## Integrated Lighting Solutions



**Beyond Energy Savings** 



## Lighting Control System Applications

#### Common Areas & Stairwell

Optimize lightning energy with presence / occupancy detector. Use of standard switch connected to a KNX network for automation capability.



#### Parking Area ---

Time scheduling / presence / occupancy detector to keep light's off when not needed for energy saving



#### Mechanical / Plant Room

Presence / occupancy detector to keep light's off when not needed for energy saving. Use of standard switch connected to a KNX network for automation capability.



#### Facade / Outdoor Scheduling of façade outdoor

Scheduling of façade outdool lighting or control through ambient light level



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#### **Management Office**

Smart device control such as automated curtain control and dimming with multiple scene settings





#### **Open Office**

Optimize lighting with Dali & presence detection, time scheduling and day-light utilization with smart switches for efficient control



#### **Meeting Rooms**

Scene setting as per the light requirement shutter/window control. Wall mounted touch screen for an all-in-one controls capability





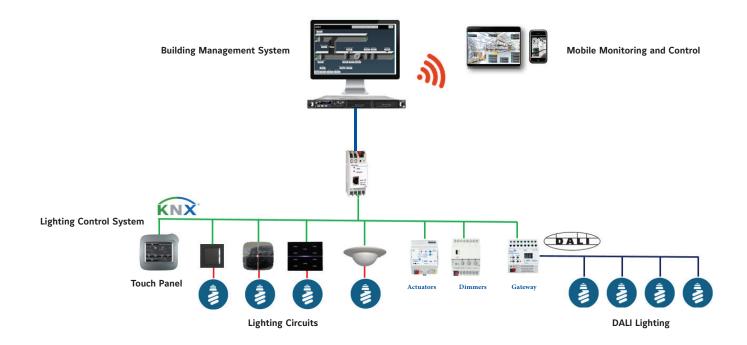
#### **Storage Area**

Use of standard switch connected to a KNX network for automation capability.



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## Integrated Solution Platform



End users can benefit from Johnson Controls' industry leading capabilities in system integration by opting for a bundled enterprise level BMS and LCS solution with a single source supplier advantages.

Johnson Controls' leading Building Management System enhances occupant comfort and productivity, while providing control and easier access to information through unique dashboard view of the user interface. A time tested industry leader, Johnson Controls has proven its reliability even in the most demanding customer scenarios and offers the intelligence, ease of use and mobility which facility operators need to improve productivity and drive energy and operational savings.

Johnson Controls BMS integrates lighting control system devices using KNX, BACnet and DALI. Advanced technology from Johnson Controls compliments the benefits from LCS solutions to ensure energy efficiency through optimized control of individual space.





## Lighting Control Strategies



#### **Manual Control**

Occupants have manual on/off control of lighting circuits for respective areas. This is achieved by conventional switches which control one or multiple circuits.



#### **Occupancy Based**

The lighting load (lighting circuits) will be switched on automatically when the movement is detected and the ambient light level is below the Lux setting value. Load will be automatically switched off after pre-set time delay until no movement is detected.



#### **Dimming Control**

The brightness of the lighting circuits can be increased or decreased in order to achieve the desired light scene setting to match the occupant's current activity.



#### **Timer Based**

The building operation time schedule is synced with the lighting control system software to achieve pre-defined accurate control of lighting circuits based on occupied/ unoccupied hours of the day. The control logic can also be extended to holidays for further energy savings.

# The right solution giving benefits that you can measure

Johnson Controls' lighting control system offers powerful, scalable and versatile solutions that integrate seamlessly with building automation systems.



#### About Johnson Controls' Building Technologies and Solutions

Johnson Controls' Building Technologies & Solutions is making the world safer, smarter and more sustainable – one building at a time. Our technology portfolio integrates every aspect of a building – whether security systems, energy management, fire suppression or HVACR – to ensure that we exceed customer expectations at all times. We operate in more than 150 countries through our unmatched network of branches and distribution channels, helping building owners, operators, engineers and contractors enhance the full lifecycle of any facility. Our arsenal of brands includes some of the most trusted names in the industry, such as Tyco<sup>®</sup>, YORK<sup>®</sup>, Metasys<sup>®</sup>, Ruskin<sup>®</sup>, Frick<sup>®</sup>, PENN<sup>®</sup>, Sabroe<sup>®</sup>, Simplex<sup>®</sup> and Grinnell<sup>®</sup>. **For more information, visit www.johnsoncontrols.com or follow @JCl\_Buildings on Twitter.** 

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