



Certificate of Compliance

Certificate: 80252316

Master Contract: 261002

Project: 80252316

Date Issued: 2025-04-29

Issued To: Hoymiles Power Electronics Inc.
No.18 Kangjing Road,
Hangzhou, Zhejiang 310015
China
Attention: Qingman Yang

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only.



Issued by: Ky Huang
Ky Huang

PRODUCTS

CLASS - C3701 08 - BATTERIES - Electrical Energy Storage System

CLASS - C3701 88 - BATTERIES - Electrical Energy Storage System - Certified to US Standard

AC Li-ion Battery Energy Storage System (AC ESS), Models HYDEYE5.1-@-xP, HADEYE5.1-@-xP (“@” in the model name could be 3.8k, 4.8k, 6.0k, 7.6k, 9.6k, 11.5k indicating the power of the PCS; “x” could be 1-16 indicating the quantity of the battery system in parallel.)



Certificate: 80252316

Master Contract: 261002

Project: 80252316

Date Issued: 2025-04-29

Refer to following table for component of Pre-Engineered of Matched Component ESS.

Model/Component		
ESS Model:	Power Conversion Equipment (PCS) Model:	Battery System Model:
HYDEYE5.1-3.8k-xP	HYS-3.8LV-USG1	SE-G5.1 Pro-B Note: “x” in the ESS model name could be 1-16 indicating the quantity of the battery system in parallel.
HYDEYE5.1-4.8k-xP	HYS-4.8LV-USG1	
HYDEYE5.1-6.0k-xP	HYS-6.0LV-USG1	
HYDEYE5.1-7.6k-xP	HYS-7.6LV-USG1	
HYDEYE5.1-9.6k-xP	HYS-9.6LV-USG1	
HYDEYE5.1-11.5k-xP	HYS-11.5LV-USG1	
HADEYE5.1-3.8k-xP	HAS-3.8LV-USG1	
HADEYE5.1-4.8k-xP	HAS-4.8LV-USG1	
HADEYE5.1-6.0k-xP	HAS-6.0LV-USG1	
HADEYE5.1-7.6k-xP	HAS-7.6LV-USG1	
HADEYE5.1-9.6k-xP	HAS-9.6LV-USG1	
HADEYE5.1-11.5k-xP	HAS-11.5LV-USG1	

Electrical Ratings:

Refer to the table below for the ratings of the Battery Energy Storage System:

Rating/Model		ESS Model: HYDEYE5. 1-3.8k-xP	ESS Model: HYDEYE5. 1-4.8k-xP	ESS Model: HYDEYE5. 1-6.0k-xP	ESS Model: HYDEYE5. 1-7.6k-xP	ESS Model: HYDEYE5. 1-9.6k-xP	ESS Model: HYDEYE5. 1-11.5k-xP
Main ESS Rating							
Output current (maximum continuous) for each power port	AC Grid port:	16Aac	20Aac	25Aac	32Aac	40Aac	48Aac
	EPS / AC Backup port:	16Aac	20Aac	20Aac	32Aac	40Aac	40Aac
Input current (maximum continuous) for each power port	AC Grid port:	32Aac	40Aac	40Aac	64Aac	80Aac	80Aac
	PV Port:	16Adc per MPPT (Two)			32Adc per MPPT (Two)		
	GEN Port:	16Aac	20Aac	20Aac	32Aac	40Aac	40Aac
Output voltage (minimum and maximum) for each power port	AC Grid port:	120Vac/240Vac, Split phase					
	EPS / AC Backup port:	120Vac/240Vac, Split phase					
Input voltage (minimum and maximum) for each power port	AC Grid port:	120Vac/240Vac, Split phase					
	PV Port:	125-500Vdc					
	GEN Port:	120Vac/240Vac, Split phase					
Power input (maximum continuous) for	AC Grid port:	7.68kW	9.6kW	9.6kW	15.36kW	19.2kW	19.2kW
	PV Port:	5.76kW	7.2kW	9kW	11.52kW	14.4kW	14.4kW



