



## **OPP Series On-Line UPS**

# OPP Series On-Line UPS



## OPP Series

- True On-Line UPS
- Rack-Mount/Standalone Format
- Universal Battery Design (Patent Pending)
- Dual Mains Input
- Dual Position Backlit LCD
- LCD Load Segment Control 2.5 kVA & 3 kVA
- Optional 10 Year Batteries

## Specification

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### Input

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- Input Voltage (full load without using battery)
  - 115 VAC version: 80-138 VAC
  - 208 VAC version: 176-276 VAC
  - 230 VAC version: 176-276 VAC
- Input Frequency
  - 46-64 Hz
- Input Power Factor
  - >0.98 at full load
- Input Protection
  - Fuse/breaker. See notes next page

### Output

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- Output Voltage
  - 115 VAC nominal - 100/110/115/120 VAC selectable
  - 208 VAC nominal - 208/220/230/240 VAC selectable
  - 230 VAC nominal - 208/220/230/240 VAC selectable
- Output Regulation
  - $\pm 2$  of nominal
- Output Waveform
  - Sine wave
- Output THD
  - 3%, linear load
- Crest Factor
  - 3:1
- Output Protection
  - Electronic overload protection (ultimately by fuse/breaker)
- Efficiency (AC-AC)
  - 86% up to 1.5 kVA, 90% up to 6 kVA
- Overload Capacity
  - See overload characteristics
- Output Frequency
  - 50/60 Hz dependent on input

### Battery

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- Internal Battery Type
  - VRLA 5 year design life. For 10 year option add suffix 'X' to model number
- Battery Replacement
  - Hot-swap all models
- Recharge
  - <4 hours to 90%, standard battery only
- Battery String Voltage
  - 48 VDC up to 1.5 kVA
  - 96 VDC 2.5 kVA to 3 kVA
  - 192 VDC 4 kVA to 6 kVA
- Autonomy
  - See tables
- Battery Module
  - 2 x 48 VDC OPP BP per battery module (BM)
- Temperature
  - Autonomy, recharge and battery life based on 25 °C ambient

### General

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- Input Receptacles
  - See rear panel drawings
- Output Receptacles
  - See rear panel drawings
- Display/Alarm
  - Front panel LCD menu-driven, audible alarms. See front panel layout
- Interface (Rear Panel)
  - 1 x RS232 and 1 x USB (fitted in option slot)
- Software
  - Supplied bundled to support Windows 95, 98, ME, 2000, XP & NT
- Fitted Fuse/Breaker Ratings
  - OPP1000/OPP1500 - 10A
  - OPP2500/OPP3000 - 15 A
  - OPP4000-OPP6000 - 30 A
  - OPP1500L CE - 15 A
  - OPP1500L - 15 A
  - OPP3000L (208 VAC) - 15 A
  - OPP3000L120 - 30 A
  - OPP6000L - 32 A
- REPO
  - Remote emergency power off, must be fitted for unit to function. Connector on rear of unit. Remove link to shut down output in AC mode or shut down unit in battery mode

### Environmental

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- Operating Temperature
  - 0 °C to +40 °C
  - -15 °C to +50 °C
- Storage Temperature
  - 0-95% RH, non-condensing
- Operating Humidity
  - 3000 m without derating
- Operating Altitude
  - <45 dBA at 1 metre
- Acoustic Noise
  - IP20
- Ingress

### EMC & Safety

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- Emissions
  - EN55022 level B
  - EN50091-2, level B
  - FCC Class B
- ESD Immunity
  - EN61000-4-2, level 3
- Radiated Immunity
  - EN61000-4-3, level 2
  - EN61000-4-4, level 2
- EFT/Burst
  - EN61000-4-5, level 3
- Surge
  - EN50091-1-1, EN60240-1-1, EN60950, CEL versions: UL1778
- Safety Approvals

