constant powerservices











TRANSPORT

Master HP UL









3:3 65-500 kVA











UL certified



SmartGrid

HIGHLIGHTS

- High efficiency
- IGBT-based rectifier technology
- · Compact, reliable and robust
- Galvanic isolation
- High overload capacity

The high levels of quality, reliability and energy savings offered by the Master HP range of UPS, has been extended to include a UL/CSA Listed, 480 Vac 60 Hz version with ratings from 65 kVA to 500 kVA. IT managers, facility managers, and CTOs are under increasing pressure to reduce downtime and assure that their critical loads are supplied with uninterrupted and high quality power. With this increasingly stringent requirement, Riello UPS has invested in power solutions that meet strict demands; a commitment resulting in the launch of the Master HP UL range. More than just an innovative and technologically-advanced UPS, it is a leap into the future of three-phase technology. With its double conversion on-line

technology based entirely on IGBT and digital signal processors (DSP), the Master HP UL range ensures maximum critical load protection, with VFI SS 111 classification (Voltage and Frequency Independent) in accordance with IEC EN 62040-3. This range is designed using a new configuration that includes an IGBT sinusoidal input rectifier. Unique in its design, double conversion technology with galvanic isolated output guarantees a quality power supply that is completely protected from all electrical anomalies at the input.

Complete galvanic separation

The Master HP UL UPS features an output isolation transformer on the inverter as part of the inverter circuit inside the UPS cabinet, providing galvanic isolation between the load and the battery with improved versatility in system configuration, allowing:

- Complete UPS output galvanic isolation for critical infrastructures from the battery DC power source;
- Two truly separated supply inputs (utility and bypass), which can be taken from two different power sources (with different neutrals); this is particularly well suited for parallel systems in order to ensure selectivity between the two sources, improving the reliability of the entire installation;
- No neutral input connection is required at the UPS rectifier input stage; this method is particularly favorable in order to prevent the transmission of common neutral disturbances via the neutral conductor:
- No effects to the UPS output performance or reduced impact of the inverter power components while supplying specific loads; in addition the inverter transformer minimizes the impact of third harmonic disturbances, prevents the effects of energy back-feed into the inverter when supplying industrial load applications and can supply unbalanced loads.
- High inverter short circuit current to clear faults which occur between phase and neutral on load side (up to three times nominal current).

Output transformer housed within a cabinet which allows for a significant reduction in the footprint and provides space savings.

Zero impact source

The Master HP UL series features the added advantages of the Zero Impact Source formula offered by an IGBT-based rectifier assembly. This eliminates problems connected with installation in networks with limited power capacity, where the UPS is supplied by a generator set or anywhere there are compatibility problems with loads

that generate current harmonics. Master MHT UL series UPS have zero impact on the power supply source, whether it is a utility grid or generator set:

- Input current distortion < 3%
- Input power factor 0.99
- Power walk-in function that ensures progressive rectifier start up
- Start-up delay function, to restart the rectifiers when mains power is restored if there are several UPS in the system.

This provides savings in installation costs via:

- A smaller electrical infrastructure.
- Smaller circuit protection devices
- · Less wiring.

Flexibility

Master HP UL is suitable for a wide range of applications including IT and the most demanding industrial environments and processes. With several operational configurations including On-Line, Eco, Smart Active, Stand By, Frequency Converter and Voltage Regulation. A broad range of accessories and options, complex configurations and system architectures can be achieved to guarantee maximum power availability and the option to add new UPS without interruption to site operations.

Battery care system: maximum battery care

Master HP UL series UPS include a range of features designed to prolong battery life and reduce usage by using different recharging methods; deep discharge protection, current limitation, and voltage compensation based on ambient temperature.

Main features

- Compact size: e.g.: only 2.330 square inches for the Master HP UL 500 kVA
- Reduced weight for transformer based UPS
- Double load protection, both electronic and galvanic, towards the battery.

The entire Master HP UL range is suitable for use in a wide range of applications. The Master HP can supply any type of load, e.g. servers, controls, lighting, capacitive, switch mode. Power supply reliability and availability are ensured for critical applications by distributed parallel configurations of up to 8 units, for redundant (N+1) or power parallel configurations.

