



# UPS SOLUTIONS

## THE MATRIX UPS SERIES

The Ultimate Power Solution

**XRT-MTX**



ENQUIRE NOW

10-40kW @ 400V | 10-20kW @ 208V

# THE XRT-MTX UPS

## Engineered for Ultimate Performance: Precision Power for Critical Applications.



### Key Features

- **High Efficiency:** 96% @ PF=1
- **Configurable Modes:** 33 / 31 / 11
- **Voltage Compatibility:** 400Vac and 208Vac
- **User-Friendly Interface:** 4.3-inch touchscreen
- **Advanced Intelligent Functions**
- **Hot-Swappable Battery Design**
- **Flexible Power Options:** 10-40kW at 400V (Three-Phase) or 10-20kW at 208V (Single-Phase)

The XRT-MATRIX Series is a versatile Rack and Tower UPS power solution. Designed with phase sequence adaptation and a wide voltage input range, it is ideal for a variety of commercial applications, including IT server rooms, regional office buildings, and commercial security systems.

### Why Choose XRT-MTX?

- **Pre-installed SNMP & Dry Contact:** Streamline monitoring and management with pre-installed connectivity features.
- **Battery Temperature Sensor Included:** Ensure optimal battery health with built-in temperature sensing.
- **10-Year Design Life Batteries:** Extend reliability with long-lasting battery packs when purchased separately.
- **Flexible Warranty Options:** Benefit from a 3-Year Warranty with an optional 5-Year extension.
- **Optional Service Contracts:** Tailor ongoing support to your needs for uninterrupted performance.

# Built for Reliability

## Engineered to Perform in Any Condition

### Applications



Telecom



Data Centre

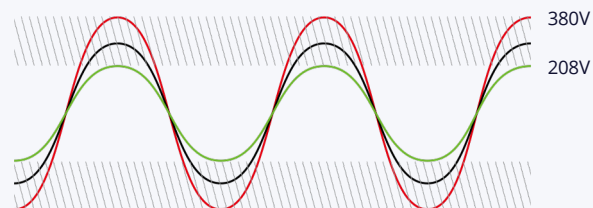


Finance

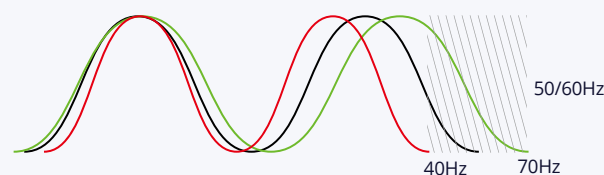


Government

- **Wide Input Range:** Handles voltage from -60% to +25% and frequency from 40-70Hz, ensuring grid adaptability and extended battery life.
- **Efficient Airflow Design:** Independent air duct extends component lifespan by directing heat away from sensitive parts.
- **Advanced DSP Control:** Latest technology eliminates single points of failure and boosts performance.
- **High Overload Capacity:** Reliable under 105% load, supports 130% for up to 10 minutes, and safely bypasses above 130%.
- **Intelligent Cooling:** Advanced fan control and redundancy ensure reliability and longer service life.
- **Surge & Lightning Protection:** Shields against high surge voltages for enhanced durability.
- **Battery & Short Circuit Protection:** Reverse connection protection and adjustable fault protection ensure safe operation.
- **Dust Protection (Optional):** Optional filters safeguard the UPS in harsh environments.
- **Conformal Coating:** PCB boards are coated to resist dust, salt spray, and corrosion.
- **Backfeed Protection:** Prevents electric shock during bypass failures with optional dry contact kits.
- **Cold Start Functionality:** Allows startup using battery power when the grid is unavailable.
- **Bus Synchronisation:** Ensures reliable high-power output in dual-bus systems.
- **Dual Input Design:** Offers flexibility with separate or single utility and bypass inputs.
- **Temperature Resilience:** Operates efficiently up to 40°C, with derating for sustained use at up to 50°C.



