

B400 Online UPS

User Manual

B400-010-B (C)

B400-020-B (C)

B400-030-B (C)

200/208/220/230/240VAC



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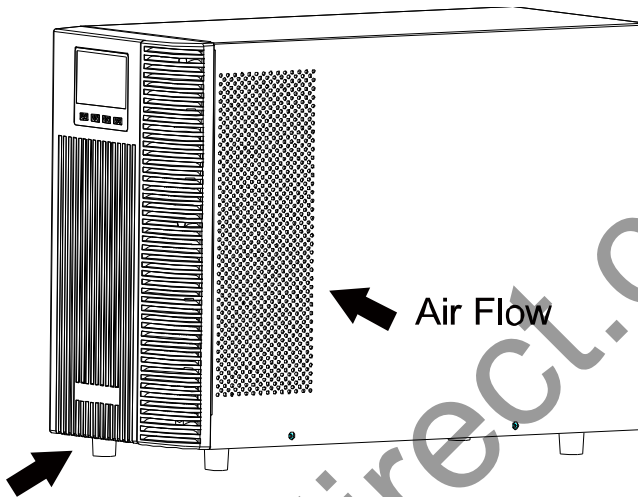
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1. Safety and EMC Instructions

Please carefully read the following user manual and safety instructions before installing and using the UPS!

1.1 Installation

- ★ Check installation instructions before connecting to UPS to the supply.
- ★ Condensation may occur if the UPS is transported directly from a cold to a warm environment. Please allow an acclimatization time of at least two hours before switching the UPS.
- ★ Do not install the UPS near a water source or in a damp environment.
- ★ Do not install the UPS where it would be exposed to direct sunlight or near a heat source.
- ★ Do not connect items of equipment which would overload the UPS (e.g. laser printers) to the UPS output.
- ★ Always place cables in such a way so that they are not a trip hazard.
- ★ Always make sure the installation is connected to a reliable earth source.
- ★ Any additional battery cabinets must be connected to a reliable earth source.
- ★ Check after installation, the total earth leakage current including the UPS and the connected load does not exceed 3.5mA.
- ★ Do not obstruct the ventilation and air flow of the UPS housing. Ensure the air vents on the front, side and rear of the UPS are not blocked. Allow at least 25cm of space on each side.



- ★ An appropriate safety circuit breaker device should be installed within the building wiring installation, meeting local regulations and standards. Please see the UPS specification in chapter 5.2. for the correct sizing.
- ★ Remember the UPS can be powered by more than one source.

1.2 Operation

- ★ Do not disconnect the mains cable to the UPS during operation as this would remove the earthing point of the UPS and of all connected loads.
- ★ The UPS may have internal batteries, electricity maybe present at the output terminals of the UPS even with the mains disconnected.
- ★ In order to completely isolate the UPS, first press the OFF button to turn off the UPS, then disconnect the mains lead.
- ★ Ensure that no liquid, excess of dust or other foreign objects can enter the UPS.

- ★ Do not remove the enclosure. This system is to be serviced by qualified service personnel only.

1.3 Maintenance, servicing and faults

- ★ Repairs may be carried out only by qualified maintenance personnel.
- ★ Caution - risk of electric shock. Even after the unit is disconnected from the mains power supply (mains input lead), components inside the UPS are still connected to the battery which are potentially dangerous.
- ★ Batteries must be replaced only by qualified personnel.
- ★ Batteries have a high short-circuit current and pose a risk of shock. Take all precautionary measures specified below and any other measures necessary when working with batteries:
 - remove all jewellery, wristwatches, rings and other metal objects
 - use only tools with insulated grips and handles.
- ★ When changing batteries, replace with the same quantity and the same type of batteries.
- ★ Dispose of all batteries according to local standards.
- ★ Always replace any fuse with one of the same type and rating.

1.4 Transport

- ★ Please transport the UPS in the original packaging only to protect against impact damage.

1.5 Storage














- ★ The UPS must be stored in a dry and well-ventilated area.

