



BRUNSTOCK **Symm 261**



C&I BESS 261 kWh (125 kW)

Catalogue

2026

 **Brunstock**



PRESENTATION	2
CHARACTERISTICS	4
WORKING PRINCIPLES & TOPOLOGY	6
SYSTEM PARAMETERS	8
MAIN COMPONENTS	10
SYSTEM CONFIGURATION & EXTENSION	12



One Symm 261 unit

Product introduction

Symm 261, a distributed energy storage system, has an integrated design concept. It is a highly integrated energy storage product with an optional included power conversion system (PCS), energy storage battery system, battery management system (BMS), temperature control system, fire protection system, etc. Its main components are the AC combiner box (hereinafter referred to as 'combiner box') and the energy storage cabinet.

Its compactness, along with the integrated and modular design, make it a versatile energy storage product in the renewable energy market.

Symmetry is essential

We are amid the global energy transition—a system where loads and generation fluctuate more than ever before. Renewables surge and decline. Demand peaks and falls unpredictably. Stability is no longer a given; it must be engineered.

Across every level of the modern energy ecosystem—from grid-scale storage to behind-the-meter systems—balance between supply and demand is needed. Grid balance starts with symmetry. The Brunstock Symm series embodies this principle—engineered to stabilise, support and bring perfect operational symmetry to a dynamic energy world.

Overview of main functions

Energy storage and release

Symm 261 supports energy charging and discharging control of external power grids or power generation systems to achieve peak load shifting, load balancing or backup power supply.

The battery system has multi-cycle charging and discharging capabilities, supporting frequent daily scheduling.

Multi-level security protection mechanism

Symm 261 provides fault isolation, overvoltage protection, overheating warnings, thermal runaway fire suppression linkage, intelligent monitoring and remote management.

Communication protocols

Symm 261 supports RS485, Ethernet, CAN and other communication protocols, which enables remote data collection, status monitoring, alarm push and policy scheduling that can be achieved through the EMS platform.

Compatible with multiple operation strategies

Symm 261 is configurable for peak shaving and valley filling, emergency backup, solar storage combined operation and other strategies.

It is compatible with PCS and EMS systems from multiple manufacturers through standard communication protocols.

Factory-integrated design

The product is pre-assembled as an integral cabinet at the factory, reducing on-site installation time. It supports modular parallel deployment for scalable capacity expansion.

Operating requirements and limitations

Symm 261 must be installed and commissioned by qualified electrical contractors or Brunstock-trained technicians. Operation outside designed specifications is strictly prohibited.

Environmental limitations

Symm 261 is not suitable for operation in highly corrosive atmospheres or explosive gas environments (Class I Division 1 hazardous locations).

System integration requirements

All advanced functions require proper communication configuration and EMS integration. Partial system integration will limit available operating modes and grid services capabilities.

Medical and critical infrastructure

Symm 261 is not approved as a primary power source for medical life support systems.



Modular and extensible, Symm 261

Application scenarios

Peak shaving and valley filling for commercial and industrial (C&I) applications

Symm 261 charges during off-peak tariff periods and discharges during peak demand windows, reducing demand charges and lowering total energy costs. It integrates with enterprise EMS for automated scheduling based on load forecasting and tariff structures.

Backup power and resilience

Symm 261 provides UPS-level backup power with seamless transfer (<20 ms) when grid supply fails, ensuring continuous operation of critical loads. Suitable for hospitals, data centres, manufacturing facilities and other applications requiring high power reliability.

Solar-storage integration

When operated in conjunction with the photovoltaic system, it increases photovoltaic self-consumption by storing excess solar generation and releasing during non-solar periods or peak demand. Symm 261 supports automatic grid-connected and islanded mode operation with seamless transition capability.

Microgrid and off-grid operation

These energy storage cabinets can be used together with local generators and wind and solar systems to form autonomous microgrids. Symm 261 provides grid-forming capability for frequency and voltage regulation, black start functionality and islanded operation in areas with limited grid infrastructure.

Grid services and market participation

Symm 261 is capable of providing demand response, frequency regulation (FCAS where available) and capacity services to grid operators. Supports participation in energy arbitrage and capacity markets when integrated with appropriate EMS and market systems.



Symm 261 application

Symm 261 complies with the following standards

Standards and compliance	Description
IEC 62619	Secondary cells and batteries containing alkaline or other non-acid electrolytes – Safety requirements for secondary lithium cells and batteries, for use in industrial applications
IEC 60730-1 Annex H	Automatic electrical controls for household and similar use – Part 1: General requirements – Annex H: Requirements for electronic controls
IEC 62109	Safety of power converters for use in photovoltaic power systems
IEC 62477	Safety requirements for power electronic converter systems and equipment
IEC 62909	Bi-directional grid-connected power converters
IEC 61000	Electromagnetic compatibility (EMC)
EN 18031	Stationary energy storage systems (SESS) – Safety requirements
IEC 63056	Secondary cells and batteries containing alkaline or other non-acid electrolytes – Safety requirements for lithium batteries for use in stationary applications
VDE 4105	Generation plants connected to the low-voltage grid – Technical minimum requirements for the connection to and parallel operation with low-voltage distribution networks
VDE 4110	Technical requirements for the connection to and operation of customer installations connected to the medium-voltage grid (TCR Medium Voltage)
NRS 097-2-1	Grid interconnection of embedded generation - Part 2: Small-scale embedded generation - Section 1: Utility interface
AS 4777	Grid connection of energy systems via inverters
UN 38.3	UN Recommendations on the Transport of Dangerous Goods - Manual of Tests and Criteria

CHARACTERISTICS



World-class architecture
and design

Features

- Unlock energy independence
- Decrease peak demand
- Improve resilience
- Reduce operating costs
- Integrate renewables
- Balance resources
- Promote safety

Symm 261 is class-leading

Seamless microgrid integration

- Connect effortlessly with solar, wind, generators and EV charging
- Operate grid-connected or completely islanded
- Fast-acting controls stabilise frequency, voltage and load
- Unlock services like peak shaving, load balancing and resilience support

Scalable, modular design

- Start with a single 125 kW unit and expand to multiple unit systems
- Parallel ready architecture grows with your facility's demand
- Ideal for seasonal or expanding operations
- Invest in phases to match your business growth

Flexible configurations

- Optional DC-only variant for third party PCS integration
- Perfect for unique grid codes or local supplier requirements
- Supports hybrid microgrids with multi-brand electronics
- Retains Brunstock's proven enclosure, safety and design standards

