



# Master MPS



DATACENTER



E-MEDICAL



EMERGENCY



INDUSTRY



TRANSPORT



ONLINE



Tower



Lithium compatible



Service 1st start



SmartGrid ready



Supercaps UPS

**3:1** 10-100 kVA  
**3:3** 10-200 kVA



## HIGHLIGHTS

### TOTAL PROTECTION

Master MPS is a double conversion UPS, designed for mission critical loads, including

telecommunications, security and electro-medical systems.

Master MPS is an ON LINE double conversion UPS, classified as VFI 3C (as set out by the IEC EN 62040-3 standard) with a transformer-based isolated inverter. The Master MPS range includes three-phase input and single-phase output versions from 10 to 100 kVA and three-phase input and output versions from 10 to 200 kVA. All versions are provided with a 6-pulse thyristor-based rectifier, with or without optional harmonic filters. A 12-pulse thyristor-based rectifier is

available on request for the 60 and 80 kVA

versions.

Master MPS makes supplying the UPS from generator sets and MV/LV transformers simpler and more efficient, reducing power loss in the system and cabling, correcting the power factor and eliminating current harmonics created by the loads supplied by the UPS.

In addition to this, the progressive rectifier start up (power walk-in) and the option to reduce battery charging currents, allow for a reduction in the input current uptake. This means less demand on the source, which is particularly useful when the source is a generator set.



## FLEXIBILITY

Master MPS is suitable for a wide range of applications including IT and the most demanding industrial environments. The UPS is suitable for powering capacitive and inductive loads. With a broad range of accessories and options, complex configurations and system architectures can be achieved to guarantee maximum power availability, as well as providing the option to add new UPS without interruption to existing installation.

## BATTERY CARE SYSTEM: MAXIMUM BATTERY CARE

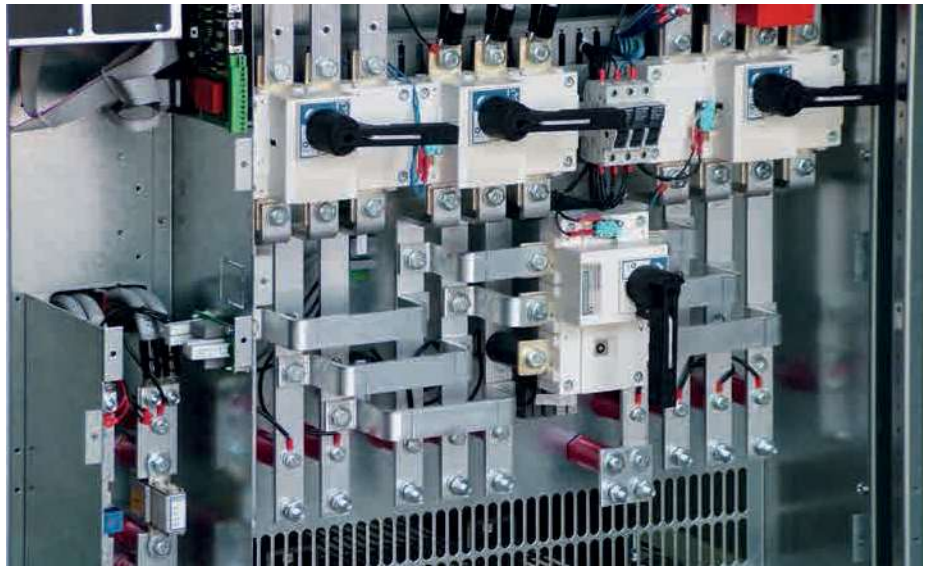
Normally the batteries are kept charged by the rectifier; when mains power fails, the UPS uses this energy source to power the critical load. Proper battery care is therefore critical to ensure the correct UPS operation under emergency conditions. The Riello UPS battery care system consists of a series of functions designed to optimise battery management and achieve the best possible performance and operating life. Master MPS is also compatible with various battery technologies: open vented lead acid, VRLA AGM, Gel, NiCd, Supercaps and Lithium-ion.

## SPECIFIC SOLUTIONS

The UPS can be adapted to meet the most specific requirements. Contact our TEC team to discuss any specific solutions and options not listed in this catalogue.

