LC SmartGlass™
SPD SmartGlass™

Electrical Installation Manual

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We hope that you find this document useful and welcome any feedback.

ELECTRICAL INSTALLATION

SUPPLIES NEEDED

Installation of SmartGlass panels require the following items:

A 16 AMP (minimum) Residual current device (Rcd) with Miniature circuit breaker (Mcb) or a Residual current circuit breaker with overload protection (Rcbo) must be used along with a fused spur at the connection point for the panel for localised isolation.

A wall mounted switch, 230VAC 50/60 Hz (installer/owner supplied). Alternatively a radio remote control switch can be specified, contact us for information.

SmartGlass panels may be connected in parallel up to 4 square meters total area per single Tim 100 power conditioner/transformer. Bespoke electronic controllers can be used including "smart" systems such as Creston and ABX controllers.

Note: Larger Power Conditioner / Transformers can be supplied to power larger areas of Smartglass, Contact us for further information.

INSTALLATION REQUIREMENTS

As with any electrical device, SmartGlass must be included in the electrical layout for each project. E.g. Position of spurs, switching layout, containment (conduit, trunking etc to house cables) connection boxes etc. The installation must meet all local rules and regulations. Also any metal frames which could come in to contact with the wiring of the panel ***must*** be earthed. Smartglass international is not responsible for these layouts however we can be contacted for further information.

POWER TRANSFORMER / CONDITIONER DETAIL

Short circuit proof isolating encapsulated auto wound transformers for step down of 230V to either 110V or 65V depending on which product is supplied.

WARNING: The transformer must be installed by the electrical contractor in an easily accessible area in order to replace fuse in the event of damage.

Specification: Tim 300 - Power Conditioner / Transformer.

Input Voltage	230V 50-60 Hz
Power	300 VA
Dimensions (L*W*H mm)	223mm * 117mm * 117mm
Weight	4.9 kg approx.
Insulation	Double Insulated (No Earth Required).
Output voltage	110V or 65V

- Twin secondary windings for series or parallel connection
- Integrated overload protection and short circuit proof
- Encapsulated in resin
- Isolating transformer to IEC 61558-2-4, DIN EN 61558-2-4, VDE 0570 part 2-4

WIRING & TESTING

SmartGlass International requires that all SmartGlass electrical installations be completed by a licensed electrician, and in compliance with all local rules, legislation and regulations.

Before installation, inspect bus bars, electrode leads and wires to assure insulation. No exposed bus bars, electrode leads, or wires should contact any metal frames that will damage the transformer and possibly the SmartGlass. All metal frames ***must be earthed***.

Multiple SmartGlass panels should be connected in parallel with the transformer. Insure that the transformer "in" connects to 230V AC and "out" connects to SmartGlass panel. The output voltage is approximately 115V or 65V depending on the type of SmartGlass used.

Before turning on the power, test resistance reading between the metal frame and electrode and make sure that the resistance reading is infinite. Otherwise, check short location and insulate electrodes from metal frames.

NOTE: Ensure not to conduct an insulation resistance test with a fault voltage upon Smartglass. This will permanently damage the Smartglass and will void your warranty.

SmartGlass uses approximately 5 watts per square meter in the "on" (clear) state. No electricity is consumed in the "off" (opaque) state. SmartGlass can be controlled with a single or multiple switches, radio remote control, photosensor, infra red detector, etc.

NOTE: It is vital for correct operation that the switch/remote receiver is positioned on the mains voltage before the transformer/power conditioner. Failure to correctly install the switching mechanism may cause irreparable damage to the LC SmartGlass.

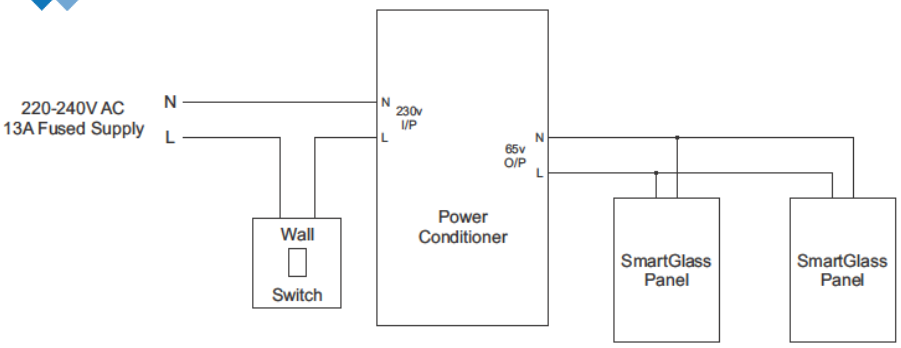
Ensure the mains supply is switched off and take care when opening the power transformer, allow a few minutes to cool down. Internal electronic parts may be very hot, this is normal. Only open the power transformer in the areas noted safe for opening, never open the sealed body of the power transformer.

Warning: Do not substitute a higher fuse rating! Fuse rating is critical to properly protect SmartGlass panels. A spare fuse is included on the inside cover of the power transformer supplied and additional fuses can be ordered from SmartGlass International if required.

For any additional information regarding the electrical installation of Smartglass please do not hesitate to contact us.

