



GATEWAY-2(B)S

700/1400W

On Demand AC Power
With Sleep function

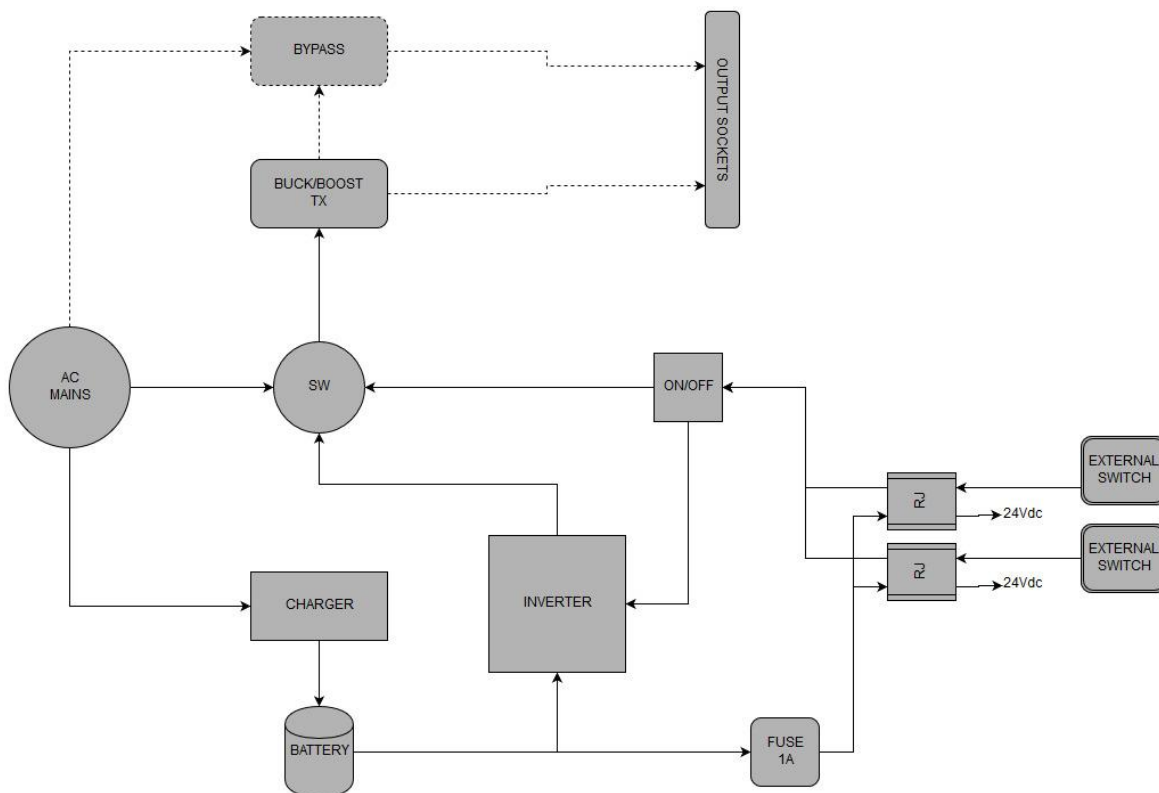
1. INTRODUCTION

The GATEWAY Series are battery backed AC power supply designed for door access systems. Unlike standard battery backup systems which revert to battery immediately following a power failure, it is intended that the GATEWAY units remain off until awoken when needed with an external switch contact. This prevents unnecessary battery discharge and extends power availability from hours to weeks.

The Gateway 2S units can be used in standard UPS mode (where no remote contacts can be incorporated) or in sleep mode. When in sleep mode the unit is activated using an external switch or relay. Wireless relays or other controllers can also be incorporated using a 24Vdc supply provided by the GATEWAY-2S. The Gateway-2BS models incorporate an internal mains first bypass facility. This ensures mains power is always present on the output terminals whenever there is mains power feeding the system. This is the case if the Gateway is active or not. The advantage of the bypass is that output power will be available if the Gateway cannot be started due to a fault or flat internal batteries.

When operating on battery, the unit outputs a high quality sine wave, as good as or better than you would get from your normal utility supply which is essential to ensure reliable door operation. Note that alternative systems may use non-sine wave inverters which are lower cost and simply not designed to power motor type loads. This can cause mis-operation, system trips, excessive noise and even damage to the motor or battery backup system itself.

GATEWAY BLOCK DIAGRAM



2. SYMBOLS USED IN THIS MANUAL



A Useful Point To Note



A Warning which must be heeded or damage or injury could occur.



Danger of High Voltage

3. CAUTIONS & WARNINGS



Indoor Use Only



Do not operate the GATEWAY without the mains input plug being connected to an earthed socket outlet.



