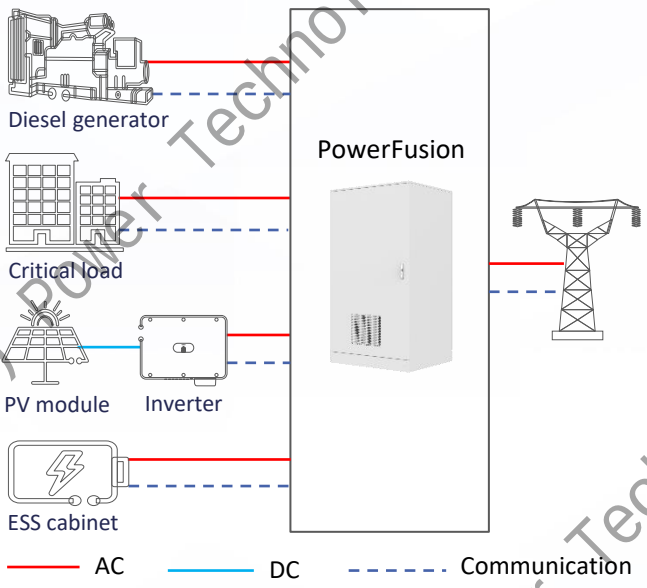
PowerFusion

PowerFusion is a core platform integrating power distribution and control functions for C&I microgrid scenarios. It delivers a highly pre-integrated solution for managing grid power, PV, ESS, diesel generators, and other energy sources in C&I microgrids, enabling fast on/off grid switching and autonomous power quality management. By incorporating both primary and secondary electrical equipment during factory integration, PowerFusion simplify the design, production, and delivery process of on/off grid switching cabinet.





Superior cost effective

Parallel operation of PV, energy storage, and diesel generator. (Customization)

Superior performance

20 ms on-grid to off-grid transition

Superior easy

Easy to setup and maintain by all in one design

Superior safety

Anti-Islanding, ensure operational safety

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Typical Configuration



		L80 Series	L150 Series	L300 Series
				
	on grid to off grid switching in 20ms between PV-ESS-Grid	✓	✓	✓
	off grid to on grid Seamless switching between PV-ESS-Grid	✓	✓	✓
	Parallel operation between PV, ESS, and diesel systems controlled by DO signal	✓	✓	✓
	Parallel operation between PV, ESS, and diesel systems controlled by RS485 signal ①	✓	✓	✓
	Maximum Self-Consumption	✓	✓	✓
	TOU	✓	✓	✓
	Peak shaving	✓	✓	✓
	On/off switching time	20 ms	20 ms	20 ms
	Backup capacity for load ②	80 kW	150 kW	300 kW
	LUNA2000-241/215/161/107 ③	1	2	4
	SUN2000-50/100/150K	One 250A breaker	One 630A breaker	One 1000A breaker
	POI breaker	250 A	630 A	1000 A

Remarks:

① An EMS must be configured in the solution to enable this function.

② 80kW/150kW/300kW refers to the maximum capacity of resistive load in off-grid mode. Derating operation must be considered if the system includes loads with inrush currents.

③ The specific solution shall be evaluated based on customization, when more than 4 ESS cabinets are needed.

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Technical Specifications

Product Series		PowerFusion-L80 Series		PowerFusion-L150 Series		PowerFusion-L300 Series	
System Function	Load capacity ①	80 kW		150 kW		300 kW	
	On grid to off grid switching time ②	20 ms		20 ms		20 ms	
Overall Parameters	Dimensions (W×D×H)	800 x 600 x 1800 mm		800 x 1000 x 2100 mm		1150 x 1000 x 2100 mm	
	Total weight	≤ 0.9 T		≤ 1.1 T		≤ 1.2 T	
	Cooling mode	Industrial air conditioner	Fan	Industrial air conditioner	Fan	Industrial air conditioner	Fan
	IP rating	IP55	IP54	IP55	IP54	IP55	IP54
	Installation mode	Floor-mounted installation		Floor-mounted installation		Floor-mounted installation	
	Door open direction	Front		Front and Back		Front and Back	
	Cable inlet and outlet	Routed from the bottom		Routed from the bottom		Routed from the bottom	
Electricity Parameters	Power mode	3ph, 4w, PE 380/400/415V		3ph, 4w, PE 380/400/415V		3ph, 4w, PE 380/400/415V	
	Frequency	50/60 Hz		50/60 Hz		50/60 Hz	
	Mains circuit breaker	MCCB 250A		MCCB 630A		MCCB 1000A	
	Bypass breaker	MCCB 250A		MCCB 630A		MCCB 1000A	
	On/off grid switch	Fast switch		Fast switch		Fast switch	
	Breakers for inverter ③	1*MCCB 250A		1*MCCB 630A		1*MCCB 1000A	
	Breakers for ESS	1*MCCB 250A		2*MCCB 250A		4*MCCB 250A	
	Load breaker	1*MCCB 250A		1*MCCB 400A		1*MCCB 630A	
	SPD	Type II		Type II		Type II	
Monitoring System	Data collector	HW SmartMGC5000B		HW SmartMGC5000B		HW SmartMGC5000B	
	Northbound protocol	Modbus-TCP, IEC 60870-5-104, and GOOSE		Modbus-TCP, IEC 60870-5-104, and GOOSE		Modbus-TCP, IEC 60870-5-104, and GOOSE	
Environment	Deployment site	Outdoor		Outdoor		Outdoor	
	MAX altitude	4000 m		4000 m		4000 m	
	Operating temperature	-25 ~ +55 °C	0 ~ +50 °C	-25 ~ +55 °C	0 ~ +50 °C	-25 ~ +55 °C	0 ~ +50 °C
	Storage temperature	-40 ~ +70 °C		-40 ~ +70 °C		-40 ~ +70 °C	
	Relative humidity	5% ~ 95% RH		5% ~ 95% RH		5% ~ 95% RH	
	Environment requirements	C3		C3		C3	
Option	EMS ④	Optional		Optional		Optional	

Remarks:

① The maximum load capacity applies only to the resistive load. Derating operation must be considered if the system includes loads with inrush currents.

② It do not including the voltage recovery time after the POI breaker is closed. The normal voltage recovery time of the grid depends on the ratio of PCS to load capacity and load feature.

③ The standard solution is equipped with only one main breaker for the inverters, and the requirement of multiple breakers of different specifications shall be considered as a customized requirement.

④ The EMS needs to be configured if the microgrid uses non-Huawei inverters or multi-array access points exist.

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