

POWER SUPPLY PS10

PRODUCT DESCRIPTION

The PS10 is dedicated for electronic equipment which require 12VDC buffered supply source. Device consist of metal case with compartment for sealed lead-acid battery, mains transformer and electronic circuit. PS10 may deliver up to 1.0A current without any time limit, it utilize classic "linear mode" electronic circuit which offer simple design and low cost. PS10 employs internal current limiting and short circuit protection which make it essentially indestructible. The reserve battery is connected to output terminals through an ultra low-resistance MOS transistor, such a circuit architecture enables optimum performance during AC failure and during dynamic changes of load when excessive current consumption is required. PS10 charge battery with *constant current-constant voltage* method, this method of charging guaranties relatively quick and safe charging process. The initial charging current is factory set to ~300mA, installer should be aware that with battery connected to PS the output current will be reduced to 0.7A. Depending on battery charging phase the output voltage of PS10 may vary from approx. 11.5 up to 13.8V level. When battery voltage drops below ~10.0V level internal circuit disconnect it from load, battery is automatically reconnected when AC supply returns. Battery cut off circuit protect battery from deep discharge but the equipment connected to power supply from operation below 10.0V level which in many cases can lead to undefined system behavior. Battery is protected with 5A fuse which reduce maximum output current sourced from battery and electronic circuit against battery reverse connection. PS10 offer two output ports protected with separate fuse. The nominal output voltage is factory set to 13.8V and should not be changed by user. PS10 is equipped with two LEDs, the red one (marked as 230VAC) signalize that AC power exists where the second one (marked as 12VDC) signalize that output voltage is available.

INSTALLATION

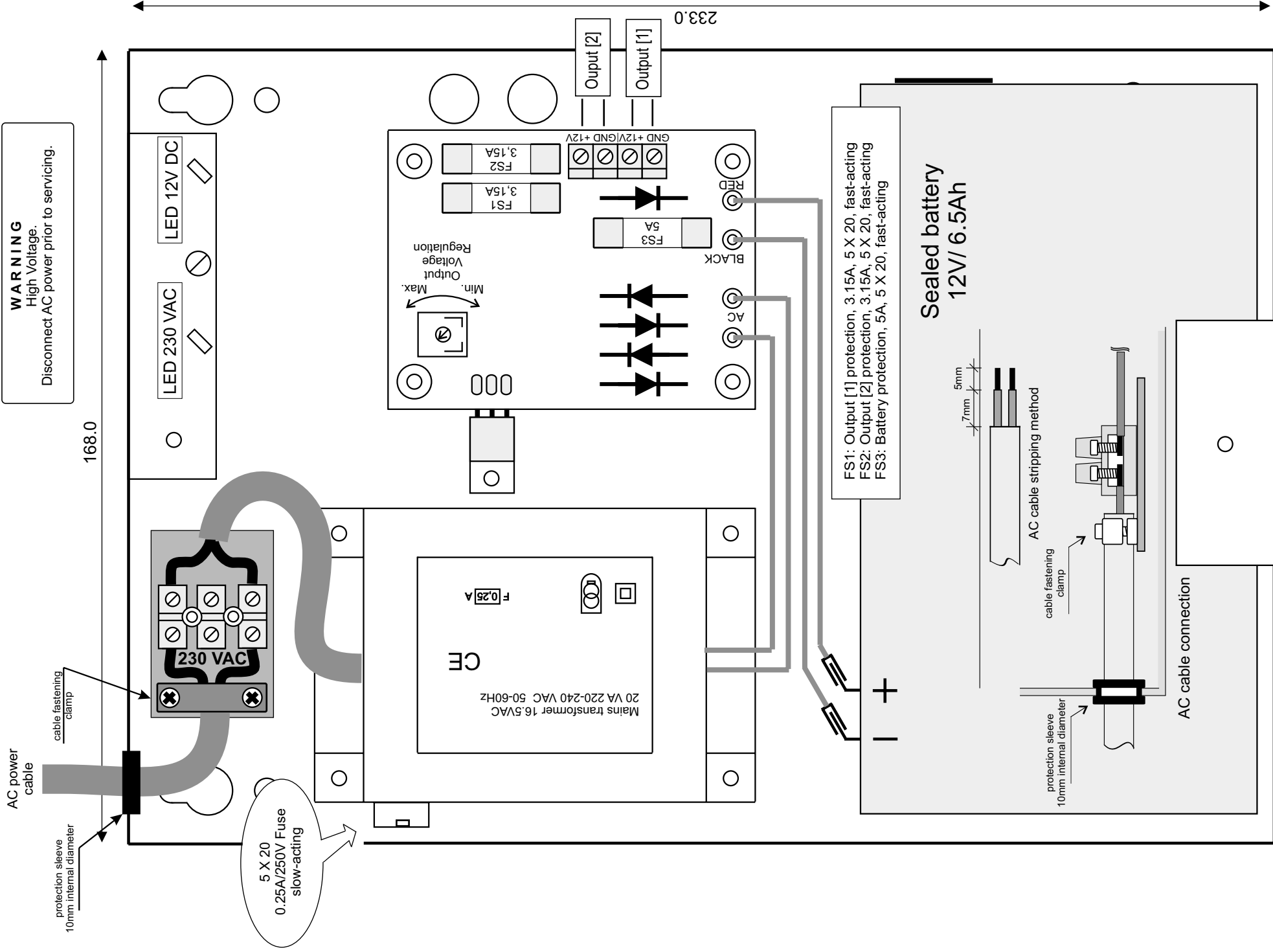
PS10 should be mounted on wall or another surface using four screws, it may be installed in vertical or horizontal position. Power supply should be installed far enough from heat and moisture sources. All electrical connection should be carried out with AC supply off. PS10 will not start operation on reserve battery, the AC supply must exists in order to begin PS activity. The AC supply cable should be guided into PS's case using dedicated hole protected with dielectric sleeve and then firmly fixed to 230VAC input terminals (see installation diagram). Do not adjust potentiometers located on PS10 electronic board, those components are factory set and should not be changed.

Warning

The high voltage exists on some device elements, prior to servicing the AC supply must be switched off.

TECHNICAL SPECIFICATION

Parameter	Value	Comments
AC supply	230 VAC	RMS value
AC frequency	50..60 Hz	
Power consumption	20W	
Nominal Output voltage	13.8 VDC	Output voltage may vary from app. 11.5 up to 13.8V depending on actual battery charging phase.
Max. output current (without battery)	1.0A	Maximum output current is guaranteed for unlimited time and for entire temp. range. During battery charging process output current will be reduced to 0.7A
Ambient Temperature	0..55 °C	
Max. momentary output current with battery	5A	1.0A delivered by electronic circuit and 4.0A delivered by battery
Initial battery charging current	0.3A	
Battery cut off voltage	10.0V	
Battery compartment	6.5Ah/12V	or 7Ah/12V
Dimensions	234x165x80	
Weight	2,0 kg	Without battery



PS10 internal view and installation/wiring diagram