

Rexel

a world of energy

Solcellepaneler



Best Choice for Residential



395 / 400 / 405 / 410

DM410M10-54HBB/-V



Aesthetics

Ultimate look of black modules, perfectly matching the owner's aesthetic pursuit



Quality

Over 40 years of manufacturing experience in house wafer, cell and module



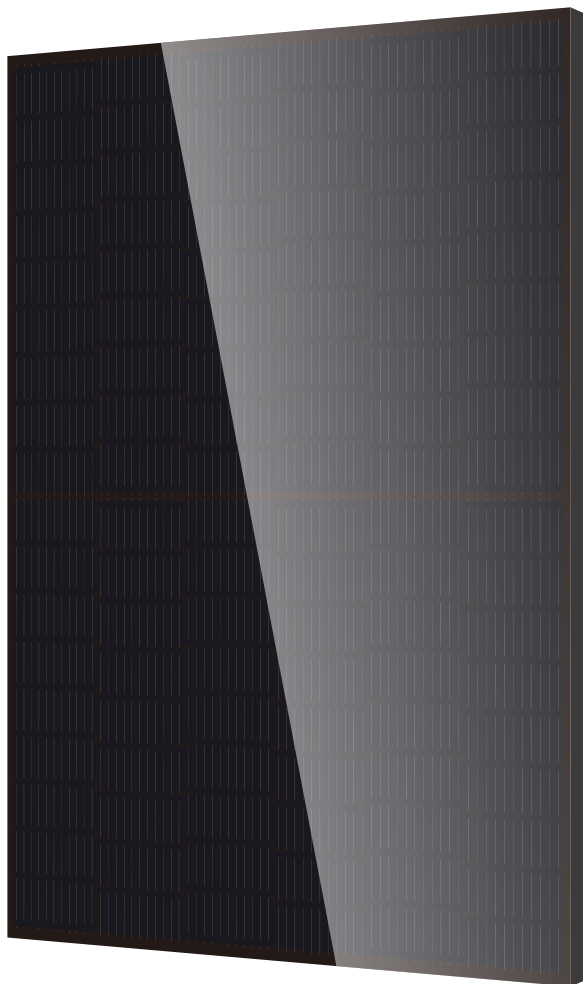
Guarantee

Warranty comes from one of the most financial healthy PV providers

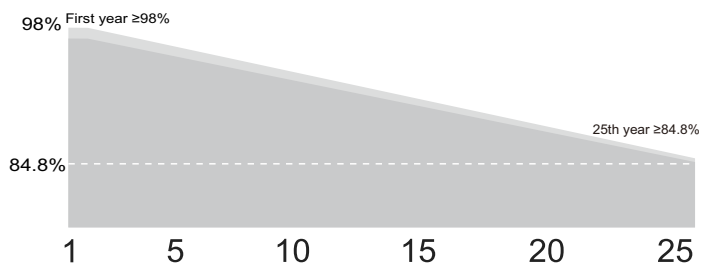


Service

Customer-oriented and local services



Warranty



12 Years product warranty

25 Years power output warranty

A Member of the Hengdian Group

Ver:20220802A0

Electrical Specifications

Module Type	DM395M10-54HBB/-V		DM400M10-54HBB/-V		DM405M10-54HBB/-V		DM410M10-54HBB/-V	
Testing Condition	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Pm(W)	395	317	400	321	405	325	410	329
Imp(A)	13.10	10.54	13.19	10.61	13.28	10.68	13.37	10.75
Vmp(V)	30.18	30.11	30.35	30.28	30.52	30.45	30.69	30.62
Isc(A)	13.50	10.75	13.59	10.82	13.68	10.89	13.77	10.96
Voc(V)	37.09	36.77	37.21	36.88	37.33	37.00	37.45	37.12
Module Efficiency	20.39%		20.65%		20.91%		21.17%	

Pm Tolerance 0/+3% STC:AM1.5 1000W/m² 25°C NOCT:AM1.5 800W/m² 20°C 1m/s Measurement uncertainty:±3%

Mechanical Data

Cell Type	P type Mono-crystalline
Cell Arrangement	108(6x18)
Module Dimensions	1708x1134x30mm
Weight	20kg
Module Structure	Glass/Encapsulant/Backsheet
Glass Thickness	2.8mm
PV module classification	Class II
Junction Box Rating	IP67/IP68
Cables	4mm ² /1100mm or Customized Length
Connector Type	MC4/MC4 Compatible(1000V) EVO2/EVO2 Compatible(1500V)

Packaging

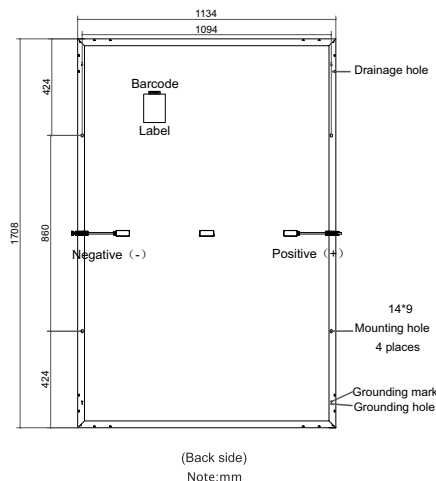
Pallet dimensions	1750×1140×1250mm
Container	40'HQ
Pieces per Pallet	36
Pieces per Container	936

Temperature Characteristics

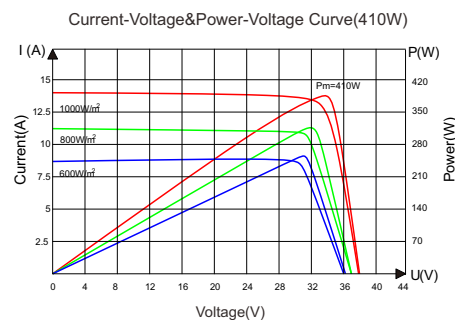
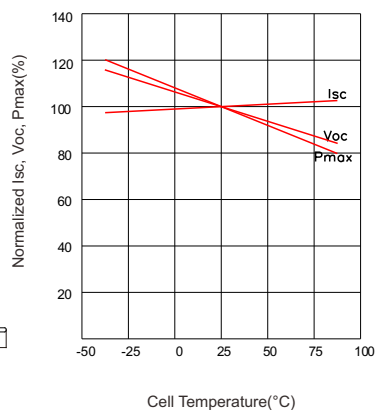
Nominal Operating Cell Temperature(NOCT)	42±3°C
Temperature Coefficient of Isc	+0.0448%/°C
Temperature Coefficient of Voc	-0.246%/°C
Temperature Coefficient of Pmax	-0.330%/°C

Maximum Ratings

Operating Temperature	-40°C to+85°C	Maximum Series Fuse Rating	25A
Maximum Load Capacity	Snow 5400Pa/Wind 2400Pa	Number of Diodes	3
Maximum System Voltage	1000V/1500V DC(IEC)	Fire Rating Class	Class C



Temperature Dependence of Isc, Voc, Pmax(°C)



Statement: Due to technological progress, product parameters will be adjusted accordingly; When signing the contract, the latest data of the company shall prevail.

