

Strategies for light control systems

Lighting accounts for a substantial portion of the energy consumption in a building. Depending on the type of building and the activity, this share may amount to 35%. This means that a large energy-saving potential remains to be tapped. In many buildings, energy-saving measures are already being applied, such as the use of movement detection or daylight control. There is, however, still room for improvement: using advanced software and hardware it is possible to increase energy saving in the area of lighting to around 75%. This requires an integrated system that is capable of supporting different energy management strategies.

An overview of the six major strategies, with indication of the maximum saving potential, is given below:

1 Intelligent time control up to 50 %

In parts of the building where no occupancy detection is indicated, time controlled switching or dimming is possible.



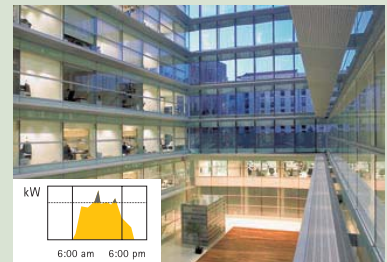
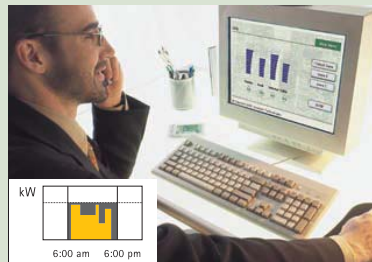
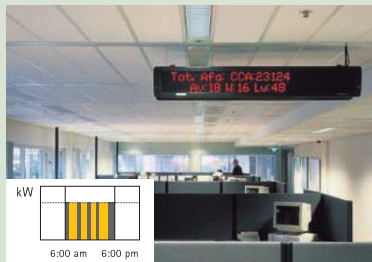
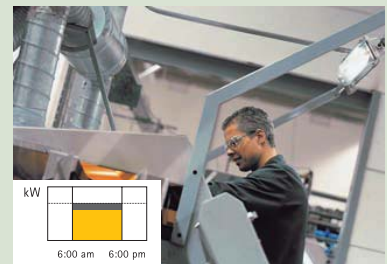
2 Daylight dependent control up to 20 %

Daylight sensors can automatically adjust the lighting levels as a function of the available amount of daylight.



3 Adaptation to the task environment up to 30 %

Each new lighting system has a certain amount of spare capacity. Optimal use of that capacity is obtained by setting a lighting level for each specific task.



4 Movement detection up to 35 %

With movement dependent sensors you can automatically switch on, switch off or dim the lighting.

5 Individual control up to 35 %

When users are given control over the lighting at their workplace, they can adjust it to suit their personal preferences.

6 Limitation of the peak output up to 10 %

Peak loads can be reduced by continuously monitoring the activated output in a building and automatically controlling the lighting via dimming or switching.

A maximum energy saving is achieved when all these strategies are applied simultaneously. The graphic shows how the six strategies can contribute to total energy saving in a building, as well as the combined effect on the energy usage of the lighting.

