

12V LIFEPO4 BATTERY

BATTERY PACK



INTRODUCTION

12 V / 24V / 48 V battery adopts catl lithium battery cell, equipped with bms power management system, providing the best power supply solution , longer service life , lightweight design, and more efficient power for different machine interior

APPLICATION



Forklift



Ship

Residential
Area

Industrial Area



12 V Battery

VALUE



More Usable Energy

90% Depth of Discharge
Pack Level Energy Optimization



Easy Installation

Standard design with helpful
pulling ear quick stacking



Smart BMS system

Each module is equipped
with an independent BMS system



Longer Lifetime

6000 cycles, 10 years design life



Safe & Reliable

Safe lithium iron phosphate cell



Modular design

Compact size and light weight

ELECTRIAL CHARACTERISTICS

Project	Description
Basic Parameter	Model
	12V
	Battery Type
	LifePO4(iron Phosphate Battery)
	Battery Module
	TY-12-100
	Battery Capacity
	100Ah
	Nominal Battery Energy
	1.2kWh
	Nominal Voltage
	12.8V
	Norminal Output Current
	50A
	Working Voltage
	11.2~14.6V
	Battery Pack Round-Trip Efficiency
	>95% (under specific condition)
	Communication Interface
	CAN 、 RS232、 RS485
	DC Disconnect
	Circuit Breaker, Contactor, Fuse
	Battery Discharge Rate
	0.5C
	Expected Life Time
	10 years
	Calendar Life(cycles)
	6000@25°C, 90%DOD
	Cell Type
	LifePO4(LFP,Iron Phosphate Lithium Battery)
	Cell Nominal Voltage
	3.2V
	Cell Combination Method
	16S1P
	Recommend Charging Voltage
	58.4V
	Recommend Discharging Cutoff Voltage
	44.8V
	Internal Resistance
	0.3mΩ
	Charging Rate
	0.5C
	Standard Charging Current
	50A
	Max Charging/Discharging Current
	60A
	Discharge Rate
	0.5C
	Standard Discharging Current
	50A
	Max Discharging Current
	50A
	Scalability
	≤15 Units in Parallel
	Pros
	Can be Used in Both Off-grid and Hybrid Setups,Compact Design,LCD Screen
	Monitoring & Protection
	Built-in BMS,Breaker Embedded in System
	Design Life Time
	10 Years

OPERATING CONDITION

Project		Description
Environment	Installation Location	Machine Interior
	Operating Temperature	-10 to 50°C
	Operating Temperature(Recommended)	15 to 30°C
	Storage Temperature	-30 to 60°C : acceptable for 7 days in total -20 to 45°C : acceptable for the first 6 months -20 to 30°C : acceptable for 7th ~12th month
	Humidity	5% to 95%
	Altitude	Max.2,000 m
	Cooling Strategy	Natural Convection
	Alarms	Overcharge, Over-discharge, Over-current, Over-temperature, Short Circuit
	Protection Level	IP30

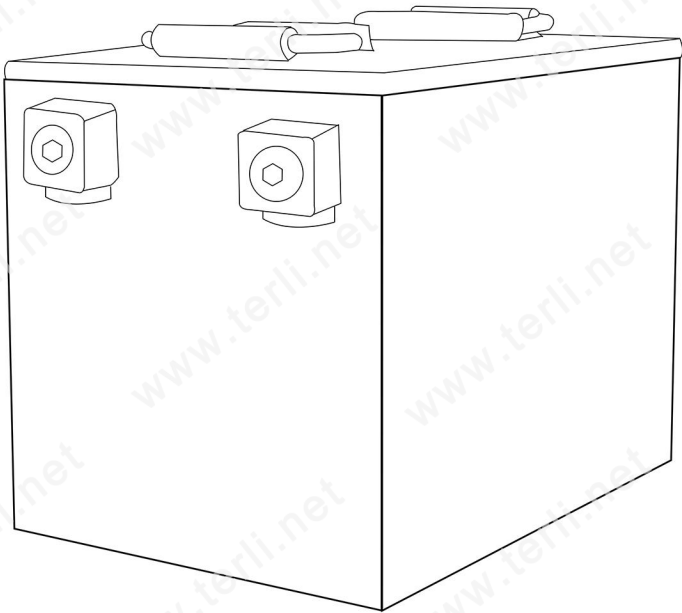
CERTIFICATION

Project		Description
Guarantee	Safety	Cell UL1642
		Battery Pack IEC62619 /IEC60950(LVD) / CE
	Emissions	IEC61000-6-1, IEC61000-6-3
	Hazardous Materials	Classification Class 9
	Transportation	UN38.3