DEEP BLUE 4.0

Mono

435W n-type Bifacial Double Glass
High Efficiency Mono Module
JAM54D40 410-435/GB Series

Introduction

Powered by the latest SMBB n-type solar cell and half-cell configuration, these modules have higher output power, lower LID, better weak illumination response, and better temperature coefficient.



Higher power generation
better LCOE



n-type with very Lower LID



Better weak illumination response



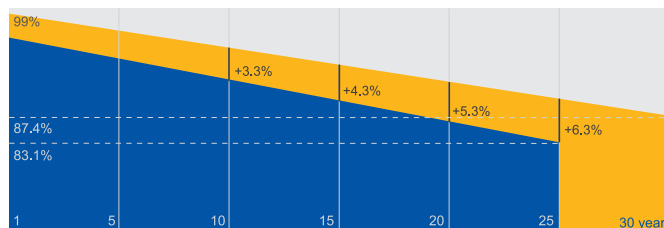
Better Temperature Coefficient

Superior Warranty

- 12-year product warranty
- 30-year linear power output warranty

1% 1st-year Degradation

0.4% Annual Degradation
Over 30 years



■ n-type Bifacial Double Glass Module
Linear Performance Warranty

■ Standard Module Linear
Performance Warranty

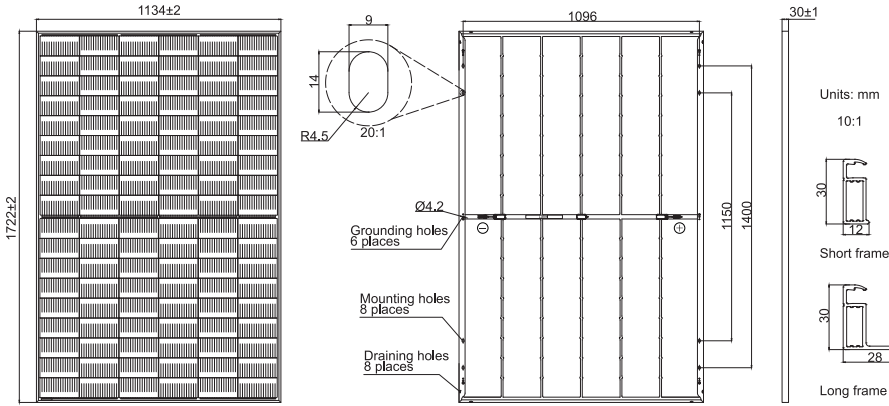
Comprehensive Certificates

- IEC 61215, IEC 61730
- ISO 9001: 2015 Quality management systems
- ISO 14001: 2015 Environmental management systems
- ISO 45001: 2018 Occupational health and safety management systems
- IEC 62941: 2019 Terrestrial photovoltaic (PV) modules - Quality system for PV module manufacturing



MECHANICAL DIAGRAMS

SPECIFICATIONS



Cell	Mono-16BB
Weight	21.5kg
Dimensions	1722±2mm×1134±2mm×30±1mm
Cable Cross Section Size	4mm ² (IEC), 12 AWG(UL)
No. of cells	108(6×18)
Junction Box	IP68, 3 diodes
Connector	MC4-EVO2/QC 4.10-35
Cable Length (Including Connector)	Portrait:200mm(+)/300mm(-); Landscape:1200mm(+)/1200mm(-)
Front Glass/Back Glass	1.6mm/1.6mm
Packaging Configuration	36pcs/Pallet, 936pcs/40HQ Container

Remark: customized frame color and cable length available upon request

ELECTRICAL PARAMETERS AT STC

TYPE	JAM54D40 -410/GB	JAM54D40 -415/GB	JAM54D40 -420/GB	JAM54D40 -425/GB	JAM54D40 -430/GB	JAM54D40 -435/GB
Rated Maximum Power(Pmax) [W]	410	415	420	425	430	435
Open Circuit Voltage(Voc) [V]	37.82	37.92	38.05	38.20	38.32	38.45
Maximum Power Voltage(Vmp) [V]	31.37	31.59	31.80	32.01	32.21	32.42
Short Circuit Current(Isc) [A]	13.95	14.02	14.09	14.16	14.23	14.30
Maximum Power Current(Imp) [A]	13.07	13.14	13.21	13.28	13.35	13.42
Module Efficiency [%]	21.0	21.3	21.5	21.8	22.0	22.3
Power Tolerance	0~+5W					
Temperature Coefficient of Isc(α _{Isc})	+0.046%/°C					
Temperature Coefficient of Voc(β _{Voc})	-0.260%/°C					
Temperature Coefficient of Pmax(γ _{Pmp})	-0.300%/°C					
STC	Irradiance 1000W/m ² , 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.

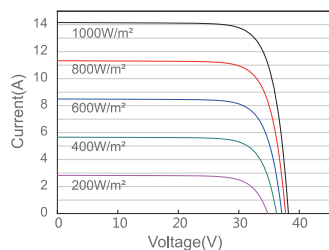
ELECTRICAL CHARACTERISTICS WITH 10% SOLAR IRRADIATION RATIO

OPERATING CONDITIONS

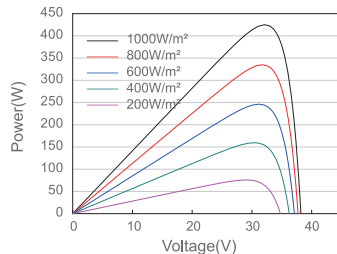
TYPE	JAM54D40 -410/GB	JAM54D40 -415/GB	JAM54D40 -420/GB	JAM54D40 -425/GB	JAM54D40 -430/GB	JAM54D40 -435/GB	Operating Conditions
Rated Max Power(Pmax) [W]	443	448	454	459	464	470	Maximum System Voltage: 1500V DC
Open Circuit Voltage(Voc) [V]	37.85	37.95	38.08	38.23	38.35	38.48	Operating Temperature: -40°C~+85°C
Max Power Voltage(Vmp) [V]	31.37	31.58	31.79	32.00	32.21	32.41	Maximum Series Fuse Rating: 30A
Short Circuit Current(Isc) [A]	15.07	15.14	15.22	15.29	15.37	15.44	Maximum Static Load, Front: 5400Pa(112 lb/ft ²) Maximum Static Load, Back: 2400Pa(50 lb/ft ²)
Max Power Current(Imp) [A]	14.12	14.19	14.27	14.34	14.42	14.49	NOCT: 45±2°C
Irradiation Ratio (rear/front)	10%						Bifaciality*: 80%±10%
*Bifaciality=Pmax,rear/Rated Pmax,front							Fire Performance: UL Type 29

CHARACTERISTICS

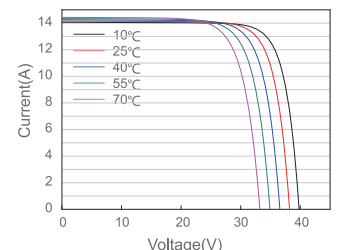
Current-Voltage Curve JAM54D40-425/GB



Power-Voltage Curve JAM54D40-425/GB



Current-Voltage Curve JAM54D40-425/GB



Meyer Burger Black

Heterojunction Module



Maximum performance:

