

# Operating Manual UPS Systems

## Wärtsilä JOVYLINE 625/1200/2200



## BAX 3522 E



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# **Important information!**

**Please read this manual carefully before installation.**

**Pay attention to each special hint within the separate chapters to avoid later disturbances of the device right from the start.**

**In case of problems please contact our Service department.**

**In favour of our environment:  
Please preserve the packing in case a servicing should arise or carry it to a suited recycling circle.**

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Chapter	Contents	page
1.	<b>Technical Data</b>	<b>4</b>
	Table 1: type-specific data	4
2.	Security	5
3.	<b>Description of the UPS-system</b>	<b>6</b>
3.1	Preface	6
3.2	Description of the system	7
3.3	Front- and back views of the Wärtsilä JOVYLINE 625/1200/2200	7
4.	<b>Installation</b>	<b>11</b>
5.	<b>Operation of the UPS-system</b>	<b>12</b>
6.	<b>Alarms</b>	<b>13</b>
7.	<b>Software options</b>	<b>13</b>
8.	<b>Computer interface connection</b>	<b>14</b>
9.	<b>Replacing of batteries</b>	<b>14</b>
10.	<b>Troubleshooting</b>	<b>15</b>

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## **Attention!**

Please inspect the contents of the packing for damages in transit and completeness right away after delivery.

### **Delivery accessories UPS JOVYLINE 625 / 1200 / 2200**

- 1 pc. OFFLINE UPS-system
- 1 pc. Mains cable, grey/white interface cable, two-poled connection cable for analogous modem/telephone - connection

## 1. Technical data

### 1.1 Table 1: Typespecific data

UPS (nominal power)	625 VA	1200 VA	2200 VA
Input voltage / mains voltage	230 V +20% -25%		
Mains frequency	50 / 60 Hz $\pm$ 5% (automatic switch-over)		
Output voltage	230V		
Output frequency	50 / 60 Hz $\pm$ 0,5% (at battery operation)		
Voltage regulation of the output voltage	AVR increases the output voltage by 15% over input voltage, if the input voltage sinks within $-9\%$ up to $-25\%$ . AVR decreases the output voltage by 13% compared with the input voltage, if the input voltage increases within $+9\%$ up to $+25\%$		
Time for switch over	2-4 ms including detection time		
10 Base-T Cable Port	network (UTP, RJ-45) compatible plugs		
Protection against spikes	320 Joule, 2ms		
Overload protection	UPS switches off after 110% overload for 60 sec. and 130% overload for 3 sec.		
Short circuit protection	UPS switches off immediately or input protection gets released		
Input protection	Protection against overload and short circuit		
Type of battery	Lead battery, closed maintenance-poor 12V / 7Ah (JOVYLINE 625)      24V / 7Ah (JOVYLINE 1200 / JOVYLINE 2200)		
Charging duration battery	4 hours up to 90% of nominal capacity		
Protection installations battery	Automatic selftest and protection against discharging, display for defect batteries		
Autonomy time	10-30 min. (in dependency on the computer load)		
Weight UPS	6,5 kg	13,4 kg	15,9 kg
Dimension (w x h x d) in mm	97 x 320 x 135	130 x 382 x 192	130 x 382 x 192
Mains input connection	Connection acc. IEC 320		
Alarm, battery charging	Slow bleeping tone (ca. 0,47Hz)		
Alarm, battery discharged	Quick bleeping-tone (ca. 1,824Hz)		
Alarm, overload	Permanent sound		
Interface RS-232	Bi-directional com. Port		
Rules for construction	security: VDE, TÜV, CE ,		
Surrounding terms Placing	1000m above sea level acc. to EN 62040-3		
Surrounding terms General	humidity 0 - 95% non condensing, acc. to table DIN 40040 0-48°C		
Decibel level acc. to ISO 7779	< 40 dbA		

Technical modifications be possible

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## 2. Security

- 👉 **To avoid an electric shock you have to disconnect the UPS from the mains before connection of the computer to the UPS.**
- 👉 **In case of works on the UPS you have to secure that the UPS is in OFF-modus and disconnected from mains. The I/O switch at the back of the UPS has to be in OFF-position. After that you can open the UPS and disconnect the batteries.**
- 👉 **Don't put the batteries into fire – they could explode.**
- 👉 **Don't open the battery-blocks. The acid inside these blocks injures skin and eyes.**
- 👉 **Even a multicellular battery can lead to an electrical shock. Therefore don't touch both poles at the same time. Before works at the battery you have to secure, that there are no metallic things such as rings, bracelets etc. at your arms and hands which could lead to a short circuit at the poles of the battery. A short circuit on the battery can produce a very high short circuit current which leads usually to bad burns and the UPS will ignite.**
- 👉 **Don't connect the mains input with the mains output of the UPS. The UPS could be damaged.**

