

## RRC-SMB-FPC

Standard battery charger  
for smart batteries

P/N: 110083



### Features:

- 40W single-bay charger
- For the standard battery form factors RRC21xx 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



## Characteristics

Input		
Voltage range	18.00 – 26.00VDC	
Current	2.50A max.	
Power	40.00W	
Protection	Over-current (fuse protected), under voltage	
Output		
Voltage range	0 - 17.40VDC	
Current range	0 - 4.00A	
Voltage tolerance	±1% max.	
Current tolerance	±10% max. @1.00A, ±3% max. @4.00A	
Charge power	40.00W max.	
Protection	Short circuit, over temperature shutdown, input-/output over current	
Environmental		
	Operation:	Storage:
Ambient Temperature	0°C to 40°C	-30°C to 80°C
Pressure and Altitude	1060hPa to 795hPa -382m to 2000m	1060hPa to 533hPa -382m to 5000m
Humidity (non-condensing)	8% to 90% r.H.	5% to 95% r.H.
General		
Efficiency	~95% at 100% load	
Indicator	Multi-color LED (green, red, orange)	
Battery types	Standard battery form factors RRC21xx 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		
One time Red/Orange/Green	Self-test: Charger is ready for use.	
Red/Green blinking	Battery recognition and initialization.	
Orange light	The inserted battery is of the correct type and is currently being charged.	
Green light	The battery is charged and can be removed for use.	
Red blinking	The battery is too hot or too cold to be charged without damage. If the battery is too cold it will be charged as soon as it has warmed up sufficiently. If the battery is too hot it should be removed to cool down.	
Red light	The battery is damaged or it is a conventional battery which cannot be recharged.	
Charger Mechanical Details		
Housing dimensions (LxWxH)	88.5 x 38.5 x 19.9mm	
Weight	36g (excluding power supply)	
Safety & EMC		
	<b>In combination with included external AC/DC power supply</b>	
Regulatory approvals	Europe	EN62368-1 (CE)
	International	IEC62368-1 (CB)
Electromagnetic Emissions	Europe	EN55032
	USA	FCC15 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
	Voltage dips, short instrumentations & voltage variations	EN/IEC61000-4-11
	Harmonic current emissions	EN 61000-3-2
	Voltage changes, voltage fluctuations and flicker	EN 61000-3-3
	Immunity characteristics	EN55035

**Specification external AC/DC power supply**

<b>Input</b>		
Voltage range	100.00 – 240.00VAC ±10%, 50-60Hz	
Current	1.70A max.	
Stand by power	< 0.21W @ no load	
<b>Output</b>		
Voltage range	19.00VDC ± 5%; Ripple < 300mV <sub>pk-pk</sub>	
Power	65.00W max.	
Current range	3.42A max.	
Protection	Short circuit, over voltage, over current, over temperature	
<b>General</b>		
Efficiency	California's Energy Efficiency Level VI	
Ripple & Noise	300mV (p-p)	
<b>Power Supply Mechanical Details</b>		
Standard output connector	DC barrel jack, 5.5 x 2.5 x 11mm	
Housing dimensions (LxWxH)	95 x 50 x 25.4mm	
Weight	270g	
Cable length	1600mm ±50mm	
<b>Regulatory Approvals</b>		
Approvals	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
	Mexico	NOM
	Singapore	Safety Mark
	United Kingdom	UKCA
	Morocco	CMIM

**Recommended Accessories**

Type	Product	P/N	Application	
3-pol AC-Cable		US-Version	210950	Country-specific power cable for standard battery chargers from RRC and PS65.
	EU-Version	210951		
	UK-Version	211133		
	AU-Version	211134		
	CN-Version	211959		
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/Headquarters**

RRC power solutions GmbH  
Technologiepark 1  
66424 Homburg / Saar

Tel.: +49 6841 98090  
Fax: +49 6841 9809280  
Email: sales@rrc-ps.de  
Web: www.rrc-ps.com

**USA**

RRC power solutions Inc.  
18340 Yorba Linda Blvd.,  
# 107-437  
Yorba Linda, CA 92886

Tel.: +1 714 777 3604  
Fax: +1 714 777 3658  
Email: usa@rrc-ps.com  
Web: www.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

Tel.: +852 2376 0106  
Fax: +852 2375 0107  
Email: hkrrc@rrc-ps.cn  
Web: www.rrc-ps.cn

**China**

RRC power solutions Ltd.  
Room 1306, C Building,  
Tianan International building,  
Renmin South Road, Luohu  
District, Shenzhen 518021

Tel.: +86 755 8374 1908  
Fax: +86 755 8374 1861  
Email: hkrrc@rrc-ps.cn  
Web: www.rrc-ps.cn