Product Specification Sheet

Name of client	neutral
Name of product	portabletypeEnergy storage power supply
Product Model / Version	G2400PXIM V1.0.00
Product Specifications	2400W/1843.2Wh
Specification Version	Trial version
Date of issue	2023-10-10

Shenzhen zhifu new energy resources co., ltd		
to copy	To examine	Approval
张军伟	/	Zhangjiang

Customer Signature:

conf irm	To exam ine	Appr oval

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Revision record				
Versio n number	date	Revised content explaination	Draft	Approva l
First editio n	2023-10	firstedition write		

catalog

1 Introduction

1.1 About this product

Model: G2400PXIM

（beautifulgauge） Product

version number: V1.0.00

Customer Name:neutral

1.2 About this specification

This product specification is compiled and released by the company's product center, which is the specification of the product released by the company, and is an important basis for the company to carry out the relevant work of this product (including production, inspection, testing, certification, marketing, etc.).

This product specification is maintained and updated by the company's product center.

1.3 Normative reference

Reference standards are as follows:

1) GB31241-Safety requirements for lithium-ion batteries and batteries for portable electronic products
2) GBT35590 - 2017 "General Standard for Mobile Power Supply for Digital Equipment"
3) CethTS018-2020Portable Lithium Ion Battery Energy Storage Power Source Certification Product Specification(for the first time)

1.4 Terms, definitions and abbreviations

1) Intelligent load: support to drive ice machine / power tools and other large impact load and high power resistive load.

2) Parallel machine: The AC output of the two main machines can be parallel to achieve double the output power and double the electricity.

3) UPS: Uninterruptible power source. whenMarket electricityWhen the input is normal, the mains is supplied to theayloadUse, while it also charges the in-machine battery; When the mains power is interrupted (accident blackout), switch to the in-machine battery power supply to the load immediately. The handoff time is an important index to measure the performance of UPS, and the industry standard requires that the handoff time must be less than 10ms in order to maintain the normal operation of the load and protect the soft and soft load.HardwareFrom damage.

4) Smart and electric:A host and 1-2 sets of intelligent parallel battery pack, through the intelligent parallel connection line with the fuselage comes with the intelligent parallel interface connection, to achieve the output power doubled.

2 Product Overview

G2400PXIMIs a standard in line with the US regulations AC power consumption, the AC output power is 2400 W, AC input power of 1200W, with two-way inverter fast charge function, using lithium iron phosphate battery, battery capacity of 1843.2Wh portable energy storage power supply products, suitable for household emergency electricity, outdoor travel, emergency disaster relief, field work and other occasions.

The product AC total output power is 2400 W, with four 120V AC output, two USB- A output in line with QC3.0 standard, two USB- C output in line with PD3.0 (100W) standard, Two DC5521 output and one cigarette lighter port output, built-in 5W LED lighting and SOS alarm function, support 10W wireless charging function, at the same time support intelligent carrying

3000W equipment, support two parallel output, support intelligent parallel power, support UPS function.

This product comes standard with an AC charge cable to support 120V AC direct charge, while supporting DC PV series and parallel 18V 75V MAX: 800W charge and DC 12V vehicle recharge through the Andresen charge port.