### 👉 **Attention!**

**Improper handling of the UPS implies a higher risk of electrical shock. Even after disconnection of the UPS from the mains there may be voltage at the output!**

### 👉 **Attention!**

**Only authorised persons are allowed to open the UPS. Don't remove the covering of the UPS. Avoid the danger of an electrical shock.  
There is no component part within the UPS which has to be replaced by the user.**

### 👉 **Warning!**

**To avoid fire please use only the integrated original fuses!**

### 👉 **Warning!**

**To reduce the risk of fire or electrical shock the UPS shouldn't placed in areas with to high temperatures or humidity. It's recommendable to install the UPS insides of air-conditioned rooms.**

### 3. Description of the UPS-system

#### 3.1 Preface

We wish to congratulate you on the good bargain of the UPS JOVYLINE. The static UPS chosen from you contains the latest findings on power electronic and digital control logic. The JOVYLINE offers a cost-effective decent solution of problems in power supply of electronic data processing equipment.

You can connect devices out of this series to computer platforms via the standardised interface RS232. A respective software for the supervision of important functions is enclosed to the UPS.

Our JOVYLINE UPS-system are UPS-systems of type VFD directly fed by the mains. As a standard the AVR is component part of our systems. AVR means: automatic voltage control, i.e. even in case of power supply through the mains the output voltage at the output socket is constant within separate voltage steps. Please take the values out of table 1 on page 4 of this manual.

Production of these UPS-systems is subjected to a strict quality control.

The JOVYLINE UPS offers an optimal solution of problems as we give special emphasis to the highest reliability of our systems. That's guaranteed by our whole organisation and our experiences in power supply technology for more than 50.

**Remark! In some special cases, in some special installations it's possible that the UPS in spite of its radio-screening interferes delicate devices. In that case it's no mistake of the UPS. You have to extend the distance between the fed device and the UPS. Remove aerials located quite near the UPS.**

**The UPS has to be power supplied through a separate socket.**

In case of technical questions or in case of disturbances you can dial our service department by the following phone numbers:

Customer service: **+49 491 - 6002 - 30**

Service Fax: **+49 491 - 6002 - 10**

Email: **info@jovyatlas.de**

Internet-Homepage: **http://www.jovyatlas.de**

## 3.2 Description of the system

### 3.2.1 Front- and back views JOVYLINE 625/ 1200

#### Frontpanel JOVYLINE 625

1. **„Change battery“** red LED  
If the UPS battery is defect or extinguished in its capacity the LED lightens up.  
You have to replace the battery.
2. **„Battery feeds load“** yellow LED  
If the load is fed by the battery the yellow LED lightens up.
3. **„Mains OK“** green LED  
If the input voltage has the nominal value the green LED lightens up.
4. **„On/Off/Test/Alarm off“** push button  
Press the push button longer than 3 seconds – UPS on/ off.  
Press the push button less than 1 second – UPS selftest becomes activated or Alarm buzzer will stop



