







Illustrative photo

HIGHLIGHTS

- Efficiency Control System (ECS)
- Robust and reliable
- Galvanic isolation
- High overload capacity
- Extensive parallel configurations

Total protection

Master MPS series UPS provide maximum protection and power quality for mission critical loads, including data centres, industrial processes, telecommunications, security and electro-medical systems. Master MPS is an online double conversion UPS (VFI SS 111 - IEC EN 62040-3) with a transformer 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, with or without optional harmonic filters.

Easy source

Master MPS makes supplying the UPS from generator sets and MT/BT transformers

simpler and more efficient, reducing power loss in the system and coils, correcting the power factor and eliminating current harmonics created by the loads supplied by the UPS. addition to this, 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 power capacitive loads such as blade servers, without any reduction in active power, from 0.9 leading to 0.8 lagging.

With а broad range accessories and options, complex configurations system architectures can be guarantee achieved to maximum power availability and 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 consumers. Proper battery care is therefore critical ensuring correct operation under emergency conditions. The Riello UPS battery care system consists of a series of functions designed optimise battery management and achieve the performance best and operating life possible.

Master MPS is also compatible with different battery technologies: vented open lead

acid, VRLA AGM, Gel, NiCd, Flywheels, Supercaps and Lithium.

Specific solutions

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

Advanced communication

- Compatible with TeleNetGuard for remote monitoring.
- Advanced multi-platform communications for all operating systems and network environments: PowerShield³ monitoring and shutdown software included, SNMP agent, Windows operating systems 8, 7, Hyper-V, 2012 2008, and previous version, Mac OS X, Linux, VMWare ESXi, Citrix XenServer and other Unix operating systems
- RS232 serial and USB ports
- 3 slots for the installation of optional communication accessories such as network adapters, potential free contacts, etc.
- REPO 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
- Graphic display panel for remote connection

Maximum reliability and availability

- Distributed or centralised parallel configuration of up to 8 units per redundant (N+1) or power parallel system.
 Parallel configurations using models with different power ratings are also possible.
- 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 transfer them to bypass mode. 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 System (ECS): a system to optimise 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 or more non-parallel UPS devices to remain synchronised even during mains power failure.

The UGS also enables a Riello UPS to be synchronised with another power source that is independent and of a different power rating.

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. S hould 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.

Software

PowerShield³ PowerNetGuard

Accessories

NETMAN 204
MULTICOM 302
MULTICOM 352
MULTICOM 401
MULTI I/O
Interface kit AS400
MULTIPANEL
RTG 100
GSM Modem
Manual Bypass MBB 100 A

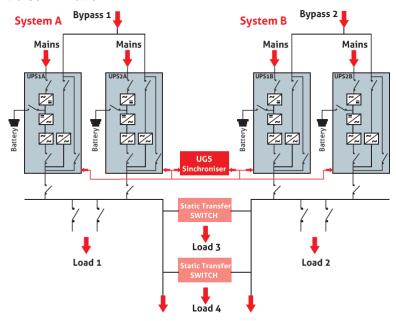
Product accessories

Filtering of 5th and 11th harmonics (HC) Isolation transformer Synchronisation device (UGS) Hot connection device (PSJ) I/O Digital and Generator interface Parallel configuration kit (Closed Loop) Battery cabinets empty or for extended runtimes Top Cable Entry cabinets IP rating IP31/IP42

DYNAMIC DUAL BUS CONFIGURATION

Solution to ensure redundancy up to the distribution of the power supply to the loads and improved STS operation.

