

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: | 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: | < 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, TTWC-3000-01 |
| 230V Compact Tower Models: | TTWC-1000-02, TTWC-1250-02, TTWC-1500-02, TTWC-2000-02, TTWC-3000-02 |
| 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 |
| 120 V Rack-Mount Models (2U): | TRMU-0600-01, TRMU-1000-01, TRMU-1500-01, TRMU-2000-01 |
| 230V Rack-Mount Models (2U): | TRMU-0600-02, TRMU-1000-02, TRMU-1500-02, TRMU-2000-02, TRMU-3000-02 |

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 | 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 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 | 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 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 19" Rack-Mount Models (2U)

| Model Number | TRMU-0600-01 | TRMU-1000-01 | TRMU-1500-01 | TRMU-2000-01 |
|---------------------------------|--|--------------------------------|--------------------------------|-----------------------------------|
| Capacity | 600VA 360W | 1000VA 600W | 1500VA 900W | 2000VA 1200W |
| 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 in / 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 | 38 / 17.3 | 44 / 20 | 55 / 25 | 61.6 / 28 |

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 | 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 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 | 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 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 |