

**Special Requirements for Multi-Story or Large Footprint Office Buildings**

What special considerations need to be addressed when implementing controls for a large office building? First, we break up the space into different room types and apply a solution for that room type. Areas like restrooms, hallways, private offices, and conference rooms are also used in other building types like schools and hotels. After those areas are identified, we need to look at the areas that are not realized in other building types. For a large office building that is typically the open office area.



What is unique to this space type and what needs to be considered? Meeting the energy code requirements is the key driver for this area.

In this example we will review a design where:

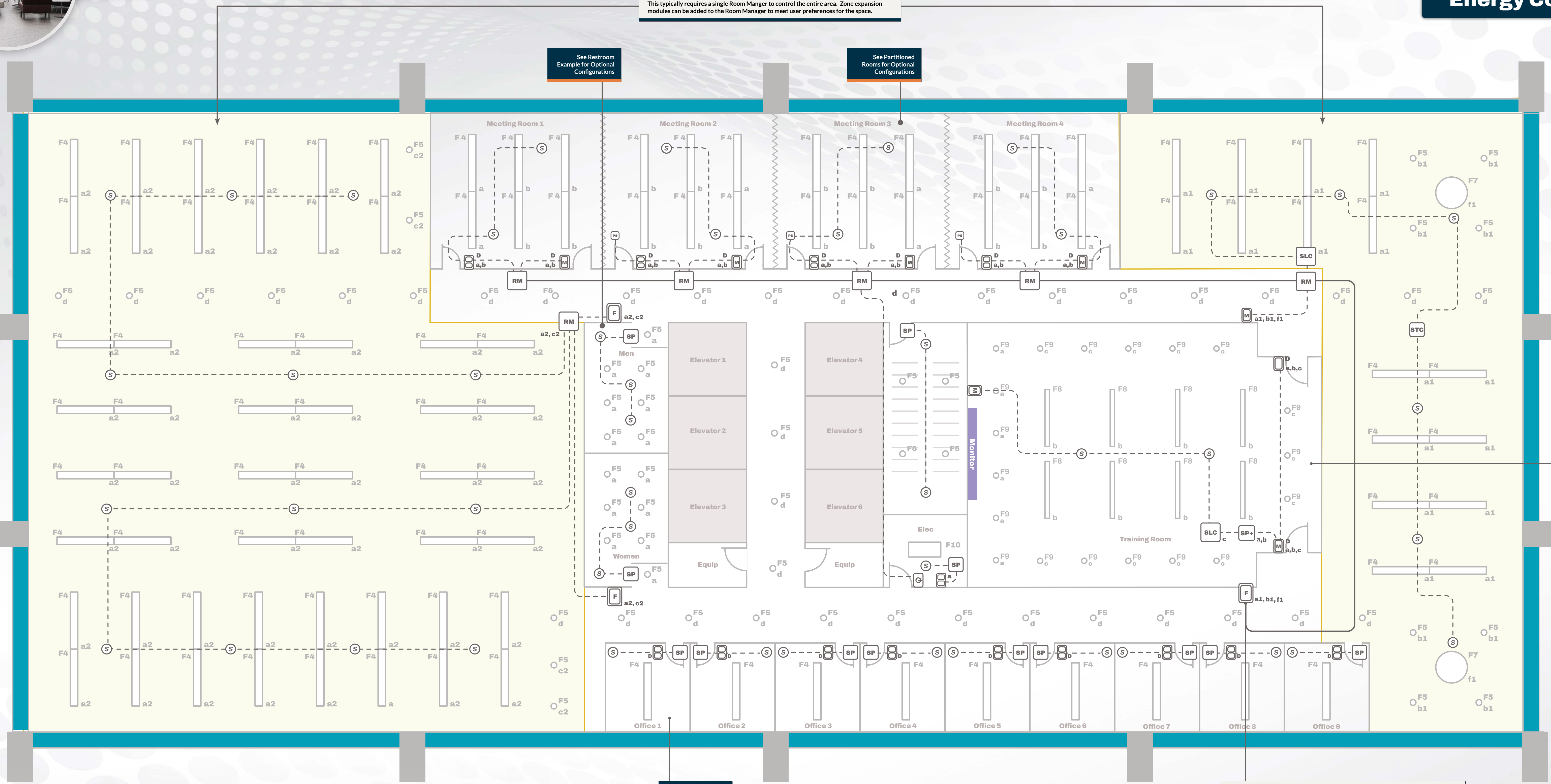
- The energy code is not as stringent, but the building owner still requires coordinated control of the space.
- The energy codes are very strict and requires the open office area to be automatically controlled by sub-regions of the space and requires plug-load control.

