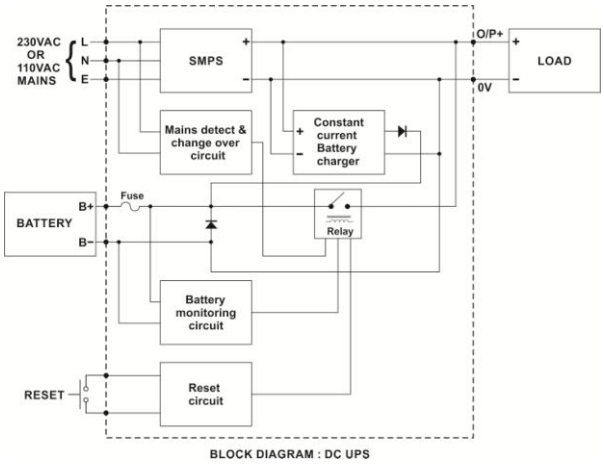
DC UPS 120W



BLOCK DIAGRAM : DC UPS

This product is not intended to be used as Stand-alone DC UPS. It is intended to be used as component or raw material inside the main equipment.

All dimensions in mm

Features	• Single Phase Input • Built In Transient protector & EMI filter • Protection against short circuit, overload & overvoltage • Low ripple & noise • Cooling by free air convection (Internal Fan for 12V model with automatic fan control)	• Power OK indication, terminations, output set control & rating details on front • 100% full load burn in tested • Low cost • High reliability • Battery low protection • Battery reverse polarity protection by fuse. • Compact
Isolation	Input – Output : 1.5KVAC, 1 minute Input – Earth : 1.5KVAC, 1 minute Output – Earth : 500VAC, 1 minute	
Efficiency	70 ~ 75%	
Hold up time	Greater than 20ms at rated input voltage and load	
Operating ambient	0 ~ 50°C, 95% RH	
Storage ambient	- 20°C to 85°C	
Terminations	Screw type, for 2.5mm sq. wire	
Mounting	Screw / Wall Mounting	
Weight	900 grams (max)	

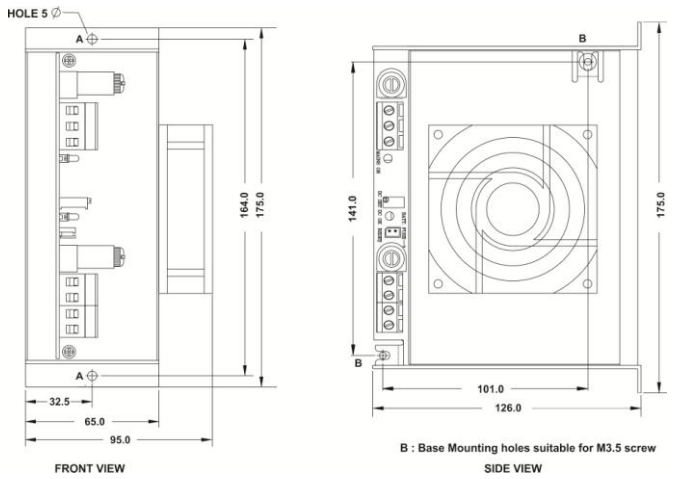


Fig.1

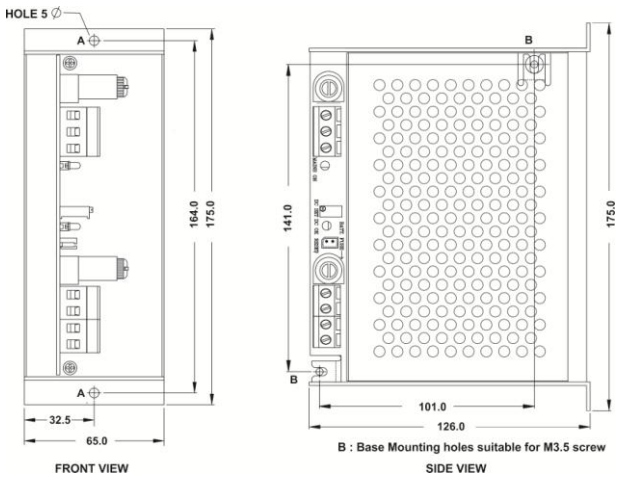


Fig.2

(All Dimensions in mm)

