Open Office Lighting
Technical Bulletin

Open Office locations can be controlled in several manners these spaces typically have 3 to 4 zones of lighting with 1 zone located by the windows as the daylight zone. Local switch stations for user override control, motion sensors configured for Occupancy or Vacancy control, and changes in the sequence based on building Occupied/Unoccupied time of day settings. Below are listed several typical sequences of operation scenarios and related standard Lighting Application programs in the LightLEEDer EVO panel that can be implemented to fit your needs.

Motion sensor for Occupancy or Vacancy operation, Local control switch station with dimming, 1-Zone or 2-Zone daylight sensor control

Lighting Application programs: **F1** & **F2**
The EVO panel has 4 motion sensor inputs, each provides a different operation for all 4 relays, #1 Occupancy (on/off), #2 Vacancy (off only), #3 Occupancy with 50% dim level start, #4 Vacancy Relay 1,3 Occupancy Relay 2,4 combination.
(F1) Photosensor #1 control for zone 1 and (F2) Photosensor #1 control for zone 1 + zone 2 at a 10% scale reduction for the 2nd daylight zone from the window. LightSync G2-MZD switch station with 1, 2, 3 or 4 zones on/off and dimming control.

Motion sensor for Occupancy or Vacancy operation, Local control switch station with dimming, 1-Zone daylight sensor control, Open/Close timer control with 2 hours off sweeps.

Lighting Application program: **FD**
The EVO panel has 4 motion sensor inputs, the first 2 inputs have different operations, #1 Occupancy (on/off), #2 Vacancy (off only). Photosensor #1 control for zone 1. LightSync G2-MZD switch station with 4 zones on/off and dimming control. Timers set for building Open at 6am and Close at 10pm. Open timer T1 will sweep on the 4 lighting zones to 50% dim level at 6am, Timer T2 will sweep off the lights at 10pm and every 2 hours after 10pm during building close. Internal Open/Close timers can be adjusted as needed.

Motion sensor for Occupancy or Vacancy operation, Local control switch station with dimming, 1-Zone daylight sensor control, Open/Close timer control to switch the motion sensor inputs from occupancy-on to occupancy-on/off with on at 50% starting dim level option.

Lighting Application program: **FE**
The EVO panel has 4 motion sensor inputs, each input provides a different operation, The Open/Close timers will enable/disable the occupancy inputs in pairs 1-3 are active during Open hours, 2-4 are active during closed hours. The motion sensors must be wired to a Pair of inputs 1-2 or 3-4, #1 Occupancy (on only), #2 Occupancy (on/off) or #3 Occupancy (on only with 50% level), #4 Occupancy (on at 50% / off). Photosensor #1 control for zone 1, LightSync G2-MZD switch station with 4 zones on/off and dimming control. Timers set for building Open at 6am and Close at 10pm. Internal Open/Close timers can be adjusted as needed.

Refer to Lighting Application Sheets and Control Matrix Technical Bulletin TB0013 for detailed information

Open Office locations where the local switch off command can be overridden by an occupancy sensor that is still detecting motion in the space. When switched off by the office personnel, the zone will turn off and then return to an on state if the motion sensor detects occupancy after a 3-33 second off delay.

Lighting Application programs: **FF**

The EVO panel has 4 motion sensor inputs, each provides an on/off occupancy control for one zone on a one to one basis. LightSync G2-MZD switch stations with 4-zone or 3-zone control are pre-configured. Photosensor daylight control of dimmer zone 1.

A LightLEEDer Relay Simulator Registry module is used to add status relay points to the EVO panel, the LL-RSR module will act as relays 5, 6, 7 and 8. The LL-RSR is set for "**21**", LS Address:**2** and **1** set of 4 relays. These RSR simulated relay points are used to disable/enable the occupancy sensor inputs forcing a rescanning of existing motion sensors for occupancy and returning to an on state if the zone is occupied. The motion sensors must be set to the shortest time out duration possible at the sensor device to allow for the fastest rescan duration.

We have pre-configured two LS-G2 stations as a MZD4zone (04/05 and 07/08) and two as a MZD3zone (0A/0B and 0D/0E) to allow for two control station locations in the space.

Four virtual LightSync stations are configured as a "Echo Push Button" device type, programming to provide the on/off with 1 second delay for each RSR relay (the Echo input is programmed as a "Maintained On/Blink" the relay is set for "Timer Off - Alarm On" for 1-second), the motion sensor inputs are each disabled when this RSR relay is on for 1-secound after a button push.
These are LightSync device - LS:06 to Echo LS:04, LS:09 to Echo LS:07, LS:0C to Echo LS:0A, LS:0F to Echo LS:0D.

Motion sensors will be wired to individual inputs for each of the 4 zones or if 2 or more zones are to be controlled by the same sensor group, the installer can wire the inputs together to combine the zones. The LightSync switch stations will still provide individual on/off control for each zone with the return to on if occupied operation (based on the RSR relay disable/enable of the input to re-scan the sensor).
The occupancy sensor inputs are configured with a 20-minute timed-on delay (+ the sensor lowest delay setting of 3 to 30-seconds) providing a delay to off when a motion sensor stops sensing activity in a zone and a user does not turn the lights off at the local LightSync station on the way out. This timed-on duration can be adjusted in 1-minute increments as needed. Any new motion sensed will restart the on cycle.

The Lights per zone will turn on with occupancy, off when vacant after a 20-minute delay, if a user turns off the lights on the way out a 3-33 seconds later the occupancy sensor can turn the lights back on if the space is still occupied.

Refer to Lighting Application Sheets and Control Matrix Technical Bulletin TB0013, Lighting application FF on page 7 for detailed addressing information.