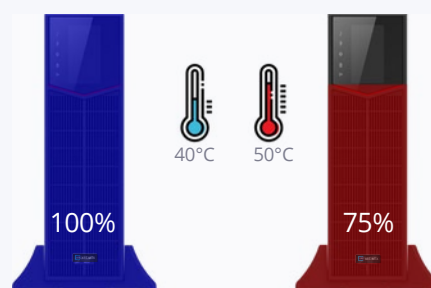
Wide Input  
Voltage



Wide Input  
Frequency



Automatic Fans  
Control



High Ambient  
Temperature

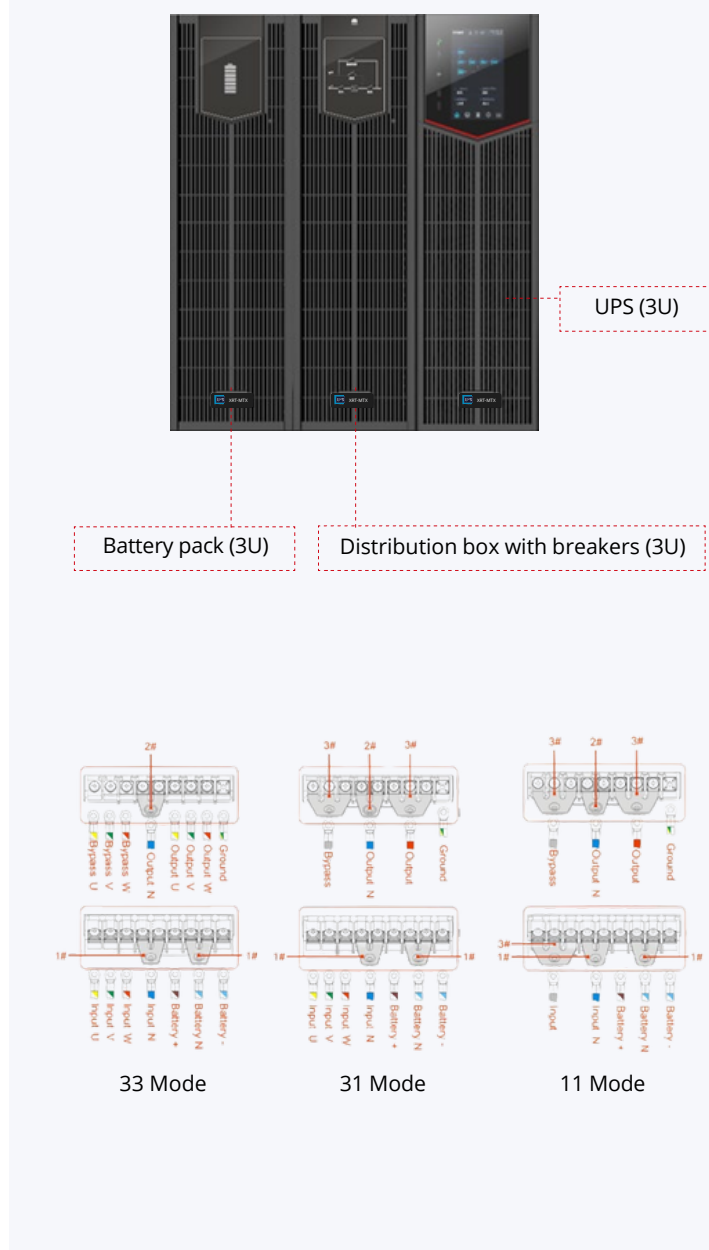


Conformal  
Coating

# Flexible Design

## Versatile Solutions for Any Application

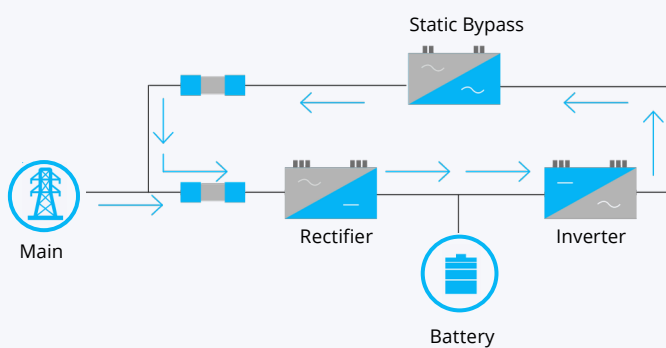
- **High Power Density Design:** Compact 3U rack and tower-compatible design, supporting up to 40kVA, offers exceptional flexibility for a variety of application scenarios.
- **Optimised Installation and Maintenance:** Easy-to-service architecture minimises MTTR (Mean Time to Repair) and enhances serviceability. Lightweight units—20kg for up to 20kVA and 34kg for 40kVA—make moving and installation easier for staff.
- **Hot-Swappable Batteries:** Standard 3U height battery pack with Anderson connectors allows for easy hot-swapping to ensure uninterrupted performance.
- **Seamless Power Distribution:** Separate UPS and power distribution systems include input/output, bypass, and a maintenance bypass breaker. This allows for manual transfer of connected equipment to utility power during maintenance or UPS replacement, ensuring continuous uptime without shutting down connected devices.
- **Flexible Phase Configuration:** Adjustable input and output configurations (3:3 / 3:1 / 1:1) for 10-20kVA and (3:3 / 3:1) for 30-40kVA provide adaptability for diverse power distribution requirements (jumper connector needed).
- **Parallel Expansion Capability:** Parallel slot design allows up to 4 units to operate in parallel, enabling scalable power solutions for larger sites.