Optimised for heavy power users

- Cut demand charges and avoid costly penalties
- Shift large loads to off-peak tariffs
- Smooth operation of motors, chillers, pumps and compressors
- Store renewable energy and release it when it matters most

CHARACTERISTICS

Energy arbitrage for maximum savings

- Charge during periods of solar excess or off peak
- Discharge during peak demand windows
- Intelligent scheduling tailored to your consumption patterns

Engineered for reliability

- Industrial-grade liquid cooling
- Maintains uniform cell temperature in extreme heat, cold or humidity
- Superior heat dissipation extends battery life
- Enables high power cycling without derating
- Enhanced safety through stable thermal operation



Symm 261 application

World-class architecture & design

- Clean, industrial aesthetic for visible commercial sites
- High grade materials resist corrosion and weather extremes
- Ergonomic layout for fast servicing and minimal downtime
- Certified to IEC standards for global compliance

Future-proof engineering

- Tier one power electronics with Brunstock AC/DC expertise
- Advanced BMS with multi-layer safety and lifecycle protection
- Scalable design supports long term site growth

CHARACTERISTICS



Brunstock's optional PCS inclusion

Advantages

Advanced PCS operating modes

- Grid-following mode for standard on-grid operation with utility synchronisation and a smart operation interface
- Grid-forming mode for islanded and off-grid applications with independent voltage/frequency control
- Seamless transition between grid-connected and islanded modes (<20 ms transfer time)
- Black start capability for dead bus energisation without external supply
- Voltage regulation accuracy $\pm 2\%$ and frequency regulation $\pm 0.5\%$ of nominal
- Configurable droop settings and load sharing for parallel PCS operation

Grid code compliance & fault handling

- Refined thermal management, with pack temperature difference $\leq 3^{\circ}\text{C}$
- Fault ride-through compliant with regional grid code requirements
- Configurable fault current contribution magnitude and duration in grid-forming mode
- Motor starting and transformer inrush current handling capability
- Protection coordination support for site-specific requirements
- Grid synchronisation protocols for safe reconnection after islanding
- IEC 62933 BESS compliance with grid-forming inverter standards

CHARACTERISTICS

Identification plate

Cabinet designation (model number)

Example	BRUN	-	BESS	-	SYMM	-	261	-	P/D
Brunstock									
Battery Energy storage cabinet									
Our product brand									
Rated capacity (kWh)									
P includes PCS D is purely DC									

Battery designation

Example	IFpP	74*176*210	/	52S	/	-30+55	/	90
Cell type: Lithium iron phosphate								
Cell size								
Cell qty in one pack								
Temperature range: -30°C to 55°C								
SOH after 500 cycles								

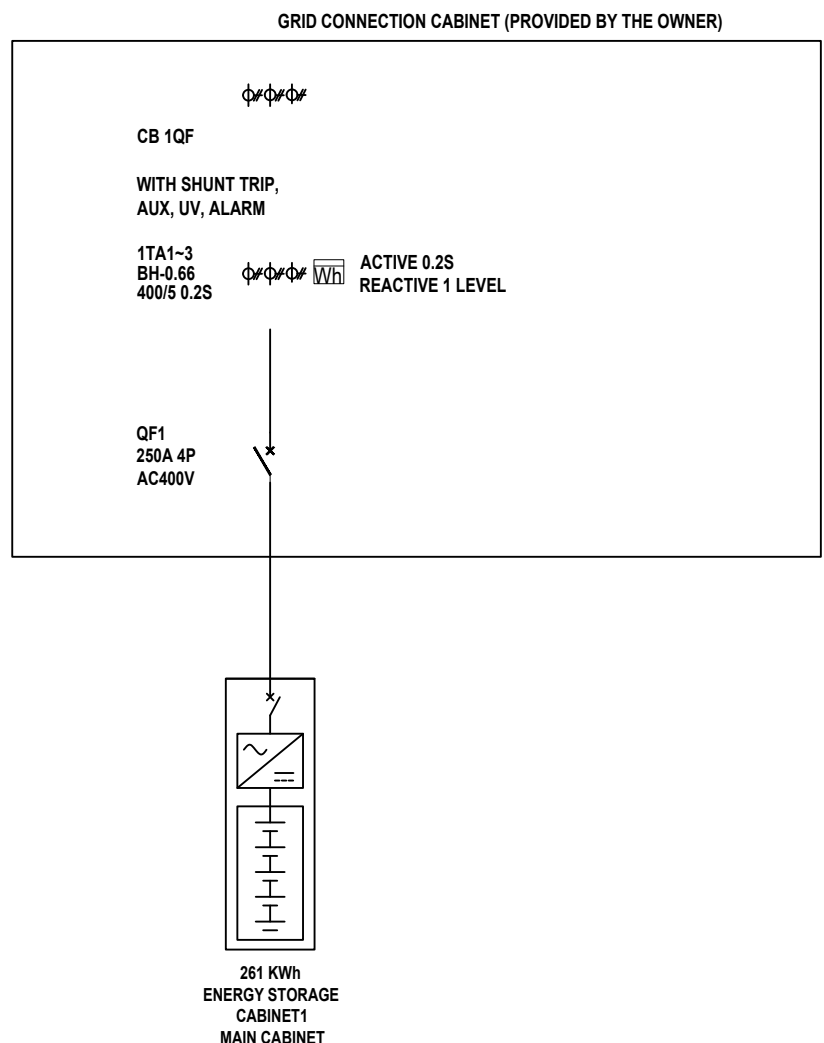
WORKING PRINCIPLE & TOPOLOGY

Working principle

The working principle of Symm 261 is shown in the figure below. This distributed energy storage (ES) system uses electrochemical batteries as the ES carrier and performs cyclic electrical ES and release through the ES inverter.

- **Charging:** When the power supply capacity of the grid is sufficient, or during off-peak electricity price periods, or upon receiving a charging command from the cloud, the energy storage system obtains electrical energy from the grid, converting electrical energy into chemical energy stored in the batteries for use when needed.
- **Discharging:** When the grid load is high, or during peak electricity price periods, or upon receiving a discharging command from the cloud, the energy storage system converts the stored energy into electrical energy through the inverter and outputs it to the 400 V AC low-voltage grid to provide electrical energy for local loads.