Advanced supervision

The Master HP UPS has a front panel mounted graphic display providing UPS information, measurements, status updates and alarms in multiple languages, with waveform displays including voltage/current and providing a kWh reading that can be used to measure IT loads and calculate a Data Centre PUE (Power Usage Effectiveness) ratio.

OPTIONS

SOFTWARE

PowerShield³

PowerNetGuard

ACCESSORIES

NETMAN 204

Multi I/O (Relay Alarm card and generator Interface)

PRODUCT ACCESSORIES

Parallel configuration kit (Closed Loop)
Fully configured battery systems with appropriate autonomy

Maintenance Bypass Switchgear for all models

DIMENSIONS

MHT 65 UL MHT 80 UL MHT 100 UL MHT 125 UL



including manual bypass

MHT 160 UL MHT 200 UL MHT 250 UL



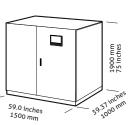
excluding manual bypass

MHT 160 UL MHT 200 UL MHT 250 UL

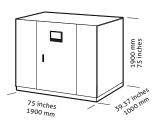


including manual bypass Top Cable Entry cabinets

MHT 300 UL MHT 400 UL MHT 500 UL



MHT 300 UL TCE MHT 400 UL TCE MHT 500 UL TCE



Nominal voltage	MODELS	MHT 65 UL	MHT 80 UL	MHT 100 UL	MHT 125 UL	MHT 160 UL			
Proper Factor	INPUT								
Proper Factor	Nominal voltage			480 Vac three-phase +	N				
Soft start	Frequency			45 - 65 Hz					
Soft start	Power factor			> 0.99					
1 296 (selectable from ± 196 to ± 596 from front panel.)	Harmonic current distortion			<3% THDi					
Standard equipment provided Back Feed protection, separable bypass line SATTERES	Soft start		0 -	100% in 125" (selecta	ble)				
Sample current Sipple current Sipp	Frequency tolerance	± 2% (selectable from ± 1% to ± 5% from front panel)							
Nominal power (kVA) 65 80 100 125 160 144 160 165 165 16	Standard equipment provided	Back Feed protection; separable bypass line							
Recharge voltage compensation	BATTERIES								
Nominal power (kW) 5880 100 125 160 Nominal power (kW) 58.5 80 100 125 160 Active power (kW) 58.5 72 90 112.5 144 Number of phases 3 + N Nominal voltage 480 Vac three-phase + N Static stability 196 196 Dypamic stability 196 196 Voltage distortion 196 with limer load / < 396 with non-tineer load Crest factor 50.05%6 Frequency stability on bettery 60 Ptz Overload 1100 for 60 minutes; 125% for 10 minutes; 150% for 1 minute NPO FOR INSTALLATION 100 for 60 minutes; 125% for 10 minutes; 125% for 1 minute Weight (libs [kg]) 1500 [680] 1610 [730] 1742 [790] 1851 [840] Weight (libs [kg]) 1500 [680] 1610 [730] 1742 [790] 1851 [840] 1893 35 x 75 [1000 x850 x1900] 189	Туре	VRLA, Wet Cell, NiCd							
OUTPUT Nominal power (kWA) 65 80 100 125 160 Active power (kWA) 58.5 72 90 11.2.5 144 Number of phases 3 + N Nominal voltage 480 Vac three-phase + N Text of the phase of the	Ripple current	Zero							
Nominal power (kWA) 65 80 100 125 160 Active power (kW) 58.5 72 90 112.5 144 Number of phases 3 + N	Recharge voltage compensation			-0.5 Vx°C					
Active power (kW) 58.5 72 90 112.5 144 Number of phases 3 + N 3 + N 144 <	ОИТРИТ								
Number of phases 3 + N Nominal voltage 480 Vac three-phase + N Static stability ± 1% Dynamic stability from ± 5% to ± 1% in ≥0 ms Voltage distortion < 1% with linear load 2 < 3% with non-linear load Crest factor 3:1 lpeack/lrms Frequency 60 Hz Overload 110% for 60 minutes; 125% for 10 minutes; 150% for 1 minute IMP6 FOR INSTALLATION The property of the phase in the phas	Nominal power (kVA)	65	80	100	125	160			
