

# REFERENCE PROJECT

SUPERMARKET X5-GROUP  
MOSCOW, RUSSIA



## ■ SUPERMARKET X5, MOSCOW

One of the largest supermarket chains in Russia utilises one of the most efficient lighting solutions in the market. From the light source all the way to the central control system, Vossloh-Schwabe offers a complete solution. More and more businesses are opting for energy-efficient technology.

The project goal was an automated, efficient lighting solution to be employed during business and working hours as well as a night lighting solution for preventing break-ins.

Thanks to the use of a VS extender, 67 dimmable DALI luminaires could be installed and addressed individually or in groups by the Light Controller LW (LiCS Indoor). The sensors were addressed separately in order to provide information for a constant light regulation. For business and working hours, two groups (2 x 11 luminaires) were formed and combined with sensors for constant light regulation on the window side in order to reduce energy consumption.

For additional groups that were not equipped with sensors, light levels (< 100%) with different lux levels were defined for different areas, e.g. the check-out areas.



The on-site system is activated in the evening at a preset time in order to access a scenario for the night. Three different brightness levels (5%, 10% and 20%) were set for the night scenario. In the morning, the system behaviour changes back to its regular function, including the constant light regulation.



# Supermarket X5-Group, Moscow, Russia

The lighting solution consists of an intelligent DALI driver and a LED COB module (4000 K) with holder and diffusor. A system luminous flux of 1,400 lumen, an efficiency of 115 lumen per watt for the light source and an intelligent driver with a high performance factor make this concept one of the most efficient light solutions on the market.

The additional system check function facilitates maintenance.

A total of 32% of the power consumption is cut down thanks to the intelligent use of daylight, scenarios for different groups and the automatic control of the lighting.

## Components used:

- 1 x VS Light Controller LW
- 2 x VS MultiSensor FM
- 1 x VS Extender
- 67 x LED luminaires
- VS LED driver
- VS LUGA LED modules

## Reasons for the DALI installation

- Simple configuration (approx 40 seconds per luminaire)
- Flexible configuration without black box behaviour
- Individual addressing and group formation
- Reduction of energy consumption
- Light automation (time-based)
- Increased convenience

## Advantages of DALI:

- Minimum time required for installation (e.g. polarity-free)
- Combination of functions (scene with constant light regulation)
- System check (feedback of components)

Project name: Supermarket – X5-Group – Moscow, Russia

Year of installation: 2013

Location: Moscow, Russia

Light designer: DEMOS LED/cbet.ru



## ■ OLD INSTALLATION (250 LUX)

Piece	Components	System output (W)/piece
56	T8 luminaires CB + 4 x 18 W, 15,000 h	100 W
<b>Total energy consumption</b>		<b>32,704 kWh</b>

## ■ NEW INSTALLATION (500 LUX)

Piece	Components	System output (W)/piece
67	LED luminaires LED driver + LED modules (COB), 50,000 h	63 W
1	Light Controller LS	9 W
2	MultiSensors (power supply via DALI bus)	0 W
1	Extender	6 W
Total energy consumption without sensors		24,651 kWh
<b>Total energy consumption with sensors (- 32%)</b>		<b>16,852 kWh</b>

## Lighting situation:

365 days/year, 16 hours/day, € 0.20/kWh

