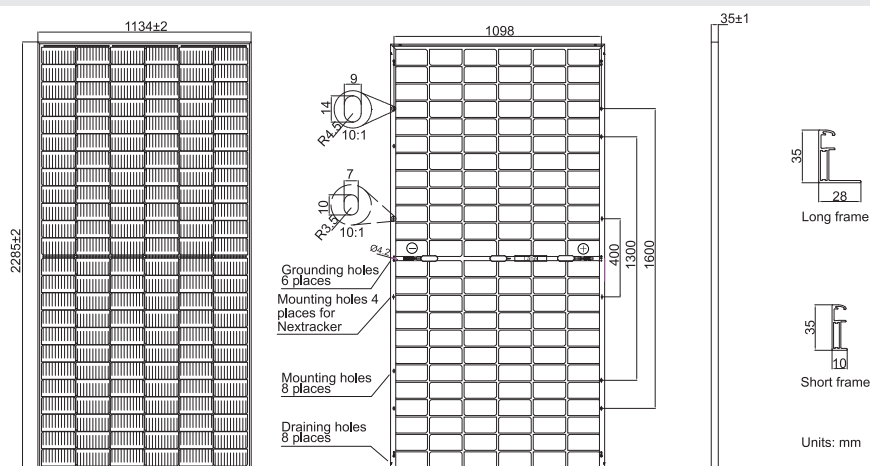


MECHANICAL DIAGRAM



Remark: customized frame color and cable length available upon request

SPECIFICATIONS

Cell	Mono
Weight	31.6kg±3%
Dimensions	2285±2mm×1134±2mm×35±1mm
Cable Cross Section Size	4mm² (IEC), 12 AWG(UL)
No. of cells	144(6×24)
Junction Box	IP68, 3 diodes
Connector	Genuine MC4-EVO2 QC 4.10-35/45
Cable Length (Including Connector)	Portrait:300mm(+)/400mm(-); Landscape:1300mm(+)/1300mm(-)
Front Glass/Back Glass	2.0mm/2.0mm
Country of Manufacturer	China/Vietnam

ELECTRICAL PARAMETERS AT STC

TYPE	JAM72D30 -525/MB/1500V	JAM72D30 -530/MB/1500V	JAM72D30 -535/MB/1500V	JAM72D30 -540/MB/1500V	JAM72D30 -545/MB/1500V	JAM72D30 -550/MB/1500V
Rated Maximum Power(Pmax) [W]	525	530	535	540	545	550
Open Circuit Voltage(Voc) [V]	49.15	49.30	49.45	49.60	49.75	49.90
Maximum Power Voltage(Vmp) [V]	41.15	41.31	41.47	41.64	41.80	41.96
Short Circuit Current(Isc) [A]	13.65	13.72	13.79	13.86	13.93	14.00
Maximum Power Current(Imp) [A]	12.76	12.83	12.90	12.97	13.04	13.11
Module Efficiency [%]	20.3	20.5	20.6	20.8	21.0	21.2
Power Tolerance	0~+5W					
Temperature Coefficient of Isc(α_{Isc})	+0.045%/°C					
Temperature Coefficient of Voc(β_{Voc})	-0.275%/°C					
Temperature Coefficient of Pmax(γ_{Pmp})	-0.350%/°C					
STC	Irradiance 1000W/m², cell temperature 25°C, AM1.5G					

Remark: Electrical data in this catalog do not refer to a single module and they are not part of the offer.They only serve for comparison among different module types.
Measurement tolerance at STC: Pmax $\pm 3\%$, Voc $\pm 3\%$ and Isc $\pm 4\%$.

ELECTRICAL CHARACTERISTICS WITH 10% SOLAR IRRADIATION RATIO

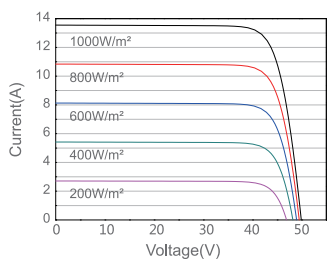
[illegible]

*For NexTracker installations, Maximum Static Load, Front is 2400Pa while Maximum Static Load, Back is 2400Pa.

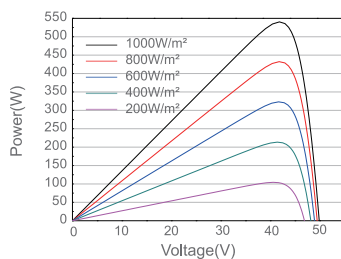
$$^{**}\text{Bifaciality} = P_{\text{max, rear}} / \text{Rated } P_{\text{max, front}}$$

CHARACTERISTICS

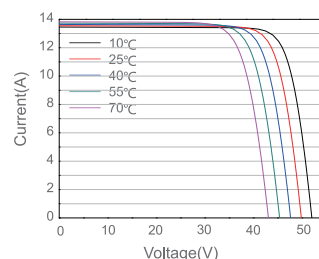
Current-Voltage Curve JAM72D30-540/MB/1500V



Power-Voltage Curve JAM72D30-540/MB/1500V



Current-Voltage Curve JAM72D30-540/MB/1500V



Standing seam and system clamps



Type / image	Standing seam type / roofing system	Opening dimension [mm]	Mounting rail	Material	Item no.
Single Standing SeamClamp CF:x 	Double standing seam 	7.0	SingleRail	Aluminium	2003024
Single Round SeamClamp CF:x 	Round standing seam 	25.0	SingleRail	Aluminium	2002859
Single Snap SeamClamp CF:x 	Angeled and snap-lock standing seam 	14.0	SingleRail	Aluminium	2003083
S-5! E-Mini-FL Standing SeamClamp 	Double standing seam 	7.0	SolidRail	Aluminium	1001052
S-5! Z-Mini-FL Round SeamClamp 	Round standing seam 	22.0	SolidRail	Aluminium	1000888
Solid Snap SeamClamp CF:x 	Angeled and snap-lock standing seam 	14.0	SolidRail	Aluminium	2003082
Solid Standing SeamClamp 	Double standing seam 	3.5	SolidRail	Stainless steel	2001712
Solid Round SeamClamp 	Kalzip roofings with round seam 	20.0	SolidRail	Stainless steel	2001853
Rib-Roof Evolution Clamp 	Rib-Roof Evolution 	23.0	SolidRail	Aluminium	2002226
Rib-Roof Speed 500 Clamp 	Rib-Roof Speed 500 	17.0	SolidRail	Aluminium	2002226
Rib-Roof 465 Clamp 	Rib-Roof 465 trapezoidal profile 	12.0	SolidRail	Aluminium	2002118

		Pantiles	Plain tile	Slate	Trapezoidal sheet metal	Sandwich panel	Corrugated sheet metal	Corrugated fibre cement	Standing seam roof
									
▶ SingleRail System	4	●	○	○	○	○	●	●	○
▶ CrossRail System	6	●	○	○	○	○	●	●	○
▶ SolidRail System	8	●	●	●	●	○	●	●	●
▶ MiniRail System	10	○	○	○	●	●	○	○	○
▶ SpeedRail System	12	○	○	○	●	●	○	○	○
▶ MultiRail System	14	○	○	○	●	●	○	○	○
▶ S-Dome Small System	16	○	○	○	●	○	○	○	○
▶ ClampRail System	18	○	○	○	○	○	○	○	●
▶ Overview of roof fastenings	20								
▶ Accessories	24								
▶ Notes	30								

● Suitable ○ Unsuitable

WARRANTY

We offer a 12-year warranty on all K2 components in systems.

k2-systems.com/en/guarantee



STATICS AND DESIGN LOADS

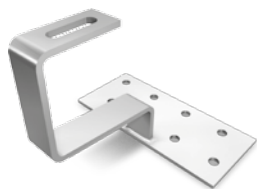
K2 mounting systems fulfil the calculation principles in accordance with Eurocode 1 and 9.

PALLET DELIVERY

Many mounting systems are delivered in pallets to save space and costs.

