



xComfort cuts installation costs and energy bills

Location:

Oslo, Norway

Challenge:

To provide a 21st century electrical installation for a 100-year old building that had to offer convenient control over heating and lighting, and maximize energy efficiency.

Solution:

Eaton xComfort wireless building automation technology provides versatile control while keeping installation costs to a minimum.

Results:

Because it uses wireless technology, the xComfort system eliminated much of the cabling that would have been required for a conventional electrical installation, delivering a savings of around €26,000.

“Compared with a traditional electrical installation, I would estimate that the xComfort system allowed us to reduce the costs to our clients by as much as €26,000.” Cato Lindgren, Smart Elektro

Background

For property developer Thune Eiendom, the 3,300 square meter factory building in Drammensveien 130, Oslo, was a prime asset. But the building was 100-years old and had previously been used as a warehouse and a bowling alley before lying empty for several years. If it was to realize its full potential, comprehensive modernization was needed.

In fact, the prospective tenant of the building, Creuna Norge AS, one of Norway’s best known advertising agencies, wanted much more than a simple refurbishment: it wanted to have “the wickedest office in Drammensveien 130”.

Challenges

Thune Eiendom and Creuna Norge were determined from the outset that this should not be a “boring old office.” Yet both parties felt it essential to respect the history of the building though hard brick walls and very high vaulted ceilings presented challenges for the installation of new electrical systems.

In spite of these issues, the property developer and the tenant wanted a system that would provide convenient and comprehensive control over heating and lighting. The goal was a system that offered a high degree of automation and would be capable of easy and cost-effective modification and expansion to cater to future requirements.



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Solution

Smart Elektro, the company appointed by Thune Eiendom to supply the new electrical installation, examined the client's requirements and carried out a site survey. It was immediately apparent that if conventional technology were used, it would be necessary to install miles of cables through hard brick walls. This would have been an expensive exercise, not only because of the high cost of the cable, but also because of the large amount of labor that would have been required.

Fortunately, Smart Elektro was able to offer a better solution based on Eaton's xComfort building automation products. The key feature of the xComfort system is that it is wireless – no cables are needed to connect control devices such as switches and sensors. This meant that the cabling and labor costs for the project could be greatly reduced and there would be much less risk of damage or modifications to the fabric of the building. Additionally, using a wireless system allowed the designers to locate the control devices and actuators wherever they were needed, without concerns over access to wiring.

In fact, the xComfort system uses mesh wireless topology, so instead of having to communicate directly with a central station, the xComfort devices communicate with each other, passing on messages and forming a mesh of wireless interconnections. This enables the system to operate reliably not only in small residential applications, but also in large commercial buildings, such as the site at Drammensveien 130.

Full of advantage was taken of the web integration feature of the xComfort system to allow the tenants of the building to control all of the lighting and heating systems from their smartphones or tablets. In principle, it would also be possible to control the building systems from any location where Internet access is available.

In addition to providing exceptionally convenient control for the lighting and heating systems, the xComfort installation will also help the building's tenants save money and reduce their carbon footprint. It has been configured to ensure that lights are switched off when the building is empty and that heating levels are reduced during the evening and overnight when the building is usually unoccupied.

Temperature sensors control heating and cooling systems, while lights are operated by motion sensors. A master switch system is provided to cut power to computers and appliances like coffee machines outside of working hours, to minimize the unnecessary use of energy. And, all of the automatic functions can be easily overridden to cater for one-off activities, such as an evening event in the building.

Results

As anticipated, the xComfort wireless building automation system proved easy to install, despite the challenges presented by the architecture and construction of the building at Drammensveien 130. The system is performing flawlessly and is making a big contribution to the comfort of personnel in the building.

Furthermore, as Cato Lindgren, project manager at Smart Elektro, said, the xComfort system is future-ready. "It's an innovative system that's very scalable, so the installation can be easily grown over time, as the need arises. Also, because it's based on wireless technology, it enables creative solutions. This was undoubtedly a challenging project, but it was also an exciting journey to be part of. And the end result is the coolest office space I have ever been involved with."



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Publication No. CS083094EN
May 2016

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