Solar Panels and its String Inverter

Included in your standard package.

Astronergy Astro N7s 460W Bifacial

Experience unmatched energy efficiency with the matte black Astroenergy Astro N7 460W Solar Panel Module, a revolutionary solution designed to harness the sun's power with unrivalled performance.

Efficiency	23%
Weight	21.5 kg
Warranty	25 year product warranty 30 year performance warranty
Dimensions (W x H x D)	1762 x 1134 x 30 (mm)

FOX ESS Single/Dual Phase Tracker PV Inverter

Maximise your solar power potential with the Fox Inverter, engineered for seamless conversion of solar energy into usable electricity, promising high efficiency and consistent performance under all conditions.

Efficiency	>97%
Weight	22 kg
Warranty	10 year warranty
Dimensions (W x H x D)	434 x 418 x 185 (mm)

Batteries and Hybrid Inverter

Included in your standard package.

Fox ESS EP6/EP12 Battery Starage System

Secure your sustainable future with the Fox ESS EP6 Battery Storage System, providing high capacity, reliable energy storage for your system, ensuring efficient power management and uninterrupted supply, day or night.

Fox H1 Hybrid Inverter

Maximise your solar power potential with the Fox H1 inverter, engineered for seamless conversion of solar energy into usable electricity, promising high efficiency and consistent performance under all conditions.

Depth of discharge	90% / 90%
Weight	51 kg / 98 kg
Dimensions (W x H x D)	380 x 640 x 185 (mm) / 710 x 640 x 185 (mm)
Warranty	10 year warranty

Efficiency	>97%
Weight	22 kg
Dimensions (W x H x D)	434 x 418 x 185 (mm)
Warranty	10 year warranty

Additional Products

These are not included in your standard package. You may choose to add them to your package following your survey.

Tigo TS4-A-O Optimisers Boost your solar efficiency with Tigo Optimisers, engineered to enhance energy output from each individual panel, ensuring your solar system operates at peak performance, regardless of shading.

£ 55.00 per panel

Pigeon protection wiring for solar panels involves installing a mesh around the panels to prevent pigeons from nesting underneath. This helps maintain panel efficiency by preventing debris buildup and damage, using durable, weather-resistant materials.

£ 35.00 per panel

Solar iBoost Hot Water Device Maximise your solar usage with the Solar iBoost, a smart device that diverts excess solar energy to heat your water, reducing your energy bills and contributing to a greener, more sustainable lifestyle.

£ 550.00

EPS or Emergency Power supply refers to a Solar PV System's ability to automatically or manually change over to powering your essential sockets from your battery storage system, in the case of a power cut.

For additional information, please contact your installer.

Solar Panel Pricing

The standard package includes solar panels, inverter and mounting system with full installation, 10 year warranties and online monitoring. Prices include 0% VAT; commercial customers pay 20% VAT.

Panel System Size	Price
4 panels	£ 2,299
5 panels	£ 2,487
6 panels	£ 2,655
7 panels	£ 2,841
8 panels	£ 2,875
9 panels	£ 3,072
10 panels	£ 3,198
11 panels	£ 3,483
12 panels	£ 3,507
13 Panels	£ 3,857
14 panels	£ 3,893

Panel System Size	Price
15 panels	£4,174
16 panels	£4,306
17 panels	£4,574
18 panels	£4,843
19 panels	£4,997
20 panels	£5,216
21 panels	£5,436
22 panels	£5,641
23 panels	£5,800
24 panels	£5,955
25 panels	£6,113

If you want more than 25 panels, please speak to your installer.

Battery Size Options

System size	Usable Capacity (kWh)	Price
Small	5.2	£ 1,999
Medium	10.4	£ 2,749
Large	15.6	£ 4,099
X-Large	20.7	£ 4,799

ASTRONERGY

ASTRO N7s 2.0

CHSM48RN(DG)(BLH)/F-BH
Bifacial Series

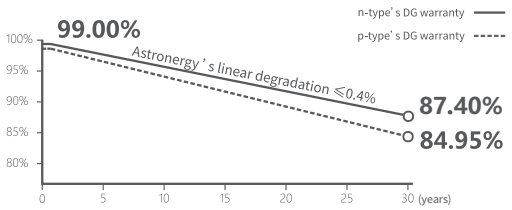
450~465W

Assist carbon neutrality

Warranty

25 25-year Product Warranty

30 30-year Linear Power Warranty



n-type TOPCon 5.0
Newly upgraded cell technology, ultra-high product energy efficiency

ZBB Design
Zero-busbar integrated interconnection

Sleek Design
< 2 ㎡ area, easy to transport and install

All-black Technology
Sleek crystalline black appearance, seamlessly blending into rooftops

IEC 61215, IEC 61730
ISO 9001:2015:ISO Quality Management System
ISO 14001:2015:ISO Environment Management System
ISO 45001:Occupational Health and Safety
The first solar company which passed the Nord IEC/TS 62941 certification audit

TOP PERFORMER 2025 kiwa PV MODULE RELIABILITY SCORECARD

Tier 1 BloombergNEF

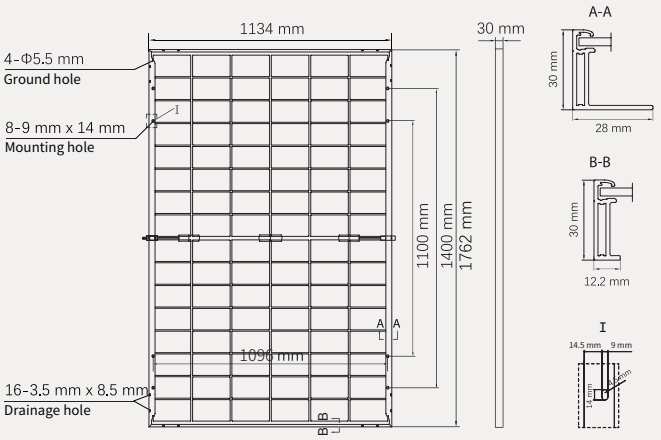
Underwritten by International Insurer

450~465W	0~+3%	23.3%	≤ 1.0%	≤ 0.4%
POWER RANGE	POWER SORTING	MAX MODULE EFFICIENCY	FIRST YEAR POWER DEGRADATION	YEAR 2-30 POWER DEGRADATION