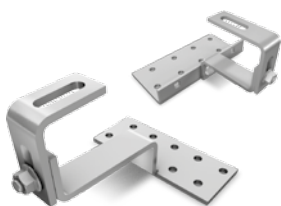


ROOF FASTENINGS



Roof hook for pantiles

- Various sizes
- Solid stainless steel design



Vario 1 and 2 roof hooks

- For pantiles
- Height adjustable under bracket and at battens



Roof hook for plain tile roofing

Also for double roofing



Roof hook for slate roofing

Three boreholes



Roof hook for Coppo roofing

- Height-adjustable under bracket
- Flexible placement on rafters



Hanger bolts

- For corrugated fibre cement or corrugated sheet roofing with wooden substructure
- Custom height adjustment



Solar fastener

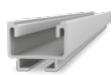
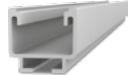
- For trapezoidal sheet, corrugated sheet, or corrugated fibre cement roofing
- For steel, wood, or concrete

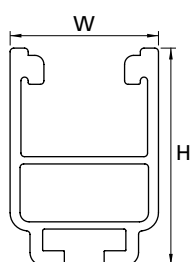


Ribbed tin clamps

Seam clamps for popular standing seam roofs such as Kalzip or Rib-Roof

TECHNICAL DATA

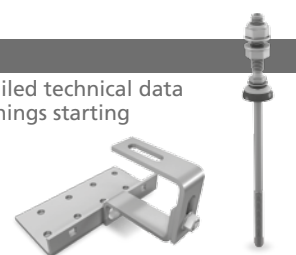
	UltraLight 32	Light 37	Medium 42	Alpine 60
Figure				
Material	Aluminium (EN AW-6063 T66)			
W = width [mm]	39	39	41	41
H = height [mm]	32	37	42	60
Lengths [m]	2,10/3,15/4,15/6,10			
Weight [kg/m]	0.7	0.85	1.3	1.7
Cross-bracing with	CrossRail and SingleRail			



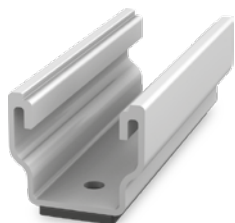
SolidRail LS85 and XL140:
For heavy loads across large widths!

Roof fastenings

You will find detailed technical data on our roof fastenings starting on page 20.

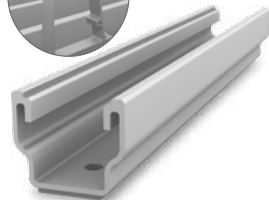


MULTIRAIL VERSIONS



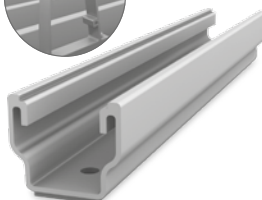
MultiRail 10

- ▶ Length 100 mm
- ▶ Landscape mounting



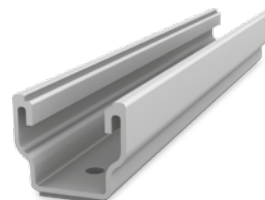
MultiRail 25

- ▶ Length 250 mm
- ▶ Roof connector for S-Dome Small elevation



MultiRail 25/3

- ▶ Length 250 mm
- ▶ Roof connector for S-Dome Small
- ▶ With three boreholes for roofs with 15° incline

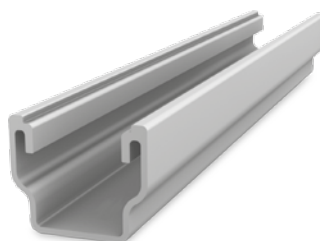


MultiRail 40

- ▶ Length 385 mm
- ▶ For mounting at right angles to raised crest

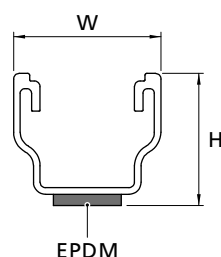
MultiRail 4.20

- ▶ Length 4200 mm
- ▶ Long rail for cutting to customised sizes
- ▶ Without EPDM seal; to be fastened manually with adhesive



TECHNICAL DATA

	MultiRail 10, 25, 25/3, 40, 4,20
Scope of application	Pitched roofs, 5-75°, with trapezoidal sheet or sandwiched trapezoidal sheet
Fastening type / roof fixture	Fastened with self-tapping sheet screws
Requirements	▶ Sheet thickness: >0.5 mm (steel and aluminium) ▶ Sandwiched trapezoidal sheet: Approval from manufacturer required ▶ Crest width: At least 22 mm ▶ Maximum crest width: Independent
Material	Aluminium (EN AW-6063 T66); EPDM
W = width [mm]	39
H = height [mm]	35
L = rail length [mm]	▶ MultiRail 10: 100 ▶ MultiRail 25: 250 ▶ MultiRail 40: 385 ▶ MultiRail 4.20: 4200
Cross-bracing with	CrossRail or SingleRail



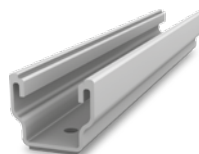
S-DOME SMALL COMPONENTS



Dome S1000 Small
Narrow elevation module support element

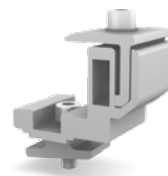


Dome SD Small
Narrow module support element



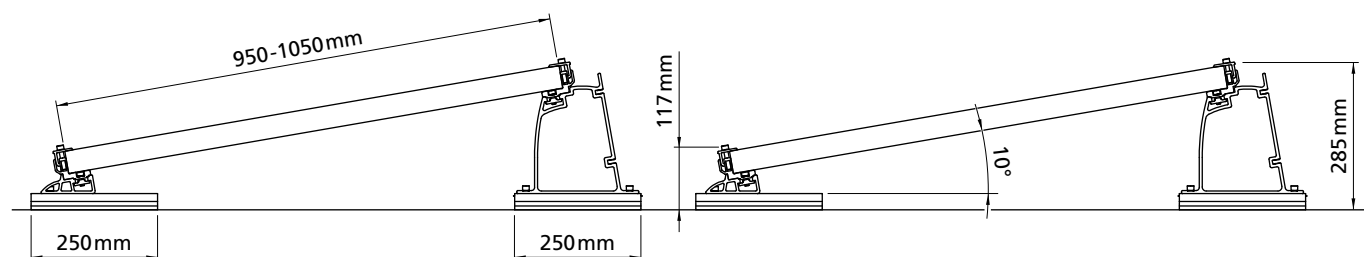
MultiRail 25 or 25/3

- ▶ Length 250 mm
- ▶ 25: For roofs with an incline $< 15^\circ$
- ▶ 25/3: With three bore-holes for roofs with 15° incline



