THE SANTON DOUBLE SAFETY SWITCH
FOR RESIDENTIAL PV SYSTEMS
THE SANTON DOUBLE SAFETY SWITCH IS THE FIRST SYSTEM SPECIFICALLY DESIGNED FOR DOMESTIC PV INSTALLATIONS. AESTHETICALLY PLEASING, THE SANTON SOLUTION MAKES INSTALLATION AND POSITIONING OF THE ISOLATORS MORE FLEXIBLE BECAUSE IT IS COSMETICALLY PLEASING IN A DOMESTIC ENVIRONMENT.

TIME SAVING
Cuts installation times by up to two thirds, safe and easy to install, the Santon Double Safety Switch series uses a groundbreaking plug and switch system. The Santon Solution is the first choice for the discerning professional in the domestic PV installation industry.

SAFETY
The Santon Solution provides complete local isolation of both AC and DC photovoltaic installations in order to comply with current legislation. Incorporating a unique interlocking system of AC and DC control handles (in the double isolation switch) it enforces the correct switching sequence for inverter protection.

The system fully complies with BS7671 and the DTI’s guide on the safe installation of photovoltaic systems. The in-built safety system of interlocking switches prevents access to the MC4 DC and the AC connections unless the switches are locked in the OFF position. It doesn’t rely on labels for safety, it is all built in! It is the complete integrated solution for sub 4KW domestic installations.

DURABLE TRUE X-TYPE DC SWITCH
Designed to last the life of the PV installation, the system comes equipped with the electrical industry’s first choice in true DC switches. The Santon system incorporates a snap action mechanism which reduces the arc flame to a minimum during switching. This in combination with the self cleaning blade wiping action of contacts increases durability and safety. The DC switch incorporated in the design will withstand up to 25A at 600V DC continuously per string.

The DTI’s guide to “Photovoltaic in Buildings” section 2.1.12 specifies the use of purposely designed DC switches. The AC switch is rated at 20A at 690V AC. Both the AC and DC switches are capable of switching under both full load and no load.

ADDITIONAL PROTECTION, METERING AND PEACE OF MIND
Protection against peak loads can be added by choosing either of the two surge arrester protection options. This shields the PV system from any unpredicted voltage change. The incorporation of a surge protection device prevents the possibility of over-voltages.

This avoids a situation where a separate installation fails and is incorrectly attributed to the PV installation, thus protecting the installer and (in the case of rented properties) the landlord, from third party claims. A Generation Meter can be integrated at either the inverter double isolation switch or the mains isolation switch.

ONE COMPLETE SOLUTION FOR RESIDENTIAL USE
Every installation is catered for. Simply select any two products from the Santon range.

SAFE, EFFICIENT, UNIQUE, DURABLE.
The SANTON DOMESTIC PV SOLUTION.
**PV STRING INVERTER**
String cables join the solar panels to the inverter. The inverter converts the solar panels’ DC output into an AC current suitable for feeding into residence and subsequently the external power grid.

**INVERTER ISOLATION UNIT**
The Inverter Isolation Unit disconnects both the DC current running from the solar panels TO the inverter, as well as the AC current running FROM the inverter into the residence and/or the power grid. The Inverter Isolation Unit can optionally include a surge arrester and/or generation meter.

**MAIN AC ISOLATION SWITCH**
The Main AC Isolation Switch disconnects the AC current running from the Inverter Isolation Unit into the residence and/or external power grid. The Main AC Isolation Switch can optionally include a generation meter.
INVERTER ISOLATION SWITCH

**DC STRING CABLE OUTPUT CONNECTIONS**
- Available as either single or two string. All MC4 DC connections are pre wired to speed up installation times and ensure the correct polarity of the installation.
- Access to the MC4 DC connections is prevented by the interlocking safety system. This only allows access in the OFF position of both switches.

**GENERATION METER**
- Pre wired generation meter option for display of generated power.
- Optional smart metering can be incorporated using the Orsis metering system.

**OVER-VOLTAGE PROTECTION**
- Additional safety is delivered by the surge arrestors for protection against unpredicted voltages.

**CONTROL HANDLE OPERATION**
- The unique interlocking control handles enforce the correct operating sequence recommended by the DTI, this ensures safe operation and provides optimal safety.
- The use of one padlock on the DC switch in OFF position locks both the AC and DC switches. (the AC switch can be secured separately if required).