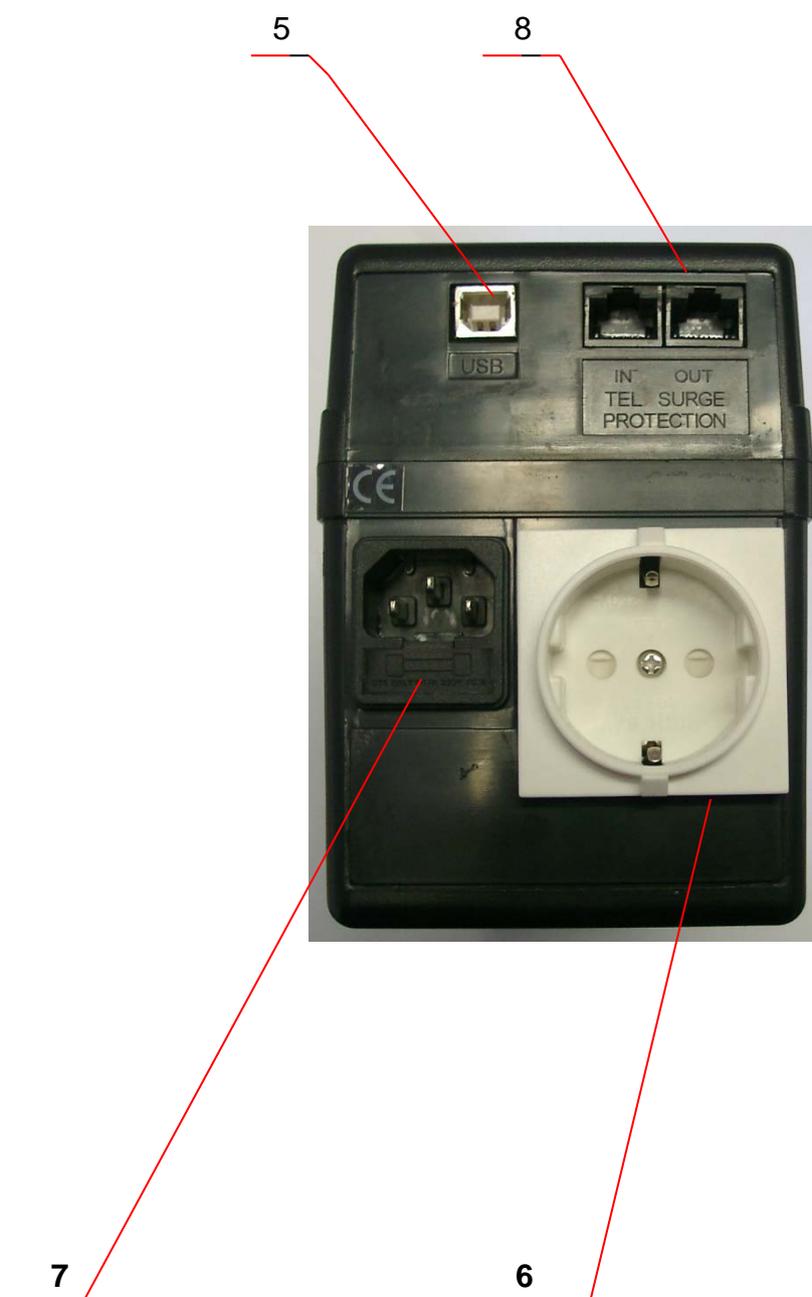
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**Back view JOVYLINE 625****5. Computer interface RS 232**

This interface contains the standardised RS 232 interface and works under the operation systems Novell, Unix , DOS, Windows and others.

**6. Output sockets****7. Mains input socket with mains fuse****8. Socket for telephone/modem with spike protection**

The overvoltage protection against voltage transients for modem, network and telephone offers a complete safe internet – connection.



## Frontpanel JOVYLINE 1200/2200

1. **„Change battery“** red LED  
If the UPS battery is defect or extinguished in its capacity the red LED lightens up.  
You have to replace the battery.
2. **„AVR (automatic voltage regulation)“** yellow LED  
This LED lightens up in case of a reduction of an excessive input voltage by the UPS onto the nominal value.  
The load is fed with normal voltage.
3. **„Battery feeds load“** yellow LED  
If the battery feeds the load the yellow LED lightens up.
4. **„AVR (automatic voltage regulation)“** yellow LED  
The LED lightens up if the UPS increases the too low input voltage onto the nominal value. The load is fed with normal voltage.
5. **„Mains OK“** green LED  
If the input voltage is within the nominal value the green LED lightens up
6. **„On/Off/Test/Alarm off“** push button  
Press the push button longer than 3 seconds – UPS on/ off.  
Press the push button less than 1 second – UPS selftest becomes activated or alarm buzzer will stop



