

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 (2030.5, OpenADR)
- Support smart scene function, intelligent loads management (e.g., Heat pump, EV charger)
- 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-19.9K X3-ULT-20K X3-ULT-25K X3-ULT-30K

INPUT PV	X3-ULT-15K	X3-ULT-19.9K	X3-ULT-20K	X3-ULT-25K	X3-ULT-30K
Max.recommended PV array power [Wp]	30000	40000	40000	50000	60000
Max.input DC power [W]	30000	40000	40000	50000	60000
Max.DC voltage [V]			1000		
Nominal DC operating voltage [V]			600		
No. of MPP trackers / Strings per MPP tracker	2 (2 / 2)	2 (2 / 2)	2 (2 / 2)	3 (2 / 2 / 2)	3 (2 / 2 / 2)
Max. input current (input PV1 / input PV2 / input PV3) [A] ^①	PV1: 36 / PV2: 36	PV1: 36 / PV2: 36	PV1: 36 / PV2: 36	PV1: 36 / PV2: 36 / PV3: 36	PV1: 36 / PV2: 36 / PV3: 36
Max. short circuit current (input PV1 / input PV2 / input PV3) [A]	PV1: 45 / PV2: 45	PV1: 45 / PV2: 45	PV1: 45 / PV2: 45	PV1: 45 / PV2: 45 / PV3: 45	PV1: 45 / PV2: 45 / PV3: 45
MPPT voltage range [V]	160 - 950	160 - 950	160 - 950	160 - 950	160 - 950
Start output voltage [V]	200	200	200	200	200

OUTPUT AC(On-Grid)	X3-ULT-15K	X3-ULT-19.9K	X3-ULT-20K	X3-ULT-25K	X3-ULT-30K
Nominal AC power [VA]	15000 (AS 4777 14999)	19999	20000	25000	30000 (AS 4777 29999)
Max. apparent AC power [VA]	16500 (AS 4777 14999)	19999	22000	27500	30000 (AS 4777 29999)
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	36.3	43.5
Max. AC current [A]	24.0	29.0	31.9	39.9	43.5
Displacement power factor			1 (- 0.8 ~ 0.8)		
Total harmonic distortion (THDi, rated power) [%]			< 3		

INPUT AC	X3-ULT-15K	X3-ULT-19.9K	X3-ULT-20K	X3-ULT-25K	X3-ULT-30K
Nominal AC power [VA]	15000	19999	20000	25000	30000
Nominal AC current [A]	21.8	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	X3-ULT-15K	X3-ULT-19.9K	X3-ULT-20K	X3-ULT-25K	X3-ULT-30K
Battery type			Lithium - ion		
Battery voltage range [V]			180 - 800		
Max. charge / Discharge current [A]			60 (30 × 2)		

EPS OUTPUT(WITH BATTERY)	X3-ULT-15K	X3-ULT-19.9K	X3-ULT-20K	X3-ULT-25K	X3-ULT-30K
EPS peak power [VA]			2 time of rated power, 10s		
EPS rated power [VA]	15000	19999	20000	25000	30000
EPS rated voltage [V], Frequency [Hz]			400 / 230; 50 / 60		
EPS rated current [A]	21.8	29.0	29.0	36.3	43.5
Switchover time [ms]			< 10		
Total harmonic distortion (THDv, linear Load) [%]			< 3		

POWER CONSUMPTION	X3-ULT-15K	X3-ULT-19.9K	X3-ULT-20K	X3-ULT-25K	X3-ULT-30K
Internal consumption (night) [W]			< 5		

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

X3-ULT-15K

X3-ULT-19.9K

X3-ULT-20K

X3-ULT-25K

X3-ULT-30K

EFFICIENCY

Max. efficiency / European efficiency	98.0% / 97.7%	98.0% / 97.7%	98.0% / 97.7%	98.0% / 97.7%	98.0% / 97.7%
Rated battery charge / Discharge efficiency	98.5% / 97.0%	98.5% / 97.0%	98.5% / 97.0%	98.5% / 97.0%	98.5% / 97.0%

