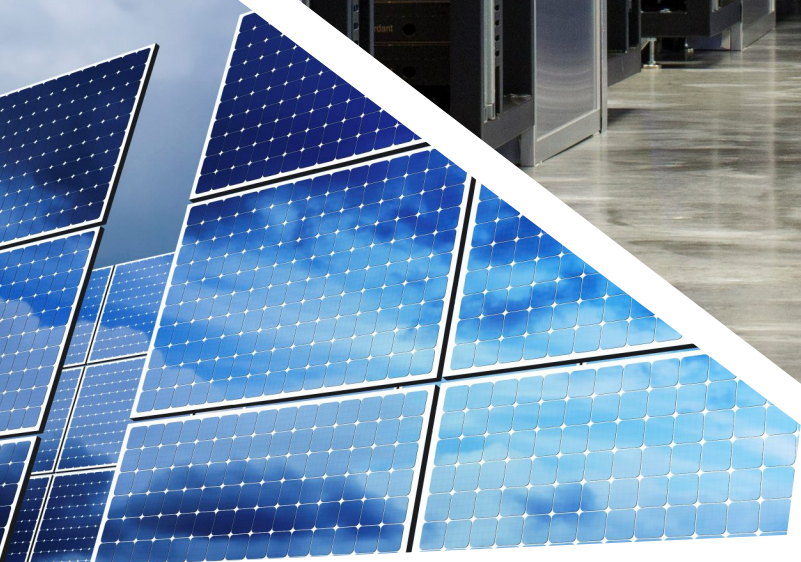




Catalogue

Quality Power Products



***X*mart**
by Integra



Catalogue

Quality Power Products

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Interactive

SUPRA 500/700/900 VA

Line Interactive UPS, with built-in voltage regulator to enlarge the operation input range reducing the battery usage. Based on microprocessor controller, Supra is a high reliable UPS perfect for home and small office applications.



Interactive Technology:

Internal voltage stabilizer regulates AC input to generate an optimal UPS output without the need of using batteries. In this way, input range is wider than similar UPS without interactive technology. Only when AC input is out of this wider input range, Supra go to battery mode to provide reliable energy to your protected products. The main advantage of this technology is to provide an input range about 15% wider than standard input range. Other important advantage is to make battery life longer than offline UPS without interactive technology.

Easy Connection:

Connecting your computer and electronic equipment is very simple. Our products offer power outlets according to the country of distribution.

Total Power Protection:

Besides voltage fluctuations, Supra protects all lines against spikes and surges, not only power outlets are protected, but also RJ11 ports, to protect the connection with routers.

Smart Battery Charger:

A state of the art battery charger allows recharging up to 90% capacity in less than 4 hours, so after deep discharge, the UPS will be ready for full backup in shorter time than other brands.

Auto-Recovery:

A long blackout could discharge batteries completely forcing UPS to power-off. When AC recovery is detected, Supra is able to restart automatically without the need of manual operation. This feature is especially useful in unattended applications.

Cold Start:

This function allows Supra family to power your equipment even without power in AC Input, like a small power generator.

Control Software:

Allows to configure and manage all UPS functions. Besides it can close files and programs, as well as shutdown operating systems and your computer equipment, during long power outage. Software also keeps an Event and Data record and allows programming periodic battery tests, as well as UPS automatic power On/Off. Control software requires the UPS to have either USB or RS-232 port.

Available versions:

Supra is available for 120V, 220V and 230V AC Lines. Power outlets are suitable for each standard: NEMA, Schuko, IEC, etc.

Applications: Small Office and Home Personal Computers

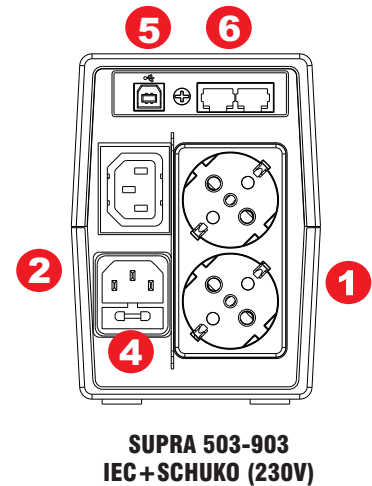
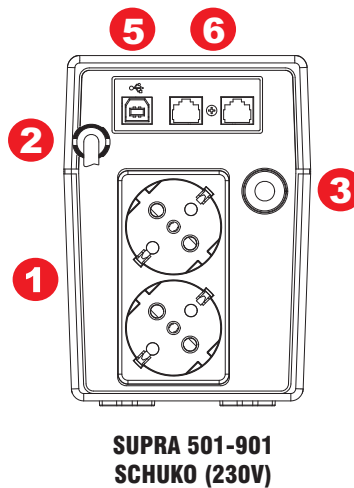
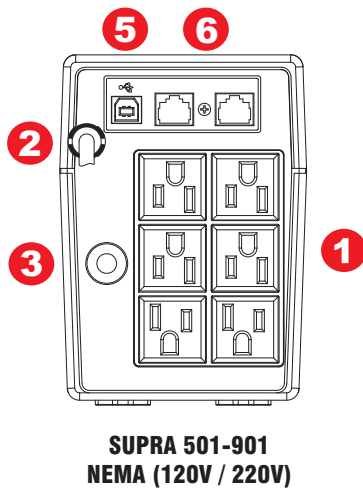
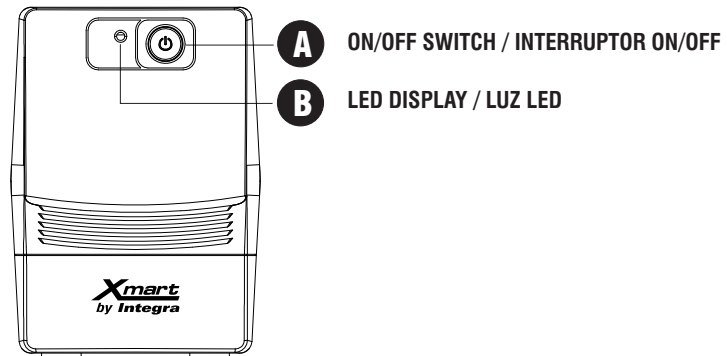


Technical Features / Características Técnicas

- 1.- Battery Supported Outlets / Salidas Respaldadas por Baterías
- 2.- AC Input / Entrada Corriente Alterna
- 3.- Input Breaker / Disyuntor de Entrada

- 4.- Input Fuse / Fusible de Entrada
- 5.- USB (optional)
- 6.- RJ-11

REAR PANEL



Standards & Certifications: CE

IEC Low Voltage Directives

IEC60950-1:2001: Information Technology Equipment – Safety-Part1: General Requirement

EN62040-1-1:2003: Uninterruptible Power Systems (UPS) Part 1-1: General and Safety requirements for UPS used in operator access areas

IEC EMC Directives

EN 62040-2: 2006: Uninterruptible Power Systems (UPS) Part 2: Electromagnetic compatibility class C2 (EMC)

IEC 61000-4-2: 2001: Electrostatic discharge immunity test

IEC 61000-4-3: 2002: Radiated, radio-frequency electromagnetic field immunity test

IEC 61000-4-4: 2004: Electrical fast transient/burst immunity test

IEC 61000-4-5: 2005: Surge immunity test

IEC 61000-2-2: 2002: Compatibility levels for low-frequency conducted disturbances and signaling in public low-voltage power supply systems

Technical Features / Características Técnicas

INTERACTIVE UPS	500 VA	700 VA	900 VA
Capacity / Capacidad	500VA / 250W	700VA / 360W	900VA / 480W
Input / Entrada			
Voltage / Voltaje	120V Model: (89-145 Vac) - 220V Model: (162-290V) - 230V Model: (170-299Vac)		
Frequency / Frecuencia	60Hz / 50 Hz: Auto Sensing / Autodetección		
Generator Compatible / Compatible con motogeneradores	Yes / Sí		
Output / Salida			
Voltage / Voltaje	+/- 10% (1 Phase / 1 Fase)		
Frequency / Frecuencia	60Hz (+/- 1Hz) - 50Hz (+/- 1Hz)		
Transfer Time / Tiempo Transferencia:	2 - 6 ms typical / típico		
Waveform / Forma de Onda (Normal Mode)	Sinewave / Sinusoidal		
Waveform / Forma de Onda (Battery Mode)	Simulated Sinewave / Sinusoidal Sintetizada		
Batteries / Baterías			
Type / Tipo	Sealed Lead Acid - Maintenance Free (VRLA AGM) / Acido Plomo Sellada Sin Mtto. (VRLA AGM)		
Capacity / Capacidad	5AH	7AH	9AH
Quantity / Cantidad	1	1	1
Back-up Time Typical / Autonomía Típica (N1*)	10-12 min.	17-20 min.	22-25 min.
Recharge Time / Tiempo de Recarga	4-6 hours to 90% capacity / 4-6 Horas hasta 90% de capacidad		
Protections / Protecciones	Deep discharge and overcharge / Descarga Profundas y Sobre-Cargas		
Alarms-Indications / Alarmas-Indicaciones			
Models: 501-901 & 503-903: LED	Battery Mode / Low Battery / Overload / Battery Replacement / UPS Fault		
AC Mode / Modo Normal	Green Lighting / Verde Fijo		
Battery Mode / Modo Batería	Green Flashing / Verde Intermitente		
Acoustic Alarm / Alarma Acústica (all models)	Battery Mode / Low Battery / Overload / Battery Replacement / UPS Fault		
Protections / Protecciones			
Input Circuit Breaker / "Breaker" de Entrada	With Manual Reset / Rearmable		
Surge/Spikes Protection (Line H-N)	Power Outlet Sockets with surge & spikes protection: L-N		
Protección contra Picos / Rayos (Línea L-N)	Tomas de Salida Protegidas contra Picos/Rayos: L-N		
Surge/Spikes Protection (RJ45)	Tel/Internet/Ethernet: RJ45		
Protección contra Picos / Rayos (RJ45)			
Total Suge Suppression / Supresión Total	120V Model: (> 758J) - 220V & 230 Models: (> 175J)		
Features / Funcionalidades			
Power Outlets per model / Tomas por modelo			
Models: 501 / 701 / 901 - NEMA 120V & NEMA 220V	6 x NEMA5-15R		
Models: 501 / 701 / 901 - SCHUKO 230V	2 x Schuko		
Models: 503 / 703 / 903 - IEC + SCHUKO 230V	1 x IEC + 2 x Schuko		
Communication / Comunicación	USB Port / Puerto USB (optional for 120V models / opcional para modelos 120V)		
Software / Software	Supports/Compatible: Windows, Mac OSX, Linux, Unix		
Dimensions / Dimensiones	279x101x142 mm		
Net Weight / Peso Neto Unitario	3.6 Kg	4.3 Kg	4.9 Kg
Operating / Condiciones de Operación:	< 95% RH / 0-40°C / ≤ 40 dB @ 1 mt		
Packing / Empaque			
Carton Information / Información Cartón	4 units per carton / 4 unidades por carton (350x600x260 mm)		
Half Pallet Information / Información Medio Pallet	96pcs / 364Kg 120x100x113cm	96pcs / 432Kg 120x100x113cm	96pcs / 489Kg 120x100x113cm
Full Pallet Information / Información Medio Pallet	192pcs / 729Kg 120x100x213cm	192pcs / 864Kg 120x100x213cm	192pcs / 979Kg 120x100x213cm
Safety & Standards			
For 220V & 230V	CE (Low Voltage Directive 2006/95/EC & EMC Directive 2004/108/EC)		
Conduction & Radiation (Models 220V/230V)	IEC / EN 62040-2 (Class 2 EMC)		
Quality & Environment	RoHS / ISO9001 & ISO14001		

Technical specifications may change without further notice. Las especificaciones pueden cambiar sin aviso previo.

N1*: Times for 1PC + TFT load / Tiempos para 1PC + Pantalla TFT

Interactive

SUPRA 505/705/905

Line Interactive UPS, with built-in voltage regulator to enlarge the operation input range reducing the battery usage. Based on microprocessor controller, Supra is a high reliable UPS perfect for home and small office applications.



**All Information at
your fingertips!!!**

Touch screen LCD:

An avant garde touch screen allows supervising parameters of UPS and AC line.

With a simple touch, the screen will sequentially show all available data. Available for UL Versions.

Interactive Technology:

Internal voltage stabilizer regulates AC input to generate an optimal UPS output without the need of using batteries. In this way, input range is wider than similar UPS without interactive technology. Only when AC input is out of this wider input range, Supra go to battery mode to provide reliable energy to your protected products. The main advantage of this technology is to provide an input range about 15% wider than standard input range. Other important advantage is to make battery life longer than offline UPS without interactive technology.

Easy Connection:

Connecting your computer and electronic equipment is very simple. Our products offer power outlets according to the country of distribution.

Total Power Protection:

Besides voltage fluctuations, Supra protects all lines against spikes and surges, not only power outlets are protected, but also RJ11 ports, to protect the connection with routers.

Smart Battery Charger:

A state of the art battery charger allows recharging up to 90% capacity in less than 4 hours, so after deep discharge, the UPS will be ready for full backup in shorter time than other brands.

Cold Start:

This function allows Supra family powering your equipment even during blackouts, like a small power generator.

Auto-Recovery:

A long blackout could discharge batteries completely forcing UPS to power-off. When AC recovery is detected, Supra is able to restart automatically without the need of manual operation. This feature is especially useful in unattended applications.

Control Software:

Allows to configure and manage all UPS functions. Besides it can close files and programs, as well as shutdown operating systems and your computer equipment, during long power outage. Software also keeps an Event and Data record and allows programming periodic battery tests, as well as UPS automatic power On/Off. Control software requires the UPS to have either USB or RS-232 port.

Technical Features / Características Técnicas

A.- ON/OFF Switch / Interruptor ON/OFF

B.- LCD Display / Pantalla LCD

1.- Battery Supported Outlets / Salidas Respaldadas por Baterías

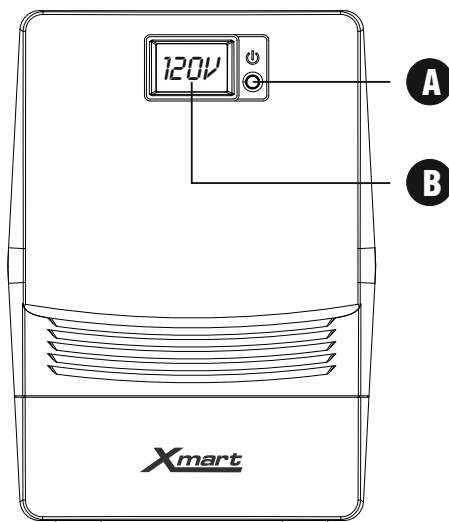
2.- AC Input / Entrada Corriente Alterna

3.- Input Breaker / Disyuntor de Entrada

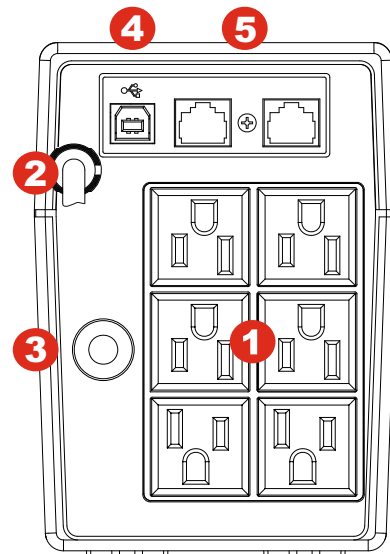
4.- USB (optional)

5.- RJ-11

VIEWS / VISTAS



FRONT VIEW / VISTA FRONTAL
SUPRA 505-905 UL



REAR VIEW / VISTA TRASERA
SUPRA 505-905 UL

Standards & Certifications: CE

IEC Low Voltage Directives

IEC60950-1:2001: Information Technology Equipment – Safety-Part1: General Requirement

EN62040-1-1:2003: Uninterruptible Power Systems (UPS) Part 1-1: General and Safety requirements for UPS used in operator access areas

IEC EMC Directives

EN 62040-2: 2006: Uninterruptible Power Systems (UPS) Part 2: Electromagnetic compatibility class C2 (EMC)

IEC 61000-4-2: 2001: Electrostatic discharge immunity test

IEC 61000-4-3: 2002: Radiated, radio-frequency electromagnetic field immunity test

IEC 61000-4-4: 2004: Electrical fast transient/burst immunity test

IEC 61000-4-5: 2005: Surge immunity test

IEC 61000-2-2: 2002: Compatibility levels for low-frequency conducted disturbances and signaling in public low-voltage power supply systems

Standards & Certifications for 505/705/905-UL 120V Models: UL

UL-1778: Certified by cTUVus

Technical Features / Características Técnicas

INTERACTIVE UPS	505	705	905
Capacity / Capacidad	450VA / 240W	650VA / 360W	850VA / 480W
Input / Entrada			
Voltage / Voltaje	89-145 Vac		
Frequency / Frecuencia	60Hz / 50 Hz: Auto Sensing / Autodetección		
Powercord / cable entrada	6 feet (1.83m) NEMA5-15P		
Generator Compatible / Compatible con motogeneradores	Yes / Sí		
Output / Salida			
Voltage / Voltaje	+/- 10% (1 Phase / 1 Fase)		
Frequency / Frecuencia	60Hz (+/- 1Hz) - 50Hz (+/- 1Hz)		
Transfer Time / Tiempo Transferencia:	2 - 6 ms typical / típico		
Waveform / Forma de Onda (Normal Mode)	Sinewave / Sinusoidal		
Waveform / Forma de Onda (Battery Mode)	Simulated Sinewave / Sinusoidal Sintetizada		
Batteries / Baterías			
Type / Tipo	Sealed Lead Acid - Maintenance Free (VRLA AGM) / Acido Plomo Sellada Sin Mtto. (VRLA AGM)		
Capacity / Capacidad	5AH	7AH	9AH
Quantity / Cantidad	1	1	1
Back-up Time Typical / Autonomía Típica (N1*)	10-12 min.	17-20 min.	22-25 min.
Recharge Time / Tiempo de Recarga	4-6 hours to 90% capacity / 4-6 Horas hasta 90% de capacidad		
Protections / Protecciones	Deep discharge and overcharge / Descarga Profundas y Sobre-Cargas		
Alarms-Indications / Alarmas-Indicaciones			
LCD	1) Operation Mode 2) Input Volt. 3) Output Volt. 4) Load 5) Battery Level 6) Overload		
Acoustic Alarm / Alarma Acústica (all models)	Battery Mode / Low Battery / Overload / Battery Replacement / UPS Fault		
Protections / Protecciones			
Input Circuit Breaker / "Breaker" de Entrada	With Manual Reset / Disyuntor Rearmable		
Surge/Spikes Protection (Line H-N)	Power Outlet Sockets with surge & spikes protection: L-N		
Protección contra Picos / Rayos (Línea L-N)	Tomas de Salida Protegidas contra Picos/Rayos: L-N		
Surge/Spikes Protection (RJ45)	Tel/Internet/Ethernet: RJ45		
Protección contra Picos / Rayos (RJ45)	Tel/Internet/Ethernet: RJ45		
Total Surge Suppression / Supresión Total	> 758J		
Noise / Ruido Eléctrico	EMI input filter		
Features / Funcionalidades			
Power Outlets / Tomas de Salida	505-UL / 705-UL / 905-UL - NEMA 120V		
Communication / Comunicación	USB Port / Puerto USB (optional / opcional)		
Software / Software	Supports/Compatible: Windows, Mac OSX, Linux, Unix		
Dimensions / Dimensiones	279x101x142 mm		
Net Weight / Peso Neto Unitario	3.6 Kg	4.3 Kg	4.9 Kg
Operating / Condiciones de Operación:	< 95% RH / 0-40°C / < 40 dB		
Packing / Empaque			
Carton Information / Información Cartón	4 units per carton / 4 unidades por carton (350x600x260 mm)		
Half Pallet Information / Información Medio Pallet	96pcs / 364Kg 120x100x113cm	96pcs / 432Kg 120x100x113cm	96pcs / 489Kg 120x100x113cm
Full Pallet Information / Información Medio Pallet	192pcs / 729Kg 120x100x213cm	192pcs / 864Kg 120x100x213cm	192pcs / 979Kg 120x100x213cm
Safety & Standards			
European	CE (Low Voltage Directive 2006/95/EC & EMC Directive 2004/108/EC)		
American	UL1778 (certified by cTUVus)		
Conduction & Radiation	FCC Part 15 Class A ; IEC / EN 62040-2 (Class 2 EMC)		
Quality & Environment	RoHS / ISO9001 & ISO14001		

Technical specifications may change without further notice. Las especificaciones pueden cambiar sin aviso previo.

