Modular UPS PLRM Series



Modular UPS-PLRM Series,

PLRM Series is a scalable, redundant Load Sharing UPS system designed to cost-effectively provide high-level availability for high-density data centers and critical applications. True Online Double Conversion and advanced DSP control technology.

Modular Architecture can scale power and runtime as demand grows or as higher levels of availability are required. Combines the modular design with the N+X parallel redundancy technology. As a result, all unwanted situations that may occur in the network are filtered by the online UPS, and your sensitive devices are fed with clean energy.



Modular UPS-PLRM Series



Ethernet port



APP



On Cloud monitoring



Cloud port



WLAN dongle



NMC card

General Specification —

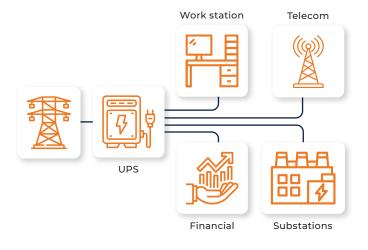
- Excellent performance on non linear loads (computer and switching power supplies).
- Input and output 50hz, 60hz, frequency optional.
- · Intelligent power module based on
- · IGBT technology full reliability.
- DSP (digital signal processor) control.
- Low output distortion factor.
- · High efficiency.
- Audible alarm
- · User-friendly control panel
- Modular design with swappable power module

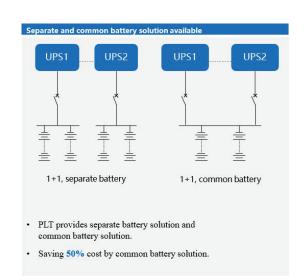
Options —

- · 2 Source Input
- <3% Input THDi with harmonic filter</p>
- Various voltage settings for different countries
- · Removing input neutral at site
- Fusible Surge Suppression (AC/DC)
- · Redundant Fans
- Cabinet color can be chosen from RAL codes
- Cable Entry (Top / Side / Bottom / Rear)
- RS485, TCP, SNMP, and GSM Communication
- · Automatic Battery Test
- · Touch Panel with Mimic Diagram
- · Parallel up to 4 units
- DC Load Supply

Features —

- · Redundant parallel operation
- · Potential free output voltage
- · Full redundant control architecture
- · Very fast dynamic response time
- · Output short circuit proof
- Wide range of ratings with IP protection up to 56 as standard
- · Low voltage ripple to prolong
- · battery life time
- Intelligent battery charge and monitoring control
- Lithium Ion Battery charging options ready and available







Modular UPS-PLRM Series 10kVA to 15kVA

The PLRM series modular, online UPS ranging from 10 kVA to 15 kVA is designed to protect any critical load for medium and large data centers achieving maximum availability.

Key Features —

- \cdot IGBT rectifier at the core of the best-in-class reliability.
- Modular Compact Cabinet Design contains maximum 6 slots.
- · <4% THDI.
- Modular design, up to 3 units in parallel online hot-swappable N+X redundancy.

Input			60kVA	40kVA	30kVA	20kVA	90kVA	45kVA	30kVA
Power Modu	le Capacity			10	0 KVA/ Kw		1!	5 KVA/ Kw	
Physical –	Weight (kg)	Cabinet	70	51	55	41	70	55	42
		Power Module			15.3			15.5	
	Dimension W*D*H (mm)	Cabinet	485*751*1033	485*697*575	485*751*575	485*697*398	485*751*1033	485*751*575	485*697*398
		Power Module			43	6*590*85			

Technical Data

Input	
Rectifier Bridge Topology	IGBT
Power Module Capacity	10 KVA/ Kw or 15 KVA/ Kw
Input Voltage	380/400/415 V Flexible configuration.
Voltage tolerance	323~478Vac
Frequency	50 Hz (60 Hz)
Frequency tolerance	40Hz∼70Hz
Efficiency	99%
Power Factor	0.99
THD	<3%
Inrush current	≤ 10 x In(4)
Float Voltage	- 2.17-2.27 V/cell VRLA - 1.4-1.42 V/cell Ni cd
Boost Voltage	- 2.25-2.4 V/cell VRLA - 1.55-1.65 V/cellNi cd
Ripple	<1%