Up to 20 percent more energy yield – even in low-light conditions, such as in the morning and evening hours or with cloudy skies



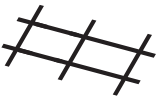
Maximum quality:

Production of solar cells and modules according to the highest standards and exclusively in Germany



Maximum durability:

Guaranteed yields for decades



Maximum stability:

Patented SmartWire technology makes the modules extremely rugged and efficient



Maximum elegance:

Understated and superb design – invented in Switzerland

Meyer Burger (Industries) GmbH

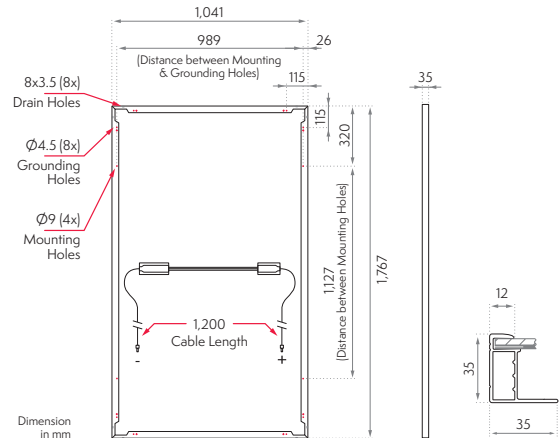
Carl-Schiffner-Str. 17
09599 Freiberg
Germany

www.meyerburger.com



MECHANICAL SPECIFICATION

Dimensions [mm]	1,767 x 1,041 x 35
Weight [kg]	19.7
Front glass	Solar glass, 3.2 mm, with anti-reflective surface
Back glass	High-barrier construction, black
Frame	Anodized aluminum [black]
Solar cell type	120 half-cut, mono n-Si, HJT
Junction boxes	3 diodes, IP68 rated, in accordance with IEC 62790
Cable	PV cable 4 mm ² , 1.2 m length, in accordance with EN 50618
Connectors	MC4, in accordance with IEC 62852, IP68 rated only when connected



ELECTRICAL SPECIFICATION¹

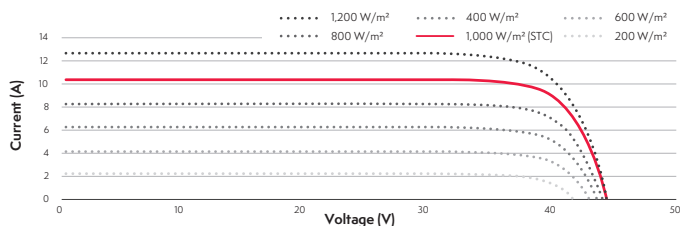
Power class in STC ² [W _p]	375		380		385		390		395		
Minimum Performance (Power Tolerance -0 W/+5 W) [W _p]	STC	NMOT ³	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	
Power at MPP	P_{mpp}	[W]	375	286	380	292	385	297	390	298	303
Short Circuit Current	I_{sc}	[A]	10.6	8.6	10.6	8.6	10.7	8.6	10.8	8.7	8.8
Open Circuit Voltage	V_{oc}	[V]	44.5	41.9	44.6	42.0	44.6	42.0	44.7	42.1	42.1
Current at MPP	I_{mpp}	[A]	9.9	8.0	10.0	8.1	10.1	8.2	10.2	8.2	8.3
Voltage at MPP	V_{mpp}	[V]	38.0	35.8	38.2	36.0	38.4	36.2	38.5	36.3	36.5
Efficiency	η	[%]	20.4		20.7		20.9		21.2		21.5

Temperature Coefficients

Temperature Coefficient of I_{sc}	α	[%/°C]	+0.033
Temperature Coefficient of V_{oc}	β	[%/°C]	-0.234
Temperature Coefficient of P_{MPP}	γ	[%/°C]	-0.259
Nominal Module Operating Temperature	NMOT ³	[°C]	44±2

The temperature coefficients stated are linear values

Performance at different irradiance



PROPERTIES FOR SYSTEM DESIGN

Maximum System Voltage	[V]	1,000
Maximum Series Fuse Rating	[A]	15
Max. Test Load +/-, [incl. Safety Factor of 1.5]	[Pa]	5,400/2,400
Fire Class (classification pending)		C
Operating Temperature	°C	-40 to +85

MEYER BURGER WARRANTY

Product Warranty [y]	25
Power Warranty [y]	25
Power after 1 year	≥98% of nominal power
Annual Degradation [%/y]	0.25
Power after 25 years	≥92% of nominal power

Warranty conditions apply

CERTIFICATES

Certifications (pending)

IEC 61215:2016, IEC 61730:2016

Certifications (to come)

UL61730-1, UL 61730-2, PID (IEC 62804), Salt Mist (IEC 61701), Ammonia Resistance (IEC 62716), Dynamical Mechanical Load (IEC, 62782:2016), Dust & Sand (IEC 60068)

Rexel

a world of energy

Invertere



NEW FROM SOLAX

X3-MEGA G2



X3-MEGA G2
40kW/50kW/60kW

Features

More energy harvest

- Maximum efficiency 98.4%
- 180~1000Vdc MPPT voltage range
- Maximum 6 MPPTs, 2 strings per MPP tracker
- 150% PV oversizing input, 110% overloading output
- Maximum 32A MPPT current

Safety & Reliability

- IP66 protection level
- AFCI protection (Optional)
- Both AC & DC SPDs (Type II) inside, Type I SPD is optional

Intelligence for easy maintenance and economy

- Built-in export power control
- Remote setting and upgrading
- Smart I-V Curve Diagnosis supported
- Aluminium AC cable connection available
- Current measuring for each of PV string
- Night-time reactive power compensation
- 24 hours operation monitoring (Optional)
- Power line communication (PLC) (Optional)
- Smart air cooling technique results in long lifetime of fans
- Advanced heat dissipation technology makes the system more than 10% lighter and smaller

Contact Us for More Information

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DC INPUT

Max. PV array input power [kWp]	60	75	90
Max. PV input voltage [V]		1100	
Startup voltage [V]		200	
Nominal input voltage [V]		600	
MPP tracker voltage range [V]		180~1000	
No. of MPP trackers	4	5	6
Strings per MPP tracker	2	2	2
Max. input current per MPPT [A]		32	
Max. short circuit current per MPPT [A]		46	

AC OUTPUT

Nominal AC output power [kW]	40	50	60
Nominal AC output current [A]	60.6 / 58	75.8 / 72.5	90.9 / 87
Max. AC output apparent power [kVA]	44	55	66
Max. AC output current [A]	66.7 / 63.8	83.3 / 79.7	100 / 95.7
Nominal AC voltage [V]		220/380V, 230/400V, 3/N/PE, 3/PE	
Nominal grid frequency [Hz]		50/60	
Displacement power factor		0.8 leading ~ 0.8 lagging	
THDi (Rated power) [%]		<3	