N1*: Times for 1PC + TFT load / Tiempos para 1PC + Pantalla TFT

Interactive

NOVA 750/1000/1200 VA

Line Interactive UPS, with built-in voltage regulator to enlarge the operation input range reducing the battery usage. Based on microprocessor controller, Supra is a high reliable UPS perfect for home and small office applications.



Interactive Technology:

Internal voltage stabilizer regulates AC input to generate an optimal UPS output without the need of using batteries. In this way, input range is wider than similar UPS without interactive technology. Only when AC input is out of this wider input range, Supra go to battery mode to provide reliable energy to your protected products. The main advantage of this technology is to provide an input range about 15% wider than standard input range. Other important advantage is to make battery life longer than offline UPS without interactive technology.

Easy Connection:

Connecting your computer and electronic equipment is very simple. Our products offer power outlets according to the country of distribution.

Total Power Protection:

Besides voltage fluctuations, Supra protects all lines against spikes and surges, not only power outlets are protected, but also RJ45 ports, to protect the connection with routers, switches, etc.

Smart Battery Charger:

A state of the art battery charger allows recharging up to 90% capacity in less than 4 hours, so after deep discharge, the UPS will be ready for full backup in shorter time than other brands.

Touch screen LCD:

Nova 1200VA includes an avant garde touch screen which allows supervising parameters of UPS and AC line. With a simple touch, the screen will sequentially show all available data.

Auto-Recovery:

A long blackout could discharge batteries completely forcing UPS to power-off. When AC recovery is detected, Supra is able to restart automatically without the need of manual operation. This feature is especially useful in unattended applications.

Cold Start:

This function allows Supra family to power your equipment even without power in AC Input, like a small power generator.

Control Software:

Allows to configure and manage all UPS functions. Besides it can close files and programs, as well as shutdown operating systems and your computer equipment, during long power outage. Software also keeps an Event and Data record and allows programming periodic battery tests, as well as UPS automatic power On/Off. 1200 VA Model includes USB port to support control software.

Available versions:

NOVA is available for 120V, 220V and 230V AC Lines. Power outlets are suitable for each standard: NEMA, Schuko, etc.

Applications: Small Office and Home Personal Computers

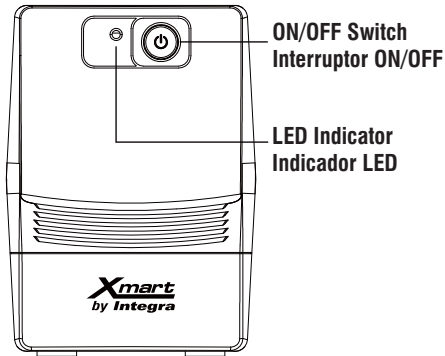


Technical Features / Características Técnicas

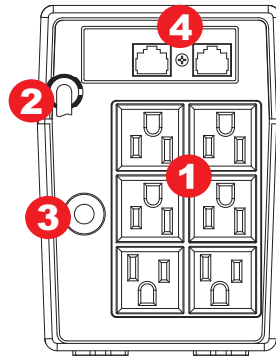
- 1.- Battery Supported Outlets / Salidas Respaldadas por Baterías
- 2.- AC Input / Entrada Corriente Alterna
- 3.- Input Breaker / Disyuntor de Entrada

- 4.- RJ-45
- 5.- USB Port
- 6.- Surge protected outlets (no battery)
Salidas protegidas contra picos (sin batería)

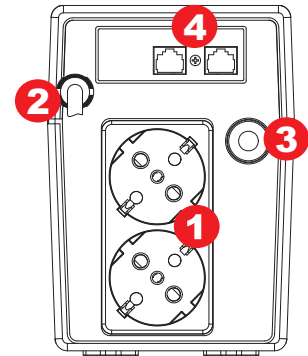
Front and Rear Panel / Panel Delantero y Trasero



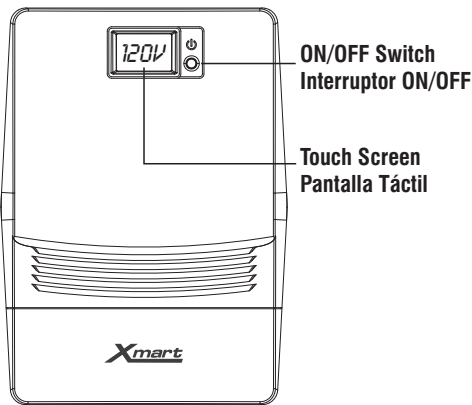
**NOVA 750-1000
FRONT VIEW
VISTA FRONTAL**



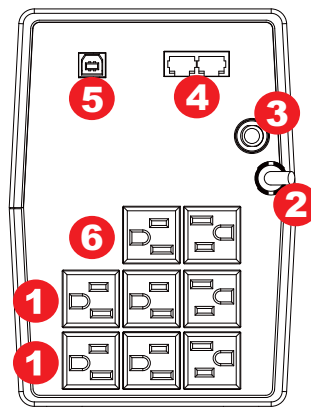
**NOVA 750-1000
NEMA (120V / 220V)**



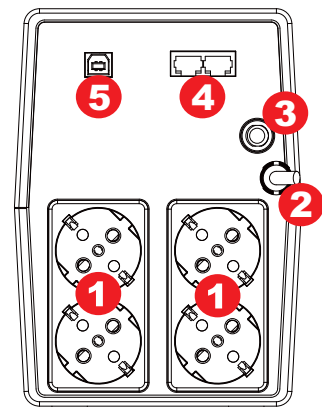
**NOVA 750-1000
SCHUKO (230V)**



**NOVA 1200
FRONT VIEW
VISTA FRONTAL**



**NOVA 1200
NEMA (120V & 220V)**



**NOVA 1200
SCHUKO (230V)**

Standards & Certifications: CE

IEC Low Voltage Directives

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IEC 61000-4-5: 2005: Surge immunity test

IEC 61000-2-2: 2002: Compatibility levels for low-frequency conducted disturbances and signaling in public low-voltage power supply systems

Technical Features / Características Técnicas

INTERACTIVE UPS	750	1000	1200
Capacity / Capacidad	750VA / 375W	1000VA / 500W	1200VA/600W
Input / Entrada			
Voltage / Voltaje	120V Model: (89-145 Vac) - 220VModel: (162-290V) - 230V Model: (170-299Vac)		
Frequency / Frecuencia	60Hz / 50 Hz: Auto Sensing / Autodetección		
Powercord / cable entrada	4 feet (1.22m) NEMA5-15P		
Generator Compatible / Compatible con motogeneradores	Yes / Si		
Output / Salida			
Voltage / Voltaje	+/- 10% (1 Phase / 1 Fase)		
Frequency / Frecuencia	60Hz (+/- 1Hz) - 50Hz (+/- 1Hz)		
Transfer Time / Tiempo Transferencia:	2 - 6 ms typical / típico		
Waveform / Forma de Onda (Normal Mode)	Sinewave / Sinusoidal		
Waveform / Forma de Onda (Battery Mode)	Simulated Sinewave / Sinusoidal Sintetizada		
Batteries / Baterías			
Type / Tipo	Sealed Lead Acid - Maintenance Free (VRLA AGM) / Acido Plomo Sellada Sin Mtto. (VRLA AGM)		
Capacity / Capacidad	7AH	9AH	7AH
Quantity / Cantidad	1	1	2
Back-up Time Typical / Autonomía Típica (N1*)	17-20 min.	22-25 min.	40 min. max.
Recharge Time / Tiempo de Recarga	Sealed Lead Acid - Maintenance Free (VRLA AGM) / Acido Plomo Sellada Sin Mtto. (VRLA AGM)		
Protections / Protecciones	Deep discharge and overcharge / Descarga Profundas y Sobre-Cargas		
Alarms-Indications / Alarmas-Indicaciones		LED Indicators - Indicadores LED	LCD Screen / Pantalla LCD
Models 750 & 1000: LED	Batt. Mode / Low Batt. / Overload / Batt. Replacement / UPS Fault		Touch LCD / Pantalla LCD táctil In & Out Volts, UPS mode, Batt. %, Load %, Alarms
AC Mode / Modo Normal	Green Lighting / Verde Fijo		
Battery Mode / Modo Batería	Green Flashing / Verde Intermitente		
Acoustic Alarm / Alarma Acústica (all models)	Battery Mode / Low Battery / Overload / Battery Replacement / UPS Fault		
Protections / Protecciones			
Input Circuit Breaker / "Breaker" de Entrada	With Manual Reset / Rearmable		
Surge/Spikes Protection (Line H-N)	Power Outlet Sockets with surge & spikes protection: L-N		
Protección contra Picos / Rayos (Linea L-N)	Tomas de Salida Protegidas contra Picos/Rayos: L-N		
Surge Protection (Network) / Protección contra Picos (Red)	Tel/Internet/Ethernet: RJ11 / RJ45		
Total Suge Suppression / Supresión Total	120V Model: (> 758J) - 220V & 230 Models: (>175J)		
Features / Funcionalidades			
Power Outlets per model / Tomas por modelo			
Models: NEMA 120V & NEMA 220V	6 x NEMA5-15R	6 x NEMA5-15R	8 x NEMA5-15R (6 with Backup + 2 Surge Protected)
Models: SCHUKO 230V	2 x Schuko	2 x Schuko	Schuko x 4 (all battery backup & protected)
Communication Port / Puerto de Comunicaciones	No	No	USB
Software / Software	Support: Windows, Mac OS; Linux ;Unix		
Dimensions / Dimensiones	280 x 102 x 142 mm	280 x 102 x 142 mm	325 x 135 x 185 m
Net Weight / Peso Neto Unitario	4.3 Kg	4.9 Kg	8.5 Kg
Operating / Condiciones de Operación:	< 95% RH / 0-40°C / ≤ 40 dB @ 1 mt		
Packing / Empaque			
Carton Information / Información Cartón (mm)	4 units per carton / 4 unidades por carton	(350x600x260)	1 Un x carton (399 x 198 x 280)
Half Pallet Information / Información Medio Pallet	96pcs/432Kg	96pcs/489Kg	60pcs/555Kg
	120 x 100 x 113cm	120 x 100 x 113cm	120 x 100 x 127cm
Full Pallet Information / Información Medio Pallet	192pcs/864Kg	192pcs/979Kg	105pcs/960Kg
	120 x 100 x 213cm	120 x 100 x 213cm	120 x 100 x 225cm
Safety & Standards			
For 220V & 230V	CE (Low Voltage Directive 2006/95/EC & EMC Directive 2004/108/EC)		
Conduction & Radiation (Models 220V/230V)	IEC / EN 62040-2 (Class 2 EMC), IEC 61000-4-2, 4-3, 4-4, 4-5, & 2-2		
Quality & Enviroment	RoHS / ISO9001 & ISO14001		

Technical specifications may change without further notice. Las especificaciones pueden cambiar sin aviso previo.

N1*: Times for 1PC + TFT load / Tiempos para 1PC + Pantalla TFT

Interactive

SUPRA-LCD 1100/1600/2100 VA

Line Interactive UPS, with built-in voltage regulator to enlarge the operation input range reducing the battery usage. Offers a modern LCD touch screen for an efficient UPS supervision and AC Line parameters. A complete power protection center for your equipment.



All Information at your fingertips !!!

Touch screen LCD:

An avant garde touch screen allows supervising parameters of UPS and AC line.

With a simple touch, the screen will sequentially show all available data.

Total Power Protection:

Besides voltage fluctuations, Supra-LCD protects all lines against spikes and surges, not only power outlets are protected, but also RJ11 ports, to protect the connection with routers.

Line Interactive Technology:

Internal voltage stabilizer regulates AC input to generate an optimal UPS output without the need of using batteries. In this way, input range is wider than similar UPS without interactive technology. Only when AC input is out of this wider input range, Supra go to battery mode to provide reliable energy to your protected products. This gives an input range about 15% wider and battery life longer than UPS without interactive technology.

Auto-Recovery:

A long blackout could discharge batteries completely forcing UPS to power-off. When AC recovery is detected, Supra-LCD is able to restart automatically without the need of manual operation. This feature is especially useful in unattended applications.

Cold Start:

This function allows Supra-LCD family to power your equipment even without power in AC Input, like a small power generator.

Control Software:

Allows to configure and manage all UPS functions. Besides it can close files and programs, as well as shutdown operating systems and your computer equipment, during long power outage. Control software requires the UPS to have either USB or RS-232 port.

Technical Features / Características Técnicas

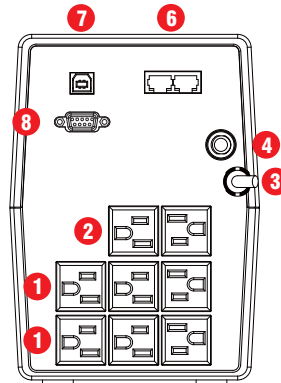
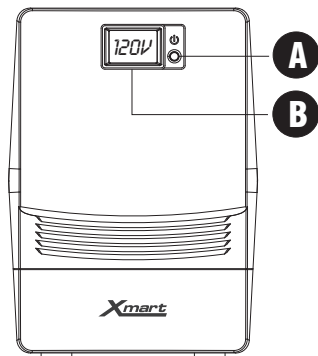
A.- ON/OFF Switch / Interruptor ON/OFF

B.- LCD Display / Pantalla LCD

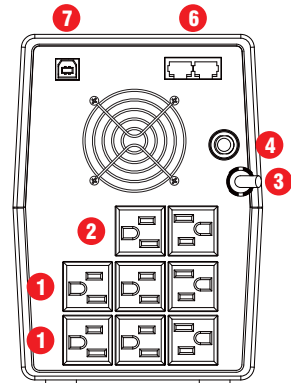
- 1.- Battery supported outlets / Salidas respaldadas por baterías
- 2.- Surge protected outlets (no battery) / Salidas protegidas contra picos (sin batería)
- 3.- AC Input / Entrada Corriente Alterna

- 4.- Input breaker / Disyuntor de entrada
- 5.- Input fuse / Fusible de entrada
- 6.- Surge protected socket / Conector protegido RJ45
- 7.- USB
- 8.- RS-232

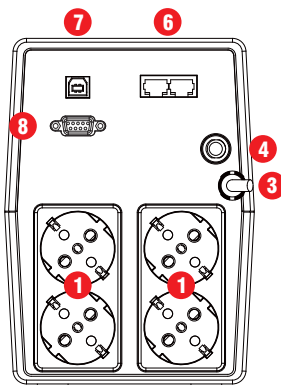
Panel Trasero



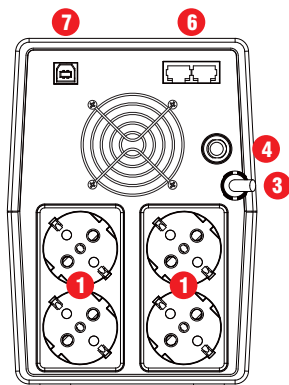
**SUPRA 1101
NEMA (120V & 220V)**



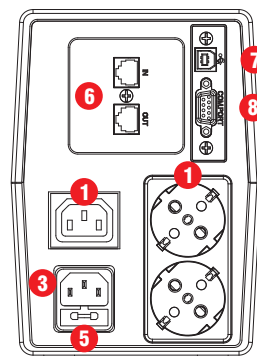
**SUPRA 1601 / 2101
NEMA (120V & 220V)**