Do not plug the GATEWAY input plug into the output socket.



Do not allow the GATEWAY to come into contact with any liquid.



Do not open the unit. Hazardous Voltages can exist even though the unit is switched off.

4. Packaging

Upon receipt please inspect your GATEWAY for signs of damage in transit. The package contains:

- The GATEWAY unit
- An RJ11 connection lead.
- This manual.
- An IEC mains lead and loop through lead for IEC models

Optionally:

- ViewPower Software for remote monitoring
- A USB lead

5. IDENTIFICATION

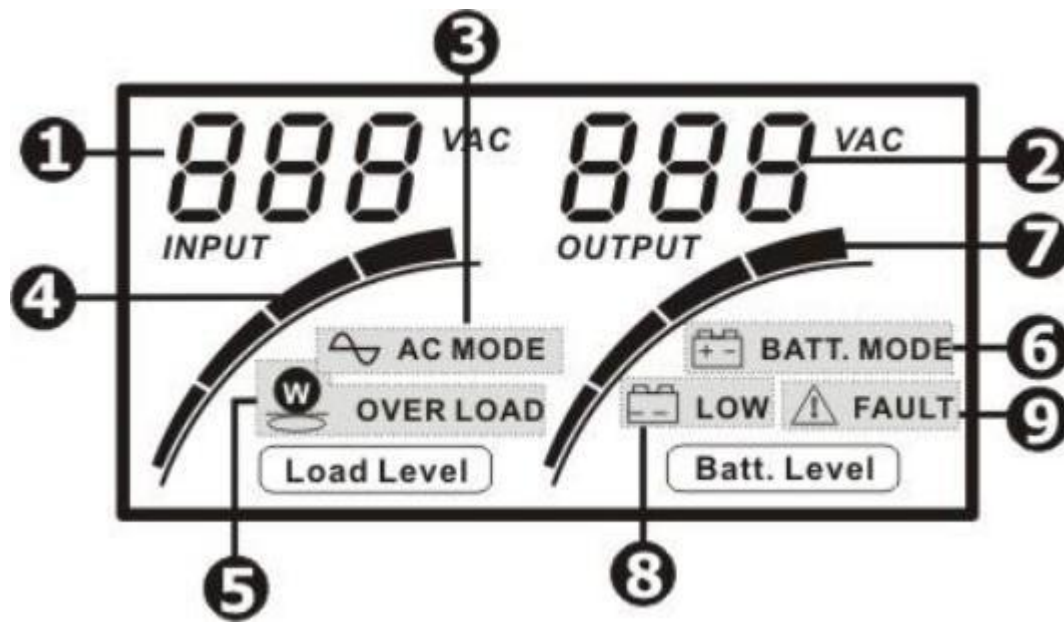
GW700-2S

GW1400-2S



①	LCD Display	⑥	Input Fuse
②	On/Off Switch	⑦	Remote Switch / 24Vdc RJ45/11 Connector
③	RS232 (Serial) Communication Port	⑧	Input AC Cord / IEC Input
④	USB Communication Port	⑨	UK Socket / IEC Outlets
⑤	Cooling Fan (Active only when on battery or in buck/boost mode)		

LCD



①	Indicates the Input Voltage to the GATEWAY
②	Indicates the voltage on the GATEWAY Inverter. This is not necessarily the voltage on the output sockets if the GATEWAY has the internal bypass option fitted.
③	Indicates the unit is operating in AC Mode. This happens if the unit is activated when there is AC power present. If the indicator flashes, the unit will be operating in Buck or Boost Mode.
④	Indicates the power being drawn from the GATEWAY. Each segment represents up to 25%.
⑤	Indicates the GATEWAY is overloaded.
⑥	Indicates the GATEWAY is operating from its batteries
⑦	Indicates the charge left on the internal batteries. Each segment represents approximately 25% of available charge.
⑧	Indicates the battery is low and requires recharging.
⑨	Indicates a fault has been detected with the GATEWAY.

6. INSTALLATION

- If the unit is to be mounted in a ceiling void or at height, please ensure the unit is adequately supported and cannot fall.
- Ensure cables are not loose and cannot snag on moving parts
- The GATEWAY must be installed indoors in an area free from excessive dust, moisture and has adequate air flow. Do not place the GATEWAY next to sources of heat or in direct sunlight.



It is possible to have mains voltages appear with reference to earth on the output connections from the GATEWAY rear panel connectors (See CONNECTIONS). These voltages are impedance limited and not hazardous but may be perceived if exposed conductors are touched. Always perform installation with the GATEWAY disconnected from the mains, and ensure all cables and contacts are insulated, not exposed and treated as though they were live conductors.

