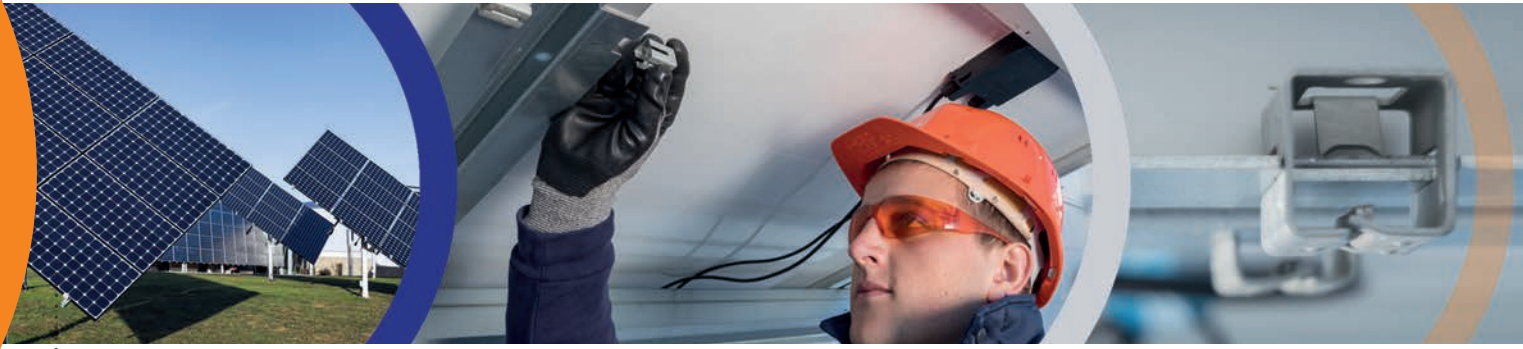


FASTENING & GROUNDING CLIP

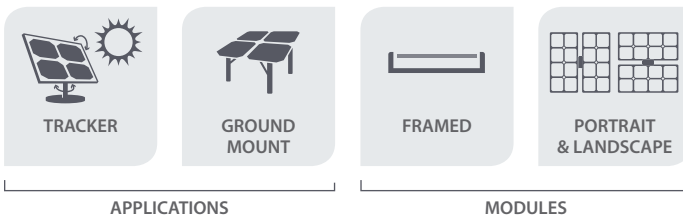
FOR FRAMED MODULES ON TRACKERS OR GROUND MOUNT



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

PowAR Cinch™

COMBINED PV MODULE
FASTENING & GROUNDING CLIP



BENEFITS

))) PERFORMING

Tested by accredited laboratories and qualified by major module manufacturers⁽¹⁾.
Anti-theft designed.

))) QUICK

Fastening and grounding in a single operation.
1 module installed in less than 30 seconds⁽²⁾.

))) EASY TO USE

Tool-free set up.
Friendly: clips can be inserted from underneath the array, no need to step on the module.
Maintenance free as no torque correction required.
Minimal training required.
Very flexible: no worry about module frame's hole and structure hole mismatch.

))) COST SAVING

Lower overall costs of the PV installation.
Lower maintenance costs: Screw-less, no periodic torque control required.
Hot spot risk reduction for PV modules thanks to elastic mechanical clamping⁽³⁾.



(1) Report available on demand

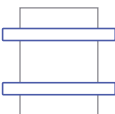
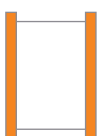
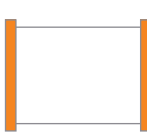
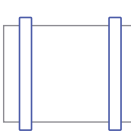
(2) According to field tests results available on demand.

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

HOW TO SELECT THE POWAR CINCH™ REFERENCE

PowAR CINCH™'s choice depends on solar field's configurations and on total thicknesses of rail + module frame's lip.

