

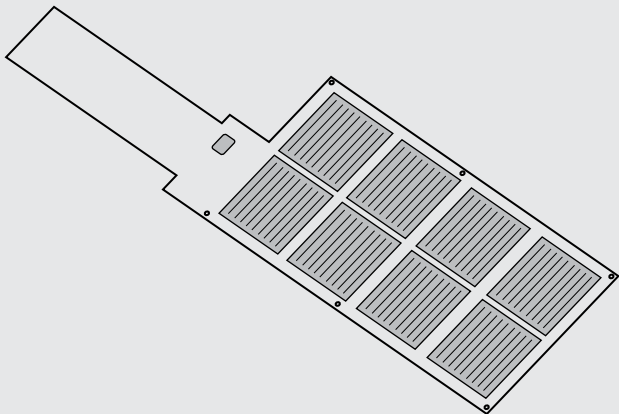
THE POWER OF

REDARC®

Monocrystalline Solar Blankets

MODELS:

- SMFB1160
- SMFB1240
- SMFB1300



WARNINGS & SAFETY INSTRUCTIONS

SAVE THESE INSTRUCTIONS — This manual contains important safety instructions. Do not operate the system unless you have read and understood this manual. REDARC recommends that the Solar Blanket referenced in this manual be installed by a suitably qualified person.

Disclaimer: REDARC accepts no liability for any injury, loss or property damage which may occur from the improper or unsafe installation or use of its products.

SAFETY MESSAGE CONVENTIONS

Safety messages in this manual include a signal word to indicate the level of the hazard as follows:

⚠ WARNING: Indicates a potentially hazardous situation which could result in death or serious injury to the operator or to bystanders.

⚠ CAUTION: Indicates a potentially hazardous situation which may result in moderate or minor injury to the operator or to bystanders.

NOTICE: Indicates a situation that may cause equipment damage.

⚠ WARNING

- 1. RISK OF EXPLOSIVE GASES:** Working in vicinity of a Lead-Acid battery is dangerous. Batteries generate explosive gases during normal operation. For this reason, it is of utmost importance that you follow the instructions when installing and using the Solar Blanket.
2. Check the manufacturer's data for your battery and ensure that the maximum voltage of the profile you select does not exceed the manufacturer's recommended maximum charging voltage. If the maximum voltage is too high for your battery type, please select another charging profile.
- 3. RISK OF DAMAGE AND INJURY FROM IMPROPERLY SECURED BLANKETS:** Solar Blankets are intended for stationary use only and must not be permanently mounted to a vehicle. Solar Blankets must be disconnected and securely stored when the vehicle is in motion.

⚠ CAUTION

1. Do NOT connect the Solar Blanket directly to a Battery. A Solar Regulator must be used between the Solar Blanket and the Battery.
2. This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they are supervised or have been instructed on how to use the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.
3. Only use the Solar Blanket for charging Lead Acid, Gel, Calcium content, AGM or Lithium Iron Phosphate batteries using a Solar Regulator suitable for the Battery's chemistry.

4. The Battery should be mounted in a well ventilated area, as far as possible from any ignition sources. NEVER smoke or allow a spark or flame in the vicinity of battery or engine. This may cause the battery to explode.
5. An unconnected Blanket exposed to light may generate voltages up to its rated open-circuit voltage at the connectors. Ensure the solar cells are not exposed to light when making electrical connections to the Blanket to reduce the chance of an electrical spark.

PERSONAL SAFETY PRECAUTIONS: To assist with the safe operation and use of the Solar Blanket when connected (via a Regulator) to the battery:

1. Wear complete eye protection and clothing protection. Avoid touching eyes while working near a battery.
2. If battery acid contacts your skin or clothing, remove the affected clothing and wash the affected area of your skin immediately with soap and water. If battery acid enters your eye, immediately flood the eye with running cold water for at least 10 minutes and seek medical assistance immediately.