GRID

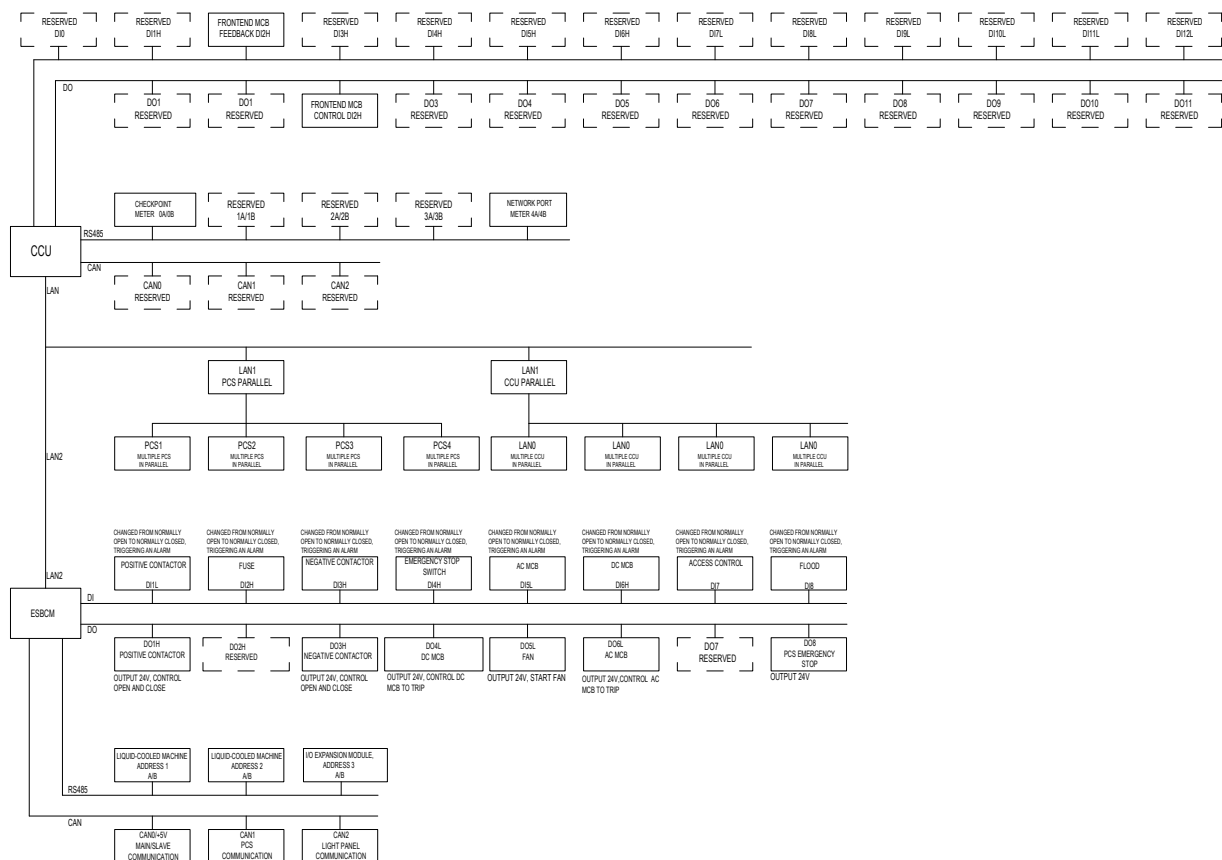


WORKING PRINCIPLE & TOPOLOGY

Control

The BMS control system monitors the operational status and environmental information of each component of the energy storage system in real time, and performs corresponding intelligent management and control. In case of any abnormality, it promptly executes protection strategies and reports alarm signals.

The communication topology is shown as in below figure.



Communication topology

Electrical parameters of AC side

Rated output power	kW	125
Maximum output power	kW	137.5
Power factor	/	-1 to +1
Rated frequency	Hz	50/60
Rated operating voltage	V	AC400/3L+N+PE
AC voltage tolerance range	%	-15 to +10
Total harmonic distortion (THDi)	%	≤3
Rated operating current	A	180.4
Maximum operating current	A	198

Electrical parameters of the DC side

Rated battery voltage	V	832
DC voltage tolerance range	V	767-923
Battery cell type	/	Lithium Iron Phosphate (LFP)
Battery cell capacity	Ah	314
Charging & discharging rate	/	0.5P
Battery cycle life	times	~8,000 cycles @ 25 °C, 0.5P, 1 cycle/day, 95% DOD
String mode	/	1P260S
Battery capacity	kWh	261

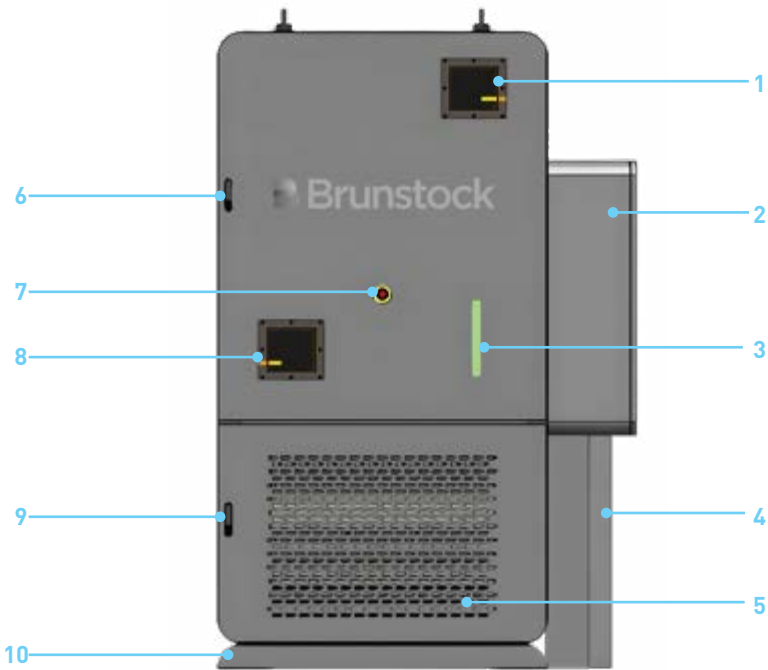
System configuration

Dimension	W x D x H	mm	1200 x 1400 x 2320
Weight		kg	≤3000
Thermal management		/	Liquid cooling for battery, forced air ventilation for AC cabinet
Protection degree		/	IP55
Fire protection		/	Level 3
Lightning protection		/	Level C, In=20 kA, I _{max} =40 kA (8/20 μs)
Noise level		dB	≤70
Communication interface		/	RS485/CAN
Communication protocol		/	Modbus/CAN/MQTT

