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# Intelligent and Compact LED Driver Solution for KNX Building Automation - XLC-25/40/60KN Series

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As a global leader in standard power supply solutions, MEAN WELL is committed to delivering efficient and intelligent KNX building automation control solutions. Following the successful launches of the LCM-KN series (constant current drivers) and PWM-KN series (constant voltage drivers), MEAN WELL further expands its KNX LED driver product line with the introduction of the **XLC-25/40/60KN** series. This series not only inherits the core advantages of MEAN WELL's existing KNX LED drivers but also features optimized designs for enhanced intelligence and compactness. Compliant with the EN61347-2-13 standard for emergency lighting (EL), these drivers seamlessly integrate into KNX systems without requiring additional gateways.

## ■ Key Features

- **Compact Design**: Optimized structure makes the driver more compact, suitable for various lighting installation environments.
- **Constant Current Output**: Supports adjustable current settings from 350mA to 1700mA (depending on the model), catering to diverse lighting needs.
- **Class II Design**: Features a double insulation structure, ensuring safety and ease of installation.
- **Emergency Lighting Support**: Compliant with EN61347-2-13, enabling use in a centralized emergency power supply system to ensure reliable illumination during power grid outages.
- **Ultra-Low Dimming to 0.5%**: Enables precise brightness control, delivering smooth and uniform lighting for various scenarios.
- **Direct KNX Communication**: Built-in KNX protocol allows seamless connection to KNX systems without additional gateways.

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## ■ Advanced KNX Functions and Application Scenarios

The XLC-25/40/60KN series not only includes MEAN WELL's existing KNX LED driver functions but also introduces advanced intelligent control features, making it more efficient and flexible for smart building lighting applications.

### 1. Auto-Dimming Over Time

a. **Function Description**: This feature allows the LED driver to automatically adjust brightness based on the time provided by an external KNX Timer (up to 10 steps per day) without requiring additional control commands. Users can choose to manually intervene by sending commands during the automatic dimming process to determine whether the system should respond or not, which provides greater flexibility.

b. **Dimming Modes and Applications**:

This feature is suitable for various applications that require brightness adjustments based on time. Users can select between **smooth transition** or **absolute dimming** based on actual requirements. It is ideal for offices, hotels, and other environments where scheduled lighting changes are needed.






## 2. Energy Consumption Feedback

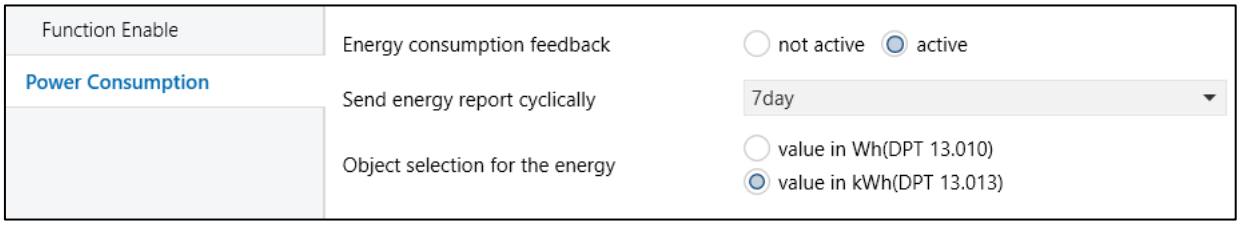
a. **Function Description**: This feature records the output power and efficiency of the LED driver, estimating energy consumption over periods ranging from 10 minutes to 1 week. The data is then fed back to KNX system management, helping users optimize energy budgets.

b. **Application Scenarios**:

i. **Office Buildings**: Assists facility managers in analyzing lighting energy consumption to optimize energy budgets.

ii. **Shopping Centers**: Provides efficiency data to improve lighting schedules.

iii. **Smart Homes**: Enables users to monitor energy consumption and adjust lighting plans to reduce unnecessary electricity use.

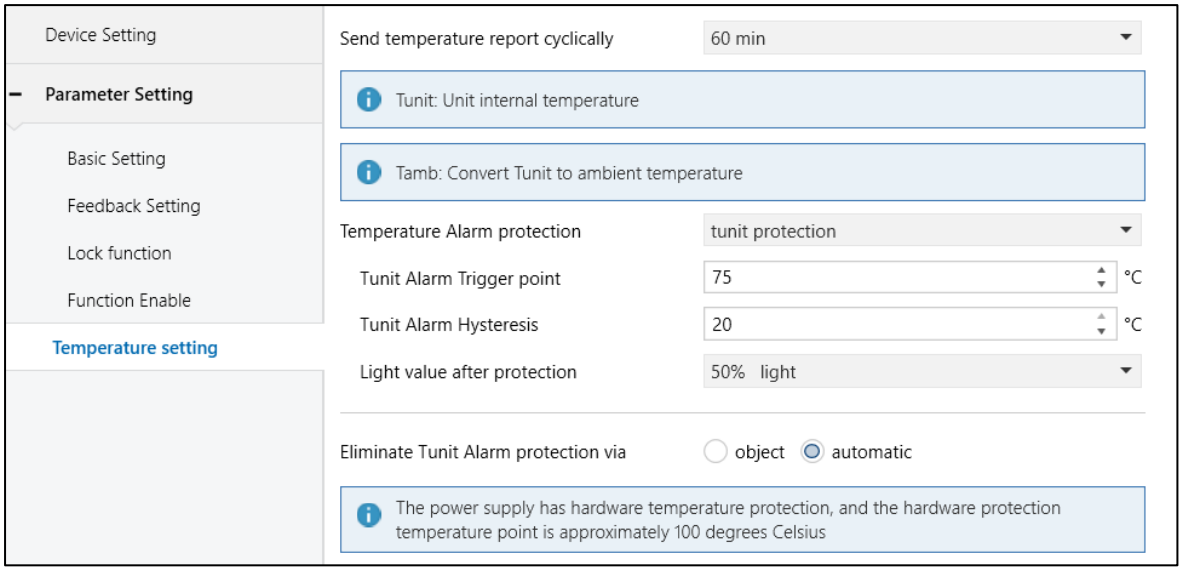



## 3. Temperature Function

a. **Function Description**: Through temperature monitoring, the system can provide real-time feedback on the power detection point temperature and set over-temperature warnings to adjust output in advance.

b. **Application Scenarios**:

**Over-temperature protection and automatic power reduction**: When the LED driver temperature exceeds the preset threshold, the system can trigger a warning or automatically reduce output power to prevent overheating damage and extend device lifespan.




## 4. Lamp Characteristic Curve Correction

a. **Function Description**: Corrects inconsistencies in brightness output for non-linear LED fixtures, ensuring that actual brightness aligns with dimming commands and avoiding uneven lighting.

b. **Application Scenarios**:

i. **Commercial Spaces and Shopping Centers**: Ensures uniform brightness across multiple LED components, enhancing visual comfort and aesthetic appeal.

ii. **Smart Home**: Optimizes brightness output for personalized fixtures, providing consistent and comfortable lighting experiences.

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**Before correction** **After correction**





The XLC-25/40/60KN series LED drivers combine MEAN WELL's proven reliability with innovative features like compact design, direct KNX connectivity, and advanced dimming and energy management capabilities. These features make the series an ideal solution for modern smart lighting applications in commercial buildings, residential spaces, and specialized environments. By enhancing lighting control precision and energy efficiency, the XLC-25/40/60KN series opens new possibilities for KNX smart building systems

For related product and application requirements, please contact MEAN WELL distributors or MEAN WELL application engineers. Also, do not forget to stay tuned for online products and solutions courses on MEAN WELL virtual EXPO.