- ※ Test Conditions - Temperature 25°C, at the beginning of life
- ※ Total Energy is measured under specific condition from LC (0.3CCCV/0.3CC)

MECHANICAL CHARACTERISTICS

		Battery	Package
Dimensions	Length	270mm	310mm
	Width	170mm	210mm
	Height	230mm	270mm
Weight		12.16Kg	15Kg
Color		White	



COMPATIBLE STORAGE INVERTERS WITH 12V BATTERY





SRNE 碩日



Deye 德業





victron energy
BLUE POWER





LUXPOWER^{TEK}





精石科技
GSSTES



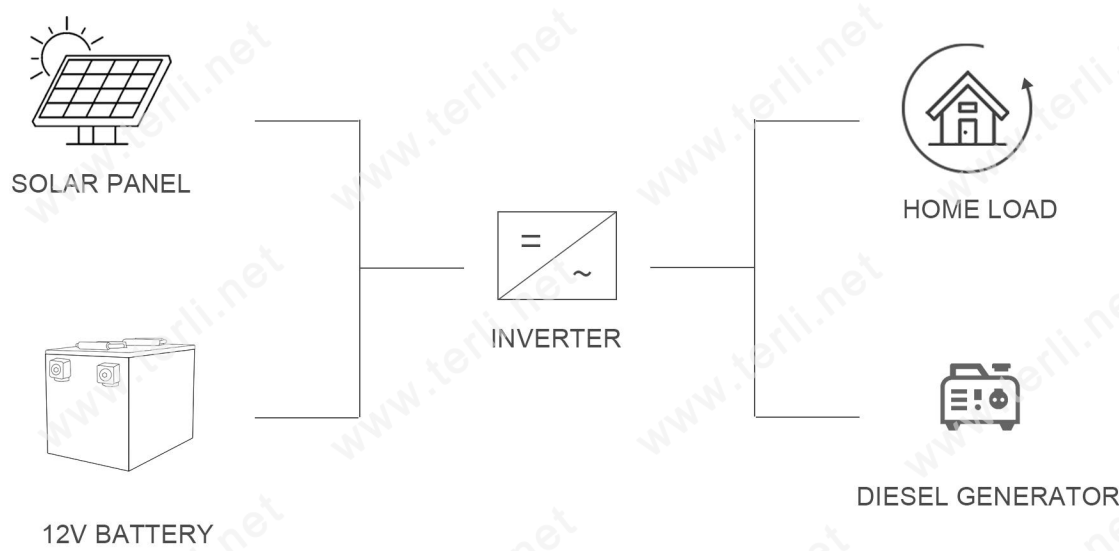


GOODWE

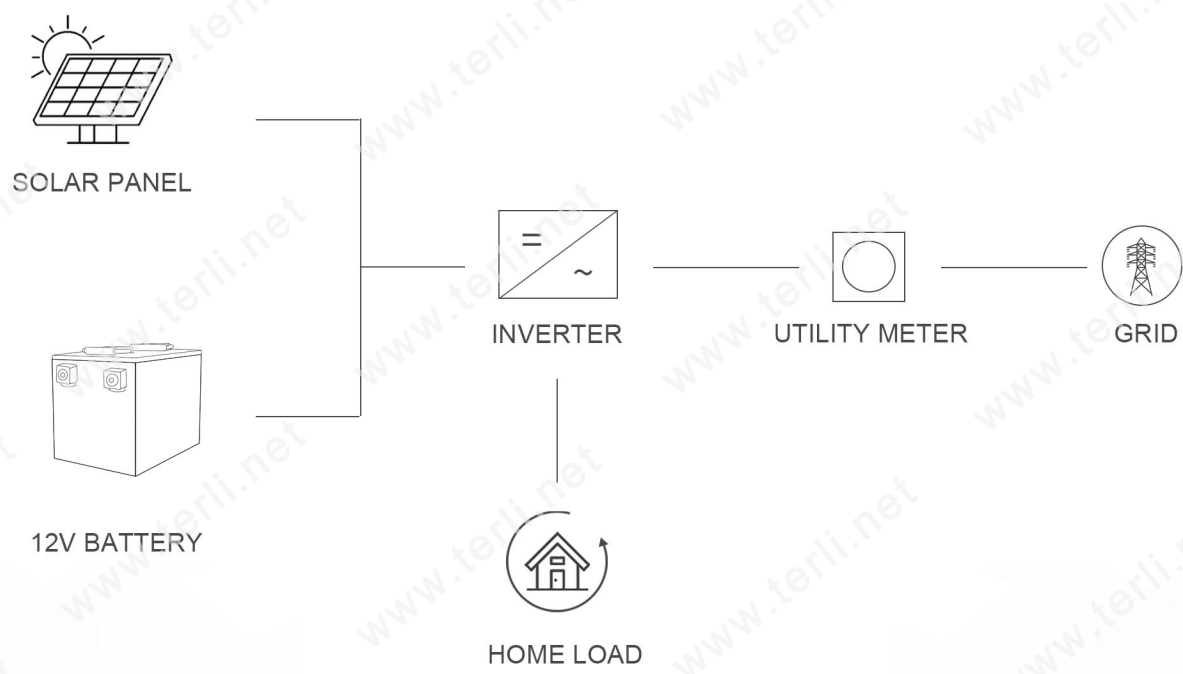


SOROTEC
Power Solutions Expert

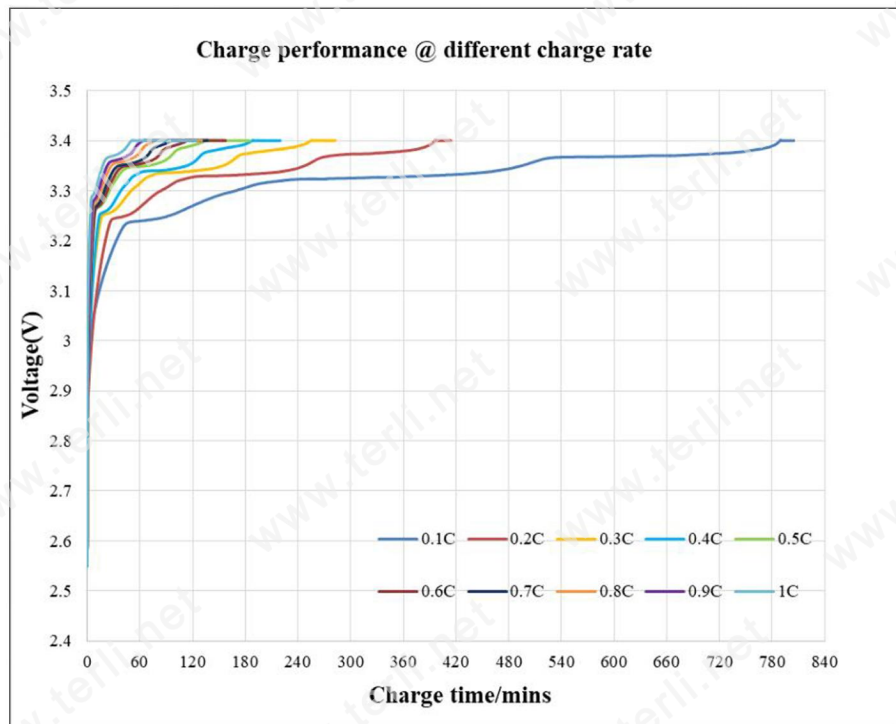
ON-GRID SYSTEM