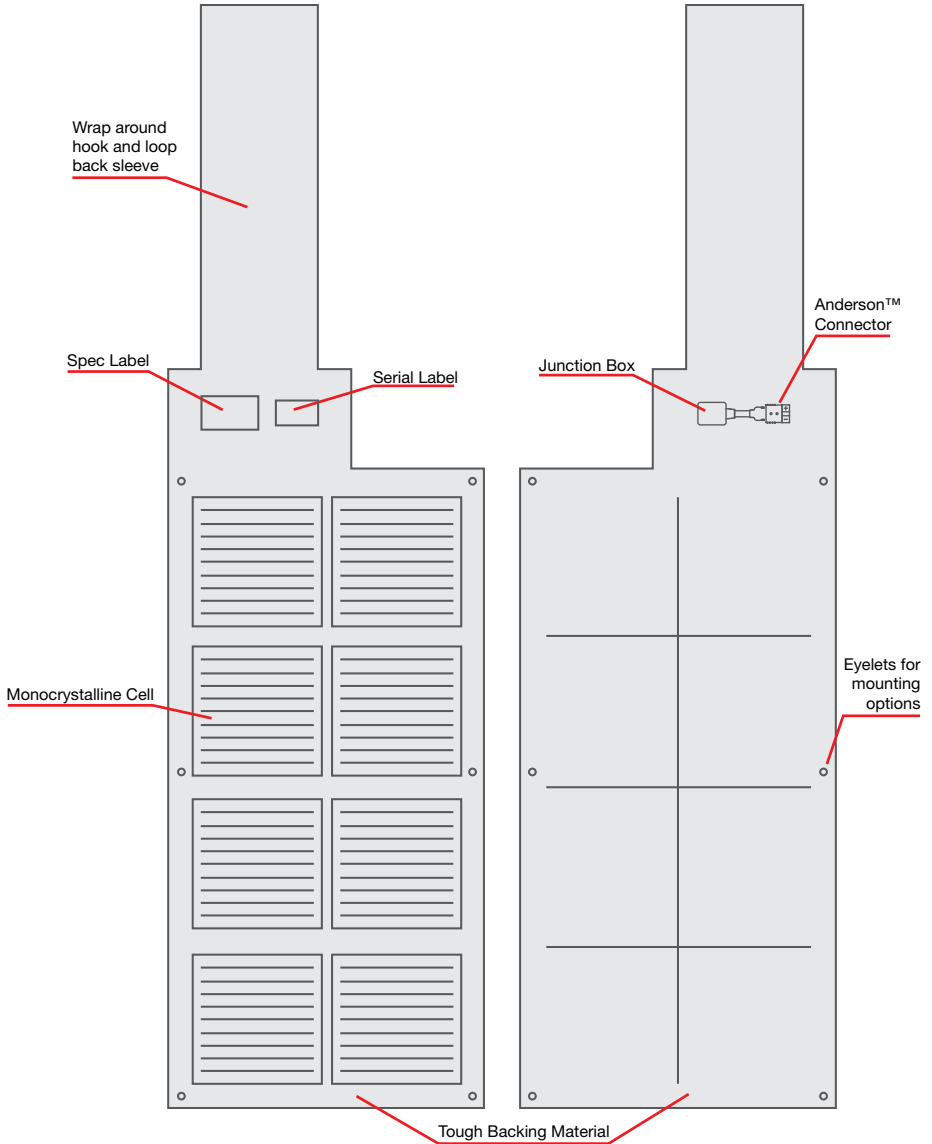
NOTICE

1. The Solar Blanket will achieve best results when proper battery maintenance is regularly performed. This includes but is not limited to checking water and specific gravity levels of the battery.
2. Do not use mirrors or other devices to artificially concentrate sunlight on the Blanket.
3. All Blankets used in series, parallel, or series-parallel should be positioned to receive identical amounts of light to reduce risk of Blanket damage.
4. Partially shaded or partially obscured Solar Blankets will have reduced output, and can potentially damage the Solar Blanket.