Operation conditions

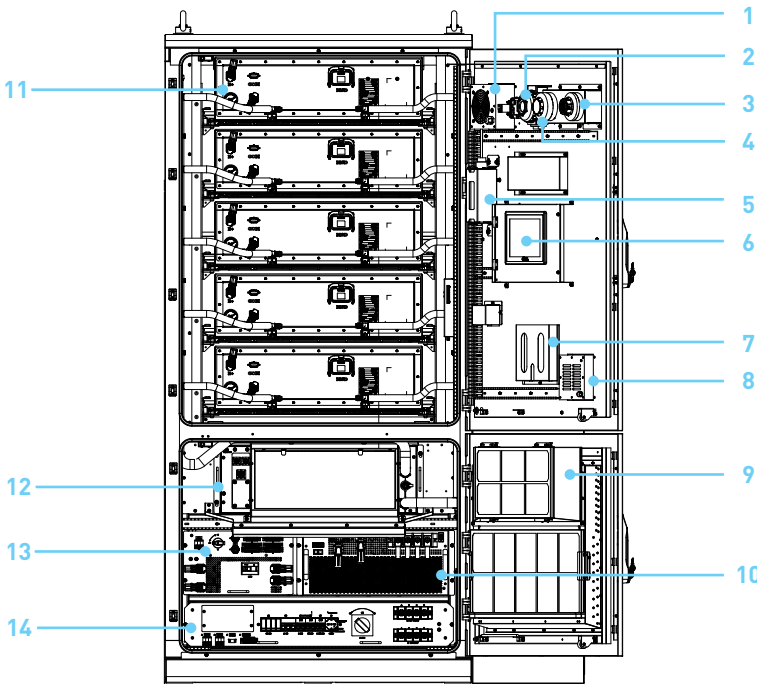
Ambient temperature	°C	-30 to 55
Altitude	m	≤3000 (derated when >2000)
Relative humidity	%	0-95

Electrical parameters of DC side		
Number of input channels	/	1
Rated DC voltage	V	768
DC voltage tolerance range	V	550 to 950
Maximum DC current	A	238
Electrical parameters of the AC side		
	A	200
Grid voltage	V	400 AC [–15% to 10%]
Off-grid voltage	V	400 AC (±10%)
Rated power	kW	125
Rated current	A	180.4
Continuous overload current	A	198.5
Maximum current	A	216.5
Frequency	Hz	50/60 (±5% adjustable)
Total harmonic distortion (THDi)	%	≤3
Power factor	/	–1 to 1
DC component	%	0.5
Environmental condition parameters		
Operating ambient temperature	°C	–30 to 55 (heating to 0 °C provided for charging)
Storage temperature	°C	–30 to 55
Altitude	m	≤3000 (power derating above 2000)
Relative humidity	%	0–95
Project parameters		
Wiring	/	3L3P/3L4P (IT/TT/TN-S)
Grid form	/	IT/TN
Maximum charging conversion efficiency	%	99
Maximum discharging conversion efficiency	%	99
Cooling method	/	Forced air cooling
Protection degree	/	IP20
Corrosion resistance	/	C3
Noise level	dB	≤75
Overvoltage level	/	DC II, AC III
Dimension	W x D x H	mm
		520 x 680 x 270
Weight	kg	80
DC surge protection	/	Class IV
AC surge protection	/	Class IV
Communication interface	/	RS485, Ethernet, CAN, WIFI
Communication protocol	/	Modbus TCP/RTU, CAN 2.0



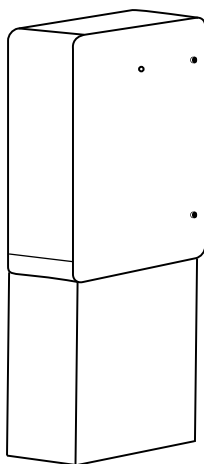
(1)	Fire exhaust fan
(2)	AC combiner box
(3)	SOC indication light
(4)	Cable trunk
(5)	Cabinet cooling air inlet
(6)	Upper access door
(7)	Emergency stop button
(8)	Fire suppression air inlet
(9)	Bottom access door
(10)	Pedestal

Symm 261 layout



(1)	Fire exhaust fan
(2)	Combustible gas detector
(3)	Smoke sensor
(4)	Heat sensor
(5)	Aerosol dispenser
(6)	CCU
(7)	File holder
(8)	Fire suppression air intake valve
(9)	Cabinet cooling air inlet
(10)	PCS
(11)	Battery pack
(12)	Liquid cooler
(13)	HV box
(14)	AC distribution box

Symm 261 internal layout



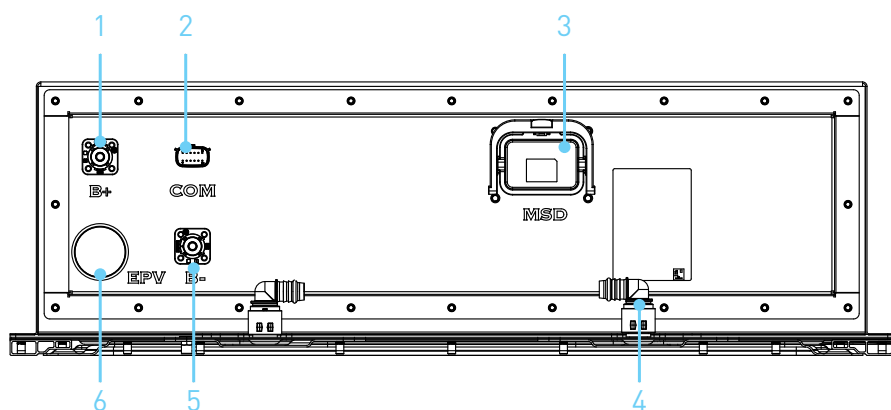
AC combiner box

AC combiner box

Used in multi-unit installations where multiple Symm 261 cabinets operate in parallel. Each cabinet connects to the AC combiner box, which aggregates all AC outputs before connecting to the grid connection point or facility main distribution board.

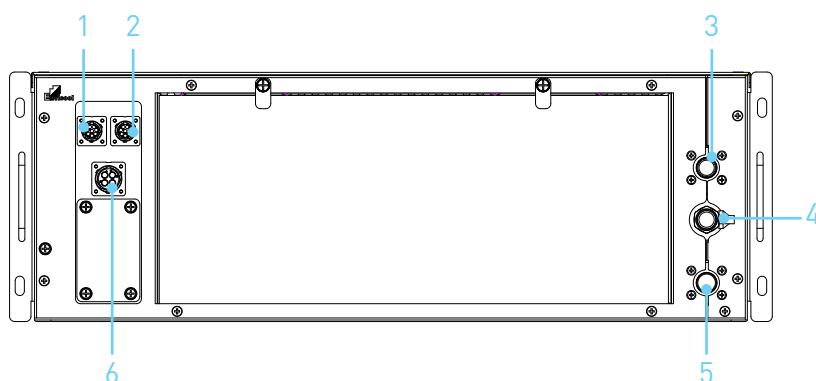
Provides main circuit breaker protection for the combined output of all parallel units. Coordinates with individual cabinet AC circuit breakers to provide selective protection. The faults in individual cabinets trip only that cabinet's breaker, while system-level faults or emergency stops trip the main combiner breaker.