Certificate: 80252316

Master Contract: 261002

Project: 80252316

Date Issued: 2025-04-29

each power port	Gen Port:	3.84kW	4.8kW	4.8kW	7.68kW	9.6kW	9.6kW
Power output (maximum continuous) for each power port	AC Grid port:	3.84kW	4.8kW	6kW	7.68kW	9.6kW	11.52kW
	EPS / AC Backup port:	3.84kW	4.8kW	4.8kW	7.68kW	9.6kW	9.6kW
Energy storage capacity (maximum)		5.12 * x kWh (Note: “x” in the ESS model name could be 1-16 indicating the quantity of the battery system in parallel.)					
Frequency	AC Grid port:	60Hz					
	PV port:	DC					
Number of phases for each power port	AC Grid port:	Split phase with neutral					
	EPS / AC Backup port:	Split phase with neutral					
	GEN Port:	Split phase with neutral					
	PV Port:	DC					
Input short-circuits current rating (SCCR)	PV Port:	20Adc per MPPT(Two)			40Adc per MPPT(Two)		
	AC Grid port:	50A	50A	50A	100A	100A	100A
	GEN port:	25A	25A	25A	50A	50A	50A
Maximum overcurrent protective device rating	AC Grid port:	40A	50A	50A	80A	100A	100A
	EPS / AC Backup port:	20A	25A	25A	40A	50A	50A
	GEN port:	20A	25A	25A	40A	50A	50A
	PV Port:	20 A	20A	20A	40 A	40 A	40 A
Output available fault current and time duration	AC Grid port:	560Apk, 17.4ms					
Other Rating							
ESS Identification		AC ESS					
ESS Type		Multipart ESS (Main Label is on the PCS left side surface)					
Operating ambient temperature		Inverter: -25°C ~ 65°C Battery System: 0°C ~ 55°C (Charge), -20°C ~ 55°C (Discharge)					
Weight of system		Inverter: 31 kg			Inverter: 41 kg		
		Battery System: 45 * x kg (Note: “x” in the ESS model name could be 1-16 indicating the quantity of the battery system in parallel.)					
Overall dimension of the system		Inverter: 502mm(W) × 615mm(H) × 202mm(T)			Inverter: 502mm(W) × 740mm(H) × 202mm(T)		
		Single Battery System: 440mm(W) ×133 mm(H) × 540mm(D)					
Environmental rating of Enclosure		Inverter: Type 4X; Battery System: IP20					
Maximum altitude		2000m					
Pollution degree		2					



Certificate: 80252316

Master Contract: 261002

Project: 80252316

Date Issued: 2025-04-29

Overvoltage Category		AC Grid Port: III; PV Port: II
Technology utilized in system		Li-ion (LFP)
Minimum separation distances	For Power Conversion Equipment (PCS)	From other PCS/ESS/Battery system (Left/Right): 200mm; From other PCS/ESS/Battery system (front): 300mm; From ceiling: 300mm; From side wall(Left/Right): 200mm; From front wall: 300mm; From the ground: 500mm
	For Battery System	From other PCS/ESS/Battery System (Left/Right): 100mm; From other PCS/ESS/Battery System (Front/Back): 100mm; From ceiling: 300mm; From back wall: 600mm; From front wall: 600mm; From side wall (Left/Right): 600mm

Rating/Model		ESS Model: HADEYE5. 1-3.8k-xP	ESS Model: HADEYE5. 1-4.8k-xP	ESS Model: HADEYE5. 1-6.0k-xP	ESS Model: HADEYE5. 1-7.6k-xP	ESS Model: HADEYE5. 1-9.6k-xP	ESS Model: HADEYE5. 1-11.5k-xP
Main ESS Rating							
Output current (maximum continuous) for each power port	AC Grid port:	16Aac	20Aac	25Aac	32Aac	40Aac	48Aac
	EPS / AC Backup port:	16Aac	20Aac	20Aac	32Aac	40Aac	40Aac
Input current (maximum continuous) for each power port	AC Grid port:	32Aac	40Aac	40Aac	64Aac	80Aac	80Aac
	GEN Port:	16Aac	20Aac	20Aac	32Aac	40Aac	40Aac
Output voltage (minimum and maximum) for each power port	AC Grid port:	120Vac/240Vac, Split phase					
	EPS / AC Backup port:	120Vac/240Vac, Split phase					
Input voltage (minimum and maximum) for each power port	AC Grid port:	120Vac/240Vac, Split phase					
	GEN Port:	120Vac/240Vac, Split phase					
Power input (maximum continuous) for each power port	AC Grid port:	7.68kW	9.6kW	9.6kW	15.36kW	19.2kW	19.2kW
	Gen Port:	3.84kW	4.8kW	4.8kW	7.68kW	9.6kW	9.6kW
Power output (maximum)	AC Grid port:	3.84kW	4.8kW	6kW	7.68kW	9.6kW	11.52kW



