

## Features



- AC input range selected by switch
- Protections: Short circuit / Over load / Over voltage / Over temperature
- Battery under/Over voltage and polarity protections (ESC only)
- Forced air cooling by built-in DC fan (240V only)
- Fixed swiching frequency at 25KHz
- 3 color LED loading indicator
- 2 years warranty

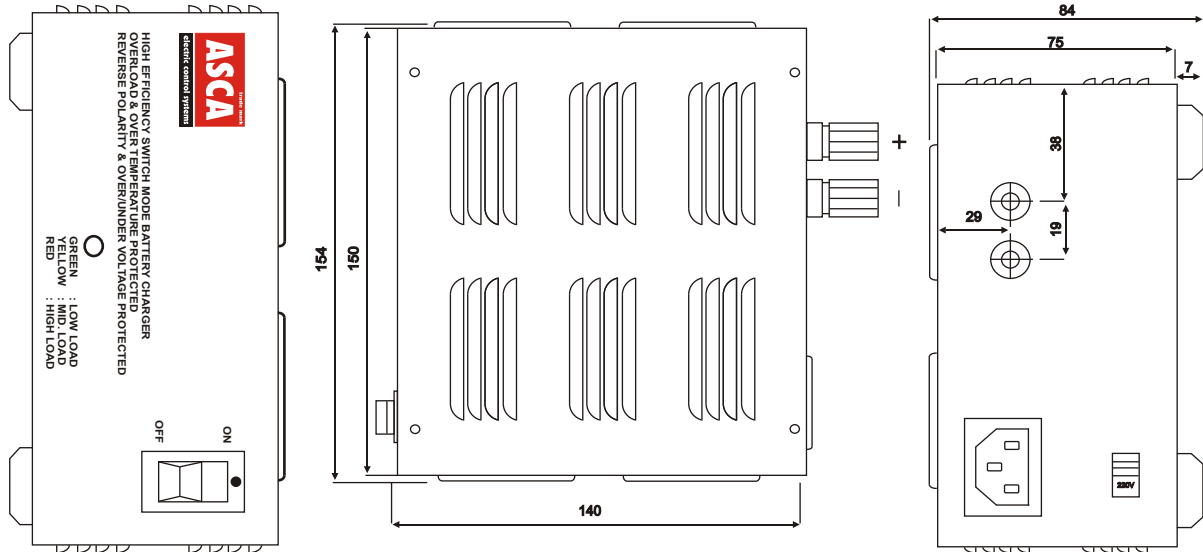
## Specification



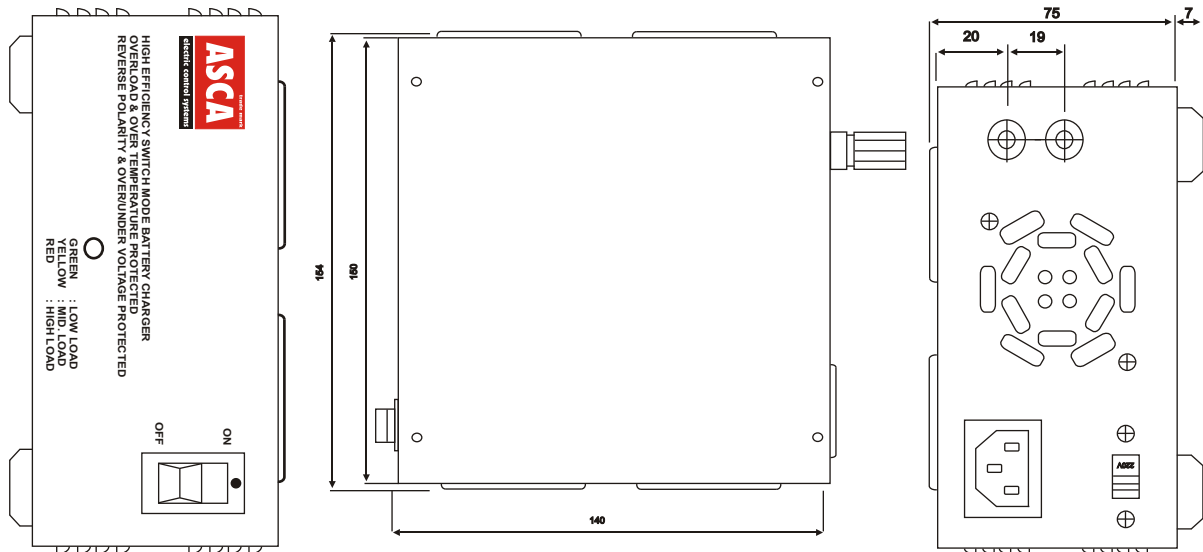
MODEL		ABC - 120			ABC - 240		
OUTPUT	DC Voltage	13.5V	27V	54V	13.5V	27V	54V
	Rated Current	8A	4A	2A	16A	8A	4A
	Current Range	0 ~ 8A	0 ~ 4A	0 ~ 2A	0 ~ 16A	0 ~ 8A	0 ~ 4A
	Rated Power	108W	108W	108W	216W	216W	216W
	Pipple & Noise (max.)	120mVp-p	150mVp-p	400mVp-p	120mVp-p	150mVp-p	400mVp-p
	Voltage Adj. Range	12 - 15V	24 - 30V	48 - 56V	12 - 15V	24 - 30V	48 - 56V
	Voltage Tolerance	± 2.0%	± 1.0%	± 1.0%	± 2.0%	± 1.0%	± 1.0%
	Line Regulation	± 0.5%	± 0.5%	± 0.5%	± 0.5%	± 0.5%	± 0.5%
	Load Regulation	± 2.0%	± 1.0%	± 0.5%	± 2.0%	± 1.0%	± 0.5%
	Setup, Rise Time	200ms, 100ms at full load			200ms, 100ms at full load		
Hold Time	36ms at full load			30ms at full load			
INPUT	Voltage Range	88 - 132VAC / 176 - 264VAC selected by switch			249 - 370VDC		
	Frequency Range	47 - 63Hz					
	Efficiency (Typ.)	81%	83%	84%	81%	84%	85%
	AC Current (Typ.)	3A/115VAC 1.5A/230VAC			4.5A/115VAC 2.5A/230VAC		
	Inrush Current (Typ.)	COLD START 4A					
	Leakage Current	<3.5mA / 240VAC					
PROTECTION	Over Load	1105 - 135% rated output power Protection type: Fold back current limiting, recovers automatically after fault condition is removed					