Mechanical Specifications

Outer dimensions (L x W x H)	1762 x 1134 x 30 mm
Cell type	n-type mono-crystalline
No. of cells	96 (6*16)
Frame technology	Aluminum, black anodized
Front / Back glass	2.0+2.0 mm
Cable length (Including connector)	Landscape: 1200 mm; or Customized length
Cable diameter (IEC/UL)	4 mm^2 / 12 AWG
① Maximum mechanical test load	6000 Pa (front) / 4000 Pa (back)
Connector type (IEC/UL)	MC4-EVO2A (Standard) / HCB40 (Optional)
Module weight	24.5 kg
Packing unit	36 pcs / box
Weight of packing unit (for 40'HQ container)	927 kg
Modules per 40' HQ container	936 pcs (Subject to sales contract)

① Refer to Astronergy crystalline installation manual or contact technical department.
Maximum Mechanical Test Load=1.5×Maximum Mechanical Design Load.



Electrical Specifications

STC: Irradiance 1000W/m^2, Cell Temperature 25° C, AM=1.5, Power measurement tolerance: ±3%

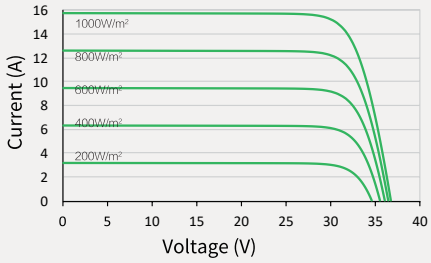
Rated output (Pmpp / Wp)	450	455	460	465
Rated voltage (Vmpp / V)	30.51	30.65	30.78	30.80
Rated current (Impp / A)	14.75	14.85	14.94	15.10
Open circuit voltage (Voc / V)	36.59	36.75	36.91	36.93
Short circuit current (Isc / A)	15.61	15.71	15.81	15.84
Module efficiency	22.5%	22.8%	23.0%	23.3%

BNPI: Irradiance: front 1000W/m^2, rear 135W/m^2, Cell Temperature 25° C, AM=1.5

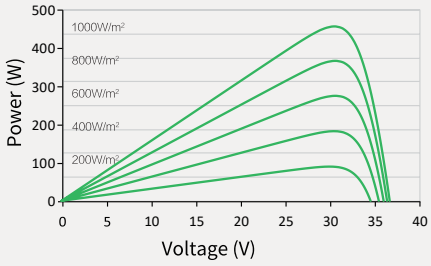
Rated output (Pmpp / Wp)	495.9	501.4	506.9	512.4
Rated voltage (Vmpp / V)	30.52	30.66	30.79	30.81
Rated current (Impp / A)	16.25	16.35	16.46	16.63
Open circuit voltage (Voc / V)	36.60	36.76	36.92	36.94
Short circuit current (Isc / A)	17.28	17.39	17.50	17.53

Curve

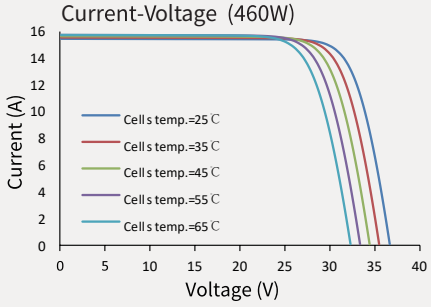
Current-Voltage (460W)



Power-Voltage (460W)



Current-Voltage (460W)



Temperature Ratings (STC)

Temperature coefficient (Pmpp)	-0.29%/°C
Temperature coefficient (Isc)	+0.043%/°C
Temperature coefficient (Voc)	-0.25%/°C

Operating Parameters

Operating Temperature	-40°C ~+85°C
Bifaciality (Pmpp)	80±5%
Junction box IP rating	IP 68
Max. series fuse rating	30 A
Max. system voltage (IEC/UL)	1500V_{DC}

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www.astronergy.com

FOX ESS

DATASHEET

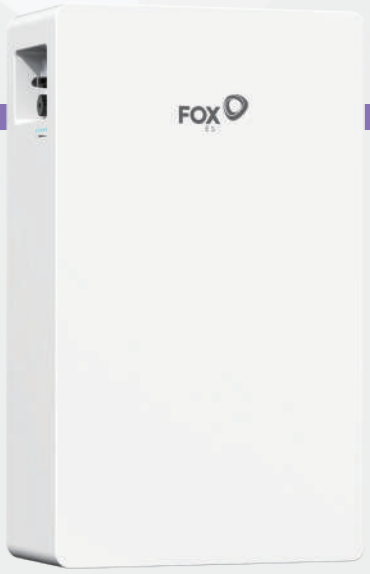
EP6

HIGH VOLTAGE STORAGE BATTERY

Smart Battery Warming

- Scalable to 23.04kWh
- 90% Depth of Discharge
- Floor or Wall Mounting
- Compact & Easy Installation
- IP65 Protection Level
- High Voltage and High Efficiency

BATTERY WARMING | SAFETY RELIABLE | EASY INSTALLATION | HIGH EFFICIENCY | EXPANDABLE SYSTEM | 90% DOD | BUILT-IN FIRE SUPPRESSION



The EP6 is a high-performance, scalable battery storage system, allows for maximum flexibility, making it suitable for a broad range of storage applications.