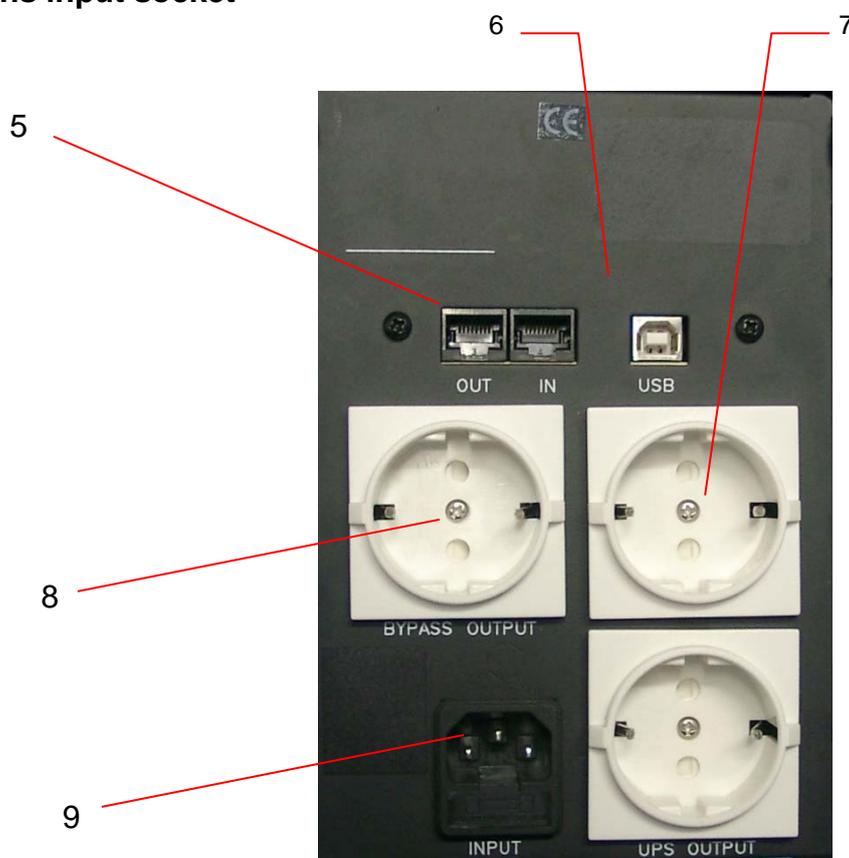
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**Back view JOVYLINE 1200/2200****5. Socket for telephone/modem with spike protection**

Overvoltage protection against voltage-transients for modem, network and telephone offers a completely safe internet – connection.

**6. USV - Port**

For communication between UPS and Computer

**7. Output sockets “Normal Version”****8. Output sockets with integrated protection against spikes. This socket serves as overvoltage protection, with no functionality for the UPS.****9. Mains input socket**

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## **4. Installation**

### **4.1 Visual inspection**

After delivery of the UPS please check the packing for damages in transit. After that remove the wrapping and check the contents for its completeness. Please notice: the wrapping is completely recyclable!

### **4.2 Positioning**

Place the UPS in a dry and air-conditioned room. Don't expose the UPS to direct sun beam. Guarantee that the surrounding conditions are corresponding with the conditions mentioned in the chapter „Technical data“.

### **4.3 Connection to Computer interface**

For the connection of the UPS to the computer interface you need the UPSMON Software (or other power management software) and one interface cable. Both are part of the delivery, you'll find them in the UPS packing.

Please use for connection to the computer only suited material, obtainable in a specialised trade. If you need the interface connect your PC with the RS232-interface by the cable enclosed.

### **4.4 Connection of external battery-blocks (optional)**

Before connection of the battery-block secure, that the battery-plug and the connection cable are compatible.

### **4.5 Connection to modem/telephone network**

Connect the sockets (RJ-45/RJ11) located backsides through a multi-wired telephone cable with the telephone socket or modem.

Secure that the telephone cable which is stuck into the telephone socket of the your telephone network is provided with a plug from the type „IN“ and the other side from the type „OUT“

### **4.6 Connection EVU network**

Insert the mains cable into the mains connection socket located backsides of the UPS. After that you have to insert the shockproof plug into a socket .

### **4.7 Connection of the load**

Connect the load with the output sockets located at the backside of the UPS (see page 10, item 11)

**Please note that the socket „surge protection“ only protects the consumer against overvoltage. It offers no UPS functionality.**

Never connect a laser printer or plotter to the UPS. These devices absorb periodically very high spike-currents, so that the UPS works under overload.

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## **5. Operation of the UPS**

### **5.1 Start the UPS**

After successful installation you have to push the mains switch backsides the UPS onto „ON“. After that you press the ON/OFF push button at the front side of the UPS for the duration of 2 seconds. Now the UPS starts and carries out a self-test.

### **5.2 Switch-off the UPS**

Press the push button ON/OFF at the frontside and keep it pressed until the LED „Mains OK“ (line normally) or the LED „Battery operation“(back up) goes out. If you don't need the UPS for a duration longer than one day, turn the mains switch at the back of the UPS onto OFF. If you don't put the switch onto OFF-position the battery may be discharged uncontrolled while the UPS is off.

