

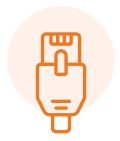
# Modular UPS PLRM Series



## 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.



Ethernet port



APP



On Cloud monitoring



Cloud port



WLAN dongle



NMC card

## Options —

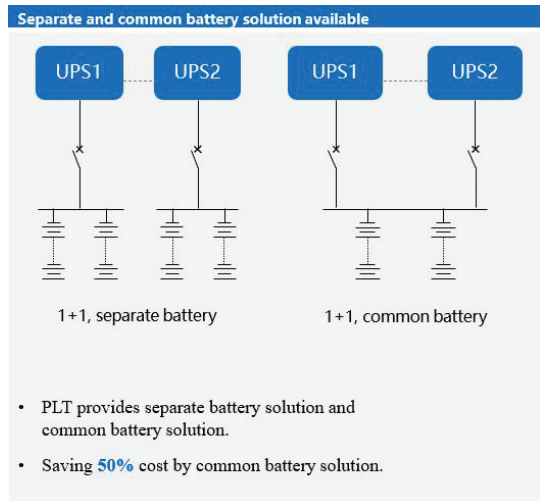
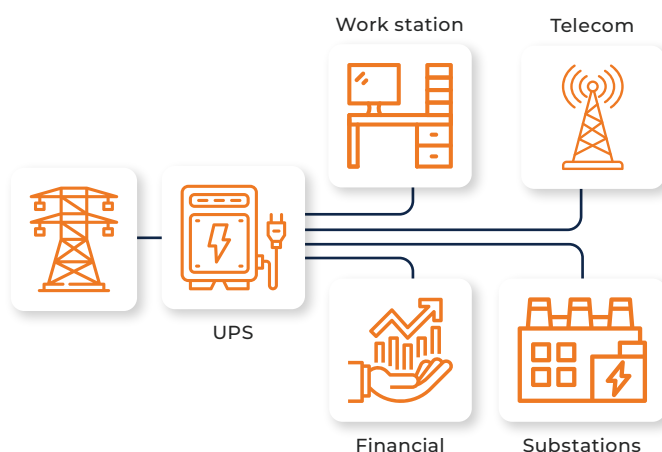
- 2 Source Input
- <3% Input THDi with harmonic filter
- Various voltage settings for different countries
- Removing input neutral at site
- Fusible Surge Suppression (AC/DC)
- Redundant Fans
- Cabinet color can be chosen from RAL codes
- Cable Entry (Top / Side / Bottom / Rear)
- RS485, TCP, SNMP, and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

## 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

## 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 20kVA to 90kVA

The PLRM series modular, online UPS ranging from 20 kVA to 90 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 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 Module Capacity		10 KVA/ Kw										15 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	436*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/cell Ni cd
Ripple	<1%

## Battery

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 %
- 1hour	<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
Static Bypass transfer Time	<4 ms

## General Data

Title	
Operating temperature	0 to 40 °C <sup>(4)</sup>
Storage temperature	-20 to +70 °C
Relative humidity	< 95 % non condensing
Operating altitude	1000 m max without derating <sup>(4)</sup>
Cooling	Fan Forced, free cooling -Optional
MTBF	<150,000 h
External protection	IP 20 <sup>(4)</sup> 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 <sup>(4)</sup>
Touch Panel "HMI"	Standard
Communication	- RTU RS485-Standard - TCP/ IP - Optional
Dimensions Cabinet	800*1100*2000
Dimensions Power Module	550*750*85
Weight KG Cabinet	443
Weight KG Power Module	35.7

## Standards

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 60kVA to 200kVA

The PLRM series modular, online UPS ranging from 60 kVA to 200 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 10 slots.
- <3% THDI.
- Modular design, up to 3 units in parallel online hot-swappable N+X redundancy.