+ Downstream fault discrimination



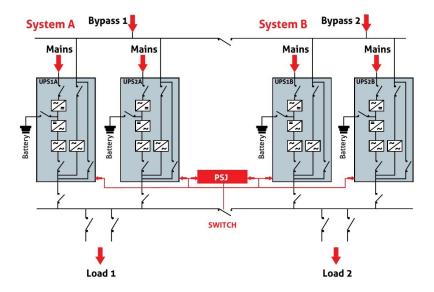




DUAL BUS SYSTEM CONFIGURATION

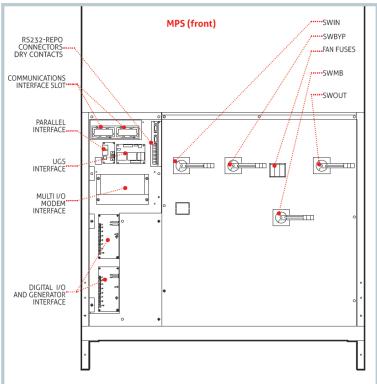
Solution to ensure redundancy up to the distribution of the power supply to the loads and improved STS operation.

+ High availability and redundancy





MT 200 open







Technical specification

Technical specification								
Models	MPM 10 ^{BAT}	MPM 15 ^{BAT}	MPM 20 ^{BAT}	MPM 30	MPM 40	MPM 60	MPM 80	MPM 100
Input								
Nominal voltage	380-400-415 V _{AC} 3ph							
Voltage tolerance	400 V +20 % /-25 %							
Frequency	45-65 Hz							
Soft start	0-100 % in 120" (selectable)							
Permitted frequency	± 2 % (selectable from ± 1 % to ± 5 % from front panel)							
tolerance		± 2 %	(selectable	from ± 1 %	to ± 5 % f	rom front pa	anei)	
Standard equipment		Е	Back Feed p	protection, s	separable b	ypass line		
Bypass								
Nominal voltage	220-230-240 V _{AC} 1ph + N							
Nominal frequency	50 or 60 Hz (selectable)							
. ,								
Output Nom.power (kVA)	10	15	20	30	40	60	80	100
Active power (kW)	9		18	27	36		72	
Number of phases	9 13,5 18 27 36 54 72 90							90
Nominal voltage	7 220 220 240 V - 45b - N (coloctable)							
Static stability		220-230-240 V _{AC} 1ph + N (selectable) ± 1 %						
·				± 5 % in				
Dynamic stability			0/ with line		3 % with no	n linear le		
Voltage distortion Crest factor		< 1	% WITH IIIIE			m-imear io	au	
				3:1 lpea	CK/IIIIS			
Frequency stability on				0,05	%			
battery			E) or 60 H= /	selectable)			
Frequency Overload					for 10'; 150			
			110 /6 101	00, 123 /6	101 10 , 130	70 101 1		
Batteries) /D A	A ON 1/OF	NIIO I O		· = 1		
Type		VKLA	AGM/GEL		percaps; Li	ion; Flywh	eels	
Residual ripple voltage				< 1	%			
Temperature				-0,5 \	//°C			
compensation				0,2 x	C10			
Typical charge current				0,2 X	CIU			
Other features			1					T =
Weight (kg)	200	220	230	270	302	440	500	580
Dimensions	555 x 740 x 1400 800 x 740 x 1400 800 x							
(WxDxH) (mm)	555 x 740 x 1400 800 x 740 x 1400 800 x							
Remote signals	dry contacts							
Remote controls	ESD and bypass							
Communications	2xRS232, dry contacts, 2x slots for communications interface							
Operating temperature	0°C / +40 °C							
Relative humidity	<95% non-condensing							
Colour	Dark grey RAL 7016							
Noise level at 1 m	60 dBA 62 dBA							
IP rating		22 45, (IP2	20			
Efficiency			Up to			ode)		
Standards	Up to 98 % (Smart Active Mode) Directives LV 2006/95/EC-2004/108/EC; Safety IEC EN 62040-1; EMC IEC EN 62040-2; Performance IEC EN 62040-3							
Classification in accordance with IEC 62040-3	VFI-SS-11 (Voltage Frequency Independent)							
Moving the UPS	transpallet							
BAT Also available with int								