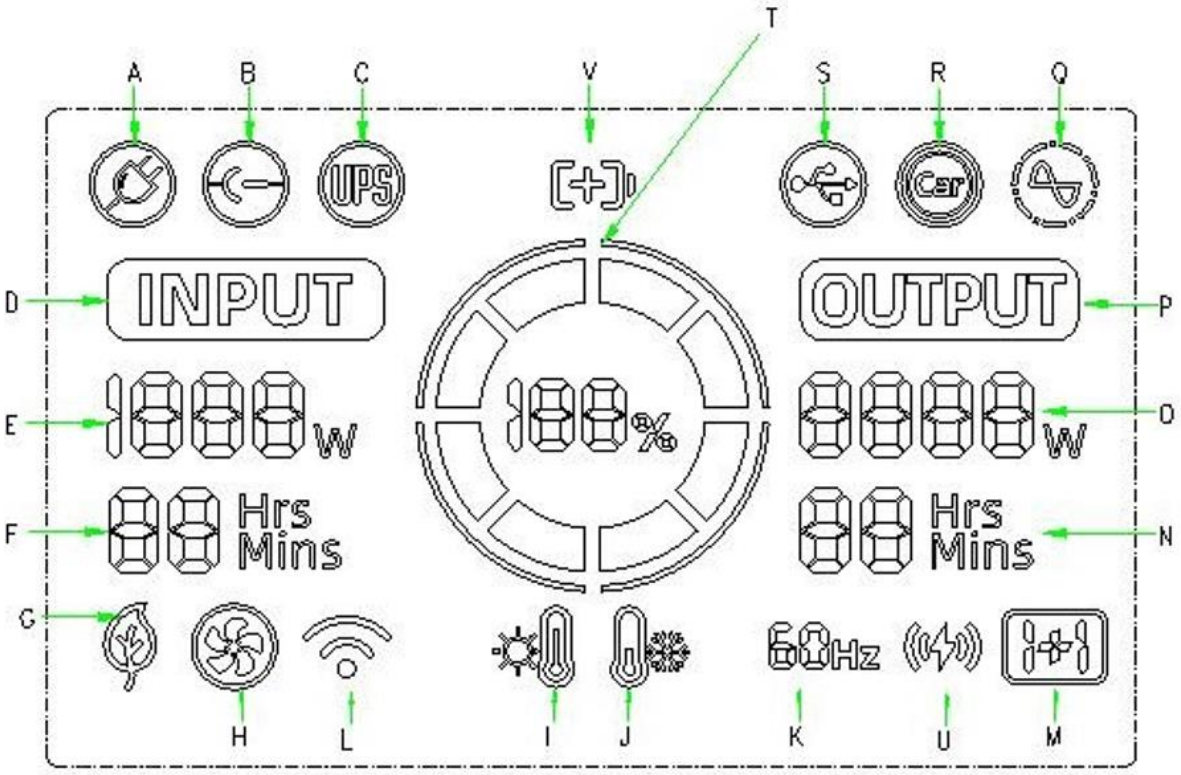
3 Schematic diagram of the whole machine

4 Switches and buttons

Serial number	Key name	Number	Introductions
1	Master switch button	1	longPress1.5SBoot up,The LCD screen lights up,Long press3S off. Simultaneous switch wireless charging and output
2	AC Output Switch Button	1	Short press to turn AC output on or off
3	DC Output Switch	1	Short-press to open or close the DC5521 and

	Button		the light port
4	USB Out On / Off Key	1	Short press on or off US-BC, US-BA
5	Light switch button	1	The cycle sequence is short: the first reading light (50%), the second reading light (100%), the third flash, the fourth SOS, the fifth close. Long press 1.5S to turn off all lights.
6	Modebutton or key	1	Fast charge switch (fast charge by default)
7	Overload Breaker Reset Button	1	Restores the circuit breaker by pressing

5 LCD screen display



Serial number	Information item	type	Introductions
1.	AC Plug icon(A)	icon	When the AC charging line is inserted, the display screen displays the identification
2.	DC/PV Plug icon (B)	icon	whenDC Direct/solar energyPV When the charging line is inserted, the display screen displays the ID

3.	UPSicon(C)	icon	When the equipment isAC State of charge andAC When the output is turned on, UPS Mode from Motion start, UPS Icon Light
4.	Charging input(D)	numerical value	When the master switch is turned on, the display “INPUT” Icon lights up
5.	Total charging input power (E)	numerical value	When charging, “INPUT” The icon lights up and shows the charging power.
6.	Charging time remaining(F)	numerical value	When charging, the display screen shows full remaining time.
7.	Fast and slow charge switching(G)	icon	When the productAC Shows icon when mains switch to slow charge
8.	Fan Icon(H)	icon	When the fan is running, the display screen shows the ID
9.	High temperature indicator icon(I)	icon	When the cell temperature is detected to reach the high temperature set protection value (charging or discharging), Display the identity.
10.	Low temperature indicator icon(J)	icon	When the cell temperature is detected to reach the low temperature set protection value (charging or discharging), Display the identity.
11.	AC output/Frequency chart mark(K)	icon	AC When the switch is on, the display screen showsAC Output icon and display the output frequency rate50Hz or60Hz。
12.	WIFIicon(L)	icon	WIFI,APP Access shows the icon, reserved, this version does not support
13.	Parallel icon(M)	icon	whenAC The ID is displayed when output parallel.
14.	Output remaining time(N)	numerical value	In the output state, the display screen displays the remaining output time.
15.	Output power(O)	numerical valu	Display wireless charging DC output, USB-A、USB-C、AC Total AC output Use power.