During maintenance on any individual cabinet, opening the main combiner breaker de-energises AC terminals on all cabinets, providing additional safety isolation beyond individual cabinet disconnects. For work on a single cabinet, open both the combiner main breaker and the individual cabinet AC disconnect.



Battery pack

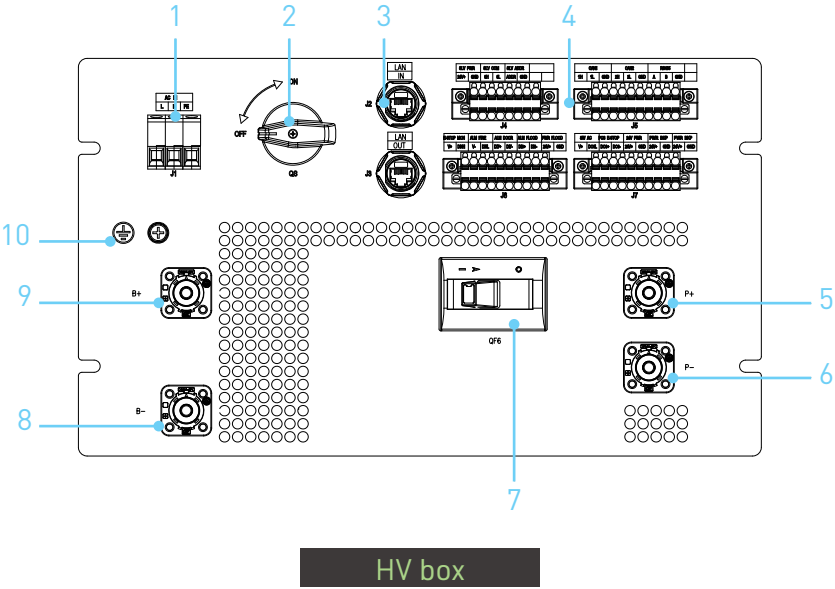
(1)	Positive terminal
(2)	Communication terminal
(3)	MSD
(4)	Coolant inlet and outlet
(5)	Negative terminal
(6)	Explosion relief valve



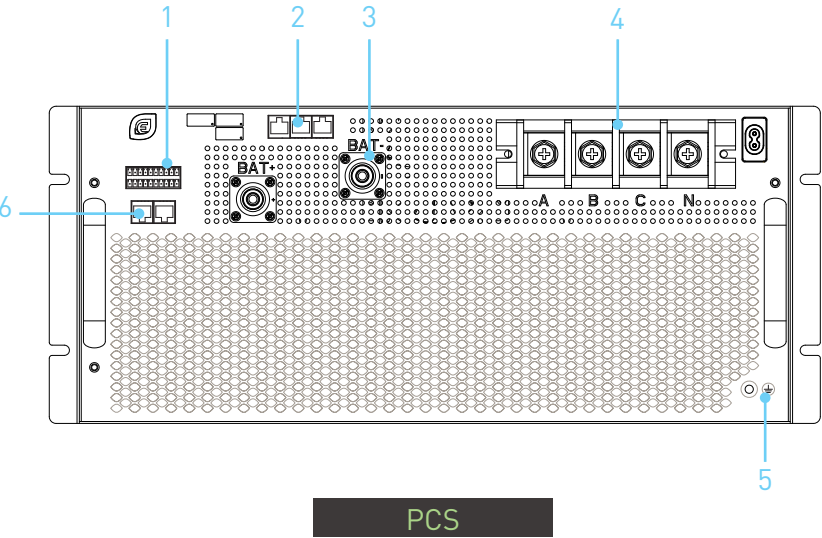
Liquid cooler

(1)	Commissioning terminal
(2)	Communication terminal
(3)	Coolant inlet
(4)	Liquid injection point
(5)	Coolant outlet
(6)	Power terminal

MAIN COMPONENTS



(1)	Auxiliary power input terminal
(2)	Isolating switch
(3)	LAN communication terminal
(4)	Signal terminal
(5)	PCS side positive terminal
(6)	PCS side negative terminal
(7)	DC switch
(8)	Negative terminal on the battery side
(9)	Positive terminal on the battery side
(10)	Ground terminal

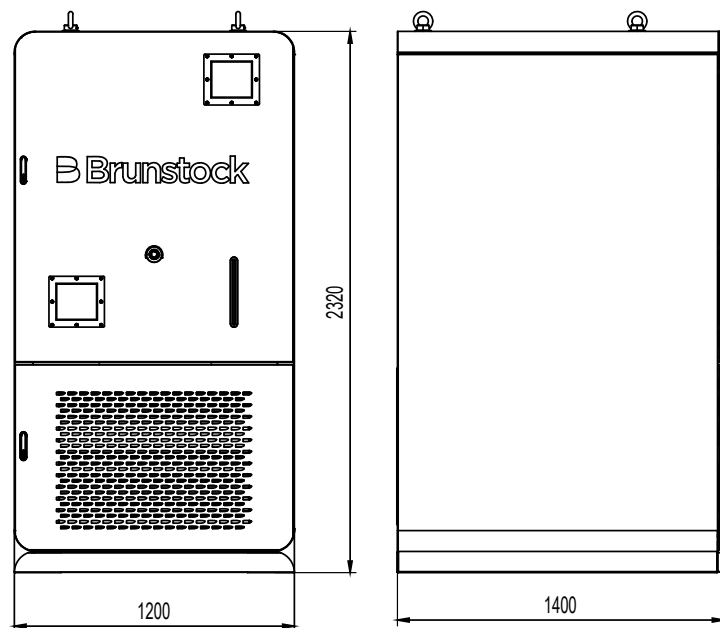


(1)	Dry contact communication terminals
(2)	LAN ports
(3)	DC side terminals
(4)	AC side terminals
(5)	Ground terminal
(6)	PCS-level networking ports

