



## NP33-12R NP33-12RFR

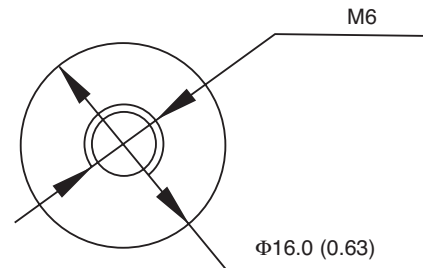
Sealed Rechargeable  
Lead-Acid Battery

12V, 33Ah

### Specifications

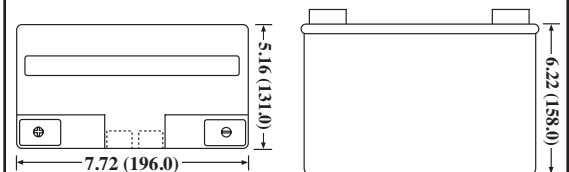
- **NOMINAL VOLTAGE:** 12V
- **NOMINAL CAPACITY:**
  - 20 hr. rate of 1.65A to 10.5V 33.0Ah
  - 10 hr. rate of 2.97A to 10.5V 29.7Ah
  - 5 hr. rate of 5.28A to 10.2V 26.4Ah
  - 1 hr. rate of 19.8A to 9.60V 19.8Ah
- **WEIGHT (approx.):** 24.0 pounds (10.9kgs)
- **ENERGY DENSITY (20 hr. rate):** 1.6 WH/cubic inch (98.8 WH/liter)
- **SPECIFIC ENERGY (20 hr. rate):** 16.5 WH/pound (36.2 WH/kg)
- **INTERNAL RESISTANCE OF CHARGED BATTERY:** 8.7 milliohms (approx.)
- **MAXIMUM DISCHARGE CURRENT WITH STANDARD TERMINALS:** 150 amperes
- **MAXIMUM SHORT-DURATION DISCHARGE CURRENT:** 500 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:** Receptacle M6 or Bolt
- **HOUSING MATERIAL:** PP Resin
- **OPTIONAL:** Container and cover made from Flame Retardant PP (UL94-V0/L.O.I.>28%)

### Terminal



DIMENSIONS: MM (INCHES)

### Dimensions

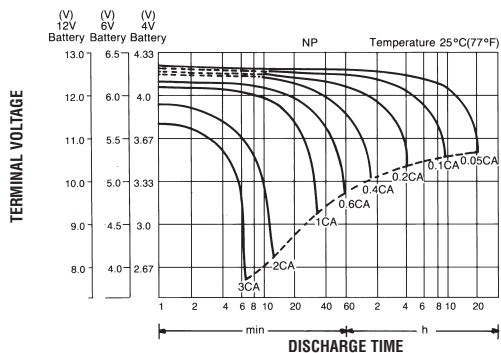


DIMENSIONS: INCHES (MM)

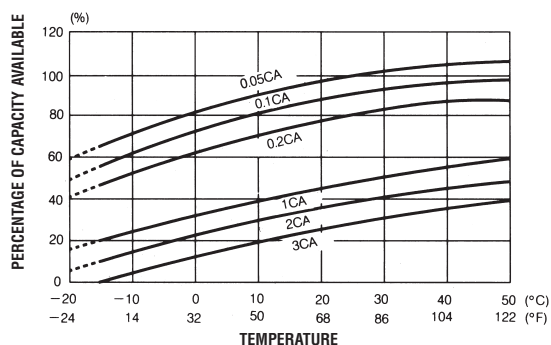
UL listing pending - File No MH16464



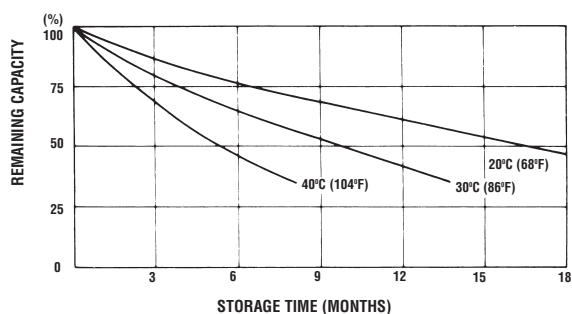
### DISCHARGE CHARACTERISTIC CURVES AT 25°C (77°F)



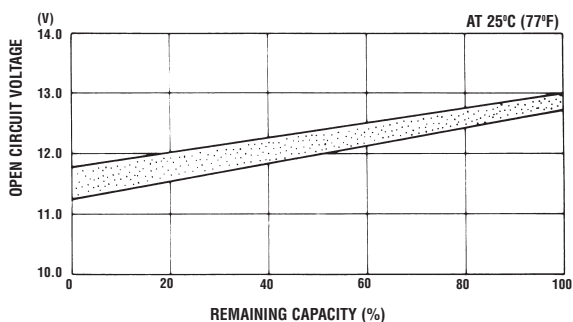
### TEMPERATURE EFFECTS IN RELATION TO BATTERY CAPACITY



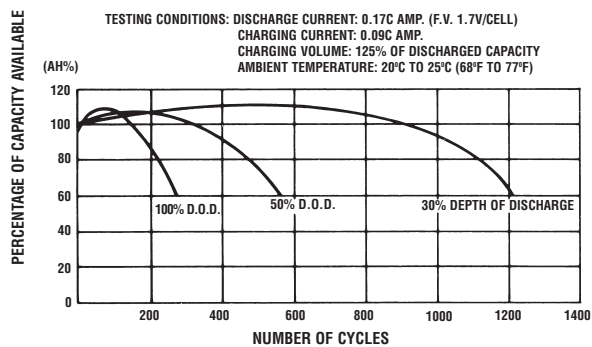
### SELF DISCHARGE CHARACTERISTICS



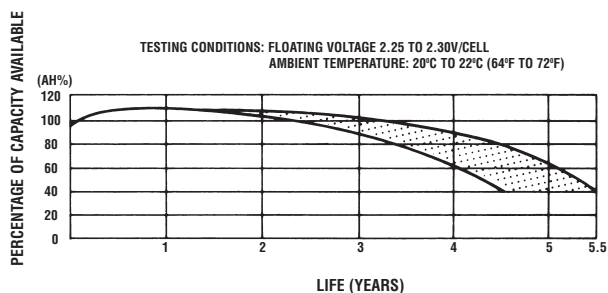
### OPEN CIRCUIT VOLTAGE VS REMAINING CAPACITY



### 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 prior to use.

#### CHARGING METHODS (At 20°C)

**Cycle use:** Maximum charging current 0.25C  
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



**EnerSys**  
P.O. Box 14145  
Reading, PA 19612-4145  
USA  
Tel: +1-610-208-1991  
+1-800-538-3627

**EnerSys EMEA**  
Brussels, Belgium  
Tel: +32 (0)2 247 94 47  
**EnerSys Asia**  
Guangdong, China  
Tel: +86 755 2689 3639

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