		e	
16.	Output Icon (P)	icon	When the master switch is turned on, the display “OUTPUT” Icon lights up
17.	AC Output Icon(Q)	numerical value	After the AC output switch is turned on, “AC output”The icon lights up and displays the communication Total output power, current remaining time and current frequency;
18.	DC Output icon(R)	numerical value	DC After the output switch is turned on, “DC output”The icon lights up and displays theDC transport Out of the total used power, the current remaining time;
19.	USB Output Logo (S)	numerical value	When the USB output switch is turned on, the "USB output" button lights up and shows the total power used by the USB output, the current remaining time;
20.	Battery Charge (T)	blend	1. Displays the current battery charge in Energy Circle + PercentWay to presentPresent. 2. The main switch is turned on, and the battery power is displayed. 3. During charging, the energy circle is displayed dynamically. 4. The current power display is less than 5%, and the energy circle is flashing.
21.	Wireless charging (U)	icon	Wireless charging access when the output shows the icon, abnormal flashing
22.	Smart Parallel Battery PackIcon (V)	icon	External connectionSmart Parallel Battery PacktimeShow the icon

6 Product function and performance

6.1 Battery pack characteristics

project	Minimum	standard	Maximum	Introductions
Cell type		Lithium iron phosphat		

		e		
Voltage	40V	51.2V	58.4V	
capacity	32.4Ah	36Ah 1843.2Wh		Environment 25 ± 2℃Factory capacity: 0.5C32.4Ah（0.5CConstant currentChargeTo 55.2V Jump to 0.2C Constant Current and Constant Pressureto58.4V, 0.02C current cutoff, 0.5C discharges to40V, the resulting capacity)
Battery Pack Low Voltage protect		2.75V		When the single cell voltage of the battery pack is below this value, the discharge is stopped.
Charging high temperature protection	50℃	55℃	60℃	Battery temperature exceeds this value, stop charging(Through the main control Charge)
Charging high temperature protection Post-recovery	45℃	50℃	55℃	After the high temperature protection stops charging, it returns to this temperature and automatically recovers. Recharging (via master control)
Low temperature protection for charging	-2℃	0℃	4℃	Battery temperature below this value, stop charging(Through the main control Charge)
Low temperature protection for charging Post-recovery	0℃	2℃	4℃	After the low temperature protection stops charging, it returns to this temperature and automatically recovers. Recharging (via master control)
High temperature discharge protection	60℃	65℃	70℃	Cell temperature exceeds this value, stop discharging(Through the main control Charge)
High temperature discharge protection Post-recovery	55℃	60℃	65℃	High temperature protection after termination of discharge, return to the temperature, you can press Key recovery (via master control)
Discharge cryogenic protection	-10℃	-15℃	-20℃	Cell temperature below this value, stop discharging(Through the main control Charge)
Discharge cryogenic protection Post-recovery	-5℃	-10℃	-15℃	Low temperature protection after termination of discharge, return to the temperature, you can press Key recovery (via master control)

6.2 Intelligent parallel electricityCharacteristic

project	Minimum	standard	Maximum	Introductions
Intelligent parallel electricitymeetmouth		1 individual		
Number of Smart Combined Power			2	One mouth can string twoSmart Parallel Battery Pack
Charge		Support		Priority host charging, and then select the external high power intelligent parallel battery pack charging
discharge		Support		Preferentially Smart and Charge Battery Pack Discharge, Then Host Battery