TYPICAL WIRING DIAGRAM

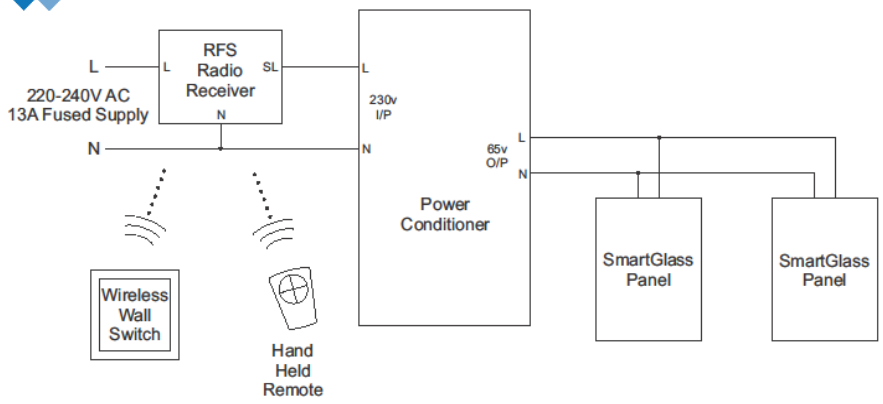
SmartGlass International Standard Wiring Diagram 65V



Please Note: The Power Conditioner has a built in fuse and must be located in an accessible position

Power Conditioner (230v AC to 65v AC 2x150VA) (223x117x117mm) 1 reqd per switchable area upto 12mSq

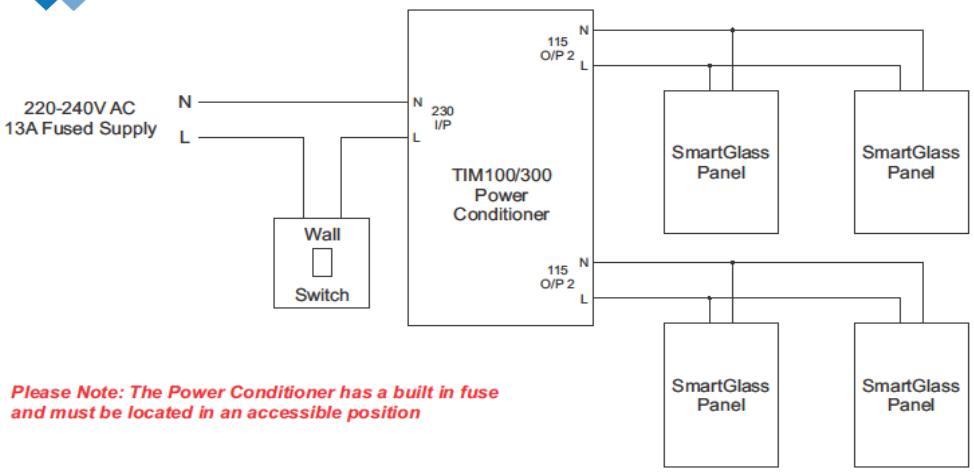
SmartGlass International Remote Control Wiring 65V



Please Note: The Power Conditioner has a built in fuse and must be located in an accessible position

Power Conditioner (230v AC to 65v AC 2x150VA) (223x117x117mm) 1 reqd per switchable area upto 12mSq

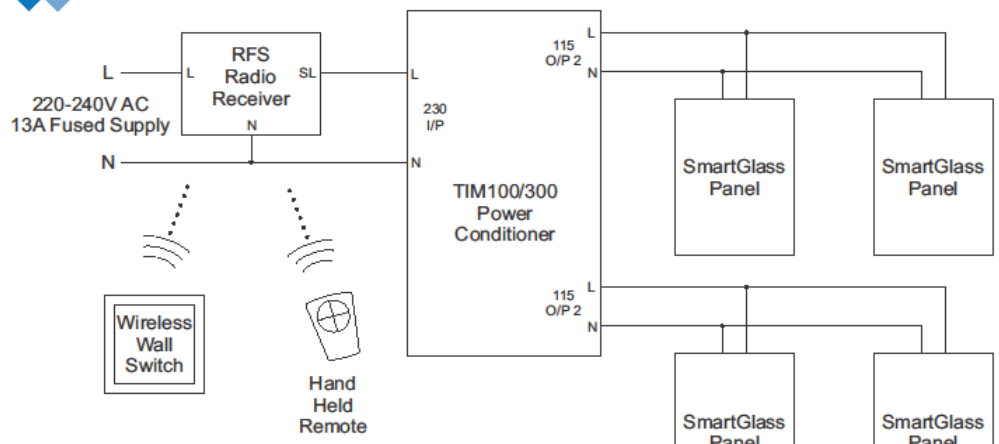
SmartGlass International — Standard Wiring Diagram



Please Note: The Power Conditioner has a built in fuse and must be located in an accessible position

TIM100 Power Conditioner (230v AC to 115v AC 2x50VA) (166x77x76mm) 1 reqd per switchable area upto 2x2mSq
TIM300 Power Conditioner (230v AC to 115v AC 2x150VA) (223x117x117mm) 1 reqd per switchable area upto 2x6mSq

SmartGlass International — Remote Control Wiring Diagram



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