FlexClamp Small

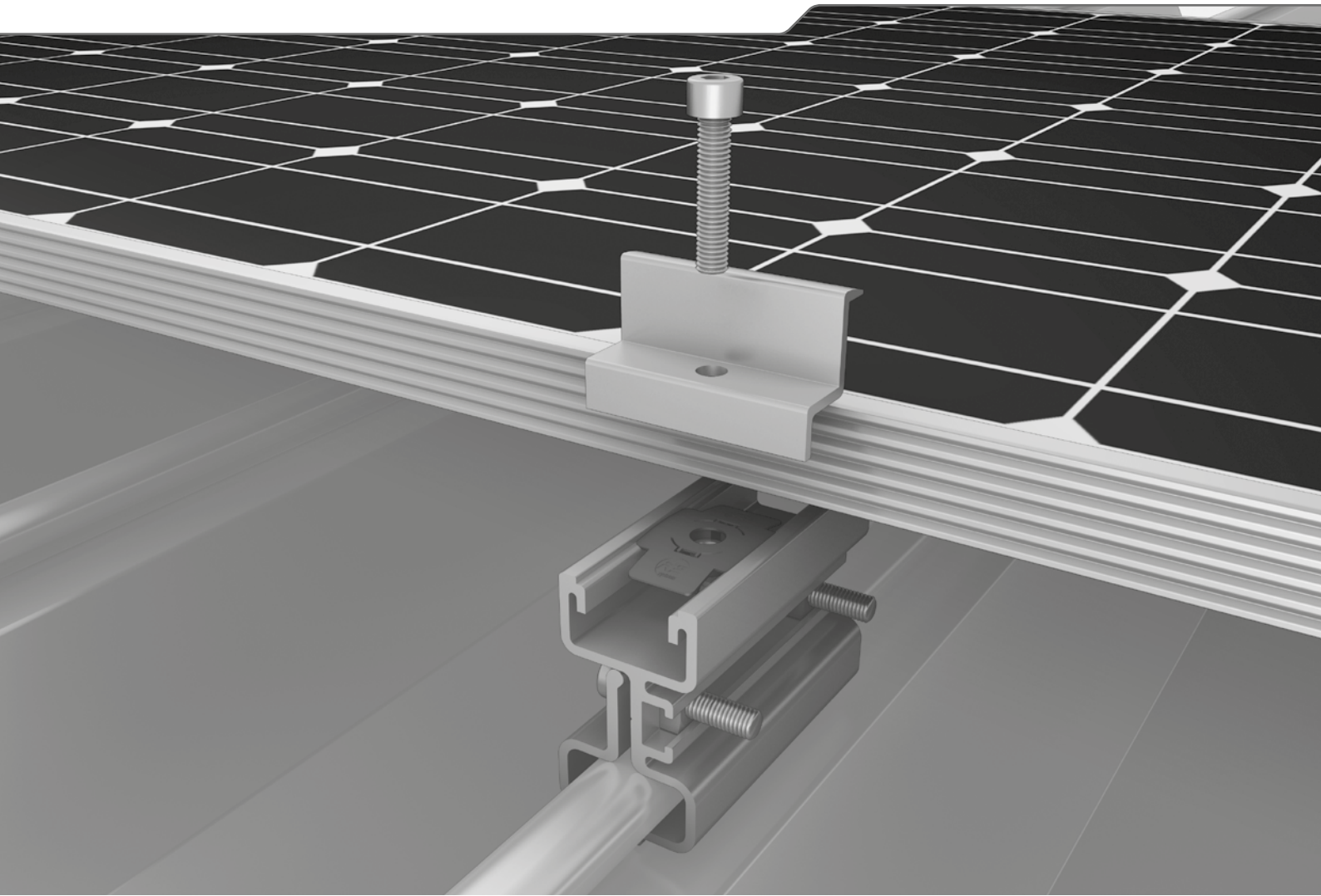
- ▶ Module clamp specifically for S-Dome Small
- ▶ Height adjustable
- ▶ For clamping on the long side of module



TECHNICAL DATA

	S-Dome Small
Scope of application	Flat or pitched roofs $\leq 15^\circ$ with trapezoidal sheet metal roofing
Fastening type/roof fixture	Attached with drilling screws in trapezoidal sheets, parallel to high bead
Requirements	▶ Sheet thickness for aluminium/steel: min. 0.5 mm ▶ Tensile strength for aluminium: 165 N/mm² ▶ Tensile strength for steel: according to approval min. S235 in acc. w/ DIN EN 10025-1 ▶ Crest width: min. 22 mm ▶ Crest spacing: independent
Technical specifications	Thermal separation after a max. of 13.5 m: min. 30 mm to max. 150 mm
Inclination angle	10°
Material	▶ Mounting rails, Dome SD Small, Dome S1000 Small, FlexClamp Small: Aluminium (EN AW-6063 T66/ EN AW-6082 T6); EPDM ▶ Small parts: Stainless steel (1.4301) A2

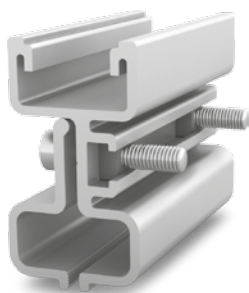
ClampRail System



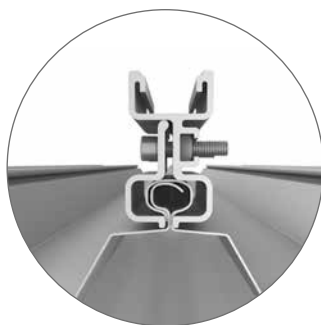
- ▶ All-in-one solution for roof fastening and module mounting
- ▶ One component with low material usage
- ▶ No roof penetration



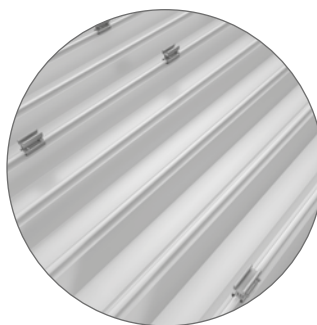
DETAILS



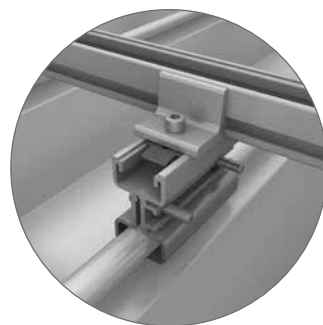
ClampRail is a roof fastener and module support in one single component



ClampRail is fastened to standing seam metal roofs via clamps without roof penetration.



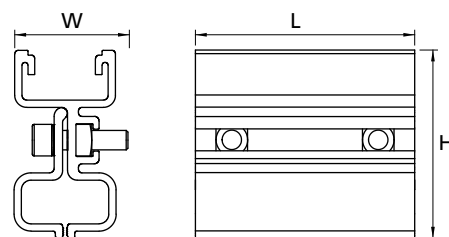
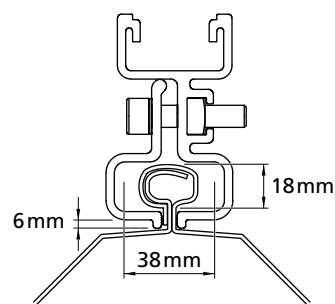
The placement depends on module dimensions and roof geometry.



Cross-bracing possible with CrossRail or SingleRail

TECHNICAL DATA

	ClampRail Roof Fastening
Scope of application	Standing seam roofs
Fastening type / roof fixture	Screw connection, clamping under the standing seam
Requirements	Maximum seam dimensions under seam: ▸ Width 38 mm ▸ Height 18 mm ▸ Height under rib: 6 mm
Technical characteristics	Cross-bracing required if clamping area is not viable due to seam spacing
Module orientation	Landscape or portrait cross-bracing
Material	Aluminium (EN AW-6063 T66/EN AW-6082 T6)
W = width [mm]	42
H = height [mm]	77.5
L = rail length [mm]	100
Cross-bracing with	CrossRail or SingleRail



Timber: Solar fastener Ø 8,0 mm
M10x50/70 mm,
metric thread
E14 calotte or
FZD sealing made of EPDM
On request



Concrete / aerated concrete:
Solar fastener Ø 8,0 mm
M10x50/70 mm, metric thread
E14 calotte or FZD sealing made
of EPDM
On request



STANDING SEAM CLAMPS



Our seam clamps are used to fasten the K2 mounting rails onto standing seam roofs or rounded seam ends.

We offer seam clamps for steel or aluminium roofs.