Nominal voltage 480 Vac three-phase + N Static stability ± 1% Opynamic stability From ± 5% to ± 1% in ±0 ms Voltage distortion Crest factor Crest factor 3:1 lpeack/Irms Frequency stability on battery 60 Hz Frequency 60 Hz Overload 110% for 60 minutes; 125% for 10 minutes; 150% for 1 minutes INFO FOR INSTALLATION The peack/Irms Weight (bis [kg]) 1500 [680] 1610 [730] 1742 [790] 1851 [840] Weight with TCE and Maintenance bypass (bis [kg]) 1500 [680] 1610 [730] 1742 [790] 1851 [840] Dimensions (wXxDxH) (inches [mm]) 31.5 x 33.5 x 75 [800 x 850 x 1900] 1800 [800] 1800 [800] 1800 [800] 1800 [800] 1800 [800] 1800 [800] 1800 [800] 1800 [800] 1800 [800] 1800 [800] 1800 [800] 1800 [800] 1800 [800]	Active power (kW)	58.5	72	90	112.5	144			
Static stability ± 1% Dynamic stability From ± 5% to ± 1% in 20 ms Voltage distortion < 1% with linear load / < 3% with non-linear load Crest factor 3:1 lpeack//Irms Frequency stability on battery 60 Hz Overload 110% for 60 minutes; 125% for 10 minutes; 150% for 1 minute INFO FOR INSTALLATION Weight (lbs [kg]) 1500 [680] 1610 [730] 1742 [790] 1851 [840] Weight with TCE and Maintenance bypass (kb [kg]) 1500 [680] 1610 [730] 1742 [790] 1851 [840] Dimensions (WxDxH) (inches [mm]) 31,5 x 33.5 x 75 [800 x 850 x 1900] 1851 [840] Dimensions (WxDxH) (inches [mm]) 31,5 x 33.5 x 75 [800 x 850 x 1900] 1858 [840] 1858 [840] 1858 [840] 1858 [840] 1858 [840] 1858 [840] 1858 [840] 1858 [840] 1858 [840] 1858 [840] 1858 [840] 1858 [840] 180 [840] 1858 [840]<	Number of phases	3 + N							
Dynamic stability from ± 5% to ± 1% in ≥0 ms Voltage distortion (1% with linear load / < 3% with non-linear load Crest factor 3:1 lpeack/Irms Frequency 60 Hz Overload 110% for 60 minutes; 125% for 10 minutes; 150% for 1 minutes INFO FOR INSTALLATION Weight (lbs [kg]) 1500 [680] 1610 [730] 1742 [790] 1815 [840] Weight with TCE and Maintenance bypass (lbs [kg]) 1500 [880] 1610 [730] 1742 [790] 1815 [840] Dimensions (WxDxH) (inches [mm]) 31.5 x 33.5 x 75 [800 x 850 x 1900] 185 x 33.5 x 75 [1000 x 850 x 1900] Dimensions with TCE and Maintenance bypass (WxDxH) (inches [mm])	Nominal voltage	480 Vac three-phase + N							
Voltage distortion < 1% with linear load / < 3% with non-linear load Crest factor 3:1 lpeack/trms Frequency stability on battery 60 Hz Overload 110% for 60 minutes; 125% for 10 minutes; 150% for 1 minute IMFO FOR INSTALLATION Weight (lbs [kg]) 1500 [680] 1610 [730] 1742 [790] 1851 [840] Weight with TCE and Maintenance bypass (lbs [kg]) 2 204 [1000] 39 x 33.5 x 75 [1000 x 850 x 1900] [39 x 33.5 x 75 [1000 x 850 x 1900] Dimensions (WxDxH) (inches [mm]) 31.5 x 33.5 x 75 [800 x 850 x 1900] [55 x 33.5 x 75 [1000 x 850 x 1900] Dimensions with TCE and Maintenance bypass (WxDxH) (inches [mm]) 3 2 x 35 x 75 [1000 x 850 x 1900] [55 x 33.5 x 75 [1000 x 850 x 1900] Dimensions with TCE and Maintenance bypass (lbs [kg]) 3 2 x 35 x 75 [1000 x 850 x 1900] [55 x 33.5 x 75 [1000 x 850 x 1900] Remote signals dry contacts (configurable) Remote controls ESD and bypass (configurable) Communications Double RS232 + dry contacts + 2 slots for communications interface with SNMP, Modbus, and Bacnet Protocols Operating temperature 0 °C / +40 °C (32 to 104 °F) Color Black Noise level at 1 m (ECO Mode) 65 dBA 68 dBA Prating UL Standard 1778: 2nd edition from 65 to 125 kVA, 5th edition from 160 to 250 kVA; (160950-11: Information Technology Equipment - S	Static stability	± 1%							
