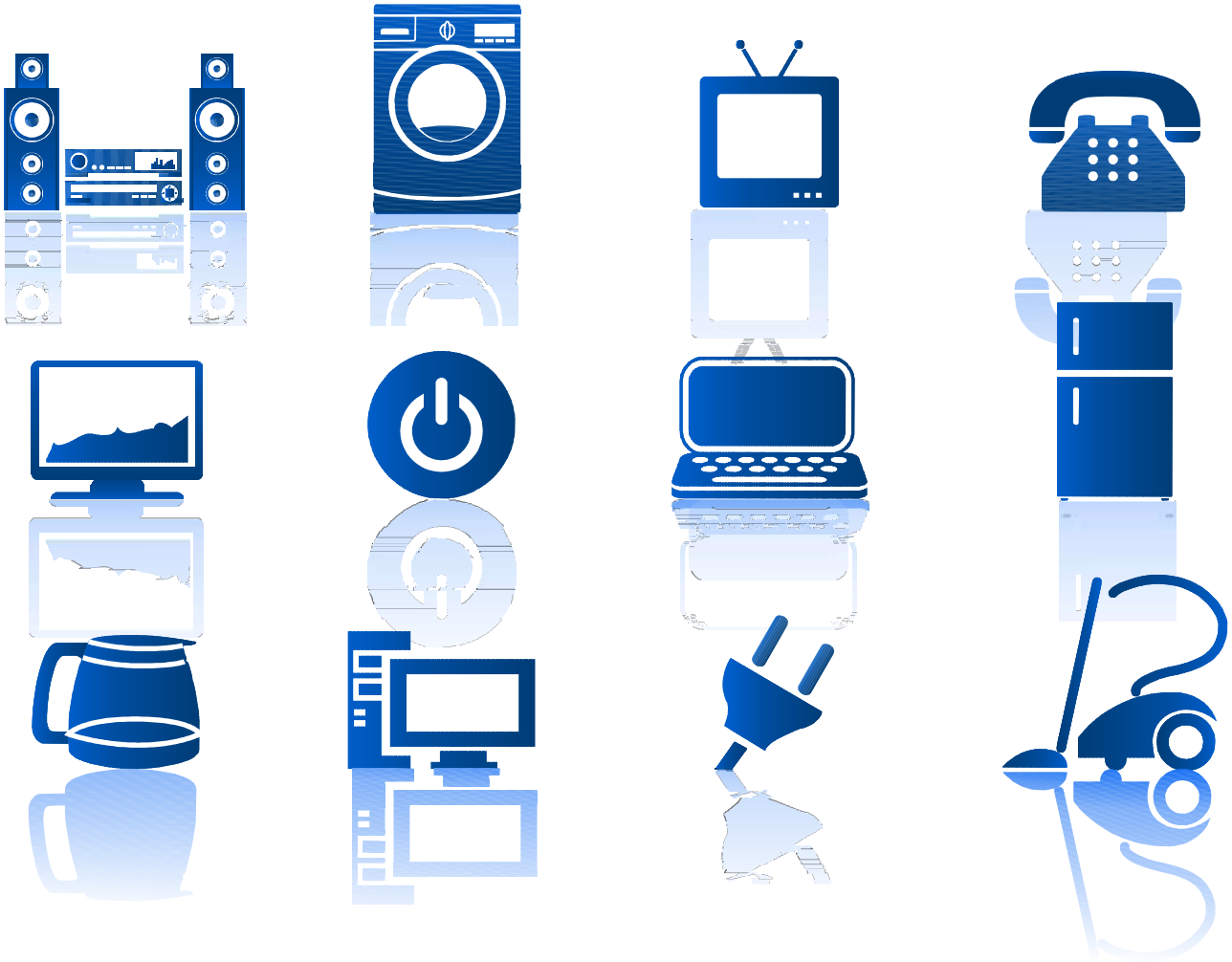
VZ Series Characteristics

On Inverter
- High overload ability up to 300% rated power (20 sec.)
- Low quiescent current power saver mode

On Battery Charger
- 3-step intelligent battery charging
- Uses PFC (power factor correction) for charger

On Transfer
- 10ms typical transfer time
- 15s delay before transfer when AC resumes

Option
- Battery/AC priority switch Available for off grid solar/ wind system
- Auto Generator Starter
- Remote Control
- Battery Temperature Sensor



VZ Series
Pure Sine Wave Inverter/Charger

Applications

- High overload ability of our VZ charger is up to 300% rated power (20 sec)
- VZ pure sine wave invrter adopts low quiescent current and power mode to reduce power consumption to 10W(3s sensing cycle)/3W(30s sensing cycle)*,It can extract max. power from various batteries with different protections and low voltage trip can be selected 9.5V/10V or 10V/10.5V)
- Uses PFC (power factor correction) for charger, which has less power consumption than conventional units.
- It has 15s delay before transfer when AC resumes, and overload protection when our VZ pure sine wave inverter equips with generator.
- 10ms typical transfer time between battery and AC, which guarantees power continuity of VZ charger. Uses selectable input AC voltage for different kinds of loads.
- Our VZ charger allows start up and through power with depleted batteries. Its powerful charge rate up to 90Amp.
- It can offer 3-step intelligent battery charging, and equipped with 8 preset battery type selector foe totally flat batteries.
- LCD status display, battery/AC priority switch, RS232 communication port are available for our VZ pure sine wave inverter, it also has 17 alarms/warnings for easier operation and trouble-shooting and ability to switch the unit on/off. In addition,select/deselect power saver mode can be used too.
- Automatic Voltage Regulator Function (Optional)

On the Dc end ofinverter, there are 5 DIP switches which enable users to customize the performance of the device.

