

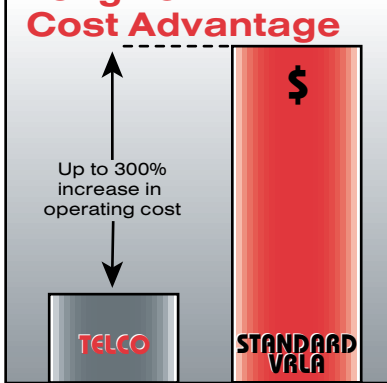


TELCO SERIES



Features & Benefits

Long-Term Cost Advantage



Note: Assumes 13-year service life with one Telco battery versus 4 Standard VRLA series batteries. Batteries are to be mounted with .05-inch spacing minimum to provide air ventilation.

4XL Alloy

- ✓ Improved lead-calcium-tin alloy resists corrosion and lasts up to 4 times longer than standard VRLA batteries.
- ✓ Designed to be environmentally friendly; reduces waste by 75%.

Rechargeable

- ✓ Provides hundreds to thousands of recharge cycles (cycle life is based on temperature and depth of discharge).
- ✓ Unrestricted transport. Complies with IATA/ICAO Special Provision A67 for air transport. U.S. DOT: Battery wet, non-spillable, not subject to regulations. IMO: Not classified as of 1992.
- ✓ EUROBAT classification: High Integrity 10+ years life in float conditions.
- ✓ Conforms to JIS C8702 standards.
- ✓ Meets requirements of NQAS as specified by NTT (approval No. NQAS 95-1007).
- ✓ Container and Lid made of 94-VO ABS plastics.
- ✓ Terminals positioned below flat top for increased safety.

Immobilized Electrolyte

- ✓ Nonspillable, usable in any position.
- ✓ Maintenance free
- ✓ Reduced internal resistance for superior performance.

Full Particle Formation

- ✓ Extended shelf life.
- ✓ Cycle or standby uses.
- ✓ Uniform plate formation for consistent capacity.

100% 2-Cycle Testing

- ✓ 100% capacity 1st cycle
- ✓ CSB-manufactured batteries are UL-recognized components under UL924 CSB file number MH 14533. ISO9001 Certified. ISO14001 Certified.

Specifications & Characteristics

TELCO 12400

NOMINAL VOLTAGE 12 V

DIMENSIONS

- **Container Height** 200 mm (7.87 inches)
- **Length** 197 mm (7.76 inches)
- **Width** 166 mm (6.54 inches)

WEIGHT 16 Kg (35.27 lb.)

INTERNAL RESISTANCE Approx. 8 mΩ

MAX. DISCHARGE CURRENT 228 (A/5 SEC)

STANDARD TERMINAL Nut & Bolt

CONTAINER MATERIAL 94-VO ABS

CONSTANT CURRENT DISCHARGE RATINGS
Amps/Battery @ 25°C (77°F) to 1.70 V/Cell

| | | | |
|---------|-----|---------|------|
| 8 hours | 4.2 | 60 min. | 21.1 |
| 6 hours | 5.3 | 30 min. | 34.5 |
| 4 hours | 7.3 | | |

MAX. CHARGING CURRENT 15.2 A

Constant Current Discharge Ratings (Amps/Battery @ 25°C, 77°F)

| Final Voltage per Cell | DISCHARGE TIME | | | | | | | | | |
|------------------------|----------------|---------|---------|----------|----------|----------|----------|----------|----------|----------|
| | 15 min. | 30 min. | 60 min. | 120 min. | 180 min. | 240 min. | 300 min. | 360 min. | 480 min. | 600 min. |
| 9.6 (1.60) | 58.5 | 38.0 | 22.4 | 13.3 | 9.5 | 7.6 | 6.4 | 5.6 | 4.3 | 3.6 |
| 10.2 (1.70) | 54.3 | 34.5 | 21.1 | 12.7 | 9.0 | 7.3 | 6.2 | 5.3 | 4.2 | 3.5 |
| 10.8 (1.80) | 50.0 | 33.0 | 20.0 | 12.3 | 8.8 | 7.0 | 6.0 | 5.1 | 4.0 | 3.3 |

Constant Power Watt Ratings (Watts/Battery @ 25°C, 77°F)

| Final Voltage per Cell | DISCHARGE TIME | | | | | | | | | |
|------------------------|----------------|---------|---------|----------|----------|----------|----------|----------|----------|----------|
| | 15 min. | 30 min. | 60 min. | 120 min. | 180 min. | 240 min. | 300 min. | 360 min. | 480 min. | 600 min. |
| 9.6 (1.60) | 677.0 | 445.0 | 278.0 | 189.0 | 116.0 | 98.0 | 79.8 | 68.4 | 53.6 | 42.2 |
| 10.2 (1.70) | 672.0 | 440.0 | 276.0 | 187.0 | 114.0 | 95.3 | 77.5 | 66.1 | 52.4 | 41.0 |
| 10.8 (1.80) | 650.0 | 422.0 | 264.0 | 182.0 | 109.0 | 91.2 | 75.2 | 63.8 | 50.2 | 38.8 |



Specifications subject to change without notification.



