



Installing the POWERswitch

The POWERswitch provides dual AC power input to equipment rated for less than 1.4 kVA input power. The POWERswitch is designed to automatically switch from the Primary source input (labeled 1) to the Auxiliary source input (labeled 2) whenever the Primary AC input drops below the specified voltage levels (see Table 3). When the Primary input is restored, the POWERswitch switches the output back to the Primary source. If a source is not connected to the Auxiliary input, the Primary input remains connected to the output at all times and a switchover does not occur. The POWERswitch secures to a chassis or a rack. To install the POWERswitch, follow the instructions below.

Checking the Kit Contents

Table 1 Kit Contents

Quantity	Item
1	POWERswitch
1	IEC output cable (24 inches or 620 mm)

1 Installing the POWERswitch on the DEChub 900 MultiSwitch

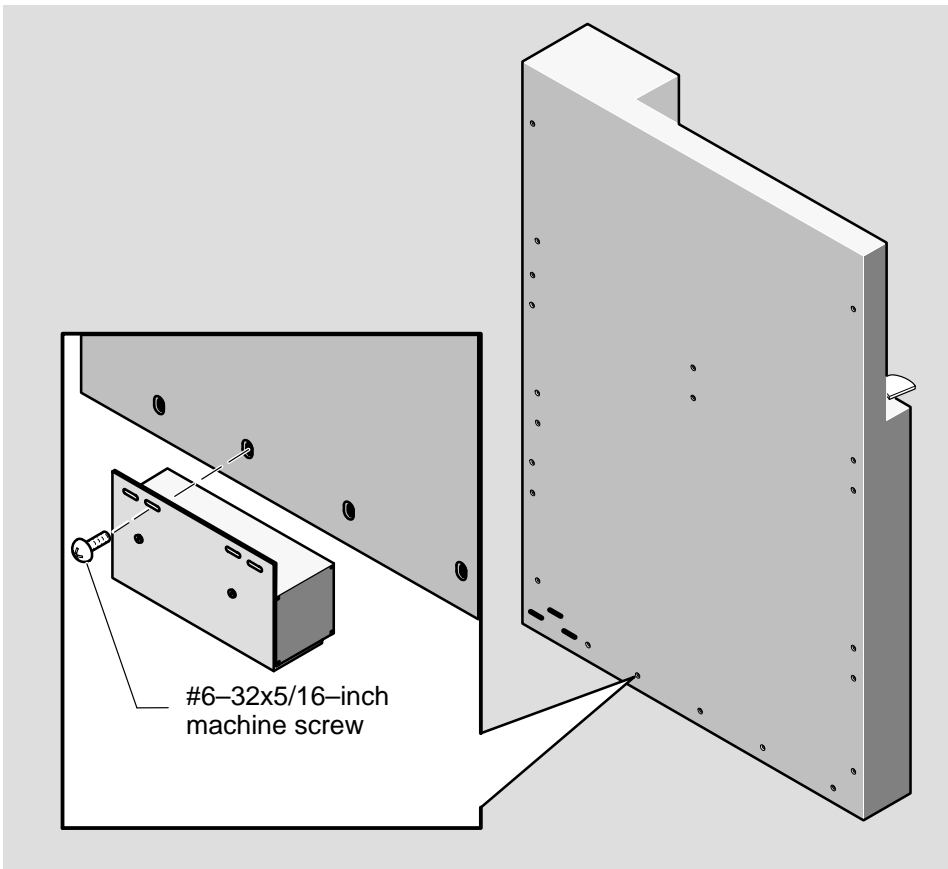
To install the POWERswitch on the DEChub 900 MultiSwitch chassis, perform the following steps (see Figure 1).