	Over Voltage	15.5 - 18.2V	31 - 36.5V	62. - 72.9V	15.5 - 18.2V	31 - 36.5V	62.1 - 72.9V
	Over Temperature	RTH5>80°C Detect on heatsink of Q1,Q2 power transistor			RTH5>80°C Detect on heatsink of Q1,Q2 power transistor		
	Battery	ABC series with Battery.Polarity, Battery.Under Voltage, Battery Over Voltage protection					
FUNCTION	Fan Control	NO FAN			RTH5>80°C FAN ON,<50°C FAN OFF		
ENVIROMENT	Working Temp.	(-10) - (+60°C) Refer to output load derating curve					
	Working Humidity	20 -90% RH non-condensing					
	Storage Temp., Humidity	(-20) - (+85°C), 10 - 95% RH					
	Vibration	10 - 500Hz, 2G 10 min./1cycle, 60min. each along X,Y,Z axes					
SAFETY & EMC	Safety Standards	CSA60950-1(UL3101-1, IEC1010-1, EN61010-1) Approved					
	Withstand Voltage	I/P-O/P:3KVAC I/P-FG:1,5KVAC O/P-FG:0.5KVAC					
	Isolation Resistance	I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500VDC					
	Harmonic Current	Compliance to EN61000-3-2,-3					
	HMS Immunity	Compliance to EN61000-4-2,2,3,4;ENV50204, Light industry level, crieria A					
NOTE	1 - All parameters NOT specially mentioned are measured at 230V input, rated load and 25°C of ambinet temoerature 2 - Ripple & noise are measured at 20MHz of bandinwidth byusing at 12" twisted pair-wire terminated wit a 0.1uf & 47uf paralel capacitor 3 - Tolerance : includes set up tolerance, line regulatio and load regulation. 4 - The power supply is considered a component which will be installed into a final equipment.						

