HYBRIDS
AMPS DC Coupling solution
Advanced Multiport Power Stations

The best option for Hybrid System

The AMPS solution includes all necessary top-quality components to ensure a good performance and availability of multiple power generation integrated with a single device.

The best option for Hybrid Systems developments, solving the challenges of PV+ESS power plants at Utility–Scale.

Our AMPS- DC Coupling Solution makes grid integration of multiple DC devices fast and easy.

eks Energy solutions allows to interface with and control multiple sources, with optimal renewable energy harvesting and economical utility with quick dynamic response, featured to provide advanced active power management under highly demanding grid requirements (HAWAII-HECO, Puerto Rico-LUMA/PREPA, California-CAISO, Australia-GPS, Chile and Mexico among others.)

Fast Dynamic Response

Quick dynamic response, providing advanced power management, including:

- Load Leveling
- Frequency Regulation
- Capacity Firming
- Peak Shaving
- Voltage Support
- Islanding
- Black Start
- Grid Inertia

Shaping the energy of tomorrow

eks
ENERGY

	AMPS REFRENCES	BESS Voltages LOWER than 1250 Vdc	BESS Voltages HIGHER than 1250 Vdc
		MP-2M-2.3B-WD3-V690	MP-2Ms2.3Bs-WD3-V850
AC	Nominal AC voltage [Vac] (1)	690 ±15%	850 ±15%
	Rated AC power [kW/kVA] @ 95ºF/35ºC @Vdc min (2)	3174	2800
	Rated AC power [kW/kVA] @ 122ºF/50ºC @Vdc min (2)	2844	2520
	Maximum output current @ 95ºF/35ºC @Vdc min (2)	3060	2080
	Total Current Demand Distortion (TDD)	<3%	
	Power factor (3)	Adjustable	
	Efficiency Maximum / Euroeta / CEC [%] (4)	98,6 / 98,3 / 98,5 (5)	98,8 / 98,5 / 98,6 (5)
DC	Voltage range @ full power [Vdc] (2)	987-1250	1216-1500
	Max. DC voltage [Vdc]	1500	1550
	Number of MMPT Inputs	2	
	Rated input current at Vdc_min [A] @35ºC	2 x 1600 (5)/ 2 x 3200 (6)	
	Rated input current at Vdc_min [A] @50ºC	2 x 1440 (5)/ 2 x 2880 (6)	
	Max. Short circuit input current [A] (7)	2 x 4800	
	Number of DC Inputs	2 Busbar with up to 12	
DC/DC	DC input voltage range [VDC]	375-1225	600-1500
	DC output voltage range [VDC]	400-1250	625-1550
	Rated Power @35ºC, Vin=V max Vdc	2 x 3675	2 x 3375
	Rated Power @35ºC, Vin=V min Vdc	2 x 1125	2 x 1350
	DC/DC Efficiency Maximum	99,6%	99,4%
	Withstand current [A] (7)	2 x 80kA/50ms 2 x 120kA/4ms	2 x 80kA/50ms 2 x 120kA/4ms

	COMMON FEATURES		
Protections	General AC Protection & Disconn	AC circuit breaker	
	General DC Protection & Disconn	DC load break switch	
	DC Overvoltage Protection	SPD (type 2)	
	Ground-fault monitoring	Yes	
	Insulation monitoring	Yes	
	Lightning protection	Optional (SPD type 1+2)	
	DC Input fuse protection (8)	Included for PV side / Optional for BESS (9)	
Cabinet	Dimensions [WxDxH]	6524 x 2190 x 2460 mm	
	Weight	~9 tn	
	Type of Ventilation	Forced air cooling	
Environment	Degree of Protection (10)	IP65	
	Operation ambient temperature	From -4ºF to 140ºF (-20ºC to 60ºC), derating >95ºF (35ºC)	
	Maximum relative humidity	100%	
	Max. altitude above sea level	4000 masl, derating >1000 masl	
	Storage and transport temperature	From -40ºF to 149ºF (-40ºC to 65ºC)	
	Storage and transport humidity	From 5% to 85%	

Certifications & Standards (11)

IEEE 1547-2018, UL 1741 – SA & SB,
IEC 62477
IEC 62109-1, IEC 62109-2, IEC62109
IEC 61000-3-4, IEC 61000-3-11, IEC 61000-3-12, IEC 61000-6-4
IEC 60529
CE Marking
NEC Compliance

Notes

(1) Other voltage configurations are possible under request.
(2) Values at nominal AC voltage and $\cos\varphi$=1, f=60Hz. Consult for derating curves.
(3) Consult for capability curves.
(4) Self-consumption is not considered in the efficiency measurement.
(5) Depending on the transformer model required, standby losses and auxiliary power consumption may vary.
(6) Single DC Switch configuration / Dual DC Switch configuration.
(7) Higher values under request
(8) Different DC fuse sizes are available
(9) Battery short-circuit isolation must be provided on the battery side with ultra-fast battery fuses. String or group fuses, e.g. fuse type aR/aBat & DC time constant Tau (L/R) <=1ms
(10)Lower protecion -IP54- is also available
(11) Other applicable standards/grid codes are possible