Additional batteries can be installed in parallel allowing for a maximum storage capacity of 23.04kWh.

For more information about the Fox ESS range, visit:
www.fox-ess.com

TECHNICAL SPECIFICATIONS

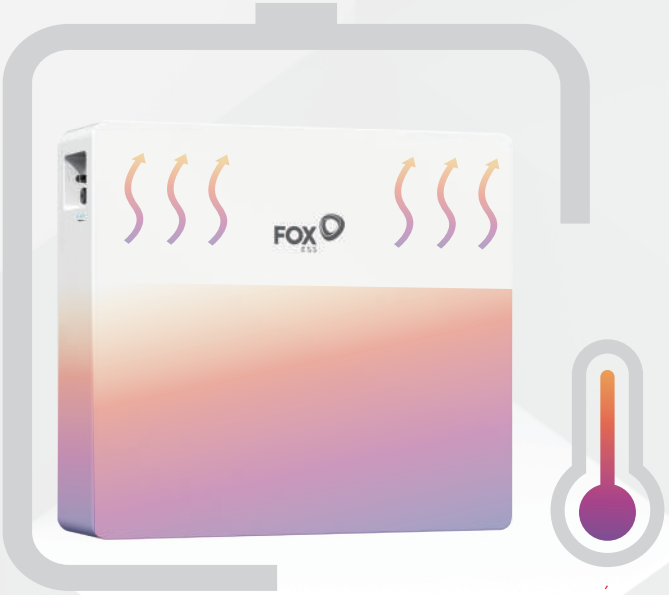
SYSTEM NAME	EP6
MODEL	**EP6 Plus**
ELECTRICAL CHARACTERISTICS	
Compatible PCS	All Series of H1, KH, H3, H3-Pro, US
Battery Type	LFP ($LiFePO_4$)
Nominal Energy [kWh]	5.76
Nominal Voltage [V]	192
Operating Voltage [V]	174 ~ 219
Max.Charge/Discharge Current [A][*1]	30
Recommend Charge Current [A]	15
Peak Discharge Current [A]	65 @60s
Peak Charge Current [A]	36 @5s
Battery Pack Round-Trip Efficiency [%]	≥95
Depth of Discharge [%]	90
Communication	CAN
Display	LED*5
Scalability	Max. 4 Units in Parallel
OPERATING CONDITIONS	
Installation Location	Outdoor/ Indoor
Operating Temperature [°C]	Charge: -25 ~ 55 Discharge: -25 ~ 55
Storage Temperature [°C]	-10 ~ 40
Cooling Method	Natural Convection
Humidity [%]	5 ~ 95 (No Condensation)
Altitude [m]	Max. 3,000
MECHANICAL CHARACTERISTICS	
Dimensions (W*H*D) [mm]	380*640*185
Weight [kg]	51
CERTIFICATES	
Safety	IEC62619
EMC	EN IEC 61000-6-1/2/3/4
Transportation	UN38.3
Ingress Protection	IP65

*1, The current is affected by temperature, cell voltage and SOC.

DATASHEET

EP12

HIGH VOLTAGE STORAGE BATTERY



Smart Battery Warming

- Scalable to 46.08kWh
- 90% Depth of Discharge
- Floor or Wall Mounting
- Compact & Easy Installation
- IP65 Protection Level
- High Voltage and High Efficiency

BATTERY WARMING | SAFETY RELIABLE | EASY INSTALLATION | HIGH EFFICIENCY | EXPANDABLE SYSTEM | 90% DOD | BUILT-IN FIRE SUPPRESSION

The EP12 is a high-performance, scalable battery storage system, allows for maximum flexibility, making it suitable for a broad range of storage applications.

Additional batteries can be installed in parallel allowing for a maximum storage capacity of 46.08kWh.

For more information about the Fox ESS range, visit:
www.fox-ess.com

TECHNICAL SPECIFICATIONS

SYSTEM NAME	EP12
MODEL	**EP12 Plus**
ELECTRICAL CHARACTERISTICS	
Compatible PCS	All Series of H1, KH, H3, H3-Pro, US
Battery Type	LFP ($LiFePO_4$)
Nominal Energy [kWh]	11.52
Nominal Voltage [V]	384
Operating Voltage [V]	348 ~ 438
Max.Charge/Discharge Current [A][*1]	30
Recommend Charge Current [A]	15
Peak Discharge Current [A]	65 @60s
Peak Charge Current [A]	36 @5s
Battery Pack Round-Trip Efficiency [%]	≥95
Depth of Discharge [%]	90
Communication	CAN
Display	LED*5
Scalability	Max. 4 Units in Parallel
OPERATING CONDITIONS	
Installation Location	Outdoor/ Indoor
Operating Temperature [°C]	Charge: -25 ~ 55 Discharge: -25 ~ 55
Storage Temperature [°C]	-10 ~ 40
Cooling Method	Natural Convection
Humidity [%]	5 ~ 95 (No Condensation)
Altitude [m]	Max. 3,000
MECHANICAL CHARACTERISTICS	
Dimensions (W*H*D) [mm]	710*640*185
Weight [kg]	98
CERTIFICATES	
Safety	IEC62619
EMC	EN IEC 61000-6-1/2/3/4
Transportation	UN38.3
Ingress Protection	IP65

*1, The current is affected by temperature, cell voltage and SOC.

DATASHEET

FOX ESS

F SERIES

SINGLE-PHASE **INVERTER**

HIGH PERFORMANCE

Low start-up voltage, wide voltage range, 97.6% maximum efficiency.

EASY INSTALLATION

Flexible configuration, plug and play set-up.

IP65 RATED

Engineered to last with maximum flexibility. Suitable for outdoor installation.

REMOTE MONITORING

Monitor your system remotely via smartphone app or web portal.

