smartglass

Bright Thinking

Technical Document Version 1.8

March 2013 Revision

Solar Smartglass™

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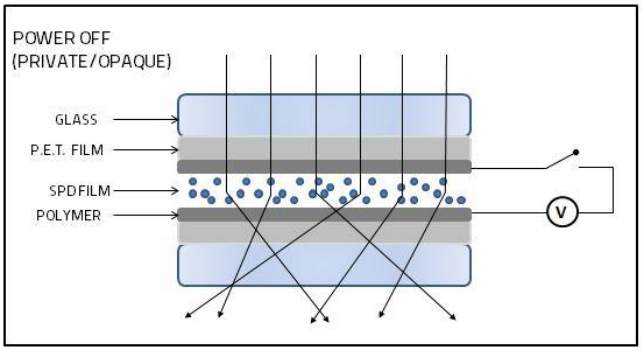
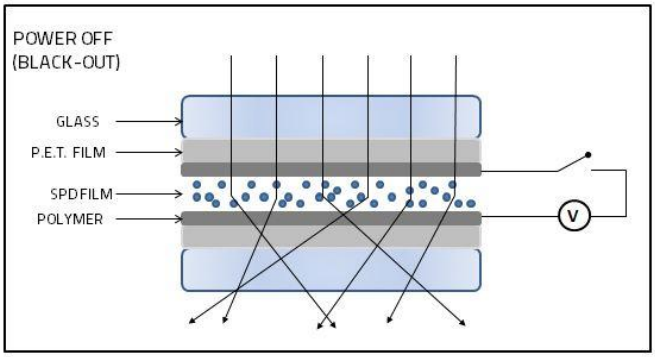


Solar SmartGlass™ is a solar control glass. When an AC electrical current is passed through the glass it instantly changes from darkened to visibly clear state. When the electrical current is removed it returns to the darkened "private" state in less than 10 seconds.

Solar SmartGlass™ offers unrivalled control of solar glare and has been shown to reduce the thermal transmittance through a glass façade which directly cuts down on associated HVAC costs. It can be manually or automatically "tuned" to different levels of darkness allowing complete solar glare control.



Sizes

Maximum 1040 x 3200mm

Thickness

Standard: 11.5mm

Custom: 9.5mm – 21.5mm

Please contact for bespoke solutions.

Environmental

Storage/Operation -10°C to 55°C

Variations

Various Shapes/Curved/Ballistic/X-Ray/Tinted.

Please contact for bespoke solutions.

Electrical

Driving voltage of110VAC at 7W/m², supplied by isolating transformer of dimension 223mm x 117mm x 117mm 4.9 kg for standard.

Different sizes dependent upon no. of glass panels.

Cable exits top centre of panel unless specified otherwise and is of double insulated 0.5mm² dual core flex.

Standard length of 4M.

Optical & Sound Data

	On (Translucent)	Off (Black-out)
Light Transmission	50%	0.7%
Light Reflectance	8%	6.9%
UV Transmission	0.01%	0.01%
Sound control	37dB	37dB

Values are nominal (±1%) and are dependent upon glass configurations used. Above data based on standard 11.5mm glass panel

Technical Data

Operating Voltage	110Vac @50HZ
Power Consumption	5W/m² in translucent on state, 0 W/m² in black-out state
IP Classification	IP X7
Bathroom Classification	Zone 1 & 2, Conformity to EN/HD 60364-7-701

Durability & Testing

As Solar Smartglass™ is a laminate glass, it offers exceptional strength and safety.

Solar Smartglass™ has been tested in accordance with relevant standards and is compliant with all applicable EU Directives and standards.

Solar Smartglass™ panels have been tested in excess of 1 million switch cycles in-house.

Certification list and test results are available upon request.

Installation Methods

Glazing Methods

- Wet Glazing must only be completed by using Soudal Silirub 2 non-acetic sealant.
- Dry Joints can be used
- Fixed, opening or sliding frames
- Door systems with top and bottom rails
- Incorporated into double glazed units

Installation specifics and Precautions

- Prevent any pressure upon the surface of the panel
- Short term exposure to be within -20°C to +60°C
- Edge not to be in contact with any material not authorised by Smartglass.
- Transformer can be located remotely but requires access for maintenance
- Electrical control either in standard wall switch or remote system to be provided upon primary side of power conditioner.
- All electrical connections to be made by certified electrician and in line with local rules and regulations.
- Setting blocks to be used of standard width and thickness of all glass panels.

