

**Standard Run-Time Models****GENERAL**

Rated Capacity: 600VA, 1000 VA, 1500 VA, 2000 VA, 3000 VA with a power factor of 0.6  
Technology: Line-interactive topology with true sinewave output on battery

**INPUT**

Phase: Single phase plus ground  
Input Voltages: 110V, 115V, 120V or 220V, 230V, 240V  
Input Voltage Range:  $\pm 25\%$   
Frequency: 50 / 60 Hz auto sensing  
AC Frequency Range: 45 - 65 Hz  
Input Current (120V): 600VA - 5A, 1000VA - 8.2A, 1500VA - 12.4A, 2000VA - 16.5A, 3000VA - 25A  
Input Current (230V): 600VA - 2.6A, 1000VA - 4.4A, 1500VA - 6.5A, 2000VA - 8.7A, 3000VA - 13A  
Input Protection: Fuse or circuit breaker for overload and short circuit (model dependent)  
DC Bus Voltage: 600VA - 24V, 1000VA - 24V, 1500VA - 36V, 2000VA - 48V, 3000VA - 96V

**OUTPUT**

Output Voltage: 110V, 115V, 120V or 220V, 230V, 240V  
Voltage Regulation:  $\pm 5\%$  (600VA - 3000VA)  
Voltage Distortion:  $< 3\%$  THD with linear loads  
Frequency Regulation:  $\pm 0.5\%$  (while on battery)  
Automatic Voltage Regulation: Increases or decreases output voltage by 15% if the input voltage decreases or increases by between 9% and 25%  
Transfer Time: Typically 4 milliseconds  
Efficiency (Standby Mode): Greater than 95%  
Overload Capacity: 110% for 20 seconds, 125% for 5 seconds

**Extended Run-Time Models****GENERAL**

Rated power: 1000 VA, 1500 VA, 2000 VA, 3000 VA with a power factor of 0.6  
Technology: Line-interactive topology with true sinewave output on battery

**INPUT**

Phase: Single phase plus ground  
Input Voltages: 110V, 115V, 120V or 220V, 230V, 240V  
Input Voltage Range:  $\pm 25\%$   
Frequency: 50 / 60 Hz auto-sensing  
AC Frequency Range: 45 - 65 Hz  
Input Current (120V): 1000VA - 8.2A, 1500VA - 12.4A, 2000VA - 16.5A, 3000VA - 25A  
Input Current (230V): 1000VA - 4.4A, 1500VA - 6.5A, 2000VA - 8.7A, 3000VA - 13A  
Input Protection: Fuse or circuit breaker for overload and short circuit (model dependent)  
DC Bus Voltage: 1000VA - 24V, 1500VA - 36V, 2000VA - 48V, 3000VA - 48V

**OUTPUT**

Output Voltage: 110V, 115V, 120V or 220V, 230V, 240V  
Voltage Regulation:  $\pm 5\%$  (1000VA - 3000VA)  
Voltage Distortion:  $< 3\%$  THD with linear loads  
Frequency Regulation:  $\pm 0.5\%$  (while on battery)  
Automatic Voltage Regulation: Increases or decreases output voltage by 15% if the input voltage decreases or increases by between 9% and 25%  
Transfer Time: Typically 4 milliseconds  
Efficiency (Standby Mode): Greater than 95%  
Overload Capacity: 110% for 20 seconds, 125% for 5 seconds

**All Models****ALARMS AND INDICATORS**

Battery Backup:	Slow beeping tone (approx. 0.25Hz)
Battery Low:	Rapid beeping tone (approx. 1.00Hz)
Overload:	Continuous tone
Front Panel Display:	LED on standard runtime models and LED or LCD on extended runtime models
Display Parameters (LED):	On Line (AC normal), On Battery (AC failure), AVR Boost, AVR Buck, Overload, Battery Capacity/Level (%), Load Level (%)
Display Parameters (LCD):	Input voltage, Output voltage, Input Frequency, Output Frequency, Load (%), Internal Temperature (°C)
Communication (std): (optional):	RS-232 bi-directional communication port and solid state signaling SNMP/WEB card for monitoring and control on a network or the internet, USB

**STANDARDS**

Safety:	EN50091-1-1
Emissions:	EN50091-2 class B
Immunity:	EN50091-2
Conformity:	UL 1778, cUL 107.1, 107.2, (120V models), CE (230V Models)
Transient Immunity (120V):	Per IEEE 62.41 (formerly IEEE 587)
Transient Immunity (230V):	Per IEEE C 61000-4-5 level 3

**ENVIRONMENTAL**

Ambient temperature range:	+32 °F to +104°F (+0 °C to +40 °C)
Optimum temperature range:	+59 °F to +77°F (+15 °C to +25 °C)
Storage temperature:	+5 °F to +122°F (-15 °C to +50 °C)
Cooling:	Forced air cooling
Humidity:	0-95%, non-condensing
Elevation:	10,000 feet max (operation), 45,000 feet (storage)
Audible noise:	< 40 db normal and battery mode (600-1000 VA models) < 45 db normal and battery mode (1500-3000 VA models)

**MODEL & PART NUMBER DESIGNATION - Standard Run-Time Models**

120V Tower Models:	TTWS-0600-01, TTWS-1000-01, TTWS-1500-01, TTWS-2000-01, TTWS-3000-01
230V Tower Models:	TTWS-0600-02, TTWS-1000-02, TTWS-1500-02, TTWS-2000-02, TTWS-3000-02
120V Rack-Mount Models:	TRMS-0600-01, TRMS-1000-01, TRMS-1500-01, TRMS-2000-01,
230V Rack-Mount Models:	TRMS-0600-02, TRMS-1000-02, TRMS-1500-02, TRMS-2000-02,