SYSTEM DATA

Max. efficiency [%]		98.4	
Euro. efficiency [%]		98.1	
Standby consumption [W] @Night		<2	
Ingress protection		IP66	
Operating temperature range [°C]		-30~+60 (Derating above 45)	
Max. operation altitude [m]		4000 (Derating above 3000)	
Relative humidity [%]		0~100	
Dimensions [WxHxD] [mm]		630*521*286	
Weight [kg]	44	44.5	45.5
Cooling concept		Smart fan cooling	
Communication interfaces		RS485 / (Optional: Pocket WiFi/LAN/4G) / PLC(Optional) / USB	
Display		LCD (Optional) / LED*4	

PROTECTION

Over/under voltage protection		YES	
Over current protection		YES	
DC isolation protection		YES	
Grid monitoring		YES	
DC injection monitoring		YES	
Residual current detection		YES	
Anti-islanding protection		YES	
String fault detection		YES	
Over temperature protection		YES	
SPD (DC/AC)		Type II / Type II	
Arc-fault circuit interrupter (AFCI)		Optional	
AC auxiliary power supply (APS)		Optional	
Power line communication (PLC)		Optional	

STANDARD

Safety		IEC/EN 62109-1; IEC/EN 62109-2; NB/T 32004	
EMC		EN/IEC 61000; NB/T 32004	
Certification		VDE4105; EN 50549; AS 4777.2; VDE4105; IEC 61727; IEC 62116; IEC 61683; IEC 60068; EN 50530; NB/T 32004	

New From SolaX

Three Phase String Inverter

X3-Mega

50K / 60K

Large-scale Industrial and Commercial Sites



Superior Efficiency



High Reliability



Intelligent Maintenance



Excellent Grid Compatibility

Feature

Superior Efficiency

- Max efficiency 98.3%, European efficiency 98.0%
- 4 independent MPPTs
- ECO Invention patent technology

High Reliability

- Top-ranking high quality components
- Integrated type II DC & AC surge arresters

Intelligent Maintenance

- Intelligent monitoring via APP & Web
- Multiple-string monitoring for easy trouble shooting (Optional)

Excellent Grid Compatibility

- Advanced grid impedance algorithm for large-scale power stations
- Active power/reactive power control option (Remotely)





X3-MEGA (THREE PHASE)

X3-50K-TL

X3-60K-TL

INPUT (DC)

Max. Input Voltage [V]	1100	
Rated Input Voltage [V]	620	
Max. Input Current [A]	110(33/33/22/22)	132(33/33/33/33)
Start Input Voltage/ Min. Operating Voltage [V]	250/200	
MPPT Operating Voltage Range [V]	200-960	
MPPT Operating Voltage Range (Full-Load) [V]	540-850	
Max. Number of PV Strings	10(3/3/2/2)	12(3/3/3/3)
No. of MPPTs	4	

OUTPUT(AC)

Rated AC Active Power [W]	50,000	60,000
Max. AC Apparent Power [VA]	55,000	66,000
Max. AC Active Power (PF=1) [W]	55,000	66,000
Max. AC Output Current [A]	3*83	3*92
Rated AC Voltage [V]	380/400,3W+N+PE	
AC Voltage Range [V]	277-520	
Rated Grid Frequency [Hz]	50/60	
Grid Frequency Range [Hz]	45-55/55-65	
THDI [%]	<3 (Rated Power)	
DC Current Injection [%]	<0.5In	
Power Factor	0.8 Leading - 0.8Lagging	

Protection

DC switch	Support
Anti-islanding protection	Support
AC overcurrent protection	Support
AC short circuit protection	Support
DC reverse connection	Support
Surge Arrester	DC Type II /AC Type II
Insulation detection	Support
Leakage current protection	Support

Efficiency

Max. Efficiency [%]	98.30%
European Efficiency [%]	98.00%

General

Topology	Transformerless
IP Rating	IP65
Night Self Consumption [W]	<1
Cooling	Fan cooling
Operating Temperature Range [°C]	-25-60
Relative Humidity Range [%]	0-100
Max. Operating Altitude [m]	4000(>2000 derating)
Noise [dB]	<62
Dimensions (W*H*D) [mm]	855*555*275
Weight [kg]	65

HMI & COM

Display	Wireless & APP +LED / LCD(optional)
Communication	WiFi(optional) / RS485 / GPRS(optional)

Certification

Safety	IEC62109-1 / IEC62109-2
EMC(Optional)	EN 61000-6-2 / EN 61000-6-4
Grid Code	IEC61727 / IEC62116

Warranty [year]

Warranty [year]	5 / 10(optional)
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NEW FROM SOLAX X3-PRO G2



X3-PRO G2

8.0kW/10.0kW/12.0kW/15.0kW
17.0kW/20.0kW/25.0kW/30.0kW

Features

High-efficiency

- Maximum efficiency is up to 98.5%
- Low startup voltage, ultrawide MPPT voltage range
- 150% DC oversizing, 110% AC overloading output
- In-built global MPP scan for higher yield efficiency

Safe

- SPD type II protection on both AC&DC
- ARC protection (Optional)
- IP66 protection

Smart

- Built-in export power control
- Intelligent load management - heat pump (Adapter Box required)
- 24h monitoring and maintenance (Optional)
- Multiple monitoring methods, Pocket WiFi/LAN (Optional)/4G (Optional)

Economic

- Ultra-high power density
- Maximum 32A DC input current per MPPT tracker, support high power solar panels
- Up to 3 MPPTs, 2 strings per MPPT
- Support Master/Slave parallel function

Contact Us For More Information

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X3-PRO-8K-G2 X3-PRO-10K-G2 X3-PRO-12K-G2 X3-PRO-15K-G2 X3-PRO-17K-G2 X3-PRO-20K-G2 X3-PRO-25K-G2 X3-PRO-30K-G2