**ACCESS CONTROL**
- Access to the releasing screws for the sliding DC covers is only possible when the DC switch is in the OFF position.
- Releasing these screws locks the DC switch and consequently the AC switch in the off position, thus preventing accidental operation of the switches whilst connection or disconnection is in progress.

**AC CABLE CONNECTIONS**
- The AC connections are easily made using less spring terminals.
- Access to the AC connections is prevented by the interlock system. This only allows access in the OFF position of both switches.
**MAIN AC ISOLATION SWITCH**

**GENERATION METER**
- Generation meter for display of generated power

**LID COVER**
- Protection lid for extra safety, endurance and designed for residential use

**AC CABLE CONNECTIONS**
- Easy connection of the AC input and output cables is provided by the spring terminals
- Specially designed cable entry systems enhance speed of installation and maintain cosmetic appearance

**CONTROL HANDLE OPERATION**
- Hidden handle when lid closed
- Padlockable in off position
- All the required labeling is moulded into the switch to maintain a cosmetically pleasing appearance

**AC SWITCH ENCLOSURE**
- AC isolation switch single box size
- Can be fitted with supplied pattress or flush mounted using a standard single 35mm deep metal back box or dry lining box
## INVERTER ISOLATION UNIT

### DSS-2DA OR DSS-4DA

<table>
<thead>
<tr>
<th>Voltage (VDC)</th>
<th>A</th>
<th>Pole</th>
<th>String</th>
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<tr>
<td>DSS-2DA</td>
<td>25</td>
<td>2</td>
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<tr>
<td>DSS-4DA</td>
<td>25</td>
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- Enclosure with DC disconnector (1 or 2 strings) and AC isolator
- Pre-wired DC connections on MC4 connectors
- Spring terminals for AC connections

### DSS-2DAM OR DSS-4DAM

<table>
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<th>Voltage (VDC)</th>
<th>A</th>
<th>Pole</th>
<th>String</th>
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<tr>
<td>DSS-4DAM</td>
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</tbody>
</table>

- Enclosure with DC disconnector (1 or 2 strings) and AC isolator
- Pre-wired DC connections on MC4 connectors
- Spring terminals for AC connections
- Pre-wired surge arrestors

### DSS-2DAO OR DSS-4DAO

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<th>A</th>
<th>Pole</th>
<th>String</th>
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<td>DSS-4DAO</td>
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</table>

- Enclosure with DC disconnector (1 or 2 strings) and AC isolator
- Pre-wired DC connections on MC4 connectors
- Spring terminals for AC connections
- Pre-wired generation meter (Elster A100C)

### DSS-2DAMO OR DSS-4DAMO

<table>
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</table>

- Enclosure with DC disconnector (1 or 2 strings) and AC isolator
- Pre-wired DC connections on MC4 connectors
- Spring terminals for AC connections
- Pre-wired generation meter (Elster A100C) and surge arrestors

### MEASURES

- Enclosure with DC disconnector
- Pre-wired DC connections on MC4 connectors
- Spring terminals for AC connections
- Pre-wired generation meter (Elster A100C)
- Spring terminals for AC connections
- Enclosure with DC disconnector
MAIN AC ISOLATION SWITCH

DSS-AM
- Enclosure with AC Isolator for wall mounting
- Spring terminals for AC connections
- Pre-wired generation meter (Elster A100C)

DSS-AW
- Enclosure with AC Isolator for wall and flush mounting
- Prepared for Pateress back box installation
- Fits all standard 35mm deep single back boxes
- Knock-outs for cable glands
- Adaptable for mini-trunking

GENERAL SPECIFICATIONS

AC Connections: Max 4mm² Spring terminals
DC Connections: Max. 6mm² Solar connector (Type MC4)
Surge Arrestors - AC circuit: DEHN guard DEHN guard Type: DG M TT 2P 275
Generation meter: Elster Type A100C
Protection degree: IP42
Protection class: II
Temperature range: -5°C till +35°C

AC & DC SWITCH SPECIFICATIONS

<table>
<thead>
<tr>
<th></th>
<th>AC Isolator</th>
<th>DC Disconnector</th>
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<tr>
<td>Rated Voltage</td>
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<td>EN 60947-3</td>
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Changes, errors and misprints reserved.
• One complete AC and DC solution
• Specially developed for residential pv systems
• True Santon DC switch inside
• Plug and switch installation
• Generation meter
• Surge arrestors
• EN 60947-3