



Main features

The unit's main features include:

- dual built-in overvoltage protection to comply with the strict functional safety requirements of the DIN V 19250 and VDE V 0801 standards,
- undervoltage alarm,
- redundant parallel operation (+R),
- serial operation (e.g. to create 48 Vdc), and
- optimum protection against continuous overload and short-circuiting.

Green LEDs in the front and rear panels are lit if the output voltage is present.

Installation

The 1200 S 24 P067 power supply can be mounted both vertically and horizontally, although vertical mounting is preferred for optimum cooling.

Convection cooling works best when the unit is mounted vertically, with the input connections facing upwards (see Figure 3). The unit is constructed in such a way that the heat generated in the semiconductors and transformer flows through a thick aluminum profile to both covers, which act as heat sinks. Thus, it is important that the air can flow freely along both vertical sides of the power supply unit. This design with natural convection cooling was chosen to avoid the use of forced ventilation, which has disadvantages like reliability, wear and tear, noise and dust filters. The unit is shipped with two H88 brackets for easy mounting.

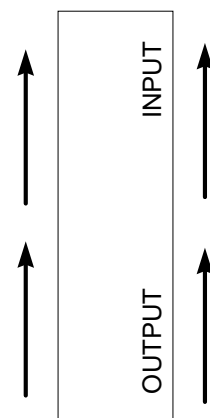


Figure 3 Vertical mounting

Although vertical mounting is preferred, the unit may also be mounted horizontally, providing that the maximum ambient temperature does not exceed 40°C (104°F) at full load (see Figure 4). When mounted in a 19" rack, the unit must have sufficient free space around it for optimum cooling (min. 1 HE, 1U).

Note:

If multiple power supplies are to be mounted above each other horizontally, it is recommended to use forced air cooling.

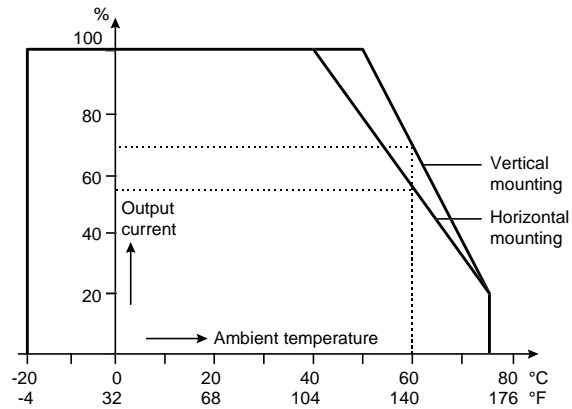


Figure 4 Derating curve
(percentage of load versus ambient temperature)

Recommended wire sizes

The table below shows the recommended wire sizes for the power supply's input and output wiring.

Table 1 Recommended wire sizes

INPUT		OUTPUT	
230 Vac	115 Vac	24 Vdc	Voltage drop
2.5 mm ² (AWG 14)	4.0 mm ² (AWG 12)	16 mm ² (AWG 6)	50.4 mV/m at 45 A

Current limit

The unit has a current limit feature, which is used to limit the maximum output to 1100 W. Figure 5 shows the power supply's current limit curve.

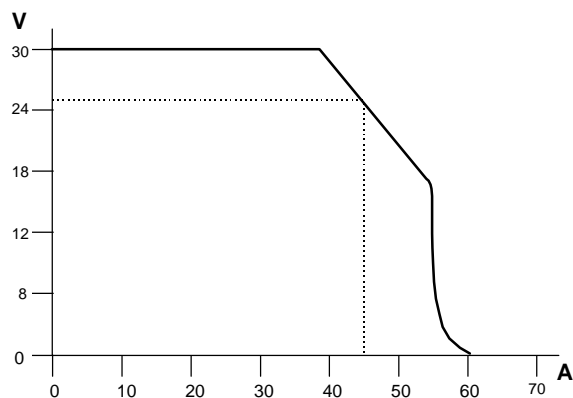


Figure 5 Current limit

Hardware control features

The 1200 S 24 P067 power supply has a number of features which allow the unit to be tailored to specific applications (see Figure 2). They are:

- an output adjustment selector switch (SW101),
- an input voltage selector block,
- a sense block, and
- an alarm contact.

Each of these features is discussed in more detail below.

Output adjustment selector switch (SW101)

For FSC applications, switch SW101 must be in the MANUAL position, which means that the output voltage can be adjusted using the potentiometer at the back (see Figure 2).

Input voltage selector block

The power supply accepts a wide input voltage range. The input voltage selector block (see Figure 2) is used to set the input voltage range.

With the jumper in the 230 V position (see Figure 6), the unit can be used at any line voltage between 200 and 264 Vac, 50/60 Hz (or between 230 and 340 Vdc). Place a 12.5 A fuse in the fuse holder.

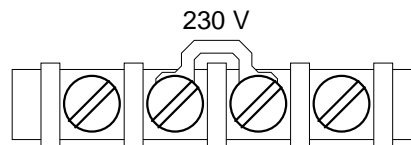


Figure 6 Selector block set at 230 V

With the two jumpers in the 115 V position (see Figure 7), the unit can be used at any line voltage between 100 and 132 Vac 50/60 Hz. Place a 25 A fuse in the fuse holder.

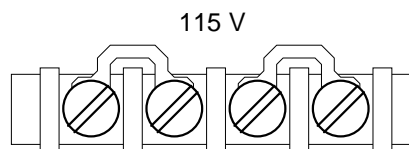


Figure 7 Selector block set at 115 V