



## NP2.3-12FR

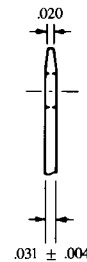
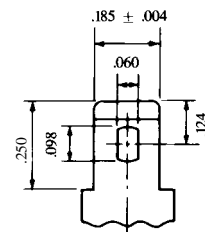
Sealed Rechargeable  
Lead-Acid Battery

### 12V, 2.3Ah

### Specifications

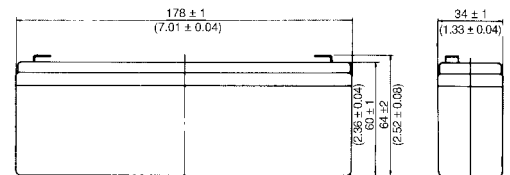
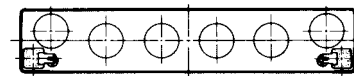
- **NOMINAL VOLTAGE:** 12V
- **NOMINAL CAPACITY:**
  - 20 hr. rate of 0.115A to 10.5V 2.3Ah
  - 10 hr. rate of 0.21A to 10.5V 2.1Ah
  - 5 hr. rate of 0.38A to 10.2V 1.9Ah
  - 1 hr. rate of 1.38A to 9.60V 1.38Ah
- **WEIGHT (approx.):** 2.05 pounds (0.94 kgs.)
- **ENERGY DENSITY (20 hr. rate):** 1.24 WH/cubic inch (76.1 WH/liter)
- **SPECIFIC ENERGY (20 hr. rate):** 13.5 WH/pound (29.7 WH/kg)
- **INTERNAL RESISTANCE OF CHARGED BATTERY:** 60 milliohms (approx.)
- **MAXIMUM DISCHARGE CURRENT WITH STANDARD TERMINALS:** 40 amperes
- **MAXIMUM SHORT-DURATION DISCHARGE CURRENT:** 75 amperes
- **OPERATING TEMPERATURE RANGE:**
  - CHARGE 5°F to 122°F (-15°C to 50°C)
  - DISCHARGE -4°F to 140°F (-20°C to 60°C)
- **CHARGE RETENTION (shelf life) at 68°F (20°C):**
  - 1 month 97%
  - 3 months 91%
  - 6 months 85%
- **LIFE EXPECTANCY:**
  - STANDBY USE 3 to 5 years
  - CYCLE USE (approx.):
    - 100% depth of discharge 250 cycles
    - 50% depth of discharge 550 cycles
    - 30% depth of discharge 1200 cycles
- **SEALED CONSTRUCTION:** Can be operated in any position without leakage.
- **STANDARD TERMINAL:** Quick Disconnect .187
- **HOUSING MATERIAL:** Container and cover made from Flame Retardant ABS (UL94-V0/L.O.I.>28%)

### Terminal



INCH = MM	
.250	6.35
.185	4.70
.124	3.15
.098	2.49
.060	1.52
.031	0.79
.020	0.51
.004	0.10

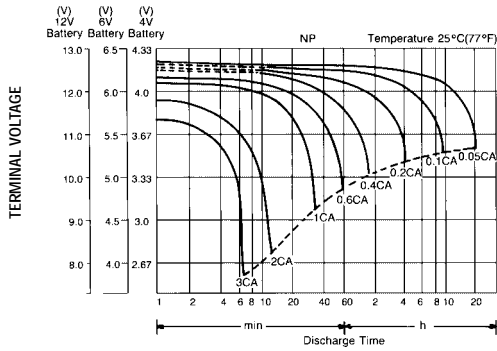
### Dimensions



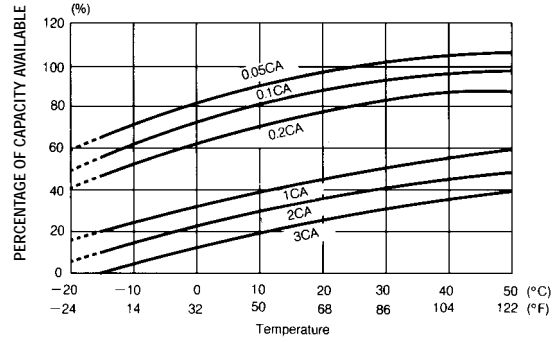
DIMENSIONS: MM (INCHES)