Crest factor 3:1 lpeack/lrms Frequency stability on battery 0.05% Frequency 60 Hz Overload 110% for 60 minutes; 125% for 10 minutes; 150% for 1 minute INFO FOR INSTALLATION Weight (lbs [kg]) 1500 [680] 1610 [730] 1742 [790] 1851 [840] Weight with TCE and Maintenance bypass (lbx [kg]) 31.5 x 33.5 x 75 [800 x 850 x 1900] 179 x 33.5 x 75 [1000x850x1900] Dimensions with TCE and Maintenance bypass (WxDxH) (inches [mm]) 31.5 x 33.5 x 75 [800 x 850 x 1900] 179 x 33.5 x 75 [1000x850x1900] Remote signals 4 gray x 33.5 x 75 [800 x 850 x 1900] 150 x 33.5 x 75 [800 x 850 x 1900] 150 x 33.5 x 75 [800 x 850 x 1900] 150 x 33.5 x 75 [800 x 850 x 1900] 150 x 33.5 x 75 [800 x 850 x 1900] 150 x 33.5 x 75 [800 x 850 x 1900] 150 x 33.5 x 75 [800 x 850 x 1900] 150 x 33.5 x 75 [800 x 850 x 1900] 150 x 33.5 x 75 [800 x 850 x 1900] 150 x 33.5 x 75 [800 x 850 x 1900] 150 x 33.5 x 75 [800 x 850 x 1900] 150 x 33.5 x 75 [800 x 850 x 1900] 150 x 33.5 x 75 [800 x 85	Dynamic stability	from ± 5% to ± 1% in 20 ms							
Frequency 0.05% Frequency 60 Hz Overload 110% for 60 minutes; 125% for 10 minutes; 150% for 1 minute INFO FOR INSTALLATION Weight (lbs [kg]) 1500 [680] 1610 [730] 1742 [790] 1851 [840] Weight with TCE and Maintenance bypass (lbs [kg]) 1500 [680] 1610 [730] 1742 [790] 1851 [840] Dimensions (WxDxH) (inches [mm]) 31.5 x 33.5 x 75 [800 x 850 x 1900] 189 x 33.5 x 75 [800 x 850 x 1900] 189 x 33.5 x 75 [800 x 850 x 1900] 189 x 33.5 x 75 [800 x 850 x 1900] 189 x 33.5 x 75 [800 x 850 x 1900] 189 x 33.5 x 75 [800 x 850 x 1900] 189 x 33.5 x 75 [800 x 850 x 1900] 189 x 33.5 x 75 [800 x 850 x 1900] 189 x 33.5 x 75 [800 x 850 x 1900] 189 x 33.5 x 75 [800 x 850 x 1900] 189 x 33.5 x 75 [800 x 850 x 1900] 189 x 33.5 x 75 [800 x 850 x 1900] 189 x 33.5 x 75 [800 x 850 x 1900] 189 x 33.5 x 75 [800 x 850 x 1900] 189 x 33.5 x 75 [800 x 850 x 1900] 189 x 33.5 x 75 [800 x 850 x 1900] 180 x 33.5 x 75 [800 x 850 x 1900] 180 x 33.5 x 75 [800 x 850 x 1900]	Voltage distortion	< 1% with linear load / < 3% with non-linear load							
Frequency	Crest factor	3:1 lpeack/lrms							
Overload 110% for 60 minutes; 125% for 10 minutes; 150% for 1 minute INFO FOR INSTALLATION Weight (lbs [kg]) 1500 [680] 1610 [730] 1742 [790] 1851 [840] Weight with TCE and Maintenance bypass (lbs [kg]) 3 15 × 33.5 × 75 [800 × 850 × 1900] 1742 [790] 1851 [840] Dimensions (WxDxH) (inches [mm]) 31.5 × 33.5 × 75 [800 × 850 × 1900] 189 × 33.5 × 75 [1000x850x1900] Dimensions with TCE and Maintenance bypass (WxDxH) (inches [mm]) 31.5 × 33.5 × 75 [800 × 850 × 1900] 189 × 33.5 × 75 [1000x850x1900] Dimensions with TCE and Maintenance bypass (WxDxH) (inches [mm]) 31.5 × 33.5 × 75 [800 × 850 × 1900] 189 × 33.5 × 75 [1000x850x1900] Dimensions (WxDxH) (inches [mm]) 31.5 × 33.5 × 75 [800 × 850 × 1900] 189 × 33.5 × 75 [1000x850x1900] Remote controls Explain transport (inches [mm]) A dry contacts (configurable) Remote controls ESD and bypass (configurable) Communications Double RS232 + dry contacts (configurable) ERD and bypass (configurable) Subgart (as a part and bypass (configurable)	Frequency stability on battery	0.05%							