Order code		DCUPS-1-120-12	DCUPS-1-120-24	DCUPS-1-120-36	DCUPS-1-120-48	DCUPS-2-120-12	DCUPS-2-120-24	DCUPS-2-120-36	DCUPS-2-120-48
Dimensions		90 x 175 x126 (Refer Fig.1)	65 x 175 x 126 (Refer Fig.2)			90 x 175 x126 (Refer Fig.1)	65x 175 x126 (Refer Fig.2)		
Input	Nominal	230V AC / DC				110V AC / DC			
	Voltage range	185 ~ 270VAC OR 200 ~ 360VDC				90 ~ 130VAC OR 100 ~ 160VDC			
	Frequency	47 ~ 63Hz				47 ~ 63Hz			
	Current(max)	1.5A @230VAC, 0.6A @230VDC				3A @110VAC, 1.2A @110VDC			
	Inrush current	32A @230VAC, 23A @230VDC				16A @110VAC, 11A @110VDC			
Output Specifications when mains ON	Nominal voltage	13.80V	27.60V	41.40V	55.20V	13.80V	27.60V	41.40V	55.20V
	Rated current	10A	4A	2.6A	2A	10A	4A	2.6A	2A
	Voltage adjustment (Refer note 10)	11V ~ 15V	22V ~ 30V	33V ~ 45V	44V ~ 60V	11V ~ 15V	22V ~ 30V	33V ~ 45V	44V ~ 60V
	Over voltage protection	<18V	<35V	<55V	<65V	<18V	<35V	<55V	<65V
	Ripple & noise	<130mV	<270mV	<400mV	<550mV	<130mV	<270mV	<400mV	<550mV
	Over load protection	105% ~ 135%							
	Line & load regulation	Better than 0.5%							
Output Specifications when mains OFF	Output voltage	10V ~ 12V	19V ~ 24V	30V ~ 36V	40V ~ 48V	10V ~ 12V	19V ~ 24V	30V ~ 36V	40V ~ 48V
	Battery low threshold (Refer note 8)	10V ± 1V	19V ± 1V	30V ± 2V	40V ± 2V	10V ± 1V	19V ± 1V	30V ± 2V	40V ± 2V
	Rated current	10A	4A	2.6A	2A	10A	4A	2.6A	2A
	Battery fuse rating	10A	5A	3A	3A	10A	5A	3A	3A
	Over load protection, Battery reverse & short circuit protection	Using fuse							
Change over threshold	Mains to battery	150 ~ 160V AC				70 ~ 80V AC			
	Battery to mains	170 ~ 180V AC				90 ~ 100V AC			
	Hysteresis	20V AC							
Change over delay		15ms typical							
Reset (Refer note 5)		Using potential free contact (as shown in block diagram).							
Recommended battery (Refer note 7)		12V single battery	12V batteries, 2Nos in series	12V batteries, 3Nos in series	12V batteries, 4Nos in series	12V single battery	12V batteries, 2Nos in series	12V batteries, 3Nos in series	12V batteries, 4Nos in series
Battery charger specifications									
Battery Charging voltage (Refer note 9)		10.3V ~ 14.3V	21.3V ~ 29.3V	32.3V ~ 44.3V	43.3V ~ 59.3V	10.3V ~ 14.3V	21.3V ~ 29.3V	32.3V ~ 44.3V	43.3V ~ 59.3V
Battery charging current		0.60A ± 0.05A							
Charger type (Refer note 6)		Constant current float charging							
Overload protection		Constant current limiting with fold back characteristic, recovers automatically after fault / overload condition is removed.							
Output ripple		Less than 1% of nominal output voltage							

Note: 1. All parameters measured at nominal input, rated load and 25°C of ambient temperature unless otherwise specified.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 100uf parallel capacitor.
3. The power supply is intended to be installed as a component inside the enclosure of final equipment. The final equipment must be re-confirmed that it still meets the EMC directives.
4. Ensure clearance of minimum 35mm from adjacent components for proper ventilation.
5. Whenever battery is connected first to UPS and mains supply is absent, apply potential free input between reset terminals to power on UPS.
6. Battery charging is started when SMPS output voltage is greater than battery voltage (refer nominal output voltage mentioned above).
7. Battery rating: 12V / 7AH, 12AH SMF BATTERY.
8. When battery voltage is below battery low threshold (as mentioned above), output load will be disconnected from battery to prevent battery from deep discharge. Manual reset or mains restore is necessary to exit from battery low condition.
9. Battery Charging voltage = SMPS output voltage - 0.7V.
10. Changeover from battery to mains may not work, when SMPS output voltage is less than battery voltage.