STANDARD

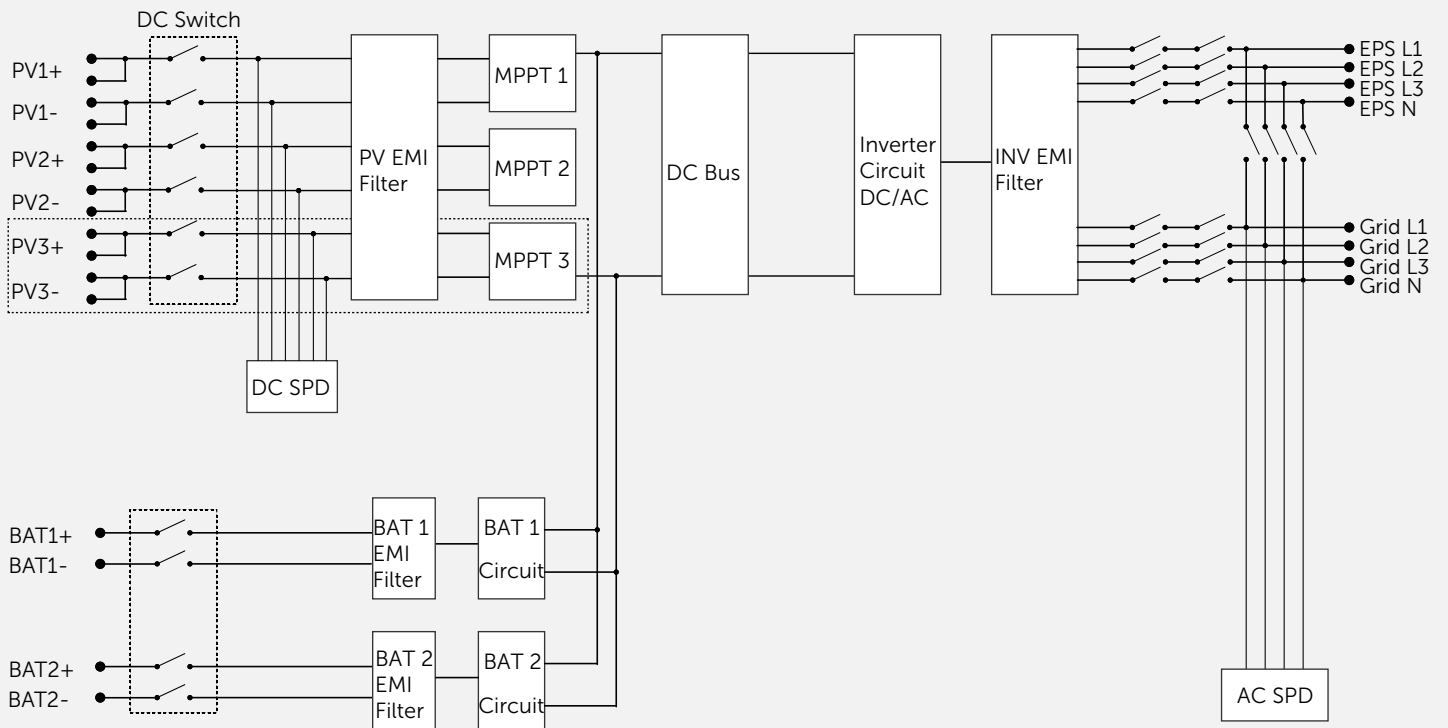
Safety	EN / IEC62109 - 1 / - 2				
EMC	EN61000 - 6 - 1 / 2 / 3 / 4; EN61000 - 3 - 11 / 12; EN 5011; IEC 62920				
Certification	VDE4105 / G99 / AS4777 / EN50549 / CEI 0 - 21 / IEC61727 / PEA / MEA / NRS - 097 - 2 - 1 / RD1699 / TOR				

