

### Protection for the most vulnerable DC connections in photovoltaic systems

**Solfit ConnectSafe™ is an IP68 rated, gel filled DC connector protection enclosure designed to reduce risks associated with site made and concealed DC connections in photovoltaic installations.**

It is specifically intended for DC connections located in roof spaces and where cabling transitions into the fabric of the building, providing environmental sealing, mechanical strain relief, and enhanced fire risk mitigation.



#### ARC RISK MITIGATION APPROACH

Electrical arcing within DC connectors may arise due to installation defects, environmental exposure, or mechanical stress.

Solfit ConnectSafe™ mitigates these risks by:

- ▶ **Encasing the DC connector within a flame retardant enclosure**
- ▶ **Surrounding the connector with a patented silicone gel with high dielectric strength (27 kV/mm)**
- ▶ **Providing integrated cable retention to reduce mechanical strain**
- ▶ **Sealing the connector from moisture, contaminants, and environmental influence**

Solfit ConnectSafe™ is a risk mitigation device and does not replace correct system design, installation, or inspection practices.

#### INTENDED APPLICATION

Suitable for photovoltaic installations where DC connectors may be exposed to:

- **Moisture or water ingress**
- **UV radiation and temperature variation**
- **Mechanical strain on connector terminations**
- **Roof space environments**
- **Transitions into the building fabric**

**Suitable for new installations and retrofit applications.**

#### WHY SOLFIT CONNECTSAFE™

One of the most common sources of failure in PV systems occurs at site made DC connections and extension cables, particularly once concealed within roof spaces or the building structure.

**Solfit ConnectSafe™ mitigates these risks** by sealing and stabilising DC connectors using a patented high dielectric gel system, reducing environmental and mechanical conditions that may contribute to connector degradation over time.

#### KEY TECHNICAL INFORMATION

|                            |                  |
|----------------------------|------------------|
| IP protection:             | IP68             |
| Rated voltage:             | Up to 1500 V DC  |
| Dielectric strength (gel): | 27 kV/mm         |
| Operating temperature:     | -20 °C to +90 °C |
| Re enterable:              | Yes              |
| Shelf life:                | Unlimited        |
| HALOGEN & LEAD FREE        |                  |

#### COMPLIANCE

Manufactured in accordance with:

- ☑ **CEI EN 50393**
- ☑ CEI EN 60695 2 11
- ☑ CEI 20 37/2 1
- ☑ CEI 20 37/4

Conforms to Low Voltage Directive 2014/35/EU and RoHS Directives.

**IMPORTANT NOTICE:** Solfit ConnectSafe™ reduces the likelihood and impact of connector related faults but does not guarantee the prevention of electrical faults or fires.



Designed for **compliance**. Built for **safety**.

## SOLFIT CONNECTSAFE™

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### ADDITIONAL INFORMATION

### POSITIONING SUMMARY

Solfit ConnectSafe™ and ArcBox address the same overall risk using different engineering approaches:

- **ArcBox** focuses on **containing** arc related fire events
- **Solfit ConnectSafe™** focuses on **reducing conditions** that may contribute to arcing, particularly at site made and concealed DC connections, while providing full environmental protection

### KEY DIFFERENTIATORS

- ▶ Designed specifically for site made and concealed DC connections
- ▶ Gel filled insulation rather than a dry enclosure
- ▶ Full IP68 environmental sealing
- ▶ Integrated mechanical strain relief
- ▶ Re enterable for inspection and maintenance
- ▶ Supports scalable, system led service delivery

### TECHNICAL COMPARISON

| Feature                  | ArcBox                 | Solfit ConnectSafe™                  |
|--------------------------|------------------------|--------------------------------------|
| Primary approach         | Fire containment       | Risk reduction + mitigation          |
| Typical risk focus       | Arc event containment  | Site made & extension DC connections |
| Connector environment    | Dry enclosure          | Gel filled, sealed                   |
| Ingress protection       | Not IP rated           | IP68 rated                           |
| Arc risk strategy        | Contains arc events    | Reduces contributing conditions      |
| Dielectric material      | Not gel based          | Silicone gel (27 kV/mm)              |
| Mechanical strain relief | Limited                | Integrated cable retention           |
| Re enterable             | No                     | Yes                                  |
| Voltage rating           | Not prominently stated | Up to 1500 V DC                      |
| Environmental sealing    | Secondary feature      | Primary feature                      |

### INSTALLATION & LIFECYCLE

| Aspect                             | Solfit ConnectSafe™  | ArcBox             |
|------------------------------------|----------------------|--------------------|
| Installation                       | Snap fit, gel sealed | Snap fit enclosure |
| Retrofit suitability               | Yes                  | Yes                |
| Suitable for concealed connections | Yes                  | Limited            |
| Maintenance access                 | Re enterable         | Not re enterable   |
| Shelf life                         | Unlimited            | Not stated         |

### IDEAL APPLICATIONS

- ✓ New build housing
- ✓ Roof space DC transitions
- ✓ Concealed cable routes
- ✓ Retrofit projects
- ✓ Installations requiring enhanced compliance and long term asset protection



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