

MD



MD 15-900 kVA

High-performance three-phase modular UPS for absolute continuity in all critical applications

Fully scalable and high efficiency (99.6% in ECO mode), the Thor series based on 15, 25 and 75 kVA/kW modules guarantees energy saving and minimum TCO (Total Cost of Ownership).

Applications

- Data centres: from micro to large
- Network Operations Centres (NOC)
- Security operations centres
- Telecommunications systems

- · Broadcast and video streaming infrastructure
- Industrial automation control systems
- Remote teaching infrastructure
- Healthcare facilities

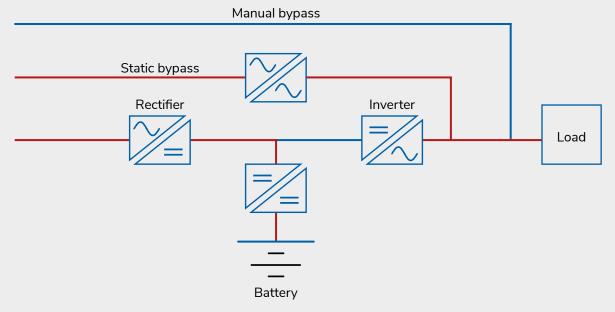
Energy Saver: higher efficiency and lower TCO (Total Cost of Ownership)

The Energy Saver function ensures the modules last a long time by automatically making them work in rotation to balance component wear and increase their life.

ECO Smart mode: higher energy savings and maximum availability of connected systems

In ECO Smart Mode (iECO), the bypass and inverter work together to provide combined energy.

This can achieve greater efficiency (up to 99.3) and ensure a transfer time of 0.



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- The high-density design with full hot-swap technology for both power and bypass modules ensures continuity and protects your load at all times.
- Power factor of 1 (kW = kVA): maximum active power available at all times.
- Very high efficiency (up to 99.3% in ECO Smart mode) for maximum energy saving: bypass and inverter work together to provide combined energy to the load and ensure zero transfer time in the event of a blackout.
- Up to 4 units can be connected in parallel (up to 3.6 MW) for power or redundancy.
- Long component life for a lower TCO (Total Cost of Ownership): the Energy Saver function automatically makes the power modules work in rotation to ensure greater efficiency and duration.
- Designed to minimise impact on generators and avoid overdimensioning them.
- Optimised footprint for maximum installation versatility to make installation possible in any type of environment.
- Easy installation thanks to the central bypass that ensures better load balance and lower risk of system overload.

- Variable battery string configuration can be set from the LCD for maximum installation flexibility.
- Minimum battery voltage can be set according to the discharge current, so the batteries can always be used in the best way to maximise their expected or lifespan life
- High quality long-life capacitors (up to 10 years under favourable operating conditions).
- Cold start function included.
- Compatible with lithium-ion batteries or other technologies.
- Dual input for main power supply and bypass.
- Internal manual bypass.
- User-friendly LCD touch display with multi-language graphical user interface to have everything under control at all times.
- Event log can be downloaded directly from the LCD via USB port.
- · Communication slots for optional card.
- RS485-ModBus, relay card with dry contact and USB port built-in.

Key options

- Input, output and bypass breaker.
- Communication cards: Web SNMP.
- Isolation transformer.

· Additional battery charger for long uptimes.

Contact our offices for a complete list of accessories

60 kVA Combo solution

- Up to 4 internal strings of 40 x 9 Ah batteries.
- Fuses to protect each string.