1.6 Standards

* Safety		
IEC/EN 62040-1-1		
* EMI		
Conducted Emission.....:IEC/EN 62040-2	Category C1	
Radiated Emission.....:IEC/EN 62040-2	Category C1	
Harmonic Current.....:IEC/EN 61000-3-2		
Voltage Fluctuation and Flicker.....:IEC/EN 61000-3-3		
*EMS		
ESD.....:IEC/EN 61000-4-2	Level 4	
RS.....:IEC/EN 61000-4-3	Level 3	
EFT.....:IEC/EN 61000-4-4	Level 4	
SURGE.....:IEC/EN 61000-4-5	Level 4	
CS.....:IEC/EN 61000-4-6	Level 3	
MS.....: IEC/EN 61000-4-8	Level 3	
Voltage Dips.....: IEC/EN 61000-4-11		
Low Frequency Signals.....:IEC/EN 61000-2-2		

2. Description of Commonly Used Symbols

Some or all of the following symbols may be used in this manual. Please familiarize yourself with them:

Symbol and Explanation			
Symbol	Explanation	Symbol	Explanation
	Alert you to pay special attention		Protective ground
	Caution of high voltage		Alarm silence
	Turn on the UPS		Overload indication
	Turn off the UPS		Battery
	Idle or shut down the UPS		Recycle
	Alternating current source (AC)		Do not dispose with ordinary trash
	Direct current source (DC)		

3. Introduction

This is a Double Conversion true On-Line Uninterruptible Power Supply.

The double-conversion eliminates all mains power disturbances. A rectifier converts the alternating current (AC) from the mains to direct current (DC). This DC charges the batteries and powers the inverter. On the basis of this DC voltage, the inverter generates a sinusoidal AC voltage, which permanently supplies the loads.

The connected load is thus powered entirely by the UPS inverter voltage. In the event of power failure, the maintenance-free batteries power the inverter.

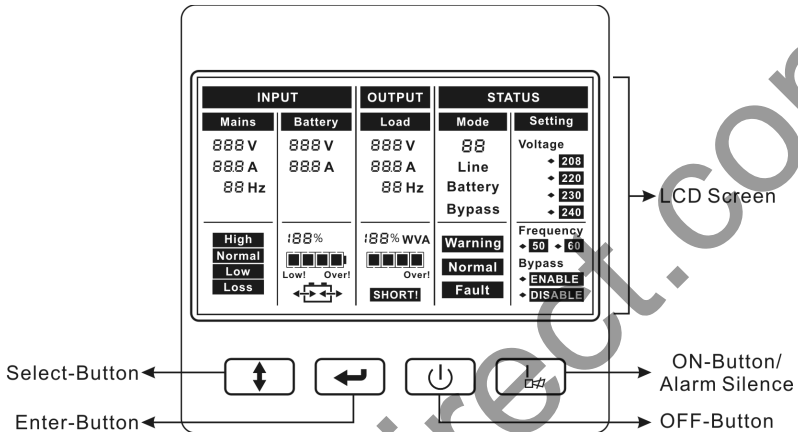
This manual covers the UPS listed as follows. Please confirm it is the correct manual by checking the model number on the rear panel of the UPS.

Model No.	Type	Model No.	Type
B400-010-B	Standard	B400-010-C	Extended backup time
B400-020-B		B400-020-C	
B400-030-B		B400-030-C	

“B” Model: Internal battery

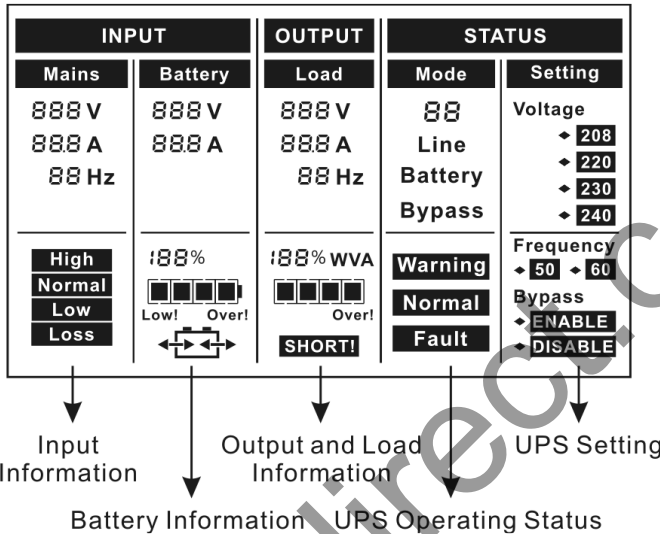
“C” Model: Internal charger for extended backup time

