

## Product Specification

### NA12-4500 NA12-4500B

#### 1. Name and address of the manufacturer:

Axcom Power Solutions GmbH  
Carl-Friedrich-Benz-Straße 15  
47877 Willich  
Germany

#### 2. Characteristics

Type: Sodium-Ion Battery (NA+)  
Technology  
Voltage: 12 V  
Capacity: 4.500 mAh (typical)  
Terminal: 4,7 mm connector (B-variant: 6.3mm)  
Dimension: 101 x 70 x 90 mm  
Weight: 0.71 kg

2.1	Charge voltage	15.8 V
2.2	Nominal voltage	12 V
2.3	Cut-off voltage	6 V
2.4	Nominal capacity	4.5 Ah
2.5	Standard charge current and Charging voltage	1. Phase: Constant-current charge at 0.2C up to 15.8V 2. Phase: Constant-voltage charge until charge current decline to 0.05C
2.6	Charging time	4 hours
2.7	Max. charge current	4.5 A
2.8	Max. discharge current	10 A
2.9	Operating temperature	Charging: 0°C – 60°C Discharging: -40°C – 60°C

2.10	Storage temperature and Humidity Range	1 month: -20 to 45°C 3 months: -10 to 45°C 6 months: 0 to 25°C Humidity 45%-90%
2.11	Storage	For long-term storage, perform a charge cycle every 3 months. Recommended storage temperature is $25 \pm 5^\circ\text{C}$ of SOC 50-60%.
2.12	Cycles	> 2,000 at 80% discharge (0.5C / 25°C)
2.13	Internal resistance	$\leq 270\text{m}\Omega$ (50% SOC, AC measurement at 1 kHz)
2.14	Battery Management System	Protection against: -Overcharge; -Over-discharge -Overcurrent -Short circuit

### 3. Image

