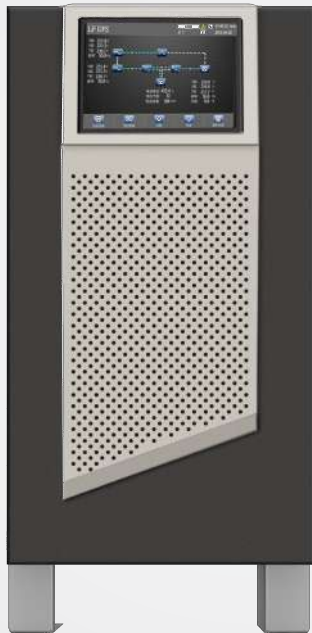




10KVA - 30KVA

Thor H+ Series

Commercial Type True Double Conversion Online UPS

The Thor H+ series is a tower type design with a true double conversion online three-phase UPS system. This UPS is equipped with a galvanic isolation transformer that can withstand a wide range of loads.

Digital Signal Processor (DSP) control technology is used to improve the system's performance and reliability. All internal PCBAs are coated to withstand harsh environmental conditions. Redundant fan design and independent ventilation to improve operation.

The Thor H+ series comes with a parallel redundant configuration that allows four units to operate in parallel. It is the ideal solution to mission-critical applications and equipment.

Features

- True Online Double Conversion with DSP Control
- DSP Technology Guarantees High Reliability
- True Galvanic Isolation Transformer Design
- Design to Withstand all kinds of Loads
- Redundant Fan Design and Independent Ventilation to Enhance Operation under Harsh Environment
- Output Power Factor 0.8
- Intelligent Battery Management to Prolong Battery Lifecycle
- Accepts Dual-Mains Input
- Parallel Capability up to 4 units (Option)
- Comes with Modbus RS-232/RS 485, Dry Contacts, SNMP Slots & Power Management Software



Automotive Industry



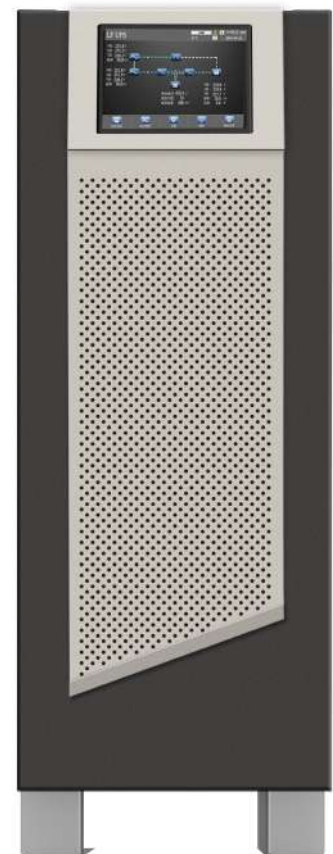
Manufacturing



Oil & Gas Industry



Power Plant



40KVA - 200KVA

Technical Specification:

