

# Ziegler

Redefine Innovative Metering

# Technical Datasheet

ZAB BC 12xx | 24xx | 30xx

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**BATTERY CHARGER**

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## BATTERY CHARGER

A device which serves electrical feeding point to batteries is termed as a battery charger. A Battery Charger is useful in order to recharge drained batteries in different charging modes, enabling efficient battery charging.

### Product Features

- Efficiency up to 86%
- Protection against Short circuit, Overload, Over voltage, Reverse Polarity Connection, Over Temperature
- Switch Mode Technology
- Automatic 3 Stage Charge Profile (Bulk, Absorption & Float)
- Additional facility of Boost Charge Function for charging deeply discharged batteries
- LED indicator for Power ON (Green), Charging (Green), Boost Charge (Green), Float (Green), Battery Reverse Connection / Fuse Blown (Red).
- Cooling by free air convection
- Input Nominal Voltage – 115 / 230VAC (90...280 VAC / 127...396 VDC)
- 3 Year warranty
- High MTBF: > 5,00,000 Hrs



### Technical Specifications

Input Data	ZAB BC 1203	ZAB BC 1206	ZAB BC 2403	ZAB BC 1210	ZAB BC 2405	ZAB BC 3003
Nominal Input Voltage	115 - 230 Vac					
Input Voltage range	90 – 280 Vac / 127 – 396 Vdc					
Inrush Current (Vn and In Load) I <sup>2</sup> t Frequency	≤ 45 A ≤ 5 msec, 45 – 65 Hz ±6%		≤ 40 A ≤ 5 msec, 45 – 65 Hz ±6%			
Input Current (115 - 230 Vac)	1.5 – 0.75 A		2.8 – 1.5 A			
AC Input Fuse	4 A					

Output Data	ZAB BC 1203	ZAB BC 1206	ZAB BC 2403	ZAB BC 1210	ZAB BC 2405	ZAB BC 3003
Absorption Voltage (VA)	14.2 V	14.2 V	28.4 V	14.2 V	28.4 V	35.52 V
Boost Voltage (VA)	14.4 V	14.4 V	28.8 V	14.4 V	28.8 V	36 V
Float Voltage (VB)	13.5 V	13.5 V	27 V	13.5 V	27 V	33.75V
Max. Charging Current (IA) at < 40°C	2.6 A	5.2 A	2.6 A	9.6 A	4.8 A	3.4 A
Max. Charging Current (IA) at 50°C	80% of In (permanent)					
Max. Charging Current (IA) at 60°C	60% of In (permanent)					
End of charging current (IB)	In X 0.32A ±20 %					
Turn-On delay after applying mains voltage	2.5 sec. (max)					
Line regulation	< ±0.5 %					
Residual Ripple	≤ 120 mVpp					

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Output Data	ZAB BC 1203	ZAB BC 1206	ZAB BC 2403	ZAB BC 1210	ZAB BC 2405	ZAB BC 3003
Efficiency	≥ 75 %	≥ 86 %				
Short-circuit Protection	Constant Current					
Short-circuit current Max	1.2 X In ±10%					
Dissipation power load max (W)	15 W	20.5 W				
Over Load protection	Constant Current					
Over Voltage Output protection	Yes					
Over Temperature Protection	Yes					
Parallel connection	No					
Recommended Battery Capacity Range (Ah)	9 - 30 Ah	30 - 60 Ah	15 - 30 Ah	30 - 100 Ah	15 - 50 Ah	12 - 40 Ah
Charge Fail Contact rating (EN60947-4-1)	Resistive load					
Max. 30 VDC 1A						
Max. 120 VAC 1A						
Min.1mA at 5 VDC						

Climatic Data	
Ambient Temperature operation	-20°C to +70 °C (>60°C Derating 2.5%/°C)
Ambient Temperature Storage	-40°C up to +85 °C
Humidity at 25 °C, no condensation	95%
Cooling	Convection

General Data	
Isolation Voltage (In / Out)	3000 Vac
Isolation Voltage (In / PE)	1605 Vac
Isolation Voltage (Out / PE)	500 Vac
Protection Class (EN/IEC 60529)	IP 20
Reliability: MTBF IEC 61709	> 5,00,000 hrs
Pollution Degree Environment	2
Connection Terminal Blocks Screw Type	2.5 mm <sup>2</sup> (24 – 14 AWG)
Vibration (operation)	10 to 500Hz, 2G, 20min/sweep, period - 1Hr, Each along X,Y,Z axes.
Shock	30g in all direction in acc. with IEC 60068-2-27.
Protection class	1 with PE connected

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## BATTERY CHARGER

### Norms and certifications

The CE mark in According to EMC 2004/108/EC and Low voltage directive 2006/95/EC.

### Electrical Safety

According to IEC/EN 60950 (VDE 0805) EN 50178 (VDE 0160) for assembling device. The unit must be installed according to IEC/EN 60950. Input / Output separation: SELV EN60950-1 and PELV EN 60204-1. Double or reinforced insulation.

### EMC Immunity

EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN61000-4-6, EN61000-6-2

### EMC Emission

EN61000-6-4, EN 61000-3-2

### Standards Conformity

EN 60204-1 Safety of Electrical Equipment Machines.

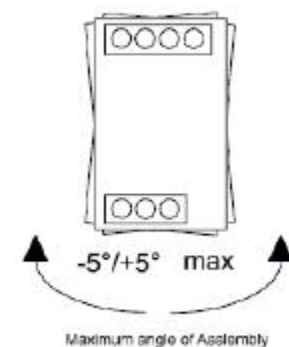
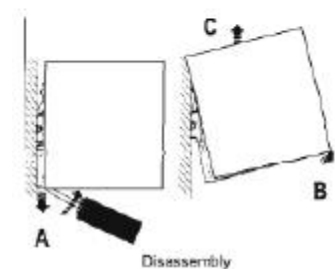
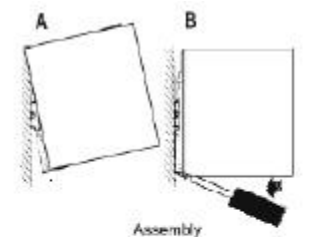
### Installation

### Dimensional Details

W X h X d

55 X 110 X 105

All Dimensions are in mm



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