

Standard Run-Time Models**GENERAL**

Rated Capacity: 600VA, 1000VA, 1500VA, 2000VA, 3000VA 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: models Display Parameters (LED):	LED on standard runtime models and LED or LCD on extended runtime 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:	< 40db normal and battery mode (600-1000 VA models) < 45db 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 Compact Tower Models:	TTWC-1000-01, TTWC-1250-01, TTWC-1500-01, TTWC-2000-01
230V Compact Tower Models:	TTWC-1000-02, TTWC-1250-02, TTWC-1500-02, TTWC-2000-02
120V Rack-Mount Models(3U):	TRMS-0600-01, TRMS-1000-01, TRMS-1500-01, TRMS-2000-01
230V Rack-Mount Models(3U):	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

Model Number	TTWS-0600-01	TTWS-1000-01	TTWS-1500-01	TTWS-2000-01	TTWS-3000-01
Capacity	600VA 360W	1000VA 600W	1500VA 900W	2000VA 1200W	3000VA 1800W
Input Connection	Detached power cord		Detached power cord		
Input Plug	NEMA 5-15P			NEMA 5-20P	NEMA L5-30P
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 in / 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	31 / 14	33 / 15	56 / 25	66 / 30	20 / 44 * 57 / 26**

*Electronics Module
**Battery Module

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

Model Number	TRMS-0600-01	TRMS-1000-01	TRMS-1500-01	TRMS-2000-01
Capacity	600VA 360W	1000VA 600W	1500VA 900W	2000VA 1200W
Input Connection	Detached power cord		Detached power cord	
Input Plug	NEMA 5-15P			
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 in / mm W x D x H	19 x 15 x 5.2 485 x 381 x 130			
Weight lbs. / kg	38 / 17.3	44 / 20	55 / 25	61.6 / 28

Standard Run-Time Compact Models

Model Number	TTWC-1000-01	TTWC-1250-01	TTWC-1500-01	TTWC-2000-01
Capacity	1000VA 600W	1250VA 750W	1500VA 900W	2000VA 1200W
Input Connection	6ft Detachable power cord			
Input Plug	NEMA 5-15P			
Output Connection	8 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 9Ah/12V
Battery Quantity	2	2	2	2
Backup Time (full load)	3min	2min	1min	1min
Recharge Time	< 4 hours to 90%			
Dimensions in / mm W x D x H	5.5 x 15 x 8.3 140 x 380 x 210			
Weight lbs. / kg	29.5/13.4	29.7/13.5	31.3/14.2	32.8/14.9

Extended Run-Time Tower Models

Model Number	TTWE-1000-01	TTWE-1500-01	TTWE-2000-01	TTWE-3000-01
Capacity	1000VA 600W	1500VA 900W	2000VA 1200W	3000VA 1800W
Input Connection	Attached Power Cord		Hardwire Terminal Block	
Input Plug	NEMA 5-15P		N/A	
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 in / 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	50 / 22.7	90 / 41	110 / 50	125 / 57

Extended Run-Time 19" Rack-Mount Models

Model Number	TRME-1000-01	TRME-1500-01	TRME-2000-01	TRME-3000-01
Capacity	1000VA 600W	1500VA 900W	2000VA 1200W	3000VA 1800W
Input Connection	Attached Power Cord		Hardwire Terminal Block	
Input Plug	NEMA 5-15P		N/A	
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 in /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	52 / 24	61 / 28	69 / 32	113 / 51