K2 Round Seam Clamp

For Kalzip roofs with rounded seam ends

Screw: M10
Clamping screw: M8
Sheet thickness: 3 mm
Material: Stainless steel
Item no. 2001853



S-5! Z-Mini-FL Round Seam

For Kalzip roofs with rounded seam ends

Slot: 11x22
Clamp: Grub screw
Material: Aluminium
Item no. 1000888



K2 Standing Seam Clamp

For standing seam metal roofs

Screw: M10
Clamping screw: M8
Sheet thickness: 2.5 mm
Material: Stainless steel
Item no. 2001712



S-5! E-Mini-FL Standing Seam

For Kalzip standing seam metal roofs

Slot: 11x22
Clamp: Grub screw
Material: Aluminium
Item no. 1001052



Rib-Roof Evolution Round Seam

For Rib-Roof Evolution ribbed tin roofs with rounded seam terminations

Screw: M10
Clamping screw: M8
Material: Aluminium
Item no. 2002226



Rib-Roof Speed 500 Standing Seam

For Rib-Roof Speed 500 ribbed tin roofs with standing seams

Screw: M10
Clamping screw: M8
Material: Aluminium
Item no. 2002225



Rib-Roof 465 Standing Seam

For Rib-Roof 465 standing seam roofs

Screw: M10
Clamping screw: M8
Material: Aluminium
Item no. 2002118



Accessories

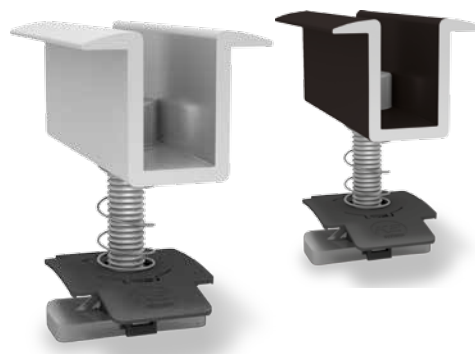
▶ Module clamps	24
▶ Self-drilling wood screw, flange head	26
▶ Self-drilling hexagon screw with sealing washer	26
▶ T-bolt and flange nuts with serration	26
▶ MK2 slot nuts with assembly clip	26
▶ Self-drilling wood screw, flange head, 2 screw threads	27
▶ Self-drilling wood screw, countersunk head	27
▶ Screw anchor, Multi Monti	27
▶ CrossRail/SingleRail End Caps	28
▶ SolidRail End Caps	28
▶ Lightning protection clamp, Multi half-piece	28
▶ TerraGrif potential equalisation	28
▶ Pad spacer	29
▶ SingleHook Compense Plate	29
▶ Cable clips	29

MODULE CLAMPS

Our module clamps can easily mounted to any K2 rail for mounting. The MK2 slot nut automatically locks in place and can be moved in the rail by pressing lightly on the Allen bolt.

Module middle clamps

Module frame height / description	Item number
30-33 mm/M8x30, aluminium mill finish	1005154
34-38 mm/M8x30, aluminium mill finish	1005148
34-38 mm/M8x30, black anodised	1005150
39-44 mm/M8x35, aluminium mill finish	1004197
39-44 mm/M8x35, black anodised	1005151
45-48 mm/M8x40, aluminium mill finish	1005146
45-48 mm/M8x40, black anodised	1005152
49-50 mm/M8x45, aluminium mill finish	1005149
49-50 mm/M8x45, black anodised	1005153



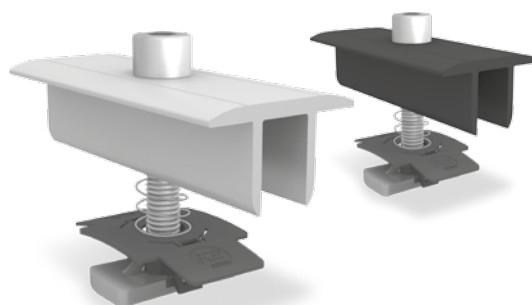
Module end clamps

Module frame height / description	Item number
30-31 mm/M8x30, aluminium mill finish	1005345
32-33 mm/M8x30, aluminium mill finish	1005344
34-36 mm/M8x30, aluminium mill finish	1005169
34-36 mm/M8x30, black anodised	1005268
37-38 mm/M8x30, aluminium mill finish	1005290
37-38 mm/M8x30, black anodised	1005293
39-41 mm/M8x35, aluminium mill finish	1005170
39-41 mm/M8x35, black anodised	1005269
42-44 mm/M8x35, aluminium mill finish	1005291
42-44 mm/M8x35, black anodised	1005295
45-47 mm/M8x40, aluminium mill finish	1005171
45-47 mm/M8x40, black anodised	1005270
48 mm/M8x40, aluminium mill finish	1005292
48 mm/M8x40, black anodised	1005296
49-50 mm/M8x45, aluminium mill finish	1005172
49-50 mm/M8x45, black anodised	1005271



Module middle clamps XS

Module frame height / description	Item number
30-33 mm/M8x50, aluminium mill finish	1005156
34-38 mm/M8x55, aluminium mill finish	1003586
34-38 mm/M8x55, black anodised	1005158
39-44 mm/M8x60, aluminium mill finish	1004908
39-44 mm/M8x60, black anodised	1005159
45-48 mm/M8x65, aluminium mill finish	1005143
45-48 mm/M8x65, black anodised	1005160
49-50 mm/M8x70, aluminium mill finish	1004407
49-50 mm/M8x70, black anodised	1005161



Module clamps for laminate modules

Module middle clamps for fastening laminate modules; approved for First Solar and Calyxo thin-film modules; small module spacing.

Material: Aluminium mill finish, EPDM

Please note: For additional anti-slip protection the K2 Slideguard is suitable for vertical mounting of laminate modules with a glass thickness of 6-9 mm.

Material: Stainless steel 1.4016, EPDM

Type / accessory	Item number
Module middle clamp	1003157
Module end clamp	1003158
Slideguard	1005828



Solis-(25-50)K-5G

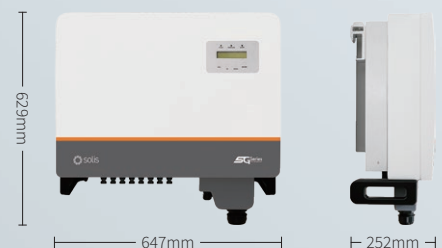
Solis Three Phase Inverters



360 degree

Features:

- ▶ Max. efficiency 98.8%
- ▶ Wide voltage range and low startup voltage
- ▶ 3/4 MPPT design with precise MPPT algorithm
- ▶ THDi<3%, low harmonic distortion against grid
- ▶ Anti-resonance, supporting over 6MW paralleled in one transformer
- ▶ Perfect commercial site monitoring solution
- ▶ 150% DC overload ratio, 13A input for each PV string
- ▶ Strings intelligent monitoring, Smart I-V curve scan
- ▶ Fuse free design to avoid fire hazard
- ▶ Type II surge arrester for both DC and AC
- ▶ Natural convection, Fan-less design, longer lifespan
- ▶ Leakage current repression technology
- ▶ Volt-watt work mode integrated
- ▶ DC input reverse alarm
- ▶ Integrated Export Power Manager (EPM)



Model:

- | | | |
|--------------|-----------------|-----------------|
| 400V: | Solis-25K-5G | Solis-30K-5G |
| | Solis-33K-5G | Solis-36K-5G |
| | Solis-40K-5G | |
| 480V: | Solis-40K-HV-5G | Solis-50K-HV-5G |

Datasheet

Model Name	Solis-25K-5G	Solis-30K-5G	Solis-33K-5G	Solis-36K-5G	Solis-40K-5G	Solis-40K-HV-5G	Solis-50K-HV-5G
Input DC							
Recommended max. PV power	38 kW	45 kW	50 kW	54 kW	60 kW	60 kW	75 kW
Max. input voltage	1100 V						
Rated voltage	600 V						
Start-up voltage	180 V						
MPPT voltage range	200-1000 V						
Max. input current	26 A / 26 A / 26 A			4*26 A			
Max. short circuit current	40 A / 40 A / 40 A			4*40 A			
MPPT number/Max. input strings number	3/6			4/8			
Output AC							
Rated output power	25 kW	30 kW	33 kW	36 kW	40 kW	40 kW	50 kW
Max. apparent output power	27.5 kVA	33 kVA	36.3 kVA	39.6 kVA	44 kVA	44 kVA	55 kVA
Max. output power	27.5 kW	33 kW	36.3 kW	39.6 kW	44 kW	44 kW	55 kW
Rated grid voltage	3/N/PE, 220 V / 380 V, 230 V / 400 V					3/PE, 480 V	
Rated grid frequency	50 Hz / 60 Hz						
Rated grid output current	38.0 A / 36.1 A	45.6 A / 43.3 A	50.1 A / 47.6 A	54.7 A / 52.0 A	60.8 A / 57.7 A	48.1 A	60.1 A
Max. output current	41.8 A	50.2 A	55.1 A	60.2 A	66.9 A	53.0 A	66.2 A
Power Factor	>0.99 (0.8 leading - 0.8 lagging)						
THDi	<3%						
Efficiency							
Max. efficiency	98.8%						
EU efficiency	98.3%						
Protection							
DC reverse-polarity protection	Yes						
Short circuit protection	Yes						
Output over current protection	Yes						
Surge protection	DC Type II / AC Type II						
Grid monitoring	Yes						
Anti-islanding protection	Yes						
Temperature protection	Yes						
Strings monitoring	Yes						
I/V Curve scanning	Yes						
Integrated PID recovery	Optional						
Integrated AFCI (DC arc-fault circuit protection)	Yes ⁽¹⁾						
Integrated DC switch	Optional						
General Data							
Dimensions (W*H*D)	647*629*252 mm						
Weight	45 kg						
Topology	Transformerless						
Self consumption (night)	<1 W						
Operating ambient temperature range	-25 ~ +60°C						
Relative humidity	0-100%						
Ingress protection	IP65						
Cooling concept	Natural convection						
Max. operation altitude	4000 m						
Grid connection standard	G98 or G99, VDE-AR-N 4105 / VDE V 0124, EN 50549-1, VDE 0126 / UTE C 15 / VFR:2019, RD 1699 / RD 244 / UNE 206006 / UNE 206007-1, CEI 0-21, C10/11, NRS 097-2-1, TOR, EIFS 2018.2, IEC 62116, IEC 61727, IEC60068, IEC 61683, EN 50530						
Safety/EMC standard	IEC/EN 62109-1/-2, IEC/EN 61000-6-1/-2/-3/-4						
Features							
DC connection	MC4 connector						
AC connection	OT terminal						
Display	LCD						
Communication	RS485, Optional: Wi-Fi, GPRS						

