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# BC-SMPS

# Battery Charger

## Description

The BC-SMPS range of switch-mode battery chargers provides single output units with maximum output powers of 40watts to 2000 watts. The range switches at 100 kHz and achieves efficiencies of 88%. This high efficiency translates into a very compact package and a lower level of input energy to power your application. The units incorporate a passive power factor correction circuit and all components are derated to provide long term reliability and trouble free use. All units in the series are fully enclosed and have mounting options on either the base or side of the case. The output characteristics are CC /CV and with over temperature, overload protection elevated operating temperature (70° C) and a conformal protection option these power supplies are suitable for a wide range of applications. The power platforms in this range have formed the base of many customer specific charging requirements including: Fire Alarm Systems, F15 avionic battery charge and test systems, Industrial DC UPS systems, and Rail applications.



- Overload & over temperature protection
- Other O/P voltages on request
- CC & CV operating modes
- High efficiency, up to 88%
- Rugged design
- PFC circuit

## Technical Data

AC Input.....	90 - 264VAC, 47 - 63Hz (115/230 75W, 150W & 2kW)
Safety.....	EN 60950
Creeping and clearance.....	8/8
Emission.....	EN 61000-6-4
Immunity.....	EN 61000-6-2
Protection class.....	1
Operating temperature.....	0 - 70° C
Temperature coefficient.....	0.02%/° C
Storage temperature.....	-45 to 85° C
Derating from 55° C.....	-2.5%/° C
MTBF MIL Handbook.....	120.000h
Load regulation.....	0.2% (10-90-10% Load)
Input regulation.....	0.1% (±15%)
Response time.....	800µsec (20-100/100-20%)
Ripple & noise.....	0.2% / 1% (rms/pp)
Temperature voltage adjust.....	±6mV/° C
Output adjustable.....	±5%



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## Selection Table

Part Number	Power	Voltage	Current	Dimensions	Weight
BC-SMPS 40-5-TC	40W	5V	8A	130 x 64 x 28mm	1.1kgs
BC-SMPS 40-12-TC	40W	12 - 15V	3.5A	130 x 64 x 28mm	1.1kgs
BC-SMPS 40-24-TC	40W	24 - 28V	2A	130 x 64 x 28mm	1.1kgs
BC-SMPS 40-48-TC	40W	48 - 60V	1.2A	130 x 64 x 28mm	1.1kgs
BC-SMPS 75-5-TC	75W	5V	15A	140 x 100 x 42mm	1.2kgs
BC-SMPS 75-12-TC	75W	12 - 15V	5A	140 x 100 x 42mm	1.2kgs
BC-SMPS 75-24-TC	75W	24 - 28V	3A	140 x 100 x 42mm	1.2kgs
BC-SMPS 75-48-TC	75W	48 - 60V	1.5A	140 x 100 x 42mm	1.2kgs
BC-SMPS 150-5-TC	150W	5V	30A	200 x 100 x 42mm	1.5kgs
BC-SMPS 150-12-TC	150W	12 - 15V	12A	200 x 100 x 42mm	1.5kgs
BC-SMPS 150-24-TC	150W	24 - 28V	5A	200 x 100 x 42mm	1.5kgs
BC-SMPS 150-48-TC	150W	48 - 60V	3.3A	200 x 100 x 42mm	1.5kgs
BC-SMPS 250-5-TC	250W	5V	50A	225 x 127 x 48mm	2.1kgs
BC-SMPS 250-12-TC	250W	12 - 15V	20A	225 x 127 x 48mm	2.1kgs
BC-SMPS 250-24-TC	250W	24 - 28V	12A	225 x 127 x 48mm	2.1kgs
BC-SMPS 250-48-TC	250W	48 - 60V	6A	225 x 127 x 48mm	2.1kgs
BC-SMPS 350-5-TC	350W	5V	60A	225 x 127 x 48mm	2.4kgs
BC-SMPS 350-12-TC	350W	12 - 15V	25A	225 x 127 x 48mm	2.4kgs
BC-SMPS 350-24-TC	350W	24 - 28V	15A	225 x 127 x 48mm	2.4kgs
BC-SMPS 350-48-TC	350W	48 - 60V	7.5A	225 x 127 x 48mm	2.4kgs
BC-SMPS 500-12-TC	500W	12 - 15 V	33A	227 x 127 x 63mm	2.9kgs
BC-SMPS 500-24-TC	500W	24 - 28V	19A	227 x 127 x 63mm	2.9kgs
BC-SMPS 500-48-TC	500W	48 - 60V	9A	227 x 127 x 63mm	2.9kgs
BC-SMPS 500-90-TC	500W	90 - 110V	5A	227 x 127 x 63mm	2.9kgs
BC-SMPS 500-125-TC	500W	125 - 150V	3.5A	227 x 127 x 63mm	2.9kgs
BC-SMPS 750-12-TC	750W	12 - 15 V	50A	227 x 127 x 63mm	2.9kgs
BC-SMPS 750-24-TC	750W	24 - 28V	30A	227 x 127 x 63mm	2.9kgs
BC-SMPS 750-48-TC	750W	48 - 60V	15A	227 x 127 x 63mm	2.9kgs
BC-SMPS 750-90-TC	750W	90 - 110V	7A	227 x 127 x 63mm	2.9kgs
BC-SMPS 750-125-TC	750W	125 - 150V	5A	227 x 127 x 63mm	2.9kgs
BC-SMPS 1000-12-TC	1000W	12 - 15 V	80A	330 x 126 x 130mm	5.5kgs
BC-SMPS 1000-24-TC	1000W	24 - 28V	40A	330 x 126 x 130mm	5.5kgs
BC-SMPS 1000-48-TC	1000W	48 - 60V	20A	330 x 126 x 130mm	5.5kgs
BC-SMPS 2000-12-TC	2000W	12 - 15 V	160A	330 x 126 x 130mm	6.5kgs
BC-SMPS 2000-24-TC	2000W	24 - 28V	80A	330 x 126 x 130mm	6.5kgs
BC-SMPS 2000-48-TC	2000W	48 - 60V	40A	330 x 126 x 130mm	6.5kgs

Different output ranges and application/user specific options are possible. Please contact ET to discuss your requirements.

## Options Table

Code	Description
/AI-5CC.....	0-5V = 0-Imax
/AI-5CV.....	0-5V = 5V-Vmax (5V units =2V-Vmax)
/AI-5CC/CV.....	0-5V = 0-Imax, 5V-Vmax (5V units =2V-Vmax)
/AI-10CC.....	0-10V = 0-Imax
/AI-10CV.....	0-10V = 5V-Vmax (5V units =2V-Vmax)
/AI-10CC/CV.....	0-10V = 0-Imax, 5V-Vmax (5V units =2V-Vmax)
/LT.....	-20° to +70° C temperature range
/LT40.....	-40° to +70° C temperature range
/PF.....	AC Power Fail Signal TTL or Open Collector (not available on 40W units)
/L3.....	DC Output Power Fail Signal (not available on 40W units)
/CC.....	Conformal Coating
/IEC.....	IEC Inlet fitted (500W to 2000W only)
/N+ 1.....	Blocking Diode fitted (500W to 2000W only)
/PS.....	Active Power Sharing input (500W to 2000W only)
/AS.....	Auto Select 90-264Vac for 75W & 150W units
/3P.....	3 phase input 3 x 400VAC 47-63Hz (2000W unit only)