

48V Standalone Battery Module

Specifications

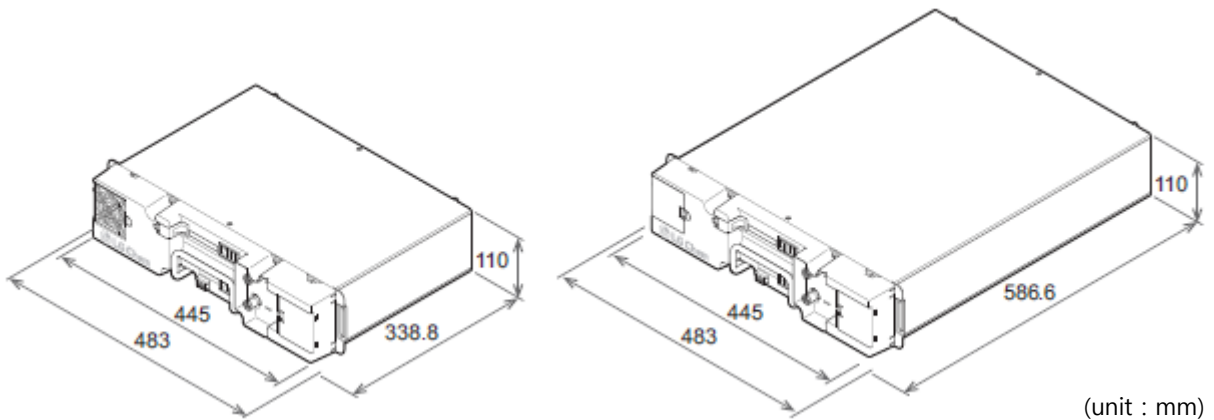
INTRODUCTION

1. Features

The Standalone battery modules (EM048063P3S and EM048126P3S series) have the following features ;

- ❑ **Built-in battery management system (BMS)** : A battery module's BMS monitors its operation and prevents the battery from operating outside design limitations. When a battery module enters abnormal state, the BMS issues an alert and restricts or disables the battery's operation.
- ❑ **How-swap capability** : Faulty battery modules can be replaced while the ESS remains in operation.
 - ※ This feature is not supported with the residential models.
- ❑ **Scalability** : An ESS can comprise up to 10 units connected in parallel.
- ❑ **Power saving** : When a battery voltage drops below the limit, it turns off.

2. Outline Dimensions



Physical Characteristics			EM048063P3Sx	EM048126P3Sx
Model			EM048063P3Sx	EM048126P3Sx
Width	mm		338.8 (13.3 in)	586.6 (23.1 in)
Depth	mm		445 (17.5 in)	445 (17.5 in)
Height	mm		483 (19.0 in)	483 (19.0 in)
Weight	kg		26.5 (58.4 lb)	44 (97.0 lb)

SPECIFICATIONS

Performance				
		EM048063P3Sx	EM048063P3S5	EM048126P3Sx
Nominal Capacity ¹		63 Ah	63 Ah	126 Ah
Nominal Energy ¹		3.3 kWh	3.3 kWh	6.5 kWh
Nominal Voltage		51.8V		
Operating Voltage		42~58.8V		
Floating Voltage		57.4V Max.		
Max. Charge/Discharge Current ²		63 A	31.5 A	63 A
Max. Charge/Discharge Power ²		3.3 kW	1.6 kW	3.3 kW
Continuous Charge/Discharge Power ²		3.0 kW	1.5 kW	3.0 kW
Round-Trip Efficiency		95% or more		
Ingress Protection Rating		IP20		
Cooling		Forced air cooling Or Natural convection	Natural convection	Natural convection
Communication Interface	Protocol	CAN 2.0B or Modbus 485		
	Port	RJ48		
Dry Contact		2Ch (Warning or Fault 1 / Fault 2)		
Operating Conditions				
Available Operating Temperature		-10~45°C		
Optimal operating Temperature		15~30°C		
Storage Temperature		-30~60°C		
Self-Discharge Rate During Storage		Less than 6% per year at 25°C		
Humidity		5%~95%		
Altitude		Below 2,000m		
Scalability & Certification				
Scalability		Up to 10 units with parallel		
Safety	Cell	UL1642		
	Module	CE / RCM / FCC / TUV (IEC 62619) / UL1973 / S-mark (JIS C 8715-2)		
Transportation		UN38.3 (UNDOT)		

¹ At standard conditions:

- Charge: CC-CV, with 0.3CC, to 58.8V (3.15A cut off) at 25°C
- Discharge: CC, with 0.3CC, to 42V at 25°C

² It can be de-rated in accordance with the power limit by the BMS.