4. Panel Description





The Display Panel



Switch	Function
ON-Button	Pressing this button turns on the UPS system. Pressing this button while the UPS is in battery mode will deactivate the acoustic alarm. Pressing this button while the UPS is in Line mode, ECO Mode or Converter mode will cause the UPS to perform a battery test.
OFF-Button	Pressing this button when mains power is normal, the UPS will switch to Bypass mode, the inverter is also switched off. If Bypass is enabled, then the output sockets are supplied with mains unprotected mains voltage if mains power is available. Pressing this button while the UPS is in bypass mode will deactivate the acoustic alarm.
Select-Button	These buttons are reserved for Borri service engineers to change parameters of the UPS including output voltage, output frequency, Bypass and Converter Mode enable / disable
Enter-Button	



The LCD Display

Display	Function
Input Information	
888 V	Indicates the input mains / line voltage value, which could be displayed from 0 to 999Vac
88 Hz	Indicates the frequency value of the input mains / line voltage, which could be displayed from 0 to 99Hz
888 A	Indicates the input mains / line current value, which could be displayed from 0 to 99.9A
High	Indicates the input mains / line voltage is higher than the specification value and the UPS would switch the battery mode.
Low	Indicates the input mains / line voltage is lower than the specification value and the UPS would switch to battery mode
Normal	Indicates the input mains / line voltage is within normal specification and the UPS is operating normally.

Loss	Indicates the input mains / line voltage is lost and the UPS would switch to battery mode
Output Information	
888 V	Indicates the UPS output voltage value, which could be displayed from 0 to 999Vac
88 Hz	Indicates the UPS output frequency value, which could be displayed from 0 to 99Hz
88.8 A	Indicates the UPS output current value, which could be displayed from 0 to 99.9A
Load Information	
SHORT!	Indicates the load or the UPS output has experienced a short circuit and the UPS would in fault mode.
Over!	Indicates the UPS is being overloaded.
	Indicates the load percentage, each box representing 25% increments.
188% WVA	Indicates the load percentage, 'W' is displayed when the load is displayed in watts or 'VA' is displayed when the load is displayed in VA (Voltage-Ampere). The display will change depending which value is the higher.
Battery Information	
888 V	Indicates the battery voltage value, which could be displayed from 0 to 999Vdc
88.8 A	Indicates the battery current value, which could be displayed from 0 to 99.9A
188% 	Indicates the battery capacitance percentage, each box representing 25% increments.

Over!	Indicates the battery is over-charge, and the UPS would be transfer to Battery mode
Low!	Indicates low battery and imminent shutdown of the UPS.
	Indicates the battery is charging
	Indicates the battery is discharging
UPS status Information	
88	Indicates UPS operating status including the operating mode, or warnings or faults on the UPS, the codes are described in detail in the following chapter *
Bypass	Indicates the UPS is working in bypass mode, the load is directly supplied by the input mains power through bypass
Line	Indicates the UPS is working normally in online mode
Battery	Indicates the UPS is working in battery mode
Fault	Indicates the UPS is working in fault mode
Warning	Indicates there are warnings that need attention
Normal	Indicates there are no warnings or fault conditions
UPS setting Information	
<ul style="list-style-type: none"> ◆ 208 ◆ 220 ◆ 230 ◆ 240 	The value with the bullet on the left hand side indicates the output voltage. This can be changed on request or by Borri service engineers. A de-rating of 10% should be applied if the output voltage is adjusted to 208VAC

Frequency ◆ 50 ◆ 60	The value with the bullet on the left hand side indicates the UPS output frequency. This can be changed on request or by Borri service engineers.
Bypass ◆ ENABLE ◆ DISABLE	The value with the bullet on the left hand side shows whether the bypass function is enabled or disabled. This can be changed on request or by Borri service engineers.

5. Connection and Operation

If electrical wiring is required the system must be installed to local safety standards by qualified electricians.

5.1 Inspection:

Inspect the packaging carton and its contents for damage. Please inform the transport agency immediately should you find signs of damage.

Please keep the packaging in a safe place for future use.

5.2 Connection:

(1) UPS Input Connection

If the UPS is connected via the supplied input power cable, please connect to a socket which has necessary protection and capacity: over 6A for B400-010-B and B400-010-C, over 7A for B400-020-B, 13A for B400-020-C, B400-030-B, and B400-030-C.