	X3-PRO-8K-G2	X3-PRO-10K-G2	X3-PRO-12K-G2	X3-PRO-15K-G2	X3-PRO-17K-G2	X3-PRO-20K-G2	X3-PRO-25K-G2	X3-PRO-30K-G2
DC INPUT								
Max. PV array input power [Wp]	12000	15000	18000	22500	25500	30000	37500	45000
Max. PV input voltage [V]	1100	1100	1100	1100	1100	1100	1100	1100
Start startup voltage [V]	200	200	200	200	200	200	200	200
Nominal input voltage [V]	650	650	650	650	650	650	650	650
MPP tracker voltage range [V]	160~980							
No. of MPP trackers	2	2	2	2	2	2	3	3
Strings per MPP tracker	2	2	2	2	2	2	2	2
Max. input current per MPPT [A]	32/32	32/32	32/32	32/32	32/32	32/32	32/32/32	32/32/32
Max. short circuit current per MPPT [A]	40/40	40/40	40/40	40/40	40/40	40/40	40/40/40	40/40/40
AC OUTPUT								
Nominal AC output power [W]	8000	10000	12000	15000	17000	20000	25000	30000
Nominal AC output current [A]	12.2/11.6	15.2/14.5	18.2/17.4	22.8/21.8	25.8/24.7	30.3/29	37.9/36.3	45.5/43.5
Max. AC output apparent power [VA]	8800	11000	13200	16500	18700	22000	27500	30000
Max. AC output current [A]	13.2	16	19.3	24.2	27.5	33.6	41.8	45.5
Nominal AC voltage [V]	220/380, 230/400, 3/N/PE, 3/PE							
Nominal grid frequency [Hz]	50/60							
Displacement power factor	0.8 leading ~ 0.8 lagging							
THDi (Rated power) [%]	<3							
SYSTEM DATA								
Max. efficiency [%]	98.20	98.20	98.20	98.30	98.30	98.30	98.50	98.50
Euro efficiency [%]	97.70	97.70	97.70	97.80	97.80	97.80	98.00	98.00
Standby consumption(Night) [W]	<3							
Ingress protection	IP66							
Operating temperature range [°C]	-30~+60 (Derating above 45)							
Max. operation altitude [m]	4000 (Derating above 3000)							
Relative humidity [%]	0~100							
Typical noise emission [dB]	<35	<35	<35	<55	<55	<55	<55	<58
Storage temperature [°C]	-30~+60							
Dimensions (WxHxD) [mm]	482x417x181							
Weight [kg]	24.5			26			28	
Cooling concept	Natural cooling				Smart fan cooling			
Communication interfaces	USB / RS485 / DRM / Pocket WiFi (Optional: Pocket LAN/4G) / Adapter box (Optional)							
PROTECTION								
Over/under voltage protection	YES							
DC isolation protection	YES							
Grid monitoring	YES							
DC injection monitoring	YES							
Residual current detection	YES							
Anti-islanding protection	YES							
Over Temp protection	YES							
SPD (DC/AC)	Type II / Type II							
AC auxiliary power supply (APS)	Optional							
Arc-fault circuit interrupter (AFCI)	Optional							
STANDARD								
Safety	IEC/EN 62109-1; IEC/EN 62109-2; NB/T 32004							
EMC	IEC/EN 61000; NB/T 32004							
Certification	VDE4105; EN 50549; AS 4777.2; VDE4105; IEC 61727; IEC 62116; IEC 61683; IEC 60068; EN 50530; NB/T 32004							

NEW FROM SOLAX

X3-MIC-G2



X3-MIC-G2

3.0kW/4.0kW/5.0kW/6.0kW
8.0kW/10.0kW/12.0kW/15.0kW

Features

High-efficiency

- Maximum efficiency is up to 98.3%
- Low startup voltage, ultrawide MPPT voltage range
- 200% oversizing, 110% overloading output (Except 15kW model)
- In-built global MPP scan for higher yield efficiency

Safe

- IP66 protection
- Integrated SPD protection on both AC&DC

Smart

- Built-in export power control
- Remote setting and upgrading
- 24h monitoring and maintenance (Optional)
- Intelligent load management - heat pump (Adapter Box required)
- Multiple monitoring methods, Pocket WiFi/LAN (Optional)/4G (Optional)

Economic

- Ultra-high power density
- Maximum 16A DC input current per string, support high power solar panels

For More Information Contact Us

www.solaxpower.com

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X3-MIC-3K-G2 X3-MIC-4K-G2 X3-MIC-5K-G2 X3-MIC-6K-G2 X3-MIC-8K-G2 X3-MIC-10K-G2 X3-MIC-12K-G2 X3-MIC-15K-G2

DC INPUT

Max. PV array input power [Wp]	6000	8000	10000	12000	16000	20000	24000	30000
Max. PV input voltage [V]	1000	1000	1000	1000	1000	1000	1000	1000
Startup voltage [V]	150	150	150	150	150	150	150	150
Nominal input voltage [V]	640	640	640	640	640	640	640	640
MPP tracker voltage range [V]	120~980	120~980	120~980	120~980	120~980	120~980	120~980	120~980
No. of MPP trackers/Strings per MPP tracker	2(1/1)	2(1/1)	2(1/1)	2(1/1)	2(1/1)	2(1/1) ^①	2(2/1)	2(2/1)
Max. input current[A]	16/16	16/16	16/16	16/16	16/16	16/16 ^①	32/16	32/16
Max. short circuit current[A]	20/20	20/20	20/20	20/20	20/20	20/20 ^①	40/20	40/20

AC OUTPUT

Nominal AC output power [W]	3000	4000	5000	6000	8000	10000	12000	15000
Nominal AC output current [A]	4.6/4.4	6.1/5.8	7.6/7.3	9.1/8.7	12.2/11.6	15.2/14.5	18.2/17.4	22.7/21.8
Max. AC output apparent power [VA]	3300	4400	5500	6600	8800	11000	13200	15000
Max. AC output current [A]	4.8	6.4	8.0	9.6	12.8	16.0	19.1	22.7
Nominal AC voltage [V]	220/380V, 230/400V, 3/N/PE							
Nominal grid frequency/Grid frequency [Hz]	50/60							
Displacement power factor	0.8 leading-0.8 lagging							
THDi (Rated power) [%]	<3							

SYSTEM DATA

Max. efficiency [%]	98.3	98.3	98.3	98.3	98.3	98.3	98.3	98.3
Euro efficiency [%]	97.8	97.8	97.8	97.8	97.8	97.8	97.8	97.8
Standby consumption (night) [W]	<3							
Ingress protection	IP66							
Operating temperature range [°C]	-30~+60(Derating above 45)							
Max. operation altitude [m]	4000(Derating above 3000)							
Relative humidity [%]	0~100							
Typical noise emission [dB]	<30	<30	<30	<30	<45	<45	<50	<50
Storage temperature [°C]	-30~+60							
Dimensions (W×H×D) [mm]	342*434*144.5				342*434*156			
Weight [kg]	15.5	15.5	15.5	15.5	17	17	18	18
Cooling concept	Natural cooling				Smart fan cooling			
Communication interfaces	USB / RS485 / DRM / Pocket WiFi (Optional: Pocket LAN/4G) / Adapter box(Optional)							

PROTECTION

Over/under voltage protection	YES
DC isolation protection	YES
DC reverse protection	YES
Grid monitoring	YES
DC injection monitoring	YES
Back feed current monitoring	YES
Residual current detection	YES
Anti-islanding protection	YES
Over temperature protection	YES
SPD (DC/AC)	Type III / Type III
Arc-fault circuit interrupter(AFCI)	Optional
AC auxiliary power supply(APS)	Optional

STANDARD

Safety	IEC/EN 62109-1; IEC/EN 62109-2; NB/T 32004
EMC	IEC/EN 61000; NB/T 32004
Certification	VDE4105; EN 50549; AS 4777.2; VDE4105; IEC 61727; IEC 62116; IEC 61683; IEC 60068; EN 50530; NB/T 32004

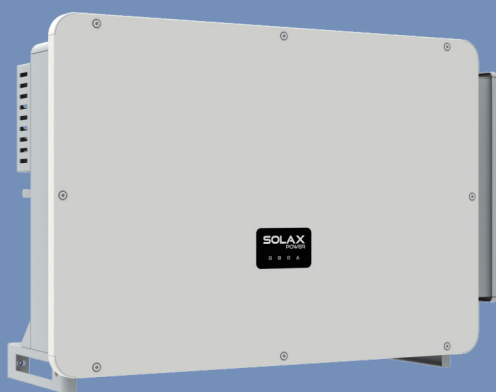
① Input 1 is optional with two strings(Max. input current: 32A, Max. short circuit current: 40A)