Solar field's configurations

RAIL CONFIGURATION		MODULE CONFIGURATION			
		PORTRAIT		LANDSCAPE	
LONGITUDINAL RAIL	SHARED RAILS		Do not exist		PowAR CINCH™ LOCKED
	NO SHARED RAILS		PowAR CINCH™		Do not exist
VERTICAL RAIL	SHARED RAILS		For tilted fix: PowAR CINCH™ For Trackers: PowAR CINCH™ LOCKED		PowAR CINCH™
	NO SHARED RAILS		Do not exist		PowAR CINCH™ LOCKED

 Shared rails
 No shared rails



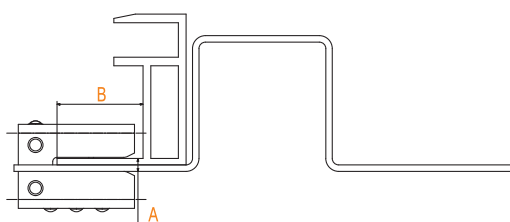
Portrait configuration



Landscape configuration

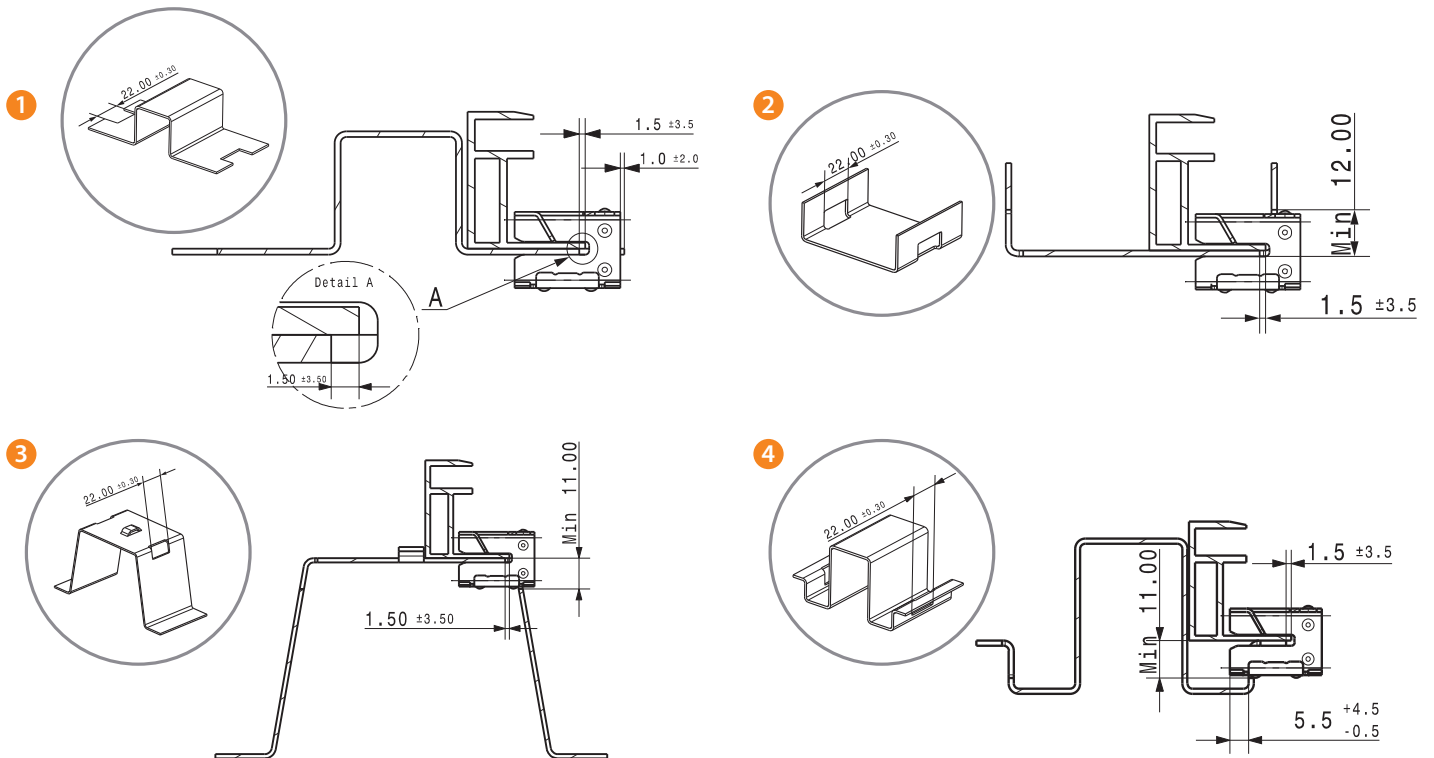
Scope of use

		A = THICKNESSES OF RAIL + MODULE FRAME'S LIP	
		A MIN in mm	A MAX in mm
PowAR CINCH™	Narrow (S) Ref. 240865	2.3	3
	Wide (L) Ref. 243648		3.3 3.8
PowAR CINCH™ LOCKED	Narrow (S) Ref. 247433	2.7	3.55
	Wide (L) Ref. 250381		3.3 4.15
	Extra Wide (XL) Ref. 248217		3.8 4.65