## RUN TIME CHART FOR 1000VA – 3000VA

### RUN TIME CHART (IN MINUTES)

UPS Model	Autonomy vs Load								
	200 VA (140 W)	400 VA (280 W)	600 VA (420 W)	800 VA (560 W)	1000 VA (700 W)	1500 VA (1050 W)	2000 VA (1400 W)	2500 VA (1750 W)	3000 VA (2100 W)
OPP1000	59	32	18	12	8				
+1BM	260	134	83	58	50				
+2BM	466	247	166	124	91				
+3BM	-	358	250	183	146				
OPP1500	63	34	19	13	9	5			
+1BM	274	142	88	62	53	31			
+2BM	491	260	175	131	96	60			
+3BM	-	377	264	193	154	92			
OPP2500	167	85	59	47	34	15	9	6	
+1BM	371	212	152	107	78	46	29	20	
+2BM	589	337	244	179	144	66	54	41	
+3BM	-	478	334	255	198	104	68	58	
OPP3000	140	66	51	38	26	15	10	6	5
+1BM	313	175	121	88	63	46	29	21	16
+2BM	-	285	196	153	118	67	54	42	31
+3BM	-	391	280	211	169	106	69	59	49

## RUN TIME CHART FOR 4000VA – 6000VA

<b>RUN TIME CHART (IN MINUTES)</b>												
UPS Model	Autonomy vs Load											
	200 VA (140 W)	400 VA (280 W)	600 VA (420 W)	800 VA (560 W)	1000 VA (700 W)	1500 VA (1050 W)	2000 VA (1400 W)	2500 VA (1750 W)	3000 VA (2100 W)	4000 VA (2800 W)	5000 VA (3500 W)	6000 VA (4200 W)
CEP4000	-	130	88	63	54	37	23	16	13	8		
+2BM	-	290	214	166	137	84	57	50	40	26		
+4BM	-	467	339	269	221	149	104	76	60	48		
+6BM	-	-	479	374	305	208	151	119	93	61		
CEP5000	-	133	90	65	56	38	24	17	13	8	6	
+2BM	-	297	219	170	140	86	59	51	41	26	19	
+4BM	-	477	346	275	226	152	106	78	61	49	37	
+6BM	-	-	489	382	311	212	154	121	96	62	54	
CEP6000	-	140	95	68	59	40	25	18	14	9	6	5
+2BM	-	313	231	179	148	91	62	54	44	28	20	15
+4BM	-	503	365	290	238	161	112	82	65	52	39	28
+6BM	-	-	515	403	328	224	163	128	101	66	57	46

## OPP Dimensions

<b>DIMENSIONS &amp; WEIGHTS</b>			
Model Number	Dimensions		
	Height	Depth	Width
OPP 1000	88.9 mm	510 mm	426 mm
OPP 1500	88.9 mm	510 mm	426 mm
OPP 2500	177.8 mm	510 mm	426 mm
OPP 3000	177.8 mm	510 mm	426 mm
OPP 4000	355.6 mm	510 mm	426 mm
OPP 5000	355.6 mm	510 mm	426 mm
OPP 6000	355.6 mm	510 mm	426 mm
OPP BATT MODULE	88.9 mm	510 mm	426 mm
OPP BATT PACK	-	-	-

## OPP Weights

<b>WEIGHTS</b>	<b>OPP</b>
Model Number	Weight (Total kg)
<b>OPP 1000</b>	22 kg (22)
<b>OPP 1500</b>	22 kg (22)
<b>OPP 2500</b>	20+28 kg (48)
<b>OPP 3000</b>	20+28 kg (48)
<b>OPP 4000</b>	28+28+28 kg (84)
<b>OPP 5000</b>	28+28+28 kg (84)
<b>OPP 6000</b>	28+28+28 kg (84)
<b>OPP BATT MODULE</b>	4+12+12 kg (28)
<b>OPP BATT PACK</b>	12 kg (12)