Switch NO	Switch Function	Position:0	Position:1
SW1	Low Battery Trip Volt	10.0VDC	10.5VDC
SW2	AC Input Range	100-135VAC	90-135VAC
SW3	Power Saver Auto Setting	Night charger	Detect load p/3 sec
SW4	O/P Frequency Setting	50 Hz	60 Hz
Sw5	Battery/AC Priority	Utility Priority	Battery Priority

Low Battery Trip Volt:
The Low Battery Trip Volt is set at 10.0VDC by defauit.It can be customized to 10.5VDC.

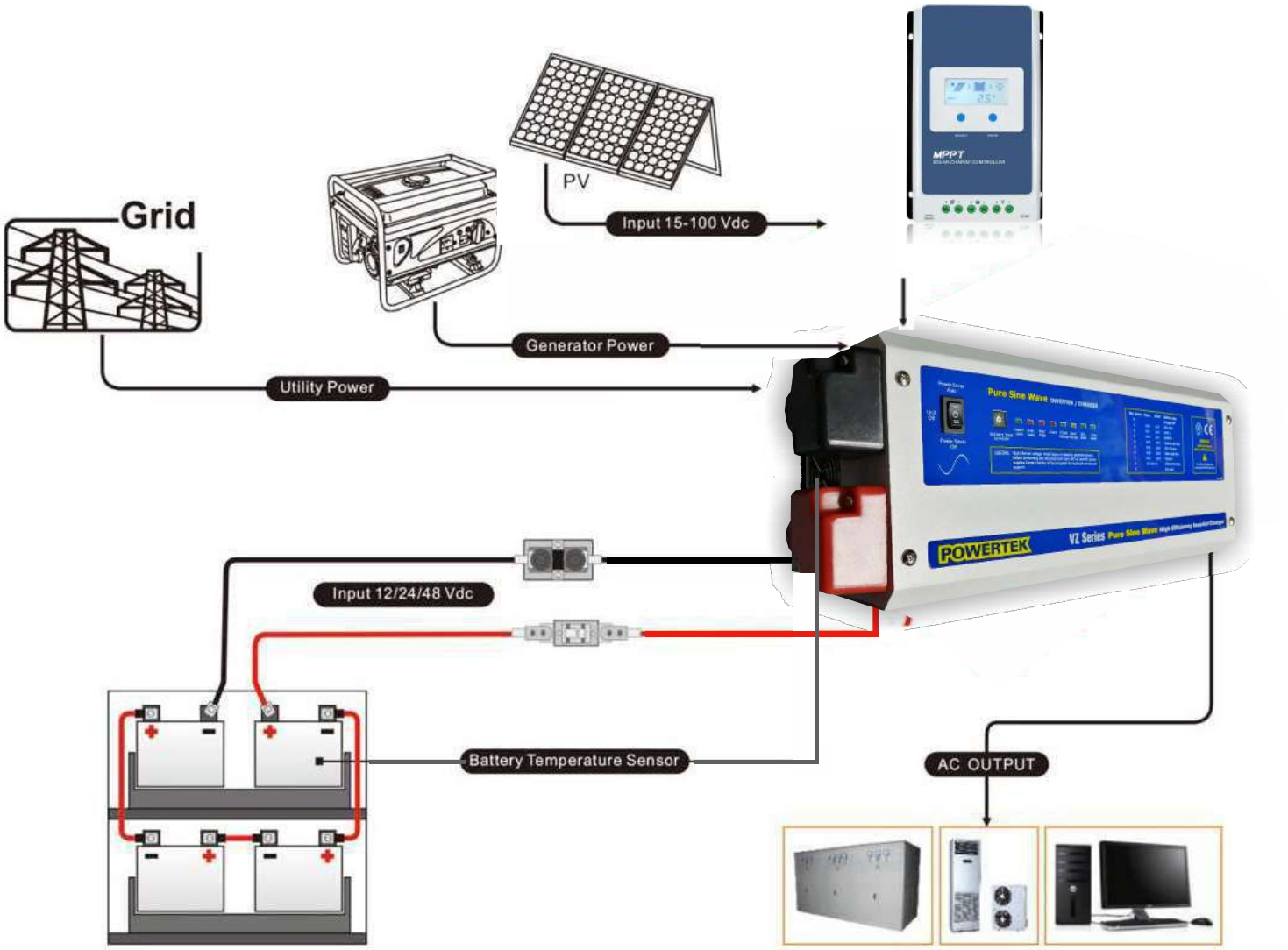
AC Input Range:
There are different acceptable AC input ranges for different kinds of loads. It can be customized.