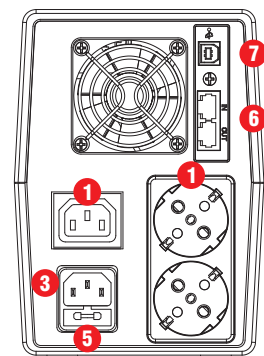
**SUPRA 1101
SCHUKO (220V)**



**SUPRA 1601 / 2101
SCHUKO (220V)**



**SUPRA 1103
IEC+SCHUKO (220V)**



**SUPRA 1603 / 2103
IEC+SCHUKO (220V)**

Standards & Certifications: CE

IEC Low Voltage Directives

IEC60950-1:2001: Information Technology Equipment – Safety-Part1: General Requirement

EN62040-1-1:2003: Uninterruptible Power Systems (UPS) Part 1-1: General and Safety requirements for UPS used in operator access areas

IEC EMC Directives

EN 62040-2: 2006: Uninterruptible Power Systems (UPS) Part 2: Electromagnetic compatibility class C2 (EMC)

IEC 61000-4-2: 2001: Electrostatic discharge immunity test

IEC 61000-4-3: 2002: Radiated, radio-frequency electromagnetic field immunity test

IEC 61000-4-4: 2004: Electrical fast transient/burst immunity test

IEC 61000-4-5: 2005: Surge immunity test

IEC 61000-2-2: 2002: Compatibility levels for low-frequency conducted disturbances and signaling in public low-voltage power supply systems

Technical Features / Características Técnicas

INTERACTIVE UPS	1100	1600	2100
Capacity / Capacidad	1.100VA / 600W	1.600VA / 900W	2.100VA / 1200W
Input / Entrada			
Voltage / Voltaje	Model 120V: (89-145 Vac) - Model 220V/230V: (162-268Vac)		
Frequency / Frecuencia	60 Hz / 50 Hz: Auto Sensing / Autodetección		
Generator Compatible / Compatible con motogeneradores	Yes / Sí		
Output / Salida			
Voltage / Voltaje	Model 120V: +/- 10% - Model 220V/230V: +/- 10%		
Frequency / Frecuencia	60Hz (+/- 1Hz) - 50Hz (+/- 1Hz)		
Transfer Time / Tiempo Transferencia:	2 - 6 ms typical / típico		
Waveform / Forma de Onda (Normal Mode)	Sinewave / Sinusoidal		
Waveform / Forma de Onda (Battery Mode)	Simulated Sinewave / Sinusoidal Sintetizada		
Batteries / Baterías			
Type / Tipo	Sealed Lead Acid, Maintenance Free (VRLA AGM) / Acido Plomo Sellada Sin Mtto. (VRLA AGM)		
Capacity / Capacidad	7AH	9AH	9AH
Quantity / Cantidad	2 pcs/pzs	2 pcs/pzs	2 pcs/pzs
Typical Back-up Time / Autonomía Típica (N1*)	40 min. max.	48 min. max.	55 min. max.
Recharge Time / Tiempo de Recarga	4-6 hours to 90% capacity / 4-6 Horas hasta 90% de capacidad		
Protections / Protecciones	Deep discharge and overcharge / Descarga Profundas y Sobre-Cargas		
Alarms-Indications / Alarmas-Indicaciones			
Interface / Interfaz	Touch LCD / Pantalla LCD táctil		
Acoustic Alarm / Alarma Sonora	Battery Mode / Low Battery / Overload / Battery Replacement / UPS Fault		
Operation Mode / Modo de Operación	Dedicated symbols for each operation mode on LCD / Modo de operación en LCD		
Alarms / Alarmas	Alarm & fault codes are presented on LCD / Alarmas y códigos de falla en LCD		
LCD Information / Información en Pantalla	Input/Output Voltage, UPS mode, Battery level (%), load (%), Alarm codes // Voltajes de entrada y salida, Nivel de baterías (%), Carga (%), Alarmas		
Protections / Protecciones			
Input Circuit Breaker / "Breaker" de Entrada	With Reset / Rearmable		
Surge/Spikes Protection (Line H-N)	Power Outlet with surge & spikes protection: L-N		
Protección contra Picos / Rayos (Línea L-N)	Tomas de Salida Protegidas contra Picos/Rayos: L-N		
Surge & Spikes Prot. / Prot. Picos & Rayos (RJ11/RJ45)	Tel/Internet/Ethernet RJ45/RJ11		
Total Suge Suppression / Supresión Total	120V Model: (> 758J) - 220V & 230V Models :(> 175J)		
Features / Funcionalidades			
Power Outlets per model / Tomas por modelo			
Models: 1101 / 1601 / 2101 - NEMA 120V & 220V	8 x NEMA5-15R (6 with Backup + 2 Surge Protected)		
Models: 1101 / 1601 / 2101 - SCHUKO 230V	Schuko x 4 (all battery backup & protected)		
Models: 1103 / 1603 / 2103 - IEC+SCHUKO 230V	IEC x 1 + Schuko x 2 (all battery backup & protected)		
LCD Touch Secreen / LCD Táctil	Touch LCD to go to next value on screen / Tocar el LCD para ir al siguiente valor en pantalla		
Communication / Comunicación	USB+RS232	USB	USB
Software / Software	Compatible: Windows family; Mac OS; Linux; Unix		
Product Size & Net Weight (DxWxH)	325 x 135 x 185 mm	325 x 135 x 185 mm	325 x 135 x 185 mm
Dimensiones & Peso Neto del Producto	8.5 Kg	10.5 Kg	11.2 Kg
Operating / Condiciones de Operación:	< 95% RH / 0-40°C		
Acoustic Noise / Ruido Acustico	≤ 40 dB @ 1 m	≤ 45 dB @ 1 m	≤ 45 dB @ 1 m
Operating Altitude / Altura Operativa	0-2000m (Over sea level / Sobre el nivel del mar)		
Packing / Empaque: 1 unit per carton / Cartón individual			
Unit Size & Gross Weight (DxWxH)	399 x 198 x 280 mm	399 x 198 x 280 mm	399 x 198 x 280 mm
Dimension & Peso Bruto Unitario	9 Kg	10.8 Kg	11.8 Kg
Half Pallet Information / Información Medio Pallet	60pcs / 555Kg	60pcs / 663Kg	60pcs / 723Kg
DxWxH	120 x 100 x 127cm	120 x 100 x 127cm	120 x 100 x 127cm
Full Pallet Information / Información Full Pallet	105pcs / 960Kg	105pcs / 1149Kg	105pcs / 1254Kg
DxWxH	120 x 100 x 225cm	120 x 100 x 225cm	120 x 100 x 225cm
Safety & Standards			
For 220V & 230V	CE (Low Voltage Directive 2006/95/EC & EMC Directive 2004/108/EC)		
Conduction & Radiation (Models 220V/230V)	IEC / EN 62040-2 (Class 2 EMC)		
Quality & Environment	RoHS / ISO9001 & ISO14001		

Tech. Specs. may change without further notice or to comply with special project requirements. Las especific. pueden cambiar sin aviso previo o para cumplir con proyectos.

N1*: Times for 1PC + TFT load / Tiempos para 1PC + Pantalla TFT

Interactive

SUPRA-LCD 1005/1505/2005

Line Interactive UPS, with built-in voltage regulator to enlarge the operation input range reducing the battery usage. Offers a modern LCD touch screen for an efficient UPS supervision and AC Line parameters. A complete power protection center for your equipment.



All Information at your fingertips !!!

Touch screen LCD:

An avant garde touch screen allows supervising parameters of UPS and AC line.

With a simple touch, the screen will sequentially show all available data.



Total Power Protection:

Besides voltage fluctuations, Supra-LCD protects all lines against spikes and surges, not only power outlets are protected, but also RJ11 ports, to protect the connection with routers.

Line Interactive Technology:

Internal voltage stabilizer regulates AC input to generate an optimal UPS output without the need of using batteries. In this way, input range is wider than similar UPS without interactive technology. Only when AC input is out of this wider input range, Supra go to battery mode to provide reliable energy to your protected products. This gives an input range about 15% wider and battery life longer than UPS without interactive technology.

Auto-Recovery:

A long blackout could discharge batteries completely forcing UPS to power-off. When AC recovery is detected, Supra-LCD is able to restart automatically without the need of manual operation. This feature is especially useful in unattended applications.

Cold Start:

This function allows Supra-LCD family to power your equipment even without power in AC Input, like a small power generator.

Control Software:

Allows to configure and manage all UPS functions. Besides it can close files and programs, as well as shutdown operating systems and your computer equipment, during long power outage. Control software requires the UPS to have either USB or RS-232 port.

Technical Features / Características Técnicas

A.- ON/OFF Switch / Interruptor ON/OFF

B.- LCD Display / Pantalla LCD

- 1.- Battery supported outlets / Salidas respaldadas por baterías
- 2.- Surge protected outlets (no battery) / Salidas protegidas contra picos (sin batería)
- 3.- AC Input / Entrada Corriente Alterna

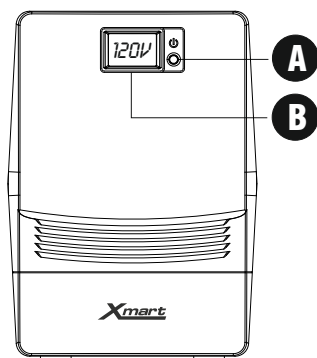
4.- Input breaker / Disyuntor de entrada

5.- Surge protected socket / Conector protegido RJ45

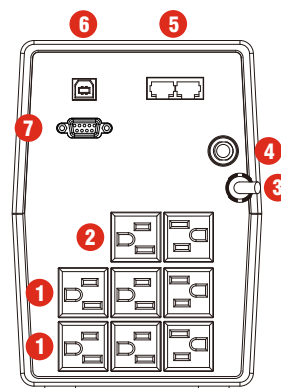
6.- USB Port / Puerto USB

7.- RS-232 Port / Puerto RS-232

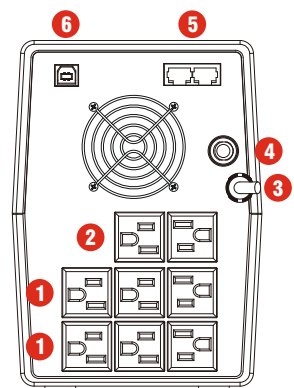
IEWS / VISTAS



FRONT VIEW / VISTA DELANTERA



REAR VIEW / VISTA TRASERA
SUPRA 1005-UL
NEMA (120V)



REAR VIEW / VISTA TRASERA
SUPRA 1505-UL & 2005-UL
NEMA (120V)

Standards & Certifications: CE

IEC Low Voltage Directives

IEC60950-1:2001: Information Technology Equipment – Safety-Part1: General Requirement

EN62040-1-1:2003: Uninterruptible Power Systems (UPS) Part 1-1: General and Safety requirements for UPS used in operator access areas

IEC EMC Directives

EN 62040-2: 2006: Uninterruptible Power Systems (UPS) Part 2: Electromagnetic compatibility class C2 (EMC)

IEC 61000-4-2: 2001: Electrostatic discharge immunity test

IEC 61000-4-3: 2002: Radiated, radio-frequency electromagnetic field immunity test

IEC 61000-4-4: 2004: Electrical fast transient/burst immunity test

IEC 61000-4-5: 2005: Surge immunity test

IEC 61000-2-2: 2002: Compatibility levels for low-frequency conducted disturbances and signaling in public low-voltage power supply systems

Technical Features / Características Técnicas

INTERACTIVE UPS	1005	1505	2005
Capacity / Capacidad	1.000VA / 600W	1.500VA / 900W	2.000VA / 1200W
Input / Entrada			
Voltage / Voltaje	89-145 Vac		
Frequency / Frecuencia	60 Hz / 50 Hz: Auto Sensing / Autodetección		
Powercord / cable entrada	6 feet (1.83m) NEMA5-15P		
Generator Compatible / Compatible con motogeneradores	Yes / Sí		
Output / Salida			
Voltage / Voltaje	+/- 10%		
Frequency / Frecuencia	60Hz (+/- 1Hz) - 50Hz (+/- 1Hz)		
Transfer Time / Tiempo Transferencia	2 - 6 ms typical / típico		
Waveform / Forma de Onda (Normal Mode)	Sinewave / Sinusoidal		
Waveform / Forma de Onda (Battery Mode)	Simulated Sinewave / Sinusoidal Sintetizada		
Batteries / Baterías			
Type / Tipo	Sealed Lead Acid - Maintenance Free (VRLA AGM) / Acido Plomo Sellada Sin Mitto. (VRLA AGM)		
Capacity / Capacidad	7AH	9AH	9AH
Quantity / Cantidad	2	2	2
Back-up Time Typical / Autonomía Típica (N1*)	40 min. max.	55 min. max.	55 min. max.
Recharge Time / Tiempo de Recarga	4-6 hours to 90% capacity / 4-6 Horas hasta 90% de capacidad		
Protections / Protecciones	Deep discharge and overcharge / Descarga Profundas y Sobre-Cargas		
Alarms-Indications / Alarmas-Indicaciones			
Interface / Interfaz	Touch LCD / Pantalla LCD táctil		
Acoustic Alarm / Alarma Sonora	Battery Mode / Low Battery / Overload / Battery Replacement / UPS Fault		
Operation Mode / Modo de Operación	Dedicated symbols for each operation mode on LCD / Modo de operación en LCD		
Alarms / Alarmas	Alarm & fault codes are presented on LCD / Alarmas y códigos de falla en LCD		
LCD Information / Información en Pantalla	Input/Output Voltage, UPS mode, Battery level (%), load (%), Alarm codes // Voltajes de entrada y salida, Nivel de baterías (%), Carga (%), Alarmas		
Protections / Protecciones			
Input Circuit Breaker / "Breaker" de Entrada	With Reset / Rearmable		
Surge/Spikes Protection (Line H-N)	Power Outlet with surge & spikes protection: L-N		
Protección contra Picos / Rayos (Línea L-N)	Tomas de Salida Protegidas contra Picos/Rayos: L-N		
Surge & Spikes Prot. / Prot. Picos & Rayos (RJ11/RJ45)	Tel/Internet/Ethernet RJ45/RJ11		
Total Surge Suppression / Supresión Total	> 758J		
Features / Funcionalidades			
Power Outlets / Tomas de Salida	1005 / 1505 / 2005 - NEMA 120V (UL1778) 8 x NEMA5-15R (6 with Backup + 2 Surge Protected)		
LCD Touch Screen / LCD Táctil	Touch LCD to go to next value on screen / Tocar el LCD para ir al siguiente valor en pantalla		
Communication / Comunicación	USB + RS232	USB	USB
Software / Software	Compatible: Windows family; Mac OS; Linux; Unix		
Operating / Condiciones de Operación:	< 95% RH / 0-40°C / < 40 dB		
Product Size & Net Weight (DxWxH)	325 x 135 x 185 mm	325 x 135 x 185 mm	325 x 135 x 185 mm
Dimensiones & Peso Neto del Producto	8.5 Kg	10.5 Kg	11.2 Kg
Packing / Empaque: 1 unit per carton / Cartón individual			
Unit Size & Gross Weight (DxWxH)	399 x 198 x 280 mm	399 x 198 x 280 mm	399 x 198 x 280 mm
Dimension & Peso Bruto Unitario	9 Kg	10.8 Kg	11.8 Kg
Half Pallet Information / Información Medio Pallet	60pcs / 555Kg	60pcs / 663Kg	60pcs / 723Kg
DxWxH	120 x 100 x 127cm	120 x 100 x 127cm	120 x 100 x 127cm
Full Pallet Information / Información Full Pallet	105pcs / 960Kg	105pcs / 1149Kg	105pcs / 1254Kg
DxWxH	120 x 100 x 225cm	120 x 100 x 225cm	120 x 100 x 225cm
Safety & Standards			
European	CE (Low Voltage Directive 2006/95/EC & EMC Directive 2004/108/EC)		
American	UL1778 (certified by cTUVus)		
Conduction & Radiation (Models 120V)	FCC Part 15 Class A ; IEC / EN 62040-2 (Class 2 EMC)		
Conduction & Radiation (Models 220V/230V)	IEC / EN 62040-2 (Class 2 EMC)		
Quality & Environment	RoHS / ISO9001 & ISO14001		
Tech. Specs. may change without further notice or to comply with special project requirements. Las especific. pueden cambiar sin aviso previo o para cumplir con proyectos.			
N1*: Times for 1PC + TFT load / Tiempos para 1PC + Pantalla TFT			

Interactive Sine wave

SW-PRO 800/1100/1600/2200

Line interactive technology UPS with pure sine wave output and built-in voltage regulator to enlarge the voltage input range and minimize the battery usage. Full protection for your electronic equipment against all potential power failure in AC line.



Line Interactive Technology With Pure Sine-Wave Output:

This line interactive UPS delivers pure sine wave and perfectly stabilized power to your equipment. Most AC line voltage fluctuations are stabilized by built-in voltage regulator, providing an exceptionally reliable power supply without using batteries. This makes possible to operate in electrically hostile environments. Besides as the battery usage is reduced mostly to power outage, the battery lifetime is significantly enlarged compared to UPS without this technology.

LCD Screen:

This UPS counts on a versatile LCD able to show on a real time basis relevant data such as: Input and output Frequency and Voltage, Battery Voltage, Load protected by the UPS, alarms, operation modes among others, and all in an understandable and comfortable way for the user.

Total Protection:

All connection lines offered by this product family are protected against electrical surges and spikes. As well as AC power outlets, RJ45 ports are protected against surges and spikes to protect Voice and Data lines in your computer equipment (Internet, LAN, etc.).

Cargador Inteligente de Baterías:

An Avant-garde battery charger allows this UPS series to charge internal batteries up to 90% capacity in only 4 hours, thus after a deep discharge cycle our UPS is ready for full back up faster than many other UPS in the market.

Auto-Recovery:

This great function allows our UPS series to recover automatically and start working as soon as AC power comes back. After a long power outage, batteries might be used until full discharge and at this moment UPS turns off by itself. In this situation UPS detects the AC power recovery and starts working automatically, which is an especially useful feature for unattended applications.

Cold Start:

Cold Start function allows UPS series to supply power to your equipment even when power is not available, making your UPS to work as a Power Generator.

Software de Control:

Thanks to our software, all functions of this product series can be configured and managed. Besides, Control Software offers the possibility of correctly shutdown Files, Programs and Operative Systems, during blackouts, it is also possible programming automatic battery tests, as well as power on/off both UPS and your installation, with a completely safe procedure. Additionally, our software allows recording Events and Data, for system analysis.