BAT Also available with internal batteries/ Weight is without batteries





Input Inpu	Technical specification									
Nominal voltage	Models	MPT 10 ^{BAT}	MPT 15 ^{BAT}	MPT 20 ^{BAT}	MPT 30					
Voltage tolerance	Input									
Frequency	Nominal voltage	380-400-415 V _{AC} 3ph								
Soft start	Voltage tolerance									
Permitted frequency tolerance	Frequency									
Standard equipment	Soft start	0-100 % in 120" (selectable)								
Back Feed protection, separable bypass line	Permitted frequency	+ 2 % (selectable from + 1 % to + 5 % from front nanel)								
Nominal voltage 380-400-415 Vac 3ph + N										
Nominal voltage	Standard equipment	Back Feed protection, separable bypass line								
Nominal frequency										
Output 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 Nominal voltage 380-400-415 V _{AC} 3ph + N (selectable) Static stability ± 1 % 1 %	V									
Nominal power (kVA)	Nominal frequency	50 or 60 Hz (selectable)								
Nominal power (kVA)	Output									
Active power (kW) 9 13,5 18 27 36 54 72		10	15	20	30	40	60	80		
Number of phases 380-400-415 Vac 3ph + N (selectable)			13.5			36	54			
Nominal voltage 380-400-415 Vac 3ph + N (selectable)										
Static stability		380-400-415 V _{AC} 3ph + N (selectable)								
Dynamic stability ± 5 % in 10ms Voltage distortion < 1 % with linear load / < 3 % with non-linear load										
Voltage distortion < 1 % with linear load / < 3 % with non-linear load Crest factor 3:1 lpeack/lrms Frequency stability on battery 0,05 % Frequency 50 or 60 Hz (selectable) Overload 110 % for 60'; 125 % for 10'; 150 % for 1' Batteries Type VRLA AGM/GEL; NiCd; Supercaps; Li-ion; Flywheels Residual ripple voltage Colspan="3">Typical charge current O,5 V/°C Typical charge current Other features Weight (kg) 228 241 256 315 335 460 540 Other features Weight (kg) 228 241 256 315 335 460 540 Other features Weight (kg) 228 241 256 315 335 460 540 Dimensions (WxDxH) 555 x 740 x 1400 mm 800 x 740 x 1400 mm <td colspa<="" td=""><td></td><td colspan="6"></td></td>	<td></td> <td colspan="6"></td>									
Crest factor 3:1 peack/lrms Frequency stability on battery 0,05 % Frequency 50 or 60 Hz (selectable) Overload 110 % for 60'; 125 % for 10'; 150 % for 1' Batteries Type VRLA AGM/GEL; NiCd; Supercaps; Li-ion; Flywheels Residual ripple voltage -0,5 V/°C Compensation Typical charge current 0,2 x C10 Other features Weight (kg) 228 241 256 315 335 460 540 Dimensions (WxDxH) 555 x 740 x 1400 mm 800 x 740 x 1400 mm 800 x 740 x 1400 mm mm Remote signals dry contacts ESD and bypass Communications 2xRS232, dry contacts, 2x slots for communications interface Operating temperature 0 °C / + 40 °C Celeative humidity < 95 % non-condensing	<td></td> <td></td> <td colspan="7"></td>									
Dattery So or 60 Hz (selectable)	Crest factor									
Dattery So or 60 Hz (selectable)	Frequency stability on				•					
Dimensions (WxDxH) Standards Standar					0,05 %					
Type	Frequency			50 or (60 Hz (select	able)				
Type VRLA AGM/GEL; NiCd; Supercaps; Li-ion; Flywheels Residual ripple voltage < 1 %	Overload		11	0 % for 60';	125 % for 10	'; 150 % for	1'			
Type VRLA AGM/GEL; NiCd; Supercaps; Li-ion; Flywheels Residual ripple voltage < 1 %	Ratteries									
