

TOSHIBA

TOSHIBA INTERNATIONAL CORPORATION

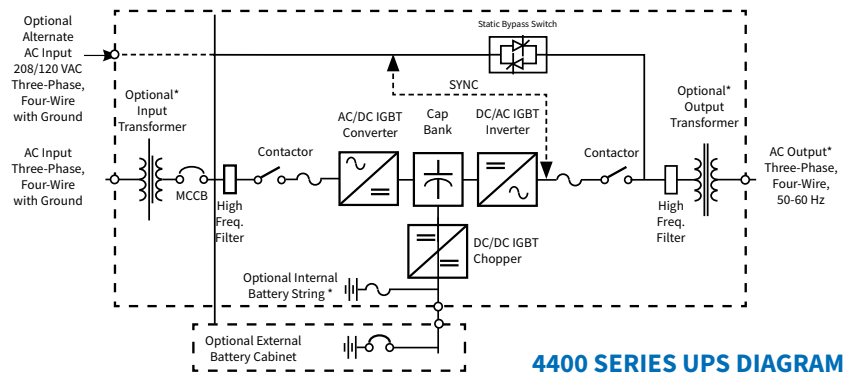
UNINTERRUPTIBLE POWER SYSTEMS

4400 Series



NEXT GENERATION TECHNOLOGY

The Toshiba 4400 Series Uninterruptible Power Supply (UPS) is the next-generation three-phase UPS. The double-conversion, all insulated-gate bipolar transistor (IGBT) 4400 Series UPS features a digitally controlled IGBT input rectifier; an intelligent, low harmonic, pulse-width modulation (PWM) IGBT output inverter; state-of-the art, IGBT battery isolation circuitry; and an easy to navigate local touchscreen interface. The small footprint and total front access mechanical design requires zero rear clearance and includes features such as top, bottom, and side cable entry, standard sized air filters included, and lockable keyed doors. Customization is available through a number of options, such as internal battery backup, internal maintenance bypass, internal transformers for specific voltage applications, and remote monitoring with the Toshiba RemotEye® 4 multi-protocol UPS monitoring solution.



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| <p>Multi-Application Ready</p> | <p>UPS models available for any application; everything from internal energy storage, internal maintenance bypass, frequency conversion, Power Conditioning (no batteries) or any voltage / power distribution configuration, all in a sleek standardized line up.</p> |
| <p>Time-Tested Topology</p> | <p>Utilizes a Toshiba established true-online, double conversion all IGBT topology to meet the highest industry standards of reliability and power quality.</p> |
| <p>Over Design Protection</p> | <p>15 year design life components with long MTBF require minimal service for long lasting use in the toughest of environments.</p> |
| <p>Bad Utility Responsive, Tough Load Ready</p> | <p>Superior Design features Low Harmonic Distortion, wide input Voltage and frequency window, 100% Load Step and 100% unbalanced load capabilities, with up to 109% continuous overload without compromising voltage regulation.</p> |
| <p>Value-Generating Construction</p> | <p>Save on power and space with the 4400 Series, rugged industrial all front access, zero rear or side clearance, seismic ready design that minimizes footprint while maximizing power efficiency.</p> |
| <p>Toshiba End-to-End Solution</p> | <p>Configurable UPS options with wide range of run time Battery cabinets ensure the 4400 Series can represent a turnkey solution for a wide variety of applications.</p> |
| <p>Made in USA</p> | <p>Manufactured in Houston, Texas. Meets BAA and ARRA requirements.</p> |

OPTIONS & ACCESSORIES

BATTERY CABINETS

Matching battery cabinets with Valve-Regulated Lead Acid (VRLA) batteries provide uniform installation appearance with various run times. The Toshiba 4400 Series UPS works equally well with either VRLA or flooded-cell battery backup.

