switching or continuous dimming control

**Primary Exceptions:** Automatic switching not required.

### 9.4.1.1(g) Automatic Off

- Automatically reduce general lighting ≤ 50% within 20 minutes of occupants leaving

**Primary Exceptions:** Automatic off not required in following spaces:

- Library stacks
- Warehouses
- Lobbies
- Stairwells
- Lobbies
- Storage rooms < 50ft²
- Healthcare facility
- Offices
- Corridors
- Restrooms
- Corridors
- Restrooms
- Corridors
- Restrooms

### 9.4.1.1(h) Automatic Full Off

- Lighting shall auto off within 20 minutes of occupants leaving
- Control device shall control an area no larger than 5,000ft²

**Primary Exceptions:** Automatic off not required in following spaces:

- Conference/meeting rooms
- Copy/print rooms
- Offices
- Classrooms
- Lounge/break rooms
- Locker rooms
- Classrooms
- Break rooms
- Classrooms

### 9.4.1.1(i) Scheduled Off

- Lighting shall auto off within 20 minutes of scheduled unoccupied
- Control area ≤ 5,000ft²

**Primary Exceptions:** Scheduled off not required in following spaces:

- Conference/meeting rooms
- Copy/print rooms
- Classrooms

### 9.4.1.1(j) Special Application Lighting

- Lighting that must be separately controlled from the space's general lighting

**Primary Exceptions:** Special application lighting not required.

### 8.4.2 Automatic Receptacle Control

At least 50% of receptacles and 25% of feeders to modular furniture shall auto shut off by either:

- Time schedule, 2-2 hour override, control area ≤ 5,000ft²
- Occupancy sensor with 20 minute off delay

**Primary Exceptions:** Automatic receptacle control not required in following spaces:

- Where full auto on is permitted, except where auto control would endanger safety or security

### 9.4.1.3(b) Guestroom Control

- Auto off all lighting and switched receptacles within 20 minutes of occupants leaving

**Primary Exceptions:** Auto off not required in following spaces:

- Private offices
- Conference rooms

### 9.4.1.4 Exterior Lighting Controls

- Auto off when daylight is available

**Primary Exceptions:** Exterior lighting not required in following spaces:

- Stairwells
- Corridors
- Restrooms

### 9.4.3 Functional Testing

- Lighting controls tested for proper calibration, adjustment, programming, and working condition

**Primary Exceptions:** Functional testing not required in following spaces:

- Where auto control would endanger safety or security

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**Note:** This infographic is for informational purposes only. Always refer to the code for specific requirements or contact your local Wattstopper representative.