MOONLIGHT TIMES

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1st In Malaysia!

Somfy Animeo KNX Dynamic Façade Management System

Sensor-Activated External Roller Blinds System designed to shield from Sun, Wind and Rain

Situated in Bukit Jalil Technology Park, Kuala Lumpur, the company which specializes in enzyme production, undoubtedly represents the best in ecologically efficient building design.

Moonlight Industries Sdn Bhd, a leading window blinds specialist in Malaysia, was chosen to propose and implement an effective & efficient window shading solutions for the entire 2200 ft² of glass façade.

The Client requests

- Improve daytime privacy
- Reduce glare and improve work efficiency
- Improve Energy consumption by lowering Air-conditioning usage
- Be consistent with the overall design theme.

In designing the shading system for this unique building, Moonlight teamed up with **Somfy**.
A **Compact Weather Station**, which senses 3 natural elements (the Sun, the wind & the rain), was installed on the roof of this building. Additionally, the building is divided into 3 zones, and each zone is made to react automatically and independently based on pre-programmed weather conditions as specified by the end users.

Mermet Satine 5500 External screen, the most innovative solar protection fabric available today, was chosen as the fabric for the external roller blind due to its excellent solar reflection and strong mechanical properties.

Note:
Compliant with the EN 14501 standard, Mermet® fabrics are suitable for the bio-climatic facades of low-energy or HEQ buildings and meet the requirements of RT 2012 thermal regulations. They make it possible to drastically reduce the energy consumed by buildings (lighting, air conditioning and heat).

The end result is a system that comes with fully motorized External Roller Blinds, using Somfy® LT 50 6/32 Tubular Motors. Equipped with Somfy Animeo KNX Dynamic Façade Management System, it is also linked to timers and the building's fire alarm systems to further improve efficiency and safety.

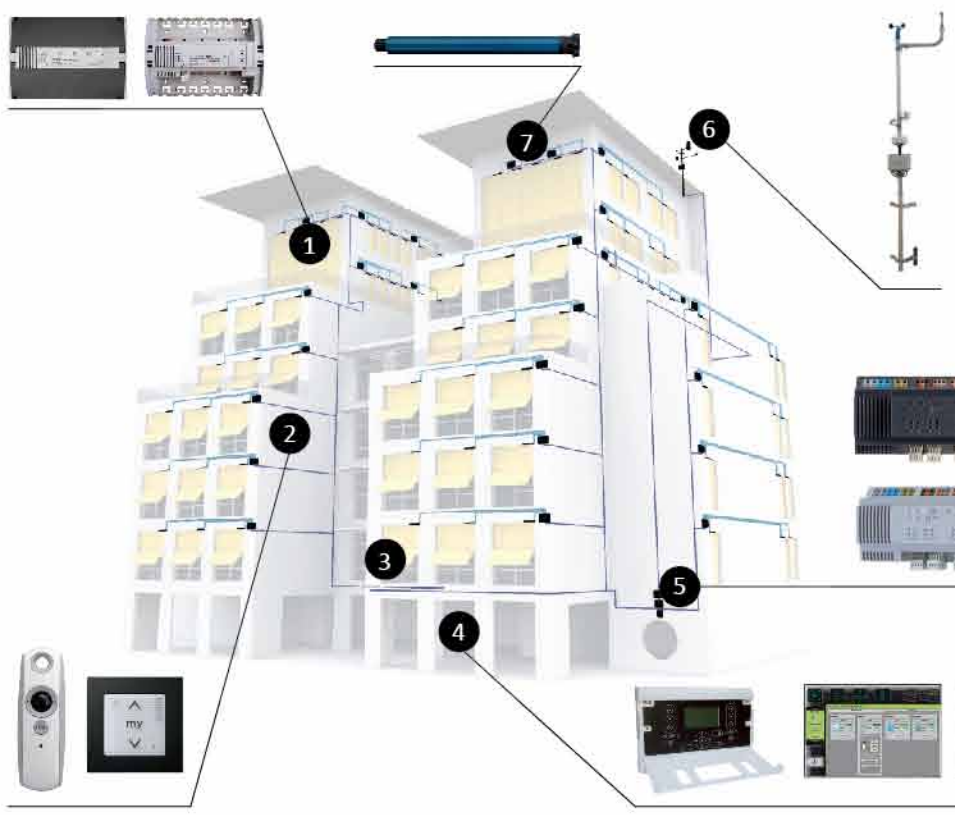
The system was completed and fully implemented by **Moonlight Industries** on 10 October 2013.

