INV Series-General Purpose INV12-7S

INVERMEXA

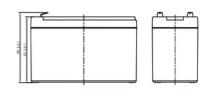
## Specifications

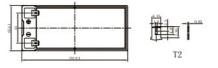
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| Rated Voltage                 |   | 12V  |
|-------------------------------|---|--|
| Nominal Capacity              | 6.0Ah   | (C <sub>20</sub> ,1.75V/cell)  |
| Dimension                     | Length<br>Width<br>Container Height<br>Total Height     | 151±2mm (5.95 inches)<br>65±1mm (2.56 inches)<br>93.5±1mm (3.68 inches)<br>99.5±1mm (3.92 inches)                                  |
| Approx Weight                 |   | 1.81 Kg (3.99 lbs)   |
| Terminal                      |   | T1/T2  |
| Container Material            |   | ABS  |
| Rated Capacity (25°C)         | 6.00 Ah<br>5.59 Ah<br>5.15 Ah<br>4.59 Ah<br>3.94 Ah     | (20hr,0.300A,1.75V/cell)<br>(10hr,0.559A,1.75V/cell)<br>(5hr,1.03A,1.75V/cell)<br>(3hr,1.53A,1.75V/cell)<br>(1hr,3.94A,1.60V/cell) |
| Max. Discharge Current        |   | 90A (5s)   |
| Internal Resistance (25°C)    |   | Approx 27mΩ  |
| Operating Temp.Range          | Discharge<br>Charge<br>Storage                          | -15 ~ 50°C (5 ~ 122°F)<br>-20 ~ 40°C (-4 ~ 104°F)<br>-15 ~ 40°C (5 ~ 104°F)  |
| Nominal Operating Temp. Range |   | 25±3°C (77±5°F)  |
| Cycle Use                     | Initial Charging Current I<br>14.4V~15.0V at 25° C(77°  | ess than 1.8A. Voltage<br><sup>°</sup> F)Temp. Coefficient -30mV/°C  |
| Standby Use                   | Initial Charging Current lo<br>13.5V~13.8V at 25° C(77° | ess than 1.8A. Voltage<br>°F)Temp. Coefficient -20mV/°C  |
| Effect of temp. to Capacity   | 40°C (104°F)<br>25°C (77°F)<br>0°C (32°F)               | 103%<br>100%<br>86%  |
| Self Discharge                |   | e stored for up to 6 months<br>reshening charge is required.<br>ne time interval will be shorter.                                  |
|                               |   |  |



# Layout





| Constant Current Discharge (Amperes) at 25 C (77F ) |      |       |       |       |       |       |      |      |      |      |      |      |       |       |       |       |
|---|------|-------|-------|-------|-------|-------|------|------|------|------|------|------|-------|-------|-------|-------|
| F.V/Time  | 5min | 10min | 15min | 20min | 30min | 45min | 1h   | 1.5h | 2h   | 3h   | 4h   | 5h   | 6h    | 8h    | 10h   | 20h   |
| 1.85V/cell  | 16.7 | 12.3  | 9.93  | 8.10  | 6.02  | 4.42  | 3.61 | 2.64 | 2.07 | 1.49 | 1.18 | 1.01 | 0.860 | 0.676 | 0.546 | 0.294 |
| 1.80V/cell  | 18.1 | 12.9  | 10.3  | 8.35  | 6.18  | 4.51  | 3.68 | 2.68 | 2.10 | 1.51 | 1.20 | 1.02 | 0.871 | 0.684 | 0.552 | 0.297 |
| 1.75V/cell  | 19.6 | 13.6  | 10.7  | 8.60  | 6.32  | 4.60  | 3.75 | 2.73 | 2.13 | 1.53 | 1.21 | 1.03 | 0.882 | 0.692 | 0.559 | 0.300 |
| 1.70V/cell  | 21.1 | 14.2  | 11.1  | 8.86  | 6.47  | 4.69  | 3.81 | 2.77 | 2.17 | 1.55 | 1.23 | 1.05 | 0.894 | 0.701 | 0.566 | 0.303 |
| 1.67V/cell  | 21.9 | 14.6  | 11.3  | 9.01  | 6.56  | 4.74  | 3.85 | 2.80 | 2.19 | 1.57 | 1.24 | 1.05 | 0.900 | 0.706 | 0.570 | 0.305 |
| 1.60V/cell  | 23.9 | 15.5  | 11.8  | 9.36  | 6.76  | 4.87  | 3.94 | 2.86 | 2.23 | 1.60 | 1.26 | 1.07 | 0.916 | 0.718 | 0.579 | 0.309 |