Battery	
Туре	Lead acid or nickel cadmium, Li
Autonomy	From few minutes to several hours, on request
Battery Voltage	± 240VDC
Charge Power	Up to 30 % from System Power

Charge Power	Up to 30 % from System Power
Output	
Inverter Bridge Topology	IGBT with output isolation Transformer
AC Voltage	380/400/415VAC
AC Voltage Tolerance	1%
Frequency	50 Hz (60 Hz)
Frequency Tolerance	+/- 0.1 %
Inverter overload capability	
- 1 minute - 10 minute - 1hour	<150% <125 % <110 %
Harmonic voltage distortion	
- With 100 % linear load - With 100 % non-linear load	< 3 % <5%
Power Factor	1
Efficiency	97%
Static Transfer Switch	SCR Type
Static Bypass transfer Time	<4 ms

General Data

Title	
Operating temperature	0 to 40 °C ⁽⁴⁾
Storage temperature	-20 to +70 °C
Relative humidity	< 95 % non condensing
Operating altitude	1000 m max without derating ⁽⁴⁾
Cooling	Fan Forced, free cooling -Optional
MTBF	<150,000 h
External protection	IP 20 ⁽⁴⁾ according to IEC 60529
Internal protection	Protection against unintentional direct contacts, as per IEC 60950-1/62477-1
Noise (at 1m in front of the unit)	60 – 75 dB according to rating
Cabinet colour	RAL 7035 ⁽⁴⁾
Touch Panel " HMI"	Standard
Communication	- RTU RS485-Standard - TCP/ IP - Optional
Dimensions Cabinet	800*1100*2000
Dimentions Power Module	550*750*85
Weight KG Cabinet	443
Weight KG Power Module	35.7

Standards	
IEC62040-1:2017	Uninterruptible power systems (UPS) - Part 1: Safety requirements
IEC62040-2:2016	Uninterruptible power systems (UPS) – Part 2: Electromagnetic compatibility (EMC) requirements
IEC62040-3:2011	Uninterruptible power systems (UPS) - Part 3: Method of specifying the performance and test requirements
IEC60529:1989 +AMD1:1999	Degrees of protection provided by enclosures (IP Code)

Conformity			
Low voltage directive	2006/95/EC and 2014/35/EU		
EMC directive	2004/108/EC and 2014/30/EU		
CE Mark			





Modular UPS-PLRM Series 20kVA to 200kVA

The PLRM series modular, online UPS ranging from 20 kVA to 200 kVA is designed to protect any critical load for medium and large data centers achieving maximum availability.

Key Features —

- \cdot IGBT rectifier at the core of the best-in-class reliability.
- Modular Compact Cabinet Design contains maximum 10 slots.
- <3% THDI.</p>
- Modular design, up to 3 units in parallel online hot-swappable N+X redundancy.



Input			200kVA	120kVA	60kVA	
Power Modu	le Capacity			20 KVA / 18 Kw		
Physical Weight (kg) Powe	Cabinet	180	150	105		
	Weight (kg)	Power Module		22		
	Dimension W*D*H (mm)	Cabinet	600*900*2000	600*900*1600	600*900*1100	
		Power Module		440*590*134		

Technical Data

nput	
Rectifier Bridge Topology	IGBT
Power Module Capacity	20 KVA/ 18 Kw
Input Voltage	380/400/415 V Flexible configuration.
Voltage tolerance	323~478Vac
Frequency	50 Hz (60 Hz)
Frequency tolerance	40Hz∼70Hz
Efficiency	95%
Power Factor	0.9
THD	<3%
Inrush current	≤ 10 x In(4)
Float Voltage	- 2.17-2.27 V/cell VRLA
	- 1.4-1.42 V/cell Ni cd
Boost Voltage	- 2.25-2.4 V/cell VRLA
	- 1.55-1.65 V/cellNi cd
Ripple	<1%

Battery	
Туре	Lead acid or nickel cadmium, Li
Autonomy	From few minutes to several hours, on request
Battery Voltage	± 240VDC
Charge Power	Up to 20 % from System Power

