

SMARTFLOWER +PLUS TECHNICAL DATA



SYSTEM POWER OUTPUT

Nominal power output	2.5 kWp
Annual output with 2-axis tracking	4,500–6,500 kWh *

SOLAR MODULE

Panel type	Glass / Backsheet
Panel power output warranty (80%)	25 years
Panel product warranty	10 years
Cell type	166mm Half Cut Monocrystalline PERC

SOLAR ARRAY DATA

Array configuration	12 module, two string
Array maximum power (Pmax)	2677 W
MPP voltage (Vmpp)	264 V
MPP current (Impp)	5.0 A
Open circuit voltage (Voc, ± 5%)	309 V
Short circuit voltage (Isc, ± 5%)	5.2 V

SYSTEM GENERAL DATA

Inverter	Integrated with unit
System weight	1,900 lb 862 kg
System self-consumption per year	Dependent on use case and environmental conditions

Shipping dimensions (in | mm):

Vertical packaging	65 x 47 x 106 1651 x 1194 x 2692
Horizontal packaging (special order)	111 x 46 x 73 2819 x 1168 x 1854
Total shipping weight	2,450 lbs 1111 kg
System warranty	2 years parts and labor

NORMATIVE REFERENCES

Certificate and compliance with standards	UL 3703, UL 1703, UL 1004, UL 9540, IEC 60068-3-3 Zone 3, CEC, CSA, FCC Class B
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OPERATIONAL CONDITIONS

Operational temperature range	-4°F to 104°F -20°C to 40°C
Humidity	5–95% (non condensing)

ELECTRICAL CONNECTIONS

Up to 100 ft (240 V Split Phase)	4 x 12 AWG (L1, L2, N, PE)
Up to 100 ft (208 V Three Phase)	5 x 12 AWG (L1, L2, L3, N, PE) **
From 100 ft onwards	Accommodate for voltage drop
Grid connection (circuit breaker)	20 A ***
Wind guard	32 ft 9.75 m cable (included)

REMOTE MONITORING

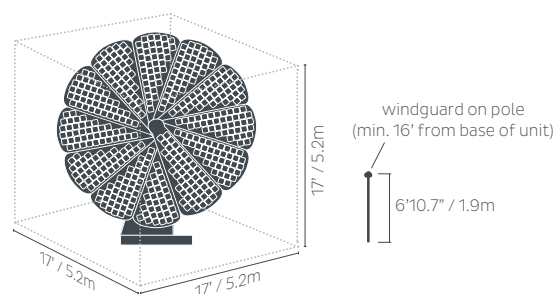
Network / LAN cable	CAT 6e or CAT7 with RJ45 Connector
Wireless	Wi-Fi enabled kit (optional)
Off-grid / remote location	Cellular network enabled (optional)

INSTALLATION

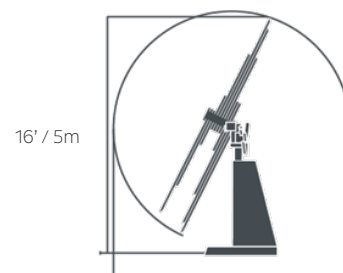
Mounting	4 fastening points to foundation
Assembly	Earth screws, concrete foundation, or a pre-cast concrete pad ****

