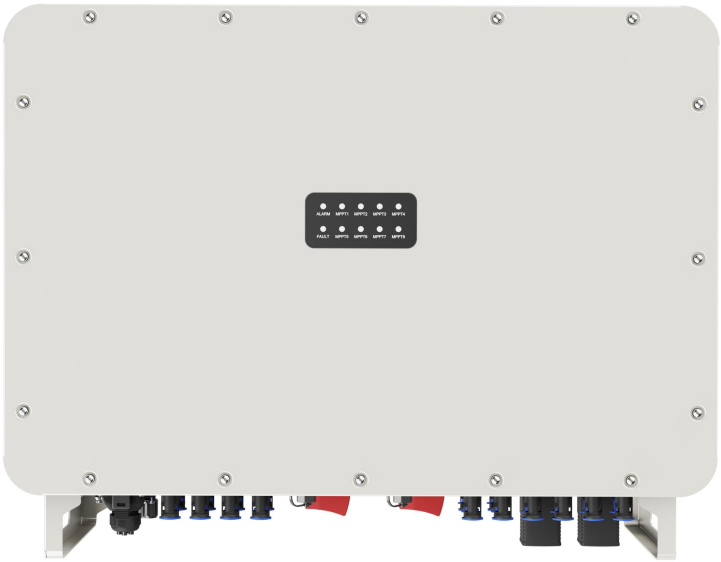
LEONA-M200K MPPT Controller
Technical Specification



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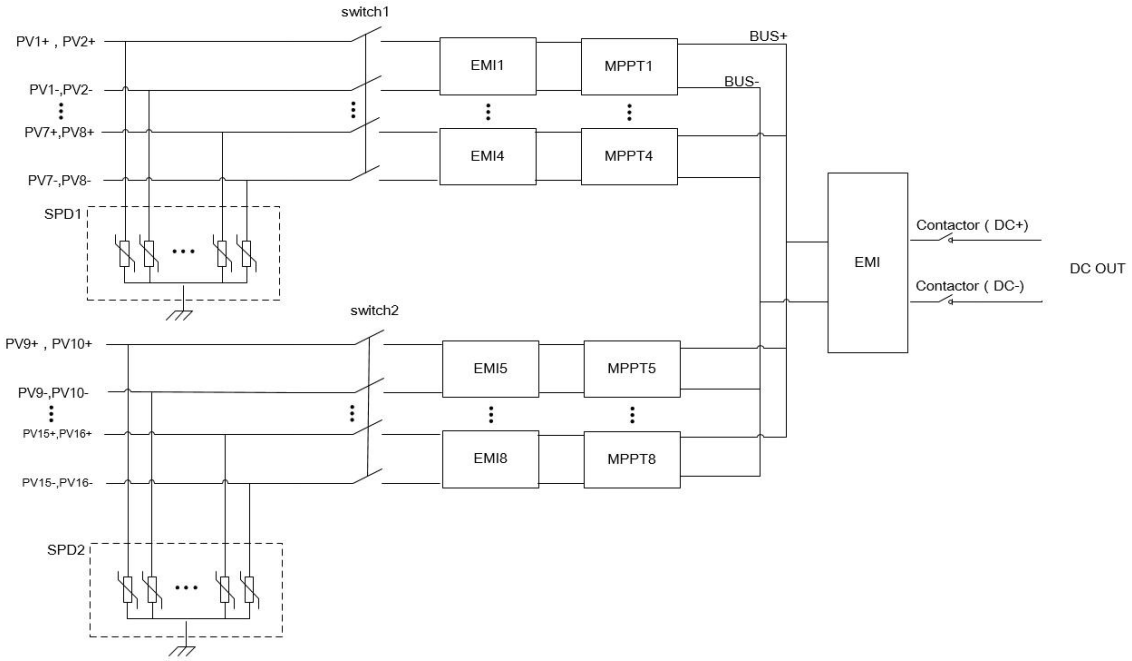
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1. product presentation

This high-efficiency, high-reliability, and highly protected IP65 Wall-Mounted Step-Down/Step-Up MPPT Controller has been developed specifically for DC-coupled microgrids in small and medium-sized energy storage systems. It features a wide voltage input and output range (with battery voltage independent of PV configuration), multiple protection mechanisms, and support for multi-unit parallel operation, making it ideal for DC-coupled microgrid applications.