If the UPS is being hardwired, the correct cable and protective safety device should be selected.

When selecting the protective device, the user can refer to below table for detailed information when installation.

Model No.	UPS INPUT ISOLATOR	
	VOLTAGE	CURRENT
B400-010-C	240 VAC	10A
B400-020-C	240 VAC	20A
B400-030-C	240 VAC	32A

(2) UPS Output Connection

The output of the UPS is IEC socket-type: 10A for B400-010-B(C) and B400-020-B; 10A for B400-020-C and 10A & 16A for B400-030-B(C); Simply plug the load power cable to the output sockets to complete connection.

Model No.	Output Socket (pcs)
B400-010-B(C)	3 IEC type
B400-020-B(C)	6 IEC type
B400-030-B(C)	5 IEC type (4 x 10A, 1 x 16A)

Caution!

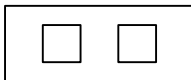
Do not connect equipment which would overload the UPS system (e.g. laser printers)

(3) EPO Connection:

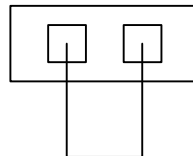
User can select the polarity of EPO; EPO is Normally close as default setting

- Normally open

Normally the EPO connector is open on the rear panel. Once the connector is closed with a wire, the UPS would stop the output until the EPO status is disabled.



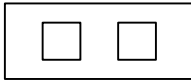
Disable the EPO status



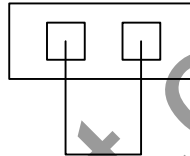
Enable the EPO status

- Normally close

Normally the EPO connector is closed with a wire on the rear panel. Once the connector is open, the UPS would stop the output until the EPO status is disabled



Enable the EPO status



Disable the EPO status

5.3 Battery charge:

The UPS system should be plugged in to the mains and switched on for 2 hours to ensure the batteries are fully charged. The UPS can be used before this time however the specified full backup time may not be achieved.

5.4 Turn on the UPS:

(1) With mains power connected:

Press and hold the “I” button to turn on the UPS, the UPS will go into inverter mode and the LCD screen will indicate the state of the UPS.

(2) Without mains power connected:

If the UPS is required to be started without mains power available (Cold Start), the user will need to press the “I” button twice, first pressing the “I” button to start the UPS and secondly press and hold the “I” button to start the inverter. The LCD screen will then indicate the state of the UPS.

5.5 Test function:

The UPS can perform a self-test including checking the battery status by pressing the On-Switch “I” for more than 1 second.

5.6 Turn off the UPS:

(1) In Inverter Mode:

Press and hold the “⏻” button, this will switch the UPS to bypass mode. If mains voltage is not available the UPS will automatically shutdown. If mains power is available disconnect the cable.

(2) In Battery Mode:

Press and hold the “⏻” button to turn off the UPS, the UPS will then shutdown.

5.7 Audible alarm mute function:

The audible alarm can be silenced while the UPS is in battery mode by pressing and holding the “I” button. The alarm will be enabled when the battery charge is at low level to alert imminent shutdown of the UPS

The audible alarm can be silenced while the UPS is in bypass mode by pressing and holding the “⏻” button. The action doesn’t affect the warning and fault alarm.

5.8 Operation procedure of external battery for long backup time model (“C” model)

- (1) Use the battery pack with voltage: 36VDC for B400-010-C (3 pcs of 12V batteries), 96VDC for B400-020-C / B400-030-C (8 pcs of 12V batteries). Connection of batteries with a different string voltage will cause permanent damage to the batteries and UPS.

- (2) The battery connection procedure is very important. It must be followed exactly to avoid electric shock.
- (3) Make sure the mains input is off, if there is a battery breaker then turn it off first.
- (4) Remove the cover of the battery connector on the rear of the UPS, always use the Borri provided battery connection cable.
- (5) Pay attention to the colour of UPS battery connector: red is the “+” terminal of the battery and black is the “-” terminal of battery, the green one is the earth. Because the connector is ANDERSON type, the wires, which is used to the connector, should be the same type. (Note: the green/yellow wire is grounded for protection purpose)
- (6) Connect the cable to the UPS and battery box.
- (7) Turn on the UPS, the batteries will then start to be charged.

If using non Borri battery cabinet a DC breaker / fuse must be used between the UPS and external battery.

