

BCS 144V/130A - Charger for battery locomotives.

High Frequency technology with IGBT modules
High energy efficiency

Microprocessor controlled
Low ripple charging current

- *Minimises temperature rise during charging*
- *Increases traction battery life*

Cable length compensation
Battery temperature compensation

Automatic charger on and off

Automatic equalise: ensures the battery is always fully charged and ready for use.

3-step constant current control

The ionic mixing by pulse currents



Fig1. Battery charger BPC 144V/130A (Floor mount model, IP-54)

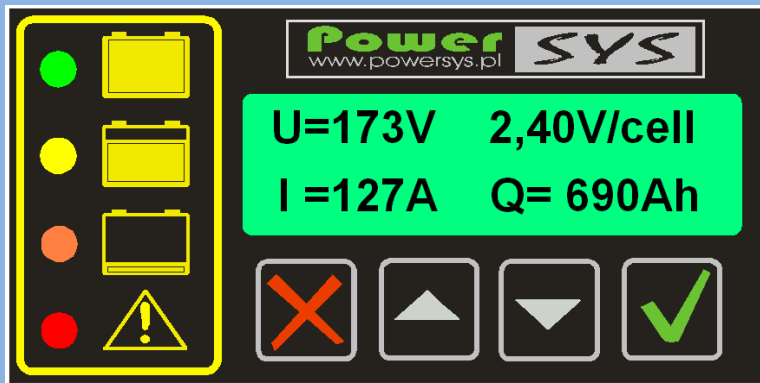


Fig2. The operator panel with LCD display and keypad

LCD display : Shows all charging parameters :

total voltage, cell voltage, current, capacity restored, charging time

LED display: Shows state of charge and fault conditions:

- Amber** – initial charging
- Yellow** – gassing
- Green** – charge complete
- Flashing Red** – Fault



Fig3. Battery charger BPC 144V/130A (Wall mount model, IP-54)

Ratings and Specifications Industrial Battery Charger BPC 144V/125A

| INPUT | |
|--|--|
| AC Input Voltage Range | 480Vac -15 /+10% AC, 3 phase |
| Input Frequency Range | 50/60 ±10% Hz |
| Input Current (RMS, maximum) | 42A/phase |
| Power Factor (at max output power) | ≥0,8 |
| OUTPUT | |
| Nominal Output Voltage | 144VDC |
| Output Adjust | 136...144VDC (68-72 cells) |
| Output Current Maximum | 125A |
| Setting the maximum current | 25... 125A step 5A |
| Voltage Regulation | ± 1% for ± 10% line voltage, 0-100% load current |
| Current pulsations | ± 2% |
| BATTERY | |
| Type | Lead-Acid |
| Capacity | 760Ah |
| Number of cells | 72 |
| Charging characteristics | IU1a 127 A until the start of gassing, 2.4 V / cell 50A to sign a full charge (constant voltage at the terminals, complete gasification, solid electrolyte specific gravity), charging maintenance 2,23V/cell |
| Electrolyte mixing | cell ionic equalizing the density, ON/OFF |
| Equalization/final charge voltage | 2,7V/cell |
| Temperature compensation | 0...5mV/cell |
| Start charging desulphurisation | 1,20...1,60V/cell |
| Charging current desulphurisation | IQ40 - 0,25% output current maximum |
| End charging desulphurisation | 2,0V/cell |
| The minimum voltage required to start | 1,2V/cell |
| GENERAL | |
| Efficiency (at max.output power) | ≥88% |
| Operating Environment | 32-95°F (0-35°C), 0-3300ft (0-1000m)* |
| Storage range | -40 ...80°C |
| Humidity | 10% -90% non-condensing |
| Cooling | electronically controlled fans |
| Weight of charger | 52kg |
| Weight of base, pedestal | 15kg |
| Maximum Size L x W x H | 1000 x 600 x 300mm |
| Maximum Size with pedestal L x W x H | 1500 x 600 x 300mm |
| Color | RAL 7032 |
| PROTECTION AND SAFETY | |
| Degree Protection of Housing | IP-54 |
| Withstand Voltage | I/P-O/P: 2.5 KVAC/min I/P-FG: 2.5 KVAC/min O/P-FG: 2.5 KVAC/min |
| Isolation Resistance | ≥100MΩ/1kV |
| Overtemperature Protection - Semiconductors | 80°C |
| Overtemperature Protection – Power Transformer | 115°C |
| Overcurrent Protection | electronic 100% |
| Input Fuse Internal | 63A gG, 22,2 x58 per phase |
| Output Fuse Internal | F 160A 22x58 in plus and minus battery |
| Safety | ,EN61204-3:2000 |
| EMC | EN61000-6-3:2007 EN61000-6-2:2005 |

(*) Above 1000m, reduce the rated current of 5% for each additional 1000m
Specifications subject to change without notice