1.1. Main topology



graph 1-1

2. Product model and external dimensions

2.1. product model

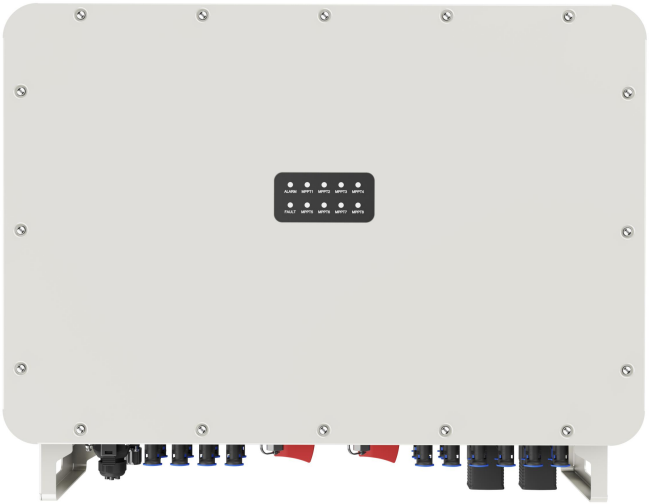


2.2. naming rule

This document applies to the model specifications of the LEONA series products.

order number	meaning	definition
1	Product Series Name	LEONAseries
2	Model Identifier	IP65 Wall-Mounted Step-Down/Step-Up MPPT Controller
3	power	200KW

2.3. product appearance



graph 2-1

2.4. product size

(unit:mm):

