



XP Series-Ultra High Rate

XP12-300(12V300W)

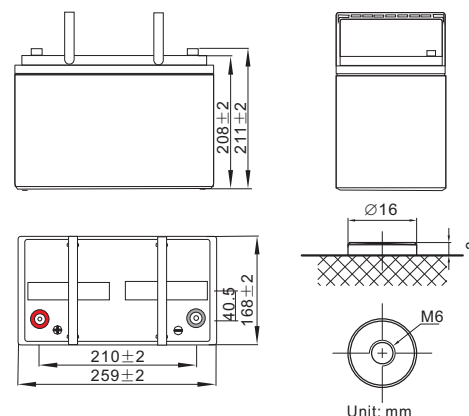


Specifications

| | | |
|--|-------------------------------|---------------------------|
| Rated Voltage | 12V | |
| Nominal Rate ($W_{15}, 1.67V/cell$) | 324.6W/cell | |
| Nominal Capacity($C_{20}, 1.80V/cell$) | 82Ah | |
| Dimension | Length | 260±2mm (10.2 inches) |
| | Width | 168±2mm (6.61 inches) |
| | Container Height | 208±2mm (8.19 inches) |
| | Total Height | 211±2mm (8.31 inches) |
| Approx. Weight | 24.2 Kg (53.4 lbs) | |
| Terminal | M6 | |
| Container Material | ABS: UL 94 HB or V-0 optional | |
| Rated Capacity (25°C) | 82.0 Ah | (20hr, 4.10A, 1.80V/cell) |
| | 78.6 Ah | (10hr, 7.86A, 1.80V/cell) |
| | 71.0 Ah | (5hr, 14.2A, 1.75V/cell) |
| | 65.7 Ah | (3hr, 21.9A, 1.75V/cell) |
| | 57.5 Ah | (1hr, 57.5A, 1.67V/cell) |
| Max. Discharge Current | 1230A | |
| Internal Resistance (25°C) | Approx. 4.5mΩ | |
| Operating Temp. Range | Discharge | -15 ~ 50°C (5 ~ 122°F) |
| | Charge | -20 ~ 40°C (-4 ~ 104°F) |
| | Storage | -15 ~ 40°C (5 ~ 104°F) |
| Nominal Operating Temp. Range | 25±3°C (77±5°F) | |
| Max. Charging Current(25°C) | 24.0A | |
| Charge voltage(25°C) | Float | 13.5V |
| | Temp. Coefficient | -3mV/cell/°C |
| | Equalization | 14.1~14.4V |
| Effect of temp. to Capacity | 40°C (104°F) | 103% |
| | 25°C (77°F) | 100% |
| | 0°C (32°F) | 86% |
| Self Discharge | ≤3%/month @ 25°C | |



Layout



Constant Current Discharge (Amperes) at 25 °C (77°F)

| F.V/Time | 5min | 10min | 15min | 20min | 30min | 45min | 1h | 2h | 3h | 4h | 5h | 6h | 8h | 10h | 20h |
|------------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|------|
| 1.85V/cell | 192.4 | 146.1 | 126.0 | 110.2 | 85.0 | 63.6 | 51.2 | 29.1 | 20.7 | 16.2 | 13.5 | 11.6 | 9.19 | 7.70 | 4.02 |
| 1.80V/cell | 220.7 | 161.0 | 138.1 | 118.8 | 89.5 | 65.9 | 52.9 | 30.0 | 21.4 | 16.7 | 13.9 | 12.0 | 9.46 | 7.86 | 4.10 |
| 1.75V/cell | 251.1 | 180.8 | 150.2 | 126.0 | 93.3 | 68.0 | 54.3 | 30.9 | 21.9 | 17.1 | 14.2 | 12.3 | 9.66 | 8.00 | 4.17 |
| 1.70V/cell | 276.4 | 196.0 | 160.1 | 134.1 | 98.1 | 70.9 | 55.9 | 31.4 | 22.4 | 17.6 | 14.6 | 12.5 | 9.82 | 8.14 | 4.24 |
| 1.67V/cell | 305.8 | 213.4 | 171.2 | 140.2 | 102.3 | 73.0 | 57.5 | 32.0 | 22.8 | 17.8 | 14.8 | 12.6 | 9.99 | 8.28 | 4.31 |
| 1.60V/cell | 336.2 | 230.3 | 180.7 | 147.6 | 106.3 | 75.7 | 58.8 | 32.6 | 23.1 | 18.2 | 15.1 | 12.9 | 10.2 | 8.43 | 4.36 |

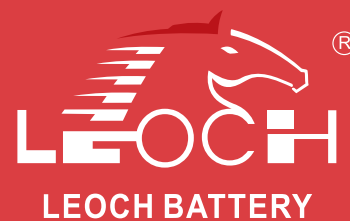
Constant Power Discharge (Watts/cell) at 25 °C (77°F)