This model includes 2 communication ports: USB & RS232.

Applications: SOHO & Small-Sized Companies Personal Computers

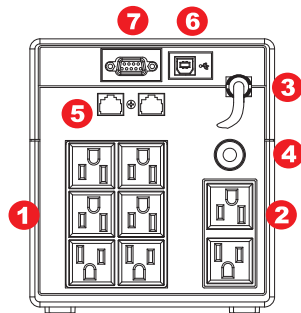


Technical Features / Características Técnicas

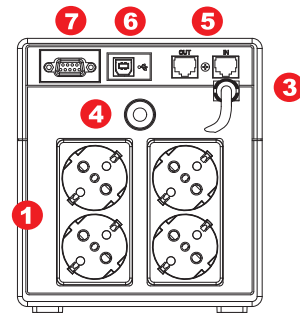
- 1.- Battery supported outlets / Salidas respaldadas por baterías
- 2.- Surge protected outlets (no battery) / Salidas protegidas contra picos (sin batería)
- 3.- AC Input / Entrada Corriente Alterna
- 4.- Input breaker / Disyuntor de entrada

- 5.- Surge protected socket / Conector protegido RJ45
- 6.- USB Port
- 7.- RS-232 Port

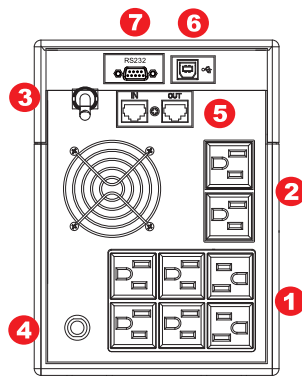
REAR PANEL



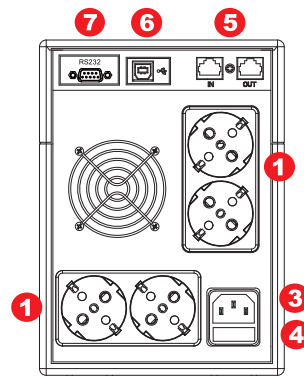
SW-PRO 800 / 1100 (120V)



SW-PRO 800 / 1100 (230V)



SW-PRO 1600 / 2200 (120V)



SW-PRO 1600 / 2200 (230V)

Standards & Certifications: CE

IEC Low Voltage Directives

IEC60950-1:2001: Information Technology Equipment – Safety-Part1: General Requirement

EN62040-1-1:2003: Uninterruptible Power Systems (UPS) Part 1-1: General and Safety requirements for UPS used in operator access areas

IEC EMC Directives

EN 62040-2: 2006: Uninterruptible Power Systems (UPS) Part 2: Electromagnetic compatibility class C2 (EMC)

IEC 61000-4-2: 2001: Electrostatic discharge immunity test

IEC 61000-4-3: 2002: Radiated, radio-frequency electromagnetic field immunity test

IEC 61000-4-4: 2004: Electrical fast transient/burst immunity test

IEC 61000-4-5: 2005: Surge immunity test

IEC 61000-2-2: 2002: Compatibility levels for low-frequency conducted disturbances and signaling in public low-voltage power supply systems

Technical Features / Características Técnicas

INTERACTIVE SINEWAVE UPS	SW PRO 800	SW PRO 1.100	SW PRO 1.600	SW PRO 2.200
CAPACITY / CAPACIDAD	800 VA / 480 W	1100 VA / 700 W	1600 VA / 1050 W	2200 VA / 1400 W
INPUT / ENTRADA				
Voltage / Voltaje	110/120 VAC o 220/230/240 VAC			
Input Range / Rango De Voltaje	81 - 145 VAC / 162-290 VAC			
Frequency Range / Rango de Frecuencias	60 / 50 Hz (Auto-detection)			
Phases / Fases	1 Ph			
OUTPUT / SALIDA				
Voltage regulation / Regulación Voltaje	± 10%			
Frequency Range / Rango de Frecuencias	60 Hz o 50 Hz ± 1 Hz			
Transfer Time from normal to Batt mode	< 3ms typical			
Wave-form / Forma de Onda	Perfect Sinewave			
BATTERIES / BATERIAS				
Type / Tipo	Valve Regulated Lead Acid			
Quantity / Cantidad	1	2	2	2
Capacity / Capacidad	12V / 9AH	12V / 7AH	12V / 9AH	12V / 10AH
Runtime / Autonomía (PC + TFT 17")	37 min	47 min	52 min	57 min
Recharge Time (typical) / Tiempo recarga	4 hours to 90% cap.			
PROTECTIONS / PROTECCIONES				
Full internal protections / protecciones	UPS overload, Shortcircuit, Batt overcharging			
Surge Suppression / Supresión de Picos	> 180J (L-N + RJ45)			
DISPLAY / INDICACIONES				
LCD Display / Pantalla LCD	Normal or Battery, Battery level, Load level, Input/output Voltages, Alarms			
BEEP ALARMS / ALARMAS AUDIBLES				
Battery Mode / Modo Batería	1 beep / 10s			
Battery Low Level / baja carga baterías	1 beep / s			
UPS Overload / Alto consumo en salida	2 beeps / s			
Battery Fault / Falla Baterías	1 beep / 2s			
UPS Fault / falla UPS	Continuous Beep			
PHYSICAL / FISICAS				
Dimension, D X W X H (mm)	350 x 146 x 160		395 x 146 x 205	
Net Weight (kgs)	8.3	9	11.6	12.25
Outlets - Model 120Vac	8 Nema 5-15R		8 Nema 5-15R	
Outlets - Model 230Vac	4 Schuko (CEE 7/4)		4 Schuko (CEE 7/4)	
OPERATIONAL CONDITIONS / CONDICIONES OPERATIVAS				
Relative Humidity / Humedad Relativa	0-90 % @ 0- 40°C (No Condensing)			
Noise / Ruido acústico	< 45dB @ 1m		< 55dB @ 1m	
SOFTWARE + COMM				
USB (Serial - RS 232 Opcional)	Windows® family, Linux, Unix, Mac OSX			

*Technical specifications can be modified to comply with special project requirements / Las especificaciones técnicas pueden modificarse bajo requerimiento para adaptarse a proyectos especiales
 Technical specifications may change without further notice due to either technical or commercial reasons / Por motivos comerciales o técnicos las especificaciones pueden cambiar sin previo aviso*

Online 1Ph

OPTIMA-T10 (UL) 1K/1.5K/2K/3K

True Online Double Conversion UPS with IGBT in Rectifier and Inverter stages. Output Power Factor 1.0 & 0.97 (according to the model) and high power efficiency. With a robust design, offers state-of-the-art features. UPS and AC Line parameters can be supervised either from a modern LCD or remotely by any of our communication options.



True ON-LINE Double Conversion and IGBT Technology

Our True ON-LINE Double Conversion Technology and IGBT (both in rectifier and Inverter stages) allows our UPS to generate full time, noiseless, impeccable, and pure sine wave power for your equipment.

Output Power Factor 1.0 & 0.97

Output power factor has been improved up to 1.0 for 1K model and 0.97 for the rest.

Shortcircuit protected

This system avoids internal electronic damages triggering automatically when a shortcircuit is detected on its output. Outlets are turned off and an error message is shown on LCD.

Communication Ports & Control Software

This UPS is equipped with several communications options:

- USB Port
- RS232 Port
- Smart port to install Network Communication Card (SNMP), Dry Contact Card (AS400), RS-485 Communication Card, etc.

Automatic Bypass:

Includes a smart and automatic bypass which activates when the UPS fails to keep your valuable electronic equipment working. Smart bypass also activates when the UPS is overloaded.

Emergency Power Off (EPO)

Our EPO port can be connected to an Emergency Stop Switch to turn off the output when activated, for safety reasons.

Frequency Converter Function

Output frequency of the UPS can be configured to 50Hz or 60Hz, regardless the input frequency, as long as it stays in the acceptable range.

Conformal Coating

This equipment features a Conformal Coating treatment on internal boards and components. Conformal coating is a technique that protects against moisture and corrosive contaminants to ensure stable performance and extend its lifespan in various environments, as long as the requirements of technical specifications of the equipment are met.

Programmable Outputs:

This UPS family offers 2 kind of power outlets: Standard and Programmable. During Battery Mode Programmable outputs can be configured to power off at a given time (previously configured), without causing severe battery discharge.

Cold Start

This UPS series can be turned on even during power outage.

Auto-Recovery

Auto-Recovery function restarts the UPS automatically when AC Line comes back.

Smart Battery Charger

With a smart battery charger this UPS family can charge batteries in an outstanding time (4 hours up to 90%), offering a better availability than similar products.

Power Generators Compatible

Only True On-Line Double conversion UPS can filter voltage fluctuation and other particularities generated by Power Generators to generate a clean, perfect, and pure sine wave power to feed your installation.

External Batteries Compatible

This UPS series includes connection for External Battery Packs to extend regular back up for as long as your equipment requires.

Eco-Mode Operation, for power saving

ECO-Mode is a power saving function which reduces electrical consumption over 5%. In this mode the load is powered directly by AC Line as long as it keeps between pre-configured limits. Otherwise, the UPS goes to regular ONLINE mode. During power outage, the UPS goes into Battery Mode to keep your equipment working perfectly safe.

Applications: Medium-Sized Businesses Critical Servers, Workstations, Multiple PCs.



Technical Features

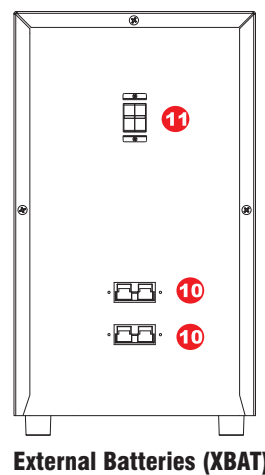
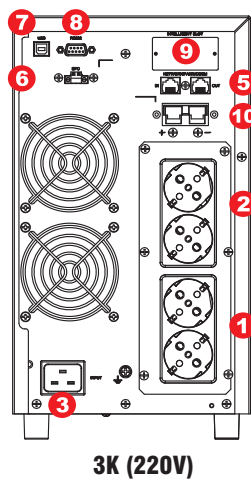
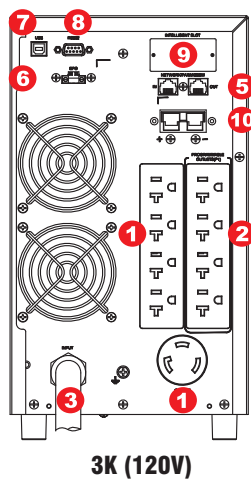
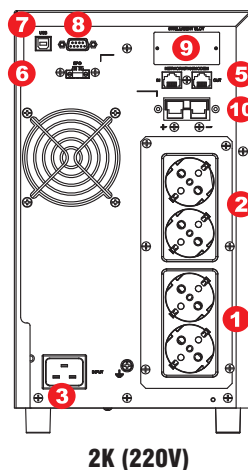
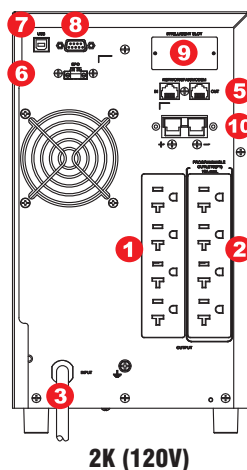
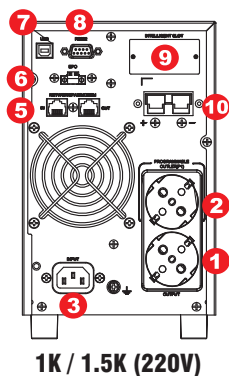
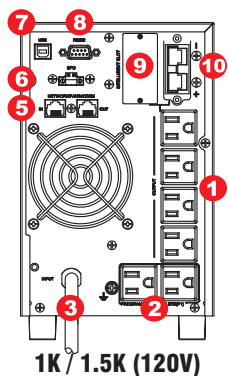
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|-------------------------------|--------------------------------|
| 1. Standard Power Outlets | 6. Emergency Power Off (EPO) |
| 2. Programmable Power Outlets | 7. USB Port |
| 3. AC Input | 8. RS-232 Port |
| 4. Circuit Breaker | 9. SNMP Smart Port |
| 5. Protected RJ45 Connector | 10. External Battery Connector |
| | 11. DC Circuit Breaker |

Available Accessories:

- LAN Card: ✓
 AS-400: ✓
 RS-485: ✓
 DC Connector: ⓘ
 Environmental Sensors: ✓

ⓘ : Included
 ✓ : Available Option
 ○ : Non-Available

Rear Panel



Technical Features / Características Técnicas

ONLINE - OPTIMA T10 (UL/CSA/CE)		1K	1.5K	2K	3K
Capacity / Capacidad	120V (UL)	1000VA / 1000W	1500VA / 1450W	2000VA / 1930W	3000VA / 2880W
Output PF / FP de Salida		1,00	0,97	0,97	0,96
Capacity / Capacidad	220V/230V	1000VA / 1000W	1500VA / 1500W	2000VA / 2000W	3000VA / 3000W
Output PF / FP de Salida		1,00	1,00	1,00	1,00
INPUT / ENTRADA					
Range / Rango - Vac	120V (UL)	@100% load:[80-150Vac] - @80% load:[70-150Vac] - @60% load:[55-150Vac]			
Range / Rango - Vac	220V/230V	@100% load:[160-300Vac] - @80% load:[140-300Vac] - @60% load:[110-300Vac]			
Frequency Input / Frecuencia de Entrada		50Hz / 60Hz autosensing / detección automática			
Frequency Range / Rango de Frecuencia		40 Hz - 70Hz			
Max. Amps / Corriente Max. (normal mode) (120V UL)		13.2A (RMS)	13.2A (RMS)	17.6A (RMS)	26.4A (RMS)
Max. Amps / Corriente Max. (normal mode) (230V)		7.6A (RMS)	11.0A (RMS)	15.3A (RMS)	17.6A (RMS)
Phase / Fases		Single phase with ground / (1 fase + Tierra)			
Power Factor / Factor de Potencia		> 0.99 @ 100% load			
Input Current THDi / THDi de Corriente de Entrada		< 5% @ 100% load			
Input Powercord / Cable de entrada		6 feet (1.83m) NEMA Plug			
OUTPUT / SALIDA					
Voltage / Voltaje AC	(120V UL)	(*N1) Model 120V: 100/110/115/120/127Vac			
Voltage / Voltaje AC	(220V/230V)	(*N1) Model 220V/230V: 200/208/220/230/240Vac			
Output Regulation / Rango de Salida:		+/-1% (all modes / en todos los modos de operación)			
Frequency / Frecuencia (Batt. Mode)		(*N2) 50 Hz +/- 0.1 Hz - 60Hz +/- 0.1 Hz			
Slew Rate / Seguimiento de Frecuencia		1 Hz / s			
Current Crest Ratio / Factor de Cresta		3:1 max. @ 100% load			
Harmonic Distortion / Dist. Armónica (THDv)		< 2% @ Linear Load / Carga Lineal (100% load) <4% @ No Linear Load / Carga no Lineal (100% load)			
Dynamic Accuracy / Regulación Carga Variable		< +/- 5% in Online (variation 0%-100% & 100%-0% R Load) (online mode)			
Transient response / Respuesta ante Carga Variable		Variation 0%-100% or 100%-0%: 30ms, up to 90% of regulation - 60ms, up to 100% regulation.			
AC to Inverter / Modo Online a modo Battery		0 ms			
Waveform / Forma de Onda		Pure Sinewave / Sinusoidal Pura			
DC component / Componente DC		100mV max. (no load / full load) (EN50091-3)			
BYPASS					
Internal Auto bypass / Modo Bypass Automático:		Default Input Range in BYPASS (Configurable): 120V: [85-132Vac] - 230V: [170-264Vac]			
PROTECTION SYSTEMS / SISTEMAS DE PROTECCION					
Surge & Spikes Suppression / Supresión de Picos		(L-N, L-G, N-G) : > 1370 Joules (EN61000-4-5)			
RJ45 Surge Suppression / Supresión picos RJ45		IN/OUT RJ45 socket surge protected / Tomas RJ45 protegidas contra picos			
Output Short-Circuits / Cortocircuitos a la Salida (Online & Battery Mode)		Electronic inverter shortcircuit protection: / Protección contra cortocircuitos en la salida: Output current >280% of nominal current during 100 ms. UPS goes to Fault Mode / Corriente de Salida >280% de corriente nominal por 100 ms. UPS pasa a Modo Falla			
Noise Protection / Protección contra ruido eléctrico		Input filter / Filtro de entrada (TVSS EMI/RFI)			
AC Input Current / Sobre-Corriente de Entrada AC		Input breaker or fuse / Disyuntor o fusible de entrada			
Battery overcurrent / Sobrecorriente de baterías		Fuse protection for battery line / Protección por fusible en línea interna de baterías (80A)			
Starting Time / Tiempo de Arranque (@ 100% load)		7s - 10s			
EFFICIENCY / EFICIENCIA					
Eco Mode		(100% LOAD: 97%) - (75% LOAD: 96%) - (50% LOAD: 96%) - (25% LOAD: 94%)			
AC Mode / Modo AC (Online)		(100% LOAD: 91%) - (75% LOAD: 91%) - (50% LOAD: 90%) - (25% LOAD: 89%)			
Battery Mode / Modo Batería		(100% LOAD: 90%) - (75% LOAD: 90%) - (50% LOAD: 89%) - (25% LOAD: 88%)			
Inverter Efficiency / Eficiencia Inversor (100%)		(100% LOAD: 97%)			
Max. Internal Loss / Pérdidas internas máx. (BTU)		307	460	546	818
OVERLOAD/ SOBRECARGA					
AC Mode / Modo Normal (to Bypass)		[100%-110%: Warning]	[110%-130%: 5min]	[130%-140%: 30s]	[>140%: 2s] to Bypass
Battery Mode / Modo Batería (to OFF)		[100%-110%: Warning]	[110%-130%: 2min]	[130%-140%: 10s]	[>140%: 2s] to Cut-Off
Bypass Mode / Modo Bypass (to OFF)		[100%-110%: Warning]	[110%-120%: 30min]	[120%-130%: 10min]	[>130%: 1min]
BATTERIES / BATERIAS					
Technology / Tecnología		YUASA or CSB: Sealed Lead Acid VRLA-AGM / Sellada Sin Mantenimiento VRLA-AGM			
Qty & Type / Cantidad&Tipo		3 x 12V-7AH	3 x 12V-9AH	6 x 12V-7AH	6 x 12V-9AH
Charging VDC / Voltaje del cargador (Floating)		41.1 VDC +/- 1%	41.1 VDC +/- 1%	82.1 VDC +/-1%	82.1 VDC +/-1%
Typical Recharge Time / T. de Recarga		4 Hours for 90% capacity / 4 Horas para recuperar el 90% de carga (*N3)			
Shutdown battery Voltage / Voltaje DC Apagado		10.0 Vdc per battery typical (*N4)			
Charging Amps / Corriente de Carga		Configurable 2A to 8A. // (0.1C min / 0.2C recommended / 0.3C max.)			
Batteries charger / Cargador de baterías		3 steps technology according to DIN41773 / Tecnología de 3 etapas según DIN41773 (Constant Current / Equalizing / Floating)			
Charging Compensation /Compensación Recarga		>30°C : -5mV/°C per cell (Equalization) / -3mV per cell (Floating)			