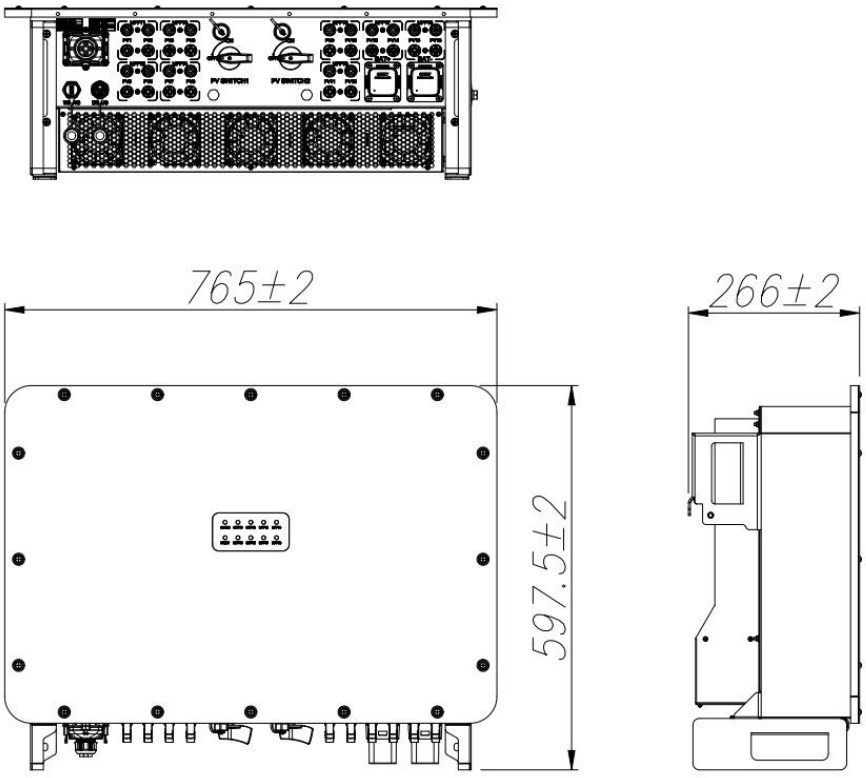


Figure 2-2 Product Dimensions

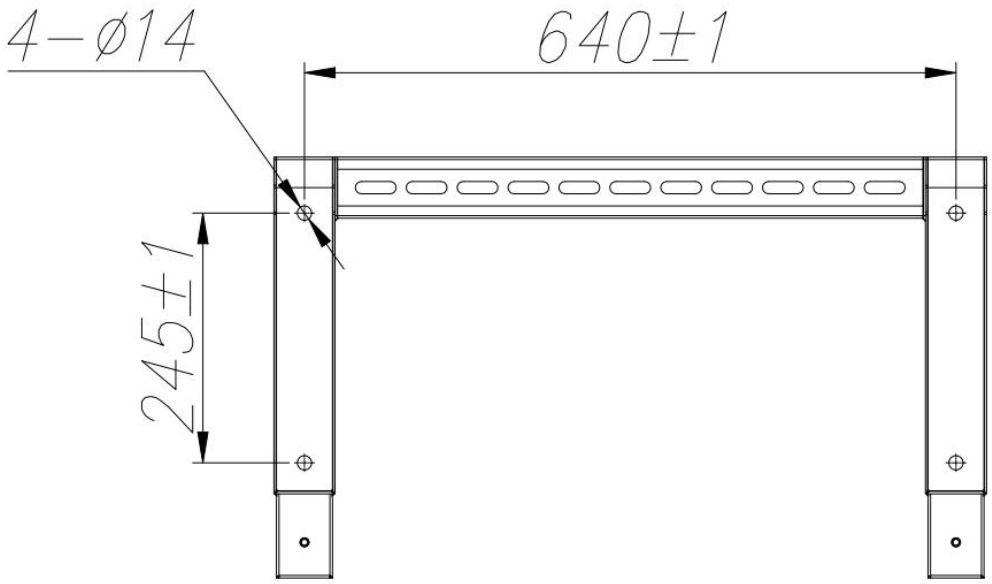


Figure 2-2: Dimensions of the wall-mounted component

3. Specifications

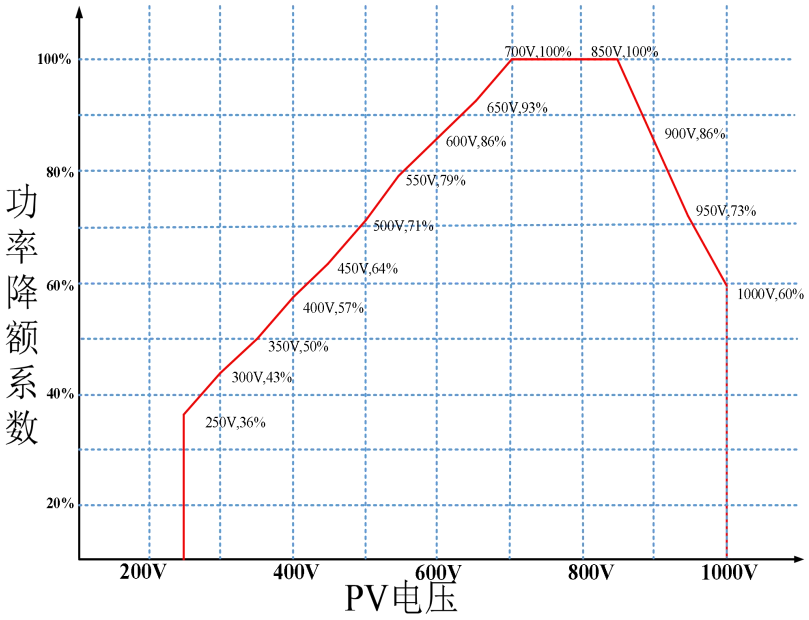
1) parameter

parameter	LEONA-M200K
PVparameter	
power rating	200kW
PV open-circuit voltage range	200V-1100V
MPPTvoltage range	200V-950V
rated voltage	700V
starting voltage	250V
Number of PV input channels	16
Maximum PV branch current	18A*16
MPPTquantity	8
MPPT current	36A*8
MPPTshort-circuit current	39.6A*8
High-voltage side parameters	
voltage range	0V-950V
rated voltage	700V
maximum current	288A
system parameter	
Communication port	EMS: RS485; Battery: CAN or RS485
DIDO	DI: 2 channels, DO: 2 channels
maximal efficiency	99.26%
way to install	wall mounting type
Corrosion resistance rating	C5-M
loss	Standby power <15 W; no-load power <100 W
weight	57KG
size	W *L* H：765*597*266mm
protect	IP65
temperature range	-30–60 °C (derating below 45 °C)
Humidity range	5%~95%

cooling-down method	Intelligent forced air cooling
height	4000 m (derated to <2000 m)
protect	Overtemperature protection, overcurrent protection, overvoltage protection, and ground short-circuit protection
attestation	IEC62477，IEC62109，EMC
Soft-start circuitry	Yes