SYSTEM CONFIGURATION & EXTENSION

System configuration of one SYMM 261 cabinet

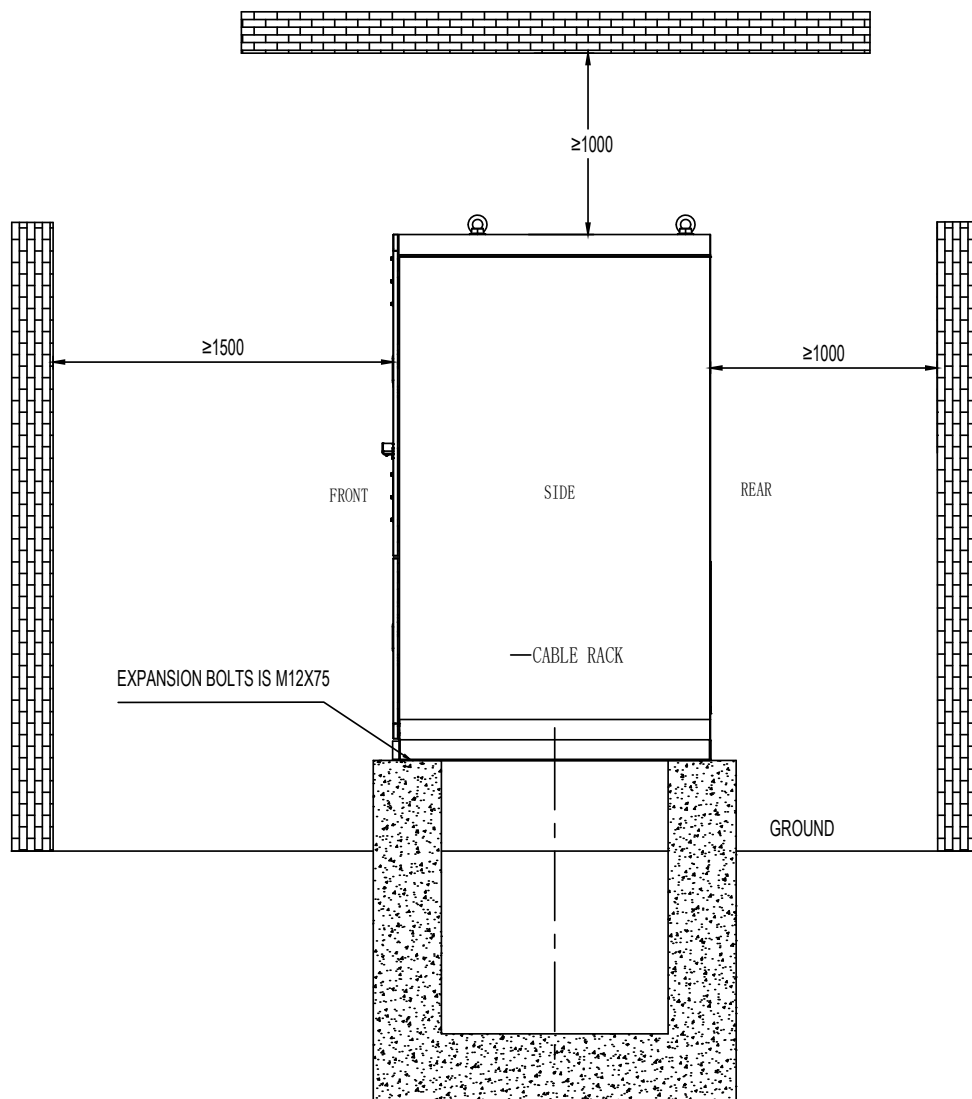
Equipment	Configuration
Energy storage cabinet	Equipped with 1 off PCS rating 400 VAC, 125 kW Equipped with LFP cell rating 1P260S, 3.2 V, 314 Ah
Battery management system	Three level architecture: BMU BCMU CCU
Temperature management system	Cooler power: Cooling 5 kW + heating 2 kW Coolant cycling volumn: 46.5 L/min (@60 kPa)
Fire protection system	Non-pressurised aerosol Detectors of heat, smoke, combustible gas Rupture disc for pressure relief
Lightning protection system	Level C In = 20 kA Imax = 40 kA (8/20 µs)
AC combiner box (optional)	Equipped with one AC input 400 V/1250 A main switch Allowable parallel connection for up to 5 Symm 261 cabinets



Symm 261 dimension in mm
(front & side view)

