

15kW HESS(PCS 15kW) Specification

Rechargeable Li-ion Battery

(Enertech International SPB58253172V2, 21Ah)

Model : 15kW HESS(PCS 15kW)

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1. Scope

This product Specification('Specification' hereinafter) covers the requirements for HESS(Home Energy Storage System) manufactured and supplied by Enertech International, Inc.

This is the grid-connected energy storage system that stores the electric energy created by renewable energy generating systems such as PV or wind power generator and uses it when necessary.

2. Specifications

2-1. Application

15kW Class HESS

2-2. AC Input specification of HESS

2-2-1. Power	Nominal	15 kW(PCS)
2-2-2. Voltage	Nominal	1PH 230 V
	Tolerance	176 V ~ 265 V at 100% load
2-2-3. Max. Input Current		50 A
2-2-4. Frequency		50/60 Hz
	Tolerance	35 Hz ~ 70 Hz
2-2-5. Power Factor		0.99
2-2-6. Current distortion		< 3 %
2-2-7. Design of connection		Screw terminal

2-3. Output specification of HESS

2-3-1. Grid Voltage	Nominal	1PH 230 V
2-3-2. Max. output Current		65 A
2-3-3. Power output kVA		18.75 kVA
2-3-4. Frequency	Nominal	50/60 Hz
	Tolerance	50/60 Hz ± 0.1 %
2-3-5. Power Factor(cos φ)		0.8 ~ 0.9
2-3-6. Voltage tolerance	Static	≤ 3 %
	Dynamic	± 4 %
2-3-7. Voltage distortion rate		≤ 1.5 %
2-3-8. Overload	10 min	125%
	1 min	150%
2-3-9. Design of connection		Screw terminal



2-4. Efficiency

2-4-1. Max efficiency	97%(offline mode)
2-4-2. Total system efficiency	95%(online mode)

2-5. Battery specification

2-5-1. battery type		SPB58253172V2_21Ah(Lithium ion)
2-5-2. Capacity	Nominal	42.0 Ah (by standard Charge & Discharge) 15.12Kw(84Ah)
2-5-3. Cell Configuration		48S-4P
2-5-4. Voltage	Nominal	180 V(3.75V/cell)
	Range	144V ~ 199.2 V(3.0 ~ 4.2V/cell)
2-5-5. Charging Method		CC-CV
2-5-6. Charging Voltage		199.2 ± 0.5 V
2-5-7. Charging Current	Standard	21 A (Max : 80 A)
	Cut-off	< 2.1A or SOC: 100% Signal
2-5-8. Discharging Current	Standard	21 A (Max : 80 A(Within 10min))
2-5-9. Discharge cutoff voltage		144 V or SOC: 0% Signal
2-5-10. Internal Resistance		<300mΩ

2-6. Environment conditions

2-6-1. Temperature range	Charge : 0 to 50°C Discharge : -20 to 50°C
2-6-2. Relative humidity	0 ~ 80% RH (not condensed)
2-6-3. Altitude above sea level	≤ 2,000m

2-7. Safety protection equipment

2-7-1. Type of protection	IP21
2-7-2. Protection class	IEC 62103(Class I)
2-7-3. Ground fault monitoring	Yes
2-7-4. Overload behavior	Switch Off
2-7-5. ExcHESS temperature behavior	Switch Off
2-7-6. DC input surge diverter	Surge protector
2-7-7. AC input surge diverter	Surge protector
2-7-8. DC circuit breaker	Yes, Internal

2-8. Communication interfaces

2-8-1. MLEC ↔ RLEC	CAN2.0B
2-8-2. MLEC ↔ PMS	RS485
2-8-3. PCS ↔ PMS	RS485
2-8-4. PMS ↔ Customer application interface	HMI, WiFi



2-9. Standards

2-9-1. System perturbation	NA
2-9-2. System	NA
2-9-3. EMC standards	EAC
2-9-4. Performance	EAC
2-9-5. IEC62040-3	EAC
2-9-6. CE Mark	Yes
2-9-7. GOST-R	EAC

