



# LP12-20 (12V 20Ah)

| Specifications                |  |
|-------------------------------|--|
| Rated Voltage                 | 12   |
| Nominal Capacity              | 20.0Ah (C <sub>20</sub> , 1.75V/cell)  |
| Dimensions                    | Length 182 mm  |
|                               | Width 77 mm  |
|                               | Container Height 168 mm  |
| Approx. Weight                | 5.78 Kg (12.74 lbs)  |
| Terminal                      | T3   |
| Layout                        | 0  |
| Container material            | ABS  |
| Rated Capacity (25°C)         | 20.0 Ah (20hr, 1.00A, 1.75V/cell)  |
|                               | 18.9 Ah (10hr, 1.89A, 1.75V/cell)  |
|                               | 17.2 Ah (5hr, 3.44A, 1.75V/cell)   |
|                               | 15.3 Ah (3hr, 5.10A, 1.75V/cell)   |
|                               | 13.1 Ah (1hr, 13.1A, 1.60V/cell)   |
| Max. Discharge Current        | 300A (5s)  |
| Internal Resistance (25°C)    | Approx 14mΩ  |
|                               | Discharge: -15°C ~50°C (5~122°F)   |
| Operating Temp. Range         | Charge: 0°C ~40°C (32~104°F)   |
|                               | Storage: -15°C ~40°C (5~104°F)   |
| Nominal Operating Temp. Range | 25±3°C (77±5°F)  |
| Cycle Use                     | Initial Charging Current less than 6.0A. Voltage 14.4V~15.0V at 25°C (77 °F)Temp. Coefficient -30mV/°C   |
|                               | Initial Charging Current less than 6.0A. Voltage 13.5V~13.8V at 25°C (77 °F)Temp. Coefficient -20mV/°C   |
| Standby Use                   | 40°C (104°F) 103%  |
|                               | 25°C (77°F) 100%   |
|                               | 0°C (32°F) 86%   |
| Effect Of Temp. To Capacity   | LP series batteries may be stored for up to 6 months at 25°C (77°F) and then a freshening charge is required. For higher temperatures the time interval will be shorter. |
| Self Discharge                |  |



## Description and Features

The LP Series AGM batteries have been specially developed to be widely applicable. These lead acid batteries with AGM technology are completely sealed and therefore 100% maintenance free and leak-proof. These batteries have a low self-discharge. The reliable and safe multipurpose batteries from the LP Series offer a long service life and can be used in various industries.

### Features

- Absorbent Glass Mat technology
- Reliable and safe performance
- Long service life - 3-5 years in standby application (at 25°C)
- Suitable for multipurpose applications

| Layout | Terminal | UL certification |
|--------|----------|------------------|
|        |          |                  |

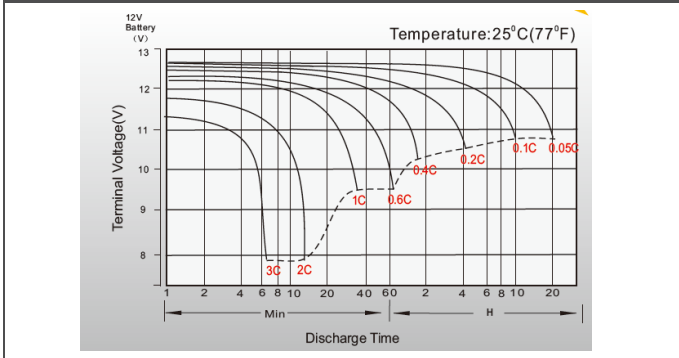
| Constant Current Discharge Characteristics: A (25°C) |       |        |        |        |        |        |      |        |      |      |      |      |      |      |       |       |
|--|-------|--------|--------|--------|--------|--------|------|--------|------|------|------|------|------|------|-------|-------|
| F.V/Time   | 5 Min | 10 Min | 15 Min | 20 Min | 30 Min | 45 Min | 1 Hr | 1.5 Hr | 2 Hr | 3 Hr | 4 Hr | 5 Hr | 6 Hr | 8 Hr | 10 Hr | 20 Hr |
| 1.85V/cell   | 61.6  | 42.4   | 33.0   | 26.9   | 19.8   | 14.4   | 11.8 | 8.71   | 6.85 | 4.94 | 3.94 | 3.35 | 2.87 | 2.26 | 1.85  | 0.98  |
| 1.80V/cell   | 66.2  | 45.0   | 34.6   | 27.9   | 20.4   | 14.8   | 12.1 | 8.89   | 6.97 | 5.02 | 3.99 | 3.40 | 2.91 | 2.29 | 1.87  | 0.99  |
| 1.75V/cell   | 69.8  | 46.8   | 35.8   | 28.7   | 20.9   | 15.2   | 12.4 | 9.06   | 7.10 | 5.10 | 4.05 | 3.44 | 2.95 | 2.32 | 1.89  | 1.00  |
| 1.70V/cell   | 73.1  | 48.7   | 37.0   | 29.5   | 21.4   | 15.5   | 12.6 | 9.21   | 7.20 | 5.18 | 4.10 | 3.49 | 2.98 | 2.34 | 1.91  | 1.01  |
| 1.67V/cell   | 75.6  | 50.0   | 37.9   | 30.1   | 21.8   | 15.7   | 12.8 | 9.33   | 7.28 | 5.23 | 4.14 | 3.52 | 3.01 | 2.36 | 1.92  | 1.02  |
| 1.60V/cell   | 80.2  | 52.1   | 39.2   | 31.0   | 22.4   | 16.1   | 13.1 | 9.53   | 7.43 | 5.32 | 4.22 | 3.58 | 3.05 | 2.39 | 1.95  | 1.03  |