INFO FOR INSTALLATION Weight (lbs [kg]) 1500 [680] 1610 [730] 1742 [790] 1851 [840] Weight with TCE and Maintenance bypass (lbs [kg]) 3.15 x 33.5 x 75 [800 x 850 x 1900] 3.9 x 33.5 x 75 [1000x 850 x 1900] Dimensions with TCE and Maintenance bypass (WxDxH) (inches [mm]) 3.15 x 33.5 x 75 [800 x 850 x 1900] 155 x 33.5 x 75 [1000x 850 x 1900] Remote signals 4 The standard signals 4 The standard signals 55 x 33.5 x 75 [1400x 850 x 1900] Remote controls 5 Substantial standard signals 5 Substantial standard signals 5 Substantial standard signals Communications 10 Double RS23.2 * dry contacts * 2 slots for communications interface with SNMP, Modbus, and Bacnet Protocols 5 Substantial standard share Protocols Operating temperature 95% non-condensing 1 Substantial standard share Protocols Color 18 Back 1 Substantial standard share Protocols Noise level at 1 m (ECO Mode) 6 5 dBA 68 dBA IP rating 1P20 Standards 1P20 Standards 1P20 Standards 1P20 standard 1778: 2nd edition from 65 to 125 kVA, 5th edition from 160 to 250 kVA; 170 standard 1778: 2nd edition from 165 to 125 kVA, 5th edition from 160	Frequency	60 Hz							
Weight (lbs [kg]) 1500 [680] 1610 [730] 1742 [790] 1851 [840] Weight with TCE and Maintenance bypass (lbs [kg]) 2204 [1000] Dimensions (WxDxH) (inches [mm]) 31.5 x 33.5 x 75 [800 x 850 x 1900] 39 x 33.5 x 75 [1000x850x1900] Dimensions with TCE and Maintenance bypass (WxDxH) (inches [mm])	Overload	110% for 60 minutes; 125% for 10 minutes; 150% for 1 minute							
Weight with TCE and Maintenance bypass (lbs [kg]) - - - 2204 [1000] Dimensions (WxDxH) (inches [mm]) 31.5 x 33.5 x 75 [800 x 850 x 1900] [39 x 33.5 x 75 [1000x850x1900] Dimensions with TCE and Maintenance bypass (WxDxH) (inches [mm]) - - - 55 x 33.5 x 75 [1000x850x1900] Maintenance bypass (WxDxH) (inches [mm]) - - - - 55 x 33.5 x 75 [1400x850x1900] Remote signals dry contacts (configurable) Remote controls ESD and bypass (configurable) Communications Double RS232 + dry contacts + 2 slots for communications interface with SNMP, Modbus, and Bacnet Protocols Operating temperature 0 °C / +40 °C (32 to 104 °F) Relative humidity Color Black Noise level at 1 m (ECO Mode) 65 dBA 68 dBA IP rating IP20 Smart Active efficiency UL Standard 1778: 2nd edition from 65 to 125 kVA, 5th edition from 160 to 250 kVA; Standards From 160 to 250 kVA: UL 60950-1 1: Information Technology Equipment - Safety - Part 1: General Requirements National Electrical Code (NFPA-70); FCC Part 15 Subpart J Calsa A - Radio Frequency; IEC 62040-3; UL 924 and OUST category - Emergency Lighting and power equipment Classification in accordance with IEC 62040-3	INFO FOR INSTALLATION								
bypass (lbs [kg]) Dimensions (WxDxH) (inches [mm]) Dimensions with TCE and Maintenance bypass (WxDxH) Align and bypass (WxDxH) Dimensions with TCE and Maintenance bypass (WxDxH) Align and bypass (WxDxH) Align and bypass (Configurable) Remote signals Remote controls Double RS232 + dry contacts (configurable) Communications Double RS232 + dry contacts + 2 slots for communications interface with SNMP, Modbus, and Bacnet Protocols Operating temperature O °C / +40 °C (32 to 104 °F) Relative humidity Color Black Noise level at 1 m (ECO Mode) Frating IP20 Smart Active efficiency UL Standard 1778: 2nd edition from 65 to 125 kVA, 5th edition from 160 to 250 kVA; From 160 to 250 kVA: UL 60950-1 1: Information Technology Equipment - Safety - Part 1: General Requirements National Electrical Code (NFPA-70); FCC Part 15 Subpart 1 class A - Radio Frequency; IEC 62040-3; UL 924 and OUST category - Emergency Lighting and power equipment Classification in accordance with IEC 62040-3 (Voltage Frequency Independent) VFI - SS - 111	Weight (lbs [kg])	1500	0 [680]	1610 [730]	1742 [790]	1851 [840]			