### **5.3 Self-test of the UPS**

You can use the self-test of the UPS to get a statement of the UPS function and battery function. To start the self-test you have to push the push button ON/OFF during normal operation of the UPS, i.e. mains voltage is existing, for the duration of less than 1 seconds. After that the UPS starts the self-test. During self-testing the UPS works in battery-mode. The LED „ Battery feeds load“ lightens. If the self-test was all right the UPS returns into normal mode. The LED „Battery ON“ goes out and the LED „ Online“ lightens. In case of failure the UPS turns back to online-operation and the LED „Change battery“ lightens up.

### **5.4 Switch-off of the alarm buzzer**

If the built-in buzzer sounds, you can switch-off the alarm by pressing the push-button ON/OFF for the duration of max. 1 second.

### **5.5 Cold start of the UPS**

If the UPS is switched-off and there is no mains voltage, the quick-start can be done anyway. For this you have to push the ON/TEST push button until the UPS emits a bleeping sound.

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## **6. Alarms**

### **Battery operation (back up)** (slow alarm sound)

If the battery gets discharged during mains failure the yellow LED at the front side of the UPS lightens up and an acoustic alarm is generated. The alarm extinguishes independently when mains is returning.

### **Low battery voltage (low battery)** (quick alarm sound)

Within battery operation mode the alarm sound gets quicker with increasing battery discharging. The quick alarm sound signals that the battery is nearly discharged and that there are only fractions of the original autonomy time available. The alarm extinguishes independently when mains is returning.

### **Overload** (permanent alarm sound)

In case of overload the acoustical alarm turns to a permanent alarm sound. In that case you have to remove parts of the load or replace the UPS by a bigger one. Even consumers with a high peak current absorption such as laser printer, plotter or faxes lead to an overload of the UPS. Therefore it's advisable to connect no such devices to the UPS.

### **Replacing battery** (permanent alarm sound)

If the batteries are used up, the alarm sound turns to a permanent alarm sound. The LED „Change battery“ at the front panel lightens up. Have a look at chapter 9 before replacing the batteries or dial our service hotline.

## **7. Software options**

### **7.1 Power Monitoring Software**

The UPSMON software is prepared for the standard RS 232 interface to indicate the operation states and alarms of the UPS on the PC. UPSMON indicates every relevant values such as voltage, frequency, current, battery-state etc. on the monitor. The software is suitable for DOS, Windows 3.1x, Windows 95, Windows NT V3.5 or later on Novell NetWare and others.

The software is a free add, but there is no support. If necessary, the JUMP software can be purchased from Jovyatlas.

## **9. Replacing the batteries**

The battery works at least 3 years faultless before its replacing is necessary.  
For replacing please act as following:

**Secure that the UPS is switched-off, that the UPS is disconnected from mains and that each leaving wires such as load, EDV, telephone etc. are disconnected.**

1. Remove the 4 screws at the UPS bottom sheet and store them.
2. Remove the upper cover sheet carefully. Don't touch parts inside the UPS before you have disconnect the battery.
3. Remove the battery connection cables from the battery poles.
4. Now you can remove the battery easily.

Attention: Lead the battery to a suited recycling circle. Don't throw the battery into fire (danger of explosion). Avoid short circuit of the battery poles (danger of burns and explosion). Before works take off every decoration things such as rings, bracelets etc. (danger of short circuit and burns)

5. Place the new batteries in the same position as the old ones.  
Connect the battery wiring to the battery again. + = red wiring, - = black wiring
6. Screw on the cap of the cabinet.
7. Follow the instructions of the manual to put the UPS into operation again.

## **10. Troubleshooting**

<b>Problem</b>	<b>Possible reason</b>	<b>Solution</b>
UPS doesn't start LED doesn't lighten	ON/OFF push button isn't pressed or pressed to short Battery voltage is lower than 10 V	push the button 1 sec at least load the battery 4 hours at least
UPS only works in battery operation	mains cable is loose AC fuse defect Mains voltage is to high  faults in the electronic system	put in the mains cable change the fuse establish normal mains voltage dial our service hotline
time of emergency - current is to short	battery isn't charged completely  faults in the electronic system	charge the battery 4 hours at least dial service hotline
buzzer on permanent alarm	overload	remove unimportant loads
Red LED lightens up	battery fault	replace the battery
UPS doesn't feed load	load is connected at the wrong socket socket: „surge protection“	use the both socket as described in item 11 page 10