Width: 1200 mm
Depth: 1400 mm
Height: 2320 mm

SYSTEM CONFIGURATION & EXTENSION



Minimum installation distances to walls in mm

Installation spacing requirement

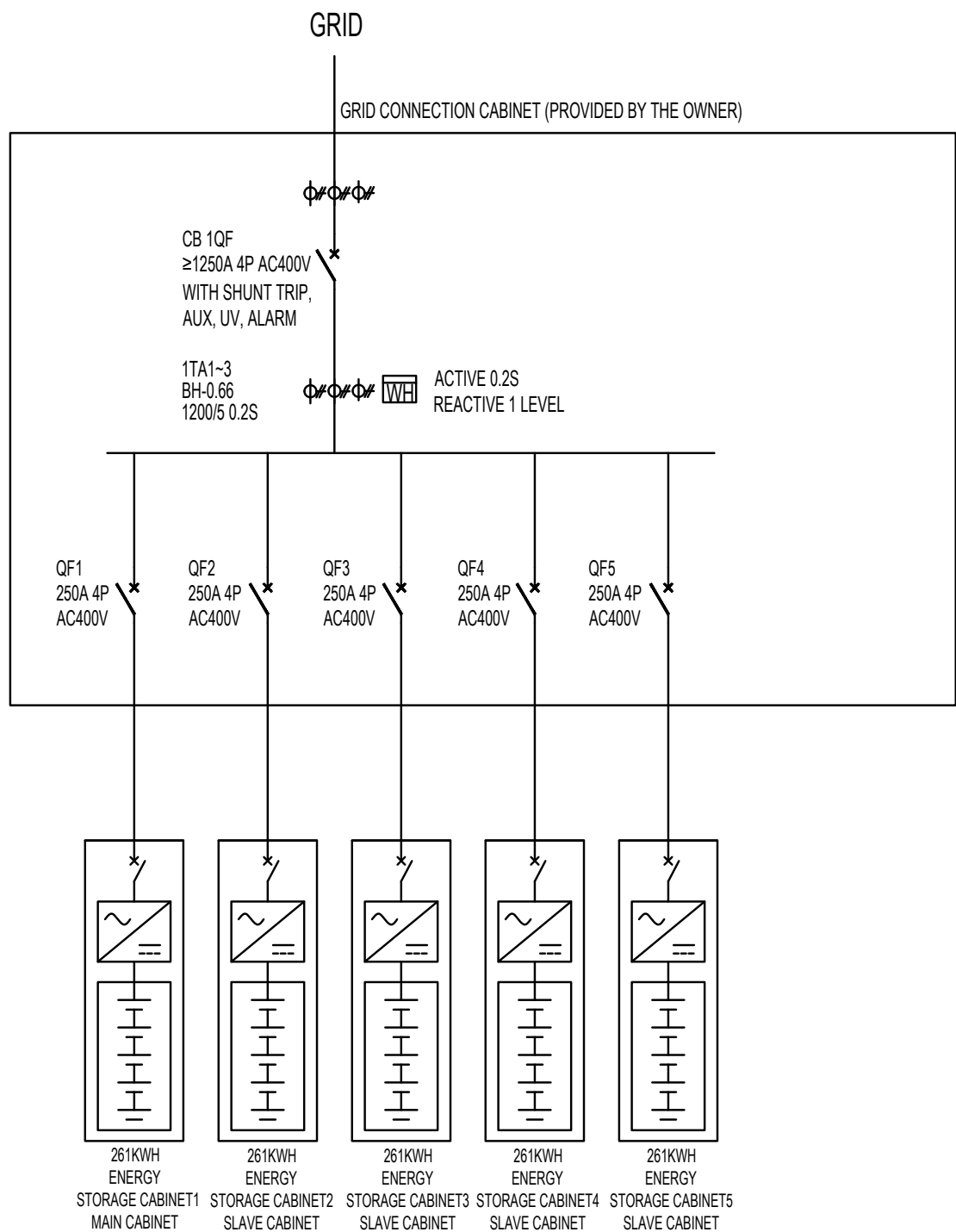
The energy storage cabinet should be installed in a clean, dry, unobstructed area that is free of explosive gases to facilitate ventilation, wiring, operation and maintenance. The installation area should be an outdoor hardened area or an indoor independent electrical room.

To ensure safety isolation and accident emergency response, Symm 261 must be installed with a sufficient safety distance from surrounding objects. As shown in the diagrams, it must be positioned at least 1000 mm from any side or back walls; it must have at least 1500 mm of space in front of it. Distance from cabinet top to roof ≥ 1000 mm for the evacuation of gases in case of overpressure.



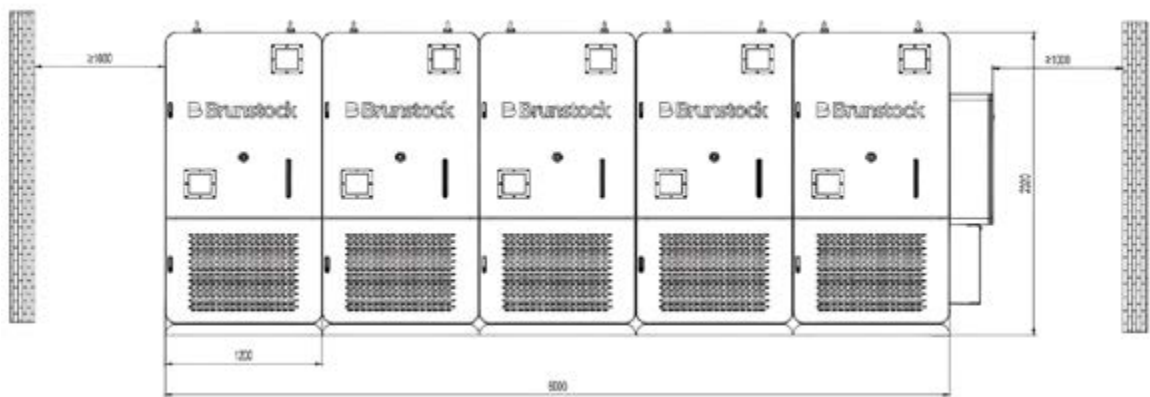
SYSTEM CONFIGURATION & EXTENSION

Extension configuration			
Solution	Cabinet quantity	Total output power	Total storage capacity
Basic unit	1	125 kW	261 kWh
Typical extension configuration	5	625 kW	1305 kWh