Advanced System Monitoring
with FoxCloud V2.0

REFINED - POWERFUL - FLEXIBLE

Fox ESS offers a range of dual MPPT single-phase inverter offering unparalleled efficiency and performance. Our range starts with the F3000 - small and compact and with an ultra-low start-up voltage that will ensure you harvest the most energy possible from your solar panels.

3kW ··· 6kW

For more about the Fox ESS range of single-phase inverters, visit:
www.fox-ess.com

TECHNICAL SPECIFICATIONS

MODEL	F3000	F3600	F4600	F5000	F5300	F6000
INPUT(PV)						
Max. Input Power [W]*1	6000	7200	9200	10000	10600	12000
Max. Input Voltage [V]*2	600					
Nominal DC Operating Voltage [V]	360					
Max. Input Current (Input A/Input B) [A]	20/20					
Max. Short Circuit Current (Input A/Input B) [A]	26/26					
MPPT Voltage Range [V]	60 ~ 550					
MPPT Voltage Range (Full Load) [V]	90 ~ 550	100 ~ 550	130 ~ 550	140 ~ 550	150 ~ 550	160 ~ 550
Start-up Voltage of LCD [V]	60					
Start-up Voltage of Operation [V]	80					
No. of MPP Trackers	2					
Strings per MPP Tracker	1+1					
Max. Inverter Backfeed Current to the Array [mA]	0					
OUTPUT(AC)						
Nominal Active AC Power [W]	3000	3600	4600	5000	5300	6000
Max. Apparent AC Power [VA]	3300	3960	5060	5500	5830	6600
Rated Grid Voltage [V]	220/230/240					
Rated Grid Frequency [Hz]	50/60, ±5					
Nominal AC Current [A]	13.6	16.4	20.9	22.7	24.1	27.3
Max. AC Current [A]	15.0	18.0	23.0	25.0	26.5	30.0
Inrush Current [A]	7.9 @50us					
Max. Output Fault Current [A]	167 @10us					
Max. Output Overcurrent Protection [A]	75					
Displacement Power Factor	1 (Adjustable from 0.8 leading to 0.8 lagging)					
THDi [%]	<3 @Rated Output					
EFFICIENCY						
Max. MPPT Efficiency [%]	99.80	99.80	99.80	99.90	99.90	99.90
European Efficiency [%]	96.80	96.80	96.80	97.00	97.00	97.00
Max. Efficiency [%]	97.60	97.60	97.60	97.60	97.60	97.60
PROTECTION						
Insulation Monitoring	YES					
Residual Current Monitoring	YES					
DC Reverse Polarity Protection	YES					
Anti-islanding Protection	YES					
AC Short-circuit Protection	YES					
AC Overcurrent Protection	YES					
AC Overvoltage Protection	YES					
Temperature Protection	YES					
Surge Protection	Type II (DC) and Type II (AC)					
DC Switch	Optional					
AFCI	Optional					
Night Mode	Optional					
GENERAL DATA						
Dimensions (W*H*D) [mm]	358*335*155					
Weight [kg]	≤9.5					
Cooling Method	Natural					
Protective Class	I					
Ingress Protection (According to IEC60529)	IP65					
Topology	Non-isolated					
Overvoltage Category	III (AC side), II (PV side)					
Noise Emission (typical) [dB] @1m	<30					
Max. Operating Altitude [m]	3000					
Operating Temperature Range [°C]	-25 ~ +60 (Derating at +45)					
Storage Temperature Range [°C]	-40 ~ +70					
Humidity [%]	0 ~ 100 (No Condensation)					
Standby Consumption [W]	＜1 (Without night mode), ＜3 (With night mode)					
Pollution Degree	II					
Monitoring Module	Internal Wifi, and external WIFI module/4G module/LAN Module as optional					
Communication	Meter, CT, RS485, DRM (For AU only)					
Display	LCD, LED, App,Website					
STANDARD						
Certification	IEC62109, NBR-W220BR2022, AS4777, G100, CEI21, IEC61727					

*1 Max. operation power for each MPPT is 4000W.
*2 The inverter will report a error once the PV voltage is higher than 585V.

DATASHEET

H1(G2)/AC1(G2)

SINGLE-PHASE **HYBRID/AC INVERTER**

HIGH VOLTAGE

Includes high-voltage batteries for maximum round-trip efficiency.

EASY INSTALLATION

Flexible configuration, plug and play set-up, built-in fuse protection.

IP65 RATED

Engineered to last with maximum flexibility. Suitable for outdoor installation.

REMOTE MONITORING

Monitor your system remotely via smartphone app or web portal.

Advanced System Monitoring
with FoxCloud V2.0

REFINED - POWERFUL - FLEXIBLE

up to **6kW** charge/discharge

Harness the power of the sun day and night with the ground-breaking range of Hybrid & AC inverter from Fox ESS. Full of advanced features and compatible with our very own range of high-voltage batteries, the hybrid range from Fox ESS.