Input		200kVA		120kVA	60kVA
Power Module Capacity		20 KVA / 18 Kw			
Physical	Weight (kg)	Cabinet	180	150	105
		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

Input	
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/cell Ni cd
Ripple	<1%

## Battery

Type	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	2%
Frequency	50 Hz (60 Hz)
Frequency Tolerance	+/- 0.1 %
Inverter overload capability	
- 1 minute	<150%
- 10 minute	<125 %
- 1hour	<110 %
Harmonic voltage distortion	
- With 100 % linear load	< 3 %
- With 100 % non-linear load	<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 <sup>(4)</sup>
Storage temperature	-20 to +70 °C
Relative humidity	< 95 % non condensing
Operating altitude	1000 m max without derating <sup>(4)</sup>
Cooling	Fan Forced, free cooling -Optional
MTBF	<150,000 h
External protection	IP 20 <sup>(4)</sup> 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 <sup>(4)</sup>
Touch Panel " HMI"	Standard
Communication	- RTU RS485-Standard - TCP/ IP - Optional
Dimensions Cabinet	800*1100*2000
Dimensions Power Module	550*750*85
Weight KG Cabinet	443
Weight KG Power Module	35.7

## Standards

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 150kVA to 300kVA

The PLRM series modular, online UPS ranging from 150 kVA to 300 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		300kVA		250kVA	150kVA
Power Module Capacity				25 kVA/kW	
Physical	Weight (kg)	Cabinet	295	200	116
		Power Module		32.2	
	Dimension W*D*H (mm)	Cabinet	650*1100*2000	482*916*1550	482*916*931
		Power Module		510*700*178	

## Technical Data

Input	
Rectifier Bridge Topology	IGBT
Power Module Capacity	25 KVA/ Kw or 30 KVA/ 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

Type	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	2%
Frequency	50 Hz (60 Hz)
Frequency Tolerance	+/- 0.1 %
Inverter overload capability	
- 1 minute	<150%
- 10 minute	<125 %
- 1hour	<110 %
Harmonic voltage distortion	
- With 100 % linear load	< 3 %
- With 100 % non-linear load	<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 <sup>(4)</sup>
Storage temperature	-20 to +70 °C
Relative humidity	< 95 % non condensing
Operating altitude	1000 m max without derating <sup>(4)</sup>
Cooling	Fan Forced, free cooling -Optional
MTBF	<150,000 h
External protection	IP 20 <sup>(4)</sup> 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 <sup>(4)</sup>
Touch Panel " HMI"	Standard
Communication	- RTU RS485-Standard - TCP/ IP - Optional
Dimensions Cabinet	800*1100*2000
Dimensions Power Module	550*750*85
Weight KG Cabinet	443
Weight KG Power Module	35.7

## Standards

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 80kVA to 600kVA

The PLRM series modular, online UPS ranging from 80kVA 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 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 Module Capacity		50kVA/50kW						40kVA/40kW			
Physical	Weight (kg)	Cabinet	1040	900	700	490	350	210	490	350	210
		Power Module	45						44		
	Dimension W*D*H (mm)	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
		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/cell Ni cd
Ripple	<1%

## Battery

Type	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	<150%
- 10 minute	<125 %
- 1hour	<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
Static Bypass transfer Time	<4 ms

## General Data

Title	
Operating temperature	0 to 40 °C <sup>(4)</sup>
Storage temperature	-20 to +70 °C
Relative humidity	< 95 % non condensing
Operating altitude	1000 m max without derating <sup>(4)</sup>
Cooling	Fan Forced, free cooling -Optional
MTBF	<150,000 h
External protection	IP 20 <sup>(4)</sup> 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 <sup>(4)</sup>
Touch Panel " HMI"	Standard
Communication	- RTU RS485-Standard - TCP/ IP - Optional
Dimensions Cabinet	800*1100*2000
Dimensions Power Module	550*750*85
Weight KG Cabinet	443
Weight KG Power Module	35.7

## Standards

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 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

Input	
Rectifier Bridge Topology	IGBT
Power Module Capacity	60 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	$\leq 10 \times I_n(4)$
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/cell Ni cd
Ripple	<1%

Battery	
Type	Lead acid or nickel cadmium, Li
Autonomy	From few minutes to several hours, on request
Battery Voltage	$\pm 240VDC$
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	$\pm 0.1 \%$
Inverter overload capability	
- 1 minute	<150%
- 10 minute	<125 %
- 1hour	<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
Static Bypass transfer Time	<4 ms

## General Data

Title	
Operating temperature	0 to 40 °C <sup>(4)</sup>
Storage temperature	-20 to +70 °C
Relative humidity	< 95 % non condensing
Operating altitude	1000 m max without derating <sup>(4)</sup>
Cooling	Fan Forced, free cooling -Optional
MTBF	<150,000 h
External protection	IP 20 <sup>(4)</sup> 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 <sup>(4)</sup>
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

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	