The Result

- Up to 90% of solar radiation reflected by external blinds (gtot=10)
- Excellent glare control with double sided weave, while optimizing the incoming light: up to 96% of light ray filtered (Tv=4%)
- Reduced energy costs

SPECIFICATIONS:

System - Somfy Animeo KNX Dynamic Façade management System
Motor - 24 sets Somfy LT 50 6/32 Tubular Motor (Made In France)
Fabric - Mermet Satine 5500 Charcoal 3030 Series (42% Fiberglass / 58 % PVC- Made In France)
Customized Housing & Side Guide Cable - Stainless Steel Grade 304
Customized Cable Suspension Termination Plug- Stainless Steel Grade 303
Warranty - 5 Years on Tubular Motor, 1 year on Fabric



1. Motor Controller range for any type of motors (high/ low voltage), compatible with proprietary bus (Solo, IB+) or open protocols (LON, KNX).
2. The bus line can be proprietary (Solo, IB+) or open (LON, KNX) and allows simple or bidirectional communication between the various products connected to the bus line.
3. Local commands
4. Programming and configuration interfaces
5. Building Controllers compatible with proprietary bus (IB+) or open protocols (KNX). To control small to large buildings.
6. Sensor station send commands to the Building Controllers.
7. Motors

It's "MAKAN" Time !

CHALLENGE

The popular restaurant serving authentic Nasi Kandar in Mid Valley has always experienced a full house crowd during lunch hours. With the semi-open dining concept, external shading is crucial for customer comfort and heat control, without affecting the visual effect of the overall designs. Most importantly, it has to be aesthetically pleasing.

SOLUTION

Moonlight External Roller Blinds comes with a choice of 8 modern fabric colours, as opposed to the old fashion wood and bamboo chicks, while providing the best visual comfort for users. The colour 0105 Grey Canary was chosen, which fits harmoniously with the corporate colours and design of the restaurant, while providing effective sun shading needs required by the owners.

The Benefits are:

- Excellent glare control, the fabric filters 92% of light rays while optimizing natural light flow.
- Unique transparency and clear vision to the outside, enabling an unobstructed view of the surroundings.
- Excellent dimensional stability, especially for larger widths.
- Certified non-flammable, with both Greenguard® and EndurisTM Glass Core certification, the Satiné 5500 fabric complies with health and safety requirements for buildings accessible to the public.

SPECIFICATIONS:

System - Somfy Altus 50 RTS 433 6/32 Tubular Motor (Made In France)
Fabric - Mermet Satine 5500 External fabric (42% Fiberglass / 58% PVC - Made In France)
Customized Housing and Side Guide Cable - Stainless Steel Grade 304
Customized Cable Suspension Termination Plug- Stainless Steel Grade 303
Warranty - 5 Years on Tubular Motor, 1 year on Fabric

For the Love of the Sun!

CHALLENGE

Awana Kijal in Terengganu is famous for being an international holiday destination with its long coastal line and crystal clear waters. However, the operation of the beach club becomes a big challenge due to excessive and harsh direct sunlight and heat throughout the year, as well as the strong monsoon winds during the monsoon season.

SOLUTION

Moonlight External Roller Blinds comes with a unique blinds support system with stainless steel grade 304 cables, termination screws and nuts to securely fasten the entire system under severe weather conditions, even at the seaside.

Love the view, but hate the glare.....

Fully Open

Fully Closed

Half Open

Half Open, View from the Living room

Enjoy your view!
Moonlight Industries' Sun Shading Solution has transformed this beautiful bungalow in **Sang Kancil Park , Kota Kinabalu** into an energy efficient home.

