

PARTNER

X3-ULTRA

15kW
|
30kW

Three-phase Hybrid Inverter

Commercial & Industrial
Hybrid Solution

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Features

Three-phase Hybrid Inverter



Economic

- Maximum 200% oversize and 200% PV input power
- Maximum 36A input current per MPPT, support high power solar panel



Intelligent

- AI ready, forecasting solar generation and home consumption, smart energy management strategy
- VPP ready, SolaX cloud supports resource aggregator
- Support smart scene function, intelligent loads management
- Micro-grid ready, supporting a variety of scenarios, both on-grid and off-grid, balancing power between PCS and Hybrid in real time
- Support 7×24h scheduling mode
- Support Wireless meter solution
- Dual independent battery ports are ready to expand battery capacity free



Robust

- Robust back-up ability, switch over time <math>< 10\text{ms}</math>, up to 200% EPS output for 10s, support half-wave loads
- Stronger, EPS operation without battery



Safe

- IP66 protection level
- AC&DC SPD type II, always guarding the inverter
- AFCI optional



X3-ULTRA

15-30kW



X3-ULTRA (THREE PHASE)

X3-ULT-15K X3-ULT-15KP X3-ULT-19.9K X3-ULT-20K X3-ULT-20KP X3-ULT-25K X3 - ULT - 30K

INPUT PV

Max. recommended PV array power [Wp]	30000	30000	40000	40000	40000	50000	60000
Max. input DC power [W]	30000	30000	40000	40000	40000	50000	60000
Max. DC voltage [V] ^①	1000						
Nominal DC operating voltage [V]	600						
No. of MPP trackers / Strings per MPP tracker	2 (2 / 2)	3 (2 / 2 / 2)	2 (2 / 2)	2 (2 / 2)	3 (2 / 2 / 2)		
Max. input current (input PV1 / input PV2 / input PV3) [A] ^②	36 / 36	36 / 36 / 36	36 / 36	36 / 36	36 / 36 / 36		
Max. short circuit current (input PV1 / input PV2 / input PV3) [A] ^③	45 / 45	45 / 45 / 45	45 / 45	45 / 45	45 / 45 / 45		
MPPT operating voltage range [V] ^④	160 - 950						
Start output voltage [V]	200						

OUTPUT AC(On-Grid)

Nominal AC power [VA]	15000 (AS 4777 14999)	19999	20000	20000	25000 (VDE4105 24900)	30000 (AS 4777 29999, VDE4105 29900)
Max. apparent AC power [VA]	16500 (AS 4777 14999)	19999	22000	22000	27500 (VDE4105 24900)	30000 (AS 4777 29999, VDE4105 29900)
Rated grid voltage (AC voltage range) [V]	3P4W, 400 / 230					
Rated grid frequency [Hz]	50 / 60					
Nominal AC current [A]	21.8	29.0	29.0	29.0	36.3	43.5
Max. AC current [A]	24.0 (AS 4777 21.8)	29.0	31.9	31.9	39.9 (VDE4105 36.3)	43.5
Displacement power factor	1 (- 0.8 ~ 0.8)					
Total harmonic distortion (THDi, rated power) [%]	< 3					

INPUT AC

Nominal AC power [VA]	15000	15000	19999	20000	20000	25000	30000
Nominal AC current [A]	21.8	21.8	29.0	29.0	29.0	36.3	43.5
Rated grid voltage (AC voltage range) [V]	3P4W, 400 / 230						
Rated grid frequency [Hz]	50 / 60						

BATTERY

Battery type	Lithium - ion						
Battery voltage range [V]	120 - 800						
Max. charge / Discharge current [A]	60 (30 × 2)						

EPS OUTPUT(WITH BATTERY)

EPS peak power [VA]	2 time of rated power, 10s						
EPS rated power [VA]	15000	15000	19999	20000	20000	25000	30000
EPS rated voltage [V], Frequency [Hz]	400 / 230; 50 / 60						
EPS rated current [A]	21.8	21.8	29.0	29.0	29.0	36.3	43.5
Switchover time [ms]	< 10						
Total harmonic distortion (THDv, linear Load) [%]	< 3						

