Honor RV Battery – 12V320Ah Specifications

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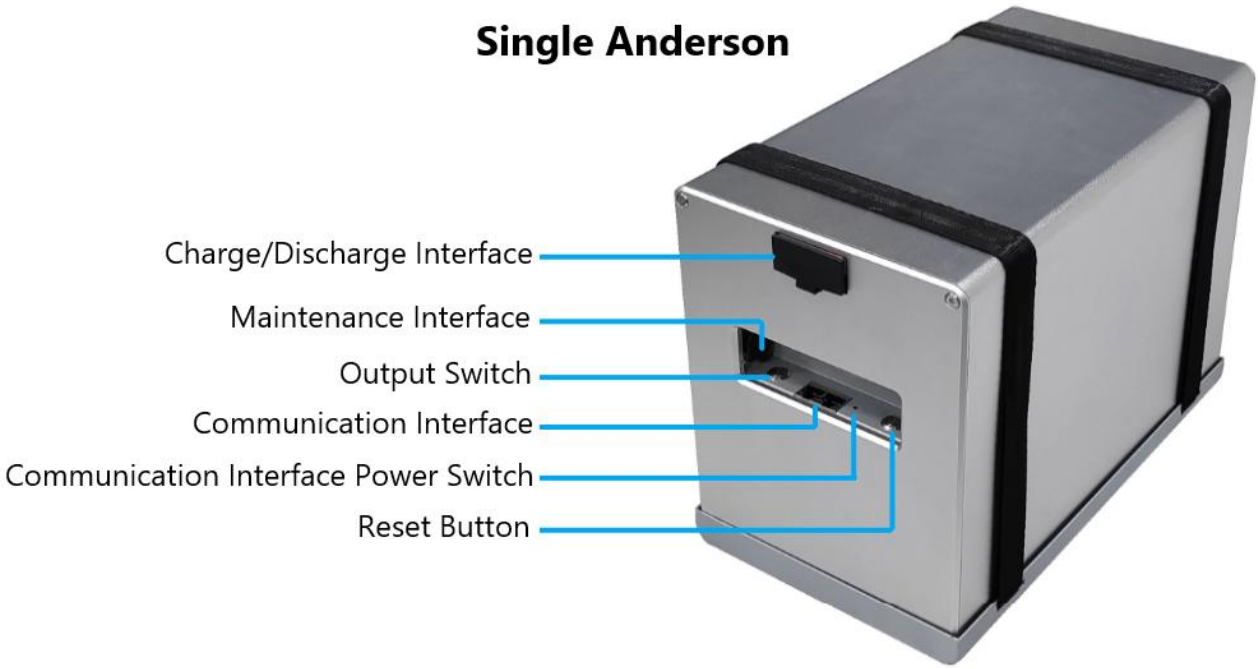
(Please read this manual carefully before using this product and keep it properly)

I. Overview

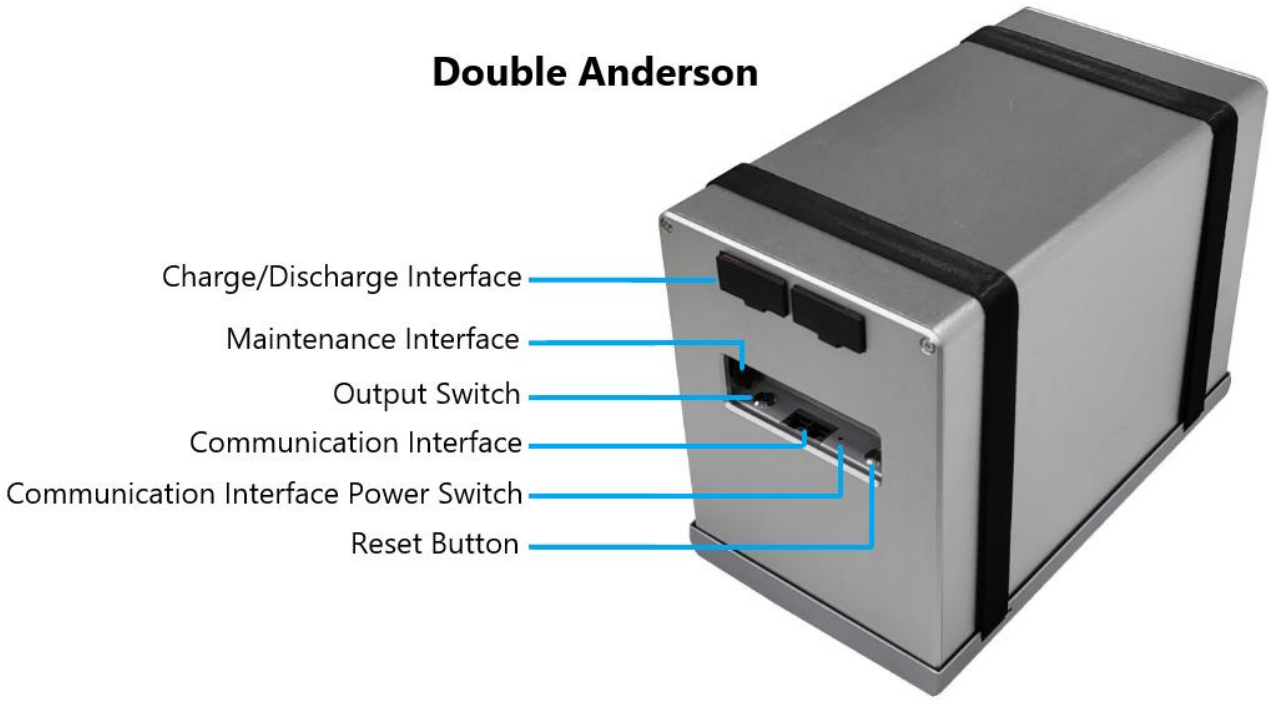
This specification is suitable for **YNT- 12-320L1SIHR1** developed by Chengdu COMVOLT New Energy Co., Ltd., and describes its dimensions, characteristics, technical requirements, and precautions for use.

