

# 3S solar balcony railings

Versatile railing module

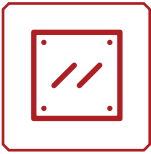
# 3S



Building integrated photovoltaics (BIPV)



Hail resistance class 4



Laminated safety glass



Frameless design for self-cleaning



Swiss made



Various RAL colours for substructure



Fall-protection glazing C1



## 150 Wp/m<sup>2</sup>



**100%** produced with CO<sub>2</sub>-neutral energy

**80%** performance guarantee over 15 years

# 3S solar balcony railings

Whether it's a classic apartment block, an upscale country villa, a conventional detached house or state-of-the-art exposed concrete architecture, the design of the 3S solar balcony railings adapts to any architectural style. The glass module with embedded solar cells provides sufficient privacy while also allowing pleasant light transmission. On request, laminated safety glass elements without solar cells can also be used in some areas to allow an unobstructed view.

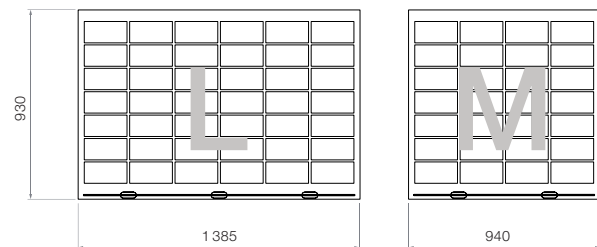
Electrical specifications	L			M		
	STC	BNPI 13.5%	BSI 30%	STC	BNPI 13.5%	BSI 30%
Nominal power (Wp)***	195	215	240	130	144	160
Voltage U <sub>mpp</sub> (V)	24.1			16		
Current I <sub>mpp</sub> (A)	8.1	9	10	8.1	9	10
Open-circuit voltage U <sub>oc</sub> (V)	29.3	29.4	29.5	19.5	19.6	19.7
Short-circuit current I <sub>sc</sub> (A)	8.6	9.5	10.7	8.6	9.5	10.7
Maximum system voltage (V)	1000					
Maximum reverse fuse rating (A)	15					
Bifaciality factor Power	80.66%			80.75%		
Bifaciality factor I <sub>sc</sub>	80.06%			80.34%		
Bifaciality factor U <sub>oc</sub>	99.18%			99.18%		
Tolerances for current, voltage and rated power	± 3%					
Temperature coefficient P <sub>max</sub> (%/K)	-0.3527					
Temperature coefficient V <sub>oc</sub> (%/K)	-0.2524					
Temperature coefficient I <sub>sc</sub> (%/K)	0.0352					

Electrical performance data at STC (1000 W/m<sup>2</sup> on the front, 0 W/m<sup>2</sup> on the rear, 25 °C, AM 1.5)  
 Electrical performance data for BNPI: 13.5% (1000 W/m<sup>2</sup> on the front, 135 W/m<sup>2</sup> on the back, 25 °C, AM 1.5)  
 Electrical performance data at BSI 30% (1000 W/m<sup>2</sup> on the front, 300 W/m<sup>2</sup> on the rear, 25 °C, AM 1.5)

Certifications & standards	
Applied standards	IEC 61730:2016; IEC 61215:2021; SIA 358;
Barrier glazing	DIN 18008-4:2013 / Category C1
Static verification	Metaltec Suisse TR 001:2019; Switzerland: SIA 260 and SIA 2057 Germany: EN 1990 and DIN 18008 Austria: EN 1990 and ÖNORM B 3716
Approved use	Cat. A, B and D Residential, office and retail spaces according to SIA 260:2013 at 0.8 kN/m
Building approval	Laminated safety glass (LSG) DIN 18008, abZ Z-70.3-299

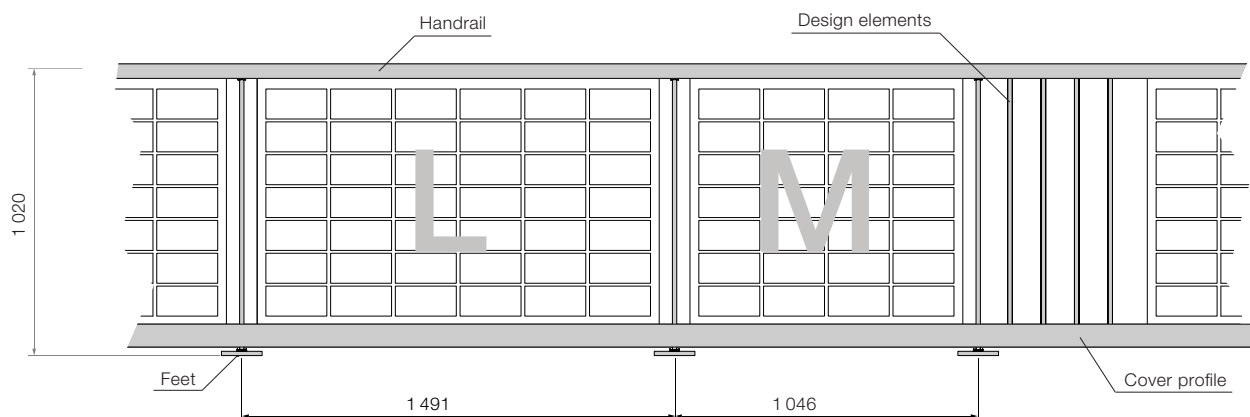
Mechanical specifications	L	M
Quantity of cells	6 x 7 = 42	4 x 7 = 28
Dimensions	1 385 x 930 mm	940 x 930 mm
Weight (kg)	27.7	18.7
Glass*	4 mm TVG + 4 mm TVG solar glass	
Cell type	G12 Half-cells PERC	
Junction box	Junction Box-171721 (QC Solar)	
Junction box cable	Solar cable H1Z2Z2-K, 4 mm <sup>2</sup> , length per 0.4 m (QC Solar)	
Electrical connector	Original MC4 (Stäubli Electrical Connectors AG)	
Maximum load	0.8 kN/m	