CSB Battery of America Corp.
 3900 Hwy. 377 South, Suite 101, Fort Worth, Texas 76116-7844 U.S.A.
 Tel: (817) 244-7777 • Tel: (800) 3CSB/USA • FAX: (817) 244-4445



USA and Canada
 usasls@csb-battery.com

Latin America
 latinsls@csb-battery.com

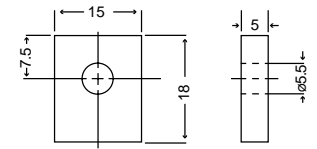
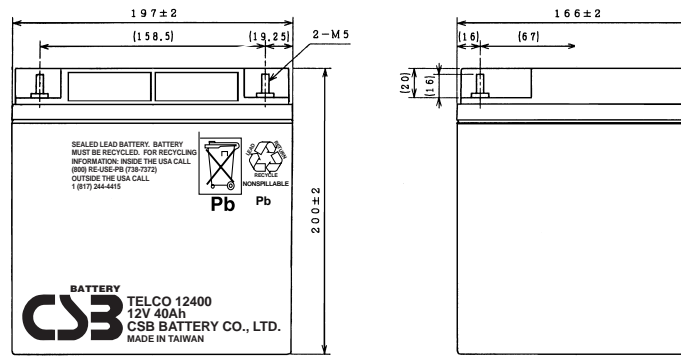
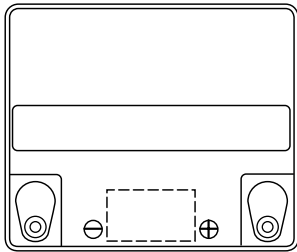
Europe
 eurosls@csb-battery.com

Asia
 asiasls@csb-battery.com

Dimensions

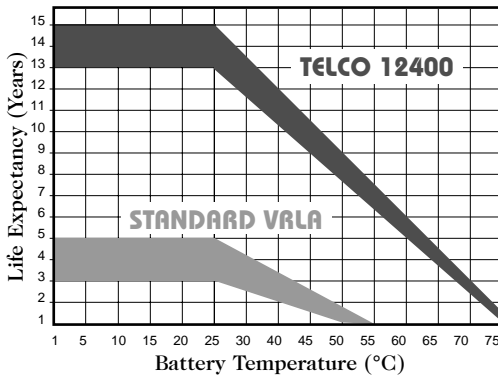
Terminal

TELCO 12400



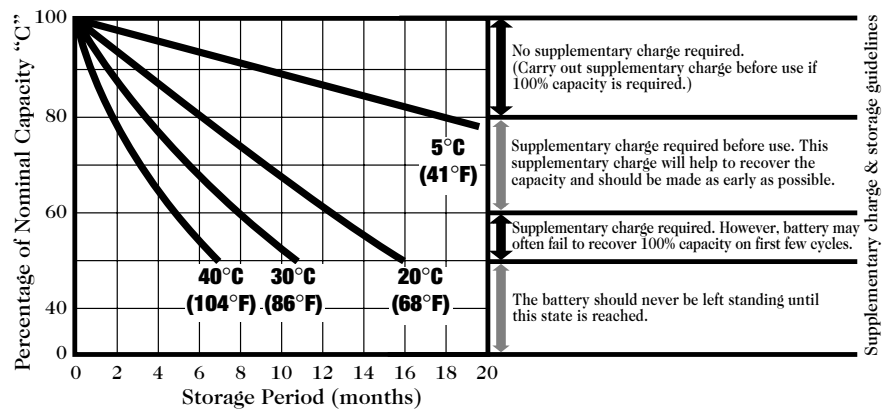
(M5 bolt & nut)

Standby (Float) Life



Storage

BATTERY SELF-DISCHARGE AT VARIOUS TEMPERATURES



Supplementary charge & storage guidelines

Discharge Current vs. Discharge Voltage

| Discharge Current A | Final Discharge Voltage (V/Cell) |
|---------------------|----------------------------------|
| 0.01CA >A | 1.90 |
| 0.2CA >A ≥ 0.01CA | 1.75 |
| 0.5CA >A ≥ 0.2CA | 1.70 |
| 1.0CA >A ≥ 0.5CA | 1.60 |
| 3.0CA >A ≥ 1.0CA | 1.60 |
| A ≥ 3.0CA | 1.30 |

Optimum Temperature Ranges

| | | |
|------------|-------------|-------------|
| Discharge: | -5° - 113°F | -15° - 45°C |
| Charge: | 23° - 113°F | -5° - 45°C |
| Storage: | -4° - 104°F | -20° - 40°C |

| Applications | Charge Voltage (V/Cell) | | | | Max. Current (A) Amps | Charge Time | Max. Ripple Current | |
|-----------------|-------------------------|---|----------------|-----------|-----------------------|-------------|-----------------------|------------------------|
| | Optimum Temp. Range | Temperature Compensation Required Outside Optimum Temperature Range | | Set Point | | | | Allowable Range |
| Cycle | -5°C-45°C 23°F-113°F | Under 5°C | +5mV/°C/Cell | 2.45 | 2.45-2.50 | 0.4C | Estimated 12-24 Hours | 0.1 x C ₂₀ |
| | | Over 35°C | -5mV/°C/Cell | | | | | |
| Standby (Float) | -5°C-45°C 23°F-113°F | Under 5°C | +3.3mV/°C/Cell | 2.275 | 2.25-2.30 | 0.4C | Continuous | 0.05 x C ₂₀ |
| | | Over 35°C | -3.3mV/°C/Cell | | | | | |

Charging Precautions

- Always charge batteries in an open, well-ventilated area.
- Do not charge batteries near equipment which may produce sparks.
- Do not charge batteries in inverted position.
- Do not charge near an open flame.
- Do not use smoking materials in battery charging area.
- Electrolysis may cause hydrogen and oxygen to be released toward the end of a charging cycle or in the event the battery is overcharged. The combination of hydrogen and oxygen can result in an explosion if a spark or flame is introduced.

- Never place or dispose of the battery near or in a fire.
- Never short the terminals.
- Never operate the battery in a gas-tight container.
- Never disassemble the battery.

- Never clean ABS battery cases with organic solvents.
- CSB batteries contain dilute sulfuric acid and in the event of contact to the skin or clothing, the exposed areas should be flushed generously with water. If contact with eyes or mucous membranes occurs, flush generously with water and seek medical attention.