POWER CONSUMPTION

Internal consumption (night) [W]	< 5						
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PROTECTION

Anti-Islanding protection	Yes						
DC reverse polarity protection	Yes						
Insulation monitoring	Yes						
Residual current monitoring	Yes						
AC overcurrent protection	Yes						
AC short-circuit protection	Yes						
AC overvoltage protection	Yes						
Over-heat protection	Yes						
Battery reverse charging from grid	Yes						
Surge protection	Type II, DC and AC						
AFCI	OPT						

EFFICIENCY

MPPT efficiency	99.9%
Max. efficiency	98.0%
European efficiency	97.7%
Rated Battery charge efficiency	98.5%
Rated Battery discharge efficiency	97.0%

STANDARD

Safety	EN / IEC62109 - 1 / - 2
EMC	EN61000 - 6 - 1 / 2 / 3 / 4; EN61000 - 3 - 11 / 12; EN 5011; IEC 62920
Certification	VDE4105 / G99 / AS4777 / EN50549 / CEI 0 - 21 / IEC61727 / PEA / MEA / NRS - 097 - 2 - 1 / RD1699 / TOR

GENERAL DATA

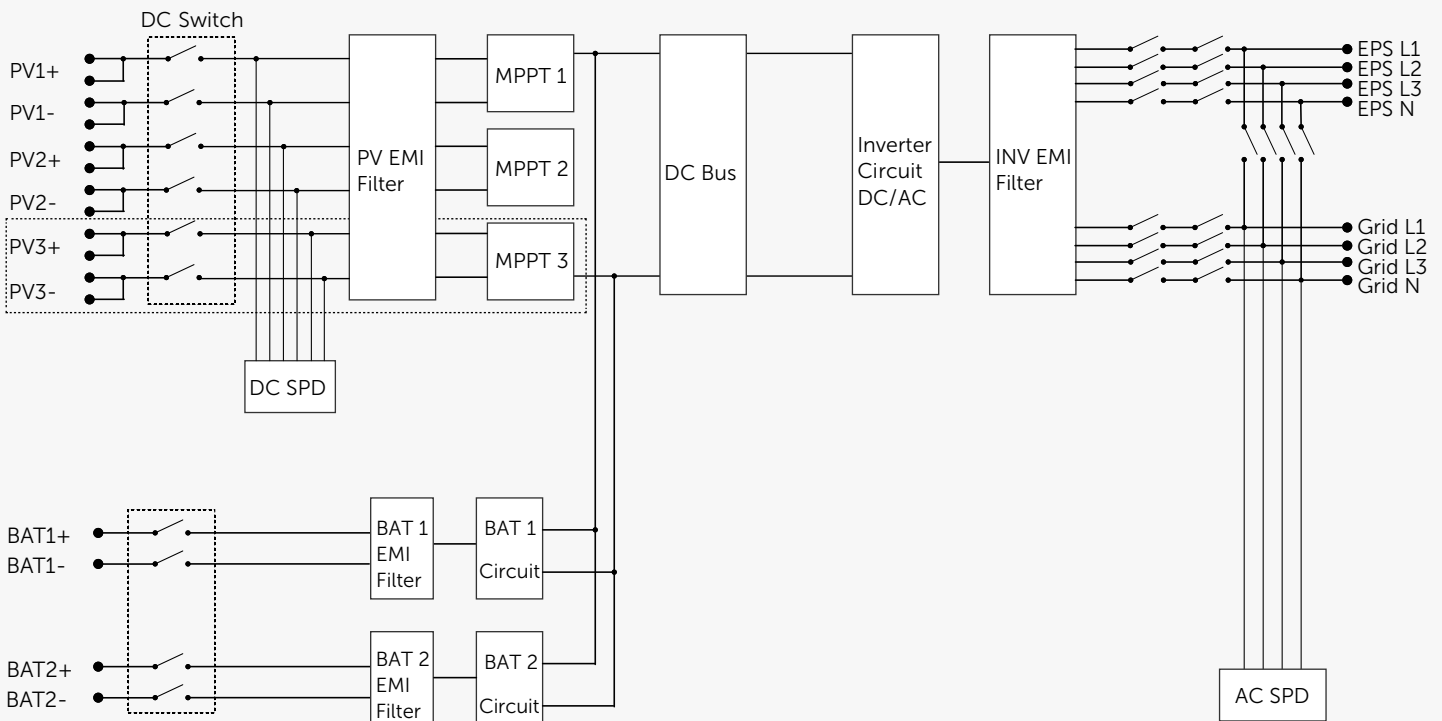
Protection class	IP66
Operating temperature range [°C]	- 35 ~ 60 (Derating above + 45)
Relative humidity [%]	0 ~ 100
Altitude [m]	< 3000
Storage temperature [°C]	- 40 ~ +70
Dimensions (WxHxD) [mm]	696 × 526 × 240
Weight [kg]	47
Cooling concept	Smart cooling
Topology	Transformerless
Communication	Modbus (RS485), Meter (RS485), DI × 2, DO × 1