## ADVANCED COMMUNICATIONS

- Compatible with RielloConnect platform for remote monitoring;
- Advanced multi-platform communications for all operating systems and network environments: PowerShield<sup>3</sup> monitoring and shutdown software included for Windows operating systems 11, 10, 8, Hyper-V, Server 2022, 2019, 2016 and previous versions, Windows Server Virtualization Hyper-V, macOS, Linux, Citrix XenServer and other Unix operating systems;
- Double RS232 serial;
- 2 slots for the installation of optional communications accessories such as network adapters, potential free contacts, etc.;
- R.E.P.O. Remote Emergency Power Off for switching off the UPS via a remote emergency button;
- Input for the connection of the auxiliary contact of an external manual bypass;
- Input for synchronisation from an external source;
- Remote graphic display panel.



Detail of connection area.

## MAXIMUM RELIABILITY AND AVAILABILITY

- Installation of up to 8 units in redundant or power parallel configuration;
- Hot System Expansion (HSE): allows the addition of a further UPS into an existing system without the need to switch off the existing UPS or switch to bypass. This guarantees maximum load protection, even during maintenance and system expansion;
- Maximum levels of availability, even in the event of an interruption to the parallel bus cable: the system is "FAULT TOLERANT". It is not affected by connection cable faults and continues powering the load without disruption, signalling an alarm condition;
- EFFICIENCY CONTROL Mode (ECM): It optimises the operating efficiency of parallel systems, according to the power required by the load. N+1 redundancy is guaranteed, with every UPS working in parallel at the best load level possible to achieve higher overall efficiency.

## OPTIONS

### • UPS Group Synchroniser (UGS)

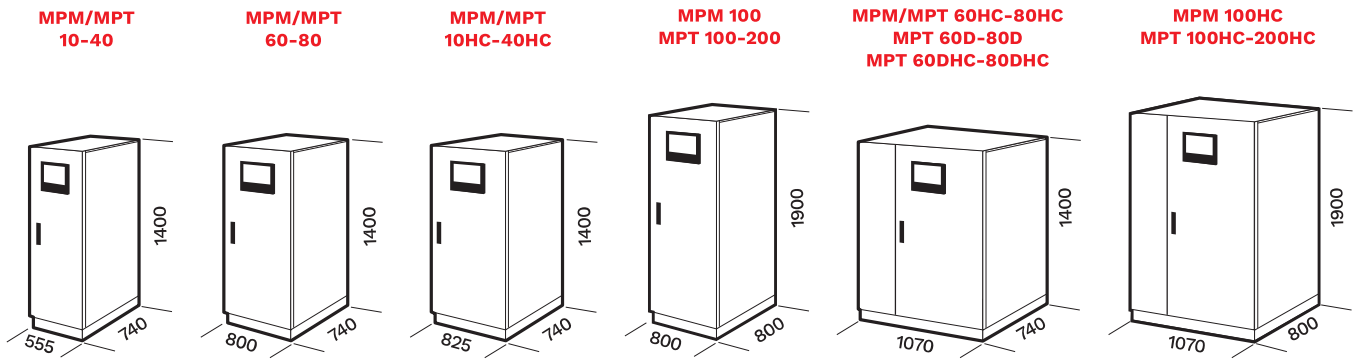
Allows two non-parallel UPS systems to remain synchronised even during mains power failure. The UGS also allows the synchronization with any independent power source, generator set and third party UPS.

### • Parallel Systems Joiner (PSJ)

Allows two groups of UPS to be connected in parallel whilst operating, in the event of maintenance (with no interruption to the output), using a power coupling switch. Should one of the UPS in one of the parallel groups fail, it is automatically excluded.

The PSJ connects the remaining UPS, to the other parallel group via an external bypass, in order to continue to guarantee load redundancy.

## DIMENSIONS



D= Twelve-pulse rectifier version  
 HC= Version with 5<sup>th</sup> or 11<sup>th</sup> harmonic filter.