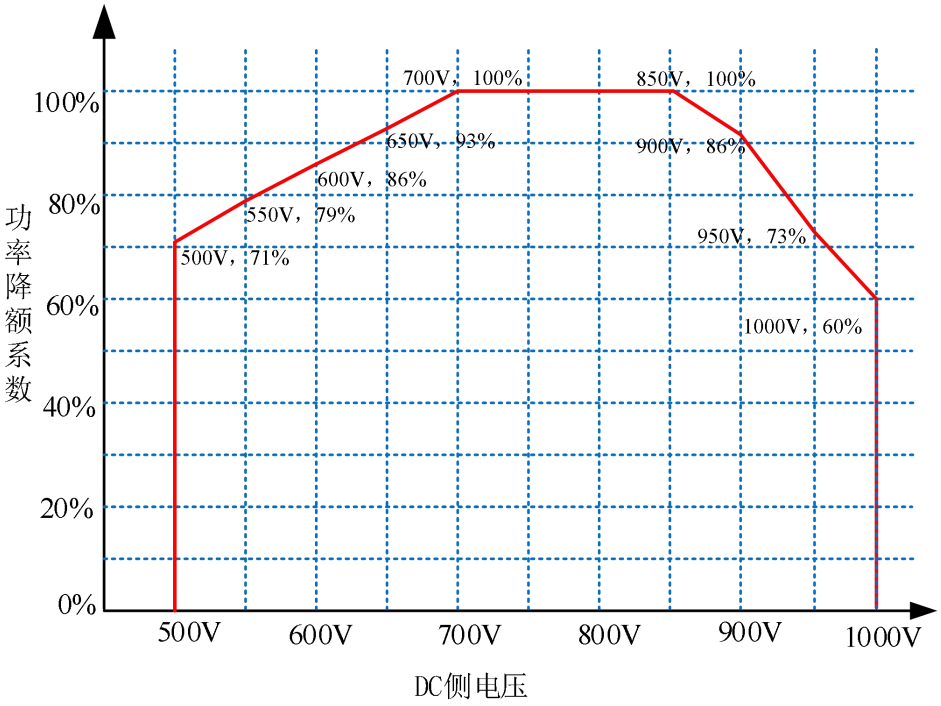
2) Power derating curve

LEONA-M200K power derating curve (PV voltage):



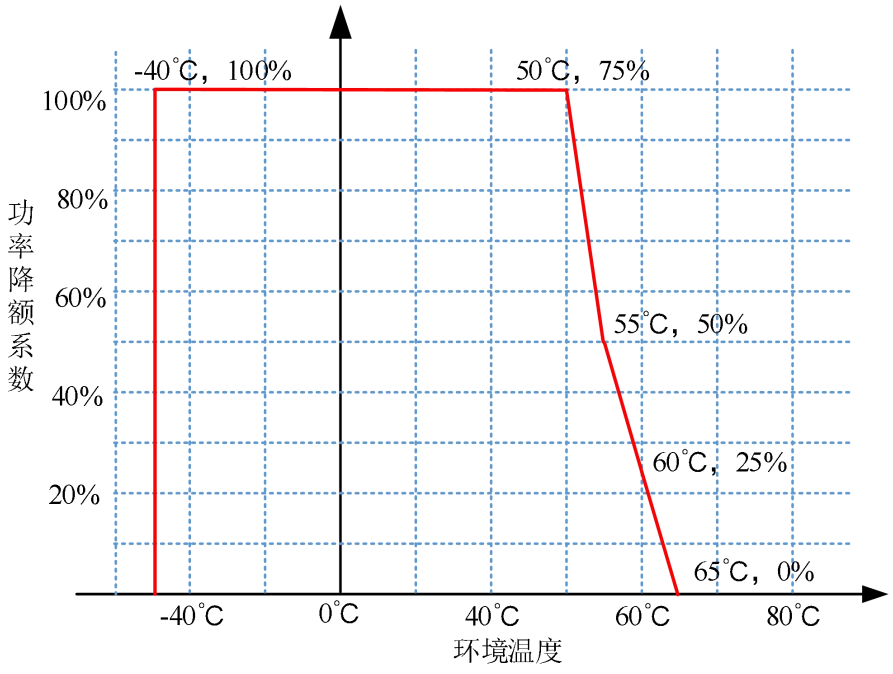
graph 3-1

LEONA-M200K power derating curve (DC-side voltage):



