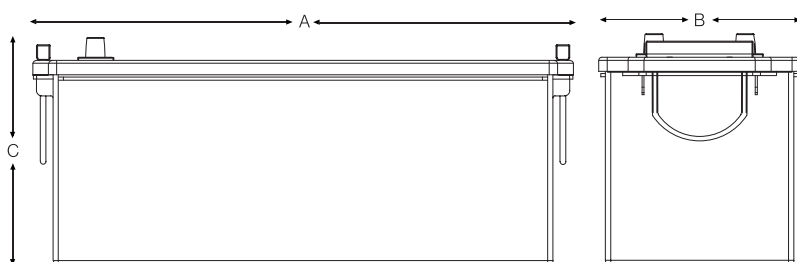
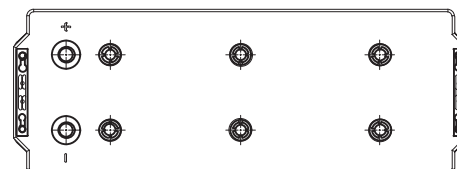


# G06-12-110-3

## Semi-Traction Bloc Battery



Right - Positive



Left - Negative

### Electrical Specifications

|                                |                                        |
|--------------------------------|----------------------------------------|
| <b>Voltage</b>                 | 12V                                    |
| <b>80% DOD Voltage Cutoff</b>  | 11.2V                                  |
| <b>Self Discharge</b>          | Less than 3% per month (20°C/68°F)     |
| <b>Charge Temperature</b>      | Min: -10°C (14°F) / Max: 50°C (122°F)  |
| <b>Discharge Temperature**</b> | Min: -40°C (-40°F) / Max: 50°C (122°F) |
| <b>Storage</b>                 | Min: -20°C (-4°F) / Max: 60°C (140°F)  |

| Amp Hours (AH) |       |      |      |
|----------------|-------|------|------|
| 20 HR          | 10 HR | 5 HR | 3 HR |
| 120            | 122   | 110  | 103  |

\*\* CAUTION: Depths of discharge, operating voltages and currents, when designing systems for use at maximum temperatures, will vary.

### Mechanical Specifications

| Industry Reference        | DINA   |        |
|---------------------------|--------|--------|
| <b>Length (A)</b>         | 20 in  | 513 mm |
| <b>Width (B)</b>          | 7.4 in | 189 mm |
| <b>Height (C)</b>         | 8.5 in | 217 mm |
| <b>Weight</b>             | 99 lb  | 45 kg  |
| <b>Terminal (Opt'l)*</b>  | A-POLE |        |
| <b>Cell(s)</b>            | 6      |        |
| <b>Electrolyte</b>        | Gel    |        |
| <b>Terminal Torque Nm</b> | n/a    |        |

NOTE: There is a tolerance of +/-2%.

### Features

Maintenance-free bloc batteries in Gel technology (no topping up during lifetime)

Good high current performance for extreme operating conditions

High-class patented safety valve

700 cycles (DIN EN 60254-1) (IEC 254-1)

Valve-regulated lead-acid battery

Recyclable

Long cycle life

Low self discharge rate allows for up to 2 years shelf life

Classified as a non-spillable battery is not restricted for transportation by:

- Air (IATA/ICAO provision 67)
- Ground (STB, DOT-CFR-HMR49)
- Water (IMDG amendment 27)

### Applications

Electric vehicles

Wheelchairs

Cleaning machines

Electric working platforms

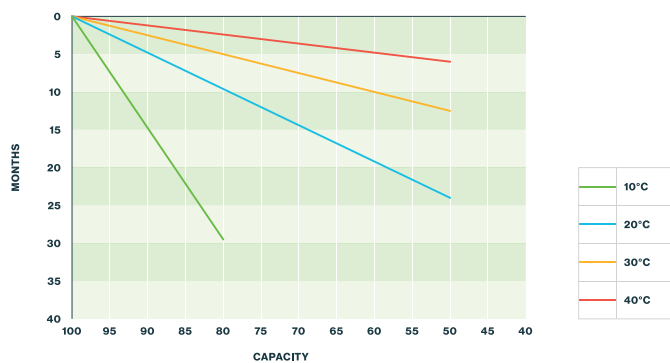
Universal for multiple cyclic applications

## Charging profile

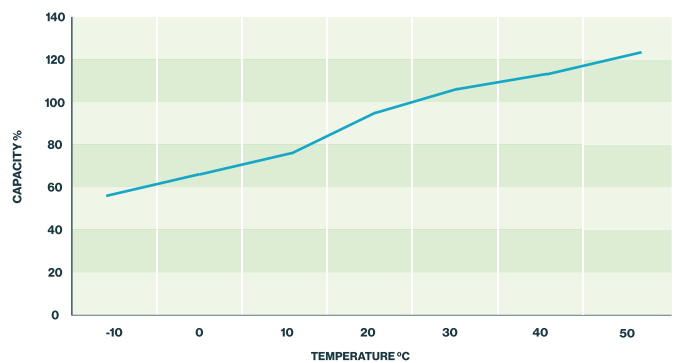
**IU Charging**  $I = \min. 12\% C_5 \text{ max. } 18\% C_5$   
 $U = 2.4 \text{ V per cell}$

**IUI Charging**  $I_1 = \min. 12\% C_5 \text{ max. } 18\% C_5$   
 $U = 2.35 \text{ V per cell}$   
 $I_2 = 1.5\% C_5 \text{ for max. 4 hours}$

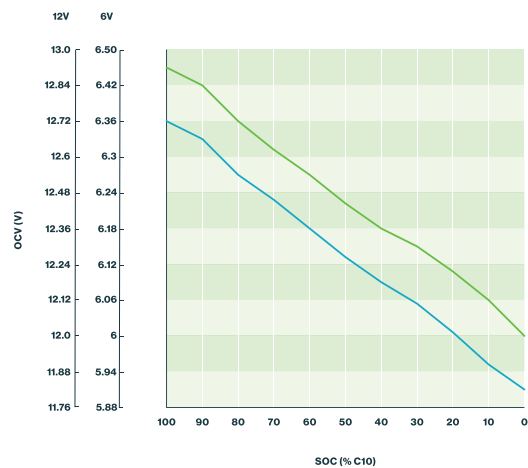
## Self discharge at different temperatures



## Capacity vs. temperature

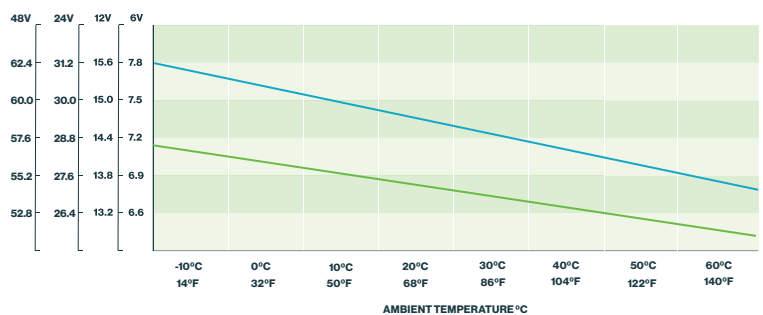


## Storage: Determine the state of charge



|         |
|---------|
| OCV max |
| OCV min |

## Relation between charging, voltage and temperature



|             |
|-------------|
| STANDBY USE |
| CYCLE USE   |