Powerware BPII HE/BPII-S HE

Harsh Environment UPS 10-40 kVA

Features

Standard Features

- 120VDC input/output
- Input/output isolation transformers
- 50°C operation
- Coated boards
- Harsh Environment enclosure
- Internal maintenance bypass

Optional Features

- High inrush inverter
- Heavy-duty rectifier
- Input filter (10%)
- Blocking diodes
- Air filters
- High KAIC breakers
- DC ground fault sensing

BPII HE Models:
10 kVA/8 kw
20 kVA/16 kw
30 kVA/24 kw
40 kVA/32 kw

BPII-S HE Models:
15 kVA/12 kw
30 kVA/24 kw

Particularly harsh industrial environments have unique requirements to ensure the nonstop availability of power to their critical applications. Whether it's transportation, process control, or remote sites, these applications face temperature fluctuations, corrosive conditions, moisture and other harsh factors that can affect UPS operation.

The IPM BPII HE features a rugged design and advanced capabilities, such as generator compatibility, protection from harsh environment, communications, and battery management, to ensure reliable operation in the most extreme environments.

120VDC UPS applications

In industrial environments, many critical loads require a source of 120VDC power. This may include circuit breaker and switching controls, electrically actuated valves, DC motors and many other types of loads. The BPII HE features a 120VDC link that can be used with an existing battery to supply a secure source of AC power. This eliminates the need for the large battery and rectifier bank that are typically required in these applications, saving both money and space. The BPII HE also offers substantial cost savings over higher voltage systems in critical applications requiring 20-year warranted lead-acid or nickel-cadmium batteries. In addition, the BPII HE's 120VDC link delivers overall reliability since the number of components required is reduced.

Specifications

ENVIRONMENTAL	
Ambient Temperature*	
Operating	0°C to 40°C without derating, 20% derating at 50°C
Relative Humidity	Non-condensing Up to 95%
Accoustical Noise	65 dB 'A' scale @ 1 meter, in accordance with ISO 7179
Altitude	
Operating	5,000 feet
MECHANICAL	
Dimensions	
Width	48 inches
Depth	32 inches
Height	72 inches

** Battery warranty is conditional upon application at or below 24°C (75°F). Continuous operation above 25°C (75°F) may reduce or void battery warranty (see battery warranty).*

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Specifications

ELECTRICAL INPUT	
Voltage:	
Configuration	3-phase, 3 wire plus ground
Range	Nominal +10%, -15%
Frequency Range	Nominal ±3 Hz continuous, ±5 Hz transient
Power Factor with Filter	0.8 lagging typical at full load and nominal conditions
Power Walk-In	15 seconds to full load
Input Current Distortion with Filter	10% THD under nominal conditions
Transient Protection	ANSI C62.41

This data sheet provides specification information unique to this rating. The specifications reflect operation in a controlled test environment. Performance may vary under actual operating conditions. Specifications are subject to change without notice.

ELECTRICAL OUTPUT	ALL PHASES
Voltage:	
Configurations	**3-phase:** 3 or 4 wire plus ground; **1-phase:** 2 wire plus ground
Steady State Regulation	±1% from nominal for the combined effects of minimum to maximum AC input voltage, zero to full rated load and maximum to minimum DC voltage
Dynamic Load Regulation	±3% from nominal for 100% step load recovering to within 1% in 1 cycle
Harmonic Distortion	4% THD at 100% non-linear load
Unbalanced Regulation	±1% for 100% load unbalance
Overload (Inverter)	125% for 15 minutes, 150% for 1 minute
Frequency	±0.01 Hz free running
Slew Rate	0.1 to 1 Hz per second (selectable)

INDUSTRIAL SERIES SYSTEM DATA

	BPII HE 10 10 kVA/8 kW			BPII HE 20 20 kVA/16 kW			BPII HE 30 30 kVA/24 kW			BPII HE 40 40 kVA/32 kW			BPII-S HE 15 15 kVA/12 kW		BPII-S HE 30 30 kVA/24 kW	
Input Power Factor	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
AC INPUT																
Input Voltage (VAC)	208	480	480	208	480	480	208	480	480	208	480	480	208	480	208	480
Input Frequency (Hz)	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
Nominal Current (Amps)	34	15	15	68	29	29	102	44	44	136	59	59	51	22	100	44
Max. Current (Amps)	43	19	19	85	36	36	128	55	55	170	74	74	64	28	128	55
AC OUTPUT																
Output Voltage (VAC)	208	208	480	208	208	480	208	208	480	208	208	480	120	120	120	120
Output Frequency (Hz)	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
Nominal Current (Amps)	28	28	12	56	56	24	83	83	36	111	111	48	125	125	250	250
15 Minutes Max (Amps)	35	35	15	70	70	30	104	104	45	139	139	60	156	156	313	313
BYPASS INPUT																
Nominal Current (Amps)	28	28	12	56	56	24	83	83	36	111	111	48	125	125	250	250
DC LINK																
Nominal Voltage (VDC)	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120
Float Voltage (VDC)	135	135	135	135	135	135	135	135	135	135	135	135	135	135	135	135
End of Discharge (VDC)	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99
Avail.Rect.Current @135 V (Amps)	86	88	88	170	167	167	257	254	254	341	342	342	128	130	251	254
Maximum Current (99 VDC)	90	90	90	176	178	178	266	266	266	351	351	351	135	135	266	266
MECHANICAL SPECIFICATIONS																
Installed Weight (lbs)	1550	1550	1550	1700	1700	1700	1800	1800	1800	2050	2050	2050	1800	1800	2050	2050
(kg)	704	704	704	772	772	772	817	817	817	930	930	930	930	930	930	930
SYSTEM EFFICIENCIES																
100% Load	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.83	0.83
75% Load	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
50% Load	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Inverter DC-AC (%)	0.9	0.9	0.9	0.91	0.91	0.91	0.91	0.91	0.91	0.92	0.92	0.92	0.9	0.9	0.91	0.91
FULL LOAD HEAT DISSIPATION																
BTU/hr. (x 1000)	6.01	6.01	6.01	8.98	8.98	11.98	17.99	17.99	17.99	23.96	23.96	23.96	8.98	8.988	16.79	16.79
Watts (x 1000)	1.76	1.76	1.76	2.63	2.63	3.51	5.27	5.27	5.27	7.02	7.02	7.02	2.63	2.63	4.92	4.92

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