①: The maximum input voltage is the upper limit of the DC voltage. Any higher input DC voltage would probably damage inverter.

②: Input PV3 is only available for 15KP, 20KP, 25K, and 30K. When both strings are connected to a single MPPT, the maximum input current for a single string is 18A. When a single string is connected to one MPPT, the maximum input current for a single string is 20A.

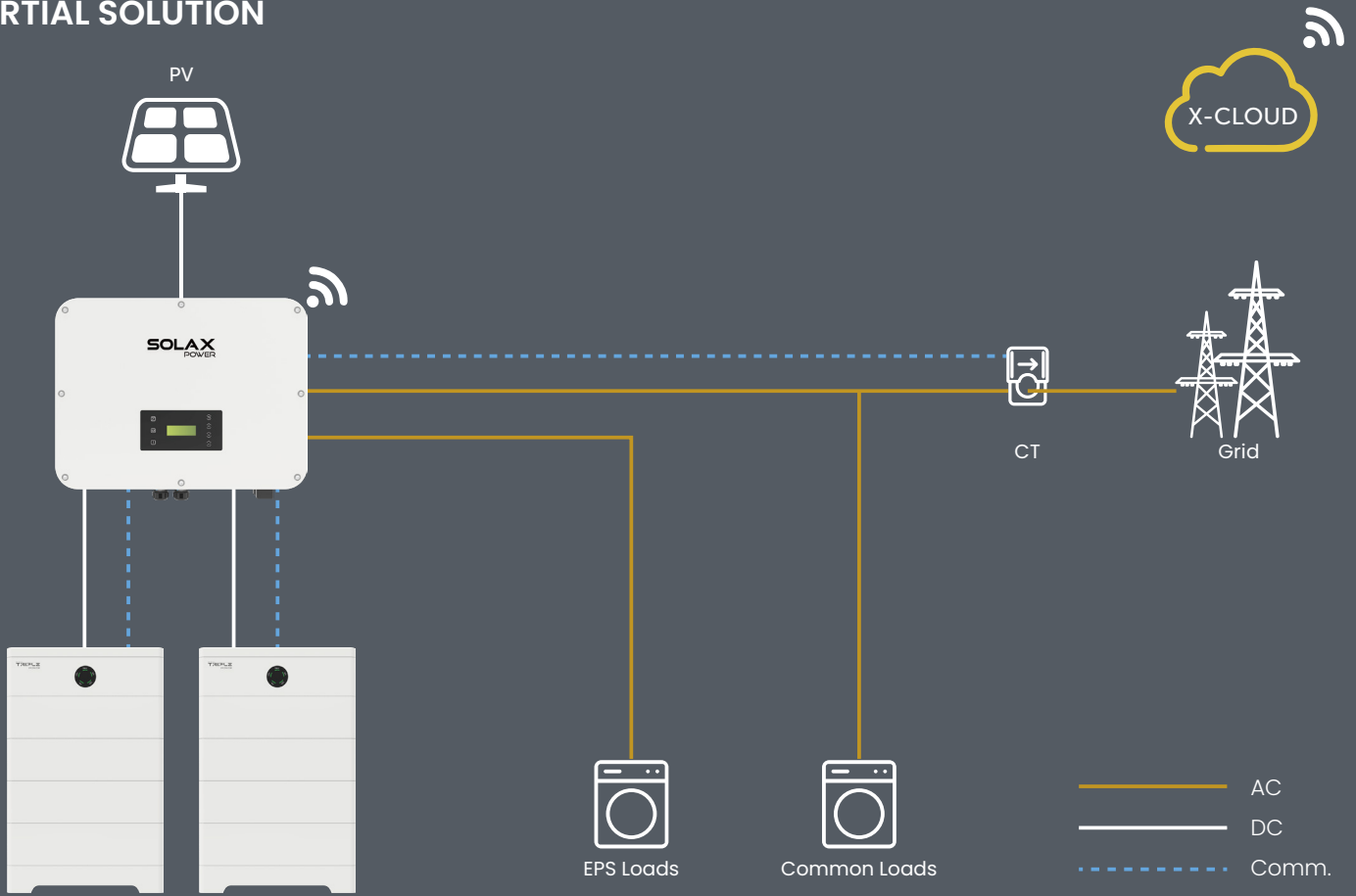
③: Input voltage exceeding the operating voltage range may triggers inverter protection.

