ARC Solar — ARC S1

Deployable 1,200W Tactical Solar Array — Foldable | Tool-Free | HSR Compatible

OVERVIEW

The ARC Solar ARC S1 is a deployable 1,200W tactical solar array system comprising two 600W foldable monocrystalline panels housed in a single Pelican 1730-style rugged transport case. Designed for military, expeditionary, and off-grid use, the system deploys in under two minutes with no tools required.

The CNC aluminium folding bracket provides a stable three-leg mounting system with four crossbeams and six stainless steel ground pegs included as standard. Wind resistance up to 65 km/h when fully deployed and pegged.

Connects directly to the Powapacs HSR solar input port. No external MPPT controller required — the MPPT is built into the HSR. Two ARC S1 units can be connected in parallel via a Y-adapter, and the system is fully compatible with simultaneous ARC Wind input.

IP65 rated across panel, cable, and connectors. UKCA, CE, RoHS, and REACH compliant. Single-person carry and setup.

Patent Pending: GB2508715.6.

1,200 W	~22%	18 kg	<2 min
Rated Output	Panel Efficiency	System Weight	Deploy Time

TECHNICAL SPECIFICATIONS

SPECIFICATION	VALUE
Product Name	ARC Solar — ARC S1
System Type	Foldable tactical solar array
Panels per Kit	2 x 600W (total 1,200W)
Max Power — Pmax	650W per panel
Voltage at Max — Vmp	44V
Current at Max — Imp	14.78A
Open Circuit Voltage	51.92V (Voc)
Short Circuit Current	16.25A (Isc)
Panel Efficiency	~22% monocrystalline
Expected Daily Yield	2.5 - 4.5 kWh (typical UK conditions)
Folded Size	890 x 710 x 60 mm
Unfolded Size	4,600 x 890 mm
Construction	Fibreglass-laminated monocrystalline cells, waterproof textile
Bracket Material	CNC aluminium (folds flat)
Fixings	Stainless plum-head bolts (tool-free)
Mounting System	3 support legs + 4 crossbeams
Anchoring	6 x stainless ground pegs (included)
Wind Resistance	Up to 65 km/h when deployed and pegged

SPECIFICATION	VALUE
Cable Type	Flat waterproof silicone, 2-core
Connector Type	SP21 / MC4 (configurable)
Primary Connection	Powapacs HSR (24V solar input port)
Parallel Option	2 x ARC S1 via Y-adapter
ARC Wind Compatible	Yes — simultaneous solar and wind to HSR
Case Type	Pelican 1730-style rugged case
Case Dimensions	952 x 689 x 365 mm
System Weight	18 kg (panel + bracket)
Deployment Crew	Single person
Deploy Time	Under 2 minutes — tool-free
Operating Temperature	-20°C to +65°C
Storage Temperature	-30°C to +70°C
IP Rating	IP65 (panel, cable, connectors)
Altitude Operating Range	Up to 4,000m
Expected Service Life	8 - 10 years (normal operational use)
Certifications	UKCA, CE, RoHS, REACH
Patent	Pending: GB2508715.6

PRIMARY USE CASES

Military & Defence

Silent solar charging for HSR at FOBs, patrol bases, OP positions, and vehicle hides.

Construction & Civil Engineering

Off-grid site power regeneration for HSR units supporting tools, lighting, and welfare.

Humanitarian & Emergency Response

Rapid-deploy solar charging in disaster zones, field hospitals, and remote aid stations.