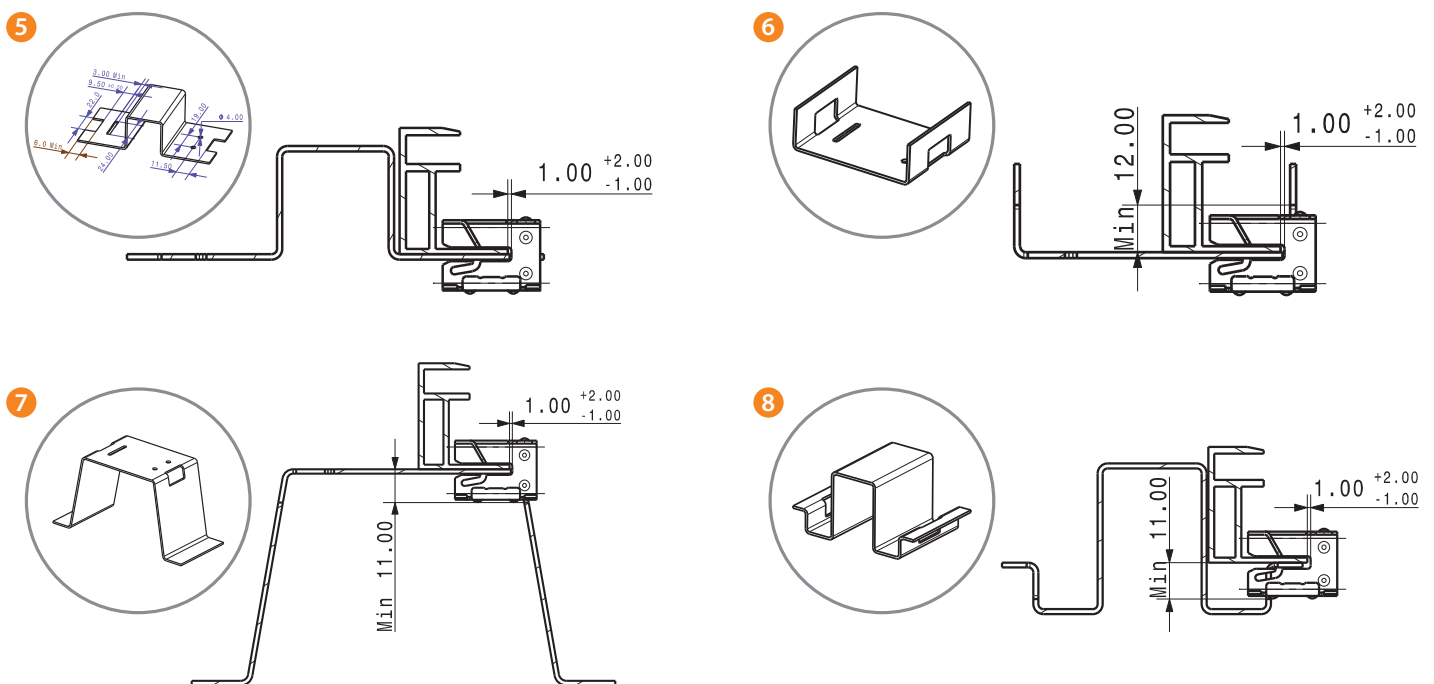


EXAMPLES OF RAIL SPECIFICATIONS

PowAR CINCH™



PowAR CINCH™ LOCKED



TECHNICAL SPECIFICATIONS



		POWAR CINCH™ NARROW (S)	POWAR CINCH™ WIDE (L)
		$2.3 \text{ mm} \leq \left(\text{Thicknesses Rail} + \text{module's frame} \right) \leq 3 \text{ mm}$	$3 \text{ mm} \leq \left(\text{Thicknesses Rail} + \text{module's frame} \right) \leq 3.8 \text{ mm}$
PRODUCT DETAILS	ARTICLE N°	240865	243648
	MATERIAL	Steel 1.1231- DIN EN 10132:2000 (SAE 1070 - ASTM AISI)	
	SURFACE TREATMENT*	Zn Al Flake coating	
	DIMENSIONS IN MM	27 x 19.5 x 20	
	WEIGHT IN G	13	
PERFORMANCES	MECHANICAL RESISTANCE	Load +5400/-2400 Pa compliant with IEC 61215-10.16:2005	
	CORROSION RESISTANCE	No red rust after 720 hours salt spray acc. EN 60068-2-11:1999	
	GROUNDING CONTINUITY	Compliant with IEC 604391:20014 8.2.4.1 after 240 hours salt spray, acc. to EN 60068-2-11:1999	
ENVIRON- MENT	PV MODULE SPECIFICATIONS	Module with minimum lip length B of 16 mm, see page 2	
	RAIL SPECIFICATIONS	See technical drawings 2, 3, 4 and 5, see page 3	



		POWAR CINCH™ LOCKED NARROW (S)	POWAR CINCH™ LOCKED WIDE (L)	POWAR CINCH™ LOCKED EXTRA WIDE (XL)