(1) Activation required.

Original MC4-Evo 2

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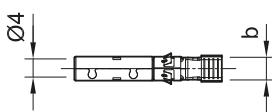
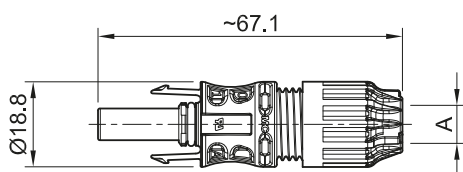
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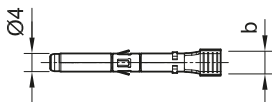
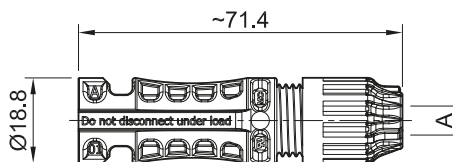
Female and male cable coupler MC4-Evo 2

Female and male cable coupler as individual part (including insulating part)

PV-KBT4-EVO 2A/...



PV-KST4-EVO 2A/...



Sealing caps see catalog tools and accessories, page 21

Tools see catalog tools and accessories, page 4 – 16

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Assembly instructions see MA298

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Internationally certified with IEC, UL, JET, cTÜVus. Approved for DC 1500 V (IEC, JET), DC 1500 V (UL) unrestricted access. MULTILAM Technology, has proven the

quality and durability several 100 million times since 2004. Suited for all climatic environments due to UV resistance, ammonia and high IP degree. Available as a field and

preassembled connector, standard crimping tools can be used. Mating compatibility with MC4 connector family.

Technical data	
Connector system	Ø 4 mm
Ambient temperature range	-40 °C ... +85 °C (IEC/UL)
Transportation/storage temperature range	-30 °C/+60 °C
Transportation/storage relative humidity	< 70 %
Upper limiting temperature	115 °C (IEC)
Degree of protection, mated	IP65/IP68 (1 m, 1 h)
Degree of protection, unmated	IP2X
Overvoltage category	III
Contact resistance of plug connectors	< 0.2 mΩ
Locking system	Locking type
Class (IEC)	II
Contact system	MULTILAM
Type of termination	Crimping
Warning	Do not disconnect under load
Contact material	Copper, tin plated
Insulation material	PA
Flame class	UL94-V0
Ammonia resistance (TÜV Rheinland certified acc. to 2 PFG 1911/03.2011)	Q60139020-0001
TÜV-Rheinland certified according to IEC 62852:2014+Amd.1:2020	R 60127169
UL recognized component in accordance with UL6703	E343181
Maximum altitude above sea level for operation	5000 m
Temperature Level according to IEC TS 63126	Level 2

Female and male cable coupler MC4-Evo 2

Female and male cable coupler as individual part (including insulating part)

Order No.	Type	Socket	Plug	Outer diameter of cable	Width of crimp opening	IEC 62852			UL 6703			Approvals	
						mm ²	DC V	A	AWG	DC V	A	TÜV Rheinland	UR
32.0310P0001	PV-KBT4-EVO 2A/2.5I	x		4.7-6.4	4	2.5	1500	39				x	x
									14	1500	30		
32.0311P0001	PV-KST4-EVO 2A/2.5I		x	4.7-6.4	4	2.5	1500	39				x	x
									14	1500	30		
32.0312P0001	PV-KBT4-EVO 2A/2.5X	x		5.9-7.3	4	2.5	1500	39				x	x
									14	1500	30		
32.0313P0001	PV-KST4-EVO 2A/2.5X		x	5.9-7.3	4	2.5	1500	39				x	x
									14	1500	30		
32.0314P0001	PV-KBT4-EVO 2A/2.5II	x		6.4-8.4	4	2.5	1500	39				x	x
									14	1500	30		
32.0315P0001	PV-KST4-EVO 2A/2.5II		x	6.4-8.4	4	2.5	1500	39				x	x
									14	1500	30		
32.0316P0001	PV-KBT4-EVO 2A/6I	x		4.7-6.4	5.8	4	1500	45				x	x
						6	1500	53					
									12	1500	35		
									10	1500	50		
32.0317P0001	PV-KST4-EVO 2A/6I		x	4.7-6.4	5.8	4	1500	45				x	x
						6	1500	53					
									12	1500	35		
									10	1500	50		
32.0318P0001	PV-KBT4-EVO 2A/6X	x		5.9-7.3	5.8	4	1500	45				x	x
						6	1500	53					
									12	1500	35		
									10	1500	50		
32.0319P0001	PV-KST4-EVO 2A/6X		x	5.9-7.3	5.8	4	1500	45				x	x
						6	1500	53					
									12	1500	35		
									10	1500	50		

Note:

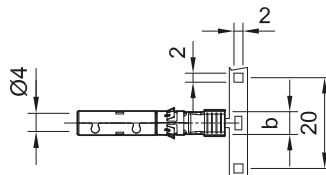
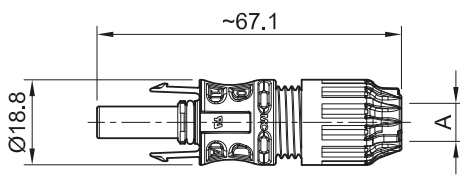
For detailed information concerning the suitable cable gland range, please consult MA298.

Order No.	Type	Socket	Plug	Outer diameter of cable	Width of crimp opening	IEC 62852			UL 6703			Approvals	
				A (mm)	b (mm)	mm ²	DC V	A	AWG	DC V	A	TÜV Rheinland	UR
32.0320P0001	PV-KBT4-EVO 2A/6II	x		6.4-8.4	5.8	4	1500	45				x	x
						6	1500	53					
									12	1500	35		
									10	1500	50		
32.0321P0001	PV-KST4-EVO 2A/6II		x	6.4-8.4	5.8	4	1500	45				x	x
						6	1500	53					
									12	1500	35		
									10	1500	50		
32.0322P0001	PV-KBT4-EVO 2A/10X	x		5.9-7.3	6.5	10	1500	69				x	x
									8	1500	70		
32.0323P0001	PV-KST4-EVO 2A/10X		x	5.9-7.3	6.5	10	1500	69				x	x
									8	1500	70		
32.0324P0001	PV-KBT4-EVO 2A/10II	x		6.4-8.4	6.5	10	1500	69				x	x
									8	1500	70		
32.0325P0001	PV-KST4-EVO 2A/10II		x	6.4-8.4	6.5	10	1500	69				x	x
									8	1500	70		

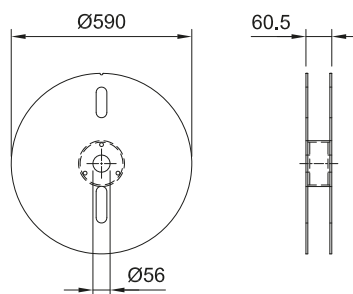
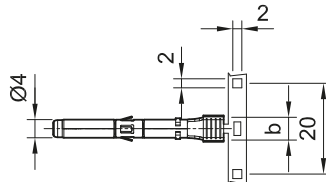
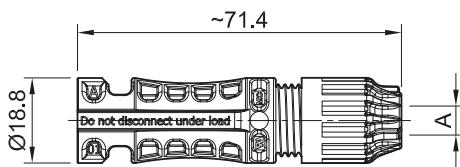
Female and male cable coupler MC4-Evo 2

Contacts on carrier band (including insulating part)

PV-KBT4-EVO 2A/...