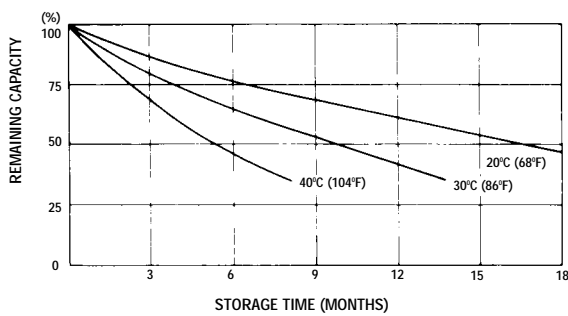
### DISCHARGE CHARACTERISTICS CURVES AT 25°C (77°F)



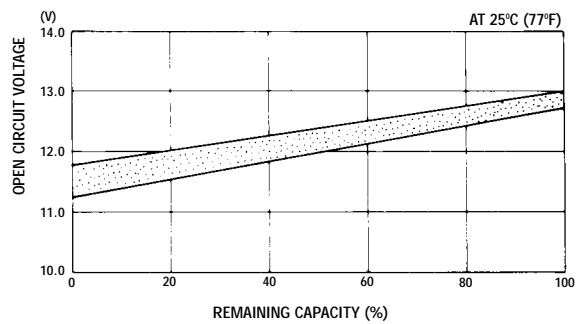
### TEMPERATURE EFFECTS IN RELATION TO BATTERY CAPACITY



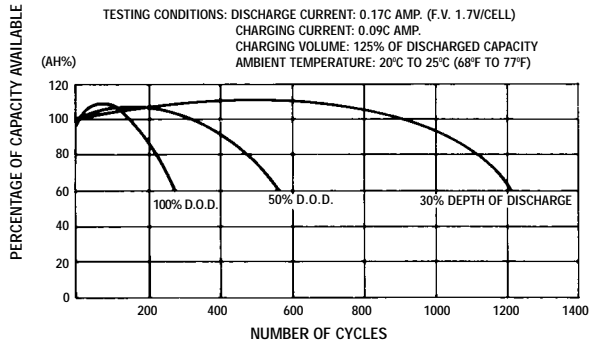
### SELF DISCHARGE CHARACTERISTICS



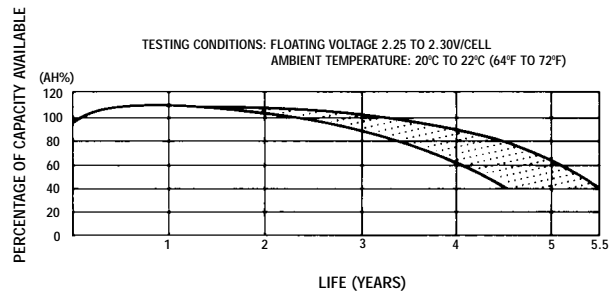
### OPEN CIRCUIT VOLTAGE VS REMAINING CAPACITY



### CYCLE SERVICE LIFE IN RELATION TO DEPTH OF DISCHARGE



### FLOAT SERVICE LIFE



When the battery will be used by current in excess of 3C, consult with EnerSys, Inc. prior to use.

#### CHARGING METHODS (At 20°C)

**Cycle use:** Maximum charging current 0.58A  
Charging voltage 14.4 to 15.0V  
**Standby use:** Float charging voltage 13.50 to 13.80V

#### CAUTION

- Avoid short circuit
- Do not charge in a sealed container.



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