

Mounting systems for solar technology



K2 SYSTEMS GMBH
CALCULATION BASIS

PROJECT: 170105-03
AUTHOR: Solar-nu.nl
DATE: 05/01/2017



PROJECT DATA

GENERAL INFORMATION

Name 170105-03
 Mounting System S-Rock 15°
 Customer Ton Verbakel
 Contact info@solar-nl
 Author Solar-nu.nl

LOCATION

Address Zernikestraat 7, 2665 JJ Bleiswijk, Netherlands
 Building height 10.00 m
 Parapet wall height 0.00 m
 Roof pitch 0 °
 Friction coefficient 0.50
 Edge distance 0.70 m

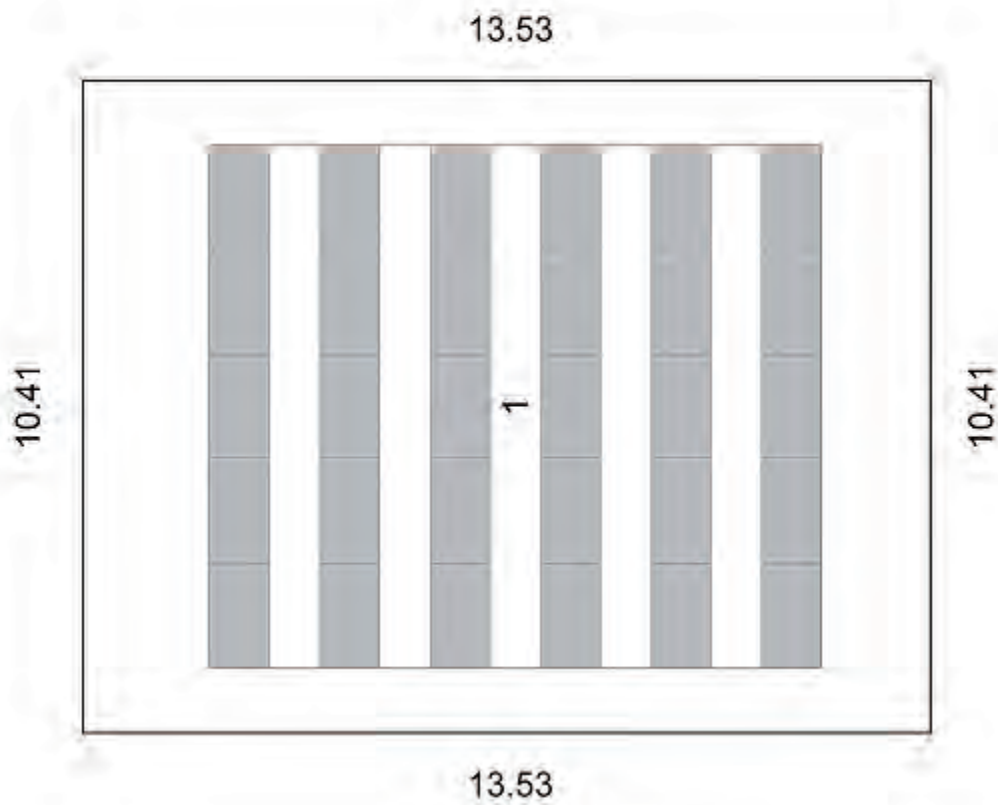
LOADS

Design method ASCE7-10

MODULES

Manufacturer	Trina	Quantity	30
Name	TSM 250-265 PC05A	Output power	8 kWp
dimensions LxWxH	1650 x 992 x 40 mm		
Weight	19.5 kg		
Output power	250 W		

ASSEMBLY PLAN



Dimensions in [m]