PV-KST4-EVO 2A/...



Sealing caps see catalog tools and accessories, page 21

Tools see catalog tools and accessories, page 4 – 16

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Assembly instructions see MA298

www.staubli.com/re-downloads.html → English → Assembly info → MA298

Internationally certified with IEC, UL, JET, cTÜVus. Approved for DC 1500 V (IEC, JET), DC 1500 V (UL) unrestricted access. MULTILAM Technology has proven the qual-

ity and durability several 100 million times since 2004. Suited for all climatic environments due to UV resistance, ammonia and high IP degree. Available as a field and pre-

assembled connector; standard crimping tools can be used. Mating compatibility with MC4 connector family.

Technical data	
Connector system	Ø 4 mm
Ambient temperature range	-40 °C ... +85 °C (IEC) -40 °C ... +90 °C (UL)
Transportation/storage temperature range	-30 °C/+60 °C
Transportation/storage relative humidity	< 70 %
Upper limiting temperature	115 °C
Degree of protection, mated	IP65/IP68 (1 m, 1 h)
Degree of protection, unmated	IP2X
Overvoltage category	III
Contact resistance of plug connectors	< 0.2 mΩ
Locking system	Locking type
Class (IEC)	II
Contact system	MULTILAM
Type of termination	Crimping
Warning	Do not disconnect under load
Contact material	Copper, tin plated
Insulation material	PA
Flame class	UL94-V0
Ammonia resistance (TÜV Rheinland certified acc. to 2 PFG 1911/03.2011)	Q60139020-0001
TÜV-Rheinland certified according to IEC 62852:2014+Amd.1:2020	R 60127169
UL recognized component in accordance with UL6703	E343181
Maximum altitude above sea level for operation	5000 m
Temperature Level according to IEC TS 63126	Level 2

Female and male cable coupler MC4-Evo 2

Contacts on carrier band (including insulating part)

Order No.	Type	Socket	Plug	Outer diameter of cable	Width of crimp opening	IEC 62852			UL 6703			Contacts per reel	Approvals	
						mm ²	DC V	A	AWG	DC V	A		TÜV Rheinland	UR
32.0310P2000	PV-KBT4-EVO 2A/2.5I	x		4.7-6.4	4.0	2.5	1500	39				2000	x	x
									14	1500	30			
32.0311P2000	PV-KST4-EVO 2A/2.5I		x	4.7-6.4	4.0	2.5	1500	39				2000	x	x
									14	1500	30			
32.0312P2000	PV-KBT4-EVO 2A/2.5X	x		5.9-7.3	4.0	2.5	1500	39				2000	x	x
									14	1500	30			
32.0313P2000	PV-KST4-EVO 2A/2.5X		x	5.9-7.3	4.0	2.5	1500	39				2000	x	x
									14	1500	30			
32.0314P2000	PV-KBT4-EVO 2A/2.5II	x		6.4-8.4	4.0	2.5	1500	39				2000	x	x
									14	1500	30			
32.0315P2000	PV-KST4-EVO 2A/2.5II		x	6.4-8.4	4.0	2.5	1500	39				2000	x	x
									14	1500	30			
32.0316P2000	PV-KBT4-EVO 2A/6I	x		4.7-6.4	5.8	4	1500	45				2000	x	x
						6	1500	53						
									12	1500	35			
									10	1500	50			
32.0317P2000	PV-KST4-EVO 2A/6I		x	4.7-6.4	5.8	4	1500	45				2000	x	x
						6	1500	53						
									12	1500	35			
									10	1500	50			
32.0318P2000	PV-KBT4-EVO 2A/6X	x		5.9-7.3	5.8	4	1500	45				2000	x	x
						6	1500	53						
									12	1500	35			
									10	1500	50			
32.0319P2000	PV-KST4-EVO 2A/6X		x	5.9-7.3	5.8	4	1500	45				2000	x	x
						6	1500	53						
									12	1500	35			
									10	1500	50			

Note:

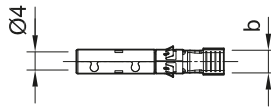
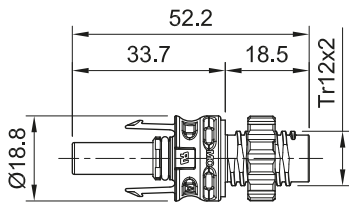
For more detailed information concerning the suitable cable gland range, please consult MA298.

Order No.	Type	Socket	Plug	Outer diameter of cable	Width of crimp opening	IEC 62852			UL 6703			Contacts per reel	Approvals	
				A (mm)	b (mm)	mm ²	DC V	A	AWG	DC V	A		TÜV Rheinland	UR
32.0320P2000	PV-KBT4-EVO 2A/6II	x		6.4-8.4	5.8	4	1500	45				2000	x	x
						6	1500	53						
									12	1500	35			
									10	1500	50			
32.0321P2000	PV-KST4-EVO 2A/6II		x	6.4-8.4	5.8	4	1500	45				2000	x	x
						6	1500	53						
									12	1500	35			
									10	1500	50			
32.0322P1500	PV-KBT4-EVO 2A/10X	x		5.9-7.3	6.5	10	1500	69				1500	x	x
									8	1500	70			
32.0323P1500	PV-KST4-EVO 2A/10X		x	5.9-7.3	6.5	10	1500	69				1500	x	x
									8	1500	70			
32.0324P1500	PV-KBT4-EVO 2A/10II	x		6.4-8.4	6.5	10	1500	69				1500	x	x
									8	1500	70			
32.0325P1500	PV-KST4-EVO 2A/10II		x	6.4-8.4	6.5	10	1500	69				1500	x	x
									8	1500	70			

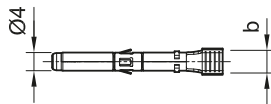
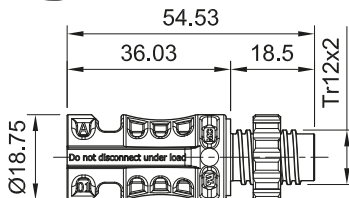
Female and male panel receptacle MC4-Evo 2

Female and male panel receptacles as individual part (including insulating part)

PV-ADB4-EVO 2A/...



PV-ADS4-EVO 2A/...



Sealing caps see catalog tools and accessories, page 21

Tools see catalog tools and accessories, page 4 – 16

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Assembly instructions see MA713

www.staubli.com/re-downloads.html → English → Assembly info → MA713

MC4-Evo 2 panel-receptacle connectors are the interface between the inverter or the distributor housing and string. Assembly directly via the threads or in the perforated plate with the plastic nut (contained in

scope of delivery). Thanks to the D-shape thread the connection is secured against twisting. For 1500 DC V (IEC), 1500 DC V (UL) approved without constraints. Degree of protection IP65/IP68 (1 m, 1 h) guarantees

highest connection safety. Fast and clean connection. Plug compatible with the original MC4 plug connector family. With preassembled flat seal.