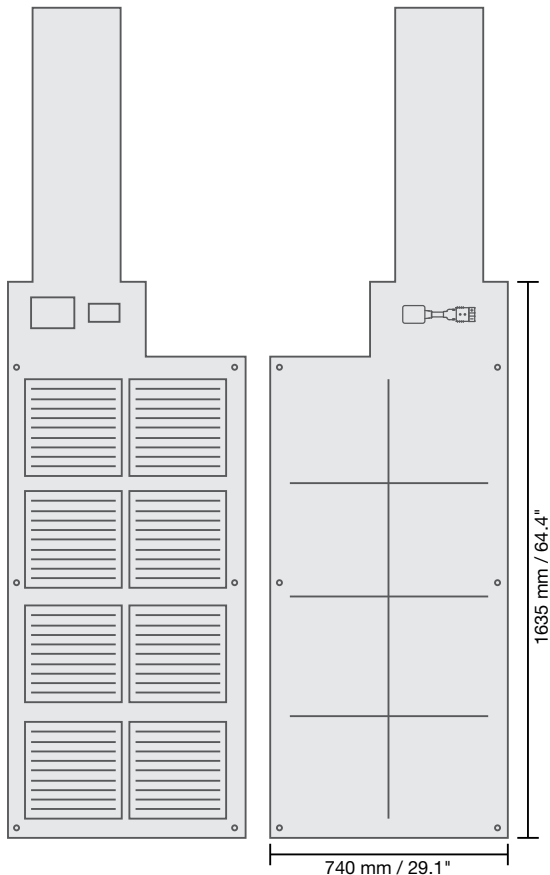
PRODUCT OVERVIEW

REDARC Solar Blankets are designed to provide high efficiency in a rugged, flexible construction. They are constructed using heavy duty canvas and robust materials making them suitable for off-road and outback conditions.

