

HARSH ENVIRONMENT TBS SYSTEM

FOR INDOOR AND OUTDOOR APPLICATIONS

STADIUM, GYMNASIUM, AMPHITHEATER, CONVENTION CENTER, PARKING STRUCTURE, EMERGENCY AND SECURITY LIGHTS, TELECOMMUNICATION, MILITARY, INLAND NON-CONTROL ENVIRONMENT, OCEAN FRONT BATTERY BACKUP SYSTEM, DUSTY AND UNCONTROLLED ENVIRONMENTS



TBS MODELS (100-1600 W)

- **UL1778 and CAN/CSA C22.2 No107.1-95**
- **Tested and Certified to Bellcore**
- **Operation Temp. (-40 to 58°C.)**
- **Provide power conditioning and transient filtering**
- **Uninterrupted, $\pm 0.5\%$ voltage regulated, continuous sinewave out for use with “normally on” lighting fixtures and exit lamps**
- **Shock and Vibration:** GR-63-CORE ISSUE 1 section 4.3
- **Vibration and Earthquake:** GR-63-CORE ISSUE 1 section 4.4
- **Salt and Fog:** Per GR-487-core R3-165
- **TVSS (Transient Voltage Surge Suppression)**
 - AC power connections to the battery backup systems are protected from lightning and electrical surges in accordance with ANSI C62.41-1991 category C3 and UL1449 second edition.
 - Grounding is in accordance with Article 250 of the National Electrical Code (ANSI/ NFPA70), and Section 10 of the Canadian Electrical Code Part I (CSA C22.1-94).
- **Electromagnetic Compatibility (EMC):** FCC Part 15 Subpart J-Class B, Bellcore TA 1089, EN 55022 (1991)/CISPR 22 Class A
- **Reliability**
 - The predicted Mean Time Between Failures (MTBF) of unit is exceeding 86,000 hours at full power output.
 - The products all comply with the requirements of Bellcore document TY-TSY-000357, Issue 1, December 1987, “Component Reliability Assurance Requirements for Telecommunications Equipment”.
- **ESD:** Meets all ESD requirements specified in Bellcore GR-1089-CORE, Issue 1A, July 1996.
- **Cabinet:** The Unit is designed and tested to the NEMA 12 environmental standard. The enclosures are designed for indoor unconditioned or outdoor unprotected use compliant with applicable sections of Bellcore GR-487-CORE, Issue 1, October, 1995.
 - Bellcore Rain intrusion test performed in addition to UL 50 tests.



NEMA 4
for Outdoor
Standard
painted Steel
cabinet,
Stainless option

NEMA 3R
for Indoor
Standard painted
Steel cabinet,
Stainless option



4 totally enclosed
Standard painted
Aluminum

HARSH ENVIRONMENT TBS SPECIFICATIONS

INPUT SPECIFICATIONS

Nominal Input Voltage: 120, 220, 240, or 277 VAC single phase

Input Voltage Range: -20% to +15%

Input Frequency: 60 or 50 Hz, $\pm 5\%$

Overcurrent Protection: Circuit breaker

Power Connection: Hard wired (TB)

Input Configuration: 2 wire plus ground

ENVIRONMENT

Operating Temperature: -40°C to +58°C

Storage & Transport Temp.: -40°C to +60°C

Operating Relative Humidity: 0 to 100%

Solar Loading: $Q_s = 70 \text{ W/ft}^2$

Operating Altitude: -1000 to +13,000 feet, referenced to sea level.
Temperature Compensated Battery Charger

OUTPUT SPECIFICATIONS

Output Voltage: Same voltage as Input or Multiple Output 120/240, 120/208 or 120/277 VAC

Voltage Regulation: $\pm 3\%$ (HE), $\pm 0.5\%$ (LU)

Frequency: 60 Hz ± 0.5 Hz, or 50 Hz $\pm 5\%$

Harmonic Distortion: $< 5\%$ THD; $< 3\%$ Single Harmonic

Crest Factor: 3 to 1

Power Factor: 0.7 leading load to 1.0 P.F.

Noise Rejection: -120 dB common mode; -60 dB normal mode

Battery Back-up Times: Range from 2 min to 13 hrs. Consult Factory for longer backup time.


PHYSICAL SPECIFICATIONS



Mounting: Pad Mount, Pole Mount Provision

Accessibility: All servicing is through the front; no side or back required, and Cable Entry from Bottom or Side (Nema 3R or 4 Cabinets)

OPTIONS

- Pole Mounting Provision
- Battery Heating Pad
- Extended Warranty and Service Plans
- Lifting Eyes NEMA 3R and 4
- Monitoring via RS232 and RS485
- Duplex 120V Receptacle for Service
- Make before break Maintenance Bypass Switch for HE & LU1.6, and Electronic Maintenance Bypass Switch for all others
- TVSS for 208/240 and 277V
- Secondary Auxiliary Output Circuit Breakers
 - LU0.4XXX, LU0.7XXX, LU1.5XXX models: Main or max. 4 total
 - LU1.6XXX model: Main or max. 9 total
- Spare Part Kits Available
- Door Intrusion Alarm Contacts
- Certified Zone 4 Seismic Bracket

NEMA 3R Cabinet	Model No	Max. Watts	**Backup time Range	**Qty. Battery	Cabinet Size
	LU0.4XXX	100	30min - 4hrs	(4) 12V 48 VDC	19.5" Wide 23" High 21" Deep
		200	30min - 2hrs		
		400	30min - 4hrs		
	LU1.5XXX	500	30min - 3hrs	(6) 12V 72 VDC	
		600	30min - 3hrs		
		700	30min - 2hrs		
		1000	15 - 60 min		
		1300	15 - 60 min		
		1400	15 - 30 min		

*NEMA 4 Cabinet	Model No	Max. Watts	**Backup time Range	**Qty. Battery	Cabinet Size
	LU0.7XXX	100	30min - 11hrs	(6) 12V 72 VDC	19.5" Wide 23" High 21" Deep
		200	30min - 9hrs		
		400	30min - 4hrs		
		500	30min - 3hrs		
		600	30min - 2hrs		
		700	30min - 2hrs		
	LU1.6XXX	500	30min - 10hrs	(8) 12V 96 VDC	33" Wide 42" High 17" Deep
		700	30min - 8hrs		
		800	30min - 7hrs		
		1000	30min - 6hrs		
		1300	30min - 4.5hrs		
		1400	30min - 4hrs		

* 4 cabinet can be used for 3R cabinet.

** Internal batteries. Longer backup times available with external battery cabinets.

Specifications are subject to change without prior notification.