\* Laminated safety glass in accordance with DIBt approval



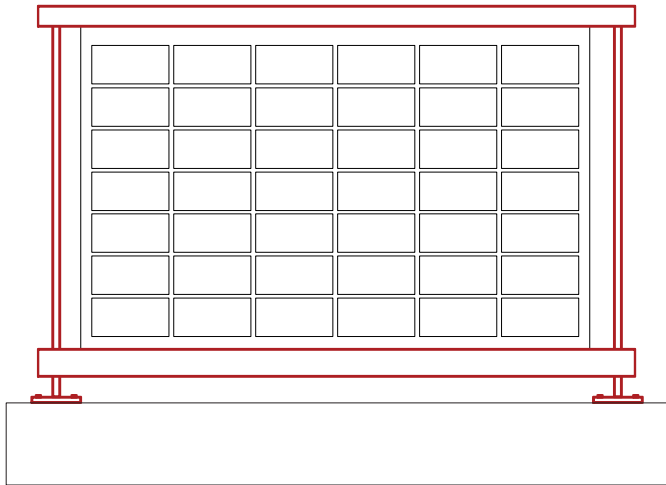
Performance guarantee over 15 years	
Product warranty	10 years
Performance guarantee	1 year on the 97% of the minimum performance 15 years on the 80% of the minimum performance

## Dimension drawing of railings (mm)

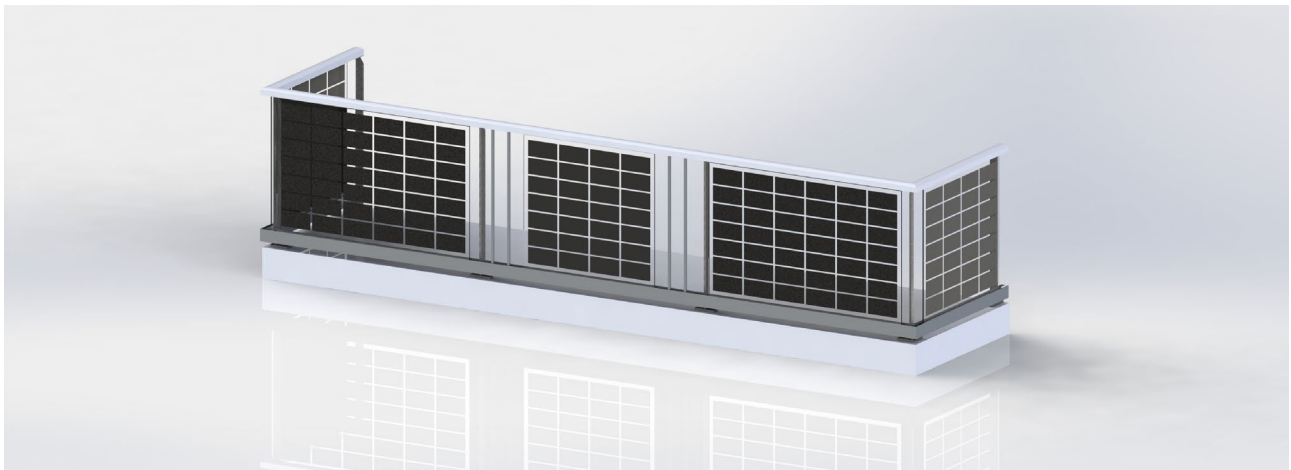


# Colour selection

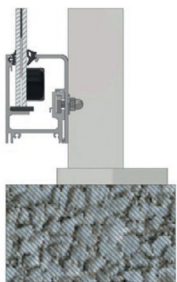
3S offers a wide range of colours for metal constructions. The metal elements are powder-coated or anodised. This allows the 3S solar balcony railings to be individually adapted to the architecture. All RAL colours are available in silk gloss according to the RAL colour palette. The steel parts are galvanised and powder-coated, while the aluminium parts are exclusively powder-coated. In the 'galvanised/anodised' version, the steel parts are galvanised and the aluminium parts are colourless anodised.



**i** Further IGP and NCS colours available on request



## Surface installation



## Side installation



This datasheet is not legally binding. The manufacturer reserves the right to make changes to product specifications and / or product features without prior notice. The most recent versions of all documents (GTCs, datasheets, warranties and installation manuals) can be found on our website at: [www.3-s.com](http://www.3-s.com)