6.3 DC input characteristics

project	Minimum	standard	Maximum	Introductions
Charging mode				Supporting the car,PV
PV Input port		1 individual		
PV Input voltage	12V	36V	75V	
PV Input current			25A	
PV Input power		800W		
Car charging input voltage	12V		24V	
Car charger input current		8A		
Car charger input power		96W	192W	
Charge and put		Support		After full, ununpulled charge, DC or USB or AC load discharge to 95% automatically resume charge.
				1. When charging,Support DC and AC input

Multiple charging at the same time		Support		at the same time, total power 1200 W Priority DC remaining and AC input 2. DC DCOnly one input mode can be selected to charge the product, PV port can not be connected to the sun and car charge at the same time, only one charge mode can be selected.

6.4 ACInput characteristics

project	Minimum	standard	Maximum	Introductions
Charging mode				Support AC direct charge
AC Entry Port		1		
AC Inputting Power	100V	120V	130V	
AC Input Current		10A		
AC Entry Rate	45hz	60hz	65hz	Frequency adaptive
AC Power Supply		1200W		Slow charge at 25% of rated input power
AC/DC (PV) Charging at the same time.		Support		Priority DC (PV) input Remaining AC input, total power 1200 W;
Charge and put		Support		
AC Override Road Break		20A		

6.5 ACOutput characteristics

project	Minimum	standard	Maximum	Introductions
AC Output Jack		4individual		American Rules 20 A*3,30A*1(L5-30R)
AC power transfer		2400W		Unit Load 48 ~ 58.4V Load PF1.0R
Output peak		4800W		Protection Off Output after Maximum

power				Power Continues 200 ms
AC Out Wave		sine wave		Resistance R load
THDV		5%		Resistive belt
AC Frequency	45hz	60hz	61hz	Frequency switching: first turn the total switch off, press and hold "AC open key" and then press and hold "total open key," then the screen lights up, the display frequency until the frequency is closed, the frequency switching is successful.
Frequency adaptive		Support		ACThe output frequency will automatically followACInput frequency changes, the input output frequency is inconsistent, When adaptive, We'll do it first.Dynamic shutdownACOutput, and then need to be opened manually againAC Output switch
stand-aloneNo-load output voltage	116V	120V	124V	
stand-aloneOutput voltage with load	110V	120V	130V	R-load
Smart Belt Load		Support		1、Constant power with load resistance 3000 Wequipment 2、Smart Band Load Not Supported When AC Charge 3、Smart Load Not Supported at Parallel Time 4、Voltage falls to 80 V ± 10% off output in smart on-load mode
UPS		Support		Market electricityto accessTurn on the AC output display screen UPS, Enter UP mode
UP Handover Time		10ms		whenUPSMode, such asACInput Power Off,10mstoswitch over To Battery Pack Power Output
Inverter efficiency	85%	88%		In Rated51.2VUnder the input pressure, the AC output is respectively loadrated The Mean Values of Transfer Efficiency at 100%, 75%, 50% and 25%
AC Effective Output Capacity	1470Wh			Ambient temperature of 25 ± 2 degrees,ratedR载Power test

amount				
AC output short circuit protection protect		Support		Turn off output, no damage to circuit, key recovery
AC Outputting Machine		Support		1. Two parallel outputs can be achieved by parallel lines 2. Shuts down first in parallelACOutput reinsertion parallel wire 3. Start with two machines.AC, Reconnect to open on-load equipment 4. Parallel connection is not supported when mains access 5. Recommended parallel machine capacity difference of ≤ 5%
AC Shedding Machine Outputing Pressure	103V	120V	137V	R-load
AC output shingle power rate		4800W		Resistance Load (PF = 1.0) Other Load Derating Use
Parallel display power error		10%		After the parallel machine, the AC load fixed power, the two machines split the load power;Due to the difference of product output parameters, the output power of the two sets will have a deviation of about 10% under the same amount of electricity; ＜240W
AC outputUndervoltage protection		80V		80V±10%
Inverter overtemperature protection	90℃	95℃	100℃	Turn off the AC output, button recovery
AC Output Overload Protection				ACLoad power greater than2400W, And the power supply < 80 VafterTime Out 3 SOverload protection to turn off the AC,Press the button to restore the output
Total power output protection		2640W		When the total output power of AC + DC + USB is greater than 2640 W, the DC output is closed with a delay of 3 S, and the USB and AC output continue.

