

# Owner's Manual

## Automatic Voltage Switch

**Model: AVS30D**



### Introduction

The AVS30D Automatic Voltage Switch is a 30 amp rated automatic voltage switch that protects appliances from high voltages, low voltages (including brownouts), power surges, spikes and lighting. It does this by switching off connected equipment if the power flowing to it goes outside preset limits, and will reconnect automatically when power returns to normal (except in the case of an overload condition). There will be a delay before the reconnection to ensure power stability.

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## Product Overview



- 1 Input Terminal** Connects mains power.
- 2 Output Terminal** Connects to appliance wiring.
- 3 F1 & F2 Program Buttons** Using the two buttons, you can set the output over/under voltage, overload protection value, browse settable parameters and change digital display mode. During normal operation, you can press F2 to display the load. After 3 seconds, the switch returns to the voltage display.
- 4**
- 5 Voltage LED** Illuminates when the digital display shows voltage.
- 6 Load LED** Illuminates when the digital display shows the load in watts.

## Product Overview

**7 Cord Strain Reliefs** Reduces strain on mains and appliance cables.

**8 Digital Display** Shows voltage, wattage, status and settings.

**A) U-H Output Overvoltage Protection Status**

When output voltage exceeds the preset limit and doesn't return to within the preset limits after 1 second, your equipment will be disconnected by the switch. U-H will flash on the display every .5 seconds as long as the overvoltage condition exists.

**B) U-L Output Undervoltage Protection Status**

When output voltage goes lower than the preset limit and doesn't return to within the preset limits after 1 second, your equipment will be disconnected by the switch. U-L will flash on the display every .5 seconds as long as the undervoltage condition exists.

**C) P-H Overload Protection Status**

When the load exceeds the preset range (nominally 110-120%) and lasts longer than 6 seconds (within this 6 seconds no action will be taken by the AVS30D), the switch will disconnect from power. P-H will flash on the display every .5 seconds as long as the overload condition exists.

When the load exceeds the preset range (nominally 150%) and lasts longer than 1 second, the switch will disconnect from power. P-H will flash on the display every .5 seconds as long as the overload condition exists.

**D) Start Up Delay**

When first powered up, the unit will count down a set number of seconds (default is 6) before monitoring voltage.

**E) Parameter Setting Codes**

E-0 Delay setting

E-1 Undervoltage protection value setting

E-2 Overvoltage protection value setting

E-3 Overload protection value setting

E-4 Displays output voltage or loading power value after startup

(U= voltage, P= watts)

E-5 Restores default settings

**Note:** The code and value flash alternately every second while changing settings.

## Operation



**Caution: Don't use this switch with any device that needs to be continually powered, as the switch is designed to cut power when unstable voltages occur.**

- 1) Make sure your load doesn't exceed the 30 amp rating of the switch.
- 2) The switch must be wired to the mains supply and the equipment it's supplying. Please refer to *Connection* section for wiring and installation instructions.
- 3) After the switch is plugged in, it will display a 6 second countdown (default) before supplying power to your appliance and showing the voltage on the Digital Display.
- 4) If the default settings aren't appropriate for your situation, you can change them by following the procedure in the *Changing Settings* section.

**Notes:**

- We strongly recommend you use the default settings to ensure safe operation of the switch.
- It's possible to adjust the parameters at any time. Changing the delay setting requires a power cycle for the new delay to take effect.

### Resetting an Overload Fault

The unit doesn't reset automatically from an overload fault. To manually reset the unit:

- 1) Remove the cause of the overload.
- 2) Press and hold **F1** until E-O appears on the display, then release.
- 3) Wait for the unit to reset. It will count down from preset and turn the load back on.

## Changing Settings

Press and hold **(F1)** for three seconds to enter settings mode.

Setting Codes: E-0 will be displayed.

(See **Switch Settings** chart for code explanations)



Press **(F1)** to cycle through the available codes.



Press **(F2)** to select the code you wish to change.



Press **(F2)** to adjust the value (the code and value will flash alternately every second). Each value changes by a certain increment every time you press **(F2)** (See **Switch Settings** chart).



Press **(F1)** to confirm the value.



Don't press anything for 10 seconds to exit and save the settings.

### Switch Settings

Code	Item	Default	Settable Range	Increment	# of Increments
E-0	Delay Setting	6 seconds	6-120 seconds	6 seconds	20
E-1	Undervoltage Protection	180V	120V-200V	5V	16
E-2	Overvoltage Protection	255V	210V-270V	5V	12
E-3	Overload Protection	3000W	800W-4800W	800W	6
E-4	Digital Display	Shows output voltage or loading power value after startup (U= voltage, P= watts)			
E-5	Restore Defaults	Restores all default settings. Unit will display defaults once confirmed, then reset and count down.			