## DUAL BUS CONFIGURATION

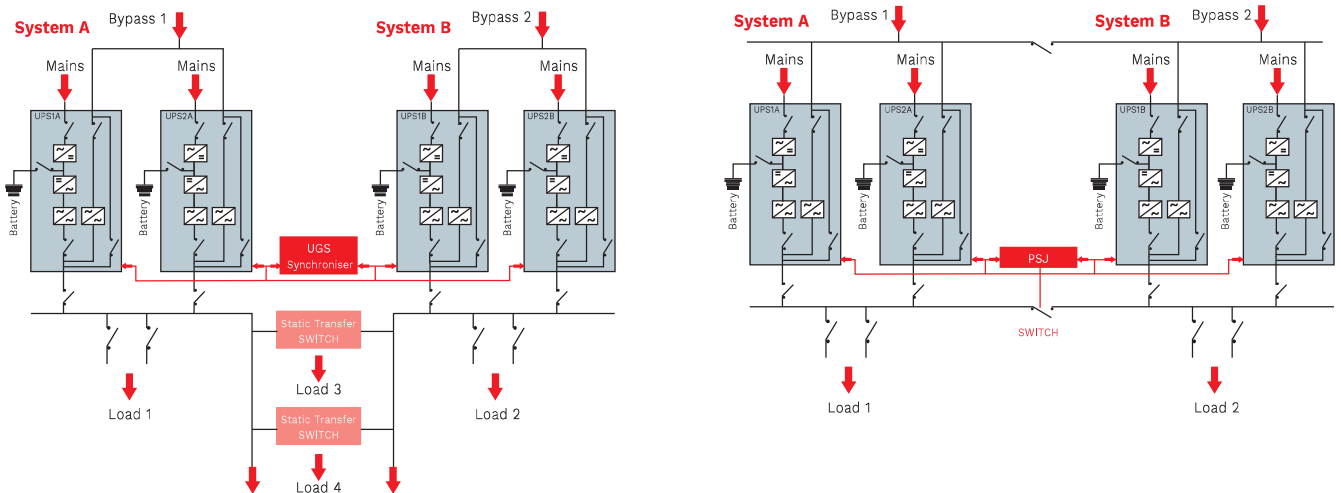
Solution to ensure redundancy through synchronization of two power buses and improving STS operation.

+ Downstream fault discrimination

## DYNAMIC BUS CONFIGURATION

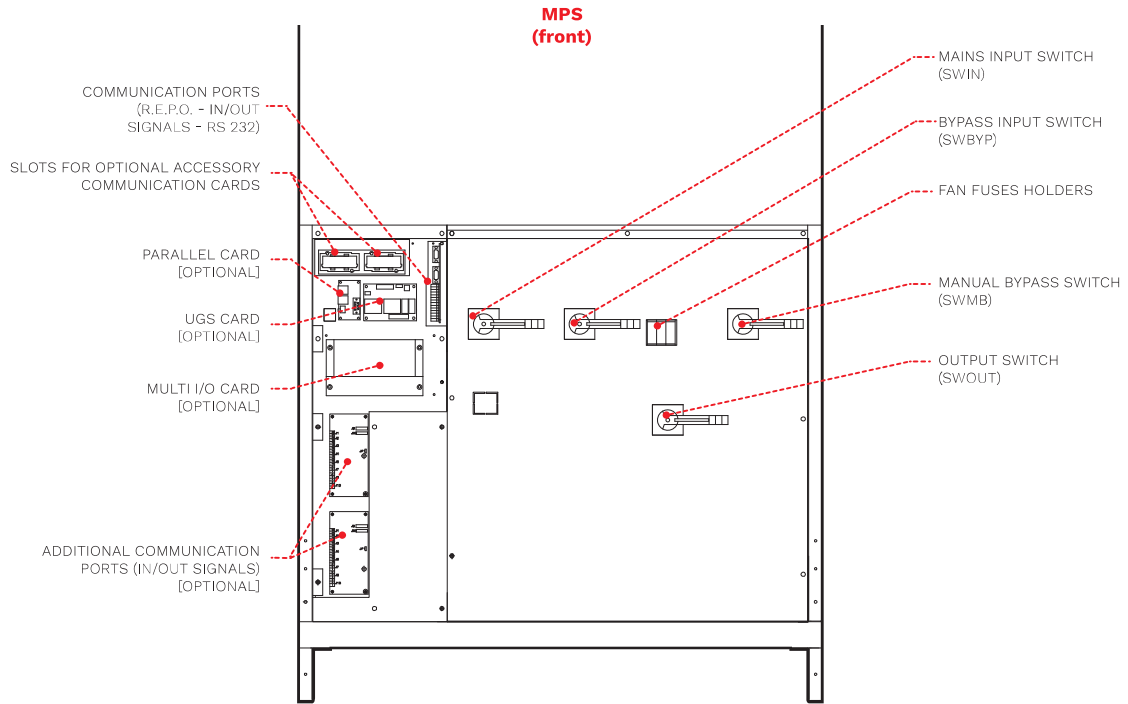
Solution to ensure redundancy of the power supply even during maintenance.