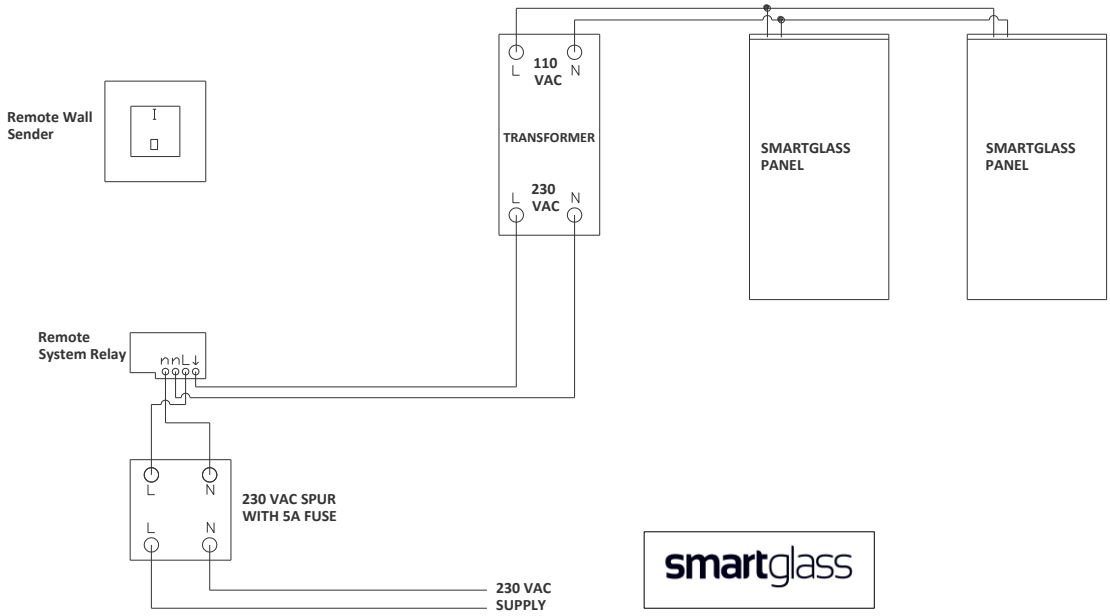
Maintenance

Once installed maintenance is as simple as keeping the Smartglass clean. Regular cleaning using only neutral materials is recommended for optimal transmission performance.

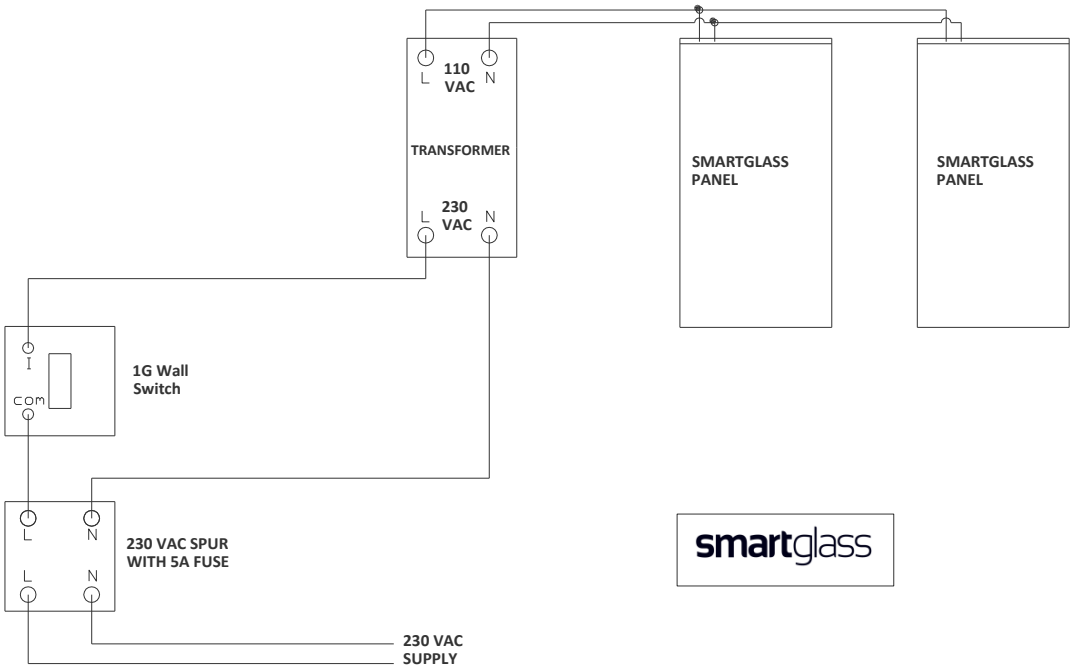
Warranties

Smartglass warrants that the physical tangible hardware products delivered should be free from defects in materials and workmanship, assuming normal use, for a period of 5 years from the date of invoice unless otherwise specified. Consumable items such as, but not limited to, power conditioners, remote control systems or any other type of switching mechanism will be warranted for a period of 2 years from the date of dispatch.

Remote Wiring Diagram



Hard-wired Wiring Diagram



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