**Note:** An "A" on the display indicates the load exceeds 1000 watts (e.g. 2A5 =2500W)

## Connection



### **DANGER! RISK OF ELECTRIC SHOCK!**

All wiring should be performed by a qualified electrician in accordance with all applicable electrical and safety codes. All wiring must comply with local ordinances and must be a proper type and size to support 30 amps. Incorrect wiring may damage the switch severely and cause serious personal injury and property damage.

### **Connection Warnings**

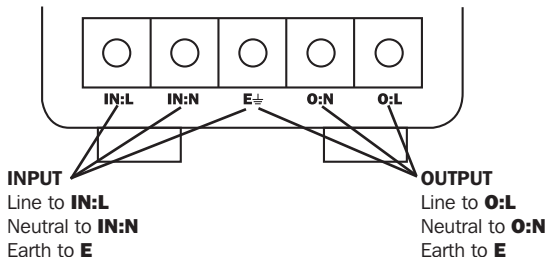
- The user must determine if this device is suitable for the intended application.
- The device should be installed indoors only.
- This device is not intended to serve as overcurrent protection. Overcurrent protection should be provided by the user and present on the input side of the device.
- Verify that the input source is not live when wiring this device.
- Once installed, never operate the device without the cover in place.

### **Wiring**

- 1) To get access to the connection terminals, you need to remove the bottom cover. To do this, remove the two black caps and then remove the two screws. Remove the bottom cover.
- 2) Loosen the cord strain reliefs.
- 3) Insert cable from the mains supply through the left side “input” cable port and make the screw terminal connections (refer to the **Connection Terminals** diagram). **DO NOT OVERTIGHTEN SCREW TERMINALS.**
- 4) Insert appliance cable through the right side “output” cable port and make the screw terminal connections (refer to the **Connection Terminals** diagram).
- 5) Tighten the cord strain reliefs, then replace the bottom cover, screws and caps.

**Note:** Mount the switch to a screw on the wall by using the keyhole slot on the back.

### **Connection Terminals**



## Specifications

Current Rating	30 amps
Voltage Rating	230V (220-240V)
Frequency	50/60 Hz
Response Time Over/undervoltage	1 second
Reflex Voltage Over/undervoltage	5~10V
Radio Frequency Interference/Noise Protection	Yes
Spike/Surge Protection (Joules)	380J
Spike/Surge Protection (Amps)	6500KA (8/20us)
Spike/Surge Protection (Response Time)	10 nanoseconds
Dimensions (HxWxD)	205x135x55 mm
Weight	.5 kg

# Warranty

## 7-Year Limited Warranty

TRIPP LITE warrants its products to be free from defects in materials and workmanship for a period of seven (7) years from the date of initial purchase. TRIPP LITE's obligation under this warranty is limited to repairing or replacing (at its sole option) any such defective products. To obtain service under this warranty, you must obtain a Returned Material Authorization (RMA) number from TRIPP LITE or an authorized TRIPP LITE service center. Products must be returned to TRIPP LITE or an authorized TRIPP LITE service center with transportation charges prepaid and must be accompanied by a brief description of the problem encountered and proof of date and place of purchase. This warranty does not apply to equipment, which has been damaged by accident, negligence or misapplication or has been altered or modified in any way.

EXCEPT AS PROVIDED HEREIN, TRIPP LITE MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Some states do not permit limitation or exclusion of implied warranties; therefore, the aforesaid limitation(s) or exclusion(s) may not apply to the purchaser.

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## Regulatory Compliance Identification Numbers

For the purpose of regulatory compliance certifications and identification, your Tripp Lite product has been assigned a unique series number. The series number can be found on the product nameplate label, along with all required approval markings and information. When requesting compliance information for this product, always refer to the series number. The series number should not be confused with the marketing name or model number of the product.



### WEEE Compliance Information for Tripp Lite Customers and Recyclers (European Union)

Under the Waste Electrical and Electronic Equipment (WEEE) Directive and implementing regulations, when customers buy new electrical and electronic equipment from Tripp Lite they are entitled to:

- Send old equipment for recycling on a one-for-one, like-for-like basis (this varies depending on the country)
- Send the new equipment back for recycling when this ultimately becomes waste

Use of this equipment in life support applications where failure of this equipment can reasonably be expected to cause the failure of the life support equipment or to significantly affect its safety or effectiveness is not recommended. Do not use this equipment in the presence of a flammable anesthetic mixture with air, oxygen or nitrous oxide.

Tripp Lite follows a policy of continuous improvement. Product specifications are subject to change without notice.



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