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				
Demensions (WxHxD) [mm]	696 x 526 x 240				
Weight [kg]	47				
Cooling concept	Smart cooling				
Topology	Transformerless				
Communication	Modbus (RS485), Meter (RS485), DI x 5, DO x 2				

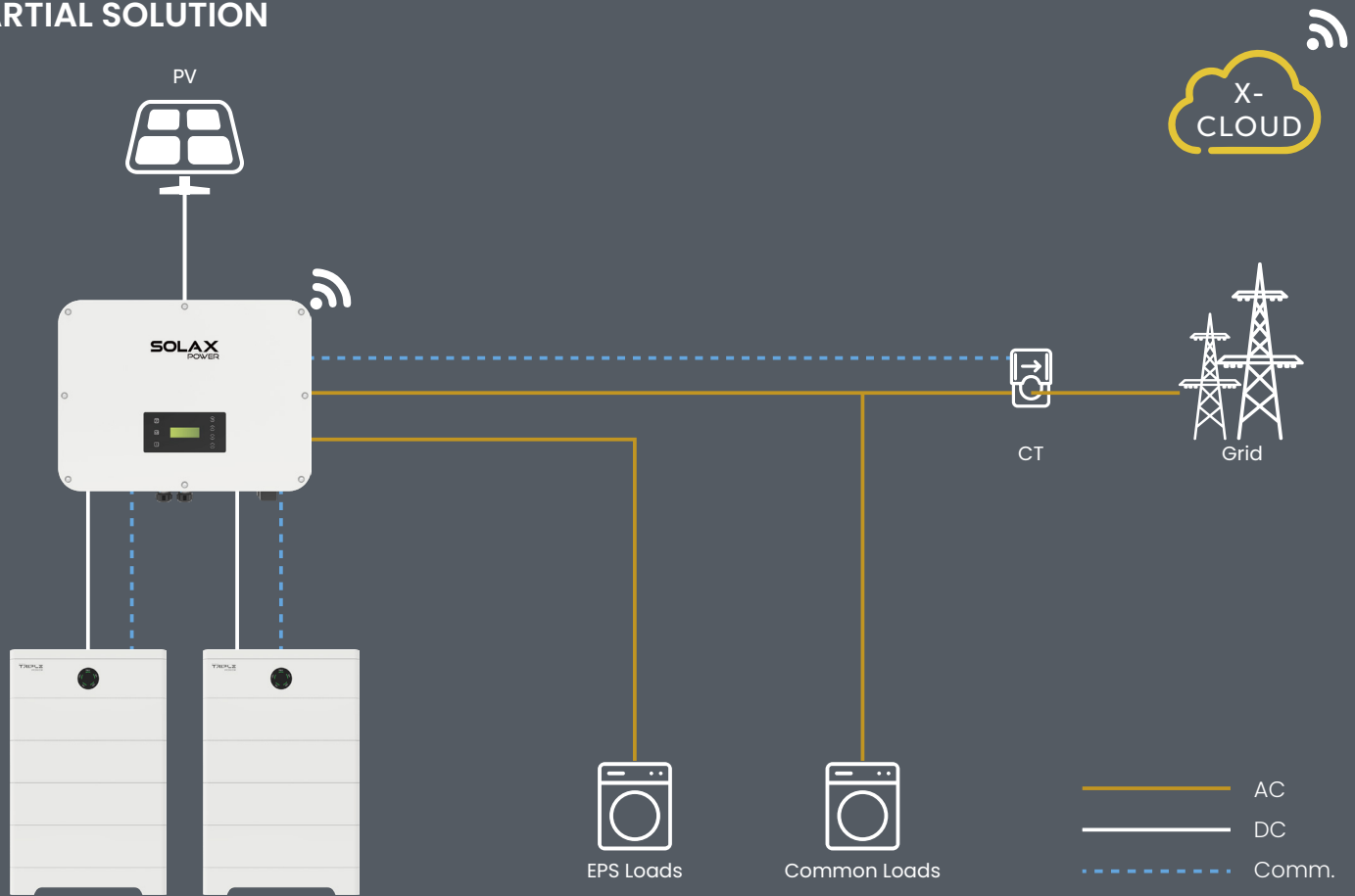
①: Input PV3 only available for 25K and 30K.