CHALLENGE

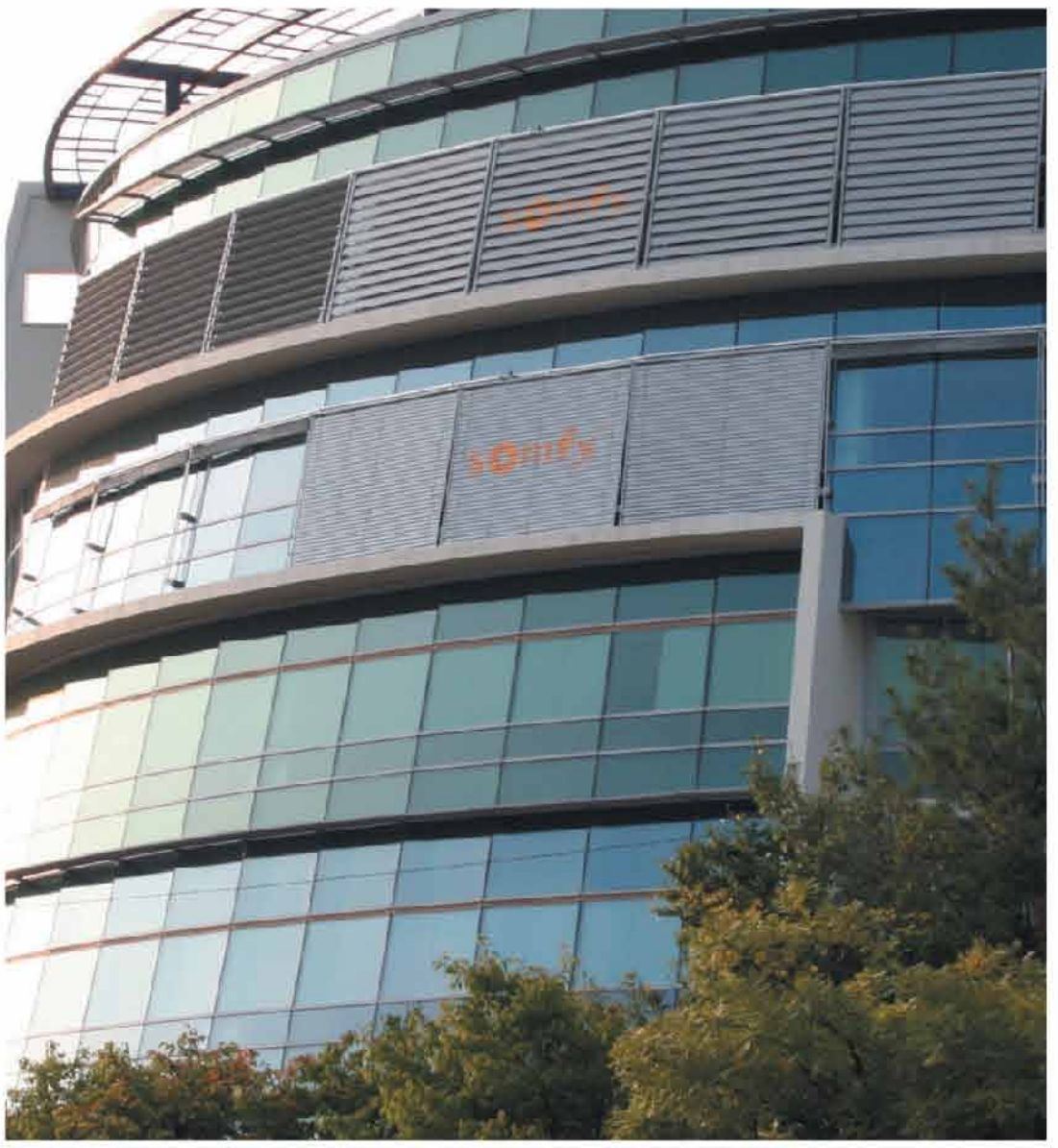
The view looking out the swimming pool is great, but the light reflected from the pool, and the harsh direct sunlight, has created a rather uncomfortable environment for those in the living hall.