3kW ··· 6kW

For more information about the Fox ESS range, visit:
www.fox-ess.com

TECHNICAL SPECIFICATIONS

MODEL	H1-3.0-E-G2 AC1-3.0-E-G2	H1-3.7-E-G2 AC1-3.7-E-G2	H1-4.6-E-G2 AC1-4.6-E-G2	H1-5.0-E-G2 AC1-5.0-E-G2	H1-6.0-E-G2 AC1-6.0-E-G2
INPUT PV (ONLY FOR HYBRID)					
Max. Array Power [Wp]	6000	7400	9200	10000	12000
Max. Input Power [W]	4500 A:2250 B:2250	5500 A:2750 B:2750	6900 A:3450 B:3450	7500 A:3750 B:3750	9000 A:4500 B:4500
Max. Input Voltage [V]	600				
Start-up Input Voltage [V]	75				
Rated Input Voltage [V]	360				
MPPT Operating Voltage Range [V]	80 ~ 550				
Max. Input Current [A]	16 / 16				
Max. Short-circuit Current [A]	20 / 20				
No. of MPP Trackers	2				
Strings per MPP Tracker	1				
BATTERY CONNECTION					
Battery Type	Lithium Battery (LFP)				
Battery Voltage [V]	80 ~ 480				
Max. Charge/Discharge Current [A]	40				
Communication Interface	CAN(communicate with inverter, upgrade BMS)				
AC INPUT AND OUTPUT (GRID)					
Max. AC Input Power [VA]	6000	7680	9200	10000	12000
Max. AC Input Current (per phase) [A]	27.3	34.9	41.8	45.5	54.5
Rated Output Power [W]	3000	3680	4600	5000	6000
Max. Output Apparent Power [VA]	3300	4048/3680[1]	5060	5500	6600
Rated Output Current (per phase) [A]	13.6	16.7/16[1]	20.9	22.7	27.3
Rated Output Current (per phase) [A](For AUS)	13.0	16.0	20.0	21.7	26.1
Max. Output Current [A]	15.0	18.4	23.0	25.0	30.0
Rated Grid Voltage [V]	220/230/240				
Rated Grid Frequency [Hz]	50/60				
Power Factor	1 (Adjustable from 0.8 leading to 0.8 lagging)				
THDi [%]	<3 @rated power				
EPS OUTPUT (WITH BATTERY)					
Max. Output Apparent Power [VA]	3000	3680	4600	5000	6000
Peak Output Apparent Power (60s) [VA]	3600	4400	5500	6000	7200
Max. Current (per phase) [A]	13.6	16.7	20.9	22.7	27.3
Rated Output Voltage [V]	220/230/240				
Rated Output Frequency [Hz]	50/60				
Power Factor	1 (Adjustable from 0.8 leading to 0.8 lagging)				
THDv (Linear Load) [%]	<2 @rated power				
Parallel operation [PCS]	10				
Switch time [ms]	<20				
EFFICIENCY					
European Efficiency [%]	95.26	95.70	96.23	96.30	96.33
Max. Efficiency [%]	97.01	97.08	97.04	97.08	97.08
Max. Battery Charge Efficiency (PV to BAT) (@full load) [%]	98.50				
Max. Battery Discharge Efficiency (BAT to AC) (@full load) [%]	97.00				
PROTECTION					
Insulation Monitoring	YES				
Residual Current Monitoring	YES				
DC Reverse Polarity Protection	YES				
Anti-islanding Protection	YES				
AC Short-circuit Protection	YES				
AC Overcurrent/Overvoltage Protection	YES				
DC Switch	YES				
Battery Wake-up Function	YES				
SPD	DC: Type II /AC: Type III				
AFCI	Optional				
GENERAL DATA					
Dimensions (W*H*D) [mm]	434*418*185				
Weight [kg]	22				
Installation	Wall-Mounted				
Topology	Non-isolated				
Cooling Method	Natural				
Noise Emission [dB]	35				
Max. Operating Altitude [m]	2000				
Operating Temperature Range [°C]	-25 ~ 60				
Humidity (No Condensation) [%]	0 ~ 100				
Ingress protection	IP65				
Standby consumption[W]	＜15				
Monitoring Module	WiFi, LAN(Optional) , 4G(Optional)				
Communication	RS485, DRM, Ripple Control, USB, CAN				
Display	LCD, App, Website				
STANDARD COMPLIANCE (MORE AVAILABLE UPON REQUEST)					
Safety	EN 62109-1, EN 62109-2				
Grid Regulation	G98, G99, EN50549, AS / NZS 4777.2				

* More technical characteristics are available on demand and customized.
1. 3680 for G98.

DATASHEET

Single-Phase S Series (G2)

S700-G2 / S1000-G2 / S1500-G2 / S2000-G2 / S2500-G2 / S3000-G2 / S3300-G2

S SERIES (G2)

SINGLE **MPPT INVERTERS**

REFINED - POWERFUL - FLEXIBLE

Fox ESS offer a range of single MPPT single-phase inverters offering unparalleled efficiency and performance. Our range starts with the S700-G2 - small and compact and with an ultra-low start-up voltage that will ensure you harvest the most energy possible from your solar panels.

High Performance

Low start-up voltage, wide voltage range, 97.4% maxium effiency

Easy Installation

Flexible configuration, plug and play set-up.

IP65 Rated

Engineered to last with maximum flexibility. Suitable for outdoor installation.

Remote Monitoring

Monitor your system remotely via smartphone app or web portal.

ANYTIME, ANYWHERE

REMOTE MONITORING PLATFORM

Monitor system performance in real-time via smartphone app or web portal using our advanced monitoring platform.

THE S SERIES (G2)

For more about the Fox ESS range of single-phase inverters, visit:

WWW.FOX-ESS.COM

TECHNICAL SPECIFICATIONS

Model	S700-G2	S1000-G2	S1500-G2	S2000-G2	S2500-G2	S3000-G2	S3300-G2
INPUT							
PV							
Max. Input Power[W]	1050	1500	2250	3000	3750	4500	4950
Max. Input Voltage[V]	500						
Start-up Input Voltage[V]	60						
Rated Input Voltage[V]	360						
MPPT Operating Voltage Range[V]	50 ~ 480						
Max. Input Current[A]	14						
Max. Short-circuit Current[A]	18						
No. of Independent MPP Trackers	1						
No. of Strings per MPP Tracker	1						
OUTPUT							
AC							
Rated Output Power[W]	700	1000	1500	2000	2500	3000	3300
Max. Output Apparent Power[VA]	800	1100	1650	2200	2750	3300	3300
Rated Grid Voltage[V]	220/230/240						
Rated Grid Frequency[Hz]	50/60						
Rated Output Current[A]	3.0	4.3	6.5	8.7	10.9	13.0	14.3
Max. Output Current[A]	3.5	4.8	7.2	9.6	12.0	14.3	14.3
Power Factor	1 (Adjustable from 0.8 leading to 0.8 lagging)						
Total Harmonic Distortion (THDi) [%]	<3						
EFFICIENCY							
MPPT Efficiency [%]	99.00	99.00	99.00	99.00	99.00	99.00	99.00
Euro-Efficiency [%]	96.50	96.50	96.50	96.80	96.80	96.80	96.80
Max. Efficiency [%]	97.20	97.20	97.30	97.40	97.40	97.40	97.40
PROTECTION							
Insulation Monitoring	YES						
Residual Current Monitoring	YES						
DC Reverse Polarity Protection	YES						
Anti-islanding Protection	YES						
AC Short-circuit Protection	YES						
AC Overcurrent Protection	YES						
AC Overvoltage Protection	YES						
Surge Protection	Optional (DC/AC: Type II)						
DC Switch	Optional						
AFCI	Optional						
GENERAL DATA							
Dimensions (WxHxD)[mm]	290*220*116						
Weight[kg]	5.4						
Cooling Method	Natural Convection						
Topology	Non-isolated						
Noise Emission (typical)[dB]	<30						
Max. Operating Altitude[m]	3000						
Operating Temperature Range[°C]	-25 ~ 60						
Humidity [%]	0 ~ 100 (No Condensation)						
Ingress Protection	IP65						
Internal Consumption at Night[W]	<1						
Monitoring Module	WIFI / 4G (Optional)						
Communication	RS485, Meter / CT, ISO Alarm						
Display	LCD, Touch Key, App, Website						
STANDARD COMPLIANCE (MORE AVAILABLE UPON REQUEST)							
Safety	EN 62109-1:2010, EN 62109-2:2011						
EMC	EN IEC 61000-6-3:2021, EN IEC 61000-6-4:2019, EN IEC 61000-6-1:2019, EN IEC 61000-6-2:2019, EN IEC 61000-3-2:2019+A1:2021, EN 61000-3-3:2013+A1:2019+A2:2021						
Grid Regulation	ABNT NBR 16149, ABNT NBR 16150, C10/11, EN 50549-1, PN EN-50549-1, VDE V 0126-1-1, IEC 61727, IEC 62116, IEC 61683, IEC 60068-2-1/2/14/30/64, G98						

DATASHEET

FOX ESS

G SERIES

SINGLE-PHASE **INVERTER**

HIGH PERFORMANCE

Low start-up voltage, wide voltage range, 97.8% maximum efficiency.

EASY INSTALLATION

Flexible configuration, plug and play set-up.

IP65 RATED

Engineered to last with maximum flexibility. Suitable for outdoor installation.

REMOTE MONITORING

Monitor your system remotely via smartphone app or web portal.

Advanced System Monitoring
with FoxCloud V2.0

REFINED - POWERFUL - FLEXIBLE

Fox ESS offers a range of single-phase inverter offering unparalleled efficiency and performance. The single-phase G Series inverter options range from 7kW to 10.5kW.

7kW ··· 10.5kW

For more about the Fox ESS range of single-phase inverters, visit:
www.fox-ess.com

TECHNICAL SPECIFICATIONS

Model	G7	G8	G9	G10	G10.5
INPUT (PV)					
Max. Input Power [W]	10500	12000	13500	15000	15750
Max. /Min. Input Voltage [V]	600/80				
Start-up Input Voltage [V]	120				
Rated Input Voltage [V]	360				
MPPT Operating Voltage Range [V]	80 ~ 550				
Max. Input Current [A]	14				
Max. Short-circuit Current [A]	18				
No. of MPP Trackers	3				
Strings per MPP Tracker	1				
OUTPUT (AC)					
Rated Output Apparent Power [VA]	7000	8000	9000	10000	10500
Max. Output Apparent Power [VA]	7700	8800	9900	10500	10500
Rated Grid Voltage [V]	220/230/240				
Rated Grid Frequency [Hz]	50/60				
Rated Output Current [A]	30.4	34.8	39.1	43.5	45.7
Max. Output Current [A]	33.5	38.3	43.0	45.7	47.7
Power Factor	1 (Adjustable from 0.8 leading to 0.8 lagging)				
Total Harmonic Distortion (THDi) [%]	<3				
EFFICIENCY					
MPPT Efficiency [%]	99.00				
European Efficiency [%]	97.40				
Max. Efficiency [%]	97.80				
PROTECTION					
Insulation Monitoring	YES				
Residual Current Monitoring	YES				
DC Reverse Polarity Protection	YES				
Anti-islanding Protection	YES				
AC Short-circuit Protection	YES				
AC Overcurrent Protection	YES				
AC Overvoltage Protection	YES				
Surge Protection	Optional (DC/AC: Type II)				
DC Switch	Optional				
AFCI	Optional				
GENERAL DATA					
Dimensions (W*H*D) [mm]	380*440*167				
Weight [kg]	19				
Cooling Method	Natural Convection				
Topology	Transformerless				
Noise Emission (typical) [dB]	<30				
Max. Operating Altitude [m]	3000				
Operating Temperature Range [°C]	-25 ~ 60				
Humidity [%]	0 ~ 100 (No Condensation)				
Ingress Protection	IP65				
Internal Consumption at Night [W]	<1				
Monitoring Module	WIFI / 4G (Optional)				
Communication	RS485, Meter/CT, DRM				
Display	LCD, Touch Key, App, Website				
Country Of Manufacture	China				
STANDARD COMPLIANCE (MORE AVAILABLE UPON REQUEST)					
Safety	EN 62109-1/2				
EMC	EN 61000-6-3, EN IEC 61000-6-1, IEC 61000-6-1/3				
Grid Regulation	AS/NZS-4777.2, ABNT NBR 16149, ABNT NBR 16150, ABNT NBR IEC 62116, NB/T 32004, G99				

The UK's favourite PV accessory!