Load Sensing Cycle:
The inverter is factory defaulted to detect load for 250ms in every 30 seconds.This cycle can be customized to 3 seconds theu the SW3 on DIP switch.

AC/Battery Priority:
Our inverter is designed AC priority by default. This means, when AC input is present, the battery will be charged first, and the inverter will transfer the input AC to power the load.
The AC priority and Battery Priority switch is available upon request. When you choose battery priority the inverter will inverting from battery despite the AC input.

Inverter Output	Model	1000W	1500W	2000W	3000W	4000W	5000W	6000W
	Continuous output power	1000W	1500W	2000W	3000W	4000W	5000W	6000W
	Surge rating (20s)	3000W	4500W	6000W	9000W	12000W	15000W	18000W
	Capable of starting electric motor	1HP	1.5HP	2HP	3HP	4HP	5HP	6HP
	Output waveform	Pure sine wave /same as input (bypass mode)						
	Nominal efficiency	>88% (peak)						
	Line mode efficiency	>95%						
	Power factor	0.9-1.0						
	Nominal output voltage (rms)	100-110-120Vac / 220-230-240Vac						
	Output voltage regulation	±10% RMS						
	Output requency	50Hz ± 0.3Hz / 60Hz ± 0.3Hz						
	Short circuit protection	Yes, current limit function (Fault after 1 sec)						
	Typical transfer time	10ms (max)						
	THD	< 10%						
DC input	Nominal input voltage	12Vdc						
		(*2 for 24vdc, *4 for 48vdc)						
	Minimum start voltage	10Vdc						
	Low battery alarm	10.5Vdc / 11.0Vdc						
	Low battery trip	10.0Vdc / 10.5Vdc						
	High voltage alarm & fault	16.0Vdc						
	High voltage input recovery	15.5Vdc						
	Low battery voltage recover	13.0Vdc						
	Idle consumption - search mode	< 25W when power saver on						
Charger	Input voltage range	Wide: 90-135Vac / 164-243Vac						
		Narrow: 100-135Vac / 194-243Vac						
	Output voltage	Depends on battery type						
	Charger breaker rating	10A	10A	10A	20A	20A	30A	30A
	Max charge rate	35A/70-90A max (charge current control)						
	Over charge protection shutdown	15.7V for 12Vdc (*2 for 24Vdc, *4 for 48Vdc)						
	Charger curve (4 stage constant current) 4 step digital controlled progressive charge	Battery types (*2 for 24Vdc, *4 for 48Vdc)						
	Battery type	Fast Vdc			Float Vdc			
	Gel U.S.A	14			13.7			
	A.G.M 1	14.1			13.5			
	A.G.M 2	14.6			13.7			
	Sealed Lead Acid	14.4			13.6			
	Gel Euro	14.4			13.8			
	Open Lead Acid	14.8			13.3			
	Calcium	15.1			13.6			
	De-sulphation	15.5 for 4hrs						
	Remote control	Yes. Optional						
Bypass & protection	Input voltage waveform	Sine wave (Grid or Generator)						
	Nominal voltage	120Vac			230Vac			
	Low voltage trip	80V/90V ± 4%			184V/154V ± 4%			
	Low voltage re-engage	90V/100V ± 4%			194V/164V ± 4%			
	High voltage trip	140V ± 4%			253Vac ± 4%			
	High voltage re-engage	135V ± 4%			243Vac ± 4%			
	Max input AC voltage	150Vac			270Vac			
	Nominal input frequency	50Hz or 60Hz (Auto detect)						
	Low freq trip	47 ± 0.3Hz for 50Hz, 57 ± 0.3Hz for 60Hz						
	Low freq re-engage	48 ± 0.3Hz for 50Hz, 58 ± 0.3Hz for 60Hz						
	High freq trip	55 ± 0.3Hz for 50Hz, 65 ± 0.3Hz for 60Hz						
	High freq re-engage	54 ± 0.3Hz for 50Hz, 64 ± 0.3Hz for 60Hz						
	Output short circuit protection	Circuit breaker						
	Bypass breaker rating	10A	15A	20A	30A	30A	40A	40A
	Transfer switch rating	30amp for UL & TUV			270Vac			
	Max bypass current	30amp			40amp			
Mechnical specification	Mounting	Wall mount						
	Inverter dimensions (L*W*H)	382*218*179mm		442*218*179mm		598*218*179mm		
	Inverter weight	16kg	17kg	20kg	24kg	35kg	45kg	45kg
	Shipping dimensions (L*W*H)	520*315*300mm		580*315*300mm		740*315*300mm		
	Shipping weight	18kg	19kg	22kg	26kg	37kg	47kg	47kg
	Display	Status LEDs / Status LEDs + LCD						
	Standard warranty	1 year						

Diagram


Grid
PV
Input 15-100 Vdc
Generator Power
Utility Power
Input 12/24/48 Vdc
Battery Temperature Sensor
AC OUTPUT
MPPT
POWERTEK
VZ Series