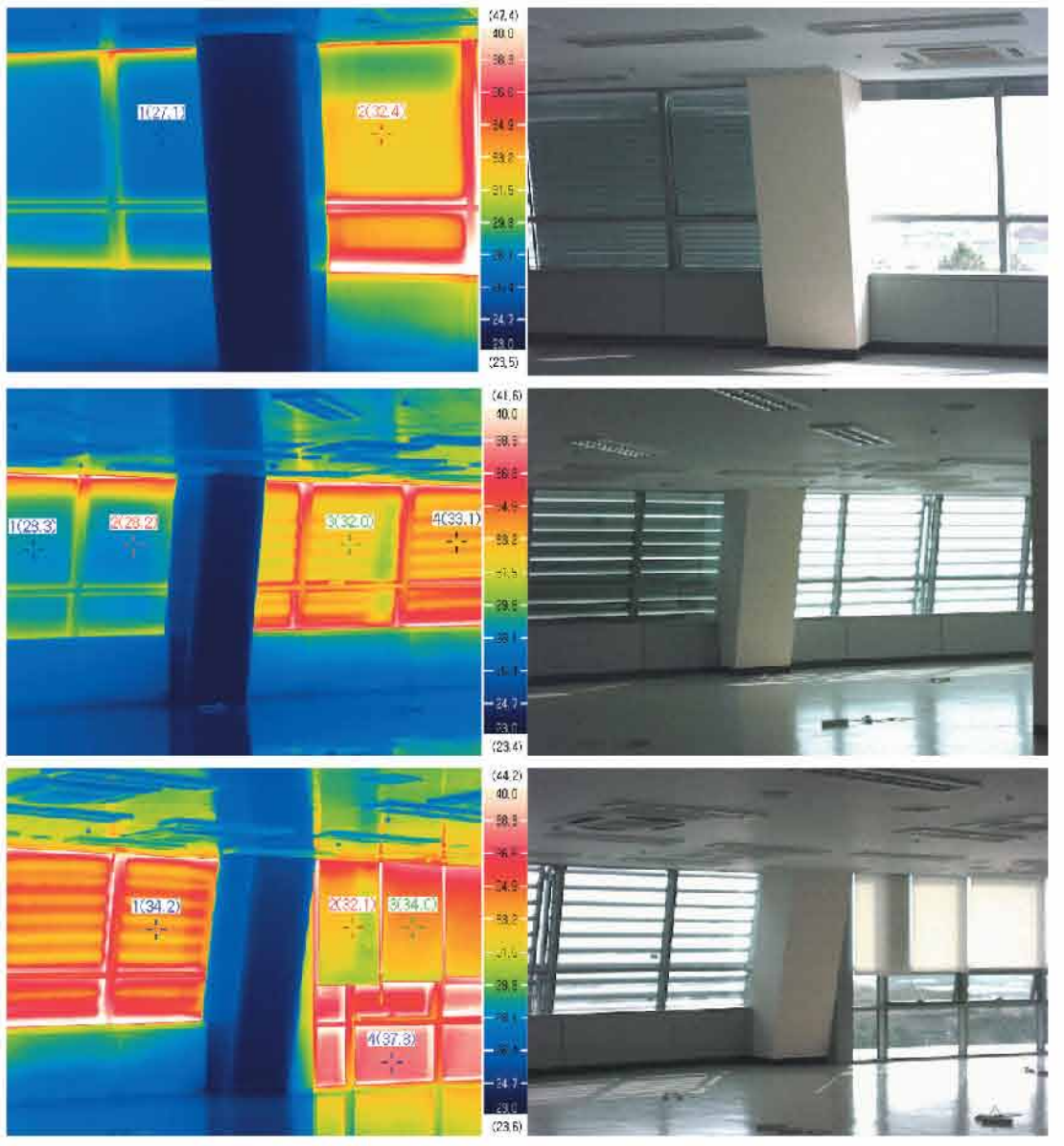
SOLUTION

Moonlight External Roller Blinds allows good outward visibility while reducing heat & glare, with up to 90% of solar radiation reflected.

BENEFITS OF EXTERIOR WINDOW COVERINGS

When meansuring the temperature of the inner glass surface using infrarred cameras where the window covering is installed was **4-5°C cooler** than the area where no window covering was installed.





Louver and EVB installation with Somfy motors at the Korea Institute of Construction Technology
(EVB installed on the 4th floor, Louver installed on the 5th floor)

RESEARCH ON SOMFY'S ENVIRONMENTAL IMPACT - CASE 1

Integrated Operation Low-energy Element Technology Development

Research summary :
Develop a façade skin that reduces energy consumption by converging and integrating technological elements in the energy-use intensive curtain wall of the building

Research goal :
Increase construction cost by 5%, reduce energy cost by 20%

Research object :
Converged and integrated skin system development

Research term :
August 2007 - July 2012 (5years)

Total research fund :
14 billion KRW

Supporting agency :
The Ministry of Knowledge Economy

Leading institute :
Daewoo E&C

Research institute :
National project research institutes (3 institutes)

Participating companies :
16 related companies

Window covering research :
Research on a window covering system that can be automatically controlled based on the external environment by installing window coverings on the building exterior to reduce the cooling and heating load

Source: Converged Integrated Building Energy Research Center

Article reprinted from Somfy Solutions for Dynamic Window Façade

THERMAL AND OPTICAL FACTORS

Thermal and optical factors, defined by the European standard EN 14501 "Blinds and shutters, thermal and visual comfort, performance characteristics and classification", allow to measure the solar protection performance of the fabrics. This standard was drawn up by a European working group comprising the Fraunhofer ISE (Institute of Solar Energy).

The EN 14501 standard defines the gtot total solar factor (fabric + glazing) as being the major property for thermal comfort and the Tv value for visual comfort.
Solar protection and light control factors are laboratory-tested.