Solar iBoost+ is our latest automatic water heating device for pv system owners. Its increased efficiency and extra functions deliver even more savings and when coupled with iBoost Buddy you can conveniently monitor and control ***Solar iBoost+*** within the home.
With over 45,000 ***Solar iBoost*** products successfully working in UK homes installers recommend it!

Solar iBoost+ is brought to you by Marlec, manufacturers in wind and solar renewables since 1979.

Visit www.solariboost.co.uk for latest customer feedback and detailed specifications

Contact your local electrical installer for fitting at:

marlec
renewable power

Marlec Eng Co Ltd
Rutland House, Trevithick Road, Corby, NN17 5XY
Tel:+44 (0)1536 201588 sales@marlec.co.uk
www.solariboost.co.uk

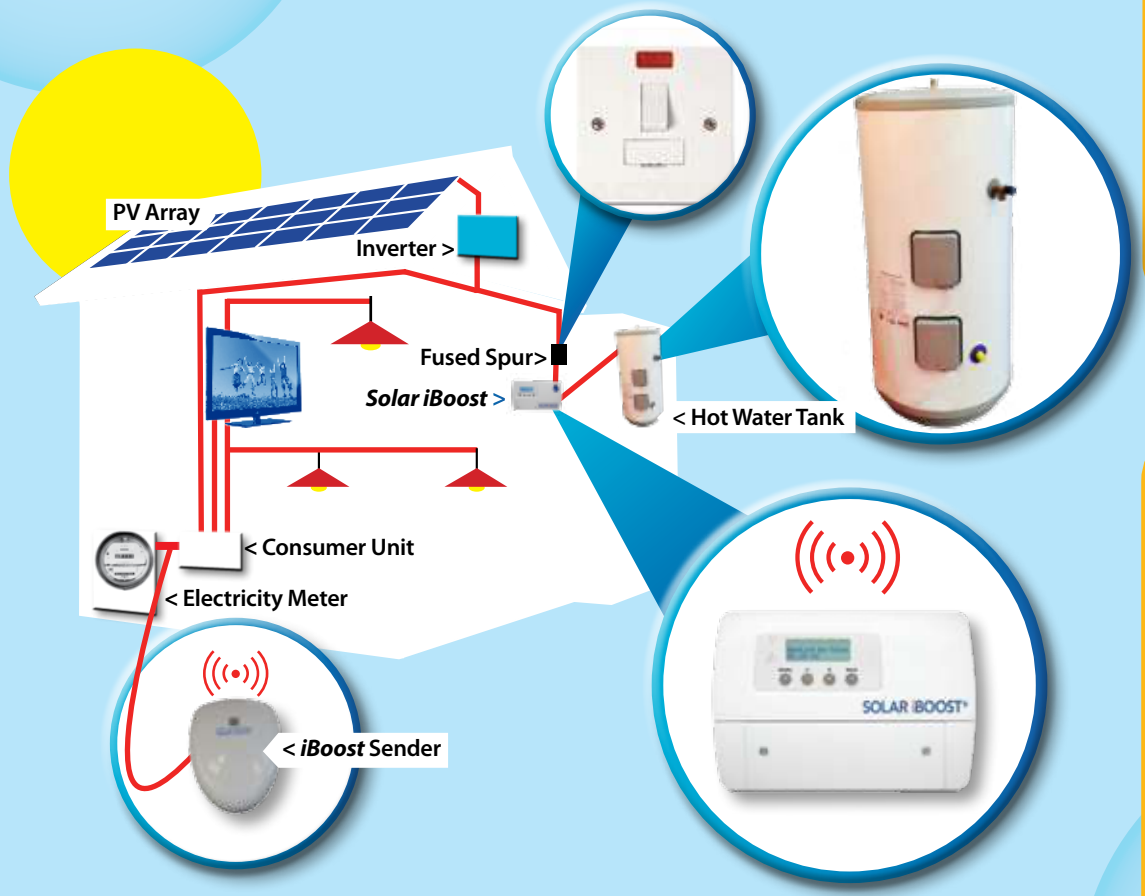
SOLAR iBOOST+

Gives you free hot water from your PV array!

Automatically consume the surplus PV generated energy at your home

Install a *Solar iBoost+* and watch your heating bills fall!

The ***Solar iBoost+*** concept is to divert the surplus solar photovoltaic energy generated at your home to heat the water in the household tank and save you money.



How does it affect my Feed in Tariff Payments?

This depends on the type of scheme operated in your country but many tariffs are reducing as energy costs are rising, favouring "self consumption" of PV and wind powered home generation. Generation based FiT's are not normally affected as the ***Solar iBoost*** only measures what is exported. In the UK, the additional export tariff is typically unmetered and therefore self consumption is most advantageous.

Benefits on net metering systems depend on the tariff paid but it may be more cost effective to consume the electricity.

How it Works

1 Using just a single clamp installed at the household meter the Sender transmits vital export energy information to the ***Solar iBoost+*** wirelessly.

2 ***Solar iBoost+*** is activated when excess energy is available. It intelligently controls and adjusts the flow of energy to the immersion in proportion with the fluctuating export levels.

3 Water is heated during the day using excess energy only up to the immersion thermostat's setting. You can top up if required from usual heating methods or using the ***Solar iBoost***'s grid power functions.

Typical example of Solar iBoost+ captured energy:

Generation	2700 W
Energy Consumed	1400 W
Potential Export	1300 W
Energy Diverted	1200 W
Energy Exported	100 W

With *Solar iBoost+* fitted you will

- Cut the cost of water heating in your home.
- Reduce the use of your boiler.
- Maximise the use of the free solar energy generated at your property.