SOLAR BLANKET FEATURES

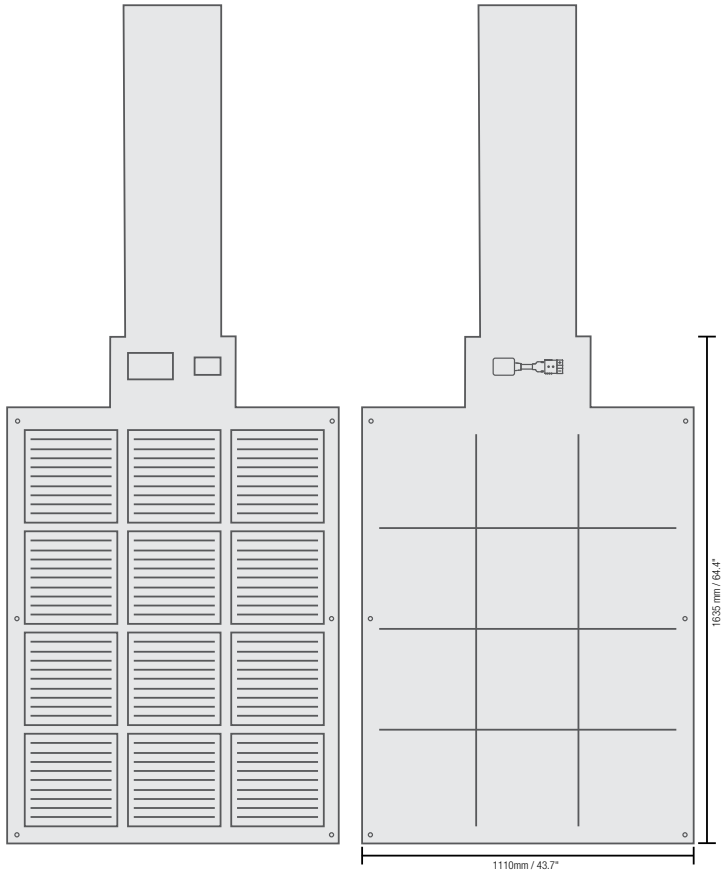


160W SOLAR BLANKET SPECIFICATIONS



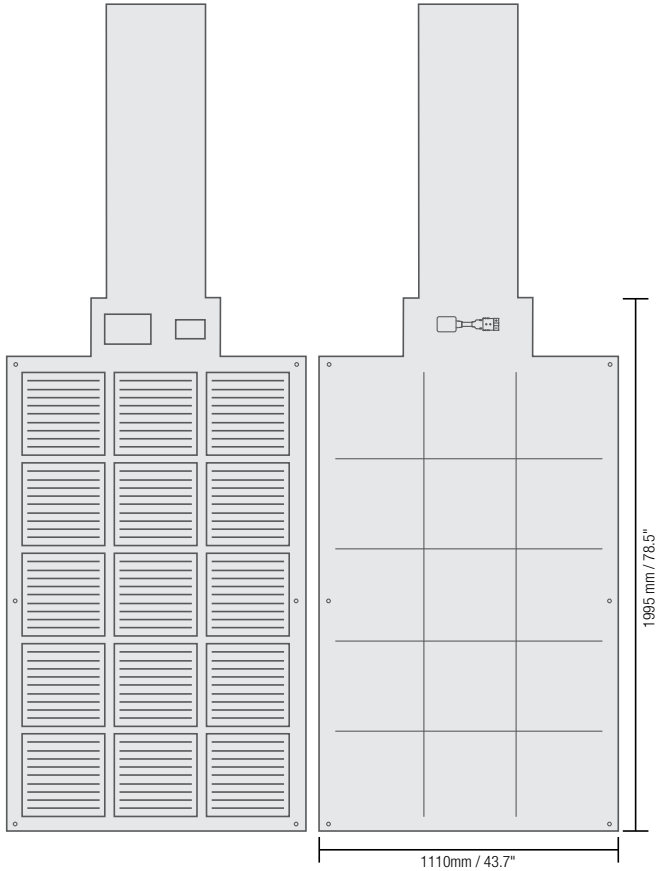
Model	SMFB1160	Cell efficiency	21%
Cell type	Monocrystalline	Dimensions (open)	1635 × 740 × 2.5 mm / 64.4" × 29.1" × 0.1"
Backing material	Canvas	Dimensions (closed)	365 × 365 × 70 mm / 14.4" × 14.4" × 2.8"
Max. power output	160 W	Connector type	Anderson™ SB™ 50
Max. power voltage	18.0 V	Cable length	120 mm / 4.7"
Max. power current	8.9 A	Operation temp.	0°C to +85°C / +32°F to +185°F
Open circuit voltage	21.5 V	Weight	4.8 kg / 10.5 lb
Short circuit current	9.5 A	Mounting eyelets	Yes (6) Diameter – 8 mm / 0.3"
Power tolerance	± 5%	Min. regulator capacity	20 A

240W SOLAR BLANKET SPECIFICATIONS



Model	SMFB1240	Cell efficiency	21%
Cell type	Monocrystalline	Dimensions (open)	1635 × 1110 × 2.5 mm / 64.4" × 43.7" × 0.1"
Backing material	Canvas	Dimensions (closed)	365 × 365 × 75 mm / 14.4" × 14.4" × 2.9"
Max. power output	240 W	Connector type	Anderson™ SB™ 50
Max. power voltage	18.0 V	Cable length	120 mm / 4.7"
Max. power current	13.4 A	Operation temp.	0°C to +85°C / +32°F to +185°F
Open circuit voltage	21.5 V	Weight	7.0 kg / 15.4 lb
Short circuit current	14.2 A	Mounting eyelets	Yes (6) Diameter – 8 mm / 0.3"
Power tolerance	± 5%	Min. regulator capacity	20 A