ONLINE - OPTIMA T10 (UL/CSA/CE)	1K	1.5K	2K	3K
INDICATORS / INDICADORES				
LCD / Pantalla de Cristal Liquido (LCD)	UPS status, Load level, Battery, Input/Output voltage, Discharge timer, and Fault Estado del UPS, Consumo, Baterías, Voltaje Entrada/Salida, Autonomía, Diagnóstico			
ALARM / ALARMAS				
Beep Alarms / Alarma Sonora:	(Batt. Mode: 1 beep/5s)-(Low batt.: 1 beep/s)-(Overload: 2 beep/s)-(Failure: Continuous)			
OUTLETS: QTY & TYPE / SALIDAS: CANTIDAD Y TIPO				
UPS Model 120Vac (UL) - Total Outlets	6	8	8	9
Std. Outlets / Salidas Estándar (120Vac)	NEMA5-15R*4	NEMA5-15R*4	NEMA5-20R*4	NEMA5-20R*4 + 1 L5-30R
Prog. Outlets / Salidas Prog. (120Vac) (*N5)	NEMA5-15R*2	NEMA5-15R*2	NEMA5-20R*4	NEMA5-20R*4
Input / Entrada (120Vac)	NEMA5-15P	NEMA5-15P	NEMA5-20P	L5-30P
UPS Model 230Vac / Schuko - Total Outlets	2	2	4	4
Std. Outlets / Salidas Estándar (230Vac)	CEE*(Schuko)*1	CEE*(Schuko)*1	CEE*(Schuko)*2	CEE*(Schuko)*2
Prog. Outlets / Salidas Prog. (230Vac) (*N5)	CEE*(Schuko)*1	CEE*(Schuko)*1	CEE*(Schuko)*2	CEE*(Schuko)*2
Input / Entrada (230Vac)	IEC C14 + Schuko plug		IEC C20 + Schuko plug	
PHYSICAL / FISICAS: UPS				
W*H*D / Ancho * Altura * Profundidad (mm)	397x145x220	397x145x220	421x190x318	421x190x318
Net Weight / Peso Neto (kgs)	14	15	23	28
PHYSICAL / FISICAS: External Battery Pack / Paquete de Baterías Externas				
W*H*D / Ancho*Altura*Profundidad (mm)	397x145x220	397x145x220	421x190x318	421x190x318
Net Weight / Peso Neto (kgs)	20	21,2	38	40,4
UPS PACKING / EMPAQUE UPS				
Unit Carton W*H*D (mm)	472x230x325	472x230x325	560x320x460	560x320x460
Unit Gross Weight / Peso Bruto (kgs)	15	16	24	29
Half Pallet / Medio Pallet (cm : pcs)	(120*100*101): 30pcs	(120*100*101): 30pcs	(115*72*104): 12pcs	(115*72*104): 12pcs
Full Pallet / Pallet Completo (cm : pcs)	(112*100*195): 50pcs	(112*100*195): 50pcs	(115*72*216): 24pcs	(115*72*216): 24pcs
Container (FCL20' / FCL40')	500pcs / 1050pcs	500pcs / 1050pcs	240pcs / 504pcs	240pcs / 504pcs
EXT BATT PACKING / EMPAQUE BATERIAS EXTERNAS				
Unit Carton W*H*D (mm)	472x230x325	472x230x325	560x320x460	560x320x460
Gross Weight / Peso Bruto (kgs)	21	22,2	40	42,4
OPERATIONAL CONDITIONS / CONDICIONES DE OPERACIÓN				
Temperature / Temperaturas (IEC-62040-3)	Operation / En Operación: (-0 to +40°C)			
Storage Temperature / Temperatura Almacenaje	UPS (w/o batteries): -25 to +55 °C / UPS (with batteries): (-20 to +50°C)			
Humidity / Humedad Relativa (IEC-62040-3)	< 95 % RH (non-condensing / no condensante)			
Audible Noise / Ruido Acústico (ISO 7779)	<50dBA @ 1m			
Protecting Coating / Tropicalizado de Tarjetas	Yes / Si			
Max. Altitude / Altura de Operación Max.	Max. 4.500 meters over sea level / sobre nivel del mar. * Power output de-rate of 1% every 100m (over 1.000m) * Disminución de potencia de 1% cada 100m (sobre los 1.000m)			
SAFETY & STANDARDS / NORMATIVAS Y ESTANDARES				
CE Directives (for 220V & 230V models)	73 / 23 & 93 / 68 (LV Safety) and 89 / 336 (EMC)			
UL & CSA (for 120V models)	UL1778 & CSA C22.2 (certified by cTÜVus)			
UPS General Safety / Seguridad General	IEC 62040 - 1			
UPS EMC / Compatibilidad. Electromag.	IEC 62040 - 2			
UPS Tests / Procedimiento Pruebas UPS	IEC 62040 - 3			
ESD / RS / EFT / Surge / CS / F. Mag. Field	EN 61000-4-2 & 4-3 & 4-4 & 4-5 & 4-6 & 4-8 & 4-11			
Low Frequency Signals	IEC / EN 61000 - 2 - 2			
Degree of protection / Grado de Protección	IP21			
Conduction & Radiation	FCC Part 15 Class A ; IEC / EN 62040-2 (Cat 2)			
Safety / Seguridad	CE - IEC/EN 62040-1			
Quality and Environment	RoHS / ISO9001 & ISO14001			
Transportation / Transporte	IEC 60068-2-32 (Drop test) / IEC 60068-2-64 (Vibration) / IEC 60068-2-27 (Shock test)			
COMMUNICATION / COMUNICACION				
Serial comm. / Comunicación serial	RS232 & USB (HID compatible)			
Software	Windows family; Linux; Mac OS; VMWare			
SNMP Intelligent Port:	LAN Card SNMP type - optional / Comunicación con LAN mediante SNMP opcional AS400 Interface (optional comm. Card) / Interfaz con AS400 (tarjeta opcional)			

Technical specifications can be modified to comply to special requirements / Las especificaciones pueden bajo requerimiento adaptarse a proyectos especiales

Technical specifications may change without further notice / Por motivos comerciales o técnicos las especificaciones pueden cambiar sin previo aviso.

(*N1): Output voltage is selectable by LCD / El Voltaje de salida es configurable entre 4 alternativas seleccionables en el LCD

(*N2): Frequency Conversion mode allows to set output frequency at constant value: 50Hz or 60Hz / El modo de Conversión de Frecuencia permite fijar la salida a 50 o 60Hz

(*N3): Recharging time based on previous 10min to 20min full discharging cycles. Tiempo de recarga basado en ciclos previos de descarga profunda de 10 a 20min.

(*N4): Shutdown battery voltage depends of operating conditions (load & runtime) / Voltaje de corte de baterías depende de condiciones operativas (carga y runtime)

(*N5): Backup time for programmable outlets can be configurable (in minutes) / Las salidas programables pueden configurarse en minutos

** Derate Watts capacity to 70% in frequency converter mode. Derate to 70% when output voltage is set to 200Vac or 100Vac

** La capacidad en Watts se degrada y baja hasta el 70% en modo "Convertidor de Frecuencia". También baja al 70% si se ajusta la salida a 200Vac ó 100Vac

Online 1Ph

OPTIMA-T09W 6K/10K (230V & ISOTX)

Robust and reliable UPS with True ONLINE Double Conversion Technology based on IGBT in rectifier and inverter stages. With improved output power factor (0.9). Two versions available: 220/230/240V Output and 2x 120V outputs isolated with transformer (ISOTX).



True ON-LINE Double Conversion and IGBT Technology

True ON-LINE Double Conversion Technology and IGBT (both in rectifier and Inverter stages) allows our UPS to generate full time, noiseless, impeccable, and pure sine wave power for your equipment.

Dual Isolated Output

ISOTX models include an output transformer which offers galvanic isolation as well as dual (110/220 Vac) Outputs. 110Vac Outputs can be used individually or together to obtain 220Vac with galvanic isolation.

Shortcircuit protected

This system avoids internal electronic damages triggering automatically when a shortcircuit is detected on its output. Outlets are turned off and an error message is shown on LCD.

Multiple Automatic Bypass:

Our UPS includes 2 different bypass systems. First there is an internal smart and automatic bypass which activates when the UPS fails or when it is overloaded, to keep your valuable electronic equipment working while the situation is solved. Second Bypass system can be manually activated from an external safe switch for maintenance purposes, such as Battery replacement or internal parts substitution.

Emergency Power Off (EPO)

This feature allows to turn off the UPS output activating an emergency external switch, which can be wired to EPO port located on the rear panel of the UPS. When the switch is detected open, the UPS turns off its output and goes to a safe status. To return to normal mode, the switch must be set back to normal and the UPS must be restarted.

Frequency Converter Function

Output frequency of the UPS can be configured to 50Hz or 60Hz, regardless the input frequency, as long as it stays in the acceptable range.

Expandable Backup

External battery packs can be connected to this UPS to offer longer backup.

Cold Start

This UPS series can be turned on even during power outage.

Auto-Recovery

Auto-Recovery function restarts the UPS automatically when AC Line comes back.

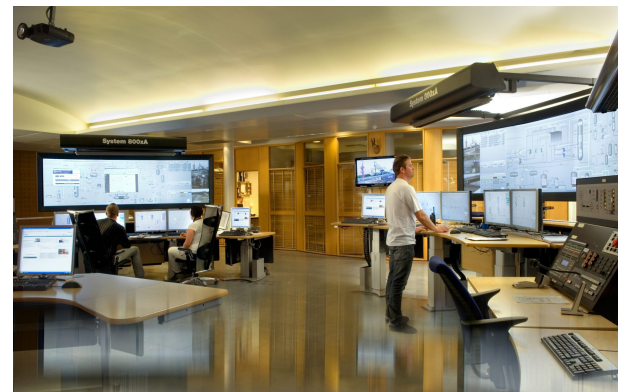
Smart Battery Charger

With a smart battery charger this UPS family can charge batteries in an outstanding time (2-4 hours up to 90%), offering a better availability than similar products.

Power Generators Compatible

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Applications: Medium-Sized Businesses Data Centers, Servers, Multiple PC.



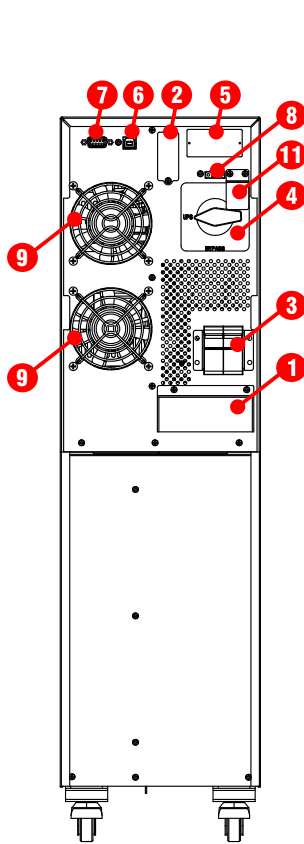
Technical Features / Características Técnicas

1. AC Input/Output Terminal Block
2. External Battery DC Connector
3. AC Input Breaker
4. Maintenance BYPASS Switch

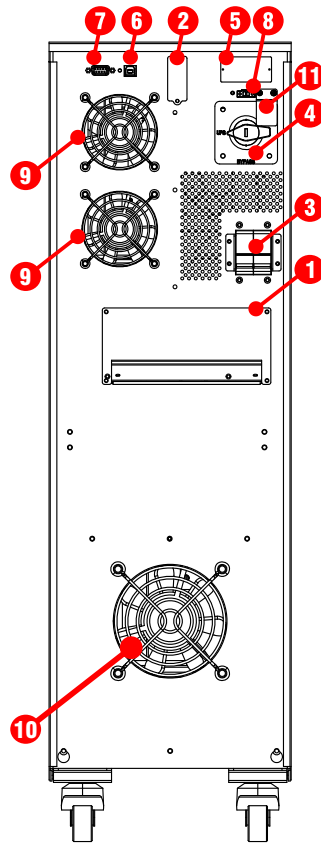
5. Smart Port
6. USB Port
7. RS232 Port
8. Emergency Power Off (EPO)

9. Power Stage Fan
10. ISOTX Transformer Fan
11. BYPASS Safety Cover
12. External Battery Breaker (optional)

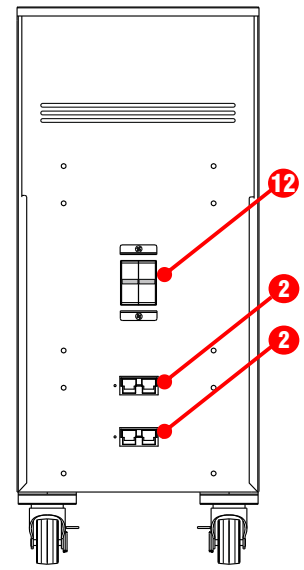
Rear Panel



OPTIMA-T09W 6K / 10K



OPTIMA-T09W 06K / 10K - ISOTX



XBAT T6/T10

Accesorios / Accesorios

Dry Contacts:
 RS-485:
 RS-232:

SNMP:
 LAN Card:
 T/H Sensor:

Parallel Function:
 ISOTX:

: Included
 : Option Available
 : Non-Available

Technical Features / Características Técnicas

ONLINE - OPTIMA T09W (1/2)	(6KVA-230 & 6KVA-ISOTX)	(10KVA-230 & 10KVA-ISOTX)
Capacity / Capacidad	6.000VA / 5.400W	10.000VA / 9.000W
INPUT / ENTRADA		
Input Voltage / Voltaje de Entrada	Rated Input / Entrada Nominal: 208/220/230/240 Vac (single phase: L-N-G)	
Rated Input / Entrada Nominal:	(110Vac-300Vac) @ 50% load // (176Vac-300Vac) @ 100% load	
Input Range / Rango de Entrada	(176Vac-300Vac) @ 100% load / (110Vac-300Vac) @ 50% load	
Frequency Range / Rango Frecuencia	40 - 70 Hz	
Max. Current / Corriente Max.	30A (RMS)	50A (RMS)
Inrush Current / Corriente Pico max.	180A max. (Input rms x 8)	300A max. (Input rms x 8)
Phase / Fases	1 Phase + Neutral + Ground / 1 Fase + Neutro + Tierra	
Power Factor / Factor de Potencia	> 0.99 @ 100%load	
THDi	<4% @ 100%load / < 6% @ 50%load	
Slew Rate / Seguimiento Frecuencia	1 Hz / s	
OUTPUT / SALIDA		
Model 230:	1 phase (L1-N1): 208/220/230/240Vac	
Model ISOTX:	Dual Isolated Outputs: 2 phases (L1-N1) + (L2-N2): 104/110/115/120Vac	
Voltage Regulation / Regulación Salida	+/- 1%	
Frequency / Frecuencia (Batt. Mode)	50 Hz +/- 0.1 Hz / 60 Hz +/- 0.1 Hz	
Current Crest Ratio / Factor de Cresta	3:1 @ 100% load.	
THDv	< 1% @ Linear Load (Carga Lineal) / <4 @ No Linear Load (Carga no Lineal)	
Dynamic Accuracy / Regulación Carga Variable	<5% (load variations 0%-100% & 100%-0% R Load)	
Transfer Times / Tiempos Transfer.	0 ms	
Waveform / Forma de Onda	Sine Wave / Sinusoidal Pura	
DC offset / Componente DC en la salida	50 mV	
Power Outlets / Salidas	Terminal Block / Regleta de Conexión	
OVERLOAD / SOBRECARGA		
AC Mode / Modo Normal	100%~110%: 30m / 110%~130%: 5m / >130% : 10s	
Battery Mode / Modo Batería	100%~110%: 3m / 110%~130%: 30s / >130% : 10s	
EFFICIENCY / EFICIENCIA @ (100%/75%/50%/25%) R LOAD		
Eco Mode / Modo ECO	MODEL 230V: 99% / 99% / 98% / 97% - ISOTX: 95% / 95% / 94% / 93%	
AC Mode / Modo AC	MODEL 230V: 94% / 93% / 87% / 83% - ISOTX: 90% / 89% / 83% / 80%	
Battery Mode / Modo Batería	MODEL 230V: 92% / 91% / 85% / 81% - ISOTX: 88% / 87% / 82% / 81%	
Inverter Efficiency / Eficiencia Inversor	97% Inverter (@ 100 LOAD)	
BTU @ 100% LOAD	1105	1841
PROTECTIONS / PROTECCIONES		
Surge / Contra Picos	All lines protection / Protección en todas las líneas (L-N, L-G, N-G): > 660J (10/1000us)	
Short Circuit / Contra Cortos en la salida	Outlets power-off / Apagado de las salidas (400% of nominal current / 5 cycles)	
Input Current / Corriente de Entrada	Circuit Breaker / Disyuntor	
Starting Time / Tiempo de Arranque	7s - 10s (@ 100% load)	
BATTERIES / BATERIAS		
Type and Qty / Tipo y Cantidad	Dry Sealed - Maintenance Free (VRLA technology)	
For 230V models	12V/7AH x 20 pcs (20pcs x 1: 240VDC)	12V/9AH x 20 pcs (20pcs x 1: 240VDC)
For ISOTX models	12V/7AH x 20 pcs (20pcs x 1: 240VDC)	12V/9AH x 20 pcs (20pcs x 1: 240VDC)
OPTION: Ext. Batt Cab. / Gab. Ext.	12V/9AH x 40 pcs (20pcs x 2: 240VDC)	12V/9AH x 40 pcs (20pcs x 2: 240VDC)
Typical Recharge T. / T. de Recarga		
Internal Battery Pack / Bat. Internas	3.5 H (90%)	4 H (90%)
External batt cabinet / Gabinete Ext.	Depending on external battery configuration (depende de cantidad de baterías externas)	
Charging Amps / Corriente de Carga	1A/2A/4A	
Recharging Time / Tiempo de recarga (90%)	1.5h - 2.5h (*N5)	
Charging VDC / Voltaje del cargador (Floating)	273.0 VDC	
Temperature Compensation / Compensación T.	120mV/°C per battery (Input Air Temp/ Temp. Aire entrada: 25-50°C)	
Shutdown battery Voltage / Voltaje DC Apagado	214VDC (0-30% load) / 204VDC (30-70% load) / 192VDC (load >70%)	