| Constant Power Discharge (Watts/cell) at 25 C (77F ) |      |       |       |       |       |       |      |      |      |      |      |      |      |      |      |       |
|--|------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|------|-------|
| F.V/Time   | 5min | 10min | 15min | 20min | 30min | 45min | 1h   | 1.5h | 2h   | 3h   | 4h   | 5h   | 6h   | 8h   | 10h  | 20h   |
| 1.85V/cell   | 31.8 | 23.5  | 19.1  | 15.6  | 11.6  | 8.58  | 7.03 | 5.15 | 4.05 | 2.92 | 2.33 | 1.98 | 1.70 | 1.34 | 1.08 | 0.588 |
| 1.80V/cell   | 34.3 | 24.6  | 19.7  | 16.0  | 11.9  | 8.72  | 7.14 | 5.22 | 4.10 | 2.96 | 2.36 | 2.01 | 1.72 | 1.35 | 1.10 | 0.594 |
| 1.75V/cell   | 36.8 | 25.7  | 20.3  | 16.4  | 12.1  | 8.86  | 7.24 | 5.29 | 4.15 | 3.00 | 2.39 | 2.03 | 1.74 | 1.37 | 1.11 | 0.600 |
| 1.70V/cell   | 39.3 | 26.7  | 20.9  | 16.8  | 12.3  | 8.99  | 7.34 | 5.37 | 4.21 | 3.03 | 2.41 | 2.06 | 1.76 | 1.39 | 1.12 | 0.606 |
| 1.67V/cell   | 40.7 | 27.3  | 21.3  | 17.1  | 12.5  | 9.07  | 7.40 | 5.41 | 4.24 | 3.06 | 2.43 | 2.07 | 1.77 | 1.40 | 1.13 | 0.610 |
| 1.60V/cell   | 43.9 | 28.8  | 22.1  | 17.6  | 12.8  | 9.26  | 7.54 | 5.50 | 4.31 | 3.11 | 2.47 | 2.10 | 1.80 | 1.42 | 1.15 | 0.619 |

**%** 

INV Series-General Purpose INV12-7S

# INVERMEXA

#### **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

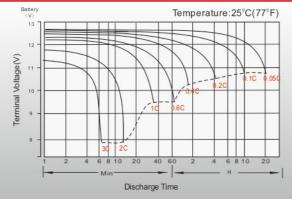
#### **General features**

- 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

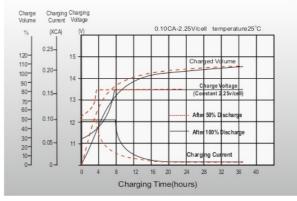
## Standards

- Compliance with IEC 60896 standards, EU Battery Directive
- UL, CE Certified
- Manufactured in Leoch®IATF16949, ISO45001,ISO 9001 and ISO 14001 certified production facilities

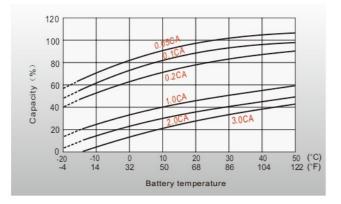
## **Discharge Characteristics**



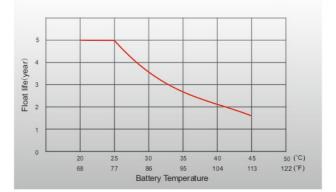
## Float Charging Characteristics



## Cycle Life in Relation to Depth of Discharge



## **Temperature Effects in Relation to Battery Capacity**



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