Dimensions (wxxxx) (Inches (Infini) Dimensions with TCE and Maintenance bypass (WxDxH) (inches [mm]) Remote signals Remote controls Communications Double RS232 + dry contacts (configurable) Communications Double RS232 + dry contacts + 2 slots for communications interface with SNMP, Modbus, and Bacnet Protocols Operating temperature O °C / +40 °C (32 to 104 °F) Relative humidity Color Relative humidity Office and the first of the f	Weight with TCE and Maintenance bypass (lbs [kg])	-	-	-	-	2204[1000]			
Maintenance bypass (WxDxH) (inches [mm]) - - 155x 35.5 x 75 [1400x850x1900] Remote signals dry contacts (configurable) Remote controls ESD and bypass (configurable) Communications Double RS232 + dry contacts + 2 slots for communications interface with SNMP, Modbus, and Bacnet Protocols Operating temperature 0 °C / +40 °C (32 to 104 °F) Relative humidity <95% non-condensing		31.5 x 33.5 x 75 [800 x 850 x 1900] 39 x 33.5 x 75 [1000x850x190							
Remote controls ESD and bypass (configurable) Communications Double RS232 + dry contacts + 2 slots for communications interface with SNMP, Modbus, and Bacnet Protocols Operating temperature 0 °C / +40 °C (32 to 104 °F) Relative humidity <95% non-condensing	Maintenance bypass (WxDxH)	-	-	-	-				
Communications Double RS232 + dry contacts + 2 slots for communications interface with SNMP, Modbus, and Bacnet Protocols Operating temperature O °C / +40 °C (32 to 104 °F) Relative humidity <sp5% (eco="" (nfpa-70);="" (voltage="" -="" 1="" 111<="" 125="" 15="" 160="" 1778:="" 1:="" 250="" 2nd="" 5th="" 60950-1="" 62040-3;="" 65="" 924="" a="" active="" and="" at="" black="" category="" class="" code="" color="" edition="" efficiency="" electrical="" emergency="" equipment="" fcc="" frating="" frequency="" frequency;="" from="" general="" iec="" independent)="" information="" kva,="" kva:="" kva;="" level="" lighting="" m="" mart="" mode)="" national="" noise="" non-condensing="" oust="" part="" power="" radio="" requirements="" safety="" ss="" standard="" subpart="" td="" technology="" to="" ul="" vfi=""><td>Remote signals</td><td colspan="7">dry contacts (configurable)</td></sp5%>	Remote signals	dry contacts (configurable)							
Operating temperature O °C / +40 °C (32 to 104 °F) Relative humidity Color Black Noise level at 1 m (ECO Mode) Frating Smart Active efficiency UL Standard 1778: 2nd edition from 65 to 125 kVA, 5th edition from 160 to 250 kVA; From 160 to 250 kVA: UL 60950-1 1: Information Technology Equipment - Safety - Part 1: General Requirements National Electrical Code (NFPA-70); FCC Part 15 Subpart J class A - Radio Frequency; IEC 62040-3; UL 924 and OUST category - Emergency Lighting and power equipment (Voltage Frequency Independent) VFI - SS - 111	Remote controls	ESD and bypass (configurable)							
Relative humidity Color Black Noise level at 1 m (ECO Mode) Prating Smart Active efficiency UL Standard 1778: 2nd edition from 65 to 125 kVA, 5th edition from 160 to 250 kVA; From 160 to 250 kVA: UL 60950-1 1: Information Technology Equipment - Safety - Part 1: General Requirements National Electrical Code (NFPA-70); FCC Part 15 Subpart 1 class A - Radio Frequency; IEC 62040-3; UL 924 and OUST category - Emergency Lighting and power equipment Classification in accordance with IEC 62040-3 (Voltage Frequency Independent) VFI - SS - 111	Communications								
