

RRC-SMB-1BC

Standard battery charger
for smart batteries

P/N: 110345



Features:

- For the standard battery form factors RRC203x, RRC204x and RRC205x or smart batteries with a similar footprint
- Optimized charging process for RRC batteries:
 - Longer cycle life
 - Faster charging
- Simple operation – Plug and Play
- External power supply for worldwide use
- Country-specific AC input cables available

Applications:

Standard charging station for mobile devices used in medical, industrial and consumer markets

Specification

Input		
Voltage range	19.00 – 24.00VDC	
Current	2.37A max.	
Power	45.00W	
Output		
Voltage range	0 – 17.40VDC	
Current range	0 – 4.70A	
Voltage tolerance	±1% max.	
Current tolerance	±10% max. @1.00A, ±3% max. @4.00A	
Charge power	45.00W max.	
Protection	Short circuit, over temperature shutdown, input-/output over current	
Environmental		
	Operation:	Storage:
Ambient Temperature	0°C to 35°C	-30°C to 80°C
Pressure and Altitude	1060hPa to 533hPa -382m to 5000m	1060hPa to 533hPa -382m to 5000m
Humidity (non-condensing)	5% to 90% r.H.	5% to 95% r.H.
General		
Efficiency	~95% at 100% load	
Indicator	Multi-color LED	
Battery types	Standard battery form factors RRC203x, RRC204x and RRC205x or smart batteries with a similar footprint	
Green procurement	RoHS 2011/65/EU + 2015/863/EU REACH 1907/2006 WEEE 2012/19/EU Chinese RoHS	
Cooling	convection cooled	
LED Indications		
White blinking (1-2 seconds)	Charger is plugged in	
LED off	Charger is ready for use, and no battery is installed	
Red blinking	Charger has an error	
White blinking	Battery is plugged in and recognized	
White breathing (slow blinking)	Battery is charging. SoC below 100%	
Green continuously illuminated	Battery is fully charged	
Yellow blinking	Reversible errors	
Red continuously illuminated	The battery has a severe defect, or it is a non-smart battery	
Charger Mechanical Details		
Housing dimensions (LxWxH)	120x64x43 (mm)	
Weight	~110g (without power supply)	
Safety & EMC		In combination with included external AC/DC power supply
Regulatory approvals	Europe	EN62368-1 (CE)
	International	IEC62368-1 (CB)
Electromagnetic Emissions	Europe	EN55032, EN55035, level B
	USA	FCC15 class B
	Canada	ICES-003, class B
Electromagnetic Immunity	ESD immunity	EN/IEC61000-4-2
	Electromagnetic field immunity	EN/IEC61000-4-3
	EFT / Burst	EN/IEC61000-4-4
	Surge	EN/IEC61000-4-5
	Conducted Immunity	EN/IEC61000-4-6
	Magnetic Fields	EN/IEC61000-4-8
	Voltage dips, short interruptions & voltage variations	EN/IEC61000-4-11
	Immunity characteristics	EN55035

Specification external AC/DC power supply (PS45)

P/N: 212721

Input																																						
Voltage range	100.00 – 240.00VAC ±10%, 50-60Hz																																					
Stand by power	< 0.075W @ no load																																					
Output																																						
Voltage range	19.00VDC ± 5%																																					
Power	45.00W max.																																					
Current range	2.37A max.																																					
Protection	Short circuit, over voltage, over current, over temperature																																					
General																																						
Efficiency	California's Energy Efficiency Level VI																																					
Ripple & Noise	380mV (p-p)																																					
Power Supply Mechanical Details																																						
Standard output connector	DC barrel jack, 5.5 x 2.5 x 10mm																																					
Housing dimensions (LxWxH)	95 x 40 x 26.5mm																																					
Weight	~155g																																					
Cable length	1600mm ±50mm																																					
Regulatory Approvals																																						
Approvals	<table> <tbody> <tr><td>Europe</td><td>CE</td></tr> <tr><td>International</td><td>CB</td></tr> <tr><td>USA & Canada</td><td>cULus</td></tr> <tr><td>Australia & New Zealand</td><td>RCM</td></tr> <tr><td>Russia (Customs Union)</td><td>EAC</td></tr> <tr><td>Korea</td><td>KC</td></tr> <tr><td>China</td><td>CCC</td></tr> <tr><td>Japan</td><td>PSE</td></tr> <tr><td>India</td><td>BIS</td></tr> <tr><td>Taiwan</td><td>BSMI</td></tr> <tr><td>Thailand</td><td>TISI</td></tr> <tr><td>Argentina</td><td>IRAM</td></tr> <tr><td>Singapore</td><td>Safety Mark</td></tr> <tr><td>United Kingdom</td><td>UKCA</td></tr> <tr><td>Morocco</td><td>CMIM</td></tr> <tr><td>Mexico</td><td>NOM</td></tr> <tr><td>South Africa</td><td>SABS</td></tr> <tr><td>Israel</td><td>SII</td></tr> </tbody> </table>		Europe	CE	International	CB	USA & Canada	cULus	Australia & New Zealand	RCM	Russia (Customs Union)	EAC	Korea	KC	China	CCC	Japan	PSE	India	BIS	Taiwan	BSMI	Thailand	TISI	Argentina	IRAM	Singapore	Safety Mark	United Kingdom	UKCA	Morocco	CMIM	Mexico	NOM	South Africa	SABS	Israel	SII
Europe	CE																																					
International	CB																																					
USA & Canada	cULus																																					
Australia & New Zealand	RCM																																					
Russia (Customs Union)	EAC																																					
Korea	KC																																					
China	CCC																																					
Japan	PSE																																					
India	BIS																																					
Taiwan	BSMI																																					
Thailand	TISI																																					
Argentina	IRAM																																					
Singapore	Safety Mark																																					
United Kingdom	UKCA																																					
Morocco	CMIM																																					
Mexico	NOM																																					
South Africa	SABS																																					
Israel	SII																																					

Recommended Accessories

Type	Product	P/N	Application	
3-pol AC-Cable		US-Version EU-Version UK-Version AU-Version CN-Version	210950 210951 211133 211134 211959	Country specific power cable for standard battery chargers from RRC and PS45.
Car Adapter DC/DC		RRC-SMB-CAR	110041	90W car adapter with USB charging port. Power supplying in cars and trucks for standard battery chargers and power management modules from RRC or mobile devices.

Germany/HQ
 RRC power solutions GmbH
 Technologiepark 1
 66424 Homburg / Saar
 +49 6841 98090
 sales@rrc-ps.com

USA
 RRC power solutions Inc.
 18340 Yorba Linda Blvd.,
 # 107-437
 Yorba Linda, CA 92886
 +1 714 777 3604
 usa@rrc-ps.com

Hong Kong
 RRC power solutions Ltd.
 S-V,6/F, Valiant Industrial
 Centre 2-12
 Au Pui Wan Street
 Fo Tan, N.T., Hong Kong
 +852 2376 0106
 hkrrc@rrc-ps.cn

China
 RRC power solutions Ltd.
 Room 1306, C Building,
 Tianan International Building,
 Renmin South Road,
 Luohu District, Shenzhen
 518021
 +86 755 8374 1908
 hkrrc@rrc-ps.cn

Vietnam
 RRC POWER SOLUTIONS
 COMPANY LIMITED
 Block C, Lot CN4
 Dinh Vu – Cat Hai
 Economic Zone,
 Dong Hai 2 Ward
 Hai An District 180000
 Hai Phong City
 vietnam@rrc-ps.com