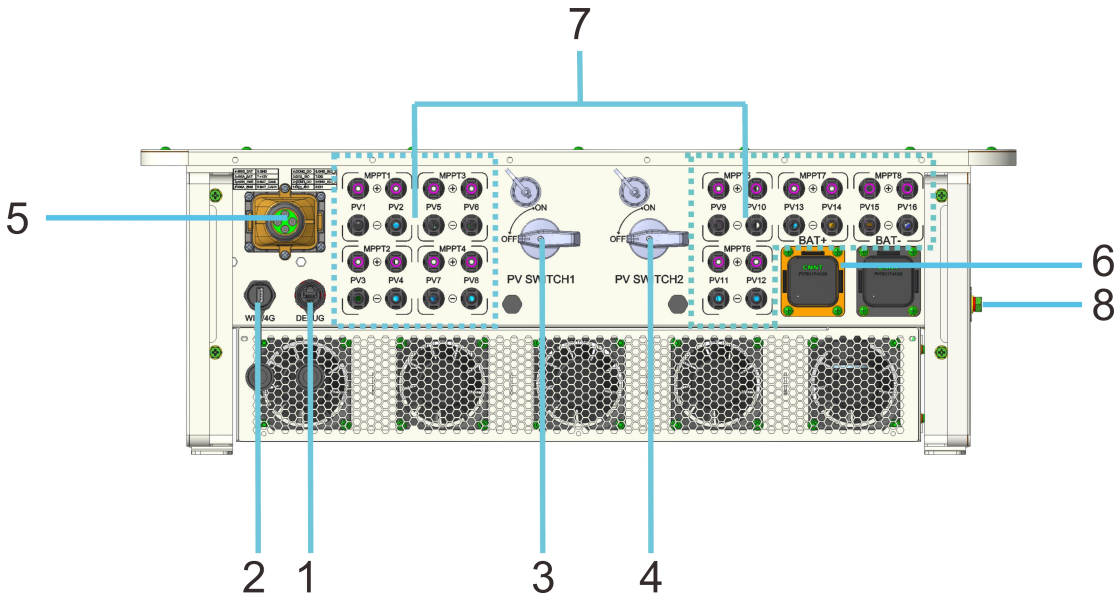
graph 3-2

3) Temperature derating curve



graph 3-3

4. Product ports and cables



graph 4-1

4.1. Product Port Definition

Port number	function	definition		Recommended Cables
1	RJ45 waterproof interface Debug	PIN1:M_CANL PIN2:M_CANH PIN3:GND PIN4:TEST_SCI_TX PIN5:TEST_SCI_RX PIN6: Empty		Recommended dedicated communication network cable: CAT6 (Category 6) Recommended models for RJ45 plugs (waterproof): CS-RJ45-R05
2	WIFI4G	Reserved		Reserved
3	PV rotary switch 1 (PV SWITCH1)	Control the DC input terminals PV1–PV8		/
4	PV rotary switch 2 (PV SWITCH2)	Control the DC input terminals PV9–PV16		/
5	Communication Port Definition	J2	PIN1:485A_EMS PIN2:485B_EMS PIN3: Empty PIN4: Empty PIN5: Empty PIN6: Empty PIN7: Empty	J2: Recommend dedicated communication network cable, type CAT6 (Category 6). J3, J4: Recommended US-spec line 22#

			PIN8: Empty	
		J3	PIN1:485A_EMS PIN2:485B_EMS PIN3:485A_BAT PIN4:485B_BAT PIN5:BAT_CANH PIN6:BATCANL PIN7:+12VA PIN8:GND	
		J4	PIN1:DO1_ISO PIN2:COM1_DO PIN3:DO2ISO PIN4:COM2_DO PIN5:D11 PIN6:GND ISO 2 PIN7:DI2 PIN8:GND _ISO_2	
		SW2	Communication matching resistor	
		SW3	Address dialing	
		SW4		
6	BAT-side cable interface (BAT+ and BAT-)	DC		1) SC95-12 terminals; recommended external cable: 95 mm^2 2) RNB100-12 terminals; 120 mm^2 external cable is recommended. (The above two types of terminals are pre-configured at the factory.)
7	DC input terminals PV1–PV16	PVinput terminal		Recommended external cable: 5 mm^2
8	Case grounding	landing		OT terminal (RNB22-6S); 10 mm^2 cable is recommended
Note: The recommended cables in this selection table are for reference only; they may be adjusted based on actual operating conditions.				