Model No.	DC breaker	
	VOLTAGE	CURRENT
B400-010-C	48VDC	50A
B400-020-C	125VDC	40A
B400-030-C	125VDC	60A

6. Operating Mode for All Models




The operating code shown on the LCD screen and explanation are listed in the table below.

Under normal circumstances only one code will appear. If warnings are present the appropriate codes will scroll through.

Normal operating mode	Code
No output mode	0
Bypass mode	1
Line mode	2
Battery mode	3
Battery test mode	4
ECO mode	5
Converter mode	6

6.1 Online mode

The LCD display in Online mode is shown in the following diagram. The information about the mains power, the battery, the UPS output and the load is displayed. The “Line” and “2” code indicate the UPS is working in Online mode.

INPUT		OUTPUT	STATUS	
Mains	Battery	Load	Mode	Setting
222 V 08.0 A 50 Hz	110 V	220 V 07.0 A 50 Hz	2 Line	Voltage 208 220 230 240
Normal	90%  	73%w 	Normal	Frequency 50 60 Bypass ENABLE DISABLE

■ Online mode

If the output is overloaded, the load percent is shown and the audible alarm will beep twice every second. You should switch off unnecessary load one by one to decrease the load connected to the UPS ideally less than 90% of its nominal power capacity.




Note: Please see following if running the UPS from a diesel generator:

- Activate the generator and wait for the engine to stabilize before supplying power to the UPS. Turn on the UPS according to the start-up procedure. After the UPS is turned on, then the loads can be connected to the UPS one by one.
- The power capacity of the AC generator should be at least twice of the UPS capacity.

6.2 Battery mode

The LCD display for the UPS operating in battery mode is shown in the following diagram. The information about the mains power, the battery, the UPS output and the load is displayed. The “Battery” and “3” code indicate the UPS is working in the battery mode.



- (1) When the UPS is running in battery mode, the audible alarm beeps once every 4 seconds. If the “ON” button on the front panel is pressed for more than 1 second, the alarm will stop beeping (in silence mode). Press the “ON” button once again for more than 1 second to resume the alarm function.
- 2) If the UPS is running in battery mode because the mains input line voltage is higher than the maximum specification, the alarm symbol - “High” will be shown; if the UPS is running in battery mode because the mains input line voltage is lower than the minimum specification, the alarm symbol - “Low” will be shown; if the mains input line voltage is lost, the alarm symbol - “Loss” would be shown.

INPUT		OUTPUT	STATUS	
Mains	Battery	Load	Mode	Setting
000 V 000 A 00 Hz	095 V 084 A	220 V 050 A 50 Hz	3 Battery	Voltage 208 220 230 240
	70% 	37% VA 		Frequency 50 60
Loss 			Normal	Bypass ENABLE DISABLE

■ Battery mode

6.3 Bypass mode

The LCD display for the UPS operating in bypass mode is shown in the following diagram. The information about the mains power, the battery, the UPS output and the load is displayed. The UPS will beep once every 2 minutes while in bypass mode. The “Bypass” and “1” code indicate the UPS is working in the bypass mode.


INPUT		OUTPUT	STATUS	
Mains	Battery	Load	Mode	Setting
226 V 020 A 52 Hz	110 V	226 V 020 A 52 Hz	1 Bypass	Voltage 208 220 ♦ 230 240
Normal	75% 	15% VA 	Normal	Frequency ♦ 50 60 Bypass ♦ ENABLE DISABLE

■ Bypass mode

The UPS will not support the load while in bypass mode. The power used by the load is supplied from the mains power via internal filter and is unprotected.

6.4 NO output mode

The LCD of the UPS display in “No output mode” is shown in the following diagram. The information about the mains power, the battery, the UPS output and the load is displayed. The “0” code indicates the UPS is working in the “No output” mode.

INPUT		OUTPUT	STATUS	
Mains	Battery	Load	Mode	Setting
225 V 000 A 53 Hz	110 V	000 V 000 A 00 Hz	0	Voltage 208 220 ♦ 230 240
Normal	100% ■■■■■ 	00%W ■■■■■	Normal	Frequency ♦ 50 60 Bypass ENABLE ♦ DISABLE

■ No output mode

6.5 EPO (Emergency Power Off)

It is also called RPO (Remote Power Off). On the LCD display, the mode code is “0”, the word “EPO” is presented in the position of output voltage.