| Constant Power Discharge Characteristics: Wpc (25°C) |       |        |        |        |        |        |      |        |      |      |      |      |      |      |       |       |
|--|-------|--------|--------|--------|--------|--------|------|--------|------|------|------|------|------|------|-------|-------|
| F.V/Time   | 5 Min | 10 Min | 15 Min | 20 Min | 30 Min | 45 Min | 1 Hr | 1.5 Hr | 2 Hr | 3 Hr | 4 Hr | 5 Hr | 6 Hr | 8 Hr | 10 Hr | 20 Hr |
| 1.85V/cell   | 116.5 | 80.7   | 63.2   | 51.7   | 38.2   | 28.0   | 23.0 | 17.0   | 13.4 | 9.71 | 7.76 | 6.62 | 5.68 | 4.48 | 3.67  | 1.96  |
| 1.80V/cell   | 124.1 | 85.0   | 65.9   | 53.5   | 39.2   | 28.7   | 23.5 | 17.3   | 13.6 | 9.85 | 7.85 | 6.70 | 5.76 | 4.54 | 3.72  | 1.98  |
| 1.75V/cell   | 129.3 | 87.8   | 67.7   | 54.7   | 40.1   | 29.2   | 23.9 | 17.6   | 13.8 | 10.0 | 7.95 | 6.78 | 5.82 | 4.59 | 3.75  | 2.00  |
| 1.70V/cell   | 134.1 | 90.7   | 69.5   | 56.0   | 40.9   | 29.7   | 24.3 | 17.8   | 14.0 | 10.1 | 8.05 | 6.86 | 5.88 | 4.63 | 3.79  | 2.02  |
| 1.67V/cell   | 137.6 | 92.7   | 71.0   | 57.0   | 41.5   | 30.1   | 24.6 | 18.0   | 14.1 | 10.2 | 8.11 | 6.91 | 5.93 | 4.66 | 3.81  | 2.03  |
| 1.60V/cell   | 143.1 | 95.4   | 73.0   | 58.4   | 42.4   | 30.7   | 25.0 | 183    | 14.4 | 10.4 | 8.23 | 7.00 | 6.00 | 4.73 | 3.86  | 2.05  |

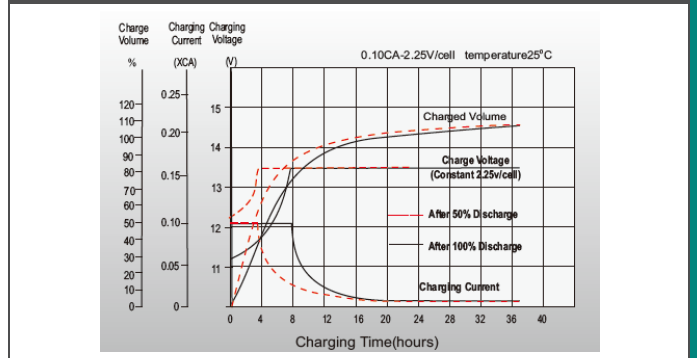


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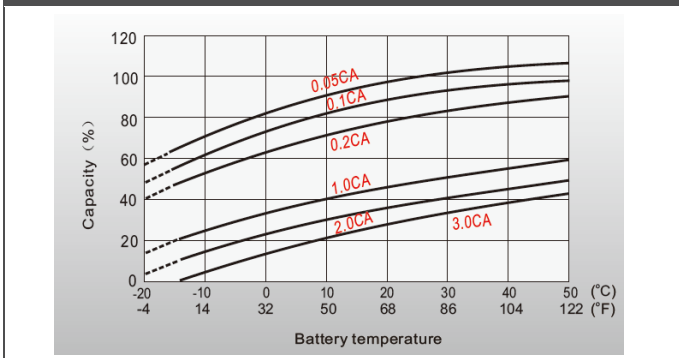
## Discharge Characteristics



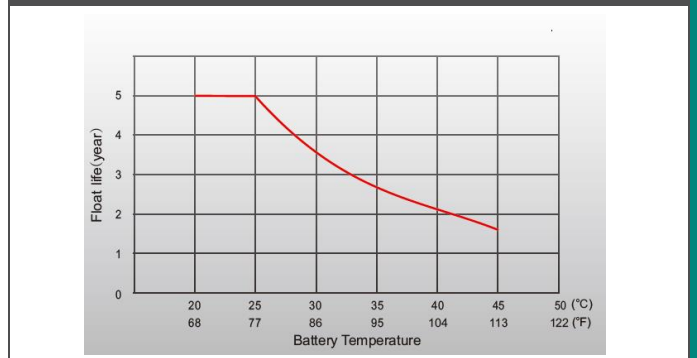
## Float Charging Characteristics



## Temperature Effects In Relation To Battery Capacity



## Float Service Life



### Applications

- All purpose
- Uninterruptable Power Supply (UPS)
- Electric Power System (EPS)
- Emergency backup power supply
- Alarm and security system
- Communication power supply
- DC power supply
- Auto control system

### General Features

- 5 years design life(25°C)
- Special exhaust structure and sealing technology, safe and reliable, flexible installation, convenient maintenance
- PbCaSn alloy for plate grids: less gassing, less self-discharging
- High quality AGM separator: extend cycle life and prevent micro short circuit
- High purity raw material: ensure low self discharge rate

### Standards

- Compliance with IEC 60896 standards, EU Battery Directive
- UL, CE Certified
- UKCA Certified (for UK)
- IATF16949, ISO45001,ISO 9001 and ISO 14001 certified production facilities

(Note) All above information shall be changed without prior notice, Landport Batteries reserves the right to explain and update the latest information.