		$2.7 \text{ mm} \leq \left(\text{Thicknesses Rail} + \text{module's frame} \right) \leq 3.55 \text{ mm}$	$3.3 \text{ mm} \leq \left(\text{Thicknesses Rail} + \text{module's frame} \right) \leq 4.15 \text{ mm}$	$3.8 \text{ mm} \leq \left(\text{Thicknesses Rail} + \text{module's frame} \right) \leq 4.65 \text{ mm}$
PRODUCT DETAILS	ARTICLE N°	247433	250381	248217
	MATERIAL	Steel 1.1231- DIN EN 10132:2000 (SAE 1070 - ASTM AISI)		
	SURFACE TREATMENT*	Zn Al Flake coating		
	DIMENSIONS IN MM	27 x 19.5 x 20		
	WEIGHT IN G	13		
PERFORMANCES	MECHANICAL RESISTANCE	Load +5400/-2400 Pa compliant with IEC 61215-10.16:2005		
	CORROSION RESISTANCE	No red rust after 720 hours salt spray acc. EN 60068-2-11:1999		
	GROUNDING CONTINUITY	Compliant with IEC 604391:20014 8.2.4.1 after 240 hours salt spray, acc. to EN 60068-2-11:1999		
ENVIRON- MENT	PV MODULE SPECIFICATIONS	Module with minimum lip length B of 16 mm, see page 2		
	RAIL SPECIFICATIONS	See technical drawings 5, 6, 7 and 8, see page 3		

*Other surface treatment available on demand.

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



www.araymond-energies.com

*ARaymond Energies SAS (RCS Grenoble 798 705 604) - ZI Technisud 123 rue Hilaire de Chardonnet - 38100 Grenoble - FRANCE has designed this datasheet.

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