Technical Features / Características Técnicas

ONLINE - OPTIMA T09W (2/2)

(6KVA-230 & 6KVA-ISOTX)

(10KVA-230 & 10KVA-ISOTX)

INDICATORS / INDICADORES

LCD / Pantalla LCD Status, Load level, Battery, Input/Output voltage, Discharge timer & Fault conditions
Estado, Consumo, Baterías, Voltaje Entrada-Salida, Tiempo Descarga, Diagnóstico

ALARM / ALARMAS

Beep Alarm / Alarma sonora: For Battery Mode, Low battery, Overload, UPS Failure /
Modo Batería, Baja batería, Sobrecargas, Falla

PRODUCT SIZE & WEIGHT / DIMENSIONES Y PESOS DEL EQUIPO

D x W x H / Prof. x Ancho x Altura (mm)

UPS (230)	442x190x688	442x190x688
UPS (ISOTX)	532x250x826	657x250x826
Ext. Batt. Cabinet / Gabinete Bat. Ext.	592x250x576	592x250x576

Net Weight / Peso Neto (kgs)

UPS (EX)	74	76
UPS (ISOTX)	117	142
External batt cabinet / Gabinete Ext.	119 (optional)	119 (optional)

PACKING / EMPAQUE

D x W x H / Prof. x Ancho x Altura (mm)

UPS (EX)	Small Pallet: 58x39x91 cm
UPS (ISOTX)	Small Pallet: 80x39x102 cm
Ext. Batt. Cabinet / Gabinete Bat. Ext.	Small Pallet: 73x39x833 cm

Gross Weight / Peso Bruto (kgs)

UPS (EX)	81	83
UPS (ISOTX)	117	142
External Battery Cabinet	124	124

OPERATING / AMBIENTALES

Humidity / Humedad	<95 % (non-condensing / no condensante)
Temperature / Temperatura	0-40 °C
Noise Level / Ruido Producido	< 55dB @ 1m

Max. Altitude / Altura de Operación Max.

4.500 meters over sea level / sobre nivel del mar.
* Power output derate 1% every 100m (over 1.000m)
* Disminución de potencia de 1% cada 100m (sobre los 1.000m)

COMMUNICATION / COMUNICACION

Smart RS-232 & USB ports	Windows family, Linux, and MAC
Intelligent Port (SNMP)	Optional LAN card / Comunicación LAN Ethernet opcional AS400 optional interface board / Interfaz AS400 - opcional

SAFETY / ESTÁNDARES

Safety / Seguridad	CE / 62040-1 // UL1778 & CSA C22.2
EMC	62040-2 & FCC Part 15, Class A
Others / Otros	Check in user manual (section 2) / En manual de usuario, sección 2
Degree of protection / Grado de Protección	IP 21

Specifications may be adapted to comply with special project requirements / Las especificaciones pueden modificarse para adaptarse a proyectos.

Specifications may change without further notice / Por motivos comerciales o técnicos las especificaciones pueden cambiar sin previo aviso.

Model ISOTX: 2 outputs provided by an isolation transformer. Modelo ISOTX: Con 2 salidas desde transformador de aislamiento. (104/110/115/120V)

Note 1: Max. output power is derated to 90% when output voltage is set to 208V. La potencia máx. de salida se reduce al 90% si se fija voltaje en 208V

Note 2: Max. output power is derated to 70% when CF function is activated. La potencia máxima de salida se reduce al 70% si se activa la función CF.

Note 3: Bypass mode is automatically prohibited when CF function activated. El modo bypass se anula automáticamente cuando se activa función CF.

Note 4: ECO, prog. outlet and parallel function not available. Función ECO, conexión paralela y salida programable No disponible para este modelo

(*N5): Recharging time based on previous 10min to 20min full discharging cycles. Tiempo de recarga para ciclos previos de descarga profunda de 10 a 20min.

Online 1Ph

OPTIMA-T10 (UL) 6K/10K (230V & ISOTX)

Robust and reliable UPS with True ONLINE Double Conversion Technology based on IGBT in rectifier and inverter stages. With improved output power factor (1.0). Two versions available: 220/230/240V Output and 2x 120V outputs isolated with transformer (ISOTX).



True ON-LINE Double Conversion and IGBT Technology

True ON-LINE Double Conversion Technology and IGBT (both in rectifier and Inverter stages) allows our UPS to generate full time, noiseless, impeccable, and pure sine wave power for your equipment.

Dual Isolated Output

ISOTX models include an output transformer which offers galvanic isolation as well as dual (110/220 Vac) Outputs. 110Vac Outputs can be used individually or together to obtain 220Vac with galvanic isolation.

Parallel operation

Up to 3 units can be installed in parallel either to grow in capacity or for redundancy purposes.

Shortcircuit protected

This system avoids internal electronic damages triggering automatically when a shortcircuit is detected on its output. Outlets are turned off and an error message is shown on LCD.

Multiple Automatic Bypass:

Our UPS includes 2 different bypass systems. First there is an internal smart and automatic bypass which activates when the UPS fails or when it is overloaded, to keep your valuable electronic equipment working while the situation is solved. Second Bypass system can be manually activated from an external safe switch for maintenance purposes, such as Battery replacement or internal parts substitution.

Emergency Power Off (EPO)

This feature allows to turn off the UPS output activating an emergency external switch, which can be wired to EPO port located on the rear panel of the UPS. When the switch is detected open, the UPS turns off its output and goes to a safe status. To return to normal mode, the switch must be set back to normal and the UPS must be restarted.

Conformal Coating

This XSMART equipment features a Conformal Coating treatment on its internal boards and components. Conformal coating is a technique that protects against moisture and corrosive contaminants to ensure stable performance and extend its lifespan in various environments, as long as the requirements of the technical specifications of the equipment are met

Frequency Converter Function

Output frequency of the UPS can be configured to 50Hz or 60Hz, regardless the input frequency, as long as it stays in the acceptable range.

Expandable Backup

External battery packs can be connected to this UPS to offer longer backup.

Cold Start

This UPS series can be turned on even during power outage.

Auto-Recovery

Auto-Recovery function restarts the UPS automatically when AC Line comes back.

Power Generators Compatible

Only True On-Line Double conversion UPS can filter voltage fluctuation and other particularities generated by Power Generators to generate a clean, perfect, and pure sine wave power to feed your installation.

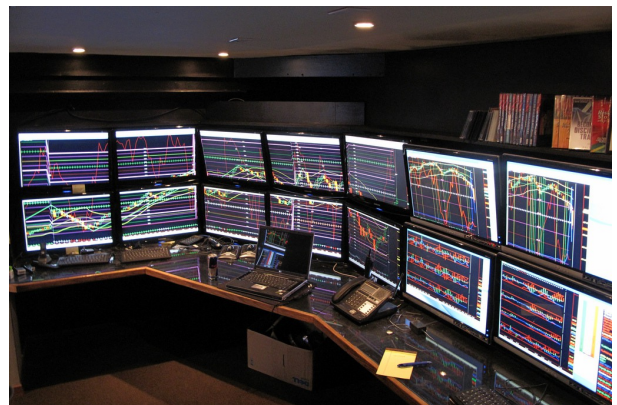
Smart Battery Charger

With a smart battery charger this UPS family can charge batteries in an outstanding time (2-4 hours up to 90%), offering a better availability than similar products.

Eco-Mode Operation, for power saving

ECO-Mode is a power saving function which reduces electrical consumption over 5%. In this mode the load is powered directly by AC Line as long as it keeps between pre-configured limits. Otherwise, the UPS goes to regular ONLINE mode. During power outage, the UPS goes into Battery Mode to keep your equipment working perfectly safe.

Applications: Medium-Sized Businesses Data Centers, Servers, Multiple PC.



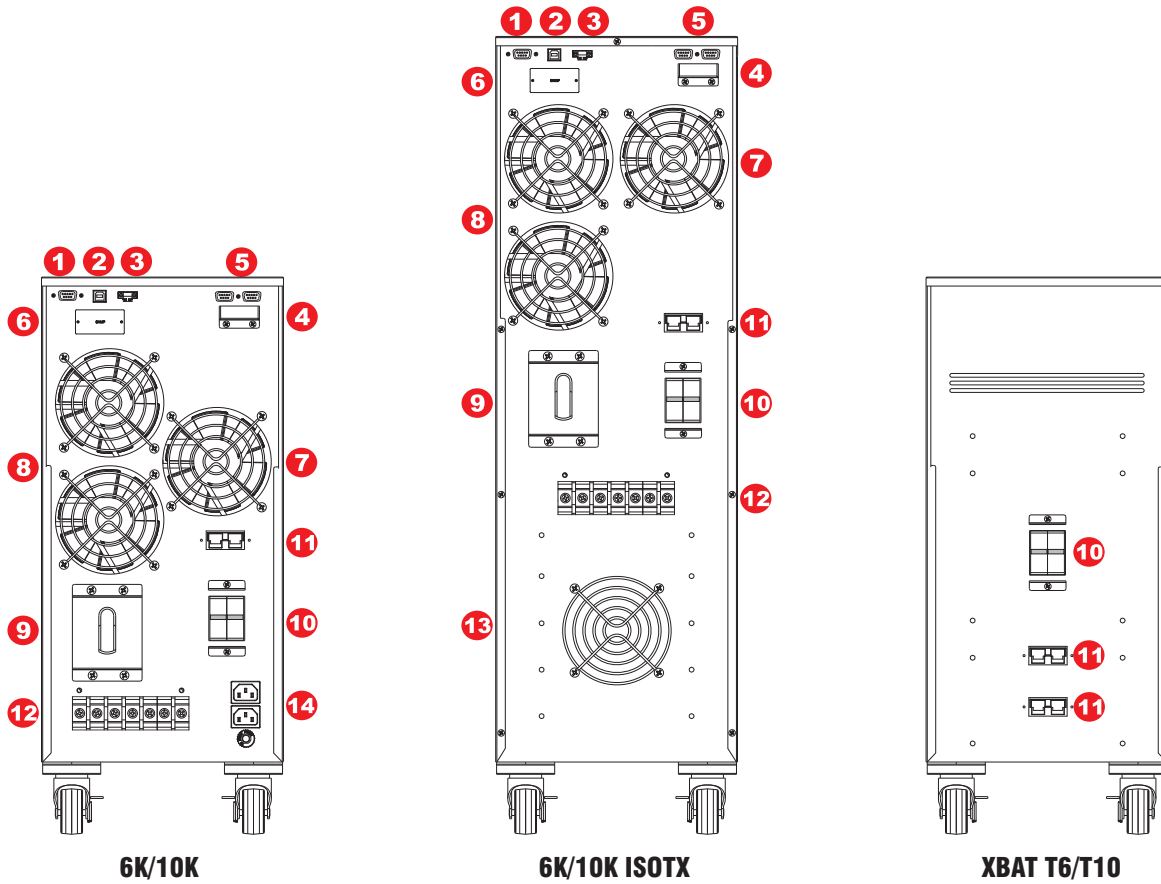
Technical Features / Características Técnicas

- 1.- RS232 Port
- 2.- USB Port
- 3.- Emergency Power Off (EPO)
- 4.- Shared Current Connector
- 5.- Parallel Connectors

- 6.- SNMP Port
- 7.- Battery Charger Fan
- 8.- Power Stage Fan
- 9.- Maintenance BYPASS Switch
- 10.- AC Input Breaker

- 11.- External Battery DC Connector
- 12.- AC Input/Output Terminal Block
- 13.- ISO-TX Transformer Fan
- 14.- IEC Auxiliary Output

Rear Panel



6K/10K

6K/10K ISOTX

XBAT T6/T10

Accesorios / Accesorios

Dry Contacts:	<input checked="" type="checkbox"/>	SNMP:	<input type="checkbox"/>	Parallel Function:	<input type="checkbox"/>
RS-485:	<input checked="" type="checkbox"/>	LAN Card:	<input checked="" type="checkbox"/>	ISOTX:	<input checked="" type="checkbox"/>
RS-232:	<input checked="" type="checkbox"/>	T/H Sensor:	<input checked="" type="checkbox"/>		

: Included
 : Option Available
 : Non-Available



Other brands and logos are property of their respective owners. Certifications may apply according to destination country and product model.

Technical Features / Características Técnicas

ONLINE - OPTIMA T10 (UL/CSA/CE)	(6KVA-230 & 6KVA-ISOTX)	(10KVA-230 & 10KVA-ISOTX)
Capacity / Capacidad	6.000VA / 6.000W	10.000VA / 10.000W
INPUT / ENTRADA		
Input Voltage / Voltaje de Entrada	Rated Input / Entrada Nominal: 208/220/230/240 Vac (single phase: L-N-G)	
Input Range / Rango de Entrada	@50% load: [110-300Vac] - @100% load: [176-300Vac]	
Frequency Range / Rango Frecuencia	40 - 70 Hz	
Max. Ope. Current / Corriente Max Operación	30A (RMS)	50A (RMA)
Inrush Current / Corriente Pico max.	200A max.	200A max.
Phase / Fases	1 Phase + Neutral + Ground / 1 Fase + Neutro + Tierra	
Power Factor / Factor de Potencia	> 0.99 @ 100%load	
THDi	<4% @ 100%load / < 6% @ 50%load	
Slew Rate / Seguimiento Frecuencia	1 Hz / s	
OUTPUT / SALIDA		
Model 230:	1 phase (L1-N1): 208/220/230/240Vac	
Model ISOTX:	Dual Isolated Outputs: 2 phases (L1-N1) + (L2-N2): 104/110/115/120Vac	
Voltage Regulation / Regulación Salida	+/- 1%	
Frequency / Frecuencia (Batt. Mode)	50 Hz +/- 0.1 Hz / 60 Hz +/- 0.1 Hz	
Current Crest Ratio / Factor de Cresta	3:1 @ 100% load.	
THDv	@Linear Load / Carga Lineal: < 1% - @Non-Linear Load / Carga no Lineal: <4%	
Dynamic Accuracy / Regulación Carga Variable	<5% (load variations 20%-100% & 100%-20% R Load)	
Transfer Times / Tiempos Transfer.	0 ms	
Waveform / Forma de Onda	Sine Wave / Sinusoidal Pura	
DC offset / Componente DC en la salida	50 mV	
Power Outlets / Salidas	Terminal Block / Regleta de Conexión	
PROTECTIONS / PROTECCIONES		
Surge & Spikes Suppression / Supresión de Picos	All lines protection / Protección en todas las líneas (L-N, L-G, N-G): > 650J (10/1000us)	
Output Short-Circuits / Cortocircuitos a la Salida	Electronic inverter shortcircuit protection / Protección del inversor contra cortocircuitos: <100ms: Current limited to max. capacity / Corriente limitada al 100% de Capacidad > = 100ms: Output shutdown. UPS goes to Fault Mode / UPS apaga salida y va a Modo Falla	
Battery overcurrent / Sobrecorriente de baterías	Fuse protected / protegido por fusibles	
Starting Time / Tiempo de Arranque (@ 100% load)	7s - 10s (@ 100% load)	
OVERLOAD / SOBRECARGA		
AC Mode / Modo Normal	[100%-110%: 10m]	[110%-130%: 1m] [>130% : 1s] to Bypass
Battery Mode / Modo Batería	[100%-110%: 30s]	[110%-130%: 10s] [>130% : 1s] to Cut-Off
Bypass Mode / Modo Bypass	[100%-130%: Warning]	[>130% : 1min] to Cut-Off
EFFICIENCY / EFICIENCIA (100% / 75% / 50% / 25% R LOAD)		
Eco Mode / Modo ECO	MODEL 230V: 99% / 99% / 98% / 97% - ISOTX: 95% / 95% / 94% / 93%	
AC Mode / Modo AC	MODEL 230V: 94% / 93% / 91% / 90% - ISOTX: 90% / 89% / 87% / 86%	
Battery Mode / Modo Batería	MODEL 230V: 92% / 91% / 89% / 88% - ISOTX: 88% / 87% / 85% / 84%	
Inverter Efficiency / Eficiencia Inversor (@100% load)	97% Inverter (@ 100 LOAD)	
BTU @ 100% LOAD	1228	2046
BATTERIES / BATERIAS		
Type and Qty / Tipo y Cantidad		
For 230V models (Internal)	12V/7AH x 20 pcs (20pcs x 1: 240VDC)	12V/9AH x 20 pcs (20pcs x 1: 240VDC)
For ISOTX models (Internal)	12V/7AH x 20 pcs (20pcs x 1: 240VDC)	12V/9AH x 20 pcs (20pcs x 1: 240VDC)
OPTION: External Batt Cab. / Gab. Externo	12V/9AH x 40 pcs (20pcs x 2: 240VDC)	12V/9AH x 40 pcs (20pcs x 2: 240VDC)
Typical Recharge T. / T. de Recarga		
Internal Battery Pack / Bat. Internas	3.5 H (90%)	4 H (90%)
External batt cabinet / Gabinete Ext.	Depending on external battery configuration (depende de cantidad de baterías externas)	
Charging Amps / Corriente de Carga	1A, 2A, 3A & 4A Configurable (According to/ De acuerdo con DIN41773).	
Recharging Time / Tiempo de recarga (90%)	1h - 2h (*N5)	
Charging VDC / Voltaje del cargador (Floating)	273.0 VDC	
Temperature Compensation / Compensación Temp.	120mV/°C per battery (Input Air Temp/ Temp. Aire entrada: 25-50°C)	
Shutdown battery Voltage / Voltaje DC Apagado	214VDC (0-30% load) / 204VDC (30-70% load) / 192VDC (load >70%)	

Online 1Ph

OPTIMA-T10 15K/20K (230V & ISOTX)

True ONLINE Double Conversion single-phase input and output UPS with robust design and state-of-the-art features. With Output Power Factor of 1.0 and a versatile Touch Screen, is the best protection to critical equipment. Two versions available: 220/230/240V Output and 2x 120V outputs isolated with transformer (ISOTX).



