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

GROUND MOUNT | INDUSTRIAL & COMMERCIAL ROOFS — APPLICATIONS

FRAMED | PORTRAIT & LANDSCAPE — MODULES

BENEFITS

))) PERFORMING
Conforms to UL STD 2703 (Ed.2015) (for ref.233147)
Tested by accredited laboratories and qualified by major module manufacturers (for ref.233147)
High protection against corrosion and lightening
Grounding continuity of the string preserved when a module is dismounted for maintenance
Anti-theft designed

RECOGNIZED COMPONENT ETL LISTED US Intertek for ref.233147

))) QUICK
Fastening and grounding in a single operation
1 module installed within 30 seconds(1)

))) 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

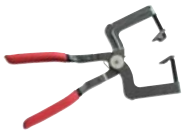
))) COST SAVING
Lower overall costs of the PV installation
Lower land investment and structure savings thanks to minimized inter module gap: up to 3% more modules per available surface
Lower maintenance costs: Screw-less, no periodic torque control required
Hot spot risk reduction for PV modules thanks 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.

ARaymond™
MORE THAN FASTENING

TECHNICAL SPECIFICATIONS



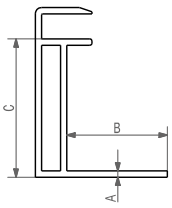



		CLIPS FOR PV MODULE FASTENING		REMOVAL TOOLS	
		PowAR Snap® S - ETL Listed	PowAR Snap® S	Front access	Back access
PRODUCT DETAILS	ARTICLE N°	233147001	244113000	237942001 244429001	235216001
	MATERIAL	Steel 1.1231 - DIN EN 10132:2000 (SAE 1070 - ASTM AISI)	Steel 65Mn - GB/T 1222	Metal assembly	Metal assembly
	SURFACE TREATMENT	Combines an inorganic zinc-rich with basecoat with aluminum-rich organic topcoat	Zn Al Flake coating	-	-
	DIMENSIONS IN MM	44 x 48 x 34	44 x 48 x 34	237942: 1100 x 50 x 140 244429: 200 x 50 x 140	280 x 130 x 40
	WEIGHT IN G	33,4	33,4	237942: 1300 244429: 292	500
PERFORMANCES	TEMPERATURE RESISTANCE	Conforms to UL 2703 (2015) section 17	-	-	-
	HUMIDITY RESISTANCE	Conforms to UL 2703 (2015) section 18	-	-	-
	MECHANICAL RESISTANCE	Load +5400/-2400 Pa compliant with IEC 61215-10.16:2005 Conforms to UL 2703 (2015) section 21	Load +5400/-2400 Pa internal tests	-	-
	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 internal tests acc. EN60068-2-11:1999	-	-
	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 (SO2) acc. EN ISO 6988:1995 Conforms to UL 2703 (2015) sections 22.1a and 22.1b	Internal tests compliant with IEC 60439-1:2004 8.2.4.1 after 240 hours salt spray, acc. EN 60068-2-11:1999	-	-
	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 2,2 mm, minimum lip length B of 16 mm and minimum frame height C of 30 mm (see technical drawing 1)		-	-
	RAIL SPECIFICATIONS	Standard Strut rails 41 x 41 mm or 41 x 62 mm (see technical drawing 2) or steel rails with square punch (see technical drawing 3) or with specific punch (see technical drawing 4)		-	-

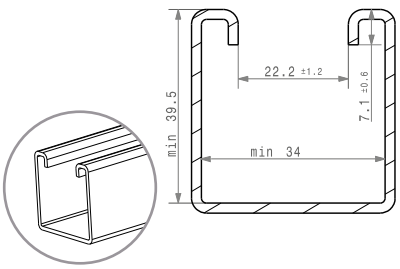
Product Information disclosed in this "data sheet" can be modified without any previous notice.

PV MODULE FRAME AND RAIL SPECIFICATIONS

1



2



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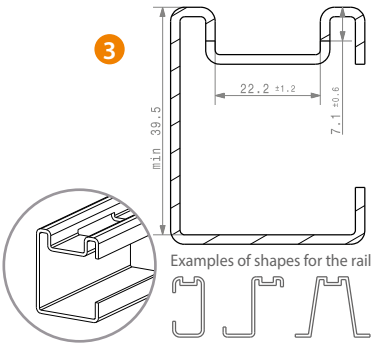
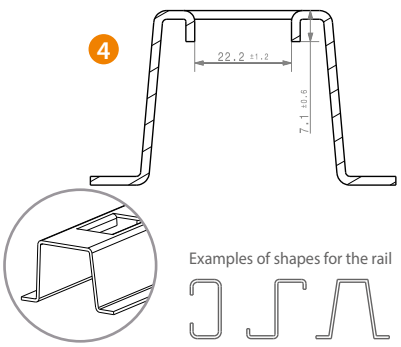


Examples of shapes for the rail

4



Examples of shapes for the rail

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