Technical data

Connector system	Ø 4 mm
Ambient temperature range	-40 °C...+85 °C (IEC) -40 °C...+90 °C (UL)
Upper limiting temperature	115 °C
Degree of protection, mated	IP65/IP68 (1 m, 1 h)
Degree of protection, unmated	IP2X
Overvoltage category	III
Locking system	Locking type
Contact system	MULTILAM
Type of termination	Crimping
Contact material	Copper, tin plated
Insulation material	PA
Flame class	UL94-V0
TÜV Rheinland certified according to IEC 62852:2014+Amd.1:2020	R 60127171
UL recognized component in accordance with UL6703	E343181
Maximum altitude above sea level for operation	5000 m
Temperature level according to IEC TS 63126	Level 2

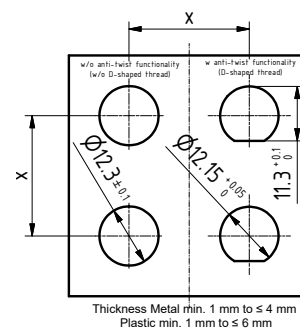
Order No.	Type	Socket	Plug	Width of crimp opening	IEC 62852			UL 6703			Approvals	
				b (mm)	mm²	DC V	A	AWG	DC V	A	TÜV Rheinland	UR
32.0344P0001	PV-ADB4-EVO 2A/2.5	x		4.0	2.5	1500	32				x	x
								14	1500	30		
32.0345P0001	PV-ADS4-EVO 2A/2.5		x	4.0	2.5	1500	32				x	x
								14	1500	30		
32.0346P0001	PV-ADB4-EVO 2A/6	x		5.8	4	1500	42				x	x
					6	1500	47					
								12	1500	35		
								10	1500	50		
32.0347P0001	PV-ADS4-EVO 2A/6		x	5.8	4	1500	42				x	x
					6	1500	47					
								12	1500	35		
								10	1500	50		
32.0352P0001	PV-ADB4-EVO 2A/10	x		6.5	10	1500	62				x	x
								8	1500	70		
32.0353P0001	PV-ADS4-EVO 2A/10		x	6.5	10	1500	62				x	x
								8	1500	70		

Note:

For more detailed information concerning the suitable cable gland range, please consult MA713

Note

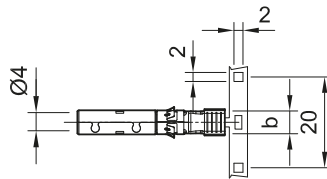
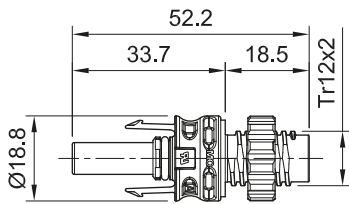
When using panel receptacles in housings (e.g. inverter maker) confirm that the minimum plastic wall thickness shall be between 1 mm and 6 mm; on metal housings, wall thickness shall be between 1 mm and 4 mm. In case of wall thickness undercut or exceedance, the panel receptacle usage in the end-application has to be verified by the installer.



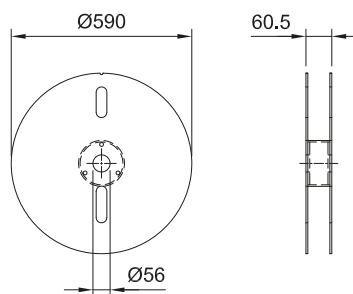
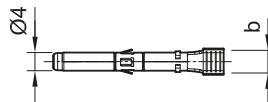
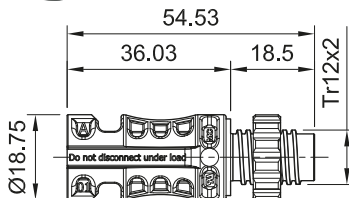
Female and male panel receptacle MC4-Evo 2

Contacts on carrier band (including insulating part)

PV-ADB4-EVO 2A/...



PV-ADS4-EVO 2A/...



Sealing caps see catalog tools and accessories, page 21

Tools see catalog tools and accessories, page 4 – 16

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Assembly instructions see MA713

www.staubli.com/re-downloads.html → English → Assembly info → MA713

MC4-Evo 2 panel-receptacle connectors are the interface between the inverter or the distributor housing and string. Assembly directly via the threads or in the perforated plate with the plastic nut (contained in

scope of delivery). Thanks to the D-shape thread the connection is secured against twisting. For 1500 DC V(IEC), 1500 DC V (UL) approved without constraints. Degree of protection IP65/IP68 (1 m, 1 h) guarantees

highest connection safety. Fast and clean connection. Plug compatible with the original MC4 plug connector family. With preassembled flat seal.

Technical data	
Connector system	Ø 4 mm
Ambient temperature range	-40 °C...+85 °C (IEC) -40 °C...+90 °C (UL)
Upper limiting temperature	115 °C
Degree of protection, mated	IP65/IP68 (1 m, 1 h)
Degree of protection, unmated	IP2X
Overvoltage category	III
Locking system	Locking type
Contact system	MULTILAM
Type of termination	Crimping
Contact material	Copper, tin plated
Insulation material	PA
Flame class	UL94-V0
TÜV Rheinland certified according to IEC 62852:2014+Amd.1:2020	R 60127171
UL recognized component in accordance with UL6703	E343181
Maximum altitude above sea level for operation	5000 m
Temperature level according to IEC TS 63126	Level 2

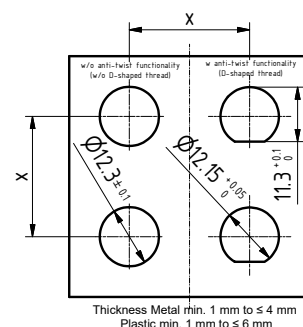
Order No.	Type	Socket	Plug	Width of crimp opening	IEC 62852			UL 6703			Contacts per reel	Approvals	
					mm ²	DC V	A	AWG	DC V	A		TÜV Rheinland	UR
32.0344P2000	PV-ADB4-EVO 2A/2.5	x		4.0	2.5	1500	32				2000	x	x
								14	1500	30			
32.0345P2000	PV-ADS4-EVO 2A/2.5		x	4.0	2.5	1500	32				2000	x	x
								14	1500	30			
32.0346P2000	PV-ADB4-EVO 2A/6	x		5.8	4	1500	42				2000	x	x
					6	1500	47						
								12	1500	35			
								10	1500	50			
32.0347P2000	PV-ADS4-EVO 2A/6		x	5.8	4	1500	42				2000	x	x
					6	1500	47						
								12	1500	35			
								10	1500	50			
32.0352P1500	PV-ADB4-EVO 2A/10	x		6.5	10	1500	62				1500	x	x
								8	1500	70			
32.0353P1500	PV-ADS4-EVO 2A/10		x	6.5	10	1500	62				1500	x	x
								8	1500	70			

Note:

For more detailed information concerning the suitable cable gland range, please consult MA713

Note

When using panel receptacles in housings (e.g. inverter maker) confirm that the minimum plastic wall thickness shall be between 1 mm and 6 mm; on metal housings, wall thickness shall be between 1 mm and 4 mm. In case of wall thickness undercut or exceedance, the panel receptacle usage in the end-application has to be verified by the installer.