It is a special status in which the UPS would switch the output off and alarm. The UPS cannot be turned off by pressing the “OFF” button on the panel until the EPO has been released by turning or releasing the EPO switch.

6.6 ECO mode (High Efficiency Mode)

In ECO mode the UPS LCD will display the mode code “5”.

After the UPS is turned on, the power used by the load is supplied from the mains power via the internal filter while the mains power is in normal range. Once the mains power is lost or abnormal, the UPS will transfer to battery mode and the load is supplied continuously by the battery.

- 1) This mode can be enabled through the LCD setting or software.
- 2) The transfer time of UPS output from ECO mode to battery mode is less than 10ms.

6.7 Converter mode

In converter mode the UPS LCD will display the mode code “6”.

The UPS would run with a fixed output frequency (50Hz or 60Hz) in converter mode. Once the mains power is lost or abnormal, the UPS would transfer to battery mode and the load is supplied continuously by the battery.

- 1) This mode can be enabled through the LCD setting or software.
- 2) The load should be derating to 60% in converter mode.

6.8 Abnormal mode

In abnormal mode such as Bus fault etc., the corresponding fault code would be shown to indicate the operating mode of the UPS. Some other warnings could also be shown, for example “short!” would be shown when the load or the UPS output is subject to a short circuit and the UPS is in inverter fault mode.

7. Trouble Shooting

If the UPS system does not operate correctly, check the operating status on the LCD display.

Normal operating mode	Code
No output mode	0
Bypass mode	1
Line mode	2
Battery mode	3
Battery test mode	4
ECO mode	5
Converter mode	6
Warning	Code
Site fail	09
Fan fail	10
Battery over voltage (over charged)	11
Battery low	12
Charge fail	13
DC-DC temperature high	21
Inverter temperature high	24
Ambient temperature high	25
Line voltage high (OVCD action)	26
Battery open	27

Overload	29
Fault	Code
Bus fault	05
Inverter fault	06
Overload fault	07
Over temperature fault	08
Inverter short	14
Bus short	28

If the UPS system does not operate correctly, please attempt to solve the problem using the table below.

<i>Problem</i>	<i>Possible cause</i>	<i>Remedy</i>
No indication, no warning tone even though system is connected to mains power supply	No input voltage	Check building wiring socket outlet and input cable.
BYPASS LED lights up even though the power supply is available	Inverter is not switched on	Press On-Switch "I".
BATTERY LED lights up, and audible alarm sounding every 1 beep in every 4 seconds	Mains power supply has failed, or Input power and/or frequency are out of tolerance	Switching to battery mode automatically. Check the input power source and inform dealer if necessary.

Emergency supply period shorter than nominal value	Batteries not fully charged / batteries defect	Charge the batteries for at least 5 - 8 hours and then check capacity. If the problem still persists, consult your dealer.
Fan fail	Fan abnormal	Check if the fan is running
Battery over voltage	Battery is over charged	The UPS will switch to battery mode automatically, and after the battery voltage is normal and the mains is normal, the UPS would switch to Online mode automatically again.
Battery low	Battery voltage is low	When the audible alarm is sounding every second, the battery is almost empty.
Charge fail	The charger is broken	Notify dealer.
DC-DC temperature high	Inside temperature of the UPS is too high	Check the ventilation of the UPS, check the ambient temperature.
Inverter temperature high	Inside temperature of the UPS is too high	Check the ventilation of the UPS, check the ambient temperature of the room.
Ambient temperature high	The ambient temperature is too high	Check the environment ventilation.
Line voltage high (OVCD action)	Input power voltage is too high	The UPS will switch to battery mode automatically, and after the mains is normal, the UPS will switch to online mode automatically again.

