



Smart connections.

Technical Specification

PLENTICORE plus with BYD Battery-Box HV

Energy efficiency of PV storage systems

Technical data according to the efficiency guideline for PV storage systems

PLENTICORE plus power class		4.2	5.5	7.0	8.5	10	
Energy conversion (paths ¹⁾)	PV2AC / PV2BAT / BAT2AC / AC2BAT	✓/✓/✓/-	✓/✓/✓/-	✓/✓/✓/-	✓/✓/✓/-	✓/✓/✓/-	
	System Performance Index (SPI) - Load reference profile 1 ²⁾	%	---	91.4	---	---	
	System Performance Index (SPI) - Load reference profile 2 ³⁾	%	---	---	---	---	
	Efficiency PV2AC ($\eta_{PV2AC,t} U_{MPP,nom}$)	%	94.8	95.4	95.6	95.8	95.8
	Efficiency PV2BAT ($\eta_{PV2BAT,t} U_{MPP,nom}$) ⁴⁾	%	95.7	95.7	95.5	95.5	95.5
	Efficiency BAT2AC ($\eta_{BAT2AC,t} U_{BAT,nom}$) ⁴⁾	%	94.6	95.1	95.1	95.1	95.1
	Idle consumption ($P_{neutral, AC + DC}$)	W	9.03	9.03	9.18	9.18	9.18
	Mean dead time / settling time	s	0.98 / 4.97	0.98 / 4.97	1.08 / 4.20	1.08 / 4.20	1.08 / 4.20
	Rated power ($P_{AC,r}$)	kWp	4.2	5.5	7.0	8.5	10
	Rated power ($P_{AC,r discharge}$)	kWp	4.2	5.5	5.8	5.8	5.8
Rated power ($P_{BAT,r}$)	kWp	6.2	6.2	6.2	6.2	6.2	
Input side (DC)	Max. PV power ($\cos \varphi = 1$)	kWp	6.3	8.25	10.5	12.75	15
	Nominal DC power	kW	4.33	5.67	7.22	8.76	10.31
	Input voltage range ($U_{DCmin} - U_{DCmax}$)	V	120...1000				
	MPP working voltage range ($U_{MPPworkmin} - U_{MPPworkmax}$)	V	120...720				
	Number of DC inputs		3				
	Number of combined DC inputs (PV or battery)		1				
	Number of independent MPP trackers		3				
	DC 3 – battery input optional - Activation code battery available at: shop.kostal-solar-electric.com						
	Working voltage for battery input ($U_{DCworkbatmin} - U_{DCworkbatmax}$)	V	120...650				
	Max. charging current/discharging current at battery input	A	13/13				

BYD Battery-Box HV power class		H 6.4	H 7.7	H 9.0	H 10.2	H 11.5	
System data	Max. Power consumption in connection with PLENTICORE plus 4.2-10 ⁵⁾	kW	3.33	4.00	4.65	5.32	6.00
	Usable capacity ⁶⁾	kWh	6.08	7.30	8.51	9.73	10.94
	Number of battery modules		5	6	7	8	9
	Battery type		Lithium iron phosphate (LiFePO ₄)				
	Nominal voltage	V	256	307	358	409	460
	Voltage range	V	200...282	240...338	280...395	320...451	360...500

Subject to technical changes. Errors excepted. You can find current information at www.kostal-solar-electric.com. Manufacturer: KOSTAL Industrie Elektrik GmbH, Hagen, Germany

¹⁾ Measurement results determined according to the efficiency guideline for PV storage systems. Battery system consisting of PLENTICORE plus with BYD Battery-Box HV 11.5

²⁾ Load reference profile 1 = Standard 4 persons household with approx. 5010 kWh annual consumption