Charge Power	Up to 20 % from System Power
Output	
Inverter Bridge Topology	IGBT with output isolation Transformer
AC Voltage	380/400/415VAC
AC Voltage Tolerance	2%
Frequency	50 Hz (60 Hz)
Frequency Tolerance	+/- 0.1 %
Inverter overload capability	
- 1 minute - 10 minute - 1hour	<150% <125 % <110 %
Harmonic voltage distortion	
- With 100 % linear load - With 100 % non-linear load	< 3 % <5%
Power Factor	1
Efficiency	95%
Static Transfer Switch	SCR Type
Static Bypass transfer Time	<4 ms

General Data

Title	
Operating temperature	0 to 40 °C ⁽⁴⁾
Storage temperature	-20 to +70 °C
Relative humidity	< 95 % non condensing
Operating altitude	1000 m max without derating ⁽⁴⁾
Cooling	Fan Forced, free cooling -Optional
MTBF	<150,000 h
External protection	IP 20 ⁽⁴⁾ according to IEC 60529
Internal protection	Protection against unintentional direct contacts, as per IEC 60950-1/62477-1
Noise (at 1m in front of the unit)	60 – 75 dB according to rating
Cabinet colour	RAL 7035 ⁽⁴⁾
Touch Panel " HMI"	Standard
Communication	- RTU RS485-Standard - TCP/ IP - Optional
Dimensions Cabinet	800*1100*2000
Dimentions Power Module	550*750*85
Weight KG Cabinet	443
Weight KG Power Module	35.7

Standards	
IEC62040-1:2017	Uninterruptible power systems (UPS) - Part 1: Safety requirements
IEC62040-2:2016	Uninterruptible power systems (UPS) – Part 2: Electromagnetic compatibility (EMC) requirements
IEC62040-3:2011	Uninterruptible power systems (UPS) - Part 3: Method of specifying the performance and test requirements
IEC60529:1989 +AMD1:1999	Degrees of protection provided by enclosures (IP Code)

Conformity	
Low voltage directive	2006/95/EC and 2014/35/EU
EMC directive	2004/108/EC and 2014/30/EU
CE Mark	





Modular UPS-PLRM Series 25kVA to 30kVA

The PLRM series modular, online UPS ranging from 25 kVA to 30 kVA is designed to protect any critical load for medium and large data centers achieving maximum availability.

Key Features —

- IGBT rectifier at the core of the best-in-class reliability.
- Modular Compact Cabinet Design contains maximum 12 slots.
- · <3% THDI.
- Modular design, up to 3 units in parallel online hot-swappable N+X redundancy.



Input			600kVA	300kVA	180kVA	500kVA	250kVA	150kVA
Power Module Capacity			25 kVA/kW			30 kVA/kW		
Woight (kg)	Weight (kg)	Cabinet	600	242	178	660	242	178
Physical Physical		Power Module		32.2		32	.2	
Dimension	Dimension	Cabinet	2000*1050*2000	600*1100*2000	600*1100*1600	2000*1050*2000	600*1100*2000	600*1100*1600
W*D*H (mm)		Power Module			510*7	00*178		

Technical Data

nput	
Rectifier Bridge Topology	IGBT
Power Module Capacity	25 KVA/ Kw or 30 KVA/ Kw
nput Voltage	380/400/415 V Flexible configuration.
/oltage tolerance	323~478Vac
Frequency	50 Hz (60 Hz)
Frequency tolerance	40Hz∼70Hz
Efficiency	95%
Power Factor	0.9
HD	<3%
nrush current	≤ 10 x In(4)
oat Voltage	- 2.17-2.27 V/cell VRLA - 1.4-1.42 V/cell Ni cd
Boost Voltage	- 2.25-2.4 V/cell VRLA - 1.55-1.65 V/cellNi cd
Ripple	<1%

Battery	
Туре	Lead acid or nickel cadmium, Li
Autonomy	From few minutes to several hours, on request
Battery Voltage	± 240VDC
Charge Power	Up to 20 % from System Power

Charge Fower	op to 20 % from System Fower
Output	
Inverter Bridge Topology	IGBT with output isolation Transformer
AC Voltage	380/400/415VAC
AC Voltage Tolerance	2%
Frequency	50 Hz (60 Hz)
Frequency Tolerance	+/- 0.1 %
Inverter overload capability	
- 1 minute - 10 minute - 1hour	<150% <125 % <110 %
Harmonic voltage distortion	
- With 100 % linear load - With 100 % non-linear load	< 3 % <5%
Power Factor	1
Efficiency	95%
Static Transfer Switch	SCR Type
Static Bypass transfer Time	<4 ms