*V2.3. Information may be subject to modify without notice. 650.00003.00



NEW FROM SOLAX

X3-FORTH



X3-FORTH

80kW/100kW/110kW

120kW/125kW/136kW/150kW

Features

More energy harvest

- Maximum efficiency up to 99%
- 180~1000Vdc MPPT voltage range
- Maximum 12 MPPTs, 2 strings per MPP tracker
- 150% PV oversizing input, 110% overloading output
- Maximum 32A MPPT current

Safety & Reliability

- IP66 protection level
- AFCI protection (Optional)
- AC terminal temperature detection
- Both AC&DC SPDs(Type II) inside, Type I+II SPD is optional

Intelligence for easy maintenance and economy

- Built-in export power control
- Remote setting and upgrading
- 24 hours operation monitoring
- Smart I-V Curve Diagnosis supported
- Night-time reactive power compensation
- Aluminium AC cable connection available
- Power line communication (PLC)(Optional)
- Fuse free design with smart string current monitoring
- Smart air cooling technique results in long lifetime of fans
- Advanced heat dissipation technology makes the system more than 5% lighter and smaller

Contact Us for More Information

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X3-FORTH (THREE PHASE)

X3-FTH-80K X3-FTH-100K X3-FTH-110K X3-FTH-120K X3-FTH-125K X3-FTH-136K-MV X3-FTH-150K-MV

DC INPUT

Max. PV array input power [kWp]	120	150	165	180	188	204	225
Max. PV input voltage [V]	1100	1100	1100	1100	1100	1100	1100
Startup voltage [V]	200	200	200	200	200	200	200
Nominal input voltage [V]	580/600	580/600	580/600	580/600	580/600	730/785	730/785
MPP tracker voltage range [V]	180~1000	180~1000	180~1000	180~1000	180~1000	180~1000	180~1000
No. of MPP trackers	9	9	9	12	12	12	12
Strings per MPP tracker				2			
Max. input current per MPPT [A]				32			
Max. short circuit current per MPPT [A]				46			

AC OUTPUT

Nominal AC output power [kW]	80	100	110	120	125	136	150
Nominal AC output current [A]	121.3/116	151.6/145	166.7/159.5	181.9/174	189.4/181.2	157.1/145.4	173.2/160.4
Max. AC output apparent power [kVA]	88	110	121	132	132	149.6	165
Max. AC output current [A]	133.4/127.6	166.7/159.5	183.4/175.4	200/191.3	200/191.3	172.8/160	190.6/176.5
Nominal AC voltage[V]	220/380, 230/400, 3/N/PE, 3/PE					500/540,3P3W+PE 500/540,3P3W+PE	
Nominal grid frequency [Hz]	50/60						
Displacement power factor	0.8 leading-0.8 lagging						
THDi (Rated power) [%]	<3						

SYSTEM DATA

MPPT efficiency [%]	99.9						
Max. efficiency [%]	98.6	98.6	98.6	98.6	98.6	99.0	99.0
Ingress protection	IP66						
Operating temperature range [°C]	-30~+60 (Derating above 45)						
Max. operation altitude [m]	4000 (Derating above 3000)						
Relative humidity [%]	0~100						
Dimensions[WxHxD] [mm]	985x660x327.5						
Weight [kg]	83	83	83	87	87	87	87
Cooling concept	Smart fan cooling						
Communication interfaces	RS485 / (Optional: Pocket WiFi/LAN/4G) / PLC(Optional) / USB						
Display	LCD(Optional)/LED*4						

PROTECTION

Over/under voltage protection	YES
DC isolation protection	YES
Grid monitoring	YES
DC injection monitoring	YES
Residual current detection	YES
Anti-islanding protection	YES
String fault detection	YES
SPD (DC/AC)	Type II / Type II
Arc-fault circuit interrupter(AFCI)	Optional
AC terminals over temperature detection	YES
AC auxiliary power supply(APS)	Optional
Power line communication(PLC)	Optional

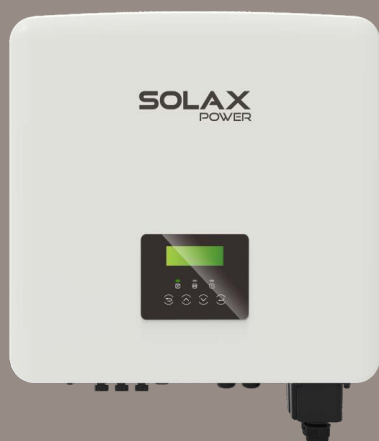
STANDARD

Safety	IEC/EN 62109-1; IEC/EN 62109-2; NB/T 32004
EMC	IEC/EN 61000; NB/T 32004
Certification	EN 50549; AS4777.2; VDE4105; IEC 61727; IEC 62116; IEC 61683; IEC 60068; EN 50530; NB/T 32004



NEW FROM SOLAX

X3-HYBRID G4



X3-Hybrid-D/M
5.0kW/6.0kW/8.0kW
10.0kW/12.0kW/15.0kW

Features



Support 150% oversized PV power

Excess energy to battery



Fast charging and high power discharge

Max 30A charging & discharge current



Remote units control & upgrading function

External control communication interface



Working under extremely cold condition

Working in full load under extreme cold temp $-35^{\circ}\text{C}/-31^{\circ}\text{F}$



On & Off grid parallel use

Inverter on&off grid parallel to support higher power loads



Unbalanced output supported

Prevent voltage imbalance when using high-power electrical appliances

For More Informations Contact Us

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X3-HYBRID G4 (THREE PHASE)

X3-Hybrid-5.0-D X3-Hybrid-6.0-D X3-Hybrid-8.0-D X3-Hybrid-10.0-D X3-Hybrid-12.0-D X3-Hybrid-15.0-D
X3-Hybrid-5.0-M X3-Hybrid-6.0-M X3-Hybrid-8.0-M X3-Hybrid-10.0-M X3-Hybrid-12.0-M X3-Hybrid-15.0-M

INPUT (DC)

Max. recommended PV power[W]	8000	10000	12000	15000	18000	18000
Max. DC voltage [V]	1000					
Nominal DC operating voltage [V]	630					
Max. input current (input A/input B) [A]	14/14	14/14	26/14	26/14	26/14	26/14
Max. short circuit current (input A/input B) [A]	16/16	16/16	30/16	30/16	30/16	30/16
MPPT voltage range[V]	180-950					
Start operating voltage[V]	200					
No. of MPP trackers / Strings per MPP tracker	2(1/1)	2(1/1)	2(2/1)	2(2/1)	2(2/1)	2(2/1)

INPUT AC

Max. apparent AC power[VA]	10000	12000	16000	20000	20000	20000
Max. AC current[A]	16.1	19.3	25.8	32.0	32.0	32.0
Nominal grid voltage(AC voltage range)[V]	415/240; 400/230; 380/220					
Nominal grid Frequency/range[Hz]	50/60					