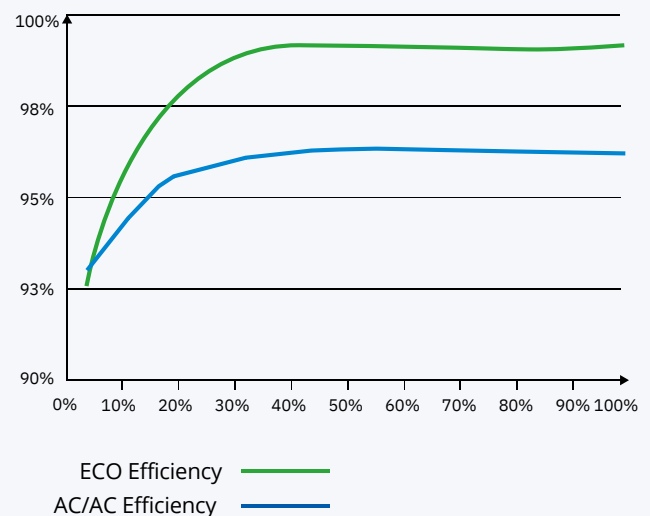
# Green Power

## Efficient Technology for Sustainability

- **Latest Generation IGBT Technology:** Features three-level technology for low harmonic distortion, high efficiency, and effective energy savings.
- **High Input Power Factor:** Up to 0.99 with low input THDi (<3.0% at full load), significantly reducing grid pollution and associated costs.
- **Superior Efficiency:** Achieves up to 96% AC/AC efficiency at full load and up to 94% efficiency at 25% load, minimising heat dissipation and power consumption, resulting in substantial OPEX savings.
- **ECO Mode:** Delivers up to 99% efficiency, offering significant cost reductions.
- **Self-Load Test Function:** Simplifies commissioning with an easy debugging process, enabling tests without connecting to the real load. Eliminates the need for temporary loads, cabling, or breakers, ensuring cost-effective energy savings.