CIRCUIT DIAGRAM

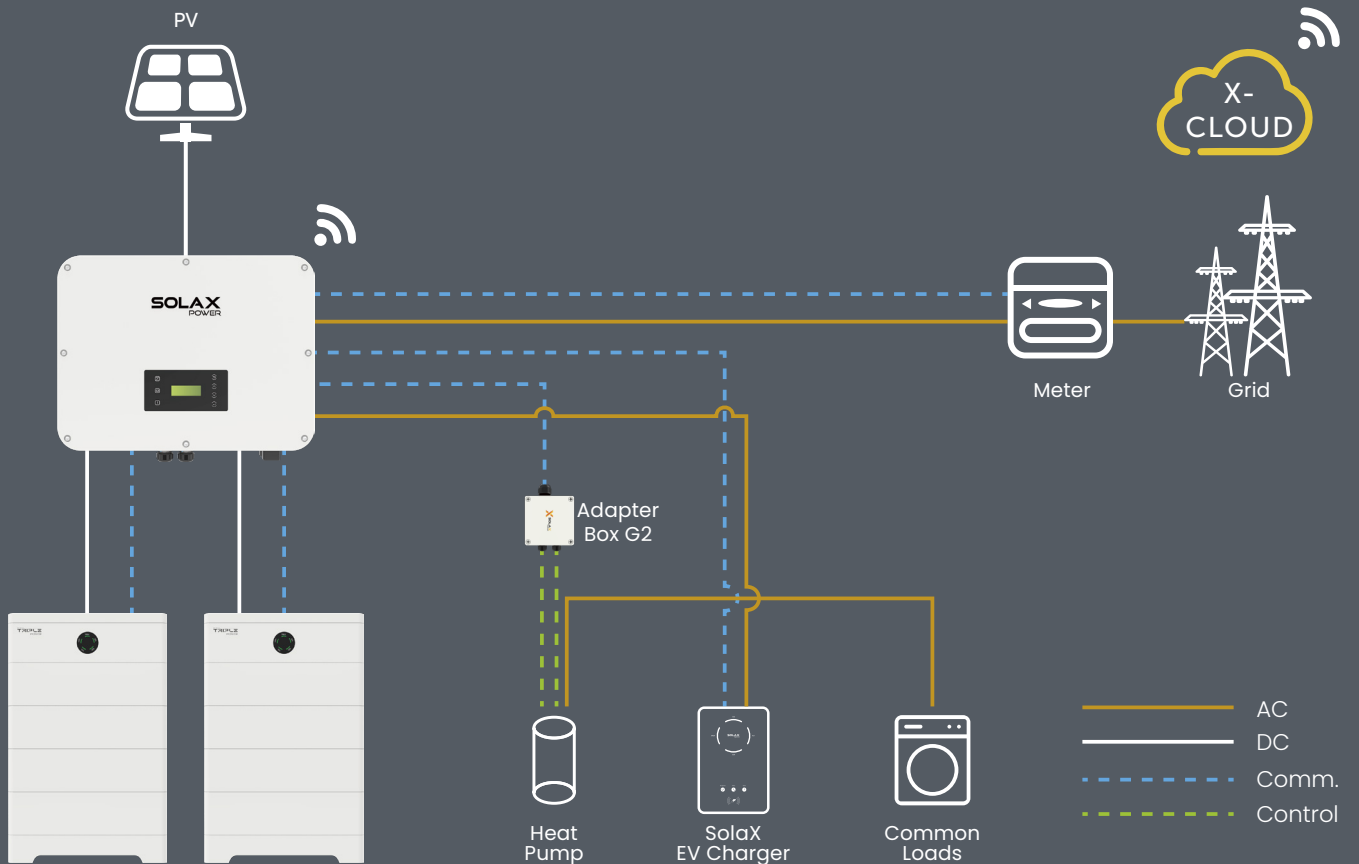


TYPICAL SCENARIO

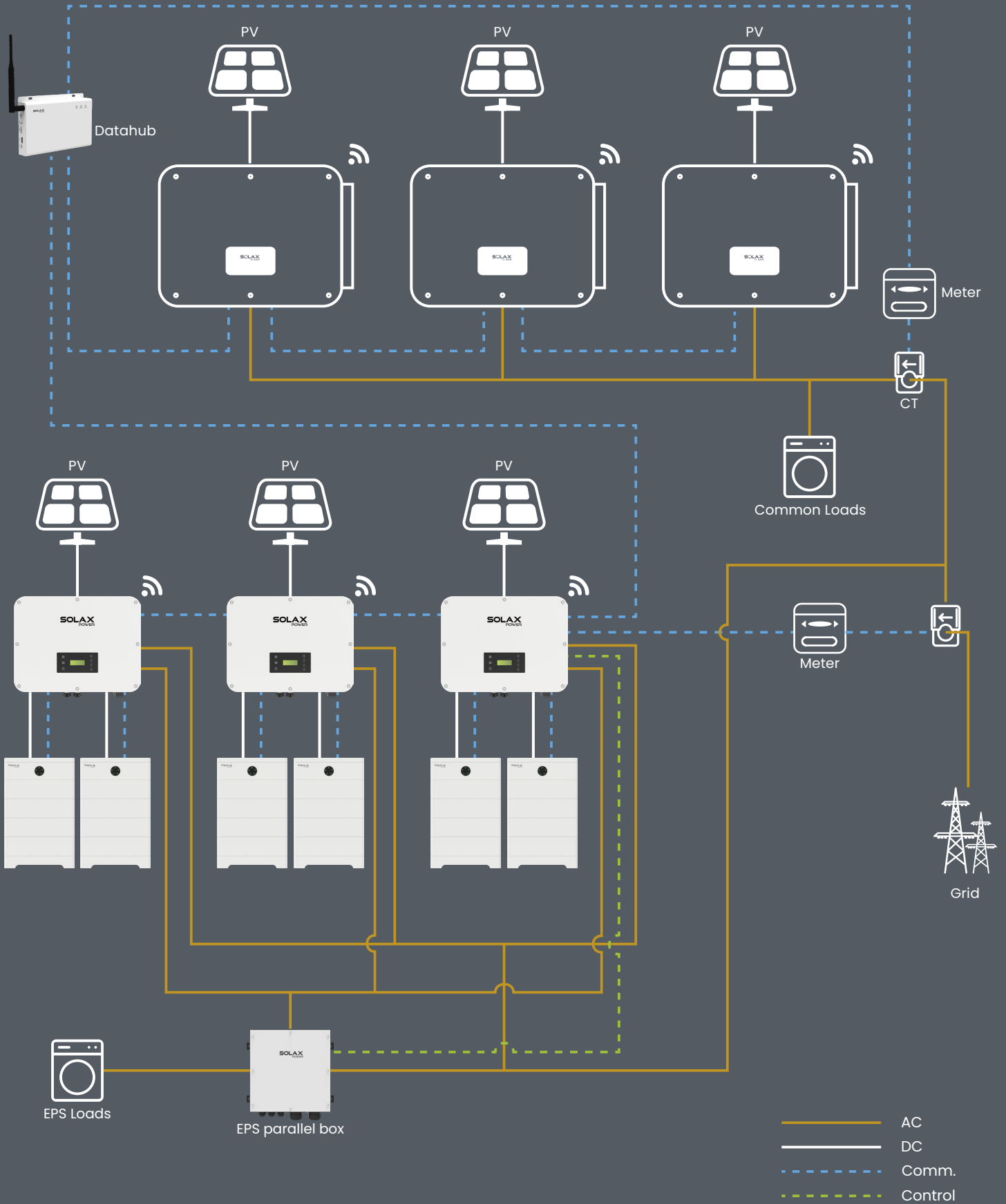