+ High availability and redundancy



MPT 200 with open doors.

## DETAILS



## OPTIONS

### SOFTWARE

PowerShield<sup>3</sup>  
PowerNetGuard

### ACCESSORIES

NETMAN 208  
MULTICOM 302  
MULTICOM 352  
MULTICOM 411  
MULTICOM 421

MULTI I/O

MULTIPANEL

MBB 100 A 2P

MBB 125 A 4P

MBB 400 A 4P

### PRODUCT ACCESSORIES

Battery temperature sensor  
5<sup>th</sup> or 11<sup>th</sup> harmonic filter (HC)  
Bypass isolation transformer

Synchronisation device (UGS)

Hot connection device (PSJ)

Cold Start

Parallel Kit

Battery temperature sensor

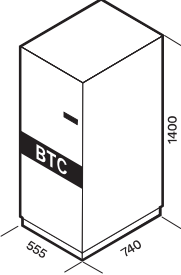
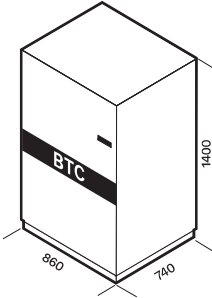
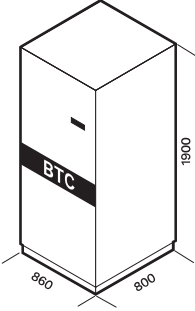
Top Cable Entry cabinet

IP rating IP21, IP31/IP42 on request

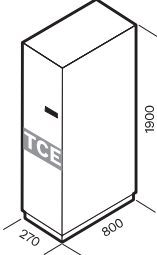
ENERGYMANAGER

Power Absorber (PWA)

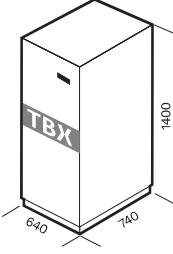
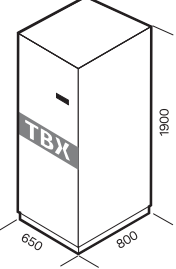
## BATTERY CABINET

MODELS	BTC 1400 384V BB B1 2F BTC 1400 384V AB B1 2F	BTC 1400 384V BB B2 5F BTC 1400 384V BB B3 5F BTC 1400 384V BB B4 5F BTC 1400 384V AB B4 5F	BTC 1900 396V BB L6 3T BTC 1900 396V BB L7 3T BTC 1900 396V BB L8 3T BTC 1900 396V BB L9 3T BTC 1900 396V AB L9 3T
UPS MODELS	MPT 10-60 / MPM 10-60	MPT 10-80 / MPM 10-80	MPT 100-200 / MPM 100
Dimensions [mm]			

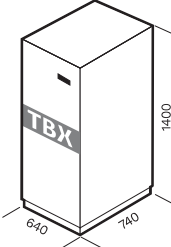
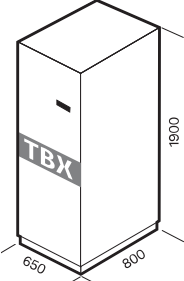
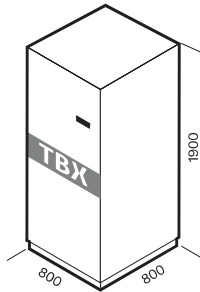
## CABINETS WITH TOP ACCESS FOR CABLES

MODELS	MPT TCE 100-200
UPS MODELS	MPT 100-200 / MPM 100
Dimensions [mm]	

## SINGLE-PHASE ISOLATION TRANSFORMERS

MODELS	TBX ISO 10 M TBX ISO 80 M	TBX ISO 100 M
UPS MODELS	MPM 10-80	MPM 100
Dimensions [mm]		

## THREE-PHASE ISOLATION TRANSFORMERS

MODELS	TBX ISO 10 T Dyn11 TBX ISO 80 T Dyn11	TBX ISO 100 T Dzn0 TBX ISO 160 T Dzn0	TBX ISO 200 T Dzn0
UPS MODELS	MPT 10-80 / MPM 10-80	MPT 100-160 / MPM 100	MPT 200
Dimensions [mm]			