General Data

Title	
Operating temperature	0 to 40 °C ⁽⁴⁾
Storage temperature	-20 to +70 °C
Relative humidity	< 95 % non condensing
Operating altitude	1000 m max without derating ⁽⁴⁾
Cooling	Fan Forced, free cooling -Optional
MTBF	<150,000 h
External protection	IP 20 ⁽⁴⁾ according to IEC 60529
Internal protection	Protection against unintentional direct contacts, as per IEC 60950-1/62477-1
Noise (at 1m in front of the unit)	60 – 75 dB according to rating
Cabinet colour	RAL 7035 ⁽⁴⁾
Touch Panel " HMI"	Standard
Communication	- RTU RS485-Standard - TCP/ IP - Optional
Dimensions Cabinet	800*1100*2000
Dimentions Power Module	550*750*85
Weight KG Cabinet	443
Weight KG Power Module	35.7

Standards	
IEC62040-1:2017	Uninterruptible power systems (UPS) - Part 1: Safety requirements
IEC62040-2:2016	Uninterruptible power systems (UPS) – Part 2: Electromagnetic compatibility (EMC) requirements
IEC62040-3:2011	Uninterruptible power systems (UPS) - Part 3: Method of specifying the performance and test requirements
IEC60529:1989 +AMD1:1999	Degrees of protection provided by enclosures (IP Code)

Conformity	
Low voltage directive	2006/95/EC and 2014/35/EU
EMC directive	2004/108/EC and 2014/30/EU
CE Mark	





Modular UPS-PLRM Series 40kVA to 50kVA

The PLRM series modular, online UPS ranging from 40kVA to 50kVA is designed to protect any critical load for medium and large data centers achieving maximum availability.

Key Features —

- \cdot IGBT rectifier at the core of the best-in-class reliability.
- Modular Compact Cabinet Design contains maximum 12 slots.
- · <3% THDI
- Modular design, up to 3 units in parallel online hot-swappable N+X redundancy.



Input			600kVA	500kVA	400kVA	300kVA	200kVA	100kVA	240kVA	160kVA	80kVA
Power Modu	le Capacity		50kVA/50kW 40kVA/40kW								
Physical Weight (kg) Dimension	\4/a;ah+ /l-a\	Cabinet	1040	900	700	490	350	210	490	350	210
	Power Module			45				44			
	Dimension	Cabinet	1300*1100*2000	1300*1100*2000	1050*1000*2000	650*1095*2000	650*960*1600	600*980*1150	650*1095*2000	650*960*1600	600*980*1150
W*D*H (mm)		Power Module					510*700*178				

Technical Data

Input	
Rectifier Bridge Topology	IGBT
Power Module Capacity	50 KVA/ Kw or 40 KVA / Kw
Input Voltage	380/400/415 V Flexible configuration.
Voltage tolerance	323~478Vac
Frequency	50 Hz (60 Hz)
Frequency tolerance	40Hz∼70Hz
Efficiency	99%
Power Factor	0.99
THD	<3%
Inrush current	≤ 10 x In(4)
Float Voltage	- 2.17-2.27 V/cell VRLA - 1.4-1.42 V/cell Ni cd
Boost Voltage	- 2.25-2.4 V/cell VRLA - 1.55-1.65 V/cellNi cd
Ripple	<1%

Battery	
Туре	Lead acid or nickel cadmium, Li
Autonomy	From few minutes to several hours, on request
Battery Voltage	± 240VDC
Charge Power	Up to 20 % from System Power

Output	
Inverter Bridge Topology	IGBT with output isolation Transformer
AC Voltage	380/400/415VAC
AC Voltage Tolerance	1%
Frequency	50 Hz (60 Hz)
Frequency Tolerance	+/- 0.1 %
Inverter overload capability	
- 1 minute - 10 minute - 1hour	<150% <125 % <110 %
Harmonic voltage distortion	
- With 100 % linear load - With 100 % non-linear load	<3 % <5%
Power Factor	1
Efficiency	97%
Static Transfer Switch	SCR Type
Static Bypass transfer Time	<4 ms