One key item to note is that in both applications, Touche uses the same collections of base components.





Where energy codes are less stringent, lighting zones are organized by user preference. This typically requires a single Room Manager to control the entire area. Zone expansion modules can be added to the Room Manager to meet user preferences for the space.



See Restroom Example for Optional Configurations

See Partitioned Rooms for Optional Configurations

See Training Rooms for Optional Configurations

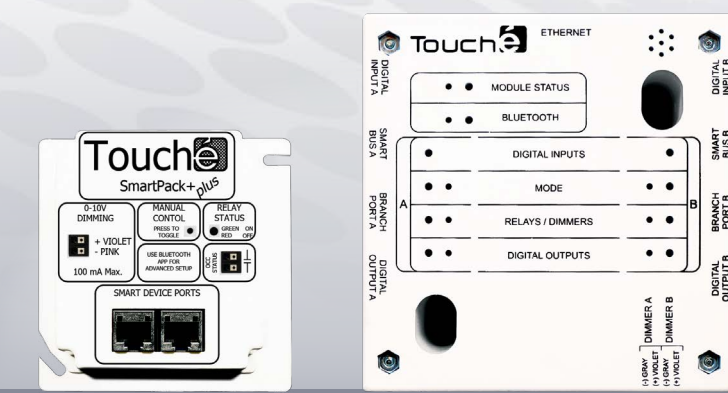
See Office Rooms for Optional Configurations

In this example we used the full-size color wall station to indicate both scene and zone control of the open area space.  
Any wall station type can be configured as system override station. A system override station can control a room/area, a collection of rooms/areas, or the entire building.

**Touché Components**

- SP** SmartPack  
Standalone Room Controller
- SP+** SmartPack+  
Standalone Room Controller
- RM** Room Manager  
Networked Room Controller
- F** Wall Station  
Color
- M** Wall Station  
Color Mini
- SS** Smart Switch  
Decorator
- SKS** Smart Keyed Switch  
Keyed Lockout Switch
- SLC** Smart Load Control  
Dimmable
- S** Smart Sensor  
Dual technology (PIR/passive acoustic) occupancy / vacancy sensor with built-in photo sensor.
- PS** Partition Sensor  
Digital Input Partition Sensor

**Cable Type**  
 - - - CAT5 (minimum)  
 — éNet CAT5 (minimum)



**Reducing Cost + Increasing Functionality  
= The Right Solution**

**Meet Our Controllers**

Combining our stand-alone SmartPacks and networkable Room Managers throughout the building results in a cost-effective solution for any lighting control application. Both controllers interface with the same collection of sensors, wall controls, and zone expansion modules and both controllers use the same Insight app for configuration and setup. The result is consistency and cost savings. Nothing demonstrates this advantage better than this example. Use this graphic and the associated room graphics to see how powerful and flexible this method of control really is.