CIRCUIT DIAGRAM

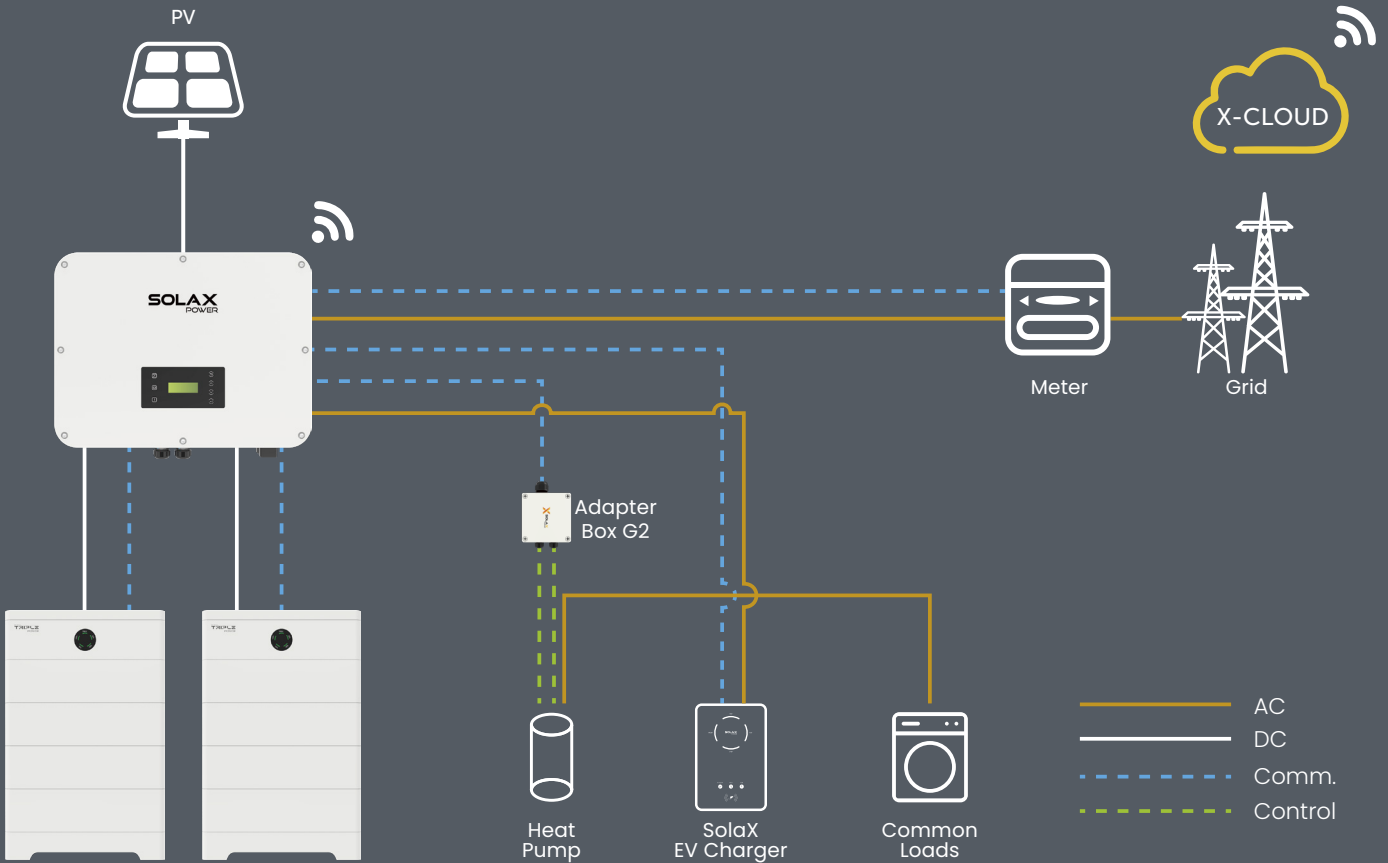


TYPICAL SCENARIO

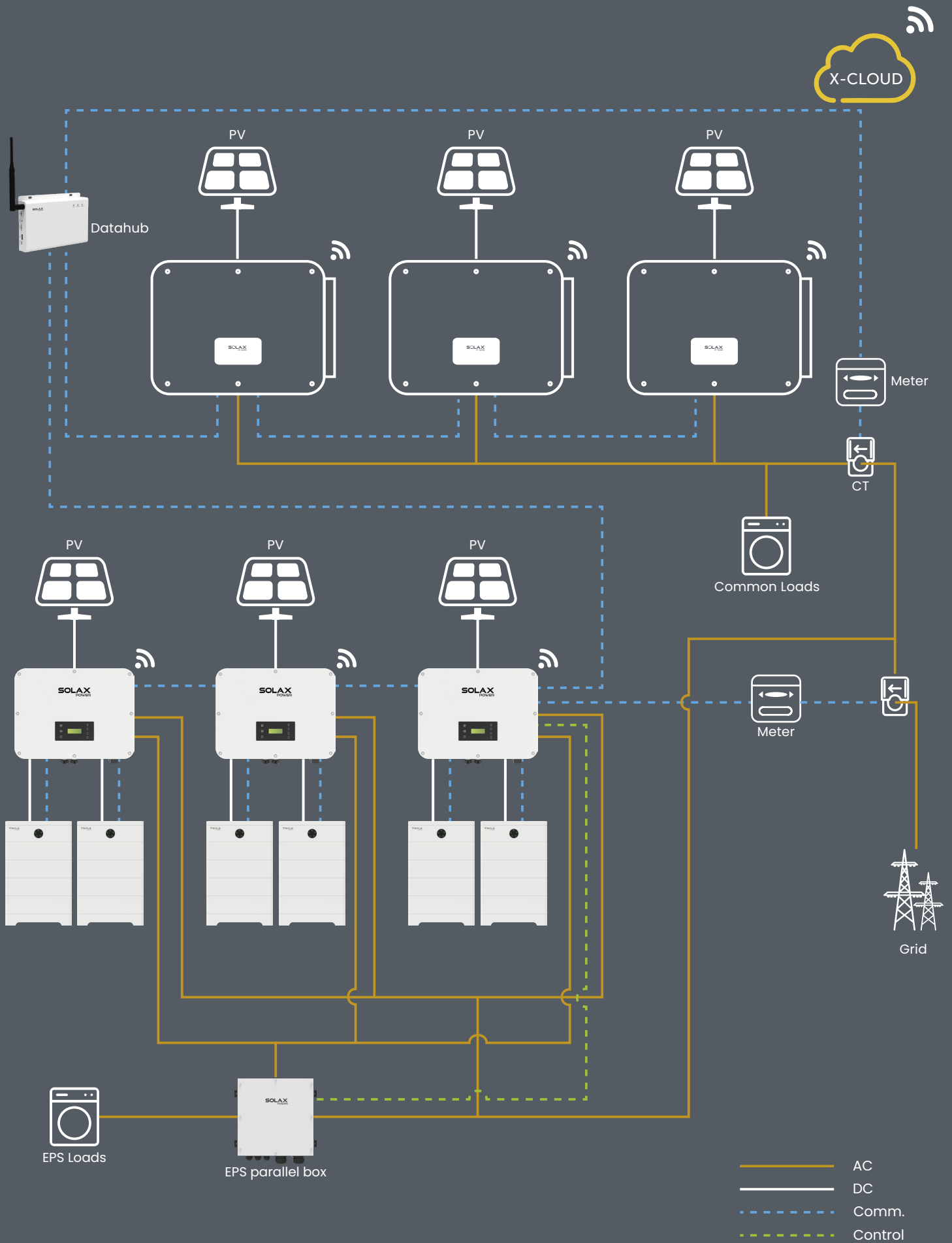
PARTIAL SOLUTION