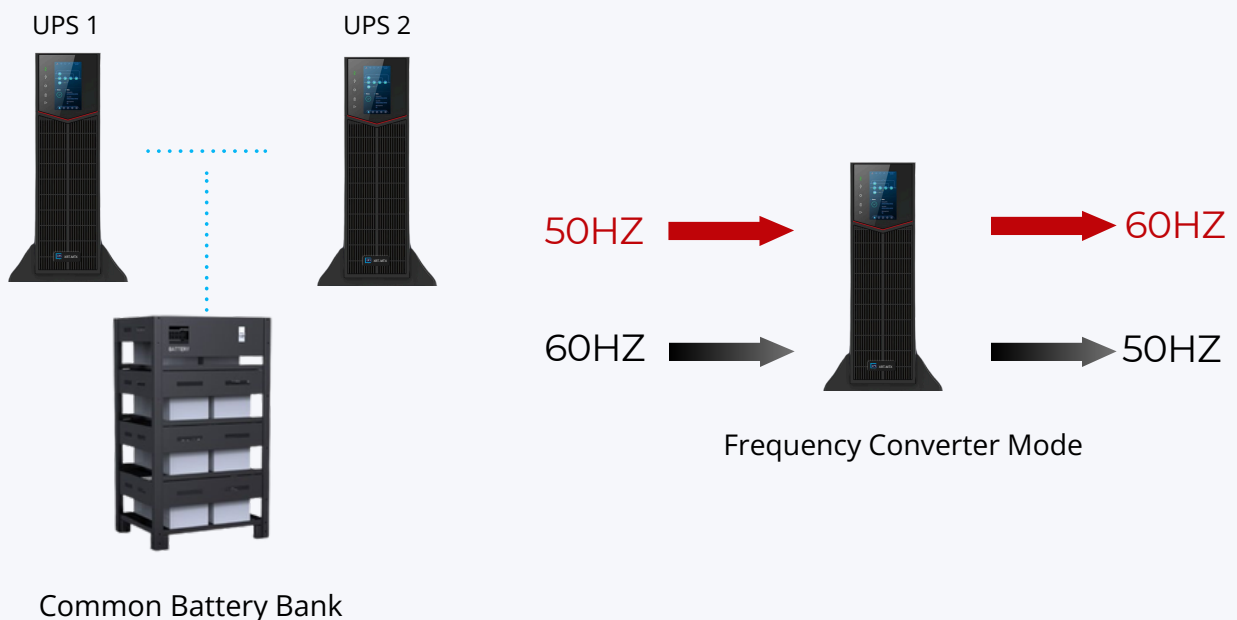
Self-load  
Test Mode



# Intelligent Management

## Advanced Control for Maximum Efficiency

- **Multiple Communication Ports:** Includes embedded RS232, EPO dry contact, and maintenance bypass switch detection dry contact. Features two intelligent slots for optional SNMP slot kit, protocol transfer slot kit, and dry contact slot kit, compatible with Modbus protocol and most management systems.
- **System Diagnostics:** Automatic and manual power-on diagnostics for comprehensive UPS and battery self-testing.
- **Wide DC Voltage Range:** Adjustable from  $\pm 96V$  to  $\pm 240V$  (16–40 units) for enhanced flexibility.
- **Smart Battery Management:** Utilises a three-stage charging scheme and intelligent battery testing to prolong battery lifespan and ensure reliable performance.
- **Input Phase Sequence Correction:** Keeps the UPS running in inverter mode without switching to battery during phase issues.
- **Self-Dedusting Function:** Allows technicians to schedule dust-cleaning operations for improved efficiency and reduced service times.
- **Pre-Alarm for Key Components:** Alerts for faults and service reminders for essential components like capacitors, fans, batteries, and dust filters.
- **Smart Generator Mode:** Sends signals to turn generators on/off and supplements power from batteries to optimise generator capacity.
- **Battery Bank Flexibility:** Supports common or distributed battery banks in parallel mode.
- **Frequency Conversion:** Operates as a frequency converter (60Hz to 50Hz or 50Hz to 60Hz).
- **Battery Compatibility:** Compatible with both VRLA and Lithium battery designs.





# User-Friendly Interface

## Intuitive Design for Effortless Operation

- **Vibrant Touchscreen Display:** 4.3-inch colour touchscreen with LED indicators for clear and comprehensive information presentation.
- **Gravity-Sense Auto-Rotate:** Automatically adjusts the screen orientation for user convenience.
- **Intuitive Graphical Interface:** Displays a single-line mimic diagram showing key system parameters like voltage, current, UPS temperature, operating status, load capacity, and battery capacity.
- **Multi-Language Support:** Built-in support for Chinese, English, Spanish, Italian, French, Portuguese, and Russian.
- **Enhanced Security:** Password-protected access with multiple levels for users, technicians, and service engineers.
- **Large Event Log Storage:** Stores up to 1,000 event logs for better system tracking.
- **Simple Firmware Updates:** Easy and quick updates for display firmware.



Rack Mode



Tower Mode

# More Options

## Customisable Add-Ons for Enhanced Functionality

- 19-inch Rail Kit
- Tower Conversion Kit
- Parallel Operation Kit
- SNMP Communication Kit
- Dry Contact Kit
- Protocol Transfer Kit for Lithium Battery Integration
- Jumper Connector for Phase Configuration
- Intelligent Battery Monitoring System (IBMS)
- Lithium Battery Support
- Input/Output Isolation Transformer
- Battery Charge Temperature Compensation