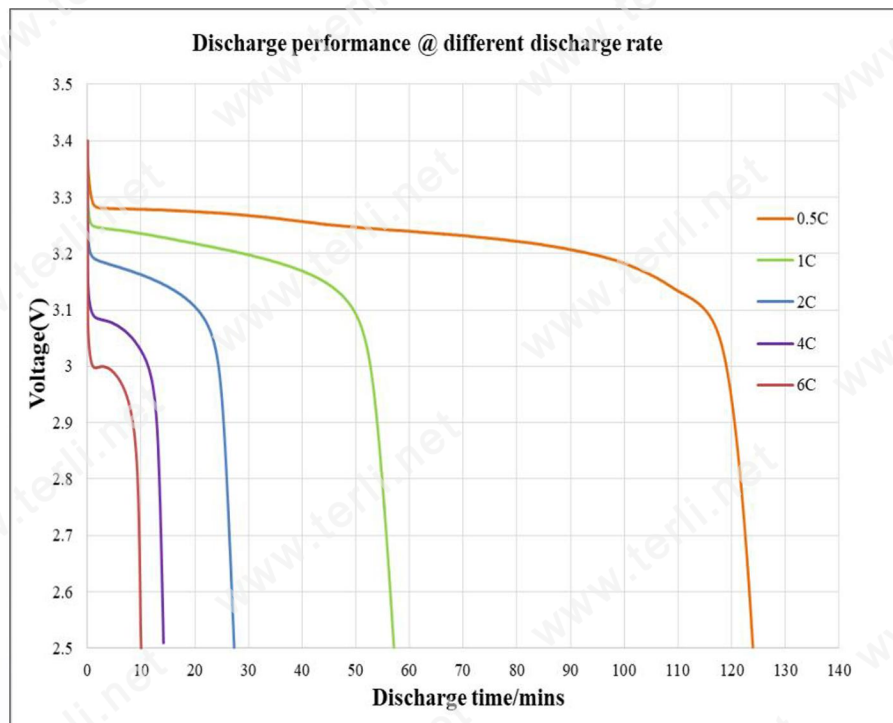
OFF-GRID SYSTEM



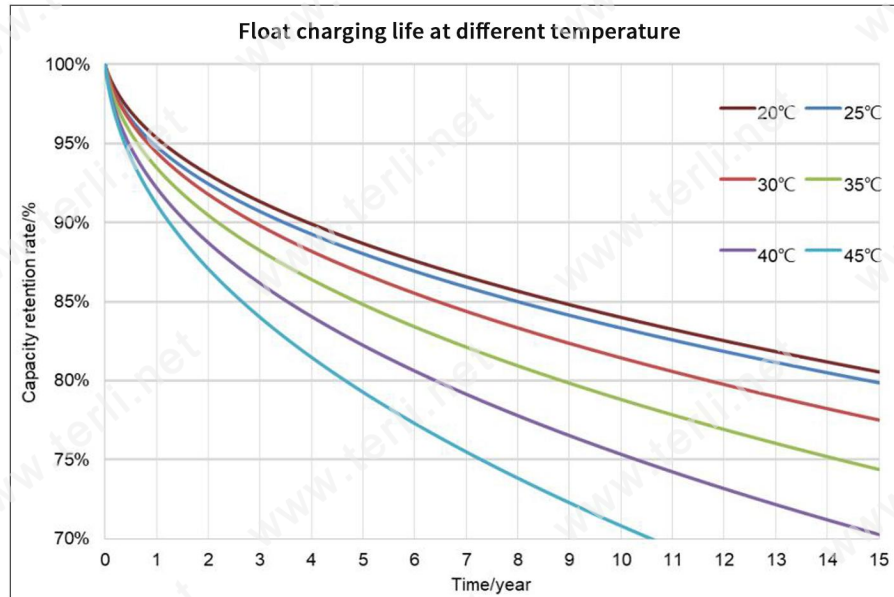
CHARGING CURVES UNDER DIFFERENT CHARGING RATES



DISCHARGE CURVE UNDER DIFFERENT DISCHARGE RATES



FLOATING CHARGING LIFE CURVES AT DIFFERENT TEMPERATURES



CYCLE LIFE CURVES AT DIFFERENT TEMPERATURES AND DOD CONDITIONS