MD TECHNICAL DATA SHEET

MODEL						MD 15-900					
	kVA		1	5		2	5		75		
POWER	kW		1	5		2	5		75		
INPUT	Rated voltage	400 Vac three-phase with neutral									
	Voltage tolerance	20% @100% load, -40% ~-20% @50% load									
	Rated frequency	40 – 70 Hz									
	Power factor	≥0.99									
	Current distortion (THDi)	<3%									
OUTPUT	Rated voltage	380/400/415 Vac three-phase with neutral									
	Voltage stability	±1% (static load)									
	Frequency	50/60 Hz									
	Frequency stability	±0.01% (free running)									
	Power factor	1									
	Crest factor	3:1									
	Voltage distortion	≤3% with linear load, ≤6% with distorting load									
	Permissible overload	110% for 60 minutes, 125% for 10 minutes, 150% for 1 second									
BATTERY	Battery cabinet	modular classic									
	Battery architecture	modular, 4 strings	modular, congrete cabinet								
	Number per string (12V)	40	32–44 configurable 32–44 configurable								
	Max. charging current		3 A per module 5 A per module 15 A per module						le		
EFFICIENCY	VFI mode	up to 95.3% up to 95.6% up to 96%									
	ECO Smart mode	99.3%									
	Battery mode	up to 95.2% up to 95.5% up to 95.7%									
BYPASS	Rated voltage	380/400/415 V three-phase + neutral									
	Voltage tolerance*	-40% to +20% (selectable)									
	Frequency	50/60 Hz									
	Frequency tolerance		50/60 Hz±4% 50/60 Hz±6%								
GENERAL	Cabinet Model	MD COM- BO60-00 cabinet	MD R30-00	MD R60-00	MD R120- 00	MD R150- 00	MD R250- 00	MD R450- 00	MD R600- 00	MD R900- 00	
	Module power (kVA)	Cabinet	15			2	5		75		
	Power modules that can be installed	up to 4	up to 2	up to 4	up to 8	up to 6	up to 10	up to 6	up to 8	up to 12	
	Parallel connection	up to 4									
	Cabinet dimensions (WxDxH) mm	600x 1100x2000	442x 800x662	442x 800x840	442x 800x1195	600x 1000x1600	600x 1000x2000	900x 1000×2000	1200x 1000x2000	1800x 1000x2000	
	Weight (Kg) **	444	120	164	263	284	410	650	800	1200	
	Protection class	IP20									
CONNECTIVITY	User interface	7" colour LCD touch screen									
	Built-in communication ports	USB, 1 additional slot, EPO, RS485-ModBus, RS232 USB, 1 additional slot, EPO, BFP, RS485-ModBus, RS232 GEN, GEN, BCB, 4 in/8 out relay with dry contacts USB, 1 additional slot, EPO, BFP, RS485-ModBus, RS232 GEN, BCB, 4 in/8 out relay with dry contacts							5232 GEN,		
	Optional accessories	Cards: SNMP, battery temperature sensor									
ENVIRONMENTAL PARAMETERS	Operating temperature***	0 – 40°C									
	Altitude (a.s.l.)	<1000 m with no power derating, >1000 m with 1% derating for every 100 m.									
	Relative humidity	0 – 95% (without condensing)									
	Audible noise at 1 m.	<70 dBA									
	Standards	IEC EN 62040-1, IEC EN 62040-2, IEC EN 62040-3									
REGULATIONS		CE, UKCA									

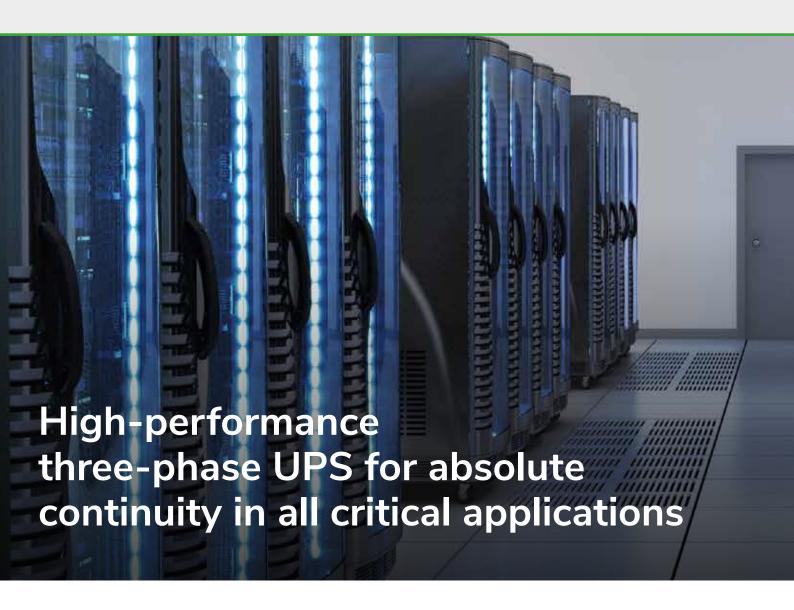
^{*} Subject to conditions ** Includes empty battery modules for Thor Combo *** To be verified according to the battery parameters



