



OCCUPANCY LIMIT APPLICATION

OVERVIEW

To limit the number of people in a room, the Occupancy Limit application can be imposed with a counter relay and some programming.

PARTS REQUIRED

- A counter relay (multiple manufacturers including Square D).
- A spare Input.
- Two Devices/Readers.

Note: If using a DSX-1042 Controller, an FRB8 Relay Board may be required.

CONNECTIONS

1. Create a new Location if this is part of a large Location.
2. Install a Reader on either side of the Door connected to Side A and Side B of a Controller.
3. Connect the Lock to both relays A1 and B1 for activation.
4. Connect Door contact to Side A Input 7 only.
5. Terminate Input 8 on both sides with 1K Resistors.
6. Connect A2 Relay to the Increment Input on the Counter Relay.
7. Connect B2 Relay to the Decrement Input on the Counter Relay.
8. Connect the Output of the Counter Relay to Input A5.
9. Set the Counter Relay to activate the Output at the Occupancy Limit desired (10, 50, 100, etc..).

PROGRAMMING

1. Create 2 Time Zones: TZ1 and TZ2.
2. Set both Time Zones for 24x7 and "Time Zone is OFF when linked to".
3. Add Outputs A1, B1. Assign them to Time Zone 2. Set "State when Linked to" for Open.
4. Add Outputs A2, B2 and assign them No Time Zone. Set "State when Linked To" for Secure.
5. Create a Linking Group A consisting of output A2 - Pulse 1 second.
6. Create Linking Group B consisting of output B2 - Pulse 1 second.
7. Create Input A7 - Pulse 20 seconds.
8. Use Time Zone 2 for the conditional Time Zone in the Linking Groups.
9. Create Linking Level A that activates Linking Group A from reader A and activates Linking Group B from reader B.
10. Create Access Level 1 for the side A reader that uses Time Zone 1 (24x7).
11. Create Access Level 2 for the side B reader that uses Time Zone 2 (also 24x7).
12. Assign Linking Level A and Access Levels 1 and 2 to the Card Holders that will have access to the room.
13. Create Linking Group C that consists of Time Zone 1 set to Follow using conditional Time Zone 2.
14. Add Input A5 and give it no Time Zone.
15. Assign Linking Group C to the spare Input and set it to link on Status Change.

OPERATION

1. When Cards are used at Reader A (In)-Relay A1 unlocks the Door and the Linking Level activates A2 which increments the Counter Relay up.
2. When Cards are used at Reader B (Out)- Relay B1 unlocks the Door and the Linking Level activates B2 which decrements the Counter Relay.
3. As the traffic flows into the room, the Counter Relay increments up.
4. When the Counter reaches the limit set for occupancy (10, 50, 100, etc.) it provides an Output that trips Input A5.
5. Input A5 then links to Time Zone 1 turning it OFF.
6. When Time Zone 1 is linked OFF, Access Level 1 no longer allows Card Holder entrance.
7. Card Holders trying to Enter will be "Denied By Time Zone".
8. Card Holders leaving the room will be granted access with Access Level 2 which will decrement the Counter Relay.
9. When the Counter Relay is below the limit set for occupancy (10, 50, 100, etc.) it will release Input A5.
10. The release of Input A5 will enable Time Zone 1 allowing Card Holders to enter until the counter reaches the limit set for occupancy.