MODELS	MPM 10 <sup>BAT</sup>	MPM 15 <sup>BAT</sup>	MPM 20 <sup>BAT</sup>	MPM 30	MPM 40	MPM 60	MPM 80	MPM 100	
<b>INPUT</b>									
Rated voltage [V]	380 / 400 / 415 three-phase								
Voltage tolerance [V]	400 +20% -25% @ full load <sup>1</sup>								
Frequency [Hz]	45 - 65								
Soft start	0 - 100% in 120 s (selectable)								
<b>BYPASS</b>									
Rated voltage [V]	220 / 230 / 240 single-phase + N								
Rated frequency [Hz]	50 or 60 (selectable)								
Permitted frequency tolerance	±2% (selectable from ±1% to ±5%)								
Standard equipment provided	Backfeed protection; separable bypass line								
<b>OUTPUT</b>									
Nominal power [kVA]	10	15	20	30	40	60	80	100	
Active power [kW]	9	13.5	18	27	36	54	72	90	
Number of phases	1 + N								
Rated voltage [V]	220 <sup>1</sup> / 230 / 240 single-phase + N (selectable)								
Static stability	±1%								
Dynamic stability	EN 62040-3 class performance 1 non-linear load								
Voltage distortion	<1% with linear load / <3% with non-linear load								
Crest factor [I <sub>peak</sub> /I <sub>rms</sub> ]	3:1								
Frequency stability on battery	0.05%								
Frequency [Hz]	50 or 60 (selectable)								
Overload	110% for 60 min; 125% for 10 min; 150% for 1 min								
<b>BATTERIES</b>									
Type	VRLA AGM/GEL/NiCd/Li-ion/SuperCaps								
Recharging method	One level, Two level, Cyclic recharge (selectable)								
Battery arrangement (parallel systems)	Separate/Common								
<b>OVERALL SPECIFICATIONS</b>									
Weight without batteries [kg]	200	220	230	255	302	416	616	665	
Dimensions (WxDxH) [mm]	555x740x1400					800x740x1400		800x800x1900	
Remote signals	1x opto insulated Input and 3x relays Outputs								
Auxiliary signals	R.E.P.O. - External manual bypass - External output switch								
Communications	UPS status LEDs - Graphic display - 2 slots for communications interface - 2x RS232								
Ambient temperature for the UPS	0 °C - +40 °C								
Recommended temperature for battery life	+20 °C - +25 °C								
Range of relative humidity	5-95% non-condensing								
Colour	RAL 7016								
Noise level at 1 m [dBA ±2] ECO Mode	60			62			65		
IP rating	IP20								
ECO Mode efficiency	up to 98%								
Standards	European directives: LV 2014/35/EU low voltage Directive EMC 2014/30/EU electromagnetic compatibility Directive Standards: Safety IEC EN 62040-1; EMC IEC EN 62040-2; RoHS compliant Classification in accordance with IEC 62040-3 (Voltage frequency Independent) VFI - SS - 111								
Moving the UPS	Pallet jack								

<sup>1</sup> For wider tolerance conditions apply.

<sup>BAT</sup> Also available with internal batteries.