Solar iBoost+ uses only the energy that would otherwise be exported

A Simple Design with Innovative and Clever Features

- ***Solar iBoost+*** **fits quickly and neatly next to your water cylinder wired simply between a fused spur and the immersion. No need to change your standard immersion heater up to 3kW.***
- **It responds rapidly to the varying home consumption and changing weather ensuring that only excess power is used.**
- ***Solar iBoost+*** **features connections for 2 immersions, switching between them automatically to maximise electric water heating systems.**
- **Wireless Sender eliminates unsightly and costly wiring.**
- ***Solar iBoost+*** **displays real time information "Heating by Solar 1.6kW" and historical energy saving figures are seen at the push of a button. View this and more data using the optional *iBoost+ Buddy* home display.**
- **LED's also give an instant visual indication of the system in operation.**
- **Simple programmable timer enables *Solar iBoost+* to work in harmony with your existing water heating system on a 5/2 day basis. Even separate winter and summer settings can be programmed and switched between at the push of a button.**
- **Selectable languages; French, German, Italian, Portuguese & Spanish.**
- **Built-in Boost override switch keeps you in control so you can top up your hot water in 15 minute increments up to 2 hours.**
- ***Solar iBoost+*** **is ready to connect wirelessly to the *Buddy* if added at installation or a later date.**
- **CE compliance to all product and safety standards conducted by independent test laboratories.**
- **2 year warranty. Dimensions: 288x255x100mm 1.95kg**

Consult your PV installer or qualified electrician for installation in your home. The wireless communication, no essential programming and connection into existing circuits means that installation is straightforward for a professional.
Add ***iBoost+ Buddy*** to conveniently monitor home energy and *Heating by Solar* savings.

iBOOST+ BUDDY

Monitor home energy usage with ***iBoost Buddy***. The eco-gauge lets you know when unused energy is available so you can switch on appliances.

View the ***Solar iBoost+*** display and remotely activate the Boost function.

Keep the ***Buddy*** handy so you can check the intuitive "traffic light" energy indicator.

Dims: 133x113x56mm 150g

The ***iBoost+ Buddy*** comes with a mains adaptor and connects wirelessly to the ***Solar iBoost+***. Your installer can pair it into the system at the same time or you can add it at a later date.

TS4-A-O

Module-level optimization, monitoring, and rapid shutdown

The Tigo TS4-A-O improves production, safety, and intelligence in new designs and existing systems. Patented technology delivers top performance with high efficiency for a fast ROI. Easy installation and long-term reliability reduce system downtime and truck rolls, while Tigo's Energy Intelligence platform enables quicker onsite commissioning and comprehensive remote monitoring.

Features

- Simple, fast installation – snaps to a standard PV module frame or mounts to racking
- Intelligent optimization – delivers the maximum energy from an array
- Module-level monitoring – full visibility into module- and system-level production
- Rapid shutdown – a UL Standards-certified component for photovoltaic rapid shutdown systems (PVRSS) worldwide
- Works with any system – fully compatible with thousands of different inverter models from more than 50 inverter brands
- 25-year warranty
- Monitoring, rapid shutdown, and remote troubleshooting with Tigo Access Point (TAP) and Cloud Connect Advanced (CCA)

Specifications

Electrical	
Maximum current (I_{MP}/I_{SC})	15 A/20 A
Input voltage range (V_{MP})	16 – 80 V
Maximum input voltage	80 V
Maximum system voltage (V_{MAX})	1000 V/1500 V*
Maximum output current (I_{MAX})	15 A
Maximum output power (P_{MAX})	700 W
Maximum fuse rating	25 A
Maximum efficiency	99.6%
AS 5033: Operational Output	
Maximum output current	$I_{DCU\ MAX}$
Maximum output voltage	$V_{DCU\ MAX}$
Maximum output power	$P_{DCU\ MAX}$
Rapid Shutdown	
TS4 conductor AWG	12
Rapid shutdown time limit	<30 sec.
PVRSE-controlled conductor limits	≤240 VA, ≤8 A, ≤30 V_{DC}
UL 1741-compliant PVRSE	Yes
Communications	Wireless
Connections	
Input (from module) cable lengths	0.12/0.62 m
Output (to string) cable lengths	1.2/2 m
Connectors	MC4/EVO2

* Depending on UL/IEC certification

tigoenergy.com

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Specifications

Environmental	
Operating temperature range	-40 – 70 °C (-40 – 158 °F)
Storage temperature range	-40 – 85 °C (-40 – 185 °F)
Maximum elevation	2000 m (6560 ft.)
Outdoor IP rating	IP68/NEMA 3R
Mechanical	
Dimensions (H/W/D)	139.7 x 138.4 x 22.9 mm (5.4 x 5.5 x 0.9 in.)
Weight	520 g (1.15 lb.)
General	
Standards compliance	
FCC 15b, ETSI EN 301 489, CISPR 31, CSA 22.2, IEC 62109, NEC 690.12 UL 1741 PVRSE/PVRSS	
Warranty	25 years

Ordering Information

Part Number	V_{MAX} Certifications UL/IEC	Cable Lengths	Connectors
461-00252-20	1500 V/1000 V	1.2/2 m	MC4
461-00252-32	1500 V/1000 V	0.12/1.2 m	MC4
461-00252-62	1500 V/1000 V	0.62/1.2 m	MC4
461-00261-32	1500 V/1500 V	0.12/1.2 m	EVO2
461-00261-62	1500 V/1500 V	0.62/1.2 m	EVO2
462-00252-32	1000 V*	0.12/1.2 m	MC4
462-00252-62	1000 V*	0.62/1.2 m	MC4
462-00261-32	1500 V*	0.12/1.2 m	EVO2
462-00261-62	1500 V*	0.62/1.2 m	EVO2

* IEC certified only

More Resources

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