Battery open	Battery pack is not connected correctly	Do the battery test to confirm. Check the battery bank is connected to the UPS. Check the battery breaker is turn on.
Overload	Overload	Check the loads and remove some non-critical loads.
Site fail	Phase and neutral conductor at input of UPS system are reversed	Check UPS installation.
EPO active	EPO function is enabled	Turn off the EPO switch.
Bus fault	UPS internal fault	Notify dealer
Inverter fault	UPS internal fault	Notify dealer
Over temperature fault	Over temperature	Check the ventilation of the UPS, check the ambient temperature and ventilation.
Inverter short	Output short circuit	Remove all the loads. Turn off the UPS. Check whether the output of UPS or loads are short circuit. Make sure the short circuit is removed, and the UPS has no internal faults before turning on again.
Bus short	UPS internal fault	Notify dealer

Please have the following information available before calling the After-Sales Service Department:

1. Model number, serial number
2. Date on which the problem occurred
3. LCD/LED display status, Buzzer alarm status
4. Utility power condition, load type and capacity, environment temperature, ventilation condition
5. The information (battery capacity, quantity) of external battery pack if the UPS is “C” model
6. Other information for complete description of the problem

8. Maintenance

8.1 Operation

The UPS system contains no user-serviceable parts. If the battery service life (3~5 years at 25°C ambient temperature) has been exceeded, the batteries must be replaced. In this case please contact Borri.

8.2 Storage

If the batteries are stored in a temperate controlled area, they should be charged every three months for 1~2 hours. You should shorten the charging intervals to two months at locations subject to high temperatures.

8.3 Battery Replacement

If the battery service life has been exceeded, the batteries must be replaced.

Battery replacement should be performed only by qualified personnel.

9. Technical Data

9.1 Electrical specifications

INPUT						
Model No.	B400 -010-B	B400 -010- C	B400 -020-B	B400 -020- C	B400 -030-B	B400 -030- C
Phase	Single					
Frequency	(45~55)/(54~66) Hz					
Current(A)	5A	7A	9A	14A	14.5A	15A

OUTPUT			
Model No.	B400-010-B (C)	B400-020-B (C)	B400-030-B (C)
Power rating	1kVA/0.8kW	2kVA/1.6kW	3kVA/2.4kW
Voltage	200/208/220/230/240× (1 ± 2%) VAC		
Frequency	50/60× (1±0.2) Hz (Battery mode)		
Waveform	Sinusoidal		

Derating to 90% when the output voltage is adjusted to 208VAC

Derating to 80% when the output voltage is adjusted to 200VAC

BATTERIES			
Model No.	B400-010-B	B400-020-B	B400-030-B
Number and type	3×12V 7Ah	8×12V 7Ah	8×12V 7Ah

9.2 Operating Environment

Ambient Temperature	0 °C to 45 °C
Operating humidity	< 95%
Altitude	< 1000m
Storage temperature	0 °C to 45 °C

9.3 Typical backup time (Typical values at 25°C in minutes :)

Model No.	100 % Load	50 % Load
B400-010-B	5	14
B400-020-B	9	21
B400-030-B	5	15

9.4 Dimensions and weights

Model No.	Dimensions W×D×H (mm)	Net Weight (kg)
B400-010-B	145×400×220	13
B400-010-C	145×400×220	7
B400-020-B	192×460×347	31
B400-020-C	192×460×347	13
B400-030-B	192×460×347	31
B400-030-C	192×460×347	13

10. Communication Port

The communication port is for the monitoring software. A USB port and an intelligent slot are provided.

10.1 USB

The USB port is compliance with USB 1.1 protocol.

10.2 RS232 Interface (Option)

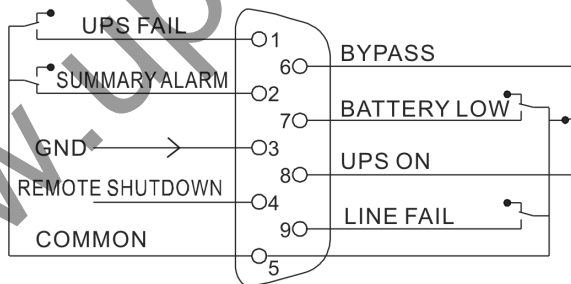
The following is the pin assignment and description of DB-9 connector.