AUXILIARY CABINETS

Matching auxiliary cabinets are available for uniform installation appearance. Options include:

- Maintenance Bypass Switch (MBS)
- Power Distribution
- Subfeed Breakers
- Input Step Down Transformer
- Slim MBS

UPS MONITORING

RemotEye® 4 offers real-time control, monitoring, and analysis of UPS operation. The quick and easy-to-use software can automatically initiate an orderly shutdown to connected servers to minimize any risk of data loss. RemotEye® 4 also features a first-ever mobile website for monitoring UPS status updates on-the-go. Universal communications protocols compatible with RemotEye® 4 include:

- Modbus TCP & RTU
- BACnet IP & MSTP
- HTTP/HTTPS
- SNMP
- IPv6 Compatible

EMERGENCY LIGHTING (UL924)

4400 Series UPS Systems may be ordered in a pre-designed and certified configuration to meet the rigorous UL924 Standard for emergency lighting applications. The end-to-end solution includes the 90-minute runtime and battery test function required by the UL924 Standard. The 4400 Series' centralized approach for emergency lighting is ideal for a world moving towards the utilization of LED lights which demand the power quality that only a UPS system like the 4400 Series can provide. Optional matching 4400 Series Distribution cabinets are available for multi branch circuitry of an Emergency Lighting System.



Battery Cabinet

50-100 kVA UPS

Slim MBS

One Cabinet Solution:
UPS, MBS, & Batteries

INDUSTRIES SERVED

- Data Center
- Emergency/Healthcare
- Commercial/Retail

4400 SERIES APPLICATIONS

- Computer Systems
- Medical Labs
- Small Scale Server Rooms
- Voice/Data Network Closets
- Edge Data Centers
- Point of Sale Equipment
- Banking Systems
- Retail Office Systems
- School System Computer Rooms
- Light Industrial

