



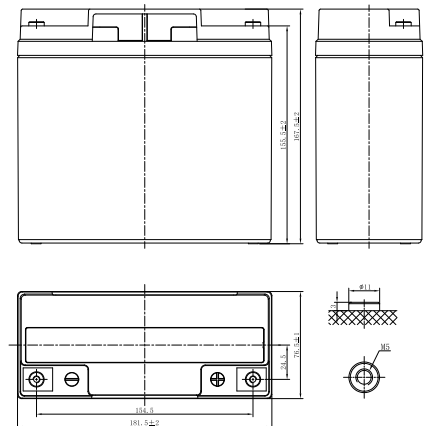
INV Series - General Purpose INV12-20 (12V 20Ah)

I N V E R M E X A

Specifications

| | | |
|-------------------------------|---|--------------------------------|
| Rated Voltage | 12V | |
| Nominal Capacity | 20.0Ah | (C ₂₀ , 1.75V/cell) |
| Dimension | Length | 181.5±2mm (7.14 inches) |
| | Width | 76.5±1mm (3.01 inches) |
| | Container Height | 160.5±2mm (6.49 inches) |
| | Total Height | 167.5±2mm (6.59 inches) |
| Approx Weight | 5.65 Kg (12.46 lbs) | |
| Terminal | M5 | |
| 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 16mΩ | |
| Operating Temp. Range | Discharge | -15 ~ 50°C (5 ~ 122°F) |
| | Charge | -15 ~ 50°C (5 ~ 122°F) |
| | Storage | -15 ~ 50°C (5 ~ 122°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 | |
| | Standby Use | |
| Effect of temp. to Capacity | Initial Charging Current less than 6.0A. Voltage 13.5V~13.8V at 25°C(77°F)Temp. Coefficient -20mV/°C | |
| | 40°C (104°F) | 103% |
| | 25°C (77°F) | 100% |
| Self Discharge | 0°C (32°F) | 86% |
| | 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. | |

Layout



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

| F.V/Time | 5min | 10min | 15min | 20min | 30min | 45min | 1h | 1.5h | 2h | 3h | 4h | 5h | 6h | 8h | 10h | 20h |
|------------|------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|------|-------|
| 1.85V/cell | 62.2 | 42.6 | 33.2 | 27.0 | 19.9 | 14.5 | 11.9 | 8.71 | 6.85 | 4.94 | 3.94 | 3.35 | 2.87 | 2.26 | 1.85 | 0.978 |
| 1.80V/cell | 66.9 | 45.2 | 34.8 | 28.1 | 20.5 | 14.9 | 12.2 | 8.89 | 6.97 | 5.02 | 3.99 | 3.40 | 2.91 | 2.29 | 1.87 | 0.989 |
| 1.75V/cell | 70.5 | 47.0 | 36.0 | 28.8 | 21.0 | 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 | 73.8 | 48.9 | 37.2 | 29.7 | 21.6 | 15.6 | 12.7 | 9.21 | 7.20 | 5.18 | 4.10 | 3.49 | 2.98 | 2.34 | 1.91 | 1.01 |
| 1.67V/cell | 76.4 | 50.3 | 38.1 | 30.3 | 21.9 | 15.8 | 12.9 | 9.33 | 7.28 | 5.23 | 4.14 | 3.52 | 3.01 | 2.36 | 1.92 | 1.02 |
| 1.60V/cell | 81.0 | 52.4 | 39.4 | 31.2 | 22.5 | 16.2 | 13.1 | 9.53 | 7.43 | 5.32 | 4.22 | 3.58 | 3.05 | 2.39 | 1.95 | 1.03 |