2-10. Others

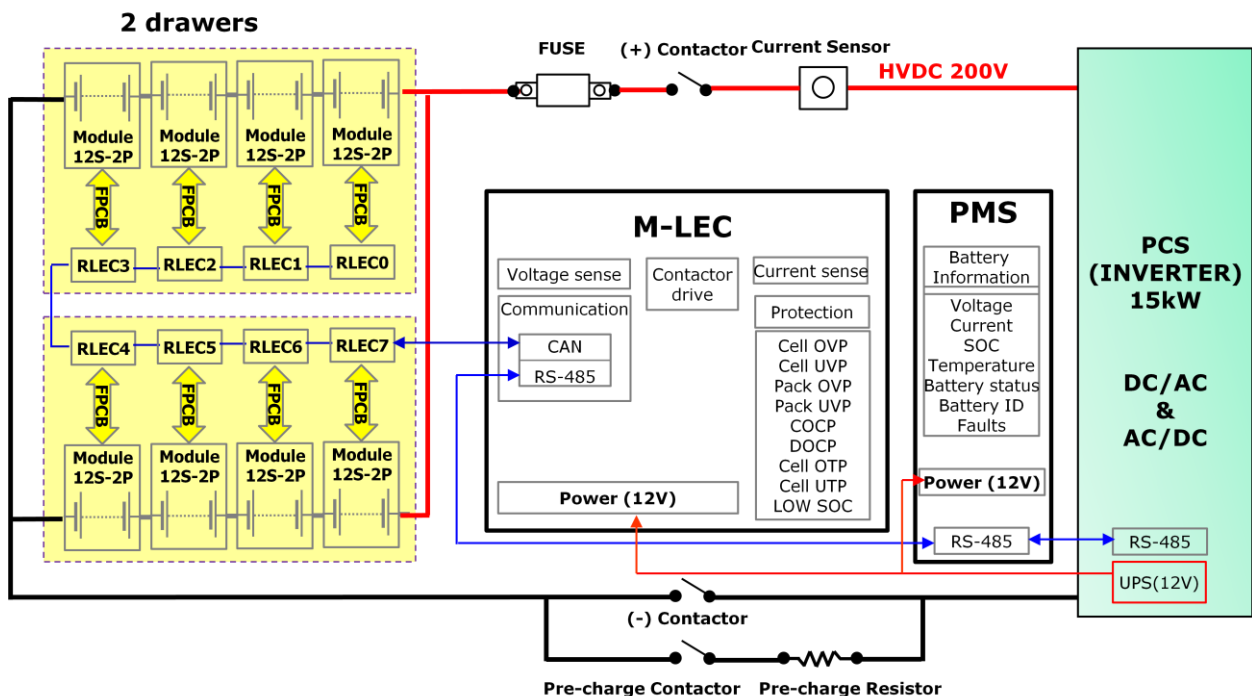
2-10-1. Display	Graphic representation with touch display
2-10-2. Topology	Transformerless HESS(Using IGBT), on-line, Double conversion
2-10-3. Warranty	2 years after selling but not more than 3 years From production date

2-11. Physical Specification

2-11-1. Dimension	L x W x H	W765*L660*H1500
2-11-2. Weight		< 415Kg

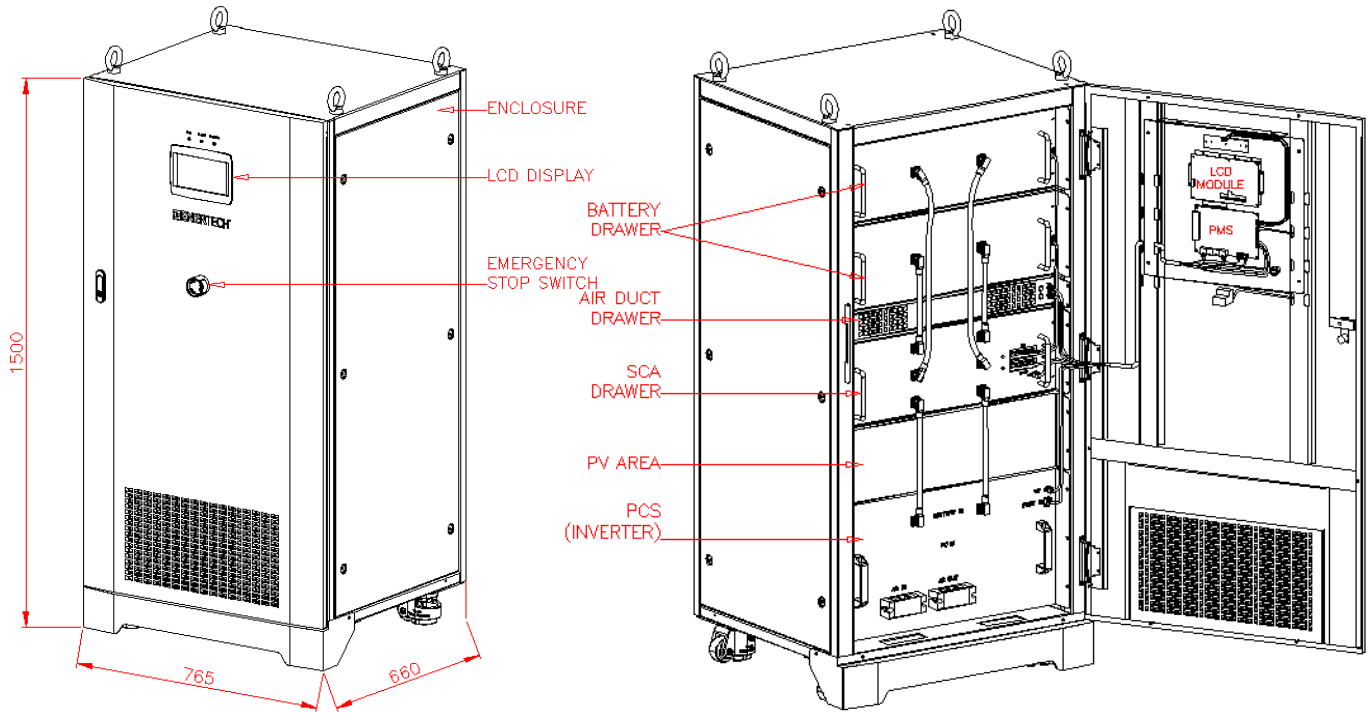
3. HESS configuration

3-1. Block Diagram



4. Drawings

4-1. Structure of HESS



< HESS appearance >

< HESS appearance of the open door >