**MODEL & PART NUMBER DESIGNATION - Extended Run-Time Models**

120V Tower Models:	TTWE-1000-01, TTWE-1500-01, TTWE-2000-01, TTWE-3000-01
230V Tower Models:	TTWE-1000-02, TTWE-1500-02, TTWE-2000-02, TTWE-3000-02
120V Rack-Mount Models:	TRME-1000-01, TRME-1500-01, TRME-2000-01, TRME-3000-01
230V Rack-Mount Models:	TRME-1000-02, TRME-1500-02, TRME-2000-02, TRME-3000-02

**Standard Run-Time Tower Models**

Capacity	600VA / 360 W	1000VA / 600 W	1500VA / 900 W	2000VA / 1200 W	3000VA / 1800 W
Input Connection	Fixed power cord				Hardwire terminals
Output Connection	4 x NEMA 5-15R		6 x NEMA 5-15R		H/W + 4 x NEMA
Battery Type & Rating	Sealed, lead-acid 7.2Ah/12V	Sealed, lead-acid 7.2Ah/12V	Sealed, lead-acid 7.2Ah/12V	Sealed, lead-acid 7.2Ah/12V	Sealed, lead-acid 7.2Ah/12V
Battery Quantity	2	2	3	4	8
Backup time (full load)	9 min	5 min	5 min	5 min	5 min
Recharge time	<4 hours to 90%				
Dimensions ins/mm W x D x H	5.6 x 17.2 x 8.3 140 x 436 x 210		6.7 x 17.8 x 8.9 170 x 450 x 226		
Weight lbs/kg (net)	31 / 14	33 / 15	56 / 25	66 / 30	20 / 44 † 57 / 26**

†Electronics Module  
\*\*Battery Module

**Standard Run-Time 19" Rack-mount Models (3U)**

Capacity	600VA / 360W	1000VA / 600 W	1500VA / 900 W	2000VA / 1200 W
Input Connection	Removable IEC power cord or fixed power cord			
Output Connection	4 x NEMA 5-15R			
Battery Type & Rating	Sealed, lead-acid 7.2Ah/12V	Sealed, lead-acid 7.2Ah/12V	Sealed, lead-acid 7.2Ah/12V	Sealed, lead-acid 7.2Ah/12V
Battery Quantity	2	2	3	4
Backup time (full load)	9 min	5 min	5 min	5 min
Recharge time	<8 hours to 90%			
Dimensions ins/mm W x D x H	19 x 15 x 5.2 485 x 381 x 130			
Weight lbs/kg (net)	38 / 17.3	44 / 20	55 / 25	61.6 / 28

**Standard Run-Time 19" Rack-mount Models (2U)**

Capacity	600VA / 360W	1000VA / 600 W	1500VA / 900 W	2000VA / 1200 W
Input Connection	Removable IEC power cord or fixed power cord			
Output Connection	6 x NEMA 5-15R			
Battery Type & Rating	Sealed, lead-acid 7.2Ah/12V	Sealed, lead-acid 7.2Ah/12V	Sealed, lead-acid 7.2Ah/12V	Sealed, lead-acid 7.2Ah/12V
Battery Quantity	2	2	3	4
Backup time (full load)	9 min	5 min	5 min	5 min
Recharge time	<8 hours to 90%			
Dimensions ins/mm W x D x H	19 x 16.9 x 3.3 485 x 430 x 84			19 x 24.2 x 3.3 485 x 615 x 84
Weight lbs/kg (net)	38 / 17.3	44 / 20	55 / 25	95 / 43.2

**Extended Run-Time Tower Models**

Capacity	1000VA / 600 W	1500VA / 900 W	2000VA / 1200 W	3000VA / 1800 W
Input Connection	Fixed power cord			Hardwire terminals
Output Connection	6 x NEMA 5-15R			H/W + 6 x NEMA 5-15R
Battery Type & Rating	Sealed, lead-acid 7.2Ah/12V	Sealed, lead-acid 17Ah/12V	Sealed, lead-acid 17Ah/12V	Sealed, lead-acid 17Ah/12V
Battery Quantity	4	3	4	4
Backup time (full load)	10 min	15 min	15 min	10 min
Recharge time	4 - 8 hours to 90% depending on variable charger setting			
Dimensions ins/mm W x D x H	6.7 x 17.7 x 8.8 170 x 450 x 224	6.7 x 18.9 x 16.9 170 x 480 x 430		6.7 x 21.6 x 16.9 170 x 550 x 430
Weight lbs/kg (net)	50 / 22.7	90 / 41	110 / 50	125 / 57

**Extended Run-Time 19" Rack-mount Models**

Capacity	1000VA / 600W	1500VA / 900 W	2000VA / 1200 W	3000VA / 1800 W
Input Connection	Fixed power cord			Hardwire terminals
Output Connection	4 x NEMA 5-15R			H/W + 6 x NEMA 5-15R
Battery Type & Rating	Sealed, lead-acid 7.2Ah/12V	Sealed, lead-acid 8.5Ah/12V	Sealed, lead-acid 8.5Ah/12V	Sealed, lead-acid 12Ah/12V
Battery Quantity	4	3	4	4
Backup time (full load)	10 min	8 min	8 min	7 min
Recharge time	4 - 8 hours to 90% depending on variable charger setting			
Dimensions ins/mm W x D x H	19 x 22 x 5.2 485 x 560 x 130			19 x 22 x 7 485 x 560 x 178
Weight lbs/kg (net)	52 / 24	61 / 28	69 / 32	113 / 51