LEGEND

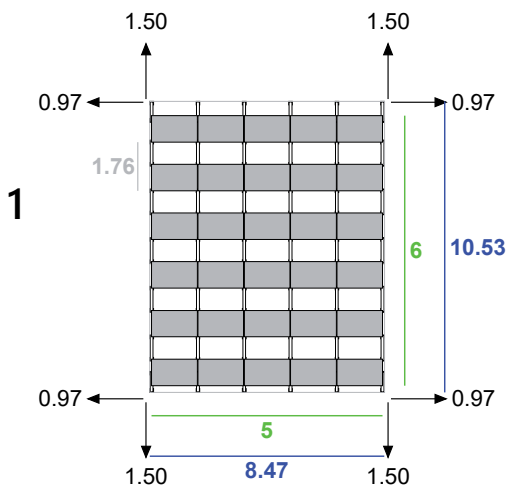
Distance to neighbouring module array [m]

Distance to roof edge [m]

Number of modules

Length/Width of module array [m]

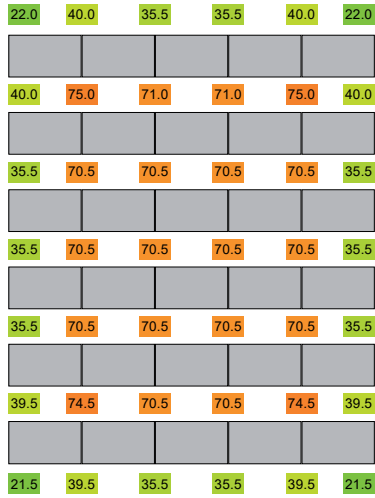
Row distance [m]





BALLAST PLAN

1





RESULTS

BALLAST CAPACITY

S-Rock End 15	74.0 kg	Rounding value	0.0 kg
S-Rock Front 15	12.0 kg		
S-Rock 15	68.0 kg		
T-Tray	85.0 kg		

SPECIFIC LOADS

Index (module block)	No. of modules (module block)	Ballast [kg] (module block)	Dead weight [kg] (module block)	Dead Weight [kN/m ²] (module block)	Dead Weight [kN/m ²] (roof area)
module array 1	30	2188.0	2881.0	0.32	---
all Blocks	30	2188.0	2881.0	---	0.20

NOTES

- This structural analysis relates to the mounting system only. A qualified structural engineer is required to analyse and verify the roof's capacity.
- The determination of wind and snow loads is based on ASCE7-10.

STRUCTURAL ANALYSIS REPORT

GENERAL INFORMATION

Name	170105-03
Mounting System	S-Rock 15°
Customer	Ton Verbakel
Contact	info@solar-nl
Author	Solar-nu.nl

LOCATION

Address	Zernikestraat 7, 2665 JJ Bleiswijk, Netherlands
Building height	10.00 m
Parapet wall height	0.00 m
Roof pitch	0 °
Friction coefficient	0.50
Edge distance	0.70 m

LOADS

Design method	ASCE7-10
---------------	----------

DEAD WEIGHT

Weight module	$G_M = 19.5 \text{ kg}$	Dead weight module	$= 11.91 \text{ kg/m}^2$
Weight mounting system	$= 3.6 \text{ kg}$	Dead weight mounting system	$= 2.20 \text{ kg/m}^2$
Module area	$A_M = 1.64 \text{ m}^2$	Dead Weight	$= 0.14 \text{ kN/m}^2$

BILL OF MATERIALS

Position	Item no.	Item description	Quantity	Weight
1	2002244	S-Rock 15	30	40.5 kg
2	2002246	S-Rock End 15	6	6.6 kg
3	2002245	S-Rock Front 15	6	4.3 kg
4	2001740	Building Protection Mat without Alu-lamination	84	29.4 kg
5	2002322	CableRouting Clip	36	0.0 kg
6	2002247	S-Rock Windbreaker 15	30	27.9 kg
7	1005193	Thread-forming screw	72	0.0 kg
8	2002331	S-Rock T-Tray Set	26	13.5 kg
9	1006413	MiniClamp MC 36-50mm	48	4.8 kg
10	2000059	MiniClamp EC 36-50mm	24	2.4 kg
Total				129.4 kg

