

## UNITY 1® Three Phase Uninterruptible Power Systems

10kVA/kW to 220kVA/kW

Superior three-phase power protection at lowest life cycle costs

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### Superior Design

Typical three-phase UPSs are constantly converting power twice – AC to DC, then DC to AC. Their two power modules run continuously, consuming large amounts of energy. Patented UNITY/I Three-Phase systems employ only one power module and perform only a single power conversion. This single-conversion design generates less heat, consumes less energy, and costs much less to operate.

### Up to 97% Efficient

UNITY/I Three-Phase systems are so efficient that they can pay for themselves within a few years. They use as little as three percent of incoming power (rather than the 10 or 15% of double-conversion designs). This big edge in efficiency can mean thousands of dollars saved each year.

### Performance That Excels

Whenever power fails, reliable UNITY/I Three-Phase protection prevents interruptions or changes in the steady sine-wave power your equipment receives. Unlike a double-conversion system, a UNITY/I Three-Phase system draws a clean sinusoidal current. With no rectifier to produce harmful input current distortion, this system requires no costly filtering. Connected generators are not required to be three to five times oversized.



### Proven Reliability

UNITY/I Three-Phase systems offer an ideal solution across a wide spectrum of applications. The systems are kW-rated and therefore can protect power-factor corrected, kW-rated equipment without oversizing. UPSs that are kVA-rated must be derated for kW-rated applications. UNITY/I Three-Phase supports and protects many kinds of loads, including 100% unbalanced loads, high-crest factor computers, and large industrial motors.

### Easy System Expansion

UNITY/I Three-Phase units can be easily connected in parallel. This makes enlarging capacity or adding redundancy much simpler and more economical than with most other UPSs. Loads as large as 1980kW can be protected by connecting up to nine units.

# UNITY 1® Three Phase Spec Details

10kVA/kW to 220kVA/kW

Models	10kVA	15kVA	20kVA	30kVA
<b>Part Number</b>	UT310	UT315	UT320	UT330
<b>Capacity</b> VA Watts	10kVA 10kW	15kVA 15kW	20kVA 20kW	30kVA 30kW
<b>Dimensions (HxWxD)</b> inches mm	59.1 x 24 x 31.5 1500 x 600 x 800		59.1 x 39.4 x 31.5 1500 x 1000 x 800	
<b>Runtime</b> W/internal batteries*	16/30	9/15	12/16/30	9/15
<b>Weight w/internal batteries</b> lbs kg	1111/1331 504/604	1237/1464 561/664	1748/1882/2317 593/859/1053	2112/2438 958/1106
<b>Weight without batteries</b> lbs kg	749 340	901 409	1176 534	1330 604
<b>Operation</b>				
<b>Input and Output Voltage</b>	208Y/208 and 480Y/480			
<b>Input Voltage Range</b> Utility Bypass	+ 10%, -15% programmable (+ 15%, -20% maximum ±10% programmable			
<b>Output Voltage Range</b>	100% static symmetrical, ±1%; 100% static asymmetrical, ±3%, 0 to 100% load step, ±5%			
<b>Input Frequency</b>	60 Hz ±6% programmable			
<b>Output Frequency</b>	60 Hz (utility synchronized) ±0.1% free running			
<b>DC Voltage</b>	216VDC			360VDC
<b>Efficiency AC to AC</b> Normal Mode Economy Mode	93% 95%	93% 95%	94% 96%	94% 96%
<b>Typical Losses (kW)</b> Normal Mode (.8PF load) Economy Mode (.8PF load)	0.6 0.42	0.9 0.63	1.02 0.67	1.5 1.0
<b>Surge Protection</b>	Meets IEEE 587/ANSIC62.41-91			
<b>EMI Suppression</b>	FCC Part 15 Sub Part J Class A			
<b>Autostart</b>	Programmable			
<b>Agency Approvals</b>	UL 1778/CSA ©22.2 #107.1; UL and cUL (Canada) listed; CE compliant			
<b>Load Power Factor</b>	0.9 leading to 0.4 lagging			
<b>Harmonic Distortion</b>	Input 5% or less; output maximum 3% linear load			
<b>Transient Attenuation</b>	Differential mode - 60 to 80dB; common mode 120dB			Differential mode - 60 to 80dB; common mode 40 to 80dB
<b>Overload Capacity</b>	Utility operation - 250% for one min., 150% for 10 min.; battery operation - 150% for one min., 125% for 10 min.			
<b>Environmental</b>				
<b>UPS Operating Temperature</b>	0f to 40f C (32f to 104f F)			
<b>UPS Storage Temperature</b>	-20f to 70f C (-4f to 122f F)			
<b>Relative Humidity</b>	0 to 95%, non-condensing			
<b>Altitude</b>	Up to 3300 feet (1000 meters). Derate temperature for hig her elevation.			
<b>Audible Noise at one meter</b>	57dB	65dB		
<b>All specifications subject to change without notice.</b>				