| MODEL NUMBER | 4400X3X150XA | 4400X3X200XA | 4400X3X250XA | 4400X3X300XA | 4400X3X500XA | 4400X3X800XA | 4400F3F10KXA |
|--|--|-------------------|-------------------|-------------------|---|---|--------------------|
| Capacity | 15 kVA (13.5 kW) | 20 kVA (18 kW) | 25 kVA (22.5 kW) | 30 kVA (27 kW) | 50 kVA (45 kW) | 80 kVA (72 kW) | 100 kVA (90 kW) |
| Topology | True On-Line, Double-Conversion, All-IGBT Technology | | | | | | |
| INPUT | | | | | | | |
| Voltage (Standard) | 208/120V Three-Phase, Four-Wire + Ground Single or Dual Input* | | | | | | |
| Voltage Range | -15% to +10% (Without Using Battery)** | | | | | -10% to +10% (Without Using Battery)** | |
| Power Factor | >0.98 | | | | | | |
| Current THD | <5% at 100% Load | | | | | | |
| Frequency | 50 +/- 5 Hz; 60 +/- 5 Hz | | | | | | |
| OUTPUT | | | | | | | |
| Voltage (Standard) | 208/120V Three-Phase, Four-Wire + Ground Output*** | | | | | | |
| Frequency | 50/60 Hz, +0.1% Auto-Sensing Standard. (50/60 Hz Selectable, for use as Frequency Converter) | | | | | | |
| Voltage Regulation | +/-2% at 0-100% Balanced Load | | | | | | |
| Power Factor | 0.9 Lagging | | | | | | |
| Inverter Overload Capacity | 109% Continuous, 110-124% for 6 Minutes, 125-149% for 90 Seconds, 150% for 30 Seconds; | | | | | 104% Continuous, 105-125% for 6 Minutes, 125-149% for 60 Seconds, 150% for 30 Seconds | |
| Bypass Overload Capacity | 125% for 10 Minutes, 150% for 2 Minutes, 1000% for 1 Cycle | | | | | | |
| BATTERY | | | | | | | |
| DC Link | 288 VDC | | | | | | |
| Ripple Voltage | <0.5% DC | | | | | | |
| ENVIRONMENT | | | | | | | |
| Temperature Range | 32° to 104°F (0° to 40°C) | | | | | | |
| Relative Humidity | 5% to 95% Non-Condensing | | | | | | |
| Heat Rejection | 4556 BTUs/Hour | 6074 BTUs/Hour | 7395 BTUs/Hour | 9111 BTUs/Hour | 15,286 BTUs/Hour | 24,297 BTUs/Hour | 30,372 BTUs/Hour |
| Full-Load Efficiency | 91.0% | | | | | | |
| 25% Load Efficiency | 88.0% | | | | | | |
| Altitude | 3300 ft. (1000 m) Maximum Without Derating | | | | | | |
| Air Filtration | Airflow Front-to-Top, Front-Located Filters Included | | | | | | |
| Audible Noise | <65dBA @ 1 m Typical | | | | | <70dBA @ 1 m Typical | |
| DIMENSIONS | | | | | | | |
| Dimensions | 20.12 in. (W) x 37.40 in. (D) x 65.06 in. (H) | | | | 32.10 in. (W) x 37.20 in. (D) x 73.80 in. (H) | | |
| Weight **** | 725 lbs. (329 kg) | 730 lbs. (331 kg) | 750 lbs. (340 kg) | 760 lbs. (345 kg) | 965 lbs. (438 kg) | 1550 lbs. (612 kg) | 1650 lbs. (748 kg) |
| COLOR | | | | | | | |
| Powder Coat, DuPont O'Brien Black | | | | | | | |
| MONITORING | | | | | | | |
| Touchscreen Operator Interface, UPS Status N/O Dry Contacts, RS232C Interface (Optional RemotEye® 4 Intelligent Monitoring System) | | | | | | | |
| OPTIONS | | | | | | | |
| Internal Batteries (15-50kVA), Internal Isolation & Voltage Conversion Transformers, Dual-Input Feed, RemotEye® 4 Intelligent Monitoring System, Remote Status Alarm Panel, External Matching & Non-Matching Battery Cabinets, Matching MBS/Transformer/Distribution Cabinets. UL924 Certified Emergency Lighting System (15-20kVA), Internal 3-Breaker MBS (15-30kVA) | | | | | | | |
| STANDARDS | | | | | | | |
| UL 1778, CUL, ISO9001, ISO14001:2004, ANSI C62.41 (IEEE 587), NEMA/PET-1993, CE, IBC, & CBC (OSHDP) | | | | | | UL 1778, CUL, ISO9001, ISO14001:2004, ANSI C62.41 (IEEE 587), NEMA/PET-1993 | |
| WARRANTY | | | | | | | |
| 3-Year On-Site Warranty; 10+ Year Service Agreements Available; See Toshiba Warranty Policy for Full Details | | | | | | | |
| SERVICE | | | | | | | |
| 24-Hour, 365-Day Technical Support: 1-877-867-8773 | | | | | | | |

* Isolation and Auto Transformer Options for Input Voltage Conversion. 15-50kVA Units can support 2 internal transformers. 80kVA Units can support 1 internal transformer. Not available for 100kVA
 ** For loads less than 50% of total UPS output capacity, input voltage within -30% to +10% of Standard value is sufficient for operation
 *** Auto Transformer Options for Output Voltage Conversion. 15-50kVA Units can support 2 internal transformers. 80kVA Units can support 1 internal transformer. Not available for 100kVA
 **** Unit Weight Not Including Internal Battery and Transformers
 Specifications subject to change without notice.



TOSHIBA POWER ELECTRONICS

Uninterruptible Power Systems • SCiB™ Lithium Ion Batteries • Energy Management Systems
 Remote Monitoring • High Power Chargers • Containerized Solutions
 PDU • RPP • Server Rack Enclosures

www.reliabl.com 385-800-2905

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 Toshiba International Corporation
 Power Electronics
 13131 West Little York Road
 Houston, Texas 77041 USA
 Tel +713-466-0277
 US 1-800-231-1412
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