General Data

Title	
Operating temperature	0 to 40 °C ⁽⁴⁾
Storage temperature	-20 to +70 °C
Relative humidity	< 95 % non condensing
Operating altitude	1000 m max without derating ⁽⁴⁾
Cooling	Fan Forced, free cooling -Optional
MTBF	<150,000 h
External protection	IP 20 ⁽⁴⁾ according to IEC 60529
Internal protection	Protection against unintentional direct contacts, as per IEC 60950-1/62477-1
Noise (at 1m in front of the unit)	60 – 75 dB according to rating
Cabinet colour	RAL 7035 ⁽⁴⁾
Touch Panel " HMI"	Standard
Communication	- RTU RS485-Standard - TCP/ IP - Optional
Dimensions Cabinet	800*1100*2000
Dimentions Power Module	550*750*85
Weight KG Cabinet	443
Weight KG Power Module	35.7

Standards	
IEC62040-1:2017	Uninterruptible power systems (UPS) - Part 1: Safety requirements
IEC62040-2:2016	Uninterruptible power systems (UPS) – Part 2: Electromagnetic compatibility (EMC) requirements
IEC62040-3:2011	Uninterruptible power systems (UPS) - Part 3: Method of specifying the performance and test requirements
IEC60529:1989 +AMD1:1999	Degrees of protection provided by enclosures (IP Code)

	Conformity	
	Low voltage directive	2006/95/EC and 2014/35/EU
	EMC directive	2004/108/EC and 2014/30/EU
Ī	CE Mark	





Modular UPS-PLRM Series 600kVA

The PLRM series modular, online UPS ranging up to 600kVA is designed to protect any critical load for medium and large data centers achieving maximum availability.

Key Features —

- IGBT rectifier at the core of the best-in-class reliability.
- Modular Compact Cabinet Design contains maximum 10 slots.
- · <3% THDI.
- Modular design, up to 3 units in parallel online hot-swappable N+X redundancy.
- Smart access to UPS data via a large color touchscreen with 2000-event exportable log.