300W SOLAR BLANKET SPECIFICATIONS

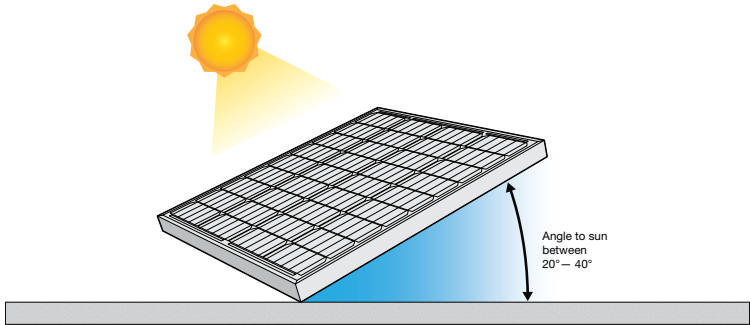


Model	SMFB1300	Cell efficiency	21%
Cell type	Monocrystalline	Dimensions (open)	1995 × 1110 × 2.5 mm / 78.5" × 43.7" × 0.1"
Backing material	Canvas	Dimensions (closed)	365 × 365 × 80 mm / 14.4" × 14.4" × 3.1"
Max. power output	300 W	Connector type	Anderson™ SB™ 50
Max. power voltage	17.0 V	Cable length	120 mm / 4.7"
Max. power current	18.0 A	Operation temp.	0°C to +85°C / +32°F to +185°F
Open circuit voltage	20.0 V	Weight	8.5 kg / 18.7 lb
Short circuit current	19.0 A	Mounting eyelets	Yes (6) Diameter – 8 mm / 0.3"
Power tolerance	± 5%	Min. regulator capacity	30 A

SOLAR OPTIMISATION

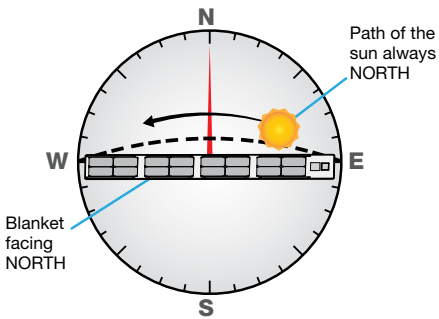
ANGLE TO THE SUN

REDARC Solar Blankets will perform at their peak when the monocrystalline cells are angled directly towards the sun (this is not always achievable). REDARC recommends having the Solar Blanket/s angled between 20° and 40° from the ground to ensure the best total output from your Blanket across the course of the day, no matter what season.

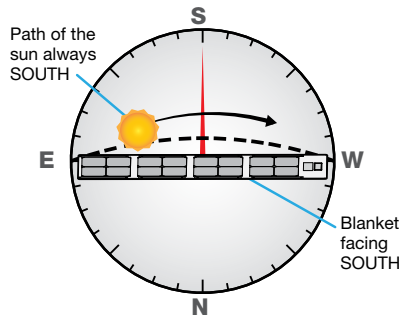


In the **southern hemisphere**, the sun is always in the northern half of the sky, facing your Blanket **NORTH** ensures the best angle to the sun for a Solar Blanket across the course of the day.

In the **northern hemisphere**, the sun is always in the southern half of the sky, facing your Blanket **SOUTH** ensures the best angle to the sun for a Solar Blanket across the course of the day.