6.6 DC5521 + Flare Flare Output Characteristics

project	Minimum	standard	Maximum	Introductions
DC5521 port		2		
Cigarette Lighter Port		1		
Output voltage	11.8V	12.8V	13.8V	Screen Printing 12 V10A
Output current		10A		Two way 5521 + one way cigarette lighter total output
Output current limiting protection	10.1A	11A	13A	Turn off output, no damage to circuit, key recovery
Output short circuit protection		Support		Turn off output, no damage to circuit, key recovery

6.7 USB-AOutput characteristics

project	Minimum	standard	Maximum	Introductions
USB A port		2		
QC3.0		Support		
Output power		18W		
5V No-load output	4.5V	5V	5.5V	
5V Full Load Outputer	4.5V	5V	5.5V	
5V Positive Current	---	3A	---	
9V No-load output	8.5V	9V	9.5V	
9V Full Load Outputer	8.5V	9V	9.5V	
9V Positive Current	---	2.0A	---	

12V No-load output	11.4V	12V	12.6V	
12V Full Load Outputer	11.4V	12V	12.6V	
12V Positive Current	---	1.5A	---	
Automatic identification	---	Yes	---	Output voltage and current according to different load
Output current limiting protection	3.1A	3.8A	4.5A	5V test turns off the output, does not damage the circuit, automatic recovery
Output short circuit protection		Suppor t		Turn off the output without damaging the circuit,automaticrestore, The switch output needs to be restarted after a long short circuit with the fault code E07.

6.8 USB-COutput characteristics

proj ect	Minim um	standa rd	Maxim um	Intr oduc tion s
USBC port		2		
PD3,0		Support		
Output power		100W		
5V No-load output	4.5V	5V	5.5V	
5V Full Load Outputer	4.5V	5V	5.5V	
5V Positive Current	---	3A	---	
9V No-load output	8.5V	9V	9.5V	
9V Full Load Outputer	8.5V	9V	9.5V	
9V Positive Current	---	3A	---	
12V No-load output	11.4V	12V	12.6V	
12V Full Load Outputer	11.4V	12V	12.6V	
12V Positive Current	---	3A	---	

15V No-load Outputer	14.25V	15V	15.75V	
15V full load output	14.25V	15V	15.75V	
15V Positive Current	--	3A	---	
20V No-load output	19V	20V	21V	
20V full load output	19V	20V	21V	
20V Power Supply Current	---	5A	---	Need a dedicated line
Automatic identification	---	Yes	---	Output voltage and current according to different load
Output current limiting protection	3.1A	3.8A	4.5A	5V test off output, no damage to the circuit, self-recovery
Output short circuit protection		Support		Turn off the output without damaging the circuit,automaticrestore, The switch output needs to be restarted after a long short circuit with the fault code E07.

6.9 Wireless charging and output characteristics

project	Minimum	standard	Maximum	Introductions
Wireless charging port		1		
Output power		10W		Automatic detection output
Output voltage	8.6V	9V	9.5V	
Output current	0.8A	1.1A	1.4A	
Output power is detected and display		Support		
FOD		Support		

6.10 IOT Features

project	Minimum	standard	Maximum	Introductions

WIFI		Not supported		Hardware has a reserved interface
Bluetooth		Not supported		
State in service APP monitor		Not supported		
APP Controlled Operation		Not supported		

6.11 Other

project	Minimum	standard	Maximum	Introductions
Lighting lamp		1		
Lighting power		5W		
Illuminant brightness		450Lm		
Illuminant color temperature		5700K	6500K	
Lights dormancy		8H		(8 H hibernation with unturned load)

