



Sustainable Solutions for Traffic Technologies

Line Interactive (Buck/Boost)



Traffic control Battery Backup from a traffic control company – the logical choice for reliable intersection operation.

The PB2000-ITS-E automatically provides emergency back-up power to traffic signals and controls whenever normal electric power is lost. It increases or decreases voltage to maintain normal operation during brownouts and power spikes, reducing the chance of dangerous intersection collisions due to “dark” signals, thus reducing the need for law enforcement and emergency personnel resources.

Minimizes component damage and signal tech callouts due to power failures.

Features

The PB2000-ITS-E includes advanced logging/programming capabilities, real-time status reporting, and fully programmable dry contacts.

- ✓ Local keypad programmability – no laptop necessary
- ✓ Backlit LCD display
- ✓ External connections are front panel accessible
- ✓ Remote access via RS232 serial interface, USB, or optional SNMP Ethernet access (web-based)
- ✓ Fully interactive program and status reporting using built-in Windows™ compatible software.
- ✓ Time/date stamp of events and alarms with download and print capability
- ✓ Low harmonic AC sinewave output
- ✓ Transient voltage protection from damaging line spikes
- ✓ Temperature-compensated charging maximizes battery life in harsh, outdoor environments
- ✓ Noise suppression, FCC Class A
- ✓ Designed based on UL1778 2nd edition
- ✓ Wide operating temperature range from -37°C to +74°C (-34°F to +165°F)

Specifications

INPUT		OUTPUT		FUNCTIONS		ENVIRONMENTAL		
Voltage Range, VAC	193 to 262 VAC User programmable. Defaults set @ 199 -262 VAC	Apparent Power, VA	2000VA (Inverter Mode) 2000VA (Line Mode)	Brownout Protection	Unit boosts output voltage (or transfers to battery) during brownout or low input line conditions and returns to normal when input power stabilizes over user-selected time period. Set points for Transfer / Retransfer, To / From Battery / Boost are users programmable	Operating Temp °C	-37 to +74°C (See Notes 1 & 2)	
Frequency, Hz	50 / 60 +/- 3HZ	Active Power, W	1500 (Inverter Mode) 1500 (Line Mode)	Generator Compatibility	Generator mode allows wider variation in input voltage and frequency for use with an AC generator	Storage Temp °C	-50 to +75°C	
Maximum Input Current, A	15 A (resistive)	Power Factor	0.75	Battery Charger 10 A	PFC switch-mode charger is temperature-compensated (-3 to -5 mV/C/Cell) with automatic shut off above 50 C.	Humidity	<95% non-condensing	
Inrush Current	Load Dependent	Output Voltage, VAC Line and Buck/Boost Mode	220/230/240 VAC Nom (Tolerances are User programmable)	Inverter Mode	Capable of running continuously in inverter mode	Altitude, ft (m)	10,000 (3000) (See Note 2)	
Over current Protection	Double pole single throw circuit breaker rated 15 A for input and output, DC bus 60 A breaker	Inverter Mode	220/230/240 VAC +/- 5%	Inverter Mode Current Limit	Continuous electronic current limit is provided	MECHANICAL		
Transient Suppression	MOV transient suppression elements (>150 V)	Frequency, Hz	60 +/- 0.4 Hz	Measurements available for remote monitoring	- Input and output voltages - Input line frequency - Battery voltage and current - Battery and heat sink temp	PB2000-E Dimensions (WxDxH) inch/mm	W: 17 / 432 19 / 483 w/flange D: 10.5 / 267 H: 5.25 / 133	
Step Load Response (50% Load Change)	1 Cycle Full Recovery (Full resistive load)	Transformer	Linear (non-isolated)	NOTES: 1. Between 55° and 74°C, the unit is de-rated to a maximum rectified-capacitive load of 1,500VA / 1,200W 2. De-rate operating temperature above 4,900 ft (1,500 mts) by 2°C per each additional 1,000 ft (300m).				
Short Circuit Protection	15 A Circuit Breaker	Output Waveform	Sine Wave	CONTROL TERMINAL BLOCK				
Battery String Voltage, VDC	48 (Four 12VDC Batteries)	Output Waveform THD	<3% (Resistive Load)	A. Provides 6 sets of programmable contacts at pin 1 thru pin 18 for intersection flash control, Remote Alarms, Pagers or other user interface. 1. "Low Batt": batteries have reached approximately 40% capacity remaining 2. "On Batt": unit is in inverter mode 3. "Timer": unit has been in inverter mode for 2 hours (programmable) 4. "Alarm": any of the following conditions occur: Line Frequency error, low Output voltage, no Temperature Probe, overload, no battery connected, high temperature, low temperature. 5. "Fault": any of the following conditions occur: short circuit, Batt low voltage, Batt high voltage, high temperature, overload. B. Provides 48 VDC signal to PTS on pins 21 & 22 C. Triggers self-test by momentarily shorting pin 19 & 20 with less than 100 ohm				
		Load Crest Factor	3:1 (Max)	Contact Type				Form C. Dry contacts rated 1 Amp at 240V
		Overload Capacity	110% for 3 min.	Wiring				Uses 14-26 AWG

COMMUNICATIONS

RS-232 / USB / Ethernet ports	Monitors, controls with terminal emulation software
RS-232	DB-9, Female, Opto-Isolated, straight-thru cable
USB	B-Type receptacle
SNMP (optional)	10/100 Mbps Ethernet, auto-detected
Ethernet (optional)	10/100 Mbps Ethernet, auto-detected
Display Panel	2-line LCD

PERFORMANCE

Transfer Time Controller	4 to 10 ms
PTS	<30 ms
TOTAL	<65 ms
Efficiency, Line Mode	>95% (Resistive Load)
Efficiency, Inverter Mode	>80% (Resistive Load)

CERTIFICATIONS AND APPROVALS

Electrical Safety	UL-1778, CSA-107.1, UL-1950
EMI	FCC Class A
Surge Immunity	Tested to: IEC 1000-4-5, IEEE C62.41

About Peek Traffic Corporation – Peek's heritage goes back over 120 years, covering a broad range of quality turnkey traffic control products and services. Throughout the years, Peek's products have helped to make motorists around the world safer and their travels more pleasant and efficient. This expertise, experience, and breadth of product lines has made Peek one of the most respected and recognized leaders in the traffic control marketplace.

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