



Case study

Bosch

Location
Philips products

Munich, Germany
CoreLine, OccuSwitch DALI



PHILIPS



"As a leader in innovation in several areas, we set high standards when it comes to third-party products too. This is why we chose the new CoreLine LED luminaires, which meet our exacting standards for light quality and cost-effectiveness."

Günter Obwieser, Head of Facility Management, Robert Bosch GmbH, Munich Factory



Efficient LED lighting for modern office workstations



Project info:

Customer

Robert Bosch GmbH, Gasoline Systems

Location

Munich

Project team

Robert Bosch GmbH, Günter Obwieser (Head of Facility Management); Philips Lighting, Martin Stark (Lighting consultancy), Dirk Seifert (Light planning)

Philips products

CoreLine, OccuSwitch DALI

Result

- Quick and easy switch from conventional to LED lighting
- Combination of LED technology and lighting control for energy savings of up to 72%
- Standard-compliant illumination of computer workstations with high colour rendering ($R_a > 80$)

Background

For more than 125 years, the name Bosch has been synonymous with future-proof technology and inventions, which have shaped the history of the world. Sustainability and corporate responsibility are important cornerstones of the company. Since 2003, environmental data and targets for all companies and sites have been recorded using a PC-based environmental information system.

The challenge

As part of the automotive technology area, Bosch's "Gasoline Systems" division has the same values and targets as the rest of the group. Therefore, when renovating the lighting in the Munich factories' offices, only a global solution would do. The new lighting had to integrate with the room architecture, achieve significant energy and maintenance savings, for the lowest possible investment whilst being controllable and offering high comfort levels for employees.

The solution

As part of a pilot project, Bosch chose the CoreLine Recessed LED Luminaire. Designed for low-cost office applications and renovation projects, CoreLine Recessed offers significant savings in terms of energy and maintenance costs, whilst complying with office norms (DIN EN 12464-1) and creates an exceptional working environment in terms of lighting.

The lighting is controlled using OccuSwitch DALI multi-sensors. The sensors automatically switch on and dim the light in the open-plan office depending on occupancy and available daylight – which offers additional energy saving as lighting is only on when and where required.

Benefits

The renovation included 240m² of open-plan office space, a meeting room and the manager's office. The old TL-D fluorescent lighting was replaced quickly and easily. Combined with innovative lighting control, the use of CoreLine has achieved several positive effects: Modern LED luminaires offer a high level of energy efficiency of 96 lm/W. As a result, the system output fell from 4,600W to 2,220W; a 52% reduction. By ensuring the optimum control of the daylight and occupancy functions, energy savings of up to 72% can be realised. After five years, the cost savings will be more than € 15,000 or € 126 per month. What is more, CO₂ emissions will be reduced by at least 8 tonnes.

Another important aspect is employees. Thanks to the constant glare-free lighting at their workstations, employees experience better quality lighting with higher light levels, which in turn provides better visual comfort and aids concentration.



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