OUTPUT AC

Nominal AC power [VA]	5000	6000	8000	10000	12000	15000
Max. apparent AC power [VA]	5500	6600	8800	11000	13200	15000
Nominal grid voltage(AC voltage range) [V]	415/240; 400/230; 380/220					
Nominal grid frequency/range [Hz]	50/60					
Nominal AC current [A]	7.2	8.7	11.6	14.5	17.5	21.8
Max. AC current [A]	8.1	9.7	12.9	16.1	19.3	24.1
Displacement power factor	0.8 leading ... 0.8 lagging					
THDi, rated power [%]	<3					

OUTPUT DC (BATTERY)

Battery type	Lead-acid/Lithium					
Battery voltage range [V]	180-650					
Recommended battery voltage[V]	400					
Max. continuous charge/discharge current [A]	30					
Communication interfaces	CAN/RS485					
Reverse connect protection	Yes					

OFF-GRID OUTPUT (WITH BATTERY)

MAX. continuous apparent power [VA]	5000	6000	8000	10000	12000	15000
Rated voltage[V],Frequency [Hz]	400/230VAC; 50/60					
MAX. continuous current [A]	7.2	8.7	11.6	14.5	17.5	21.8
Peak apparent power [VA] Duration[s]	7500 60	9000 60	12000 60	15000 60	15000 60	15000 60
Changeover time [ms]	<10					
THDv, linear Load [%]	<3					

EFFICIENCY

MPPT efficiency [%]	99.9					
Euro efficiency [%]	97.7					
Max. efficiency [%]	98.0					
Battery charge/discharge efficiency [%]	98.5/97.0					

POWER CONSUMPTION

Standby consumption (Night) [W]	<20W for hot standby,<3W for cold standby					
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STANDARD

Safety	IEC62109-1/IEC62109-2					
EMC	EN61000-6-1/EN61000-6-2/EN61000-6-3					
Certification	VDE 0126-1-1 A1:2012 / VDE-AR-N 4105 / G98 / G99 / AS4777 / EN 50549 / CEI 0-21					

ENVIRONMENT LIMIT

Degree of protection(according to IEC60529)	IP65					
Operating temperature range [°C]	-35~+60 (derating at +45, charge derating at +35)					
Max. operation altitude [m]	≤3000					
Humidity [%]	0-100 (condensing)					
Storage temperature [°C]	-35~+60					
Typical noise emission [dB]	40	40	40	40	60	60

DIMENSION AND WEIGHT

Dimensions(WxHxD) [mm]	482*417*181					
Weight[kg]	30					
Cooling concept	Natural	Natural	Natural	Natural	Fan	Fan
Topology	Non-isolated					
Communication interfaces	Meter/ CT, external control RS485, Pocket series (optional), DRM,USB					
LCD display	Backlight 20*4 character					
Standard warranty [years]	10					

Rexel

a world of energy

Montasjemateriell

INFÄSTNINGSSYSTEM FÖR SOLPANELER



WELAND STÅL AB

INFÄSTNINGSSYSTEM FÖR SOLPANELER

Med över 40 års erfarenhet av taksäkerhet och infästning i tak har Weland Stål utvecklat infästningssystem för solpaneler. Infästningssystemet är anpassade för våra nordiska förhållanden. Våra infästningssystem är beräknade och testade för att klara tuffa vind och snöförhållande.

Systemen passar alla tak och alla typer av solceller, solpaneler och solfångare.

Produkterna tillverkas i Zink/Magnesium ZM310. Ett modernt och miljövänligt material med extremt goda korrosionsegenskaper. Det betyder även att montage kan utföras på utsatta ställen.

Med Weland's system har du få och lättanvända detaljer. Dina montage blir snabba och effektiva. Vi lagerför och levererar på några få arbetsdagar direkt ut till montageplatsen.

Vi erbjuder olika lösningar för varierande behov. Vi har system för montage parallellt med taket. Vi har ett nyutvecklat system för låglutande montage på 15 grader från taket. Samt höglutande system, ett stativ med ställbar lutning från 0-50 grader.

Weland stål tänker miljö genom hela ledet. Produkterna tillverkas klimatneutralt med modern energisnål maskinpark. Egna solpaneler på taket förser oss med el.





Låglutande system

En ny enkel lösning för platta tak med infästningspunkt i varje hörn på solpanelen.

Solpanelerna monteras till ett lågt fäste i framkant och ett högt fäste i bakkant. Panelen lutar 15 grader från taket för att optimera avrinning och möta solinstrålningen. Nästa panel monteras vid sidan om 1:a panelen till samma fäste vilket ger ett sammankopplat system med få infästningspunkter.

Fästena monteras med fördel till WELANDS tätplåt och vid flera rader förankras högfäste och nästa rads lågfäste i samma infästning. Fästena är förberedda för upphängning av kabelskenor och vid montage med tätplåt förbinds jordningen via infästningen. Systemet kan även monteras med ballast och förses med vindplåtar och lösa jordbleck.

Höglutande system

Vid montage på tak eller mark kan stativ användas för att vinkla panelerna från 0-50 grader mot solen. Vi lagerhåller en ställbar lösning men kan även erbjuda mer projektanpassade lösningar.

På stativet monteras vår egenutvecklade skena som kombinerar flexibilitet med hög bärförmåga. Skenan skarvas enkelt med beslag för att byggas vidare till önskad längd. Med mitt- och ändklammor monteras sedan solpanelen enkelt in i infästningsskenan.

Detta höglutande system med stativ kan även användas på marken.

Vi har lång erfarenhet från större konstruktioner och kan enkelt ta fram projektanpassade lösningar med beräkningar efter rådande vind och snöförhållanden.





Parallella system

Vi har utvecklat en egen infästningsskena som kombinerar flexibilitet med hög bärförmåga. Skenan skarvas enkelt med beslag för att byggas vidare till önskad längd. Skenan är även förbered för korsmontage.

Skenan kan monteras till takfästena tvärs eller längs med takfallet beroende på hur panelen skall vändas.

Med mitt- och ändklammor monteras solpanelen enkelt till infästningsskenan. Klämmor och ändlock finns även i svart utförande att använda ihop med svarta paneler.

