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Active load ASC-50W

General

The ASC-50W compact electronic DC load, is the first generation of small desktop loads with a power rating of 50 Wmax. It offers voltage, current and power ratings for a multitude of applications for daily use in laboratories, schools or workshops. This model supports the for now regulation modes constant current (CC) and constant power (CP). The core of the control circuit is a fast-high performance analog amplifier/multiplier supported by microcontroller which provides interesting features, such as a load step generator push buttons and display control. The display, together with push buttons and rotary potentiometers, enables the user an intuitive kind of manual operation and better overview.

Programmable Electronic DC Load

- Input power rating: 0...50 Wmax
- Input voltage: 0...50 Vmax
- Input current: 0...10 Amax
- Load step generator (100Hz fixed frequency)
- Adjustable trip point (UVLO)
- Operation modes: CC, CP
- LCD display
- Temperature dependent Fan control

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Features

Front side view

1. Display
2. ON/OFF Push button
3. Pulse Push Button
4. Preset Push Button
5. I/P Push Button
6. Coarse Potentiometer
7. Fine Potentiometer
8. UVLO Potentiometer
9. PULSE Potentiometer
10. Preset LED (green)
    Pulse LED (yellow)
    ON/OFF LED (red)

Back side view

1. 4 mm Banana plugs
   Red for positive and **Blue** for return line
2. Plug for external 12VDC Supply

ASC-50W device is standard delivered with external AC/DC wall plug adapter.

All various AC input plugs are included.
Manufacturer: XP Power
Type: VER12US120-JA

Handling (HMI)

Manual operation is done with a LCD display, four rotary potentiometers and four pushbuttons. The display shows all relevant set values and actual values at a glance. The display is operated only on English.

ON/OFF Button

Press the button to switch ON or OFF the load current or power. If Under Voltage Lock Out (UVLO) set value higher then supply voltage, pressing the ON/OFF button will bring device in to ready state only. If in ON or ready state, the red LED will light ON

I/P Button

Ones device powered, by default will go in to Constant Current (CC) mode.
Press the button to change from (CC) in to Constant Power (CP) mode.

PULSE Button

This model includes a load step generator which can generate one typical function needed for power supply testing. Frequency generated is 100Hz with 50% duty cycle. The level of load step is defined by potentiometer "Pulse". This can be applied to current or power.
Press the button to enable or disable this function. If Under Voltage Lock Out (UVLO) set value higher then supply voltage, pressing the ON/OFF button will bring device in to ready state only.
Yellow LED blinking if generator enabled.

Under Voltage Lock Out

Very nice feature we included, is the possibility to set the trip point. This can be done by operating potentiometer UVLO. The level can be seen on display by pressing button "PRESET". The load will stay in OFF mode till the input voltage hits the threshold level. Ones this happen, the load will be switched ON and regulate to set point. At the same time a hysteresis will be applied to this UVLO value to avoid oscillations. This is in range of 10% of the input voltage value.

Preset Button

Push the button to see UVLO adjustment and inactive load function:
if device operates in CC mode you will see CP mode setup and vise versa.
Pushing the PRESET button the green LED will light on

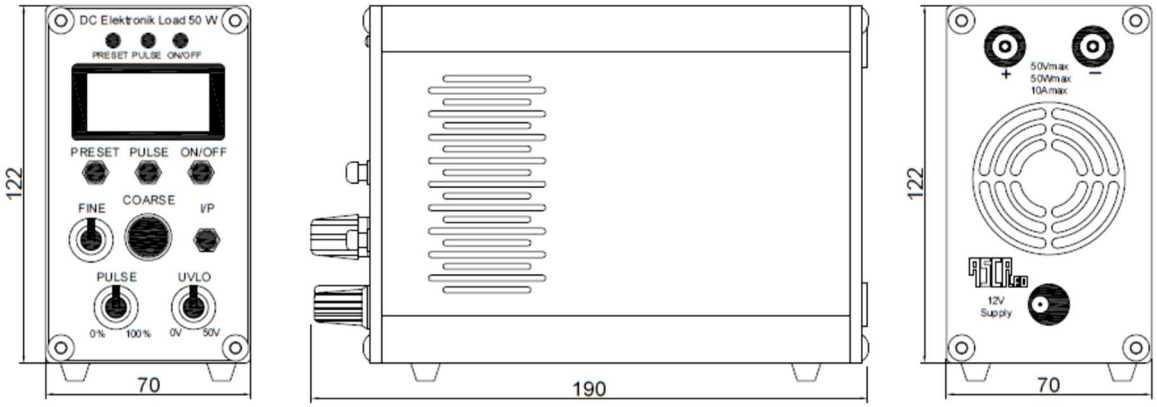
Coarce and Fine Potentiometers

Coarce is multiple turns potentiometer (10x), Fine is a single turn potentiometer. Operating it, it is possible to adjust current or power set point. Fine potentiometer alows you to have fine adjustments (in 10% range). Be aware, to get the maximum possible set point, both potentiometers must reach the maximum position.

Product specification

Supply Voltage	12VDC
Power Consumption	Max 2.5W
DC Voltage, Current Accuracy	<2%
Load Regulation	<2%
Cooling	Temperature controlled fan
Operation Temperature	0°C…40°C
Storage Temperature	-20°C…70°C
Dimensions (WxHxL)mm	70x122x190
Weight	950g
Certification	EN 61326-1

Layout dimensions



Customer support

For any details contact authorized local distributor or Ascalab directly:
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Warranty valid 1 year after purchase order.
We shall reply to you at earliest convenience.

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