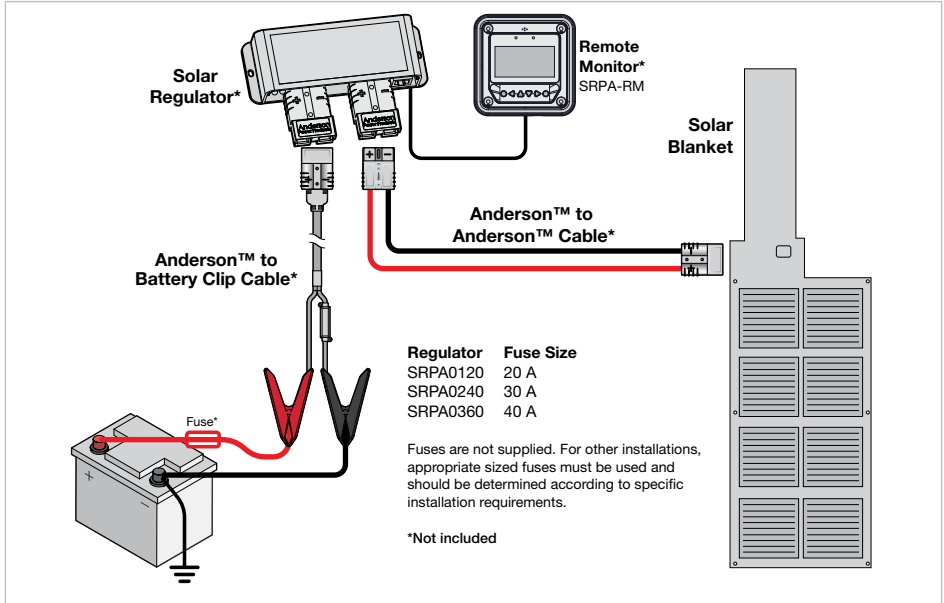
SOUTHERN HEMISPHERE



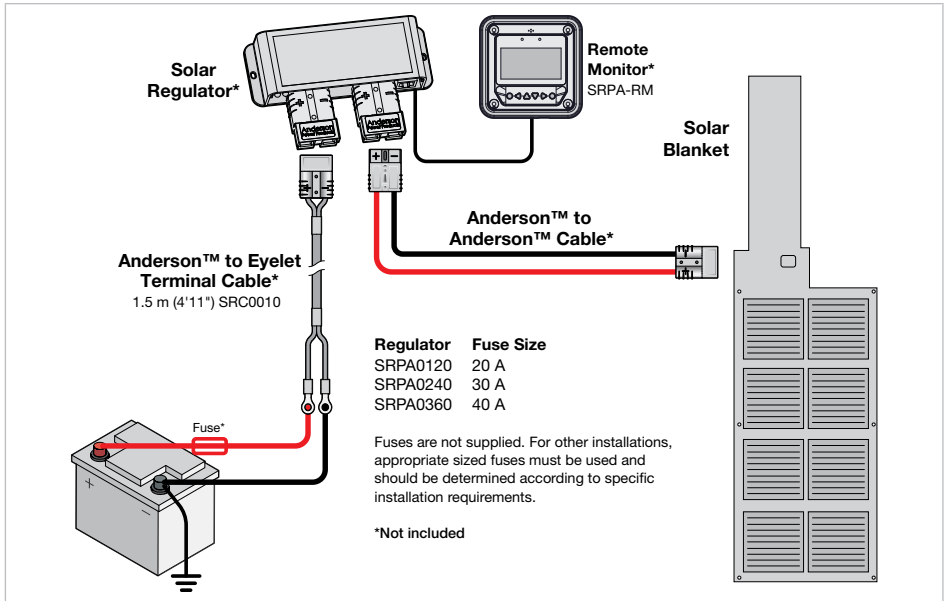
NORTHERN HEMISPHERE

SOLAR BLANKET SYSTEM WIRING

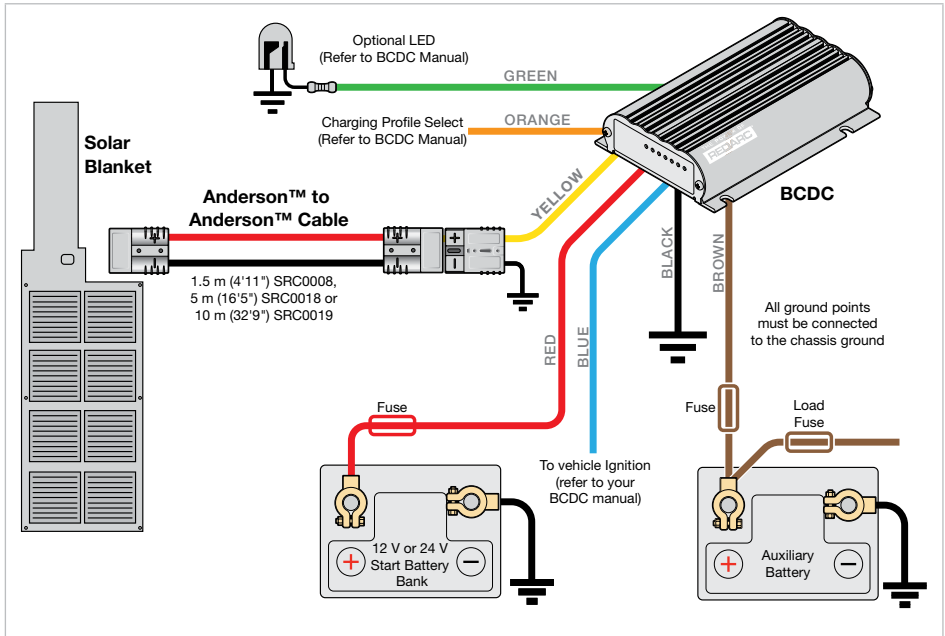
WIRING WITH ANDERSON™ TO BATTERY CLIP CABLE