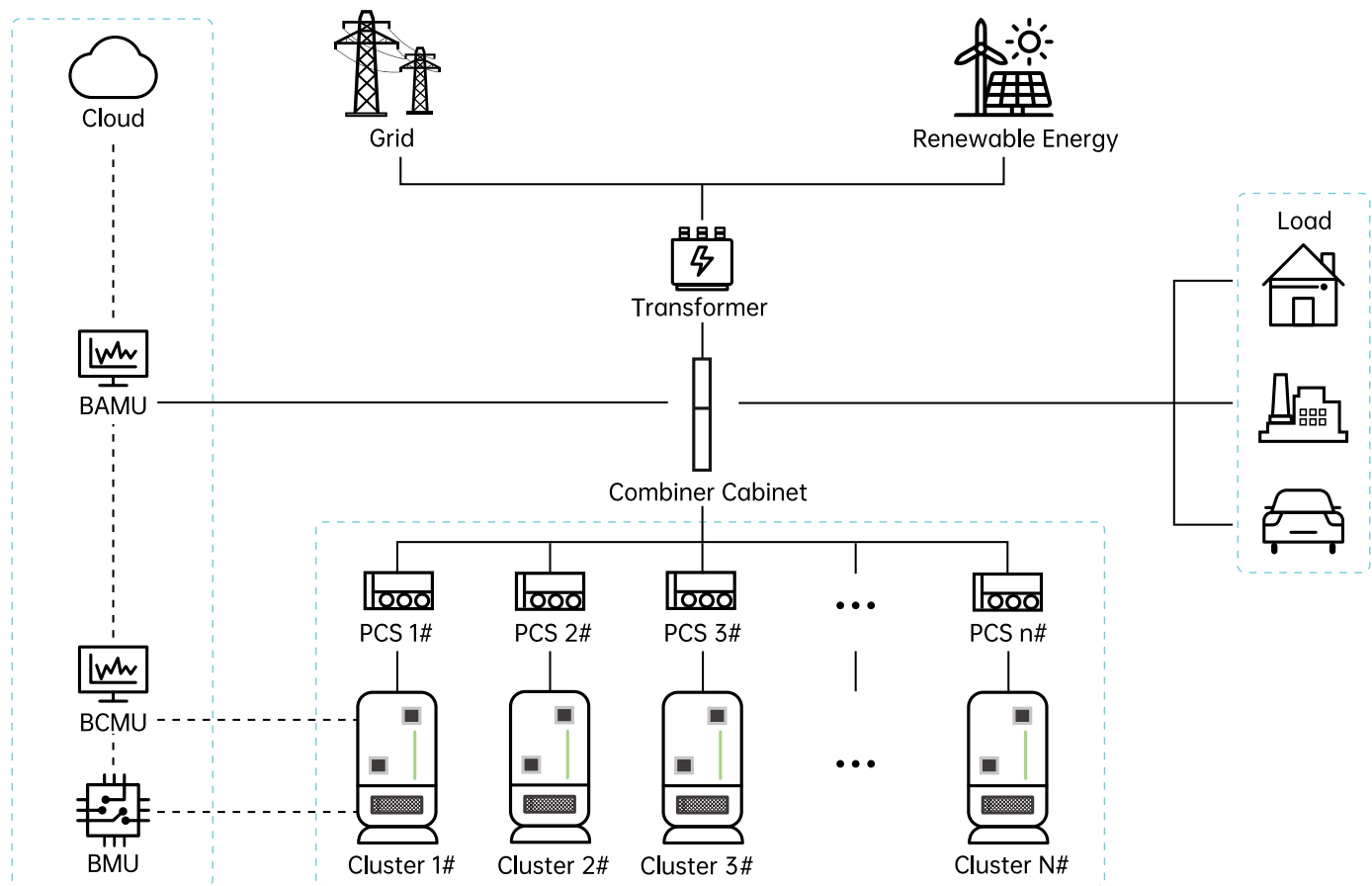


Parallel configuration of 5 sets Symm 261

SYSTEM CONFIGURATION & EXTENSION



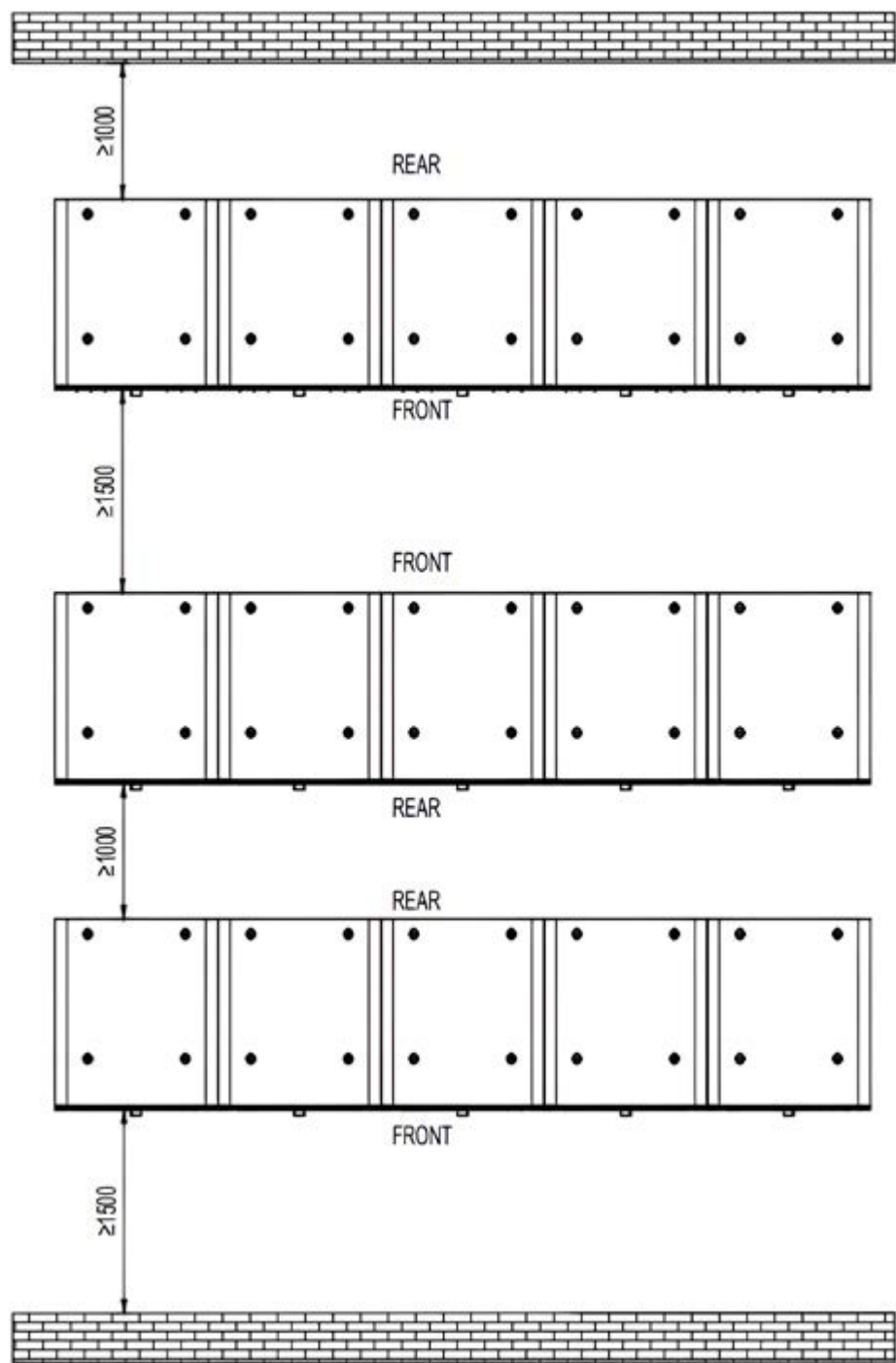
Installation distances for 5 combined cabinets in mm



AC application

SYSTEM CONFIGURATION & EXTENSION

Further extended applications



Distance requirements on multiple rows of parallel cabinets

Note: We reserve the right to make technical changes or modify the contents of this document without prior notice. With regard to purchase orders, the agreed particulars shall prevail. Brunstock does not accept any responsibility whatsoever for potential errors or possible lack of information in this document.

We reserve all rights in this document and in the subject matter and illustrations contained therein. Any reproduction, disclosure to third parties or utilisation of its contents – in whole or in parts – is forbidden without prior written consent of Brunstock.

Copyright © 2026 Brunstock All rights reserved

©2026 Brunstock. All Rights Reserved. Trademark is owned by Brunstock or its affiliated companies.

Design: Global Marketing

BRMK C00100

2026.06



For more information

Call 1300 36 26 26 | sales@colterlec.com.au | www.colterlec.com.au