Color Noise level at 1 m (ECO Mode) IP rating Smart Active efficiency UL Standard 1778: 2nd edition from 65 to 125 kVA, 5th edition from 160 to 250 kVA; Standards UL Standard 1778: 2nd edition from 65 to 125 kVA, 5th edition from 160 to 250 kVA; From 160 to 250 kVA: UL 60950-1 1: Information Technology Equipment - Safety - Part 1: General Requirements National Electrical Code (NFPA-70); FCC Part 15 Subpart J class A - Radio Frequency; IEC 62040-3; UL 924 and OUST category - Emergency Lighting and power equipment Classification in accordance with IEC 62040-3 (Voltage Frequency Independent) VFI - SS - 111	Operating temperature	0 °C / +40 °C (32 to 104 °F)							
Noise level at 1 m (ECO Mode) IP rating Smart Active efficiency UL Standard 1778: 2nd edition from 65 to 125 kVA, 5th edition from 160 to 250 kVA; From 160 to 250 kVA: UL 60950-1 1: Information Technology Equipment - Safety - Part 1: General Requirements National Electrical Code (NFPA-70); FCC Part 15 Subpart J class A - Radio Frequency; IEC 62040-3; UL 924 and OUST category - Emergency Lighting and power equipment Classification in accordance with IEC 62040-3 (Voltage Frequency Independent) VFI - SS - 111	Relative humidity	<95% non-condensing							
IP rating Smart Active efficiency UL Standard 1778: 2nd edition from 65 to 125 kVA, 5th edition from 160 to 250 kVA; From 160 to 250 kVA: UL 60950-1 1: Information Technology Equipment - Safety - Part 1: General Requirements National Electrical Code (NFPA-70); FCC Part 15 Subpart J class A - Radio Frequency; IEC 62040-3; UL 924 and OUST category - Emergency Lighting and power equipment Classification in accordance with IEC 62040-3 (Voltage Frequency Independent) VFI - SS - 111	Color	Black							
Smart Active efficiency UL Standard 1778: 2nd edition from 65 to 125 kVA, 5th edition from 160 to 250 kVA; From 160 to 250 kVA: UL 60950-1 1: Information Technology Equipment - Safety - Part 1: General Requirements National Electrical Code (NFPA-70); FCC Part 15 Subpart J class A - Radio Frequency; IEC 62040-3; UL 924 and OUST category - Emergency Lighting and power equipment Classification in accordance with IEC 62040-3 (Voltage Frequency Independent) VFI - SS - 111	Noise level at 1 m (ECO Mode)	65 dBA 68 dBA							
UL Standard 1778: 2nd edition from 65 to 125 kVA, 5th edition from 160 to 250 kVA; From 160 to 250 kVA: UL 60950-1 1: Information Technology Equipment - Safety - Part 1: General Requirements National Electrical Code (NFPA-70); FCC Part 15 Subpart J class A - Radio Frequency; IEC 62040-3; UL 924 and OUST category - Emergency Lighting and power equipment (Voltage Frequency Independent) VFI - SS - 111	IP rating	IP20							
Standards From 160 to 250 kVA: UL 60950-1 1: Information Technology Equipment - Safety - Part 1: General Requirements National Electrical Code (NFPA-70); FCC Part 15 Subpart J class A - Radio Frequency; IEC 62040-3; UL 924 and OUST category - Emergency Lighting and power equipment Classification in accordance with IEC 62040-3 (Voltage Frequency Independent) VFI - SS - 111	Smart Active efficiency	up to 98.5%							
IEC 62040-3 (voltage Frequency Independent) VFI - SS - 111	Standards	From 160 to 250 kVA: UL 60950-1 1: Information Technology Equipment - Safety - Part 1: General Requirements National Electrical Code (NFPA-70); FCC Part 15 Subpart J class A - Radio Frequency; IEC 62040-3;							
Transport Pallet Jack		(Voltage Frequency Independent) VFI - SS - 111							
	Transport	Pallet Jack							