## Mechanical Specification

### ABC - 120 Series



### ABC - 240 Series



## Description

These power supplies / chargers convert 115 or 230 Volt 50 / 60Hz AC power to low noise and ripple, regulated DC output and built in following intelligent functions.

--> **OVER LOAD PROTECTION** : ABC power supplies are protected against inadvertent short and overloads by an electronic output current limiting circuit. This current limiting circuit reduces the output limiting to a very low and safe value until the overload is removed from the power supply. As soon as the overload is removed, the output will be automatically restored.

--> **COOLING FAN ON / OFF CONTROL** : Unit ABC 240 are equipped with cooling fans. When these supplies are lightly loaded and working in low temperature, the fan will not run. When demand on the power supply increases and the internal temperature reaches about 60 C (140 F) cooling FAN will be running until the internal temperature is recuded to about 50 C (112 F)

--> **OVER TEMPERATURE PROTECTION** : The power supplies have an over temperature feature o protect against undesired component failure or i igh working temperature. The output will shut down automatically. The unit will be restarted automatically after the temperature is back to limiting condition.

--> **LED INDICATION** :

- Green Light : 0-10% of output rated capacity
- Yellow Light : 10-80% of output rated capacity
- Red Light : above 80% of output rated capacity

--> **BATTERY PROTECTION** : ABC series have a battery detect circuit. When a wrong usage connection such as wrong polarity, wrong battery voltage connection (12V battery connect to a 27V charger or 24V battery connect to 13.5V charger), inside protect relay of ABC models doesn't work (normal open). No damage on battery and charger.

## Operation

- > Connect your load (electrical equipment, battery etc.) To the until binding posts (red / positive, black / negative)
- > Insert the AC plug into an Ac outlet of the proper voltage
- > Press the ON / OFF switch to "ON" position and observe that the indicator light illimimates. If the indicator fail to light, recheck the equipment installation, hook-up polarity and the AC outlet

## Cautions

--> **AVODING DAMAGE** : Do check AC input voltage and select the correct 15/230 switch position (Note : units are factory pre-set for 230 volt AC input)

--> **USING THE RIGHT POWER CORD** :

For units used at 100-120VAC : Use a UL-listed cord set consisting of a minimum No. 18 AWGx3C, Type SVT or SJT, rated 7A 125V, three-conductor cord a maximum of 4.5 meter ing length, grounding-type attachment pug.

For units used at 200-240VAC : Use a UL-listed cord set consisting of a minimum No. 18 AWGx3C, Type SVT or SJT, rated 7A 125V, three-conductor cord a maximum of 4.5 meter ing length, grounding-type attachment pug.

The cord set should have the appropriate safety approvals for the country in which the equipment will be installed.

--> **USING THE RIGHT OUTPUT ONNECT CABLE** :

AWG No.	DIA (mm <sup>2</sup> )	Instruction	Voltage Drop Pera mV/m	Max. Current (A)
20	0.517	26/0.16	37.6	4.0
18	0.823	43/0.16	22.8	6.0
16	1.309	54/0.18	14.9	8.0
14	2.081	41/0.26	9.5	12.0
12	3.309	65/0.26	6.0	22.0
10	5.262	104/0.26	3.8	35.0

Do not block any cooling opening in this case or operate the until in a hot, enclosed enviroment. Be sure adequate ventilation is provided since heat build-up wil shorten component life

Do not expose the until to rain or moisture