Certificate: 80252316

Master Contract: 261002

Project: 80252316

Date Issued: 2025-04-29

continuous) for each power port	EPS / AC Backup port:	3.84kW	4.8kW	4.8kW	7.68kW	9.6kW	9.6kW
Energy storage capacity (maximum)		5.12 * x kWh (Note: “x” in the ESS model name could be 1-16 indicating the quantity of the battery system in parallel.)					
Frequency	AC Grid port:	60Hz					
Number of phases for each power port	AC Grid port:	Split phase with neutral					
	EPS / AC Backup port:	Split phase with neutral					
	GEN Port:	Split phase with neutral					
Input short-circuits current rating (SCCR)	AC Grid port:	50A	50A	50A	100A	100A	100A
	GEN port:	25A	25A	25A	50A	50A	50A
Maximum overcurrent protective device rating	AC Grid port:	40A	50A	50A	80A	100A	100A
	EPS / AC Backup port:	20A	25A	25A	40A	50A	50A
	GEN port:	20A	25A	25A	40A	50A	50A
Output available fault current and time duration	AC Grid port:	560Apk, 17.4ms					
Other Rating							
ESS Identification		AC ESS					
ESS Type		Multipart ESS (Main Label is on the PCS left side surface)					
Operating ambient temperature		Inverter: -25°C ~ 65°C Battery System: 0°C ~ 55°C (Charge), -20°C ~ 55°C (Discharge)					
Weight of system		Inverter: 28 kg			Inverter: 37 kg		
		Battery System: 45 * x kg (Note: “x” in the ESS model name could be 1-16 indicating the quantity of the battery system in parallel.)					
Overall dimension of the system		Inverter: 502mm(W) × 615mm(H) × 202mm(T)			Inverter: 502mm(W) × 740mm(H) × 202mm(T)		
		Single Battery System: 440mm(W) ×133 mm(H) × 540mm(D)					
Environmental rating of Enclosure		Inverter: Type 4X; Battery System: IP20					
Maximum altitude		2000m					
Pollution degree		2					
Overvoltage Category		AC Grid Port: III; PV Port: II					
Technology utilized in system		Li-ion (LFP)					
Minimum separation distances	For Power Conversion Equipment (PCS)	From other PCS/ESS/Battery system (Left/Right): 200mm; From other PCS/ESS/Battery system (front): 300mm; From ceiling: 300mm; From side wall(Left/Right): 200mm; From front wall: 300mm;					



Certificate: 80252316

Master Contract: 261002

Project: 80252316

Date Issued: 2025-04-29

		From the ground: 500mm
	For Battery System	From other PCS/ESS/Battery System (Left/Right): 100mm; From other PCS/ESS/Battery System (Front/Back): 100mm; From ceiling: 300mm; From back wall: 600mm; From front wall: 600mm; From side wall (Left/Right): 600mm

Note:

1. The ESS will be installed on site using inverter (PCS), battery system and the components specified in this report. Inverter rating details refer to CSA report 80150649. And Battery system ratings details refer to Certificate no. SGSNA/23/SZ/00039, Project Number: SZ-CERT230300445, issued by SGS North America Inc.
2. The operating parameter such as voltage, current, temperature, environmental conditions etc. of ESS are not determined during this investigation. Battery System and PCS integrated into the ESS need to be used within the operating parameter of individual component rating. Installation of ESS shall maintain all components operating within the range in the certification of PCS and Battery system.
3. For Li-ion Battery Energy Storage System, the output ratings at stand-alone mode with charge controller are different from utility interactive mode.
4. The AC circuit breaker connected in the grid port will be considered by the end product user when installation.
5. Remote update function for safety related software has not been evaluated to UL 5500, further evaluation needs to be considered if remote updated function needed.

Conditions of Acceptability:

1. The acceptability of grid support utility interactive inverters shall be determined by the local electric utility.
2. The installation was not evaluated. The ESS shall be installed in accordance with applicable local installation code.
3. The system was not walk-in system without arc flash risk considered.
4. ESS installed in seismic and coastal region were not evaluated, further evaluation shall be considered when ESS used in these environments.
5. Based on the result and test condition/method in the UL 9540A report, the acceptability shall be determined by the local AHJ according to the real installation.



Certificate: 80252316

Project: 80252316

Master Contract: 261002

Date Issued: 2025-04-29

APPLICABLE REQUIREMENTS

ANSI/CAN/UL 9540 Third Edition, with Rev. through March 7, 2025 - Energy Storage Systems and Equipment

MARKINGS

See CSA Report.

Notes:

Products certified under Class C370108, C370188 have been certified under CSA's ISO/IEC 17065 accreditation with the Standards Council of Canada (SCC). www.scc.ca





Supplement to Certificate of Compliance

Certificate: 80252316

Master Contract: 261002

*The products listed, including the latest revision described below,
are eligible to be marked in accordance with the referenced Certificate.*

Product Certification History

Project	Date	Description
80252316	2025-04-29	Original certification for AC Li-ion Battery Energy Storage System (AC ESS), Models HYDEYE5.1-@-xP, HADEYE5.1-@-xP (“@” in the model name could be 3.8k, 4.8k, 6.0k, 7.6k, 9.6k, 11.5k indicating the power of the PCS; “x” could be 1-16 indicating the quantity of the battery system in parallel.) in accordance with ANSI/CAN/UL 9540 Third Edition, with Rev. through March 7, 2025 - Energy Storage Systems and Equipment under CSA WMTC program.