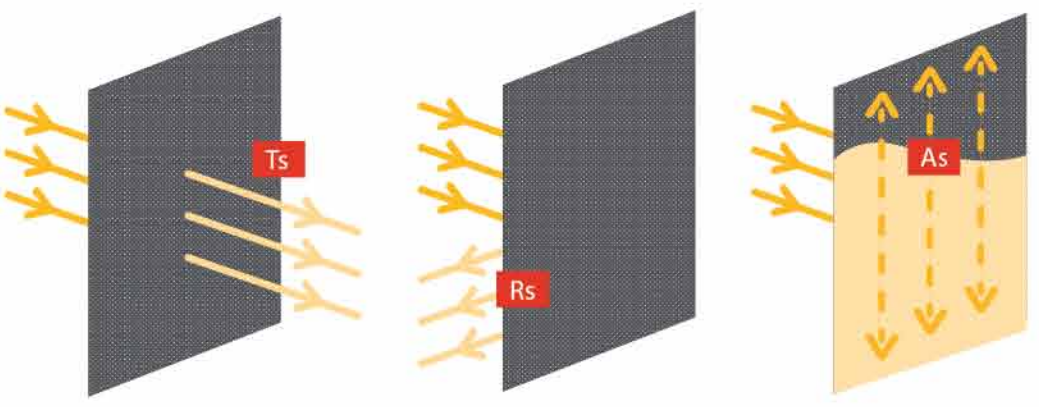
Thermal factors relating to the fabric alone

Solar transmittance (Ts)
This factor gives the proportion of solar energy transmitted through the fabric. A low percentage means the fabric performs well at reducing solar energy.

Solar reflectance (Rs)
This factor gives the proportion of solar radiation reflected by the fabric. A high percentage means the fabric performs well at reflecting solar energy.

Solar absorptance (As)
This factor gives the proportion of solar radiation absorbed by the fabric. A low percentage means the fabric absorbs little solar energy.

Solar radiation is always partially transmitted through, absorbed or reflected by the fabric. The sum of all 3 equals 100. Ts + Rs + As = 100% of solar energy.



Article reprinted from sunscreen - mermet

Sky Light Blinds by Moonlight Industries

Light and solar protection in Kuala Lumpur Corporate Office, with fabrics containing bacteria and fungi resistance properties (ASTM G21 &22).

Stunning views and unlimited natural light are the key elements in the design of this modern building, and Moonlight further enhances these points by overcoming site-specific impracticalities using the **Somfy FTS system with Alkenz Sunshadow 3000 series fabrics**, and is powered by **Somfy FTS-specific tubular motors.**
With over 1500 ft² of fabric used and 48 sets of FTS motors running side by side, the rooms welcome natural lights and filtered UV.

SPECIFICATIONS:
System – **FABRIC TENSION SYSTEM (FTS)**
Complete system including 2 motors and a control unit designed to extend the fabric between 2 tubes, keeping it tight while in motion or stopped.

Motor: 48 sets of Somfy Altus 50 RTS 433 6/32 Tubular Motor (Made In France)
Fabric - Alkens Sunshadow 3000 series (76% Polyester - 24% PVC-Made In Korea)
Warranty - 5 Years on Tubular Motor, 1 year on Fabric

25-feet high Skylight System

This 2 ½-storey high modern bungalow in Taman BDC, Kuching, Sarawak is the dream home for the modern design enthusiasts. The stunning skylight stands more than 25 feet high, in the center of the living hall, which becomes the most interesting space in the home.

CHALLENGE

The Skylight, while allowing natural light to come in from the top, also lets in unwanted elements such as a large amount of heat and glare when the sun is strong.

SOLUTION

To reduce such unwanted elements, Moonlight Skylight Blinds (Fabric Tension System) was selected to protect against UV damage and help insulate the home, thus also making it more energy efficient.

Our selected fabrics and components fulfill the following USA & EUROPEAN stringent requirement

- **GREENGUARD® Indoor Air Quality and GREENGUARD® Children & Schools**
  Improve Indoor air quality with LOW VOC (Volatile Organic Compound)
- **OEKO-TEX STANDARD 100**
  Environmental Friendly and LEAD-FREE
- **ASTM G21/G22**
  Resistance of Synthetic Polymeric Materials to FUNGI
- **FIRE RETARTANT**
  Fully comply with the most stringent international fire safety standards
  M1 /B1/B2/NFPA701

Our Preferred Partners In External Roller Blind & Skylight blinds

ASIA PACIFIC EMERGING ENTREPRENEURS TOP GLOBAL BUSINESS MAGAZINE ™

AWARDED ASIA PACIFIC TOP EMERGING ENTREPRENEURS

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