Technical Data

Rectifier Bridge Topology Power Module Capacity Power Module Capacity Rote Module Capacity Ro	reciffical Data	
Power Module Capacity Input Voltage 380/400/415 V Flexible configuration. 323~478Vac Frequency 50 Hz (60 Hz) Frequency tolerance 40Hz~70Hz Efficiency 99% Power Factor 0.99 THD <3% Inrush current \$10 x In(4) Float Voltage Boost Voltage -2.17-2.27 V/cell VRLA -1.4-1.42 V/cell Ni cd 80ost Voltage -2.25-2.4 V/cell VRLA -1.55-1.65 V/cellNi cd Ripple Battery Type Lead acid or nickel cadmium, Li From few minutes to several hours, on request Battery Voltage Charge Power Up to 30 % from System Power Output Inverter Bridge Topology AC Voltage Tolerance Frequency 50 Hz (60 Hz) Frequency Tolerance 1% Frequency Tolerance 1/-0.1 % Inverter overload capability -1 minute -10	Input	
Input Voltage 380/400/415 V Flexible configuration. Voltage tolerance 323~478Vac Frequency 50 Hz (60 Hz) Frequency tolerance 40Hz~70Hz Efficiency 99% Power Factor 0.99 THD <3% Inrush current \$10 x ln(4) Float Voltage 2.25~2.4 V/cell VRLA - 1.4-1.42 V/cell Ni cd Boost Voltage -2.25~2.4 V/cell VRLA - 1.55~1.65 V/cellNi cd Ripple <1% Battery Type Lead acid or nickel cadmium, Li From few minutes to several hours, on request at 240VDC Charge Power Up to 30 % from System Power Output Inverter Bridge Topology IGBT with output isolation Transformer AC Voltage 380/400/415VAC AC Voltage Tolerance 1% Frequency 50 Hz (60 Hz) Frequency Tolerance 1/-0.1 % Inverter overload capability -1 minute <150% -10 minute <125% -1 hour <10 % Harmonic voltage distortion - With 100 % linear load <5% Power Factor 1 Efficiency 97% Static Transfer Switch SCR Type	Rectifier Bridge Topology	IGBT
Voltage tolerance 323~478Vac Frequency 50 Hz (60 Hz) Frequency tolerance 40Hz~70Hz Efficiency 99% Power Factor THD 3% Inrush current Float Voltage - 2.17-2.27 V/cell VRLA - 1.4-1.42 V/cell Ni cd Boost Voltage - 2.25-2.4 V/cellNi cd - 1.4-1.42 V/cellNi cd Ripple 8attery Type Lead acid or nickel cadmium, Li From few minutes to several hours, on request Battery Voltage 1 240VDC Charge Power Up to 30 % from System Power Output Inverter Bridge Topology AC Voltage 380/400/415VAC AC Voltage AC Voltage Tolerance 1% Frequency 50 Hz (60 Hz) Frequency Tolerance 1/- 0.1 % Inverter overload capability -1 minute -10 minute -10 minute -10 minute -110 % Harmonic voltage distortion - With 100 % linear load - S% Power Factor 1 Efficiency 97% Static Transfer Switch SCR Type	Power Module Capacity	60 KVA/ Kw
Frequency	Input Voltage	380/400/415 V Flexible configuration.
Frequency tolerance 40Hz~70Hz Efficiency 99% Power Factor 0.99 THD <3% Inrush current ≤10 x In(4) Float Voltage -2.17-2.27 V/cell VRLA -1.4-1.42 V/cell Ni cd Boost Voltage -2.25-2.4 V/cell VRLA -1.55-1.65 V/cellNi cd Ripple <1% Battery Type Lead acid or nickel cadmium, Li From few minutes to several hours, on request 240VDC Charge Power Up to 30 % from System Power Output Inverter Bridge Topology IGBT with output isolation Transformer AC Voltage 380/400/415VAC AC Voltage Tolerance 1% Frequency Tolerance +/- 0.1 % Inverter overload capability -1 minute 150% -10 minute 150% -110 w Harmonic voltage distortion -With 100 % linear load 5% Power Factor 1 Efficiency 97% Static Transfer Switch SCR Type	Voltage tolerance	323~478Vac
Efficiency 99% Power Factor 0.99 THD <3% Inrush current \$\leq 10 \times \text{In(4)}\$ Float Voltage -2.17-2.27 V/cell VRLA -1.4-1.42 V/cell Ni cd Boost Voltage -2.25-2.4 V/cell NI cd Ripple <1% Battery Type Lead acid or nickel cadmium, Li From few minutes to several hours, on request 240VDC Charge Power Up to 30 % from System Power Output Inverter Bridge Topology IGBT with output isolation Transformer AC Voltage 380/400/415VAC AC Voltage Tolerance 1% Frequency 50 Hz (60 Hz) Frequency Tolerance +/- 0.1 % Inverter overload capability -1 minute 10 minute 155 % -110 % Harmonic voltage distortion -With 100 % linear load 5% Power Factor 1 Efficiency 97% Static Transfer Switch SCR Type	Frequency	50 Hz (60 Hz)
Power Factor THD <3% Inrush current ≤10 x In(4) Float Voltage -2.17-2.27 V/cell VRLA -1.4-1.42 V/cell Ni cd -2.25-2.4 V/cell NI cd -1.55-1.65 V/cellNi cd -1.55-1.65 V/cellNi cd -1.55-1.65 V/cellNi cd -1.55-1.65 V/cellNi cd Ripple Battery Type Lead acid or nickel cadmium, Li From few minutes to several hours, on request ± 240VDC Charge Power Up to 30 % from System Power Output Inverter Bridge Topology IGBT with output isolation Transformer AC Voltage 380/400/415VAC AC Voltage Tolerance 1% Frequency Frequency 50 Hz (60 Hz) Frequency Tolerance 1/- 0.1 % Inverter overload capability -1 minute -10 minute -10 minute -110 % Harmonic voltage distortion - With 100 % linear load - With 100 % linear load - With 100 % non-linear load - With 100 % SCR Type	Frequency tolerance	40Hz∼70Hz
THD <3% Inrush current ≤ 10 x In(4) Float Voltage	Efficiency	99%
Inrush current ≤ 10 x In(4) Float Voltage -2.17-2.27 V/cell VRLA -1.4-1.42 V/cell Ni cd Boost Voltage -2.25-2.4 V/cell VRLA -1.55-1.65 V/cellNi cd Ripple <1% Battery Type Lead acid or nickel cadmium, Li From few minutes to several hours, on request ± 240VDC Charge Power Up to 30 % from System Power Output Inverter Bridge Topology IGBT with output isolation Transformer AC Voltage 380/400/415VAC AC Voltage 196 Topology IGBT with output isolation Transformer AC Voltage 380/400/415VAC AC Voltage 196 Topology Inverted Solution Frequency 196 Hz (60 Hz) Frequency 50 Hz (60 Hz) Frequency Tolerance +/- 0.1 % Inverter overload capability -1 minute 10	Power Factor	0.99