True ON-LINE Double Conversion and IGBT Technology

True ON-LINE Double Conversion Technology and IGBT (both in rectifier and Inverter stages) allows our UPS to generate full time, noiseless, impeccable, and pure sine wave power for your equipment.

Dual Isolated Output

ISOTX models include an output transformer which offers galvanic isolation as well as dual (110/220 Vac) Outputs. 110Vac Outputs can be used individually or together to obtain 220Vac with galvanic isolation.

Parallel Installation

Up to 3 units can be installed in parallel either to grow in capacity or for redundancy purposes.

Touch Screen

From this versatile user interface all UPS and AC Line parameters can be supervised. Besides, all configurable functions can be adjusted here.

Shortcircuit protected

This system avoids internal electronic damages triggering automatically when a shortcircuit is detected on its output. Outlets are turned off and an error message is shown on LCD.

Multiple Automatic Bypass:

Our UPS includes 2 different bypass systems. First there is an internal smart and automatic bypass which activates when the UPS fails or when it is overloaded, to keep your valuable electronic equipment working while the situation is solved. Second Bypass system can be manually activated from an external safe switch for maintenance purposes, such as Battery replacement or internal parts substitution.

Unbeatable Output Power Factor: 1.0

Perfect for most power demanding systems.

Emergency Power Off (EPO)

Our EPO port can be connected to an Emergency Stop Switch to turn the output off when activated, for safety reasons.

Frequency Converter Function

Output frequency of the UPS can be configured to 50Hz or 60Hz, regardless the input frequency, as long as it stays in the acceptable range.

Expandable Backup

External battery packs can be connected to this UPS to offer longer backup.

Cold Start

This UPS series can be turned on even during power outage.

Auto-Recovery

Auto-Recovery function restarts the UPS automatically when AC Line comes back.

Power Generators Compatible

Only True On-Line Double conversion UPS can filter voltage fluctuation and other particularities generated by Power Generators to generate a clean, perfect, and pure sine wave power to feed your installation.

Smart Battery Charger

With a smart battery charger this UPS family can charge batteries in an outstanding time (2-4 hours up to 90%), offering a better availability than similar products.

Eco-Mode Operation, for power saving

ECO-Mode is a power saving function which reduces electrical consumption over 5%. In this mode the load is powered directly by AC Line as long as it keeps between pre-configured limits. Otherwise, the UPS goes to regular ONLINE mode. During power outage, the UPS goes into Battery Mode to keep your equipment working perfectly safe.

Applications:

Data Centers, Networking, Industrial Installations.



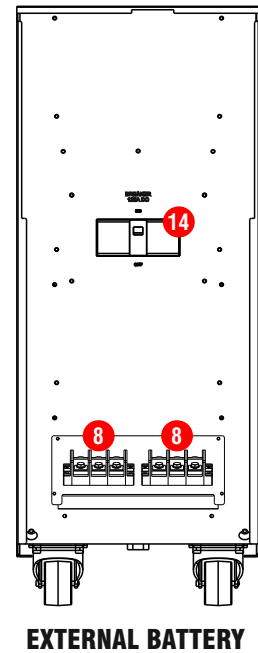
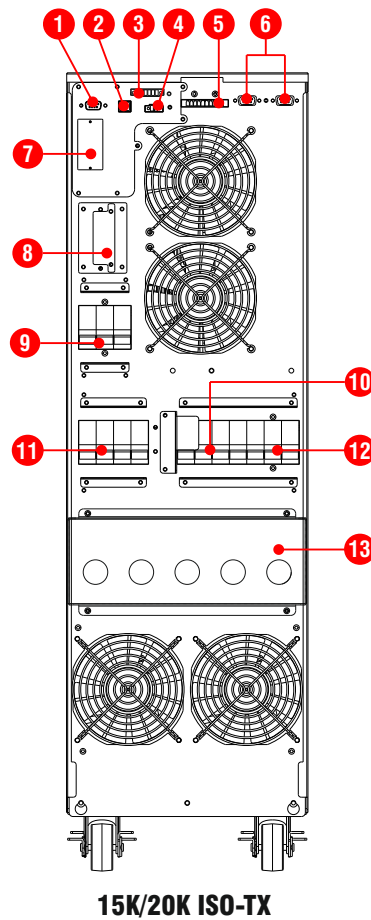
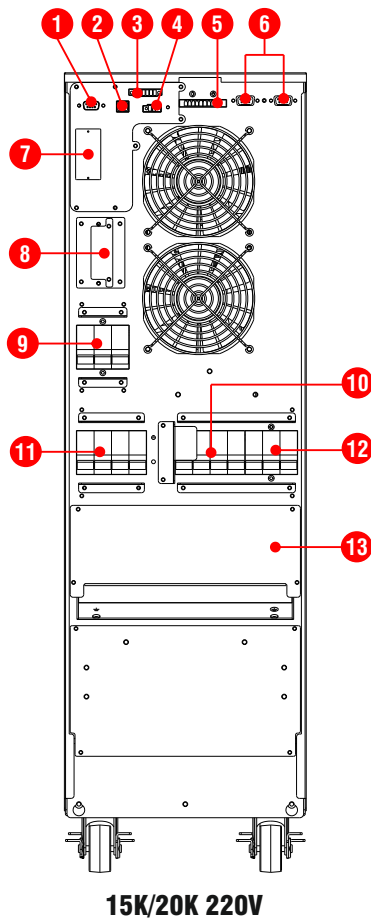
Technical Features / Características Técnicas

- 1- RS232
- 2- USB
- 3- DRY CONTACT PORT (OPTIONAL)
- 4- EPO
- 5- SHARE CURRENT PORT

- 6- PARALLEL PORT
- 7- SNMP SLOT
- 8- EXTERNAL BATTERY CONNECTOR
- 9- INPUT BREAKER
- 10- MAINTENANCE BYPASS SWITCH

- 11- OUTPUT BREAKER
- 12- BYPASS INPUT BREAKER
- 13- INPUT/OUTPUT TERMINAL BLOCK
- 14- BATTERY BREAKER

Rear Panel



Accesorios / Accesorios

- | | | | | | |
|---------------------|-------------------------------------|-------------------|-------------------------------------|--------------------------|-------------------------------------|
| Dry Contacts: | <input checked="" type="checkbox"/> | SNMP: | <input type="checkbox"/> | Parallel Function: | <input type="checkbox"/> |
| RS-485: | <input checked="" type="checkbox"/> | LAN Card: | <input checked="" type="checkbox"/> | ISOTX: | <input checked="" type="checkbox"/> |
| RS-232: | <input checked="" type="checkbox"/> | T/H Sensor: | <input checked="" type="checkbox"/> | | |

- : Included
- : Option Available
- : Non-Available

Technical Features / Características Técnicas

OPTIMA-T10 Page 1 of 2	15K-220V	20K-220V	15K-ISOTX	20K-ISOTX
Capacity / Capacidad (VA)	15.000VA	20.000VA	15.000VA	20.000VA
Capacity / Capacidad (W)	15.000W	20.000W	15.000W	20.000W
INPUT / ENTRADA				
Phase / Fases	1 Phase + Ground / 1 Fase + Tierra			
Input Voltage / Voltaje de Entrada	208/220/230/240 Vac (single phase: L-N + ground / L-N + Tierra)			
Input Range / Rango de Entrada	(176Vac-276Vac) ± 3% @ 100% load (110Vac-300Vac) ± 3% @ 50% load			
Max. Current / Corriente Max. (130% Load)	98A (RMS)	130A (RMS)	98A (RMS)	130A (RMS)
Frequency Range / Rango de Frecuencia	50Hz Systems: 46 - 54 Hz / 60Hz Systems: 56 - 64 Hz			
Power Factor / Factor de Potencia	> 0.99 @ 100%load			
THDi (IEC 62040-3)	< 4% @ 100% load			
Slew Rate / Seguimiento de Frecuencia	1 Hz / s			
OUTPUT / SALIDA (*N1)				
Output Voltage / Voltaje de Salida (L-N)	208/220/230/240Vac		2x 110Vac / 220Vac (Isolated)	
Voltage Regulation / Regulación de Salida:	± 1%			
Frequency / Frecuencia (Batt. Mode)	50 Hz ± 0.1 Hz / 60 Hz ± 0.1 Hz			
Current Crest Ratio / Factor de Cresta	3 : 1 @ 100% load.		2.6 : 1 @ 100% load.	
THDv	< 2% @ Linear Load / Carga Lineal <5 @ No Linear Load / Carga no Lineal			
Dynamic Accuracy / Regulación Carga Variable	<5% (load variations 0%-100% & 100%-0% R Load)			
Transient Recovery / Recuperación Cambio Carga	100ms to 90% for 0%-100% & 100%-0% R load			
Transfer Time / Tiempo de Transferencia:	0 ms			
Waveform / Forma de Onda	Sine Wave / Sinusoidal Pura			
Power Outlets / Salidas	Terminal Block / Regleta de Conexión			
DC Offset / Componente DC	±50mV max.			
INTERNAL BYPASS				
Bypass type / Tipo de Bypass:	SCR board / Tarjeta SCR			
Input Range in Bypass / Rango entrada en Bypass:	176-264Vac (L-N) & 50/60 ± 4Hz Freq.			
PROTECTIONS / PROTECCIONES				
Surge & Spikes Suppression / Supresión de Picos	(L-N: 490J) + (L-G: 490J) + (N-G: 490J) = TOTAL=1.470J (10/1000us)			
Short Circuit / Contra Cortos en la salida	Inverter shortcircuit protection / Protección contra cortocircuitos en el inversor: <4s: Limited to max. capacity / Corriente limitada al 100% >4s: Output shutdown automatically / Las salidas se apagan			
Input Current / Corriente de Entrada	Circuit Breaker / Disyuntor			
Battery overcurrent / Sobrecorriente de baterías	Internal Fuse protection in battery line / Protección por fusibles en línea de baterías interna			
Repetitive Overloads / Overloads repetitivos	3 overloads in 30min = UPS locks in bypass / 3 overloads en 30min = UPS a bypass			
Starting Time / Tiempo de Arranque	7s - 10s (@ 100% load)			
EFFICIENCY / EFICIENCIA (@ 100% / 75% / 50% / 25% LOAD)				
Eco Mode / Modo ECO	98.5% / 98.2% / 98% / 97.8%		94.5% / 94.2% / 94% / 94.8%	
AC Mode / Modo AC	94.8% / 95.2% / 95.5% / 95.9%		89.8% / 90.2% / 90.5% / 90.9%	
Battery Mode / Modo Batería	93.8% / 94.2% / 94.5% / 94.9%		88.8% / 89.2% / 89.5% / 89.9%	
Inverter Efficiency / Eficiencia Inversor	93.8% (@ 100% load)		88.8% (@ 100% load)	
BTU @ 100% LOAD	2730	3412	5459	6824
OVERLOAD / SOBRECARGA				
AC Mode / Modo Normal	100% - 110%: 60m / 110% - 125%: 10m / 125% - 150%: 1m / >150% : 1s			
Battery Mode / Modo Batería	100% - 110%: 60m / 110% - 125%: 10m / 125% - 150%: 1m / >150% : 1s			
Bypass	100% - 130%: OK / >130%: 1min			

Technical Features / Características Técnicas

OPTIMA-T10 Page 2 of 2	15K-220V	20K-220V	15K-ISOTX	20K-ISOTX
BATTERIES / BATERIAS				
Type and Qty / Tipo y Cantidad	VRLA Sealed & Free maintenance / Sellada de libre mantenimiento VRLA (12V-9AH)			
Battery Voltage / Voltaje de Baterías	±240Vdc			
Charging Amps / Corriente de Carga	1 - 12 A (Adjustable / Ajustable)			
Typical Recharge T. / T. de Recarga	4 H (90%)			
Charging Voltage / Voltaje del cargador (Floating)	± 273.0 VDC (13.65 VDC per battery)			
Temp. Compensation / Compensación Temp.	Configurable / Ajustable			
Shutdown battery Voltage / Voltaje DC Apagado	± 200 VDC (10.0 VDC per battery) (*N4)			
Low Battery Warning / Aviso de Baterías Baja	11.4VDC per Battery (Adjustable / Ajustable)			
Max. DC Current / Corriente DC Max.	83A DC	104A DC	86A DC	108A DC
Internal Battery Pack / Baterías Internas	40pcs*12V/9AH (20+20 pcs)		External Only / Bat. Externas	
External batt cabinets / Gabinetes Externos	Optional / Opcional: 40pcs (20+20 pcs)		40pcs*12V/9AH (20+20 pcs)	
INDICATORS / INDICADORES				
Touch Screen / Pantalla Táctil	Full Status, Error Codes and Real Time Values / Estado, Códigos Error y Valores			
ALARM / ALARMAS				
Acoustic Beep Alarm / Alarma sonora:	Battery, Low Batt., Overload, UPS Failure / Modo Batería, Baja Bat., Sobrecargas, Falla			
PRODUCT SIZE & WEIGHT (D x W x H) / DIMENSIONES Y PESOS DEL EQUIPO (Prof. X Ancho X Altura)				
UPS:	626mm * 250mm * 827mm			
Ext. batt cab. / Gabinete Ext. Bat.	592mm * 250mm * 576mm			
UPS Net Weight / Peso Neto (kgs):	137		133	
Ext. batt Net Weight / Ext. Bat. Peso Neto (kgs)	119 (Optional)		119	
PACKING (D x W x H) / EMPAQUE (Prof. X Ancho X Altura)				
Individual UPS:	Small Pallet: 731mm * 380mm * 1025mm			
Individual External Battery Cabinet	Small Pallet: 720mm * 380mm * 730mm (optional)			
Individual UPS UPS Gross Weight / Peso Bruto (kgs):	144		140	
Individual Ext. Batt. Cab. UPS Gross Weight (kgs):	149 (Optional)		149	
OPERATING / AMBIENTALES				
Operating Conditions / Condiciones de Operación	(0°C to +40 °C) (*N2) / <95 % (non-condensing / no condensante)			
Storage Temperature / Temperatura de Almacenaje	(-15 °C to +60 °C) : UPS / (0 °C to +35 °C) : Batteries			
Noise Level / Ruido Producido	< 58dB @ 1m		< 65dB @ 1m	
Max. Altitude / Altura de Operación Max.	Max Altitude: 4.500m. (over 1.000m output capacity is de-rated 1% every 100m) Altura máx 4.500msnm (sobre 1.000m la capacidad de salida disminuye 1% cada 100m)			
COMMUNICATION / COMUNICACION				
Smart RS-232 & USB ports	Windows family, Linux, Unix, and MAC			
Intelligent Port (SNMP)	Optional / Opcional: LAN, AS400, & RS485			
SAFETY & STANDARDS / NORMATIVAS Y ESTANDARES				
Certification / Certificación	CE			
UPS General Safety / Seguridad General	IEC 62040 - 1 - 1			
UPS EMC / Compatibilidad. Electromag.	IEC 62040 - 2 (Class C3) (radiation)			
UPS Tests / Procedimiento Pruebas UPS	IEC 62040 - 3			
ESD / RS / EFT / Surge / CS / F. Mag. Field	EN 61000-4-2 & 4-3 & 4-4 & 4-5 & 4-6 & 4-8 (level 3)			
Low Frequency Signals	IEC / EN 61000 - 2 - 2 (level 10)			
Degree of protection / Grado de Protección	IP20			
Conduction & Radiation	FCC Part 15, Subpart B, Class A ; IEC / EN 62040-2 (Cat 3)			
Safety / Seguridad	IEC / EN60950 - 1			
Quality and Enviroment	ISO9001 & ISO14001			
Transportation / Transporte	ETS 300019 - 2 - 2 class 2.3			

Specifications can be modified to comply with special project requirements / Las especificaciones pueden modificarse para adaptarse a proyectos especiales

Specifications may change without further notice / Por motivos comerciales o técnicos las especificaciones pueden cambiar sin previo aviso.

(*N1): Output voltage is selectable by LCD / El Voltaje de salida es configurable entre las opciones disponibles en el LCD

(*N2): UPS can work up to 40°C but batteries will short their life over 25°C / El UPS puede trabajar hasta 40°C, las baterías acortan su vida útil sobre los 25°C

(*N4) Shutdown battery voltage depends of operating conditions (load % & runtime) / Voltaje de corte de baterías depende de la carga y duración del runtime

(*N5): Recharging time based on previous 10m to 20m full discharging cycles. Tiempo de recarga basado en ciclos previos de descarga profunda de 10 a 20m.

Online 1Ph

OPTIMA-RT9W 1K/2K/3K

UPS family based on Online Double Conversion Technology, with IGBT in Rectifier and Inverter sections and a strong and reliable design, able to offer state of the art features. Dual design Rack/Tower with rotating LCD and Power Factor 0.90. All models are 2U height.



True ON-LINE Double Conversion and IGBT Technology

True ON-LINE Double Conversion Technology and IGBT (both in rectifier and Inverter stages) allows our UPS to generate full time, noiseless, impeccable, and pure sine wave power for your equipment.