MODEL		Thor H+ 10KS	Thor H+ 15KS	Thor H+ 20KS	Thor H+ 30KS	Thor H+ 40KS	Thor H+ 60KS
CAPACITY (KVA/KW)		10KVA/8KW	15KVA/12KW	20KVA/16KW	30KVA/24KW	40KVA/32KW	60KVA/48KW
PHASE		3-Phase In / 3-Phase Out					
INPUT							
NOMINAL VOLTAGE		3 x 380VAC/400VAC (3Ph + N)					
ACCEPTABLE VOLTAGE RANGE		285VAC ~ 475VAC					
FREQUENCY RANGE		50/60 Hz ± 10 %					
OUTPUT							
NOMINAL VOLTAGE		3 x 380VAC/400VAC (3Ph + N)					
OUTPUT POWER FACTOR		0.8					
FREQUENCY		50/60 Hz synchronised ±1 % ; With mains absent ±0.1 Hz					
PRECISION		Stationary: ±1% ; Transitory: ±5% (load variations 100-0-100%)					
MAX. SYNCHRONISATION SPEED		±1 Hz/s					
WAVEFORM		Pure Sinewave					
TOTAL HARMONIC DISTORTION (THDV)		<2% (Linear Load) ; <5% (Non-linear Load)					
PHASE DISPLACEMENT		120° ±1% (balanced load) ; 120° ±2% (imbalances 50% of the load)					
DYNAMIC RECOVERY TIME		3 cycles at 90 % of the static value					
ADMISSIBLE OVERLOAD		110% for 10min; 150% for 60sec ; >160% for 200ms					
ADMISSIBLE CREST FACTOR		3 : 1					
ADMISSIBLE POWER FACTOR		0.6~1 (inductive or capacitive)					
IMBALANCE OUTPUT VOLTAGE		< 1% at 100% Unbalance Load					
CURRENT LIMIT		High overload, short-circuit: RMS Voltage Limit ; High Crest-Factor current: Peak Voltage Limit					
OUTPUT CONNECTION		Hardwire 5-wire (3P+N+G)					
STATIC BYPASS							
TYPE		Solid State					
VOLTAGE		3 x 380VAC/400VAC (3Ph + N)					
FREQUENCY		50/60 Hz					
ACTIVATION CRITERION		Microprocessor control					
TRANSFER TIME		Zero					
ADMISSIBLE OVERLOAD		150% for 1 hour; 180% for 30sec; >200% for 200ms					
TRANSFER TO BYPASS		Immediate, for overloads above 160%					
RETRANSFER		Automatic after alarm clear					
MAINTENANCE BYPASS							
TYPE		Without Interruption					
VOLTAGE		3 x 400V (3Ph + N)					
FREQUENCY		50/60 Hz					
OVERALL	LINE MODE	89%		90%		91%	
EFFICIENCY	BATTERY MODE	90%		91%		92%	
BATTERY & CHARGER							
BATTERY	TYPE	Sealed Lead Acid Maintenance Free Battery					
	NUMBERS	12VDC x 32 pcs (29~32 pcs adjustable)					
NOMINAL BATTERY VOLTAGE		384 VDC (Based on 32pcs batteries)					
CHARGING METHOD		CC / CV					
CHARGING CURRENT		Default 10A, Max. = Capacity / Battery Voltage			Default: 10A. Max. 40A		
CHARGING VOLTAGE		432 VDC (Based on 32pcs batteries)					
COMMUNICATION							
POWER MANAGEMENT SOFTWARE		Support Window Family, Linux and MAC					
INTERFACE		RS485, Intelligent slot					
ENVIRONMENT							
OPERATING TEMPERATURE		0°C ~ 55°C					
HUMIDITY		5% ~ 95% non-condensing					
NOISE LEVEL		Less than 70dB					
PHYSICAL							
DIMENSION (D x W x H mm)		656 x 405 x 817		656 x 405 x 941		821 x 432 x 1159	
WEIGHT (KG)		118	120	145	193	278	365
SAFETY STANDARD							
PROTECTION		IP 20 ; IP 21 or IP 31 (Optional)					
UPS SAFETY		IEC/EN 62040-1					
EMC		IEC/EN 62040-2					
SURGE PROTECTION		IEC 61000-4-5					
UPS PERFORMANCE TEST		VFI-SS-111 in accordance with IEC/EN 62040-3					
UPS COMPLIANCE		CE					

*Specification subjects to change without prior notice



Technical Specification:

