

Traffic Cabinet Components and Accessories

NEMA Double Conversion Traffic Battery Back-Up System

What, exactly, is a Battery Back-Up System?

A stable supply of power is a critical element for reliable traffic signal operations especially during power disruptions. Battery backup systems (BBS) are designed to maintain traffic signal operations during power disruption. BBS uninterruptible power supply (UPS) help ensure intersection safety and equipment protection from power surges and outages.

Why do agencies use a Battery Back-Up System?

Econolite's ruggedized BBS is a customizable true online, double-conversion design with power factor correction to meet the transportation applications and extreme temperature environments as specified by various transportation agencies meeting NEMA standards to ensure public safety. It is designed for extended run times, and features temperature-compensated charging to maximize battery life.

How does a Battery Back-Up System benefit the driving public?

The Econolite ruggedized BBS helps ensure signalized intersections continue to function during utility power disruptions. This ensures safety for the driving public and emergency responders even during the hazardous conditions of power outages.





GENERAL			
Model Number	VRRN-0700-H1	VRRN-1000-H1	VRRN-1500-H1
Rated Capacity	700VA/490W	1000VA/700W	1500VA/1050W
Topology	True on-line, double conversion topology with automatic bypass		
INPUT			
Phase	Single phase plus ground		
Bypass Voltage	User selectable (+/- 10%) (+10%/-15%) (+15%/-20%)		
Input Voltage Range	60V - 144V @ 40% load/70V - 144V @ 70% load/80V - 144V @ 100% load		
Frequency	50/60 Hz Auto sensing		
AC Frequency Range	45-65 Hz		
Input Current (120V)	5.8A	8.2A	12.4A
Input Power Factor	0.97		
OUTPUT			
Output Voltage	120 VAC nominal		
Voltage Regulation	+/- 2%		
Voltage Distortion	< 5% THD with non-linear loads, < 3% THD with linear loads		
Frequency Regulation	+/- 0.25 Hz (while on battery or in free run mode)		
Dynamic Response	+/- 9% max from 100% to 20% or from 20% to 100% linear load		
Overload Capacity	100-125% for 1 min, 125-150% for 10 sec		
Efficiency	Greater than 93% (HE Mode), Greater than 88% (on-line mode)		
Crest Factor	3 : 1		
PHYSICAL			
Input (AC) Connection	Hardwire Terminals		
Output (AC) Connection	Hardwire Terminals + 2 NEMA 5-15R		
Dimensions: in/mm - W x D x H	16.7" x 10" x 5.11"/424 x 254 x 130		
Weight: lbs/kg	15.5/7	18.5/8.4	20.5/9.3
Operating Temperature Range	-40° C to +60° C/-40° F to 140° F at full load -40° C to 74° C/ D-Rate to 80% Load		

Notes:

- These units do not contain internal batteries