PARTIAL SOLUTION



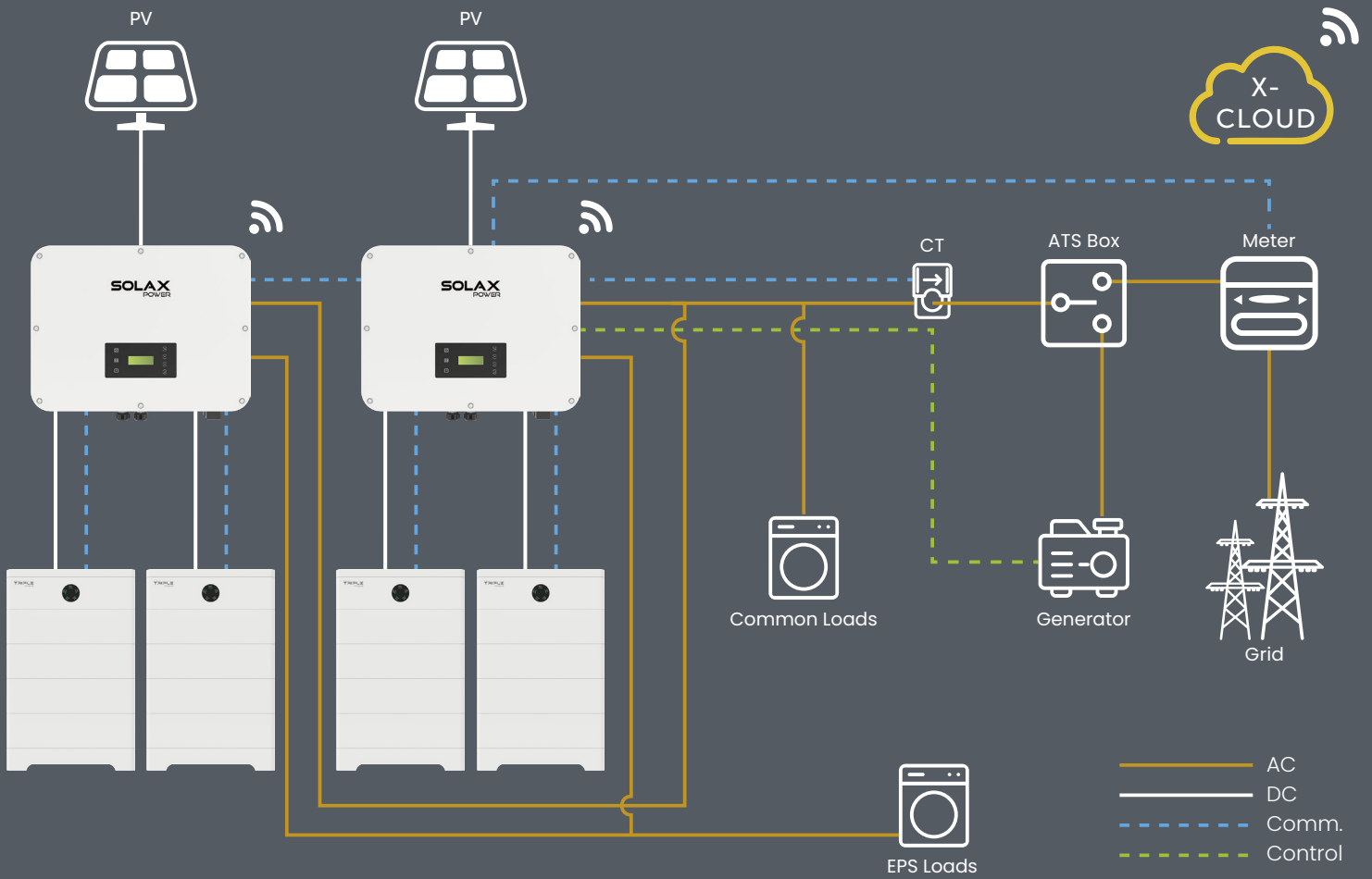
WHOLE HOME BACKUP SOLUTION