Battery Monitoring System



19 inch rail kit



SNMP kit



Protocol transfer kit



Tower kit



Parallel kit



Dry contact kit



Battery charge temperature compensation



# Battery Backup Timetable

MODEL	Battery Pack	Backup Time									
	16*9AH	1.0KW	2.0KW	3.0KW	4.0KW	5.0KW	6.0KW	7.0KW	8.0KW	9.0KW	10.0KW
10KVA	1	62	26	15	10	7.5	5.2	4	/	/	/
	2	136	62	38	26	19.5	15	12.7	10	8.5	7.5
	3	177	80.5	51	36	27	21	14.5	11.5	9.5	8.0
	4	246.5	110.5	71.5	51.5	39.5	31	22	18	15	12.5
15KVA	16*9AH	1.5KW	3.0KW	4.5KW	6.0KW	7.5KW	9.0KW	10.5KW	12.0KW	13.5KW	15.0KW
	2	90	38	23.4	15	11.9	8.5	6.9	5.2	4.1	3.3
	4	180	90	54.5	38	28	23.4	18.6	15	13.2	11.9
	6	272	136	90	62	46.8	38	30.4	26	23.4	19.5
20KVA	8	363	180	124	90	66.5	54.5	44.6	38	31.6	28
	16*9AH	2.0KW	4.0KW	6.0KW	8.0KW	10.0KW	12.0KW	14.0KW	16.0KW	18.0KW	20.0KW
	2	62	26	15	10	7.5	5.2	4	3	/	/
	4	136	62	38	26	19.5	15	12.7	10	8.5	7.5
30KVA	6	204	102	62	43.5	34.6	26	20.9	18	15	13.8
	8	272	136	90	62	46.8	38	30.4	26	23.4	19.5
	20*9AH	3.0KW	6.0KW	9.0KW	12.0KW	15.0KW	18.0KW	21.0KW	24.0KW	27.0KW	30.0KW
	2	51	20	12.2	7.9	5.2	3.9	3	/	/	/
40KVA	4	113	51	29	20	15	12.2	9.5	7.9	4.5	4.1
	6	170	85	51	36	26	20	17	14.2	12.2	10
	8	227	113	74	51	30.5	29	25	20	18	15
	20*9AH	4.0KW	8.0KW	12.0KW	16.0KW	20.0KW	24.0KW	28.0KW	32.0KW	36.0KW	40.0KW
40KVA	2	36	14.2	7.9	5	3.1	2	/	/	/	/
	4	85	36	20	14.2	10	7.9	6	5	3.9	3.1
	6	127	58	36	22	18	14.2	10.9	9.2	7.9	6.8
	8	170	85	51	36	24	20	17	14.2	12.2	10

- Note: Run times in this table are approximate. Times are based on new, fully-charged, standard battery modules at a temperature of 25°C with 100% resistive UPS loading.
- Run times listed above can vary by  $\pm 5\%$  due to manufacturing variances of the individual batteries.

# Technical Specifications

220V MODEL		XRT-MTX-10KVA		XRT-MTX-15KVA		XRT-MTX-20KVA		XRT-MTX-30KVA		XRT-MTX-40KVA	
INPUT											
Voltage (Vac) <sup>1</sup>		10~20KVA: 121~268 (155~268) 10~40KVA: 138-485 (305-485)									
Frequency (Hz)		40-70									
Power Factor		≥0.99									
THDi		<3% (linear load)									
Phase		1:1/3:1/3:3						3:1/3:3			
OUTPUT											
AC/AC Efficiency (Max.)		96%									
Power Factor		1.0 (at 40°C, allow derating at low pressure input)									
Voltage (Vac)		L-L: 400V rated, 380/400/415 L-L: 208V rated, 190/200/208									
Frequency (Hz)		50/60±0.1 (battery mode)									
THDv		THD <2% (linear load), THD < 4% (nonlinear load)									
Transfer Time (ms)		0									
Overload		105%~110%: 60min, 110%~130% load: 10 min, 130%~155% load: 1 min, 155%□Load: 200ms									
ECO Mode		Yes									
BATTERY											
Voltage (Vdc)		400V model: ±192 (±96~±240 adjustable) 208V model: ±120 (±96~±120 adjustable)									
Charging Current (A)		4 (1-10 settable)						10 (1-20 settable)			
GENERAL											
Communication Interface		RS232+EPO (RS485+Dry contact, SNMP, Protocol Conversion Kit are optional in slot)									
Display		4.3" touch screen									
Alarm		Low battery, abnormal AC input, UPS failure, etc.									
Protection		Low battery, overload, short-circuit and over temperature, etc.									
Noise (dB)		< 60									
Working Temperature (°C)		-5~40						-5~50			
Relative Humidity		0 ~ 95%, no condensation									
Dimension (W×D×H)(mm)	UPS	438×535×130(3U)						438×720×130 (3U)			
	Distribution Box	438×535×130(3U)						438×720×130 (3U)			
	Batt. Pack	438×535×130(3U)						438×720×130 (3U)			
Weight (kg)	UPS	17.5		19		20		32.5		34	
	Distribution Box	8						14			

- Specifications are subject to change without notice;
- The XRT-MTX-20KVA of 220V can be set to XRT-MTX-10KVA of 110V



## UPS SOLUTIONS

**DESIGN | SUPPLY | INSTALL | SERVICE**

**SERVICING AUSTRALIA, NEW ZEALAND & PACIFIC ISLANDS**

Reach out today to discover how The XRT-MTX Matrix  
UPS Series can meet your mission-critical needs.



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