



Model No.: OC-SW121020

Product Name : 12V 2A Switching Mode Automatic Battery Charger
 Document Ref. No.: RDS-SW121020-R3
 Battery Type: For 3AH-40AH 12V GEL, Sealed, WET

Issue Date: 2007-Apr-13
 Rev : R3

# 1 A.C power input characteristics				Unit
1-1	Input voltage :	230	190~264	Vac
1-2	A.C. power line frequency :	50	47-63	Hz
1-3	Input current at output no Load :	50	Max	mAac
1-4	Input current consumption at 230Vac : (output rated at 14.5V 2A, test method complied with EN60335-2-29)	350	±10%	mAac
1-5	Nominal Efficiency:	>80%		

# 2 Charging output control characteristics				Unit
2-1 Charging Flow : Manual Rejuvenation → Low battery Automatic Rejuvenation → Bulk Charging → Absorption charging → Maintenance Charging + Rejuvenation				
2-2-1	Manual Rejuvenation activity condition:	1) Battery voltage is over 9V	2) Press the button	
2-2-2	Manual Rejuvenation stop condition:	1) 24 hrs time out	2) Press the button again	
2-2-3	Rejuvenation output pulse frequency :		200	±5 Hz
2-2-4	Rejuvenation output current (Average):		Approx. 90	±30 mAac
2-2-5	Rejuvenation output duty control :		Approx. 1	%
2-3-1	Low battery Automatic Rejuvenation activity condition:	When battery voltage is between	3~9	±0.50 Vdc
2-4-1	Bulk Charging activity condition :	When battery voltage is over	9	±0.25 Vdc
2-4-2	Bulk Charging output current :		2	±0.15 Adc
2-5-1	Absorption Charging mode rated output voltage for Gel Battery :		14.1	±0.25 Vdc
2-5-2	Absorption Charging mode rated output voltage for Lead Acid Battery (stage 1) :		14.4	±0.25 Vdc
2-5-3	Absorption Charging mode rated output voltage for Lead Acid Battery (stage 2) :		14.7	±0.25 Vdc
2-5-4	Absorption Charging for Lead Acid stage1 transit to stage 2 condition : When charging current is less than		0.5	±0.15 Adc
2-5-5	Absorption Charging transit to Maintenance Charging mode condition :	1) Charge current is less than	0.3	±0.1 Adc
		or 2) Absorption charge is time out	4	Hours
2-6-1	Maintenance Charging mode output voltage :		13.5	±0.25 Vdc
2-6-2	Maintenance Charging mode transit to Bulk Charging mode condition :	When battery voltage is less than	12.8	±0.25 Vdc
2-7	Output opened voltage, when battery is disconnected		0.5	max. Vdc
2-8	Output short circuit, when battery is disconnected		0.5	max. mAac
2-9	Battery flow back current, output connected with 12V battery, AC Power is not present		1	max. mAac
2-10	GEL - LEAD ACID output selected method:	By slide switch, manual control		

# 3 LED Indication Characteristics		LED Status ↓	AC Power	Rejuvenation	Charge/Charged
3-1-1	AC Power connected, battery not present		RED ON	RED OFF	GREEN OFF
3-1-2	Bulk Charging & Absorption Charging mode		RED ON	RED OFF	GREEN OFF
3-1-3	Maintenance Charging mode + Rejuvenation		RED ON	RED OFF	GREEN ON
3-1-4	Manual Rejuvenation & Low battery Automatic Rejuvenation		RED ON	RED ← Flash →	GREEN OFF
3-1-5	Manual selected Rejuvenation time-out, Battery failed to rejuvenate		RED ON	RED ON	GREEN OFF
3-1-6	Output reverse polarity or short circuit		RED Flash	RED OFF	GREEN OFF

# 4 Safety & Protection	
4-1	Primary to Secondary insulation Test : 3000Vac 50/60Hz with 1 minutes, 5mAac, no break down
4-2	Input protection : Slow type fuse 0.8A 250V
4-3	Output overload protection : Slow type Fuse 6.3A 250V
4-4	Internal over-heat protection : By electronic circuit

# 5 Electrical Cable	
5-1	A.C power cord : VDE H05VVH2-F 2X0.75mm2 with 2pin plug, external length 6ft
5-2	Output lead :
	1) SPT-2 105°C VW-1 18AWGX2C with battery Clamp, external length 6ft
	or 2) SPT-2 105°C VW-1 18AWGX2C with trailer connector, external length 4ft
5-3	Extension cord :
	1) SPT-2 105°C VW-1 18AWGX2C trailer connector + battery clamp, length 2ft
	or 2) SPT-2 105°C VW-1 18AWGX2C trailer connector + ring terminal, length 2ft
	or 3) SPT-2 105°C VW-1 18AWGX2C trailer connector + cig. plug, length 2ft
	or 4) SPT-2 105°C VW-1 18AWGX2C trailer connector + ring terminal+blade Fuse, length 2ft

# 6 Enclosure construction	
6-1	Enclosure material : LEXAN
6-2	Enclosure dimensions : L140 x W65 x H42 mm
6-3	Net weight : 450g

# 7 Environmental Characteristics	
7-1	Operating temperature : 0 to 40 °C
7-2	Storage temperature : -10 to 75 °C
7-3	Operating Humidity range : 90% R.H Max.

8 Charging Curve