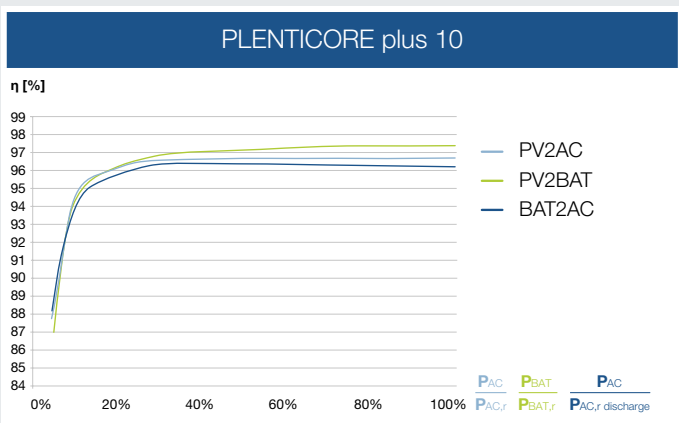
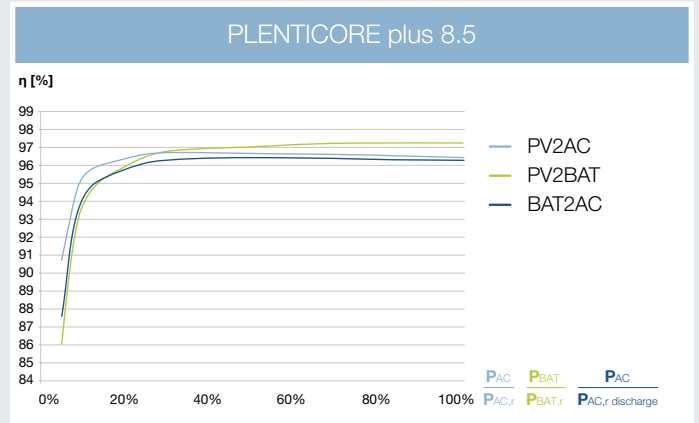
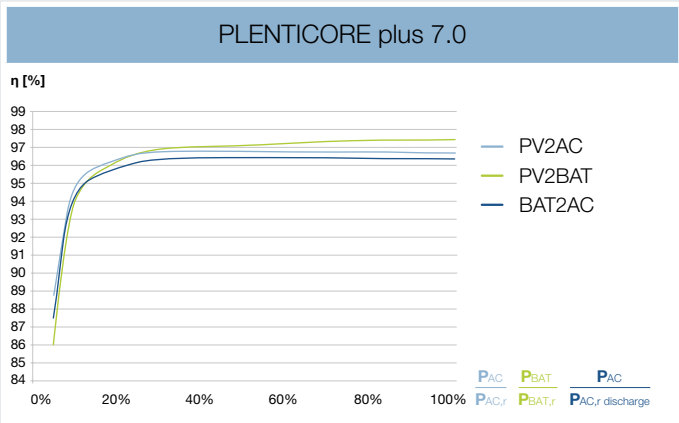
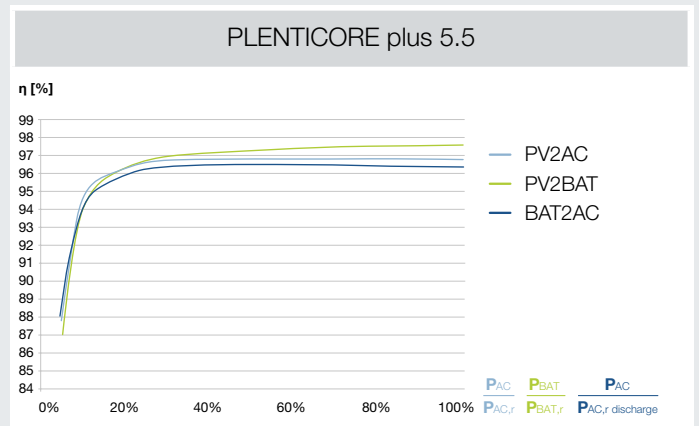
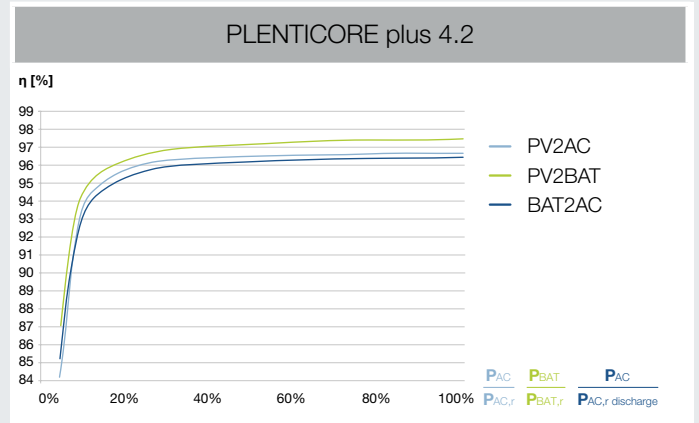
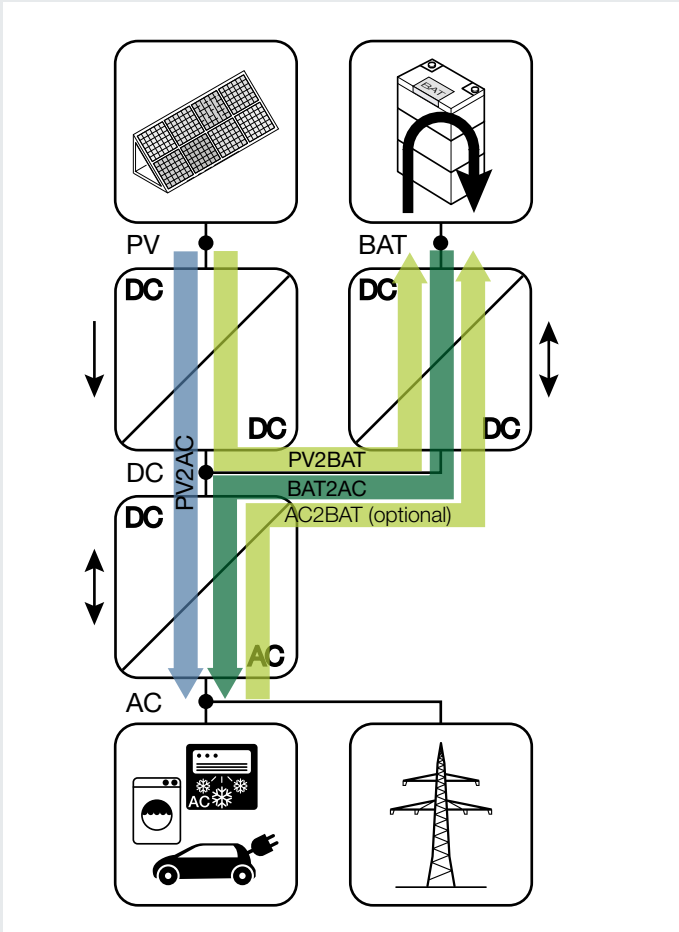
³⁾ Load reference profile 2 = Standard 4 persons household with approx. 10010 kWh annual consumption including heat pump and electric vehicle

