SH1200UR
TRAFFIC UPS

A PURE SINE WAVE, BATTERY BACK UP POWER FOR TODAY'S GROWING AND INCREASINGLY COMPLEX TRAFFIC SIGNAL SYSTEMS.

- 2.0 kVA, 2000 W, 12 V System
- Wireless Communication: Radio & WiFi
- Up to 8 hrs. or longer Run-Time
- True Sine Wave
- Instantaneous Transfer of Power
- Comprehensive Alarm System
- Custom Cabinets

Optional:

- SNMP Adapter for Ethernet (TCP/IP)

SIGNALSense TRAFFICUPS™

866.586.8877
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SPECIFICATIONS

Electrical Specifications

INVERTING MODE	**DC Input**	
	Operating voltage range	10.0–16.0 Vdc
	Safe non-operating voltage	0–18 Vdc
	Nominal current at 2000 watts	200 amps
	AC Output	True Sine Wave Inverter utilizing high frequency IGBT technology
	Output voltage	117 Vac ±2%
	Continuous power	2.0 kW, 2.0 kVA to 40° C (104° F) max ambient 1.5 kW, 1.5 kVA to 50° C (122° F) max ambient 1.0 kW, 1.0 kVA to 60° C (140° F) max ambient 0.7 kW, 0.7 kVA to 74° C (165° F) max ambient
	Surge power	4.5 kW for 5 seconds, then inverter will shutdown and auto restart
	Max short-circuit current	55 Arms, 55 Apk, then inverter will shutdown and auto restart
	Frequency	60.0 Hz ±0.05%
	Wave shape	Sine
	THD (no load to full load)	≤ 2% resistive load
	Peak efficiency	≥ 92%
	Full load efficiency	≥ 89%
	Other	
	Load Power factor range	0–1, inductive, capacitive, or nonlinear, no load to full load
	No load input power (producing output voltage)	≤ 25 W
	Load sense power	≤ 4 W (1s interval), ≤ 2 W (3s interval)
	Remote Shutdown Standby mode power draw (no output, display off)	≤ 0.5 W

CHARGING MODE	**AC Input**	
	Operating voltage range	90–135 Vac
	Maximum Input current	15 Aac at 100 A charge, 120 Vac input
	Voltage wave shape	Sine. The system will not operate on, or pass through, a modified sine-wave waveform.
	Power Factor (100 A charge, 120 Vac in)	≥ 0.98 with sine wave input
	Nominal frequency	60.0 Hz
	DC Output	
	Nominal voltage	12.0 Vdc
	Min battery voltage for charging	0.0 Vdc
	Max output voltage	17.5 Vdc
	Nominal output current	100 A at ≤ 15.0 Vdc
	Charger current derating	Automatically reduces charger current as internal temperature exceeds 80° C (176° F), input Vac approaches low transfer, and AC input current approaches 80% of breaker setting.
	Efficiency at nominal output	≥ 84%
	Other	
	Battery type settings	Gel, Flooded, AGM, Pb-Ca
	Battery size settings	50–2000 Ahr
	Charge algorithms (Customized to extend battery life)	Custom 3-stage with factory default setpoints. Custom 2-stage as above. Manually engaged, equalize, with factory defaults. CV/CC. User programmable setpoints.
	Independent battery banks	1
	Battery operation monitor	External Battery Temp. Sensor for Temp. compensated charging

Electrical Specifications (continued)

SYSTEM	Transfer relay rating	30 A, 1.5 hp
	Transfer time	4 ms (nominal)
	High input voltage range	120–135 Vac (User-adjustable)
	Inverter synchronized to AC line before transfer	Yes
	Remote ON/OFF control	Included, requires an external toggle switch (SPST) for ON/OFF control
	Start delay for Flashing Timer programmable through RS-232C Serial Port	1–6000 min. (1 minute increments)
	Maximum Contact ratings for all Alarm relays & Timer relay (ONBATT, TIMER, LOWBAT, BATT TEMP, UPS FAIL)	Switching Power: 60 W, 125 VA Switching Voltage: 220 Vdc, 250 Vac Switching Current: 2 A Carrying Current: 2 A
	Minimum Contact Ratings	10 mVdc, 10 µA
	Intelligent Cooling (extends fan life)	*Fan, activated by any of the following:* • High internal temperature • High AC input current • High AC output current

Power Management Module protection characteristics

TVSS	Series Mode Bi-direct Sine-wave tracking
	Grade A, Class 1, Mode 1 (1000 surges, 3000 amperes, SVR= 330)
	Actual Suppressed Voltage: >300 V
	No failures, L-N (ground wire protection) mode
	TVSS parameters shall be optimized for switch-mode power supply loads
	Disturbances are not shunted to ground
	Endurance for c62.41-1991 (formerly IEEE 587) Category B3 (CI) pulses
	MOVs and TRANS-ZORBS or similar shunt elements are not used

Mechanical Specifications

	UPS Module (Rack mount style)	Dimensions Weight	19" wide x 14" deep x 6" high 36 lbs
	Power Management Module	Dimensions Weight	7.5" wide x 8" deep x 3.5" high 9 lbs

SIGNAL SENSE BATTERY RUN TIME DATA

NorthStar Battery Type: NSB12-270, 12 V

Signal Load (watts) at 77° F to 1.67 VPC

72 Ah	100	150	200	250	300	350	400	450	500	550	600	700	800	900	1000
(1) NSB12-270	3:16	2:33	2:06	1:45	1:32	1:21	1:12	1:04	1:00						
(2) NSB12-270	6:56	5:27	4:32	3:48	3:19	2:56	2:37	2:22	2.09	1:58	1:49	1:36	1 22	1:12	1:04
(3) NSB12-220	10:58	8:30	7:03	5:56	5:12	4:35	4:08	3:43	3:23	3:05	2:50	2:27	2:09	1:55	1:43
(4) NSB12-270		9:18	8:01	7:07	6:14	5:33	5:05	4:37	4:13	3:54	3:23	2:58	2:37	2:22	

TIME (hr:min)

NorthStar Battery Type: NSB12-370, 12 V *(Optional)*

Signal Load (watts) at 77° F to 1.67 VPC

100 Ah	100	150	200	250	300	350	400	450	500	550	600	700	800	900	1000
(1) NSB12-370	5:14	4:04	3:20	2:47	2:25	2:06	1:53	1:40	1:30	1:22	1:15	1:03			
(2) NSB12-370		8:43	7:15	6:07	5:21	4:41	4:13	3:47	3:25	3:07	2:51	2:27	2:08	1:53	1:40
(3) NSB12-370				9:43	8:23	7:21	6:38	6:00	5:25	4:58	4:34	3:55	3:25	3:02	2:43
(4) NSB12-370						10:03	8:57	8:12	7:27	6:49	6:16	5:25	4:45	4:12	3:46

TIME (hr:min)

Temperature Performance Multiplier	
60° F	.93
45° F	.86
30° F	.77
15° F	.66
0° F	.56
-15° F	.46