WIRING WITH ANDERSON™ TO BATTERY EYELET TERMINAL CABLE



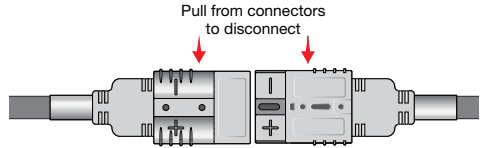
SOLAR BLANKET WIRING WITH BCDC



INSTALLATION GUIDE

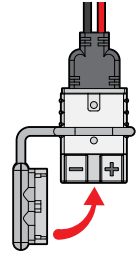
CONNECTING THE SOLAR BLANKET

Take care when connecting and disconnecting the Anderson™ connectors to avoid damage to the cables and junction box. **Pull the connectors when disconnecting, do NOT pull the cables.**



USING THE SOLAR BLANKET

- Do not walk on the Solar Blanket.
- Do not use in the rain.
- Use the cover to protect the Anderson™ connectors when not in use.
- While in use, place the wrap around hook and loop sleeve behind the Blanket.
- REDARC Solar Blankets are UV stabilised, however, high level of UV exposure will still lead to some degradation of Blanket appearance after extended use.
- Not recommended for use when subjected to salt spray conditions.



CLEANING THE SOLAR BLANKET

- Prevent scratches and increase charging performance by keeping the Solar Blanket free from dust, dirt or sand.
- Allow your Blanket to cool before cleaning.
- Do not use any chemical cleaning agents as it may damage the solar cell surface and degrade performance.
- Carefully remove dust or dirt using a sponge or damp clean chamois and dry with a soft micro fibre cloth.

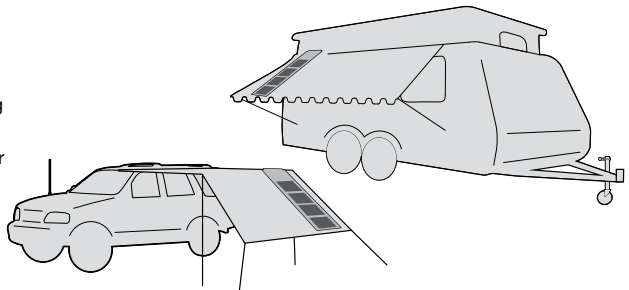
STORING THE SOLAR BLANKET

- Allow your Solar Blanket to dry before folding away to prevent the likelihood of corrosion.
- Store your Solar Blanket in a dry, cool place.
- Ensure to store your Blanket securely to prevent damage during transit.

INSTALLATION LOCATION

▲ RISK OF DAMAGE AND INJURY FROM IMPROPERLY SECURED BLANKETS: Solar Blankets are intended for stationary use only and must not be permanently mounted to a vehicle. Solar Blankets must be disconnected and securely stored when the vehicle is in motion.

REDARC Monocrystalline Solar Blankets features reinforced eyelets at the four corners and sides of the Blanket to allow for various mounting options. These Blankets can also be setup across your vehicle, caravan or tent as demonstrated.



WARRANTY

LIMITED WARRANTY

For full warranty terms and conditions, visit the Warranty page of the REDARC website:

www.redarcelectronics.com/warranty

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