

LBSS-SP230, 220-240V - 60 Hz INSTALLATION AND OPERATION

INSTALLATION



Our LBSS-SP230 Appliance Voltage-Surge protector is very easy to install

1. Verify that current of the appliance you want to protect is less or equal than 30 Amp in 220-230-240 V. The specification can be found on the appliance manufacturer label.

THE MAXIMUM LOAD CURRENT PERMITTED IS 30 AMPS AND THE NOMINAL VOLTAGE OPERATION IS 220-240VAC, 60 Hz.

2. Connect the protector to the load and to the AC input using the wires provided for that purposes. Please be sure using 10AWG wires to connect load and AC input wires to the protector. Please be sure that wires are firmly attached. Cheap UL Listed Twist-On wire connectors are a good choice to provide a secure wire connection.

PLEASE BE SURE THAT THE AC INPUT CONNECTION WHERE THE APPLIANCE PROTECTOR IS CONNECTED TO, IS PROTECTED BY A 40 AMPS, 220-240 VAC BREAKER OR FUSE AT THE MAIN PANEL BOARD.

AUTOMATIC OPERATION

1- Connect the load to protect to the unit using the wires provided for that purpose and attending carefully the indications about input and output Phase(s) Neutral and Ground and turn the main Switch ON.

2- Please check that both High/Low Led's are OFF. It means that Input Voltage is OK.

3- In this moment the OK/Delay Led will start blinking signaling that Protector is in "Delay" mode for a) 3-4 min to avoid the compressor of the refrigeration load re-start when still internal gas is expanded in case the load is a Refrigeration unit or b) 15-30 sec, according to your selection, to be sure the protected electronic load will re-start when AC input voltage is already stable.

4- Before finishing this delay time, the OK/Delay Led will blink faster and then will come ON (solid green) indicating that output AC is available for loads. Please check now the load is ON.

5- If AC input is greater than 265V or less than 170V, the Led High or Low will turn ON (respectively) and OK/Delay Led will turn OFF indicating that AC output has been "suppressed" which means load is disconnected from AC line to be protected against dangerous extreme voltages. If AC line is completely OFF no Led will be ON because protector will be totally inactivated because no AC power.

6- When input AC voltage is back to normal (less than 261V or more than 175.5V) the High or Low Led will turn OFF and OK/Delay Led will start blinking again for the selected time (3-4 min or 15-30 sec) to avoid load to be ON and OFF for repetitive ON-OFF possible conditions of the AC line.

7- All the time your load (and also the protector) will be protected against high energy spikes (surges) in both, normal and common modes.

8- If you observe load is turned OFF frequently because extreme voltage variations in your place, please think about using a Voltage Regulator.

Technical Specifications

Application	Specially designed for Split Air Conditioners
Power	220-240VAC, 30Amp
Delay Time Reconnecting / Response Time	Selectable 15-30 seg, 3 min / 2 sec max
AC Surge Suppression	525 Joules, L1-G, L2-G, L1-L2
Nominal Operating Voltage/Frequency	220-240 VAC / 60 Hz
Outlet/Inlet	HARDWIRED
High Cut Off - Back to Normal Voltage	265VAC +/- 8V - 261VAC +/- 8V
Low Cut Off - Back to Normal Voltage	170VAC +/- 8V - 175.5VAC +/- 8V
Led Indicators (3) & Controls	Low/Bajo, High/Alto (red); OK/Delay (green). Delay/Retardo: Blinking. OFF/ON Switch
Dimensions/Weight/Color	76x50x35mm (holes separation 85 mm)/130gr/Black
Operating/Storage Temperature	-10° to 45° C / -50° to 75° C
Temperature Stability	5 mVAC per°C
Relative Humidity	0 to 95% without condensing. Indoor Use
Construction	High Impact flame retardant case, Full Microprocessor functions
Safety/Quality	UL 244A pending / ISO-9001

Specifications may vary without previous notice

WARRANTY POLICY

The manufacturing unit of this product, only sell products throughout master distributor's channels and guarantee all products by covering only the repair or replacement procedure of any damaged part of the unit, for the time-period expressed in the distributor's invoice.

The end user is subjected to the own master distributor's warranty format. Please consult your provider about its warranty terms.

However, for all products, any warranty format for end users will never cover:

- Damages than can occur to external equipment or devices, as well as any compensation for dismissed lucre.
- Damages caused by external facts like: fire, water, generalized corrosion, biological infestations and by input voltages that create operating conditions beyond the maximum or minimum limits listed in the product specifications including high input voltage from generators and lightning strikes.
- Damages caused by transportation.
- Normal wear and tear of the product, and costs related to the removal, installation or troubleshooting of the customer's electrical systems.
- Damages caused by mistakes during installation procedures.
- When unit presents repairing intention by NOT AUTHORIZED personnel.
- When the explosion of any component of the surge suppression circuit causes any internal or external damage to the unit, in which case, the company considered the unit was operating correctly.
- When the original identification markings of the product (trade-mark, serial number) have been defaced, altered or removed.

All products featured in this user manual are relatively easy to install. However, please make sure that licensed electricians verify the installation and follow all instructions indicated in the product user's manuals and/or any "special instructions" written in the standard packages of the products.