



MONIER InDax 250 PV SYSTEM

Clean, solar electricity generation



Part of the MONIER GROUP

MONIER InDax 250 MODULE SPECIFICATION



Based on proven crystalline technology, the fourth generation of Monier InDax photovoltaic integrated modules fulfills two functions: clean, solar electricity generation and a secure roof covering.

- **High aesthetics**
- **Safe, flexible and quick assembly**
- **Wide pitch range capability**
- **Maximum energy yield**
- **Weathertight and high wind uplift resistance**
- **MCS compliant**
- **25 years linear performance guarantee**

High aesthetics

Low overall system height with modules mounted in attractive black coated aluminium framing in two sizes to suit different height roof tiles.

Safe, flexible and quick assembly

Modules can be installed from left to right or right to left and they can be installed in either rows or columns. This flexibility, along with a minimum number of parts and the low system weight, means the installation can be carried out simply and quickly. Modules are installed from top to bottom ensuring maximum safety during installation. Separate drainage channels overcome any unevenness in the roof structure.

Wide pitch range capability

The InDax system can be installed on roofs with pitches between 12.5° and 65°.

Maximum energy yield

Modules are arranged in arrays and mounted in specially designed framing that optimises the ventilation at the rear of each module and thereby maximises the power output. Holes in the eaves profile allows condensate to drain away.

Weathertight and high wind uplift resistance

InDax modules fulfill the same protective functions as roof tiles, i.e. weathertightness and resistance to wind uplift. Modules can withstand loads up to 550 kg/m². High quality flashings from the roof window industry are used with the weathertightness of the system guaranteed for 15 years.

MCS Compliant

Monier InDax PV system meets the requirements of MSC 005 and the new MCS 012 standard covering wind uplift resistance, weathertightness and external fire resistance.

25 years linear performance guarantee

Monier guarantees that during the first year of operation the module power output will be at least 96.5% of the rated power output. From year two to year twenty-five, the manufacturer guarantees that the module power output will reduce by no more than 0.6% per year of the rated power output such that by the end of the twenty-fifth year of operation, the modules will still provide a minimum power output of 82% compared to the rated power output.

Data at standard test conditions (STC)

Nominal power [Wp] P _{mpp}	250
Voltage at nominal power [V] U _{mpp}	30.5
Current at nominal power [A] I _{mpp}	8.28
Open-circuit voltage [V] U _{OC}	37.5
Short-circuit current [A] I _{SC}	8.74
Module efficiency (%) E _{ta}	14.5

STC (1,000 W/m², spectrum AM 1.5 and cell temperature 25°C)

Performance tolerance (tolerance only) -0 W / +4.99 W

Data at normal operating cell temperature (NOCT)

Nominal power [Wp] P _{mpp}	187
Voltage at nominal power [V] U _{mpp}	28
Open-circuit voltage [V] U _{OC}	34.5
Short-circuit current [A] I _{SC}	6.98
Temperature [°C] T _{NOCT}	47.2

NOCT (800 W/m², spectrum AM 1.5, wind speed 1 m/s, ambient temperature of 20°C)

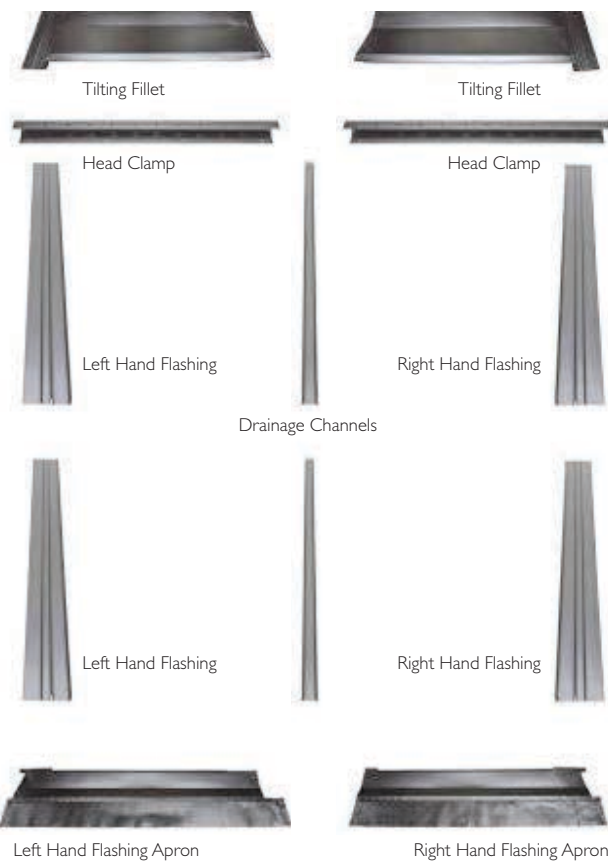
Data at low irradiation

At a low irradiation intensity of 200 W/m² (AM 1.5 and cell temperature of 25°C) 97% of the STC module efficiency (1,000 W/m²) will be achieved.

Temperature coefficients

Power [%/K] P _{mpp}	-0.42
Open-circuit voltage [%/K] U _{OC}	-0.32
Short-circuit current [%/K] I _{SC}	+0.06

Framing and Flashing Components for a 2 x 2 Module Array



MONIER InDax 250

MODULE SPECIFICATION

Characteristic data

Solar cells per module	60
Cell type	polycrystalline, 156 x 156 mm
Junction box	Huber + Suhner RH3 IP67
Connector	Huber + Suhner plug with integrated twist lock
Size of junction box	129 x 94 x 16 mm
Front panel	Low iron solar glass 3.2 mm
Backside panel	Laminated thermoplastic
Framing	Black anodised aluminum

Dimensions and weights

Overall dimensions	1,769 x 999 mm
Installed dimensions (visible)	1,705 x 999 mm
Thickness	75 mm
Weight	21.5 kg (approx)
Laid weight	12.1 kg/m ² (approx)

Limits

Maximum system voltage [V_{DC}]	1,000
Maximum reverse current [I_R A]*	20
Operating temperature range [°C]	-40 to +85
Maximum load (to IEC 61215 2nd ed.)	pressure: 5,400 N/m ² or 550 kg/m ² suction: 2,400 N/m ² or 245 kg/m ²
Application classification (to IEC 61730)	A
Fire classification (to IEC 61730)	C

* Do not apply external voltages greater than V_{oc}

Compliance and Certification

The modules are certified to IEC 61730 and IEC 61215 2nd edition.

In addition, Monier is certified and registered to ISO 9001:2008, ISO 14001:2004 and OHSAS 18001:2007.

Accuracy of power measurement \pm 4%.

The instructions for assembly and use of this product can be found in the fixing instructions and are available for download from www.monier.co.uk/literature/fixing-instructions/indax

Data shown in this document are subject to change without prior notice.

All information complies with the requirements of EN 50380.

For further information please visit:

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