Pin #	Description	I/O
2	TXD	Output
3	RXD	Input
5	GND	Input

10.3 AS400 Interface (Option)

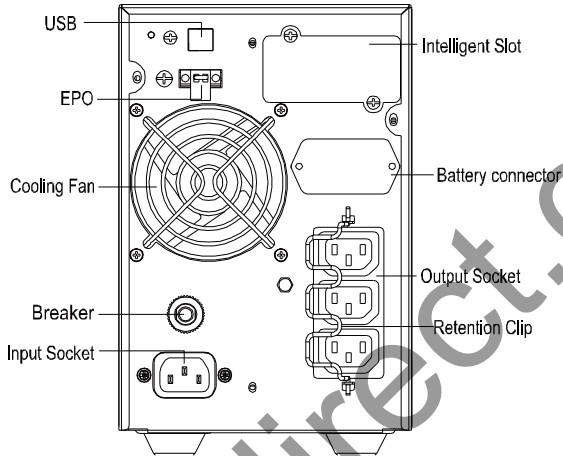
Except for the communication protocol as mentioned above, this series of UPS has AS400 card (an optional accessory) for AS400 communication protocol. Please contact your local distributor for details. The following is the pin assignment and description of DB-9 connector in AS400 card.

Pin #	Description	I/O	Pin #	Description	I/O
1	UPS Fail	Output	6	Bypass	Output
2	Summary Alarm	Output	7	Battery Low	Output
3	GND	Input	8	UPS ON	Output
4	Remote Shutdown	Input	9	Line Loss	Output
5	Common	Input			

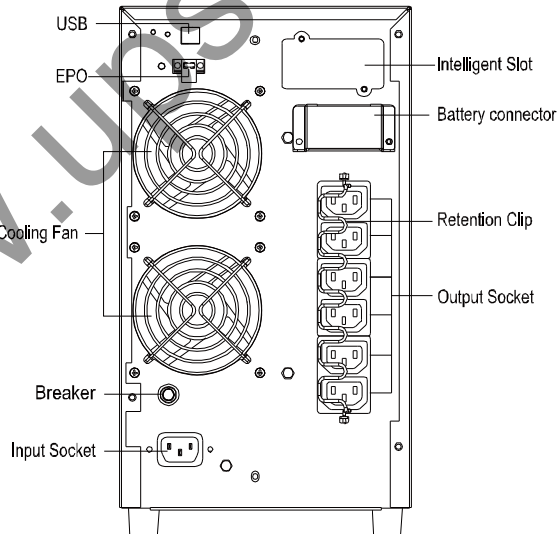


DB-9 Interface of AS400 communication protocol

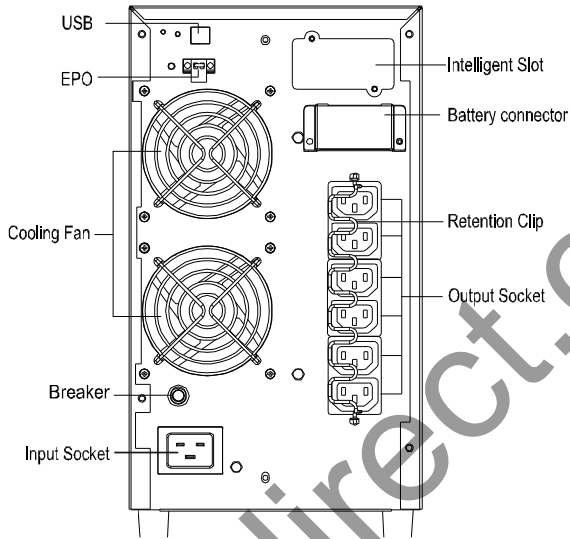
Appendix: Rear panel



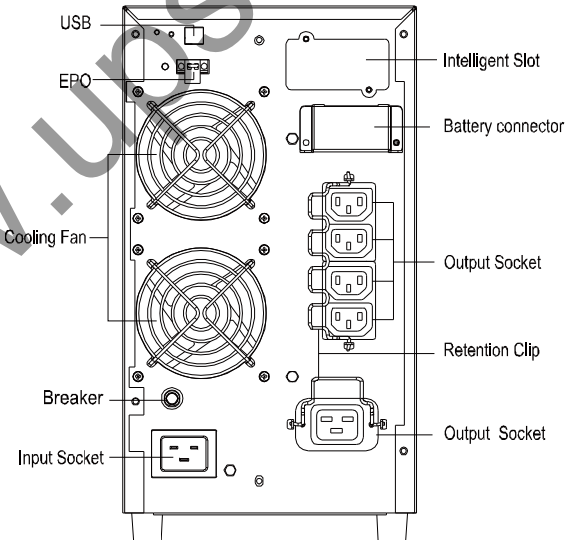
Rear View of B400-010-B (C)



Rear View of B400-020-B



Back View of B400-020-C



Back View of B400-030-B (C)