

Behavior Of Sensor Switch™ Products After Internal Failure

Sensor Switch devices are designed to maintain the “lights on” condition after an internal failure for as many scenarios as reasonably possible. That being said, a “lights off” condition could still result from the rare case of a sensor failing for reasons that are impossible to predict, track, or prevent.

Internal product failures that effect the operation of lighting in a space are extremely rare and should not be a factor of significant concern. Our return rate of actual malfunctioning product is ~0.02%. Most of those are from manufacturing defects or they are wired wrong upon installation and not from internal failure occurring after installation. External conditions that cause loss of power to the sensor and lighting are more common and therefore should be considered (see detailed information sections below). Sensor Switch occupancy sensors (both low voltage and line voltage varieties) upon any power up scenario will turn the lights on immediately. Then, after about 30 seconds, the sensors’ time delays will begin to count down if no occupants have been detected.

Behavior Of Sensor Switch Products After Power Loss

Standard low voltage sensors and power packs:

Standard power packs have electrically held relays contacts that require a maintained sensor signal to stay closed (i.e. keep lights on). Therefore if low voltage power is lost to a sensor (i.e. power wires from power pack are disconnected) or if the sensor is damaged, removed from installation, or internally fails (in a rare “lights off” condition), such that the sensor’s output signal (via low voltage wire) back to the power pack controlling the lights is disrupted, the power pack’s relay will open and the connected lights will go off.

Standard line voltage sensors:

If power is lost to a line voltage sensor the unit will continue to function (even though the lights it is controlling will not have power), for around 30 seconds, until it uses up all its stored current. If power is re-applied during this short amount of time, the sensor will act as if power was never lost. The lights will remain in whatever position they were in before power was lost.

If power is off for longer than this short duration, and then re-applied, the lights will immediately come on. From that point, they’ll either remain on due to occupancy or time out once the sensors time delay expires.

nLight sensors and power packs:

All relays in nLight are latching, therefore by default a loss of communication from connected sensors due to power outage or device damage/removal will not cause a currently closed relay to open (i.e. lights to go off). An nLight relay’s default settings can be modified to change this behavior.