MODELS	MHT 200 UL	MHT 250 UL	MHT 300 UL	MHT 400 UL	MHT 500 UL			
INPUT								
Nominal voltage		4	80 Vac three-phase +	- N				
Frequency			45 - 65 Hz					
Power factor			> 0.99					
Harmonic current distortion	<3% THDi							
Soft start	0 - 100% in 125" (selectable)							
Frequency tolerance	± 2% (selectable from ± 1% to ± 5% from front panel)							
Standard equipment provided	Back Feed protection; separable bypass line							
BATTERIES								
Туре	VRLA, Wet Cell, NiCd on Racks or Cabinet							
Ripple current	Zero							
Recharge voltage compensation	-0.5 Vx°C							
ОUТРUТ								
Nominal power (kVA)	200	250	300	400	500			
Active power (kW)	180	225	300	400	450			
Number of phases	3 + N							
Nominal voltage	480 Vac three-phase + N							
Static stability	± 1%							
Dynamic stability	from ± 5% to ± 1% in 20 ms							
Voltage distortion	< 1% with linear load / < 3% with non-linear load							
Crest factor	3:1 lpeack/lrms							
Frequency stability on battery	0.05%							
Frequency	60 Hz							
Overload	110% for 60 minutes; 125% for 10 minutes; 150% for 1 minute							
INFO FOR INSTALLATION								
Weight (lbs [kg])	2138 [970]	2247 [1110]	4190 [1900]	4741 [2150]	4741 [2150]			
Weight with TCE and Maintenance bypass (lbs [kg])	2524[1145]	2799 [1270]	4410 [2000] *	4961 [2250] *	4961 [2250] *			
Dimensions (WxDxH) (inches [mm])	39 x 33.5 x 75 [1000 x 850 x 1900] 59 x 39.5 x 75 [1500 x 1000 x 1900]							
Dimensions with TCE and manual bypass (WxDxH) (inches [mm])	55 x 33.5 x 75 [1400 x 850 x 1900]							
Remote signals	dry contacts (configurable)							
Remote controls	ESD and bypass (configurable)							
Communications	Double RS232 + dry contacts + 2 slots for communications interface							
Operating temperature	0 °C / +40 °C (32 to 104 °F)							
Relative humidity	<95% non-condensing							
Color	Black							
Noise level at 1 m (ECO Mode)	68 dBA 72 dBA							
IP rating	IP20							
Smart Active efficiency	up to 98.5%							
Standards	UL Standard 1778: 5th edition; UL 60950-1 1: Information Technology Equipment - Safety - Part 1: General Requirements; National Electrical Code (NFPA-70); FCC Part 15 Subpart J class A – Radio Frequency; IEC 62040-3; UL 924 and OUST category – Emergency Lighting and power equipment UL Standard 1778: 5th edition; National Electrical Code (NFPA-70); NEMA; CSA C22.2; ASM FCC section 15 subsection J class A; IEC 62040-3;				; CSA C22.2; ASME;			
Classification in accordance with IEC 62040-3	(Voltage Frequency Independent) VFI - SS - 111							
Transport	Pallet Jack							

^{*} Maintenance Bypass Switch – on option.