⁴⁾ Measured at a battery voltage of 470 V

⁵⁾ Depending on the max. rated power AC of the inverter (4.2 max 4.2 kW and 5.5 max 5.5 kW)

⁶⁾ Test Conditions: 95% DOD, 0,2 C charge and discharge at + 25 ° C

Efficiency curves of energy conversion paths



Services for our products

FAQs:
kostal-solar-electric.com/Service_Support

Product registration, KOSTAL Smart Warranty, warranty extension, activation code battery or purchase of accessories: shop.kostal-solar-electric.com

Get in touch: service-solar@kostal.com

KOSTAL

KOSTAL Solar Electric GmbH
Hanferstr. 6
79108 Freiburg i. Br.
Deutschland
Telefon: +49 761 47744 - 100
Fax: +49 761 47744 - 111

KOSTAL Solar Electric Ibérica S.L.
Edificio abm
Ronda Narciso Monturiol y Estarriol, 3 Torre
B, despachos 2 y 3
Parque Tecnológico de Valencia
46980 Valencia
España
Teléfono: +34 961 824 - 934
Fax: +34 961 824 - 931

KOSTAL Solar Electric France SARL
11, rue Jacques Cartier
78280 Guyancourt
France
Téléphone: +33 1 61 38 - 4117
Fax: +33 1 61 38 - 3940

KOSTAL Solar Electric Hellas E.Π.Ε.
47 Steliou Kazantzidi st., P.O. Box: 60080 1st
building – 2nd entrance
55535, Pilea, Thessaloniki
Ελλάδα
Τηλέφωνο: +30 2310 477 - 550
Φαξ: +30 2310 477 - 551

KOSTAL Solar Electric Italia Srl
Via Genova, 57
10098 Rivoli (TO)
Italia
Telefono: +39 011 97 82 - 420
Fax: +39 011 97 82 - 432

KOSTAL Solar Elektrik Turkey
Mahmutbey Mah. Taşocağı Yolu Cad.
No:3 (B Blok), Ağaoğlu My Office 212
Kat:16, Ofis No:269
Bağcılar - İstanbul / Türkiye
Telefon: +90 212 803 06 24
Faks: +90 212 803 06 25

www.kostal-solar-electric.com