Residual ripple voltage < 1 % Temperature compensation -0,5 V/°C Typical charge current 0,2 x C10 Other features Weight (kg) 228 241 256 315 335 460 540 Dimensions (WxDxH) 555 x 740 x 1400 mm 800 x 740 x 1400 mm 800 x 740 x 1400 mm mm Remote signals ESD and bypass Communications Communications 2xRS232, dry contacts, 2x slots for communications interface Operating temperature 0 °C / + 40 °C Relative humidity < 95 % non-condensing			VRI A A	GM/GEL · Nic	Cd: Supercar	s: Li-ion: Flv	wheels			
Temperature compensation Typical charge current Other features Weight (kg) Dimensions (WxDxH) Remote signals Remote controls Communications Other features ESD and bypass Communications Ox 740 x 1400 mm Remote signals Remote controls Communications Ox 78232, dry contacts, 2x slots for communications interface Operating temperature O °C / + 40 °C Relative humidity < 95 % non-condensing Colour Dark grey RAL 7016 Noise level at 1 m 60 dBA IP 20 Efficiency Standards Directives LV 2006/95/EC-2004/108/EC; Safety IEC EN 62040-1; EMC IEC EN 62040-2; Performance IEC EN 62040-3 Classification in accordance with IEC 62040-3	•		VI(E)()(<u> </u>		,,,	, , , , , , , , , , , , , , , , , , , ,			
compensation Typical charge current Other features Weight (kg) 228 241 256 315 335 460 540 Dimensions (WxDxH) 555 x 740 x 1400 mm 800 x 740 x 1400 mm Remote signals dry contacts Remote controls ESD and bypass Communications 2xRS232, dry contacts, 2x slots for communications interface Operating temperature 0 °C / + 40 °C Relative humidity < 95 % non-condensing										
Other features Weight (kg) 228 241 256 315 335 460 540 Dimensions (WxDxH) 555 x 740 x 1400 mm 800 x 740 x 1400 mm Remote signals dry contacts Remote controls ESD and bypass Communications 2xRS232, dry contacts, 2x slots for communications interface Operating temperature 0 °C / + 40 °C Relative humidity < 95 % non-condensing					-0,5 V/°C					
Other features Weight (kg) 228 241 256 315 335 460 540 Dimensions (WxDxH) 555 x 740 x 1400 mm 800 x 740 x 1400 mm mm Remote signals Gry contacts Remote controls ESD and bypass Communications 2xRS232, dry contacts, 2x slots for communications interface Operating temperature 0 °C / + 40 °C Relative humidity < 95 % non-condensing					0,2 x C10					
Weight (kg) 228 241 256 315 335 460 540 Dimensions (WxDxH) 555 x 740 x 1400 mm 800 x 740 x 1400 mm x 1400 mm mm mm Remote signals dry contacts ESD and bypass <td a="" contact="" control="" of="" rows="" td="" the="" the<=""><td>_</td><td></td><td></td><td></td><td>-,</td><td></td><td></td><td></td></td>	<td>_</td> <td></td> <td></td> <td></td> <td>-,</td> <td></td> <td></td> <td></td>	_				-,				
Dimensions (WxDxH) S55 x 740 x 1400 mm Remote signals Remote controls Communications Communications Coperating temperature Relative humidity Colour Dark grey RAL 7016 Noise level at 1 m Rod dBA IP rating Efficiency Standards Classification in accordance WFI-SS-11 (Voltage Frequency Independent) BCD controls BCD and bypass Communications interface 0 °C / + 40 °C Communications interfac		228	241	256	315	335	460	540		
Remote signals Remote controls Communications Operating temperature Relative humidity Colour Noise level at 1 m IP rating Efficiency Standards Directives LV 2006/95/EC-2004/108/EC; Safety IEC EN 62040-1; EMC IEC EN 62040-3 Classification in accordance with IEC 62040-3 Ory C / 40 °C ESD and bypass ESD and bypass Cormmunications ESD and bypass Ory C / 40 °C 0 °C / + 40 °C 2 95 % non-condensing Operating temperature 0 °C / + 40 °C 8 (Smart Active) 1 P20 Efficiency 2 Performance IEC EN 62040-1; EMC IEC EN 62040-1; EMC IEC EN 62040-2; Performance IEC EN 62040-3		220		•	•	000				