- Depending upon the model the GATEWAY is fitted with either UK socket outlets or IEC outlets. Connect the door motor supply to the most appropriate outlet.
- Depending on the model the GATEWAY is fitted with either a fixed lead with a BS1363 plug, or has an IEC mains input. An IEC lead is supplied, but may be replaced with a longer lead if necessary. If this is the case ensure the conductor size is in excess of 1mm². Connect the UK plug on the GATEWAY or the mains lead as applicable into a suitable 13A outlet. This outlet must be earthed.
- The output RJ connectors contains a 24V supply to power accessories such as wireless relays. This is fused at 1A. Note that the more power taken increases the drain on batteries and minimises time between recharges.



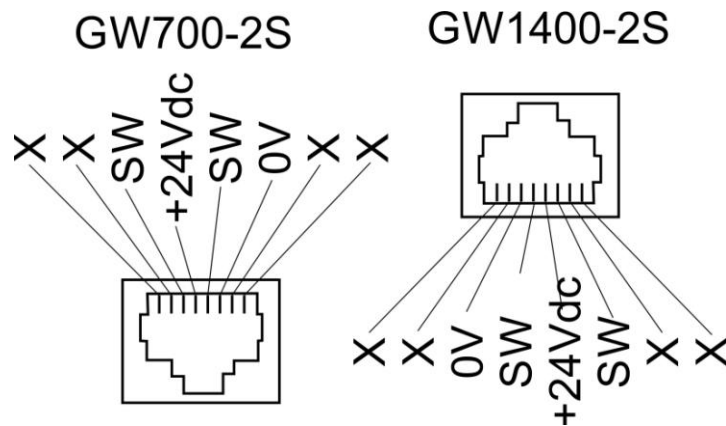
Utilising the Gateway 24V supply will cause a drain on the batteries when no utility supply is available. This can potentially lead to the batteries becoming discharged to a point of non-recovery and require replacement. This is not covered under warranty. For longer term use without utility power, it is recommended not to use the 24V supply and instead use a remote key-switch if required.

Since the GATEWAY can be started without mains power being present a warning label should be placed on the motor to advise against maintenance without first physically disconnecting the motor plug from the GATEWAY, such as:



7. CONNECTING TO AN EXTERNAL SWITCH OR CONTROLLER

- On the rear of the GATEWAY are two RJ connectors which are connected as per the diagram below.
- Note the orientation of the connectors is inverse to each model (but the pin out is the same)
- To remote start the unit the SW connections must be shorted together.
- To switch the unit off the SW connection must be opened.



You can use either an RJ45 (network type) connector or an RJ11 (modem type) lead as supplied.

RJ45 pin number	RJ11 pin number	ID	Connection	Colour of RJ11 Lead as supplied	Other RJ11 Colour Schemes*
1	X	X	Not Connected		
2	1	X	Not Connected	N/C	N/C
3	2	SW	Switch Contact	YELLOW	BLACK
4	3	+24Vdc	+24Vdc Output	WHITE	RED
5	4	SW	Switch Contact	BROWN	GREEN
6	5	0V	0V	GREEN	YELLOW
7	6	X	Not Connected	N/C	N/C
8	X	X	Not Connected		



Either of the RJ connectors can be used. If required two external switches can be connected. This is useful, for example, if you had a wireless relay and a keyswitch. Note however that the connections are not isolated from one another. The unit will be powered ON if either of the SW connections are closed.



* Confirm the pin out of the cable you are using before connecting to external devices



Do not short +24Vdc to 0V. The internal fuse will blow.



Do not connect any of the output connections to earth.

6. OPERATION - Remote / Sleep Mode

- Switch on utility power supplying the GATEWAY. It is suggested to ensure the GATEWAY has at least 6 hours of uninterrupted connection to the utility to ensure the batteries are adequately charged.



You can still operate the door whilst the GATEWAY is charging.

- Make sure the front panel switch is in the OFF position and the GATEWAY is showing no output voltage.
- Whilst connected to the utility the LCD display will be ON and the batteries will be charged or charging. The display will show the input mains voltage and the output voltage will be displayed as zero.



B-Series Only: Although displayed as zero there will be power at the output sockets as the internal bypass will be active.



B-Series Only: Whilst utility power is present you can use your door as normal, the GATEWAY does not need to be turned on.

- Should the utility power fail, the GATEWAY will switch off and the LCD will be blank.
- To obtain power to the door motor in the event of a power outage, the GATEWAY needs to be switched on. Shorting the SW connections on any of the RJ connectors will start the GATEWAY.



It will take several seconds before the GATEWAY delivers power if requesting start up when no mains power is available. When mains power is present the GATEWAY will switch on within a few seconds.