1. Place the POWERswitch assembly on the lower part of the chassis. You can use any set of two adjacent holes as long as you do not obstruct access to the line cords. Do not use the leftmost mounting hole on the DEChub 900 MultiSwitch chassis.
2. Secure the assembly using the #6-32 x 5/16 machine screws from the chassis in the appropriate mounting position. Use the screws that hold the rear cover to the chassis.
3. Plug the proper line cord for the main source into the Primary source input (labeled 1) and the auxiliary source into the Auxiliary source input (labeled 2). Plug the IEC output cable into the output located on the side of the POWERswitch.

2 Installing the POWERswitch on Other Equipment

To install the POWERswitch on other equipment, perform the following steps.

1. Position the POWERswitch assembly so that a set of mounting slots is over the area where you are going to fasten the assembly. Refer to the Mechanical Specifications section to help you determine the proper mounting configuration for your equipment. Be sure to leave space for cable management.
2. Secure the assembly in the appropriate position using suitable mounting hardware.
3. Plug the proper line cord for the main source into the Primary source input (labeled 1) and the auxiliary source into the Auxiliary source input (labeled 2). Plug the IEC output cable into the output located on the side of the POWERswitch.

Figure 1 Installing the POWERswitch on a DEChub 900 MultiSwitch

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3 Installing the Line Cords in the Strain Relief Assemblies (Optional)

Equipment that is being plugged in must be near an easily-accessible socket outlet.

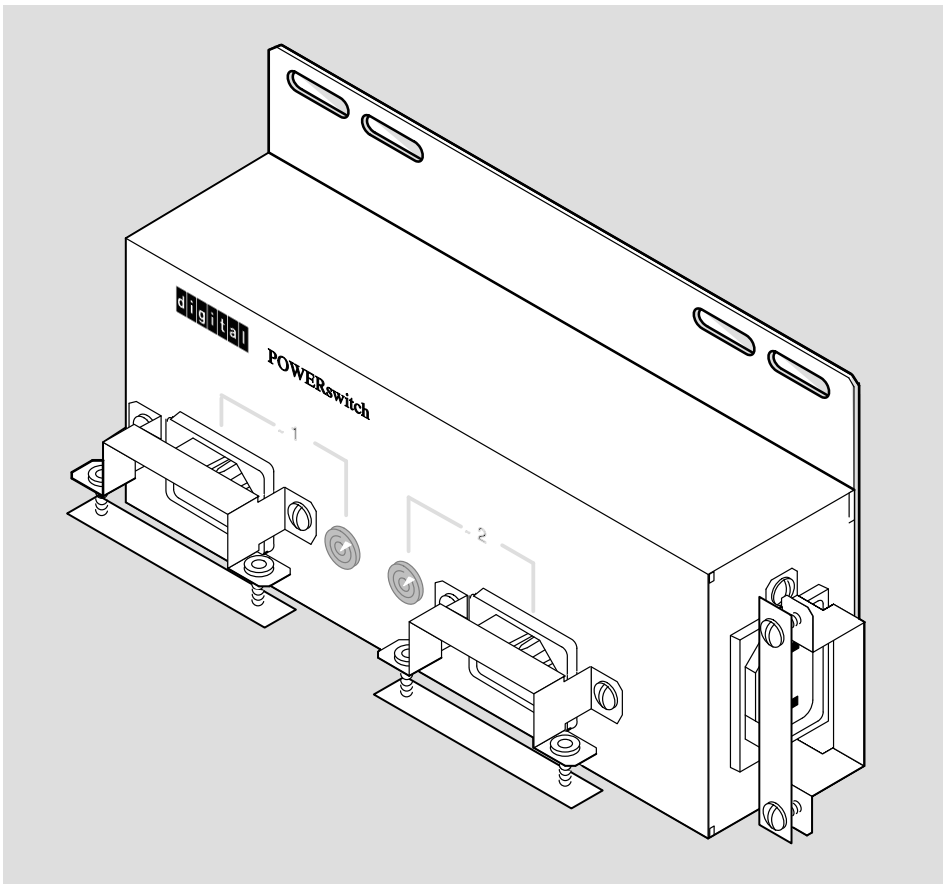
To install the line cords in the strain relief assemblies, perform the following steps for each line cord (see Figure 2).