| F.V/Time | 5min | 10min | 15min | 20min | 30min | 45min | 1h | 2h | 3h | 4h | 5h | 6h | 8h | 10h | 20h |
|------------|-------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|
| 1.85V/cell | 374.2 | 285.7 | 247.8 | 217.9 | 168.9 | 127.0 | 102.5 | 58.4 | 41.9 | 32.9 | 27.4 | 23.7 | 18.8 | 15.8 | 8.30 |
| 1.80V/cell | 425.0 | 311.8 | 269.0 | 232.7 | 176.4 | 130.6 | 105.2 | 59.9 | 42.9 | 33.7 | 28.1 | 24.3 | 19.3 | 16.1 | 8.42 |
| 1.75V/cell | 478.5 | 346.7 | 290.0 | 244.5 | 182.2 | 133.6 | 107.2 | 61.3 | 43.7 | 34.3 | 28.6 | 24.7 | 19.6 | 16.3 | 8.53 |
| 1.70V/cell | 520.7 | 371.7 | 305.4 | 257.5 | 189.6 | 137.9 | 109.5 | 61.9 | 44.4 | 34.9 | 29.1 | 25.0 | 19.8 | 16.5 | 8.61 |
| 1.67V/cell | 571.4 | 401.7 | 324.6 | 267.6 | 196.7 | 141.4 | 112.0 | 62.7 | 44.9 | 35.3 | 29.4 | 25.2 | 20.0 | 16.7 | 8.72 |
| 1.60V/cell | 621.1 | 429.0 | 339.1 | 279.0 | 202.3 | 145.1 | 113.5 | 63.3 | 45.1 | 35.7 | 29.7 | 25.5 | 20.2 | 16.8 | 8.73 |



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Applications

- UPS
- Hospitals & Testing Laboratories
- Emergency Power Supply
- Electric starting
- Telecommunications
- Data Centers

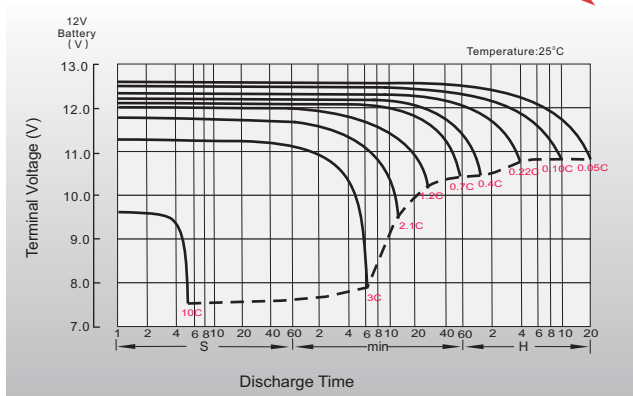
General Features

- Special designed grids for optimized high power density
- Oversized partition intercell welds, providing low resistance connections & minimal power loss
- Advanced lead tin calcium alloy, reduces grid corrosion & promotes long battery life
- Performance excels at high rates of discharge & recharge
- High integrity post seal for long life

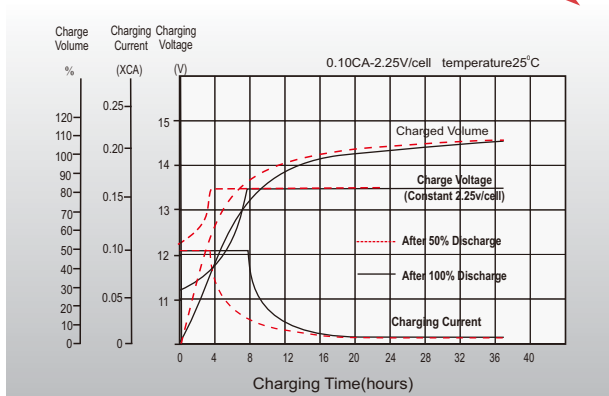
Standards

- Compliance with IEC 60896 standards
- Classified as "Long Life" according to Eurobat
- CE, UL Certified
- Manufactured in Leoch® IATF16949, OHSAS 18001, ISO 9001 and ISO 14001 certified production facilities

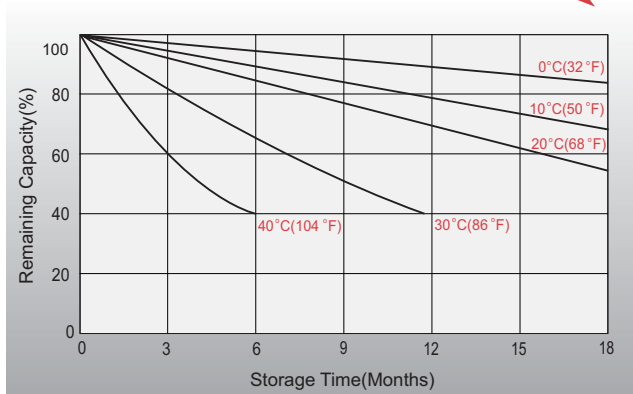
Discharge Characteristics



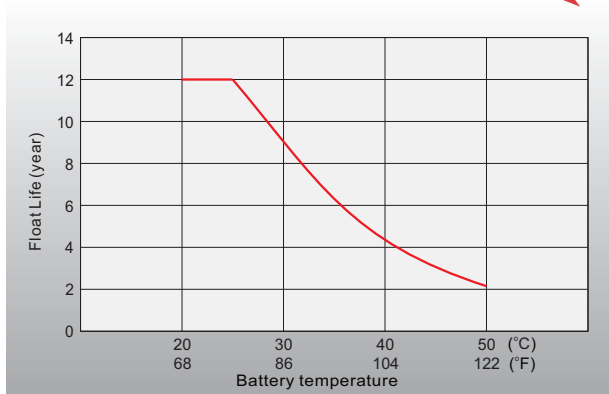
Float Charging Characteristics



Self Discharge Characteristics



Effect of Temperature on Long Term Float Life



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