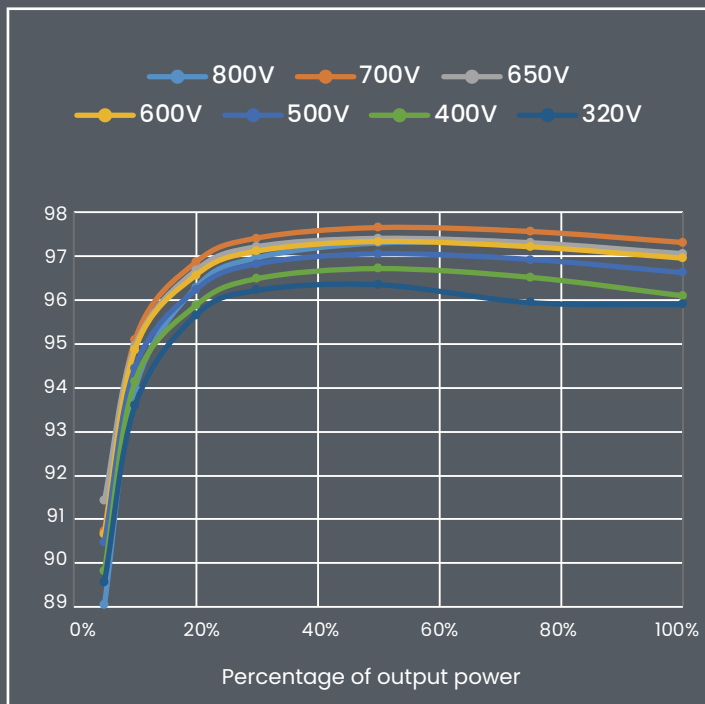
0 INJECTION SOLUTION



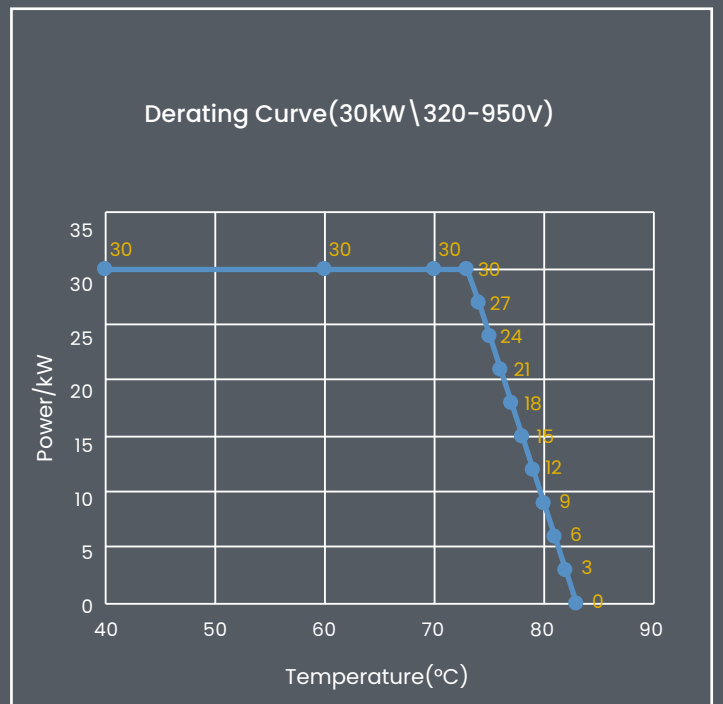
PARALLEL & GENERATOR INTEGRATED SOLUTION



EFFICIENCY CURVE (EU)



DERATING CURVE





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