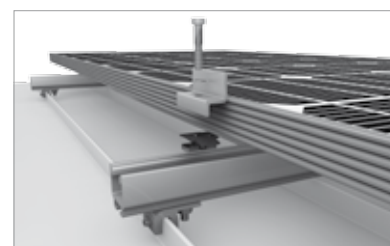
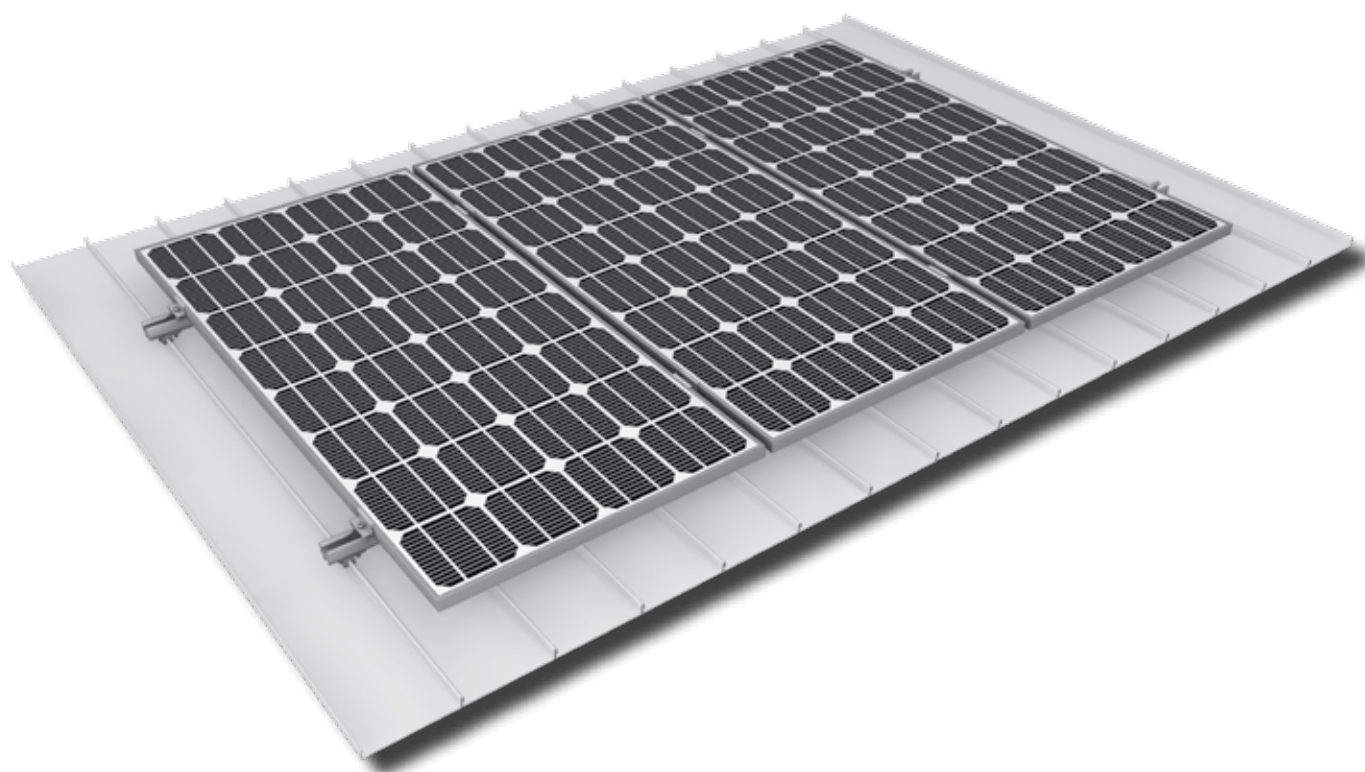


● Stäubli Units ○ Representatives/Agents

Global presence of the Stäubli Group

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Mounting systems for solar technology



- S-51-Clamp for Standing Seams
- Prior to installing it is essential to check whether the standing seam can cope with the local snow-/wind loads and whether the expansion clips/cleats are allowed to receive clamping
- Set screw has to be tightened with an Allen key (wrench size: 3/16") with a tightening torque of 15 Nm.

MONTAGEANLEITUNG **SLOPED ROOF SYSTEMS** **SEAM METAL SYSTEM**

Mounting systems for solar technology



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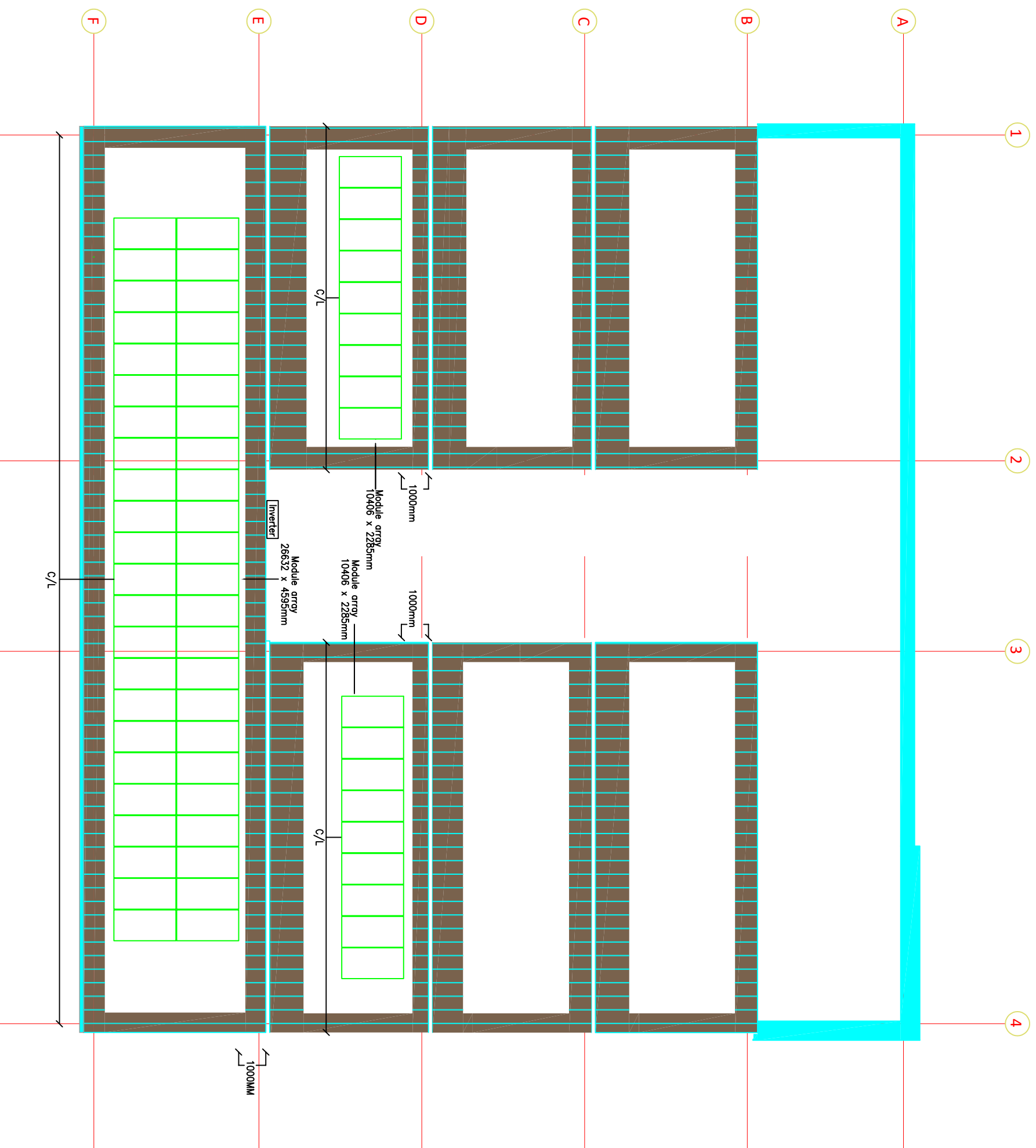
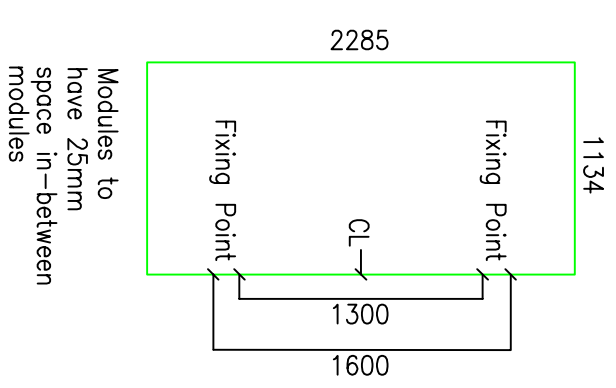
Montageanleitung Blechfalz 55i | GB1 | 0613 | Änderungen vorbehalten
Produktabbildungen sind beispielhafte Abbildungen und können vom Original abweichen.



1. Drawing to be read in conjunction with Contractors Pack.
2. Cuts/e/data logger to be advised by Energen Power Senior Project Manager.
- 3.

NOTES:

JA Solar JAM550w MR Module



A	12.01.24	SP	First Issue
rev	date	by	revision



Project
Barton Perivale College

Title

Roof Layout

Scales	N.T.S.	Checked	ME
Date	12.01.24	Drawn	SP
Drawing no.		revision	
184-009		A	D
		B	C
		E	F G H