\*Additional runtimes available. Contact factory.

## Spec Details Cont'd

Models	40kVA	60kVA	80kVA	100kVA	120kVA	160kVA	220kVA
<b>Part Number</b>	UT340	UT360	UT380	UT3100	UT3120	UT1640	UT3220
<b>Capacity</b> VA Watts	40kVA 40kW	60kVA 60kW	80kVA 80kW	100kVA 100kW	120kVA 120kW	160kVA 160kW	220kVA 220kW
<b>Dimensions (HxWxD)</b> inches mm	59.1 x 39.4 x 31.5 1500 x 1000 x 800				74.8 x 63 x 31.5 1900 x 1600 x 800		
<b>Runtime</b> W/internal batteries*	N/A						
<b>Weight</b> w/internal batteries lbs kg	N/A						
<b>Weight</b> without batteries lbs kg	1798 815	2214 1005	2479 1125	2688 1220	3729 1692	4831 2192	5493 2492
<b>Operation</b>							
<b>Input and Output Voltage</b>	208Y/208 and 480Y/480				480Y/480		
<b>Input Voltage Range</b> Utility Bypass	+10%, -15% programmable (+15%, -20% maximum ±10% programmable)						
<b>Output Voltage Range</b>	100% static symmetrical, ±1%; 100% static asymmetrical, ±3%, 0 to 100% load step, ±5%						
<b>Input Frequency</b>	60 Hz ±6% programmable						
<b>Output Frequency</b>	60 Hz (utility synchronized) ±0.1% free running						
<b>DC Voltage</b>	216VDC		360VDC		408VDC		
<b>Efficiency AC to AC</b> Normal Mode Economy Mode	95% 96%	95% 97%	96% 97%	96% 97%	96% 97%	96% 97%	96% 97%
<b>Typical Losses (kW)</b> Normal Mode (.8PF load) Economy Mode (.8PF load)	1.68 1.33	2.53 1.48	2.67 1.98	3.3 2.47	4.0 2.97	5.33 3.96	7.33 5.44
<b>Surge Protection</b>	Meets IEEE 587/ANSIC62.41-91						
<b>EMI Suppression</b>	FCC Part 15 Sub Part J Class A						
<b>Autostart</b>	Programmable						
<b>Agency Approvals</b>	UL 1778/CSA ©22.2 #107.1; UL and cUL (Canada) listed; CE compliant						
<b>Load Power Factor</b>	0.9 leading to 0.4 lagging						
<b>Harmonic Distortion</b>	Input 5% or less; output maximum 3% linear load						
<b>Transient Attenuation</b>	Differential mode - 60 to 80dB; common mode 120dB		Differential mode - 60 to 80dB; common mode 40 to 80dB				
<b>Overload Capacity</b>	Utility operation - 250% for one min, 150% for 10 min.; battery operation - 150% for one min., 125% for 10 min.						
<b>Environmental</b>							
<b>UPS Operating Temperature</b>	0° to 40° C (32° to 104° F)						
<b>UPS Storage Temperature</b>	-20° to 70° C (-4° to 122° F)						
<b>Relative Humidity</b>	0 to 95%, non-condensing						
<b>Altitude</b>	Up to 3300 feet (1000 meters). Derate temperature for higher elevation.						
<b>Audible Noise at one meter</b>	65dB				73dB		
<b>All specifications subject to change without notice.</b>							