



Smart sensors

“As the sun goes down around the building, the blinds automatically go down,” says James Idle, Somfy CBS specification engineer. “Somfy’s animeo KNX solar shading control system provides more options and allows the building to progress to the next level of functionality and control. It has all the smarts within, such as the pre-calculations of algorithms allowing sun tracking.”

Idle claims the result is natural light management, as well as glare protection and improved visual comfort for the 1200 students and staff using the centre. A manual over-ride is also available and the system is accessible, at any time.

Vertilux motorised roller blinds were selected for the project in Trevira CS Euroscreen fabric, selected for its environmental qualities. The 900 blinds are operated using 344 motors provided by Somfy. Paula Dawes, Vertilux marketing manager, confirms the fabrics selected are PVC free and VOC low.

“The fit-out was amazingly done,” she says. Internal blackout systems were used and fully cassetted within the perimeter of the building. Also installed were a high number of fully enclosed systems to enable complete blackout and privacy for science and engineering laboratories. The perimeter blinds were produced in a transparent fabric to permit a view over the Brisbane River and the Botanic Gardens.

case study

University harnesses intelligent automation

Building automation provided the solution for a Queensland University of Technology development with an intelligent facade. Dawn Adams reports

Automated window coverings were sought when the new \$230 million Science and Engineering Centre at Queensland’s University of Technology was built overlooking the Brisbane River and the Botanic Gardens.

The centrepiece of this development was The Cube, amongst the world’s largest digital interactive learning and display spaces. An automated shading system was needed to protect the displays inside this two-storey area from the sun’s harsh light. Those displays include 14 high-definition projectors with more than 40 multi-touch screens and sound technology.

For the first time in Australia, Somfy’s animeo KNX was used to provide an effective facade management system for this project. Eight sun sensors were installed to ensure the blinds automatically raised or lowered depending upon the sun’s position at any time of the day.



Shadow management

For upcoming projects, Somfy is set to introduce its next stage in automation. Shadow management can be achieved through 3D modelling that enables the company to determine where and when shadows will be cast by neighbouring buildings. Processes can be built into the system to ensure blinds are raised or lowered depending on the circumstances.

Also available is greater integration with lighting systems, heating, ventilation and cooling. "Sensors can recognise when the light quality is below a certain level to allow the lights to increase in their intensity," he says. "When the blinds go up, the lights are turned off."

Similarly, internal temperature can be controlled by permitting air conditioning to be turned on or off depending on a signal from an internal temperature sensor. And automated natural ventilation is increasingly becoming an option.

Somfy is also offering its services to architects on a consultancy basis to encourage the use of automation for window coverings, and for other purposes such as lighting, heating and cooling. "We're aggressively contacting architects and engineers and we want to position Somfy on their design teams so we can discuss the possibilities," he says.

Idle insists it is critical to be involved in a building's development at the early planning stage. "HVAC and lighting systems will be sized depending on the natural ventilation and solar shading systems that are being installed," he says. He also wants to shed the perception that automation is a luxury extra. "We're the first line of defence for a building to allow it to reduce its energy consumption, any money spent on introducing a bioclimatic façade to a building will be paid back through reduced energy costs for the lifetime of the building and reduced costs for building elements such as HVAC systems," he says.