II. External Structure

Single Anderson



Double Anderson



III. Battery Pack Parameters

	Item		Description
BASIC SPECIFICATION			
1	Standard Voltage		12.8V
2	Standard Capacity		320Ah
3	Cell Type		Lithium iron phosphate
4	Cell Internal Resistance		≤ 0.5 mΩ
5	Single Cell		3.2V 320 Ah
6	Serial Parallel Mode		1P4S
7	Total Capacity		4096Wh
CHARGE			
8	Battery Charging Temperature		33.8~131°F
9	Charging Voltage Limit		14.4±0.2V
10	Recommended Charging Voltage for float Charging applications		13.8±0.2V
11	Standard charging current		60Ah
12	Charging allowable maximum current		200Ah(use two anderson)
13	Charging method		Wall electricity, solar energy, alternator charging while driving
14	Low temperature charging heating (optional)	start condition	The temperature is less than 1°C and there is a charger connected
		Demand voltage	13.5～14.5V
		heating power	14.0V 200W
		heating stop	The battery has a discharge current or the temperature is >42.8°F
DISCHARGE			
15	Battery Discharge Temperature		-13 ~ 149°F
16	Output Voltage Range		11.5 ~ 14.0V
17	Standard Discharge Current		60A
18	Discharge Current Limit		220A(use two anderson)
19	Pulse Current		Can withstand 400 A / 1S
STRUCTURE			
20	Size		Length 13.5in * Width 7.7in * Height 10.0in
21	Weight		68.3lbs
STORAGE			
24	Storage Temperature, Humidity	Short term (within one month)	14~ 104°F , 45~75%RH
		long-term (more than one month)	32~ 95°F, 45~75%RH
		Recommended storage temperature	50～95°F, 45~75%RH

	Long-term storage: When the battery needs to be stored for a long time, it should be charged to close to 6 0% SOC and placed under the recommended storage conditions. Do at least one full charge-discharge cycle every 3 months.		
OTHER			
25	Cycle life	≥ 3000 (100%DOD)	Repeat the cycle in the standard charge and discharge mode until the battery capacity 80% of the rated capacity , and the number of cycles at this time is defined as the cycle life
26	Discharge Temperature Characteristics (0.2C)	-4°F	≥ 50 %
		32°F	≥ 80 %
		77°F	100%
		131°F	≥ 95%
27	BMS		With BMS
28	Charging/discharging interface type		120A Red Anderson
29	Number of charge/discharge ports		1 or 2 optional
30	communication method		RS485
31	Communication Interface		RJ45*2 (with power Max1A)
32	Output Wire Specifications		0.039in²*59 in(ϕ10 terminal + 120A red Anderson)

IV. Battery electrical performance and auxiliary functions

Unless otherwise specified, the test should be carried out in an environment with a temperature of 77°F, a relative humidity of 45%~75%, and an atmospheric pressure of 86Kpa~106Kpa. The room temperature mentioned in this specification refers to 77°F.

1. Standard charging - At room temperature, the battery pack is first charged at 60A Discharge the current to the cut-off voltage, put it aside for 1h, then charge it with a constant current of 60A to 13.8V, then charge it with a constant voltage charging mode, stop charging when the charging current drops to 0.01C, and put it aside for 1h after charging;
2. Standard discharge - At room temperature, the battery pack is first charged with the standard charging method. After the charging is completed, it is discharged to the cut-off voltage with a discharge current of 60A, and it is left for 1 hour after discharge.