MODEL		Thor H+ 80KS	Thor H+ 100KS	Thor H+ 120KS	Thor H+ 160KS	Thor H+ 200KS
CAPACITY (KVA)		80KVA/64KW	100KVA / 80KW	120KVA / 96KW	160KVA / 128KW	200KVA / 160KW
INPUT						
NOMINAL VOLTAGE		3 x 380VAC/400VAC (3Ph + N)				
ACCEPTABLE VOLTAGE RANGE		285VAC ~ 475VAC				
FREQUENCY RANGE		50/60 Hz ± 10 %				
PHASE		3-Phase in / 3-phase out				
OUTPUT						
NOMINAL VOLTAGE		3 x 380VAC/400VAC (3Ph + N)				
OUTPUT POWER FACTOR		0.8				
FREQUENCY		50/60 Hz synchronised ±1 % ; With mains absent ±0.1 Hz				
PRECISION		Stationary: ±1% ; Transitory: ±5% (load variations 100-0-100%)				
MAX. SYNCHRONISATION SPEED		±1 Hz/s				
WAVEFORM		Pure Sinewave				
TOTAL HARMONIC DISTORTION (THDV)		<2% (Linear Load) ; <5% (Non-linear Load)				
PHASE DISPLACEMENT		120º ±1% (balanced load) ; 120º ±2% (imbalances 50% of the load)				
DYNAMIC RECOVERY TIME		3 cycles at 90 % of the static value				
ADMISSIBLE OVERLOAD		110% for 10min; 150% for 60sec ; >160% for 200ms				
ADMISSIBLE CREST FACTOR		3 : 1				
ADMISSIBLE POWER FACTOR		0.6~1 (inductive or capacitive)				
IMBALANCE OUTPUT VOLTAGE		< 1% at 100% Unbalance Load				
CURRENT LIMIT		High overload, short-circuit: RMS Voltage Limit ; High Crest-Factor current: Peak Voltage Limit				
OUTPUT CONNECTION		Hardwire 5-wire (3P+N+G)				
STATIC BYPASS						
TYPE		Solid State				
VOLTAGE		3 x 380VAC/400VAC (3Ph + N)				
FREQUENCY		50/60 Hz				
ACTIVATION CRITERION		Microprocessor control				
TRANSFER TIME		Zero				
ADMISSIBLE OVERLOAD		150% for 1 hour; 180% for 30sec; >200% for 200ms				
TRANSFER TO BYPASS		Immediate, for overloads above 160%				
RETRANSFER		Automatic after alarm clear				
MAINTENANCE BYPASS						
TYPE		Without Interruption				
VOLTAGE		3 x 400V (3Ph + N)				
FREQUENCY		50/60 Hz				
OVERALL	LINE MODE	0.95				
EFFICIENCY	BATTERY MODE	0.95				
BATTERY & CHARGER						
BATTERY	TYPE	Sealed Lead Acid Maintenance Free Battery				
	NUMBERS	12VDC x 32 pcs (29~32 pcs adjustable)				
NOMINAL BATTERY VOLTAGE		384 VDC (Based on 32pcs batteries)				
CHARGING METHOD		CC / CV				
CHARGING CURRENT		Default: 10A. Max. 40A				
CHARGING VOLTAGE		432 VDC (Based on 32pcs batteries)				
COMMUNICATION						
POWER MANAGEMENT SOFTWARE		Support Window Family, Linux and MAC				
INTERFACE		RS485, Intelligent slot				
ENVIRONMENT						
OPERATING TEMPERATURE		0°C ~ 55°C				
HUMIDITY		5% ~ 95% non-condensing				
NOISE LEVEL		Less than 70dB				
PHYSICAL						
DIMENSION (D x W x H mm)		975 x 554 x 1286		975 x 635 x 1326	1051 x 705 x 1646	
WEIGHT (KG)		471	573	650	760	840
SAFETY STANDARD						
PROTECTION		IP 20 ; IP 21 or IP 31 (Optional)				
UPS SAFETY		IEC/EN 62040-1				
EMC		IEC/EN 62040-2				
SURGE PROTECTION		IEC 61000-4-5				
UPS PERFORMANCE TEST		VFI-SS-111 in accordance with IEC/EN 62040-3				
UPS COMPLIANCE		CE				

*Specification subjects to change without prior notice