MODELS	MPT 10 <sup>BAT</sup>	MPT 15 <sup>BAT</sup>	MPT 20 <sup>BAT</sup>	MPT 30	MPT 40	MPT 60	MPT 80
<b>INPUT</b>							
Rated voltage [V]	380 / 400 / 415 three-phase						
Voltage tolerance [V]	400 +20% -25% @ full load <sup>1</sup>						
Frequency [Hz]	45 - 65						
Soft start	0 - 100% in 120 s (selectable)						
<b>BYPASS</b>							
Rated voltage [V]	380 / 400 / 415 three-phase + N						
Rated frequency [Hz]	50 or 60 (selectable)						
Permitted frequency tolerance	±2% (selectable from ±1% to ±5%)						
Standard equipment provided	Backfeed protection; separable bypass line						
<b>OUTPUT</b>							
Nominal power [kVA]	10	15	20	30	40	60	80
Active power [kW]	9	13.5	18	27	36	54	72
Number of phases	3 + N						
Rated voltage [V]	380 <sup>1</sup> / 400 / 415 three-phase + N (selectable)						
Static stability	±1%						
Dynamic stability	EN 62040-3 class performance 1 non-linear load						
Voltage distortion	<1% with linear load / <3% with non-linear load						
Crest factor [I <sub>peak</sub> /I <sub>rms</sub> ]	3:1						
Frequency stability on battery	0.05%						
Frequency [Hz]	50 or 60 (selectable)						
Overload	110% for 60 min; 125% for 10 min; 150% for 1 min						
<b>BATTERIES</b>							
Type	VRLA AGM/GEL/NiCd/Li-ion/SuperCaps						
Recharging method	One level, Two level, Cyclic recharge (selectable)						
Battery arrangement (parallel systems)	Separate/Common						
<b>OVERALL SPECIFICATIONS</b>							
Weight without batteries [kg]	228	241	256	315	335	460	520
Dimensions (WxDxH) [mm]	555x740x1400					800x740x1400	
Remote signals	1x opto insulated Input and 3x relays Outputs						
Auxiliary signals	R.E.P.O. - External manual bypass - External output switch						
Communications	UPS status LEDs - Graphic display - 2 slots for communications interface - 2x RS232						
Ambient temperature for the UPS	0 °C - +40 °C						
Recommended temperature for battery life	+20 °C - +25 °C						
Range of relative humidity	5-95% non-condensing						
Colour	RAL 7016						
Noise level at 1 m [dBA ±2] ECO Mode	60			62			
IP rating	IP20						
ECO Mode efficiency	up to 98%						
Standards	European directives: LV 2014/35/EU low voltage Directive EMC 2014/30/EU electromagnetic compatibility Directive Standards: Safety IEC EN 62040-1; EMC IEC EN 62040-2; RoHS compliant Classification in accordance with IEC 62040-3 (Voltage frequency Independent) VFI - SS - 111						
Moving the UPS	Pallet jack						

<sup>1</sup> For wider tolerance conditions apply.

<sup>BAT</sup> Also available with internal batteries.



MODELS	MPT 100	MPT 120	MPT 160	MPT 200
<b>INPUT</b>				
Rated voltage [V]	380 / 400 / 415 three-phase			
Voltage tolerance [V]	400 +20% -25% @ full load <sup>1</sup>			
Frequency [Hz]	45 - 65			
Soft start	0 - 100% in 120 s (selectable)			
<b>BYPASS</b>				
Rated voltage [V]	380 / 400 / 415 three-phase + N			
Rated frequency [Hz]	50 or 60 (selectable)			
Permitted frequency tolerance	±2% (selectable from ±1% to ±5%)			
Standard equipment provided	Backfeed protection; separable bypass line			
<b>OUTPUT</b>				
Nominal power [kVA]	100	120	160	200
Active power [kW]	90	108	144	180
Number of phases	3 + N			
Rated voltage [V]	380 <sup>1</sup> / 400 / 415 three-phase + N (selectable)			
Static stability	±1%			
Dynamic stability	EN 62040-3 class performance 1 non-linear load			
Voltage distortion	<1% with linear load / <3% with non-linear load			
Crest factor [I <sub>peak</sub> /I <sub>rms</sub> ]	3:1			
Frequency stability on battery	0.05%			
Frequency [Hz]	50 or 60 (selectable)			
Overload	110% for 60 min; 125% for 10 min; 150% for 1 min			
<b>BATTERIES</b>				
Type	VRLA AGM/GEL/NiCd/Li-ion/SuperCaps			
Recharging method	One level, Two level, Cyclic recharge (selectable)			
Battery arrangement (parallel systems)	Separate/Common			
<b>OVERALL SPECIFICATIONS</b>				
Weight [kg]	620	640	700	800
Dimensions (WxDxH) [mm]	800x800x1900			
Remote signals	1x opto insulated Input and 3x relays Outputs			
Auxiliary signals	R.E.P.O. - External manual bypass - External output switch			
Communications	UPS status LEDs - Graphic display - 2 slots for communications interface - 2x RS232			
Ambient temperature for the UPS	0 °C - +40 °C			
Recommended temperature for battery life	+20 °C - +25 °C			
Range of relative humidity	5-95% non-condensing			
Colour	RAL 7016			
Noise level at 1 m [dBA ±2] ECO Mode	65		68	
IP rating	IP20			
ECO Mode efficiency	up to 98%			
Standards	European directives: LV 2014/35/EU low voltage Directive EMC 2014/30/EU electromagnetic compatibility Directive Standards: Safety IEC EN 62040-1; EMC IEC EN 62040-2; RoHS compliant Classification in accordance with IEC 62040-3 (Voltage frequency Independent) VFI - SS - 111			
Moving the UPS	Pallet jack			

<sup>1</sup> For wider tolerance conditions apply.