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

| F.V/Time | 5min | 10min | 15min | 20min | 30min | 45min | 1h | 1.5h | 2h | 3h | 4h | 5h | 6h | 8h | 10h | 20h |
|------------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|------|------|
| 1.85V/cell | 117.7 | 81.2 | 73.5 | 52.0 | 38.4 | 28.2 | 23.1 | 17.0 | 13.4 | 9.71 | 7.76 | 6.62 | 5.68 | 4.48 | 3.67 | 1.96 |
| 1.80V/cell | 125.3 | 85.4 | 76.3 | 53.8 | 39.4 | 28.8 | 23.6 | 17.3 | 13.6 | 9.85 | 7.85 | 6.70 | 5.76 | 4.54 | 3.72 | 1.98 |
| 1.75V/cell | 130.6 | 88.2 | 78.0 | 55.0 | 40.3 | 29.3 | 24.0 | 17.6 | 13.8 | 10.0 | 7.95 | 6.78 | 5.82 | 4.59 | 3.75 | 2.00 |
| 1.70V/cell | 135.4 | 91.1 | 79.9 | 56.3 | 41.1 | 29.9 | 24.4 | 17.8 | 14.0 | 10.1 | 8.05 | 6.86 | 5.88 | 4.63 | 3.79 | 2.02 |
| 1.67V/cell | 139.0 | 93.2 | 81.4 | 57.3 | 41.7 | 30.3 | 24.7 | 18.0 | 14.1 | 10.2 | 8.11 | 6.91 | 5.93 | 4.66 | 3.81 | 2.03 |
| 1.60V/cell | 144.6 | 95.9 | 83.3 | 58.7 | 42.6 | 30.8 | 25.1 | 18.3 | 14.4 | 10.4 | 8.23 | 7.00 | 6.00 | 4.73 | 3.86 | 2.05 |



INV Series - General Purpose INV12-20 (12V 20Ah)

I N V E R M E X A

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

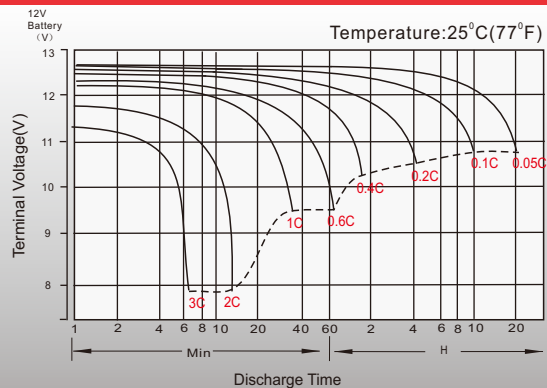
General Features

- 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

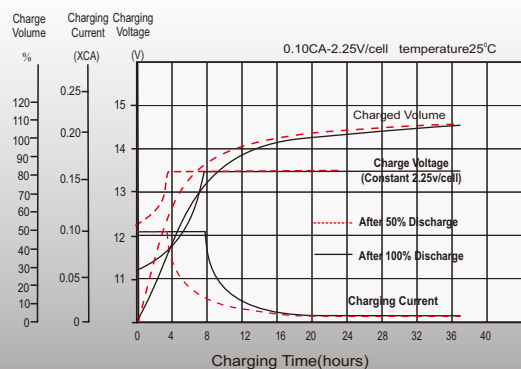
Standards

- Compliance with IEC 60896 standards, EU Battery Directive
- UL, CE Certified
- Manufactured by VN Center Power Tech Co.Ltd. under ISO45001, ISO 9001 and ISO 14001 certified production facilities

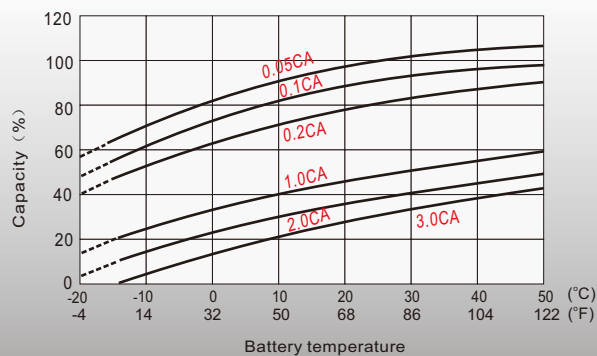
Discharge Characteristics



Float Charging Characteristics



Temperature Effects in Relation to Battery Capacity



Effect of Temperature on Long Term Float Life