Non-B-Series: The GATEWAY will provide AC power through a voltage regulator system. This may mean the output voltage is higher or lower than the input voltage.

7. OPERATION - UPS Mode

- Switch on utility power.
- Switch the front panel ON



In the event of a power outage, in this mode the GATEWAY will revert to battery operation immediately. The unit will continue to operate on battery power until either mains power returns, or the batteries become too low.



If the batteries are allowed to discharge under low or no-load conditions they may become unusable due to deep battery discharge. This may cause issues in restarting the GATEWAY and the unit may require battery replacement.



The +24V supply is still available to use through the RJ connector but it is not advised to use a remote switch contact. This will have no effect, but if the switch contacts are closed this will override the front panel switch e.g. you will not be able to switch the unit off.



In UPS mode power is present at the output sockets at all times.



Note the GATEWAY will provide AC power through a voltage regulator system. This may mean the output voltage is higher or lower than the input voltage.

9. SPECIFICATIONS

Model	GW700-2S	GW1400-2S
Capacity (Max Watts)	700W	1400W
Input Voltage	230VAC 50Hz Nominal	
Input Voltage Range	162-290VAC	
Output Voltage Regulation	230VAC \pm 10% (Battery Mode). As input	
Output Waveform	Sine Wave (On battery). As Input in normal Mode	
Internal Battery	2X12V 7Ah	2X12V 10Ah
Charge Time	6 hours from depleted to 90% capacity	
Input Connection	UK BS1363 Plug On 1.5M Cord -or- IEC C14 input	
Output Connections	4X BS1363 UK Socket Outlets -or-	
	4xIEC C13 Outlets	6xIEC C13 Outlets
Operational Connector	2x RJ connectors	
Dimensions W x D x H	146 x 350 x 160 mm	146 x 397 x 205 mm
Weight	9kg	14kg
Operating Environment	Humidity 0-90% RH Non Condensing, Temperature 0-40°C	
Audible Noise	< 45dB (Alarm)	<55dB (Alarm + Fan). Note fan only operates in Battery / Voltage Regulation Mode

10. TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	SOLUTION
LCD Display Blank	No Mains Power	Connect Power. Check Fuse.
	Poor AC input connection	Confirm Connection
Unit starts up on battery but switches off when door is activated	Insufficient Charge On Batteries	Recharge for 6 hours. If problem persists replacement batteries are required.
Alarm continually sounds and warning or fault icon is on the LCD	Fan locked	Check Fan (GATEWAY1400 only)
	Unit is overloaded	Confirm motor rating including start up rating is under maximum capacity of the GATEWAY
Output Voltage display is different to input voltage display when GATEWAY is activated. AC Icon flashes	Unit is regulating voltage and is in buck or boost mode.	Normal Operation
Alarm sounds intermittently when GATEWAY is activated	Unit is operating from battery power.	Confirm AC input power is present and within specification.
Batteries are depleted after a few days without mains power	Excessive Operation without mains	Try to reduce frequency of door operation
	Power Drain on 24V supply	Check standby current on accessories connected to 24V supply or remove during extended outages.
No DC output	Incorrect Wiring	Confirm wiring as per pin out diagram
	Blown Fuse	Replace the internal fuse. Contact Power Inspired for advice.

11. WARRANTY

1. The Gateway is warranted from defects in material and workmanship under normal use during the warranty period.
2. During the warranty period Power Inspired will repair or replace at no charge, the product or parts of it that proves defective because of improper material or workmanship under normal use or maintenance.
3. The warranty period is 2 years from date of despatch for the unit and 1 year for the internal batteries. Note that dead batteries caused by failure to adhere to the requirements contained in this manual is not covered under warranty.
4. If you suspect your GATEWAY has a problem that is covered under warranty then you must first contact us to obtain an RMA number. Once issued you must securely package the unit and return it to us at the address given under "Contact Information". Power Inspired will inspect, test and repair the unit, and send the unit back to you.
5. This warranty does not cover any problems caused by conditions, malfunctions or damage not resulting from defects in material or workmanship, nor for any losses incurred due to the failure of the product. Please refer to our Terms & Conditions of Sale located at <https://www.powerinspired.com/commercial/trade-terms-conditions-sale/>

12. CONTACT INFORMATION

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DECLARATION OF CONFORMITY



In accordance with the Low Voltage Directive 2006/95/EC and the EMC Directive 2004/108/EC.

The GATEWAY series of Door Access UPS is certified to comply with the following directives:

Low Voltage Directive 2006/95/EC

In accordance with:

EN60950-1:

EN62040-1

EMC Directive 2004/108/EC:

In accordance with:

EN62040-2

EN61000-4-2/3/4/5

EN6100-2-2

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Director

11 April 2017

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