Remote controls Communications 2xRS232, dry contacts, 2x slots for communications interface 0 °C / + 40 °C Relative humidity < 95 % non-condensing Colour Dark grey RAL 7016 Noise level at 1 m 60 dBA IP rating IP20 Efficiency up to 98 % (Smart Active) Standards Directives LV 2006/95/EC-2004/108/EC; Safety IEC EN 62040-1; EMC IEC EN 62040-2; Performance IEC EN 62040-3 Classification in accordance with IEC 62040-3	Dimensions (WxDxH)	555 X 740 X 1400 mm								
Communications 2xRS232, dry contacts, 2x slots for communications interface 0 °C / + 40 °C Relative humidity < 95 % non-condensing Colour Dark grey RAL 7016 Noise level at 1 m 60 dBA IP rating IP20 Efficiency up to 98 % (Smart Active) Standards Directives LV 2006/95/EC-2004/108/EC; Safety IEC EN 62040-1; EMC IEC EN 62040-2; Performance IEC EN 62040-3 Classification in accordance with IEC 62040-3										
Operating temperature Relative humidity Solour O °C / + 40 °C Relative humidity Operating temperature O °C / + 40 °C Operating temperature Operating temperature O °C / + 40 °C Operating temperature		,,								
Relative humidity Colour Dark grey RAL 7016 Noise level at 1 m 60 dBA IP rating Efficiency Up to 98 % (Smart Active) Standards Directives LV 2006/95/EC-2004/108/EC; Safety IEC EN 62040-1; EMC IEC EN 62040-2; Performance IEC EN 62040-3 Classification in accordance With IEC 62040-3										
Colour Dark grey RAL 7016 Noise level at 1 m 60 dBA 62 dBA IP rating IP20 Efficiency up to 98 % (Smart Active) Standards Directives LV 2006/95/EC-2004/108/EC; Safety IEC EN 62040-1; EMC IEC EN 62040-2; Performance IEC EN 62040-3 Classification in accordance VFI-SS-11 (Voltage Frequency Independent) with IEC 62040-3										
Noise level at 1 m 60 dBA IP rating Efficiency Standards Classification in accordance with IEC 62040-3 Noise level at 1 m 60 dBA 62 dBA IP20 Up to 98 % (Smart Active) Directives LV 2006/95/EC-2004/108/EC; Safety IEC EN 62040-1; EMC IEC EN 62040-2; Performance IEC EN 62040-3 VFI-SS-11 (Voltage Frequency Independent)										
IP rating Efficiency Up to 98 % (Smart Active) Standards Directives LV 2006/95/EC-2004/108/EC; Safety IEC EN 62040-1; EMC IEC EN 62040-2; Performance IEC EN 62040-3 Classification in accordance With IEC 62040-3		Ů,								
Efficiency up to 98 % (Smart Active) Standards Directives LV 2006/95/EC-2004/108/EC; Safety IEC EN 62040-1; EMC IEC EN 62040-2; Performance IEC EN 62040-3 Classification in accordance VFI-SS-11 (Voltage Frequency Independent) with IEC 62040-3			60	dBA			62 dBA			
Standards Directives LV 2006/95/EC-2004/108/EC; Safety IEC EN 62040-1; EMC IEC EN 62040-2; Performance IEC EN 62040-3 Classification in accordance with IEC 62040-3 Directives LV 2006/95/EC-2004/108/EC; Safety IEC EN 62040-1; EMC IEC EN 62040-2; Performance IEC EN 62040-3										
Classification in accordance with IEC 62040-3 EMC IEC EN 62040-2; Performance IEC EN 62040-3 VFI-SS-11 (Voltage Frequency Independent)	Efficiency									
accordance VFI-SS-11 (Voltage Frequency Independent) with IEC 62040-3		Di	Directives LV 2006/95/EC-2004/108/EC; Safety IEC EN 62040-1;							
with IEC 62040-3								· · ·		
		VFI-SS-11 (Voltage Frequency Independent)								
Moving the UPS I transpallet										
BAT Also available with internal batteries/ Weight is without batteries	Moving the UPS	transpallet								