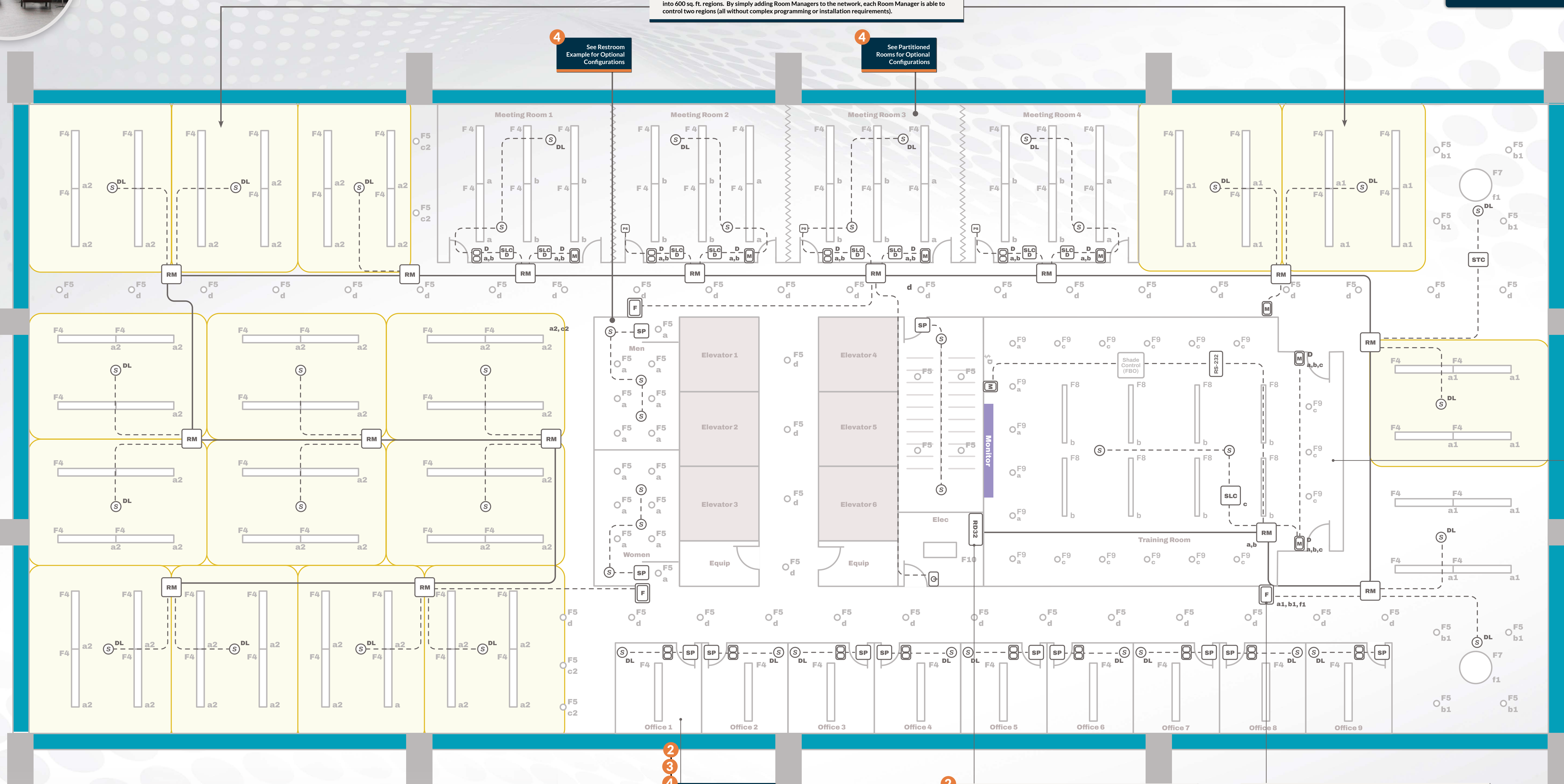


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In open office areas the large open office areas require automatic occupancy sensing control broken down into 600 sq. ft. regions. By simply adding Room Managers to the network, each Room Manager is able to control two regions (all without complex programming or installation requirements).

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See Restroom Example for Optional Configurations

4  
See Partitioned Rooms for Optional Configurations



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See Training Rooms for Optional Configurations

2  
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See Office Rooms for Optional Configurations (Including Plug Load Control)

2  
For open office areas with modular workstations, the code requires 50% of the receptacles to be plug-load controlled. This, many times, results in a large number of controlled circuits. The most cost-effective method of control for areas with a large number of controlled circuits, use an RD-32 panel. This panel can individually or collectively control up to (32) circuits.

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- G** Smart Keyed Switch  
Keyed Lockout Switch
- SLC** Smart Load Control  
Dimmable
- RD32** RD32  
Relay/Dimmer Panel
- RS-232** RS-232  
Recommended Standard 232
- PS** Partition Sensor  
Digital Input Partition Sensor
- S** Smart Sensor  
Dual technology (PIR/passive acoustic) occupancy / vacancy sensor with built-in photo sensor.
- STC** Smart Time Clock  
System scheduler (one require per network)

**Cable Type**  
--- CAT5 (minimum)  
— eNet CAT5 (minimum)



**Stricter Energy Codes Demand More Precise Control Regions and Levels**

In regions where the energy codes are more stringent, finer resolution of the control regions may be necessary and more methods of control may be required. What does this mean? In this example we will demonstrate this in four ways:

- 1 Breaking down the open office region into sub regions (typically 600 sq. ft. or less).
- 2 Applying plug load control to the commonly occupied areas like offices and the open office area.
- 3 Applying daylight control in regions near exterior windows.
- 4 Interfacing with the BMS system to control the temperature in the different rooms/regions with respect to occupancy.