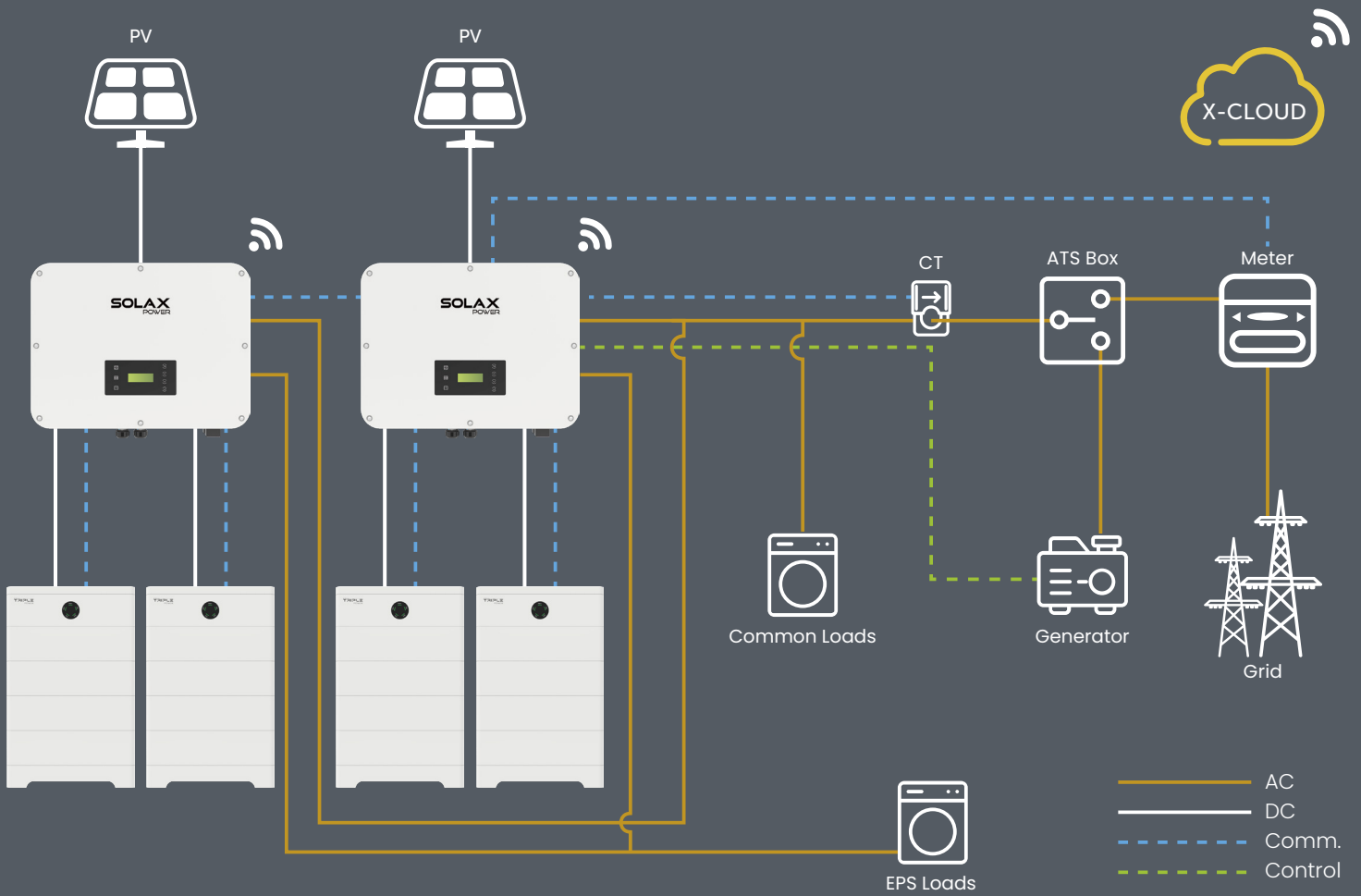
WHOLE HOME BACKUP SOLUTION



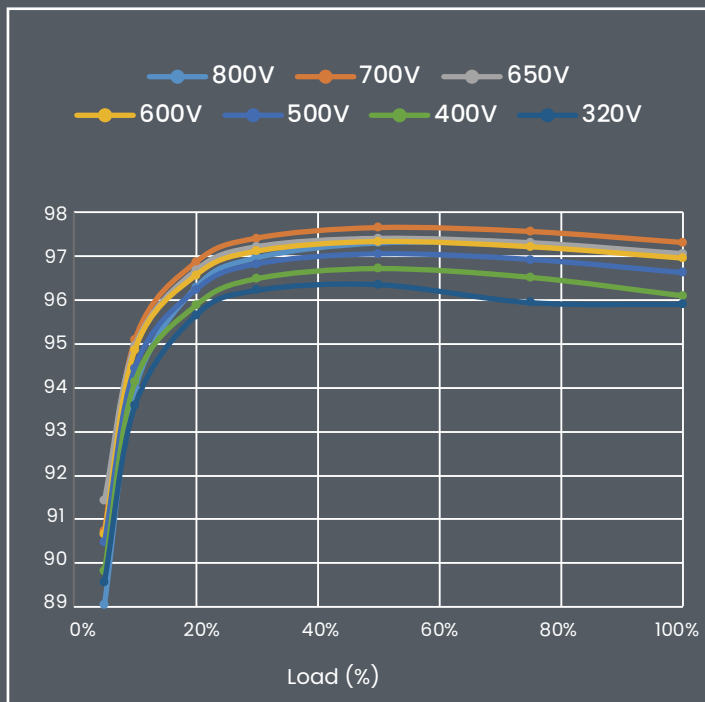
0 INJECTION SOLUTION