BAT Also available with internal batteries/ Weight is without batteries





Technical specification

Models	MPT 100	MPT 120	MPT 160	MPT 200			
Models	WII I TOO	WII 1 120	WII I 100	WII 1 200			
Input							
Nominal voltage	380-400-415 V _{AC} 3ph						
Voltage tolerance	400 V +20 % /-25 %						
Frequency	45-65 Hz						
Soft start	0-100 % in 120" (selectable)						
Permitted frequency	± 2 % (selectable from ± 1 % to ± 5 % from front panel)						
tolerance	· · · · · · · · · · · · · · · · · · ·						
Standard equipment	Back Feed protection, separable bypass line						
Bypass							
Nominal voltage	380-400-415 V _{AC} 3ph + N						
Nominal frequency	50 or 60 Hz (selectable)						
Output							
Nominal power (kVA)	100	120	160	200			
Active power (kW)	90	108	144	180			
Number of phases	3+N						
Nominal voltage	380-400-415 V _{AC} 3ph + N (selectable)						
Static stability	± 1 %						
Dynamic stability	± 5 % in 10ms						
Voltage distortion	< 1 % with linear load / < 3 % with non-linear load						
Crest factor	3:1 lpeack/lrms						
Frequency stability on		•					
battery		0,0	5 %				
Frequency		50 or 60 Hz	(selectable)				
Overload			6 for 10'; 150 % for 1'				
Batteries							
Type	VRI A	AGM/GEL: NiCd: S	upercaps; Li-ion; Flywh	neels			
Residual ripple voltage	VICE		1 %	10010			
Temperature							
compensation		-0,5	V/°C				
Typical charge current	0,2 x C10						
Other features		,					
Weight (kg)	600	610	690	790			
Dimensions (WxDxH)	800 x 800 x 1900 mm						
Remote signals	dry contacts						
Remote controls	ESD and bypass						
Communications	2xRS232, dry contacts, 2x slots for communications interface						
	0 °C / + 40 °C						
i Coeranno remberature		0 °C /	T 4() (,				
Operating temperature Relative humidity							
Relative humidity		< 95 % non	-condensing				
Relative humidity Colour	65 dBA	< 95 % non	-condensing RAL 7016				
Relative humidity Colour Noise level at 1 m	65 dBA	< 95 % non Dark grey	-condensing RAL 7016 68 dBA				
Relative humidity Colour Noise level at 1 m IP rating	65 dBA	< 95 % non Dark grey IF	-condensing RAL 7016 68 dBA				
Relative humidity Colour Noise level at 1 m	Directives L	< 95 % non Dark grey IF up to 98 % (V 2006/95/EC-2004/	r-condensing RAL 7016 68 dBA P20 Smart Active) (108/EC; Safety IEC EI				
Relative humidity Colour Noise level at 1 m IP rating Efficiency Standards	Directives L	< 95 % non Dark grey IF up to 98 % (V 2006/95/EC-2004/	-condensing RAL 7016 68 dBA 220 Smart Active)				
Relative humidity Colour Noise level at 1 m IP rating Efficiency Standards Classification in	Directives L EMC	< 95 % non Dark grey IF up to 98 % (V 2006/95/EC-2004/ IEC EN 62040-2; Pe	recondensing RAL 7016 68 dBA P20 Smart Active) (108/EC; Safety IEC EI rformance IEC EN 620	40-3			
Relative humidity Colour Noise level at 1 m IP rating Efficiency Standards	Directives L EMC	< 95 % non Dark grey IF up to 98 % (V 2006/95/EC-2004/ IEC EN 62040-2; Pe	r-condensing RAL 7016 68 dBA P20 Smart Active) (108/EC; Safety IEC EI	40-3			