Float Voltage - 2.17-2.27 V/cell VRLA - 1.4-1.42 V/cell Ni cd Boost Voltage - 2.25-2.4 V/cell VRLA - 1.55-1.65 V/cellNi cd Ripple - 2.18-1.65 V/cellNi cd - 2.25-2.4 V/cell VRLA - 1.55-1.65 V/cellNi cd Ripple - 2.18-2.25-2.4 V/cell VRLA - 1.55-1.65 V/cellNi cd - 2.25-2.4 V/cell VRLA - 1.55-1.65 V/cellNi - 2.25-2.4 V/cell VRLA - 1.55-1.65 V/cellNi - 2.25-2.5 V/	THD	<3%
- 1.4-1.42 V/cell Ni cd - 2.25-2.4 V/cell VRLA - 1.55-1.65 V/cellNi cd - 2.25-2.4 V/cellNi cd - 2.25-2.4 V/cellNi cd - 1.55-1.65 V/cellNi cd - 2.85-1.65 V/cellNi cd - 2.85-1.	Inrush current	≤ 10 x In(4)
- 1.55-1.65 V/cellNi cd Ripple <1% Battery Type Lead acid or nickel cadmium, Li Autonomy From few minutes to several hours, on request ± 240VDC Charge Power Up to 30 % from System Power Output Inverter Bridge Topology IGBT with output isolation Transformer AC Voltage 380/400/415VAC AC Voltage 1% Frequency 50 Hz (60 Hz) Frequency Tolerance +/- 0.1 % Inverter overload capability - 1 minute 10 minute 125 % - 1 hour 100 % linear load 5% Power Factor 1 Efficiency 97% Static Transfer Switch SCR Type	Float Voltage	The state of the s
Battery Type	Boost Voltage	
Type Lead acid or nickel cadmium, Li Autonomy From few minutes to several hours, on request battery Voltage ± 240VDC Charge Power Up to 30 % from System Power Output Inverter Bridge Topology IGBT with output isolation Transformer AC Voltage 380/400/415VAC AC Voltage Tolerance 1% Frequency 50 Hz (60 Hz) Frequency Tolerance +/- 0.1 % Inverter overload capability - 1 minute <150% - 10 minute <125 % - 1 hour <110 % Harmonic voltage distortion - With 100 % linear load <3 % - With 100 % non-linear load <5% Power Factor 1 Efficiency 97% Static Transfer Switch SCR Type	Ripple	<1%
Autonomy From few minutes to several hours, on request ± 240VDC Charge Power Up to 30 % from System Power Output Inverter Bridge Topology IGBT with output isolation Transformer AC Voltage 380/400/415VAC AC Voltage Tolerance 1% Frequency 50 Hz (60 Hz) Frequency Tolerance +/- 0.1 % Inverter overload capability -1 minute <150% -10 minute <125 % -1 hour <110 % Harmonic voltage distortion - With 100 % linear load <5% Power Factor 1 Efficiency 97% Static Transfer Switch SCR Type	Rattory	
Autonomy From few minutes to several hours, on request ± 240VDC Charge Power Up to 30 % from System Power Output Inverter Bridge Topology IGBT with output isolation Transformer AC Voltage 380/400/415VAC AC Voltage Tolerance 1% Frequency 50 Hz (60 Hz) Frequency Tolerance +/- 0.1 % Inverter overload capability -1 minute <150% -10 minute <125 % -1 hour <110 % Harmonic voltage distortion - With 100 % linear load <5% Power Factor 1 Efficiency 97% Static Transfer Switch SCR Type	•	
Battery Voltage ± 240VDC Charge Power Up to 30 % from System Power Output Inverter Bridge Topology IGBT with output isolation Transformer AC Voltage 380/400/415VAC AC Voltage Tolerance 1% Frequency 50 Hz (60 Hz) Frequency Tolerance +/- 0.1 % Inverter overload capability - 1 minute < 150% - 10 minute < 125 % - 110 w Harmonic voltage distortion - With 100 % linear load < 3 % - With 100 % non-linear load < 5% Power Factor 1 Efficiency 97% Static Transfer Switch SCR Type		·
Charge Power Up to 30 % from System Power Dutput INVERTIGINATION OF THE POWER OF	•	
Output Inverter Bridge Topology IGBT with output isolation Transformer AC Voltage 380/400/415VAC AC Voltage Tolerance 1% Frequency 50 Hz (60 Hz) Frequency Tolerance +/- 0.1 % Inverter overload capability - 1 minute < 150% - 10 minute < 125 % - 1 hour < 110 % Harmonic voltage distortion - With 100 % linear load < 3 % - With 100 % non-linear load < 5% Power Factor 1 Efficiency 97% Static Transfer Switch SCR Type		
Inverter Bridge Topology	Charge Power	Up to 30 % from System Power
AC Voltage 380/400/415VAC AC Voltage Tolerance 1% Frequency 50 Hz (60 Hz) Frequency Tolerance +/- 0.1 % Inverter overload capability - 1 minute <150% - 10 minute <125 % - 1 hour <110 % Harmonic voltage distortion - With 100 % linear load <3 % - With 100 % non-linear load <5% Power Factor 1 Efficiency 97% Static Transfer Switch SCR Type	Output	
AC Voltage Tolerance 1% Frequency 50 Hz (60 Hz) Frequency Tolerance +/- 0.1 % Inverter overload capability -1 minute <150% -10 minute <125 % -1 hour <110 % Harmonic voltage distortion - With 100 % linear load <3 % - With 100 % non-linear load <5% Power Factor 1 Efficiency 97% Static Transfer Switch SCR Type	Inverter Bridge Topology	IGBT with output isolation Transformer
So Hz (60 Hz)	AC Voltage	380/400/415VAC
1	AC Voltage Tolerance	1%
1 minute	Frequency	50 Hz (60 Hz)
- 1 minute	Frequency Tolerance	+/- 0.1 %
- 10 minute	Inverter overload capability	
- 1 hour		7.71
Harmonic voltage distortion - With 100 % linear load		
- With 100 % linear load		122070
- With 100 % non-linear load <5%		< 3 %
Efficiency 97% Static Transfer Switch SCR Type	- With 100 % non-linear load	
Static Transfer Switch SCR Type	Power Factor	1
**	Efficiency	97%
	Static Transfer Switch	SCR Type
	Static Bypass transfer Time	