6.12 Energy saving and environmental protection characteristics

project	Minimum	standard	Maximum	Introductions
Automatic shutdown		Support		1, turn off the screenTime Default 3 minutes, maintain the output; 2、Not charging andThe AC output detection shows less than25W, andDC Output andUSB output detection shows that are less than5W, without any key

				operation, continuous8Turn off after hours. If any of the above conditions are not satisfied, restart the sleep shutdown timer
Whole machine working idle Power consumption		850mA	950mA	Battery pack output51.2V, OpenDC.USB.ACMeasuring battery B + End Gets
When the whole machine shuts down since Electricity consumption		≤2mA		The main switch of the front panel is closed for 5 minutes, and the power consumption is ≤ 2 mA;
Runtime noise			70db	Less than 35db when fan free and less than 70db when fan starts

7 Working environment

proj ect	Minimum	stand ard	Maxim um	Intr oduc tion s
Charging operating temperature	0℃	25℃	40℃	environmental temperature
Discharge operating temperature	-10℃	25℃	40℃	environmental temperature
Storage temperature	-20℃	---	45℃	
Working humidity	10%	---	85%	No condensation
Storage humidity		---	45%	
altitude			2000 rice	
Test ambient temperature	23℃	25℃	27℃	
If the battery is stored for more than three months, please use the charger with the specified parameter range to charge and discharge the product once. Charge to50%;				

8 Compliance with certification or testing standards

According to customer needs can do the following certification or record:PSA / ETI Record / UN 38.3 / MSDS / UN Box Performance

Single / dangerous package certificate, the cost is borne by the customer.

Certification Program	Certification Implementation Standards
SE Annexation 9	Annex 9 (or table 9)
ETI Records	
UN38.3	ST/SG/AC.10/11/Rev.7/Amend.1

9 Product physical parameters

Maximum size of this machine appearance: long430Mm × Wide 300 mm × High287mm

Body weight: ≈ 27KG

10 Packing list

Serial number	name	Specifications	Number
1	G2400PXIM	2400W/1843.2Wh	1
2	User's manual	G2400PXIM: 142*210mm	1
3	AC Line	SF31 + SF82S SJT3X 14AWG line length 1.5 m 125 V / 15A1 Three Vertical Products Ending Beauty Gauge BandUL Approved	1

11 Optional accessories

Serial number	name	Specifications	Number
1	Car charging cable	Car charging head to Anderson head, 18 #, line length 1 meter	1
2	MC4 Charge Cable	MC4Charging cable solar panel waterproof plugMC4Turn Anderson's head. Total line. 500mm	1
3	Parallel lines	Air and connection at both end of M23 self-Locking male head, 3 + 5, with self-Locking, line length 0.8 m	1

12 Fault code

Serial number	Exception coding	Code meaning	Solutions
1	E01	Battery overvoltage	Please disconnect the charging cable and stop charging
2	E02	Battery undervoltage	Please disconnect the output and charge the device
3	E03	Inverter overtemperature	Please disconnect the output and wait 1-2 hours before operating
4	E04	Abnormal power grid voltage	Please disconnect the charging cable
5	E05	Frequency anomaly of power grid	Please disconnect the charging cable
6	E06	Abnormal output voltage	Please contact us
7	E07	Output short circuit	Please disconnect the output and check the electrical equipment
8	E08	Output overload	Please disconnect the output
9	E09	Inverter failure	Please contact us
10	E16	Charge overload	Please disconnect the output load

13 Note

2. Do not put the product into water or rain!

3. Do not heat the product or approach the fire source! Do not disassemble or transform the product without authorization! Do not hit the product hard! Otherwise, it may cause the battery to overheat, short circuit, fire or function failure, short life and other hazards.

4. Do not use or place this product in high temperatures (in hot sunlight or in very hot cars), otherwise it may cause overheating of the battery, fire or failure of function, short life, and other hazards.

5. Prohibit disassembly and disassembly of power supply

6. Prohibit short circuit of the power battery

7. Prohibit the use of non-dedicated charger to charge the power supply, it will be dangerous;

8. Do not directly touch the leaking battery, the leakage of electrolyte will cause skin discomfort, in case the electrolyte enters the eyes, rinse with water as soon as possible, do not rub the eyes, and quickly sent to the hospital;

FCC Warning

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-Reorient or relocate the receiving antenna.

-Increase the separation between the equipment and receiver.

-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-Consult the dealer or an experienced radio/TV technician for help.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.