

DALI Drivers and LED modules for the Havenhuis Antwerp, Belgium

For the new headquarters of the Antwerp Port Authority Zaha Hadid Architects have added a glass structure on top of a listed former fire station. The way the light interacts with the expressive architecture is truly elegant. At the heart of this special lighting system are DALI LED Drivers and LED Light Engines from Tridonic.

The extension for the Havenhuis features a wealth of unconventional details such as free-form floor plans for walkways, offices and meeting zones, angled pillars and walls, and curved stairways, galleries and coving. The profiles integrated in the ceilings for office lighting therefore had to meet very different structural requirements.

Multiline, the Belgian luminaire manufacturer, developed a special solution to this problem. It equipped the tailor-made profiles with Tridonic's LLE-G3-24 modules and associated LED Drivers. The LLE linear LED light engines are available in lengths of 140 mm, 280 mm and 560 mm. They can be easily combined depending on the different profile lengths and also allow other technical systems, such as smoke detectors, to be integrated with a high degree of flexibility.

The different lengths of the LED modules for incorporation in the strip lights were a blessing because other technical systems also had to be integrated in the profiles. Smoke detectors, for example, could be positioned appropriately and even the sprinkler heads could project through the profiles.

DALI drivers especially help to control the lighting of the desks and meeting points close to the windows. Lighting needs to be adapted here to daylight permanently and via DALI many different small spaces can be controlled individually.

Presence sensors and ambient light sensors ensure that the light is controlled to suit demand at all times. Both types of sensor communicate via DALI with the LED Drivers which Tridonic supplies for its LED light engines — the drivers LCAI 35W and LCAI 65W are used. The DALI light management system reacts to presence or absence and to ambient light levels and is part of a comprehensive sustainability and energy efficiency concept for the entire building. It was given a “Very Good” BREEAM rating for environmental construction.

Watch the project video on [Youtube](#).

Tridonic LCAI drivers are dimmable built-in LED drivers offering adjustable output current (I-select resistor or DALI) and a dimming range of 1 to 100 % . This DALI Device Type 6 includes switchDIM (with memory function) and corridorFUNCTION. In terms of safety this driver has an input temperature sensor for LED control functions, intelligent temperature Guard (overtemperature protection), short-circuit protection and overload protection.

Project: Havenhuis Antwerp, Belgium

Client: Antwerp Port Authority

Architecture: Zaha Hadid Architects (ZHA), London/GB

Lighting planning: Ingenium n.v., Brugge, Belgium

Luminaire development General Office Lighting, Floors 6, 7, 8 and 9:

Multiline Licht NV, Lummen, Belgium

Electrical installation: ITB nv, Kruikeke, Belgium

LED Light Engines, DALI LED Drivers for Multiline special luminaires:

Tridonic, Dornbirn