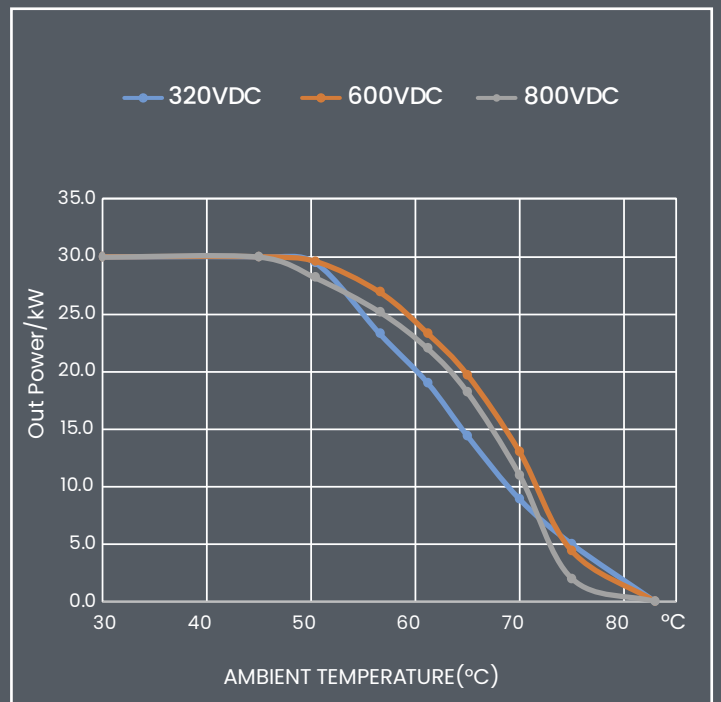
PARALLEL & GENERATOR INTEGRATED SOLUTION



EFFICIENCY CURVE (EU)



DERATING CURVE





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V2.0. Information may be subject to modify without notice.
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