1. Ensure that the line cord is plugged into the POWERswitch.
2. Secure the cable bracket clamp using two #4-40 x 1/2-inch machine screws. Tighten the two screws until the cable clamp is seated firmly against the line cord.

Mechanical Specifications

The POWERswitch has oblong slots to support various mounting configurations (see Figure 2). The Primary input is labeled 1 and the Auxiliary input is labeled 2. The LED indicates which source input is operating. NOTE that the absence of a lit LED might mean that there is an internal device failure or a loss of input power.

Figure 2 The POWERswitch Assembly



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The two middle mounting slots are spaced at 3.5 inches center-to-center (the standard RETMA mounting dimension). The portion of the body that fits under a chassis is 1.08 inches high.

Mounting

The POWERswitch can be mounted to the bottom of a DEChub 900 chassis, in 19-inch racks, or in other mounting configurations. Table 2 lists other measurements for the POWERswitch that might be useful when determining your mounting configuration.

Table 2 Measurements

Measurement	Value
Length (with clamp)	7.73 inches (196.34 mm)
Length (without clamp)	7.00 inches (177.8 mm)
Height	2.90 inches (73.66 mm)
Depth (with clamps)	2.88 inches (73.15 mm)
Depth (without clamps)	2.16 inches (54.86 mm)
Weight	1.55 pounds (0.703 kg)

Be sure to leave enough room (on the front and the side) for cable bend of 3 inches.

Electrical Specifications

Table 3 lists the electrical requirements for the POWERswitch.

Table 3 Electrical Requirements

Parameter	Value
Maximum Voltage Rating	254 volts AC (VAC)
Maximum Load Current	12 amperes in the 120 VAC range, 8 amperes in the 240 VAC range
For 120 VAC Operation:	
Primary to Auxiliary Switchover Voltage	Primary voltage \leq 93 VAC
Auxiliary to Primary Switchback Voltage	Primary voltage \geq 100 VAC
For 240 VAC Operation:	
Primary to Auxiliary Switchover Voltage	Primary voltage \leq 186 VAC
Auxiliary to Primary Switchback Voltage	Primary voltage \geq 200 VAC
Typical Switchover Time	15 milliseconds
Maximum Switchover Time	20 milliseconds
Minimum Switchover Time	10 milliseconds
Relay Contact Resistance	5 milliohms maximum
Isolation Voltage, Primary to Auxiliary	1500 VAC minimum
Maximum Voltage Drop (including IEC connectors)	400 millivolts

Voltage sensing is done only on the Primary input.

AC Phases

The Primary and Auxiliary inputs for the POWERswitch can be sourced from different phases of the same AC source.

Grounding

Ground connections between the Primary and Auxiliary inputs are tied together internal to the POWERswitch. Similarly, the ground connections for any AC sources connected to the Primary and Auxiliary inputs of the POWERswitch must also be tied together in this manner.

Input Voltages

The POWERswitch can be used with different Primary and Auxiliary input voltages. However, this capability does *not* mean that all attached equipment will operate correctly. The attached equipment must be able to operate automatically on 110 or 240 volts. Each system might be designed differently and might not be able to switch from one input voltage to another in the very short time span that the POWERswitch takes to switch from Primary to Auxiliary inputs.

Caution



Digital recommends that the same voltage level be used for the Primary and Auxiliary inputs because *equipment damage could occur*.

- Consult the equipment manufacturer to determine if the device meets the AC input specification. The equipment must be capable of a voltage change from 110 volts to 240 volts and from 240 volts to 110 volts.
- Use of different voltages for the Primary and Auxiliary inputs is *prohibited* with unqualified equipment. Digital is not responsible for the resultant equipment damage.
- DEChub equipment must not be attached to a POWERswitch using different voltages for the Primary and Auxiliary inputs.