DIMENSIONS

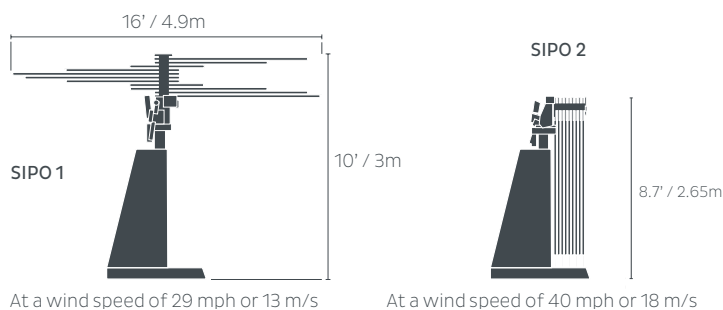
ACTIVE AREA



TRACKING, MAX. HEIGHT



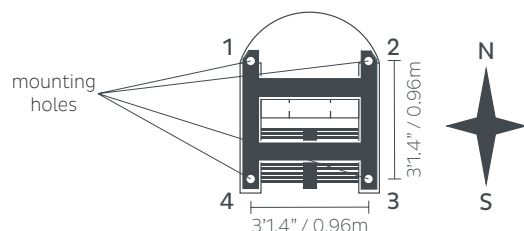
SAFETY POSITIONS



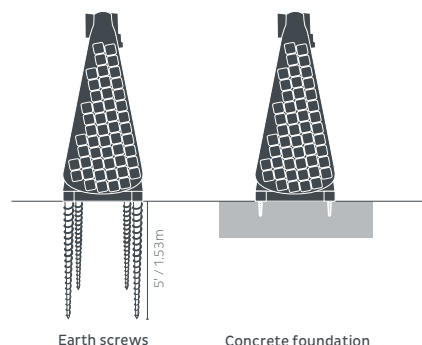
* Dependent on geographical location and weather
 ** If using a 208 VAC connection, please contact Smartflower before installation
 *** Local standards must be followed
 **** Recommendations may vary based on local jurisdiction and soil conditions
 For more information, contact info@smartflowersolar.com

INSTALLATION DRAWINGS

BOTTOM VIEW



FOUNDATION



INVERTER DATA

Inverter	Sol-Ark 8K
Nominal frequency	50 Hz / 60 Hz

DC INPUT DATA

Max. DC voltage	500 V
MPPT voltage range	150–425 V
Max. DC work current	18 A
Number of inputs/MPP trackers	2

AC OUTPUT DATA

Rated AC voltage	9000 VA
Max. AC current	50 A (240 V)
AC connection	On-grid (240 V split-phase, L1, L2, N, PE), 3-Phase (208 V, L1, L2, L3, N, PE)
Grid frequency range	45–66 Hz (240 V)

FEED-IN PHASES

Max. efficiency	97.5%
CEC efficiency	96.5%

INVERTER PROTECTIVE DEVICES

Anti-islanding	Internal, in accordance with UL1741-2010/ 2018, IEEE1547a-2003/2014, FCC 15 class B, UL1741SA, CA Rule 21, HECO Rule 14H
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NORMATIVE REFERENCES

Certificate and compliance with standards	NEC 690.4B & NEC 705.4/6
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GENERAL DATA

Degree of protection	NEMA 1
Inverter warranty	5–10 years

CHARGER DATA

Charge controller	Sol-Ark 8K
Nominal battery voltage range	41–59 V
Continuous battery charging output	190 A
Charging efficiency	96.0%

CHARGER PROTECTIVE DEVICES

DC reverse polarity protection	No
DC disconnect	Yes
AFCI	Yes
Rapid shutdown compliant	Yes
Ground fault protection	Yes

CHARGER NORMATIVE REFERENCES

Certificate and compliance with standards	Combined inverter/charger. See inverter details above for Normative References.
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CHARGER GENERAL DATA

Degree of protection	Combined inverter/charger. See inverter details above for General Data.
Charger warranty	

BATTERY STORAGE SYSTEM

Battery	Simpliphi Phi 3.8 48V
Battery storage system configuration	3 batteries arranged in Parallel (3P)
System Capacity	11.4 kWh
Nominal operating system voltage	51.2 V
System max. charge current	88 A
System float voltage	54 V
Maximum discharge power	4.5 kW

SIMPLIPHI PHI 3.8 48V BATTERY DATA

Nominal battery voltage	51.2 V
Battery operating temperatures	-4°F to 140°F -20°C to 60°C
Nominal battery capacity	75 Ah
Max. battery charge / discharge current	37.5 A
Safety and compliance	UL 1973, CE, RoHS