General Data

Title	
Operating temperature	0 to 40 °C ⁽⁴⁾
Storage temperature	-20 to +70 °C
Relative humidity	< 95 % non condensing
Operating altitude	1000 m max without derating (4)
Cooling	Fan Forced, free cooling -Optional
MTBF	<150,000 h
External protection	IP 20 ⁽⁴⁾ according to IEC 60529
Internal protection	Protection against unintentional direct contacts, as per IEC 60950-1/62477-1
Noise (at 1m in front of the unit)	60 – 75 dB according to rating
Cabinet colour	RAL 7035 ⁽⁴⁾
Touch Panel " HMI"	Standard
Communication	- RTU RS485-Standard - TCP/ IP - Optional
Dimensions Cabinet	800*1100*2000
Dimentions Power Module	440*1100*2000
Weight KG Cabinet	400
Weight KG Power Module	53.5

Standards	
IEC62040-1:2017	Uninterruptible power systems (UPS) - Part 1: Safety requirements
IEC62040-2:2016	Uninterruptible power systems (UPS) – Part 2: Electromagnetic compatibility (EMC) requirement
IEC62040-3:2011	Uninterruptible power systems (UPS) - Part 3: Method of specifying the performance and test requirements
IEC60529:1989 +AMD1:1999	Degrees of protection provided by enclosures (IP Code)
Conformity	
Low voltage directive	2006/95/EC and 2014/35/EU
EMC directive	2004/108/EC and 2014/30/EU
CE Mark	