Accessories

DUMMY LOADS	S FOR GLM FUNCTION						
	DUMMY 10: dummy load for lift function 3 kW for TAURUS 10kVA.						
	DUMMY 20: dummy load for lift function 6 kW for TAURUS 20kVA.						
	DUMMY 30: dummy load for lift function 9 kW for TAURUS 30kVA.						
	DUMMY 40: dummy load for lift function 12 kW for TAURUS 40kVA.						
	DUMMY 60: dummy load for lift function 18 kW for TAURUS 60kVA.						
	DUMMY 80: dummy load for lift function 24 kW for TAURUS 80kVA.						
REMOTE PANE	L for Kronos, Taurus and all single phase double conversion, Monitor up to 64 UPS						
COMMUNICATI	ON CARDS						
	MD-SNMP: SNMP Card for THOR						
	SNMP GEN Mini: SNMP Generex CS141 mini						
	TEMPEXT-TH: External Battery Temperature Probe						
INPUT BARS	· ·						
	DUAL-TH-R30: single source 30kVA						
	DUAL-TH-R60: single source 60kVA						
	DUAL-TH-R120: single source 120kVA						
	DUAL-TH-R450: single source 450kVA						
	DUAL-TH-R600: single source 600kVA						
	DUAL-TH-R900: single source 900kVA						
PARALLEL KIT							
	PARKIT2-TH: Parallel Kit for 2 pcs UPS parallel						
	PARKIT3-TH: Parallel Kit for 3 pcs UPS parallel						
	PARKIT4-TH: Parallel Kit for 4 pcs UPS parallel						
DISCONNECTO	RS						
	BR-TH-R30: Input/ bypass/output braeker for TH-R30. Dim. 442x800x662						
	BR-TH-R60: Input/ bypass/output braeker for TH-R60. Dim. 442x800x840						
	BR-THCOMBO-R30: Input/ bypass/output braeker for combo 30KVA. Dim. 442x800x662						
	BR-THCOMBO-R60: Input/ bypass/output braeker for combo 60KVA. Dim. 442x800x840						
	BR-TH-R150: Input/ bypass/output braeker for 150KVA. Dim. 600x1000x1600						
	BR-TH-R250: Input/ bypass/output braeker for 250KVA. Dim. 600x1000x2000						
	BR-TH-R450: Input/ bypass/output braeker for 450KVA. Dim. 1200x1000x2000						
	BR-TH-R600: Input/ bypass/output braeker for 600KVA. Dim. 1200x1000x2000						
	BR-TH-R900: Input/ bypass/output braeker for 900KVA. Dim. 1800x1000x2000						







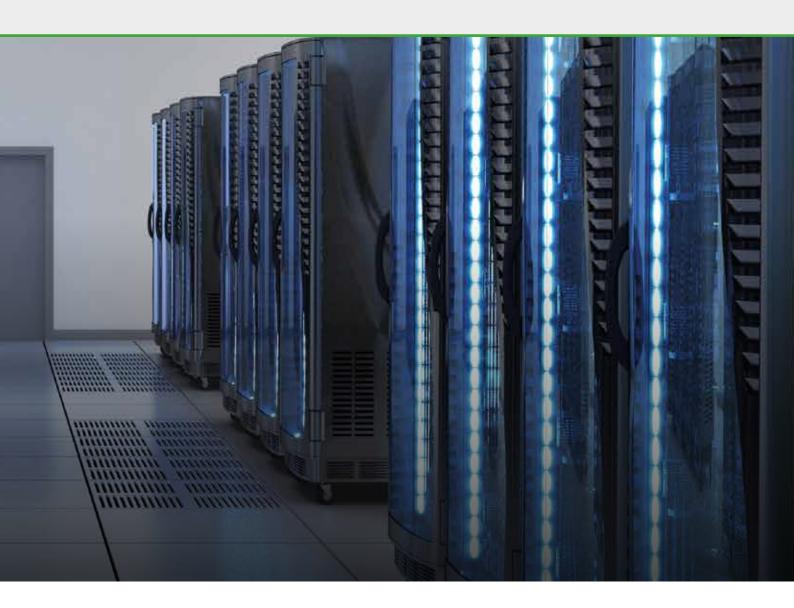






THREE-PHASE UPS











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