# FASTENING & GROUNDING CLIP FOR FRAMED MODULES AND STEEL STRUCTURES



Screwless and tool-free clipped fastening solutions provide fast and simple assembly. It allows customers to reduce the overall cost of renewable energies.

## PowAR Snap® S

### COMBINED PV MODULE FASTENING & GROUNDING CLIP











APPLICATIONS

MODULES

### **BENEFITS**

#### ))) PERFORMING

Conforms to UL STD 2703 (Ed.2015)

Tested by accredited laboratories and qualified by major module manufacturers
High protection against corrosion and lightening
Grounding continuity of the string preserved when a module is dismounted for maintenance
Anti-theft designed



#### ))) QUICK

Fastening and grounding in a single operation 1 module installed within 30 seconds<sup>(1)</sup>

#### ))) EASY TO USE

Tool-free set up

Minimal training required

Intuitive: the "click" signals job is properly done

Friendly: no need for climbing on structure, panels can be inserted from underneath the array

#### ))) COST SAVING

Lower overall costs of the PV installation

Lower land investment and structure savings thanks to minimized inter module gap: up to 3% more modules per available surface Lower maintenance costs: Screw-less, no periodic torque control required

Hot spot risk reduction for PV modules thanks to elastic mechanical clamping(2)

(1) According to field tests results available on demand

(2) Mechanical shocks and daily thermal cycles often induce micro-cracks within cells, leading to hot spots and power output degradation.



11 Woodlands Close #05-22 Woodlands 11 Singapore 737853 Website: www.smsolar.net Tel: +65-98203376 Fax: +65-67622478 Business Reg No. & GST No.: 201605439C







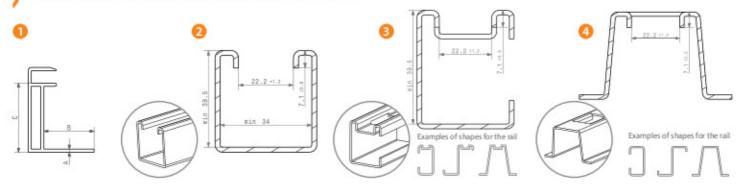




		CLIP FOR PV MODULE FASTENING	STOPPER	SLIDER REMOVAL TOOL	REMOVAL TOOL BACK ACCESS
		PowAR Snap® S	PowAR Snap® S	For roof top	For ground mount
PRODUCT DETAILS	ARTICLE N°	233147002	232579001	237942001	235216001
	MATERIAL	Steel 1.1231 - DIN EN 10132-2000 (SAE 1070 - ASTM AISI)	Steel 1.0038 - NF 10025:1990	Metal assembly	Metal assembly
	SURFACE TREATMENT	Combines an inorganic zinc-rich with basecoat with aluminum-rich organic topcoat	Combines an inorganic zinc-rich with basecoat with aluminum-rich organic topcoat	*	
	DIMENSIONS IN MM	44x48x34	49x52x50	1100x50x140	280x130x40
	WEIGHT IN G	33,4	103	1300	500
PERFORMANCES	TEMPERATURE RESISTANCE	Conforms to UL 2703 (2015) section 17		7.	
	HUMIDITY RESISTANCE	Conforms to UL 2703 (2015) section 18	ā		
	MECHANICAL RESISTANCE	Load +5400/-2400 Pa compliant with IEC 61215-10.16:2005 Conforms to UL 2703 (2015) section 21	Max. Load 1000 daN (suitable for 6 x PV 60 cells modules loaded at 5400 Pa with a 20° tilt angle)	-	-
	CORROSION RESISTANCE	No red rust after 1000 hours salt spray acc. EN 60068-2-11:1999 Conforms to UL 2703 (2015) sections 19.1 and 19.2	No red rust after 1000 hours salt spray acc. EN 60068-2-11:1999	-	-
	GROUNDING CONTINUITY	Compliant with IEC 60439-1:2004 8.2.4.1 after 240 hours salt spray, acc. EN 60068-2-11:1999 after sulfur dioxide (SO 2) acc. EN ISO 6988:1995 Conforms to UL 2703 (2015) sections 22.1a and 22.1b	12 13	3	
	LIGHTNING RESISTANCE	Compliant with IEC 60439-1:2004 8.2.4.1 after 20kA/8-20µs current pulse		-	-
ENVIRONMENT	PV MODULE SPECIFICATIONS	Module with frame thickness A between 1,5 and 2,2mm, minimum lip length B of 16mm and minimum frame height C of 30mm (see technical drawing 1)	Module with frame	*	
	RAIL SPECIFICATIONS	Standard Strut rails 41x41 mm or 41x62mm (see technical drawing 2) or steel rails with square punch (see technical drawing 3) or with specific punch (see technical drawing 4)	Standard Strut rails 41mm wide (see technical drawing 2)	*	
	ACCESSORIES NEEDED		Delivered with 2 self-threading / tapping CHC screws	-	

Product Information disclosed in this "data sheet" can be modified with out any previous notice.

### PV MODULE FRAME AND RAIL SPECIFICATIONS



# SM Solar Pte Ltd

11 Woodlands Close #05-22 Woodlands 11 Singapore 737853 Website: www.smsolar.net Tel: +65-98203376 Fax: +65-67622478 Business Reg No. & GST No.: 201605439C