Advanced Multiport Power Stations (AMPS)

Fully integrated DC-coupled power stations for hybrid utility-scale solar PV & battery energy storage systems.

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- Fast and easy integration of large solar + storage systems, ensuring high performance and availability.
- Interfaces with, and controls, multiple energy assets to maximize renewable energy integration.
- Provides advanced active power management under highly demanding grid requirements.
- Enables a higher DC/AC ratio, reducing CAPEX and levelized cost of energy (LCOE), making it a very competitive solution for our customers.

Fast Dynamic Response

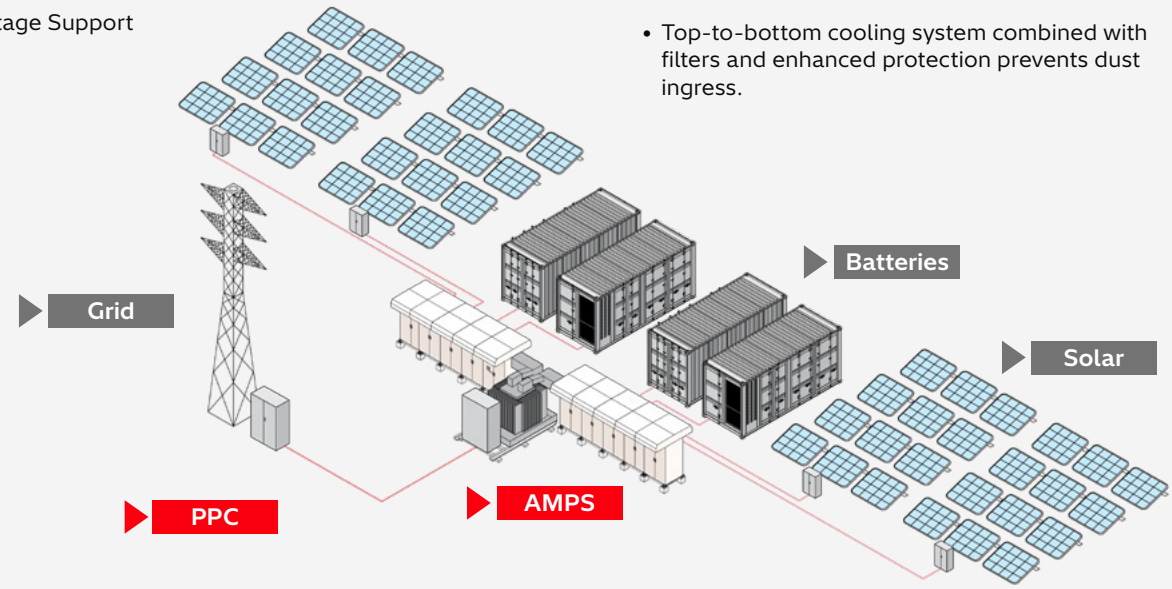
Quick dynamic response, providing advanced power management, including:

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

Harsh Environments

Platform reliability under extreme conditions:

- Ability to perform in high altitude mountain regions up to 4000 MASL.
- Internal electronics and components are coated for resistance to corrosive, salt-intensive conditions.
- Sealing elements and standard enclosures with IP65 rated protection against rain and moisture.
- Top-to-bottom cooling system combined with filters and enhanced protection prevents dust ingress.



Model		BESS Voltages LOWER than 1250 Vdc	BESS Voltages HIGHER than 1250 Vdc
	AMPS REFRENCES	**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 (2)	3174	2800
	Rated AC power [kW/kVA] @ 122ºF/50ºC (2)	2844	2520
	Maximum output current @ 95ºF/35ºC (2)	3016	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 (7)	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		

(1) Other voltage configurations are possible under request.
(2) Values at nominal AC voltage and cosφ=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