	Measure	Standard	Test Conditions
1	Battery internal resistance	≤ 3 mΩ	The battery is in a 50% SOC state, and the frequency of use is (1kHz) AC Internal resistance tester measurement.
2	Battery capacity	320 Ah ± 3%	Charge and discharge in standard charge and discharge mode, and record the discharge capacity

3	Charge retention	The discharge capacity of charge retention is not less than 85% of the rated capacity	After the battery is charged by standard, in the environment of 77°F, put the battery open-circuit storage for 28 days, discharge to the cut-off voltage with a constant current of 0.2C at room temperature, and the discharge capacity should meet the test requirements. Then charge according to the standard, and then discharge to the cut-off voltage with a current of 0.2C at an ambient temperature of 77°F, and the discharge capacity should meet the test requirements.
		The discharge recovery capacity is not less than 90 % of the rated capacity	

V. BMS protection parameters

The battery is equipped with BMS, which can monitor the battery operating status in real-time, and provide overcharge, over-discharge, overcurrent, short-circuit, over-temperature, and balance protection, and cut off the input and output of the battery for protection if necessary.

No.	project	content	standard
1	Overcharge	Single string overcharge protection voltage	3. 6 0 ±0.0 5 V
		Single string overcharge recovery voltage	3. 45 ± 0.05 V
		Overcharge delay time	2000±300m s
		Overcharge protection recovery method	discharge recovery
2	Overdischarge	Single string over-discharge protection voltage	2. 8 ± 0.05 V
		Single string over-discharge recovery voltage	3. 0 ± 0.05 V
		Over-discharge delay time	1000±300m s
		Over-discharge protection recovery method	charge recovery
3	Overcurrent	Charging overcurrent protection value	120A
		Charge overcurrent protection delay	2000 ± 300m s
		Charging overcurrent protection recovery method	30s delay recovery
		Discharge overcurrent 1 protection value	120A
		Discharge overcurrent 1 protection delay	5000 ± 300m s

		Discharge overcurrent 2 protection value		400A
		Discharge overcurrent 2 protection delay		1280 ± 300m s
		Discharge overcurrent protection recovery method		30s delay recovery
4	Short circuit	Short circuit protection		With/prohibit short circuit
		Short circuit protection		Hiccup protection for 6 consecutive times
		Short circuit protection current		1000A
		Short circuit protection delay		70 ±10u s
		Short circuit protection recovery		5s delay recovery after disconnecting the short-circuit circuit
5	Balanced	balanced mode		Charge balance, static balance
		Turn on voltage		single > 3260mV
		Opening pressure difference		>10mV
		Balance current		100mA
6	Activation	Battery zero voltage charging		support
7	Self-consumption	BMS	working status	≤15mA
			sleep state	200uA
		Battery self-discharge		25%/ years
8	Overheating	Charging high temperature protection		131°F
		Charging high temperature protection recovery		113°F
		Charging low temperature protection		35.6°F
		Charging low temperature protection recovery		42.8°F
		Discharge high temperature protection		149°F
		Discharge high temperature protection recovery		131°F
		Discharge low temperature protection		-13°F
		Discharge low temperature over temperature protection recovery		-4°F

XI. Storage and transportation

1. During transportation or loading and unloading, do NOT drop it. Do not stack up or turn upside down.
2. The portable power station should be stored and transported under the State of charge (SoC) of less than 50% charged, and please charge it in time before use it.
3. Long-term storage of the power station should be 50-60% charged and placed in a dry, clean, dark, well-ventilated indoor environment, storage temperature refers to the table above. (Storage Temperature range：14~95°F)

4. For long-term storage, For long-term storage, please charge the portable charging station to 50-60% first, turn off all switches, and recharge the power bank to 50-60% every 3 months.

XII. Warnings and Precautions

Please read this manual carefully before using the portable power station. Improper use may cause damage to the supply. Please strictly adhere to the following use instructions. Comvolt and it's distributors do not bear any responsibility for any accidents caused by failure to follow the instructions.

- Do not use metal battery pack positive-negative short circuit.
- Do not reverse the positive and negative poles of the battery pack.
- Avoid any liquids including corrosive liquids such as battery acid.
- Keep unit away from heat, fire sources, high pressure place, and avoid long time exposure.
- Do not hit, fall, or trample the battery pack.
- It is strictly prohibited to disassemble or change the circuit, structure, or appearance of the battery pack without the permission and guidance of the manufacturer.
- If battery leakage splashes into the skin, eyes, please rinse with water and immediately seek medical treatment.
- If the battery pack emits an abnormal smell, abnormal sound, leakage, serious deformation and other abnormal conditions, please immediately stop using.
- Please do not put the battery into water or fire.
- After the battery life expires, send it to a local qualified battery recycling company for disposal.
- Keep battery out of children's reach.