Infästningar för alla typer av tak

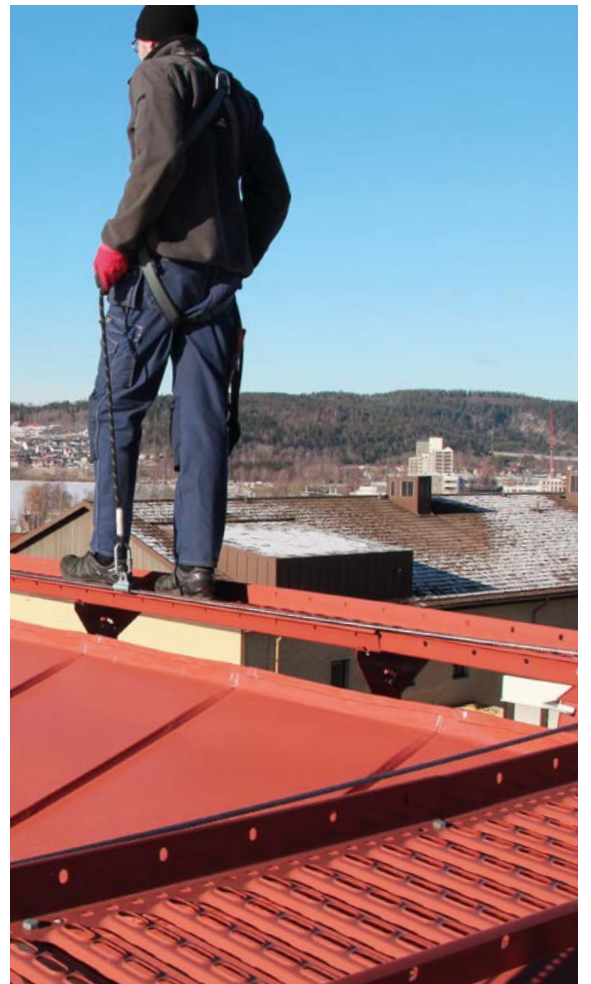
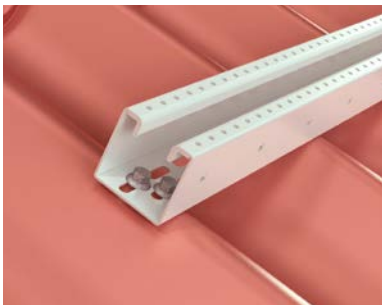
Weland Stål har med sin mångåriga erfarenhet från taksäkerhet en mängd olika infästningsalternativ för olika underlag och takkonstruktioner. Vi har lösningar till tak med betong och tegelpannor, släta och profilerade plåttak, tätskikt m.m.

Säkerhet på tak

Vid takarbete är det mycket viktigt att tänka på säkerheten. Varje installerad solcellsanläggning kommer även utgöra ett nytt serviceställe på byggnaden.

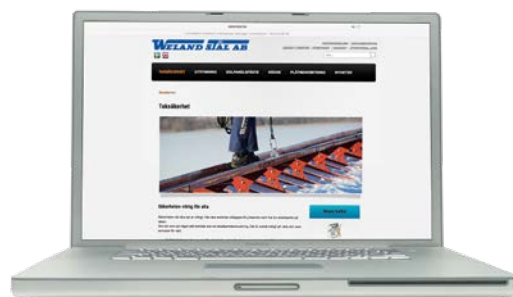
För att underlätta servicen av solpanelerna på taket kan Weland Stål hjälpa er att skapa en säker arbetsplats med fästen för livlina, stabila gångvägar och andra lösningar för din säkerhet.





LÄS MER OM VÅRA TAKSÄKERHETS- PRODUKTER OCH SOLPANELSFÄSTEN

www.welandstal.se



Du kan även göra kalkyler och materialspecifikationer på vår hemsida.

WELAND STÅL AB

Weland Stål AB, Industrivägen 1, 523 90 Ulricehamn
Tel. 0321-261 60 • E-mail: info@welandstal.se • Internet: www.welandstal.se

Weland förbehåller sig rätten till konstruktionsändringar. Eftertryck förbjudes.

GSE IN-ROOF SYSTEM™

BIPV system for traditional photovoltaic panels

**Simple, Quick, Aesthetic,
Lightweight, Waterproof
and Cost-Competitive**

2022
RANGE



MADE IN FRANCE

www.gseintegration.com

The GSE IN-ROOF SYSTEM™ range is expanding

MODULES UP TO 400 Wp 2012 AND 2020 RANGE

MODULES UP TO 450 Wp 2022 RANGE

ALSO COMPATIBLE WITH PREVIOUS TECHNOLOGIES (BEFORE 2020)

PORTRAIT:

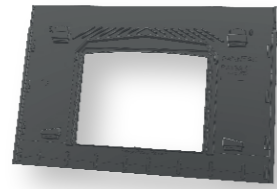


19 available references*

Module length: 1535 to 1780 mm

Module width: 803 to 1055 mm

LANDSCAPE:



21 available references*

Module length: 1554 to 1740 mm

Module width: 768 to 1120 mm

PORTRAIT:



19 available references*

Module length: 1610 to 1990 mm

Module width: 990 to 1160 mm

LANDSCAPE:

Landscape format plates will be available in summer 2022

* Detailed list available on our website: www.gseintegration.com

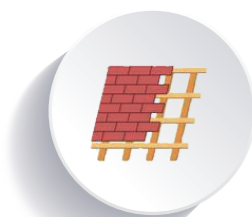
BENEFITS

- Economic: the most competitive system for roof renovations and new constructions
- Easy to install: 10 to 16 panels installed in 6 hours
- Flexible: achieve any desired configuration type (U-Shape, pyramid, etc...)
- Lightweight and space-saving: 50 plates per pallet
- Optimised for roof renovation (re-roofing) and New Builds.

PRODUCT CERTIFIED IN MANY COUNTRIES

- Fire resistance
- Completely waterproof: ensures complete watertightness of the PV system and the roof
- Optimal ventilation
- Impact resistance
- Very high mechanical resistance:
 - Downward pressure: 5400 Pa (IEC 61215)
 - Upward pressure: up to 5500 Pa (NF EN 12179)

TECHNICAL SPECIFICATIONS



All types
Roof covering



Slope
12 to 60°



Weight
2.8 to 3.7 kg/m²



Temperature range
-30°C to 100°C



Material
PP - Aluminium - Stainless steel
(100% Recyclable)

NEW: EVEN EASIER TO INSTALL

Integration of new module generations. Up to 150 mm of inter-module gap adjustment possible

Pre-drilled fixing points












Simplified clamps installation: position indication

Optimised cable management. Cable slots designed for all junction boxes

LIABILITY INSURANCE BACKED BY **CHUBB®**

CERTIFICATIONS

-   ■ Universel kit: ALPES CONTROLE: ETN A27T2109 Many modules approved (list available on our website)
-   ■ Specific kits : CCFAT-CSTB : ATEC N°21/16-57 V4 - "In Roof System" V. TS-2 : flat tiles, "In Roof System" V. A-2 : slate, "In Roof System" V. TN-1 : flat roof tiles
-   ■ BBA : MCS 012 certifie no. "MCS BBA 0156" - compatible with more than 30 PV panels - maximum wind load: 2.71 kN/m²
-   ■ System Performance Assessment (certification in progress)
-  ■ DIBt :DIBt : Allgemeine bauaufsichtlichen Zulassung no. Z-14.4-817 (certification in progress)

FIRE TESTS EXPOSURE

- BRoof T1   
- BRoof T2    
- BRoof T3 
- BRoof T4 

GSE Intégration

OUR TIME-SAVING TOOLS

CALCULATOR

Allows you to find out which GSE IN-ROOF SYSTEM plate is compatible with your panel and to determine the overall size of the final PV field in just a few clicks.

CONFIGURATOR

Allows you to establish a list of materials needed for your GSE IN-ROOF SYSTEM installation.

INSTALLATION MANUALS AND GUIDES

Find these tools here:



A DEDICATED CONTACT PERSON FOR EACH REQUEST

A battening plan or a technical question? technical.support@gseintegration.fr

Any other request? contact@gseintegration.fr