Output Power Factor 0.90

Power Factor has been improved up to 0.9 to supply a real power in watts up to 90% of nominal power rated for each model.

Dual Installation: Rack & Tower

This Series can be installed vertically thanks to support accessories included with each product, but also can be installed in 19" Racks with optional Xmart rails.

Rotating LCD Screen:

From this versatile LCD all parameter of the UPS, as well as AC Line conditions, can be monitored. It is also a very intuitive interface to set up all configurable functions of this state-of-the-art unit. LCD can be rotated 90° to match either Tower or 19" Rack installation.

Shortcircuit protected

This system avoids internal electronic damages triggering automatically when a shortcircuit is detected on its output. Outlets are turned off and an error message is shown on LCD.

Automatic Bypass:

Includes a smart and automatic bypass which activates when the UPS fails to keep your valuable electronic equipment working. Smart bypass also activates when the UPS is overloaded.

Power Generators Compatible

Only True On-Line Double conversion UPS can filter voltage fluctuation and other particularities generated by Power Generators to generate a clean, perfect, and pure sine wave power to feed your installation.

Frequency Converter Function

Output frequency of the UPS can be configured to 50Hz or 60Hz, regardless the input frequency, as long as it stays in the acceptable range.

Conformal Coating

This XSMART equipment features a Conformal Coating treatment on its internal boards and components. Conformal coating protects against moisture and corrosive contaminants to ensure stable performance and extend its lifespan in various environments, as long as the requirements of the technical specifications of the equipment are met.

Cold Start

This UPS series can be turned on even during power outage.

Auto-Recovery

Auto-Recovery function restarts the UPS automatically when AC Line comes back to normal.

Space Saving

All models (1K to 3K) are 2U height, including electronic parts and batteries.

Smart Battery Charger

With a smart battery charger this UPS family can charge batteries in an outstanding time (4 hours up to 90%), offering a better availability than similar products.

Eco-Mode Operation, for power saving

ECO-Mode is a power saving function which reduces electrical consumption over 5%. In this mode the load is powered directly by AC Line as long as it keeps between pre-configured limits. Otherwise, the UPS goes to regular ONLINE mode. During power outage, the UPS goes into Battery Mode to keep your equipment working perfectly safe.

Battery Protections for Long Storage

Originally, internal batteries are disconnected to minimize the self-discharge during storage. Batteries can be easily connected by end-user or a technician during first start-up.

Hot Swappable Batteries

Batteries can be safely replaced while UPS is working allowing to perform maintenance procedures without shutting down the system.

Applications:

Rack or Tower Critical Servers, IT Equipment.



Technical Features / Características Técnicas

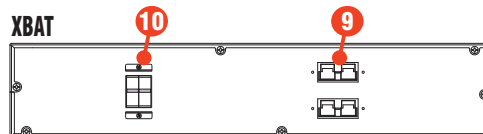
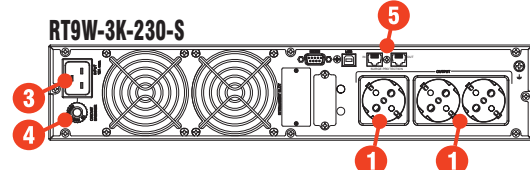
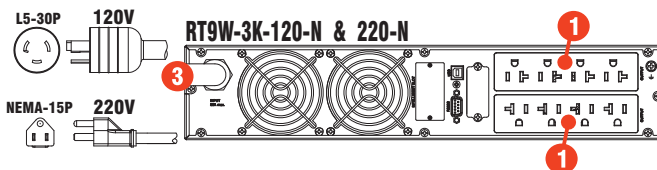
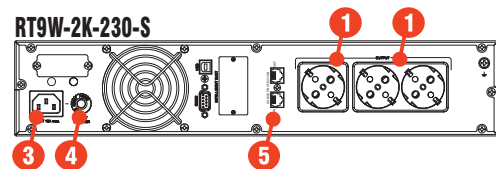
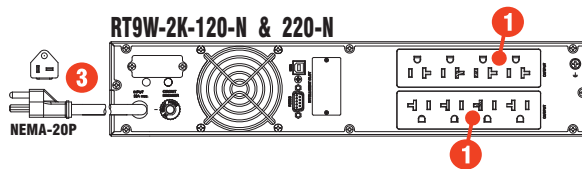
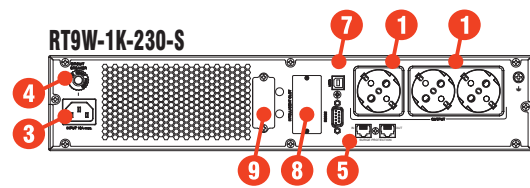
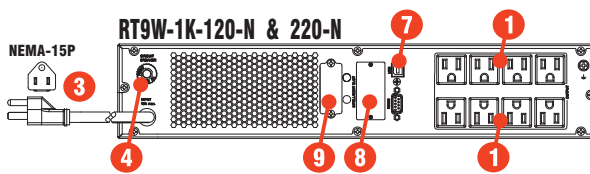
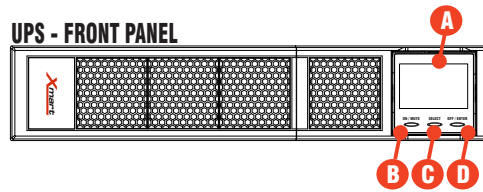
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 B.- ON / Mute
 C.- Select
 D.- OFF / Enter

1. Power Outlets
 3. AC Inputs
 4. Circuit Breaker
 5. RJ45 Connector

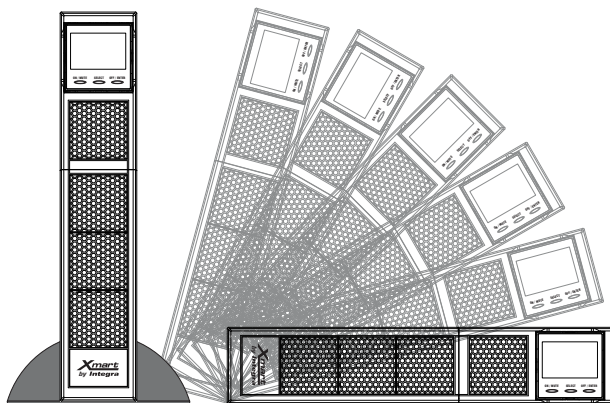
7. USB & RS232 Ports
 8. Smart Port
 9. External Battery Connector
 10. DC Breaker

Rear and Front Panels

UPS - FRONT PANEL



Dual Installation Rack - Tower (RT)



Accesorios / Accesorios

- LAN Card:
- AS-400:
- RS-485:
- DC Connector:
- Environmental Sensors:

: Included
 : Available Option
 : Non-Available

Technical Features / Características Técnicas

ONLINE RT9W UPS	1K	2K	3K
Capacity / Capacidad	1.000VA / 900W	2.000VA / 1.800W	3.000VA / 2.700W
INPUT / ENTRADA			
Range / Rango - Vac (Model 120Vac)	@60% Load: [60-145Vac] - @100 Load: [90-145Vac]		
Range / Rango - Vac (Model 220Vac)	@60% Load: [120-300Vac] - @100% Load: [180-300Vac]		
Frequency Input / Frecuencia de Entrada:	50Hz / 60Hz autosensing / detección automática		
Frequency Range / Rango de Frecuencia	40 Hz - 70Hz		
Max. Current / Corriente Max. (Model 120Vac)	11.9 (RMS)	23.6 (RMS)	35.0 (RMS)
Max. Current / Corriente Max. (Model 220Vac)	6.0 (RMS)	11.8 (RMS)	17.5 (RMS)
Phase / Fases	Single phase with ground / (1 fase + Tierra)		
Power Factor / Factor de Potencia	> 0.99 @ 100% load		
Input Current THDi / THDi de Corriente de Entrada	< 7% @ 100% load		
OUTPUT / SALIDA			
Voltage Output / Voltaje de Salida AC:	(*N1) Model 120V: 110/115/120/127Vac - Model 220V: 208/220/230/240Vac		
Output Regulation / Rango de Salida:	+/-1%		
Frequency / Frecuencia (Batt. Mode)	(*N3) 50 Hz +/- 0.5 Hz - 60Hz +/- 0.5 Hz		
Slew Rate / Seguimiento de Frecuencia	1 Hz / s		
Current Crest Ratio / Factor de Cresta	3:1 max. @ 100% load		
Harmonic Distortion / Dist. Armónica (THDv)	< 3% @ Linear Load / Carga Lineal / <6% @ No Linear Load / Carga no Lineal		
Dynamic Accuracy / Regulación Carga Variable	< +/- 5% Online (variation 0%-100% & 100%-0% R Load)		
AC to Inverter / Tiempo de AC a Inversor	0 ms		
Waveform / Forma de Onda	Pure Sinewave / Sinusoidal Pura		
DC component / Componente DC	100mV max.		
BYPASS			
Internal Auto bypass / Modo Bypass Automático:	Default Input Range in BYPASS: (120V): 90-132Vac / (220V): 180-264Vac		
PROTECTION SYSTEMS / SISTEMAS DE PROTECCION			
Surge & Spikes Suppression / Supresión de Picos	(L-N, L-G, N-G) : MODEL 120V: > 850Joules / MODEL 220V: > 1.250Joules		
Output Short-Circuits / Cortocircuitos a la Salida (Online & Battery Mode)	Electronic inverter shortcircuit protection / Protección del inversor contra cortocircuitos: < 140ms: Current limited to 560% max. current / Corriente limitada al 560% de Capacidad > = 140ms: Outputs shutdown & Fault Mode / UPS apaga salidas y queda en Falla		
AC Input Current / Sobre-Corriente de Entrada AC	Input breaker or fuse / Disyuntor o fusible de entrada		
Battery overcurrent / Sobrecorriente de baterías	Internal Fuse protection in battery line / Protección por fusibles en línea de baterías interna		
Starting Time / Tiempo de Arranque (@ 100% load)	7s - 10s		
EFFICIENCY / EFICIENCIA			
Eco Mode	(100% LOAD: 97%) - (75% LOAD: 96%) - (50% LOAD: 96%) - (25% LOAD: 94%)		
AC Mode / Modo AC	(100% LOAD: 91%) - (75% LOAD: 90%) - (50% LOAD: 90%) - (25% LOAD: 88%)		
Battery Mode / Modo Batería	(100% LOAD: 90%) - (75% LOAD: 90%) - (50% LOAD: 90%) - (25% LOAD: 88%)		
Inverter Efficiency / Eficiencia Inversor (100%)	(100% LOAD: 97%)		
Internal Loss / Consumo Interno (BTU) @100%load	276	491	737
OVERLOAD/ SOBRECARGA			
AC Mode / Modo Normal (To Bypass)	[100%-105%: Warning] [105%-110%: 10min] [110%-130%: 30s] [130%-150: 3s] [>150: 0.1s]		
Battery Mode / Modo Batería (To Cut-Off)	[100%-105%: Warning] [105%-110%: 10min] [110%-130%: 30s] [130%-150: 3s] [>150: 0.1s]		
Bypass Mode / Modo Bypass (To Cut-Off)	[100%-110%: Warn.] [110%-120%: 30min] [120%-130%: 10min] [130%-150: 1min] [>150%: 0.1s]		
BATTERIES / BATERIAS			
Technology / Tecnología	YUASA or CSB: Sealed Lead Acid VRLA-AGM / Sellada Sin Mantenimiento VRLA-AGM		
Qty&Type / Cantidad&Tipo	2 x 12V-9AH	4 x 12V-9AH	6 x 12V-9AH
Charging VDC / Voltaje del cargador (Floating)	27.4 VDC +/- 1%	54.7 VDC +/-1%	82.1 VDC +/-1%
Typical Recharge Time / T. de Recarga	4 Hours for 90% capacity / 4 Horas para recuperar el 90% de carga		
Shutdown battery Voltage / Voltaje DC Apagado	10.0 Vdc per battery typical (*N4)		
Charging Amps / Corriente de Carga	1 A (Max.)		
Recharging Time / Tiempo de recarga (90%)	3h - 4h (*N5)		

ONLINE RT9W UPS	1K	2K	3K
INDICATORS / INDICADORES			
LCD / Pantalla de Cristal Liquido (LCD)	UPS status, Load level, Battery, Input/Output voltage, Discharge timer, and Fault Estado del UPS, Consumo, Baterías, Voltaje Entrada/Salida, Autonomía, Diagnóstico		
ALARM / ALARMAS			
Beep Alarms / Alarma Sonora:	(Batt. Mode: 1 beep/4s)-(Low batt.: 1 beep/s)-(Overload: 2 beep/s)-(Failure: Continuous)		
OUTLETS: QTY & TYPE / SALIDAS: CANTIDAD Y TIPO			
UPS Model 230Vac - Total Outlets	CEE*(Schuko)*3	CEE*(Schuko)*3	CEE*(Schuko)*3
UPS Model 120Vac - Total Outlets	NEMA5-15R*8	NEMA5-15R*8	NEMA5-20R*8
UPS Model 220Vac NEMA - Total Outlets	NEMA5-15R*8	NEMA5-15R*8	NEMA5-20R*8
UPS Model 3K L5-30P	x	x	NEMA5-20R*8
Input / Entrada (230Vac)	CEE 7/7 hybrid	CEE 7/7 hybrid	CEE 7/7 hybrid
Input / Entrada (120Vac)	NEMA5-15P	NEMA5-20P	L5-30P
Input / Entrada (220V NEMA)	NEMA5-15P	NEMA5-20P	NEMA5-20P
PHYSICAL / FISICAS: UPS			
W*H*D / Ancho * Altura * Profundidad (mm)	438*88*310 [2U]	438*88*410 [2U]	438*88*630 [2U]
Net Weight / Peso Neto (kgs)	12	20	28
PHYSICAL / FISICAS: External Battery Pack / Paquete de Baterías Externas			
W*H*D / Ancho*Altura*Profundidad (mm)	438*88*410 [2U]	438*88*630 [2U]	438*88*630 [2U]
Net Weight / Peso Neto (kgs)	28	33	43
UPS PACKING / EMPAQUE UPS			
Unit Carton W*H*D (mm)	400*200*500	500*200*560	600*240*760
Unit Gross Weight / Peso Bruto (kgs)	14	22	30
Half Pallet / Medio Pallet (cm : pcs)	(120*100*105): (30pcs)	(120*100*108): 20pcs	(120*80*96): 8pcs
Full Pallet / Pallet Completo (cm : pcs)	2 half pallets (60pcs)	2 half pallets (40pcs)	(120*80*171): 14pcs
Container: (FCL20' 7 FCL40')	600pcs / 1260pcs	400pcs / 840pcs	154pcs / 336pcs
EXT BATT PACKING / EMPAQUE BATERIAS EXTERNAS			
Unit Carton W*H*D (mm)	500*180*560	600*200*760	600*200*760
Gross Weight / Peso Bruto (kgs)	30	35	45
OPERATIONAL CONDITIONS / CONDICIONES DE OPERACIÓN			
All models / Todos los modelos	< 95 % RH (non-condensing / no condensante) / 0 - 40 °C / <50dBA @ 1m		
Protecting Coating / Tropicalizado de Tarjetas	Yes / Si		
Degree of protection / Grado de Protección	IP 21		
Max. Altitude / Altura de Operación Max.	Max. 4.500 meters over sea level / sobre nivel del mar. * Power output de-rate of 1% every 100m (over 1.000m) * Disminución de potencia de 1% cada 100m (sobre los 1.000m)		
Quality & Environmental Standards / Estándares de Calidad y Ambientales	RoHS, ISO9001 & ISO14001		
COMMUNICATION / COMUNICACION			
Smart RS-232 & USB	Windows family; Linux; Unix; Mac OS; VMWare.		
SNMP Intelligent Port:	LAN Card, Dry-Contacts card, RS485 (Optional / Opcional)		
Technical specifications can be modified to comply with special requirements / Las especificaciones pueden bajo requerimiento adaptarse a proyectos especiales			
Technical specifications may change without further notice / Por motivos comerciales o técnicos las especificaciones pueden cambiar sin previo aviso.			
Output voltage is selectable by LCD / El Voltaje de salida es configurable entre 4 alternativas seleccionables en el LCD			
Allows to set output frequency at constant value: 50Hz or 60Hz / El modo de Conversión de Frecuencia permite fijar la salida a 50 o 60Hz			
(*N4): Shutdown battery voltage depends of operating conditions (load & runtime) / Voltaje de corte de baterías depende de condiciones de operación (carga y runtime)			
(*N5): Recharging time based on previous 10 to 20min full discharging cycles. Tiempo de recarga basado en ciclos previos de descarga profunda de 10 a 20min.			

Low Voltage Directives 2006/95/EC

IEC60950-1:2001:Information Technology Equipment – Safety-Part1: General Requirement

EN62040-1-1:2003:Uninterruptible Power Systems (UPS) Part 1-1: General and Safety requirements for UPS used in operator access areas

EMC Directives 89/336/EEC, 2004/108/EC and Amendment 93/68/EEC

EN 62040-2: 2006:Uninterruptible Power Systems (UPS) Part 2: Electromagnetic compatibility class C2 (EMC)

IEC 61000-2-2: 2002:Compatibility levels for low-frequency conducted disturbances and signaling in public low-voltage power supply systems

IEC 61000-4-2: 2001:Electrostatic discharge immunity test

IEC 61000-4-3: 2006:Radiated, radio-frequency electromagnetic field immunity test

IEC 61000-4-4: 2004:Electrical fast transient/burst immunity test

IEC 61000-4-5: 2005:Surge immunity test

IEC 61000-4-6: 2006:Conducted immunity test

IEC 61000-4-8: 2001:Power frequency magnetic field immunity test

IEC 61000-4-11: 2004:Testing and measurement techniques - Voltage dips, short interruptions and voltage variations immunity tests

Online 1Ph

OPTIMA-RT10 (UL) 1K/1.5K/2K/3K

UPS family based on Online Double Conversion Technology, with IGBT in Rectifier and Inverter sections and a strong and reliable Microprocessor-based design (DSP), able to offer state of the art features. Dual design Rack/Tower with rotating LCD and improved Power Factor of 1.0 and 0.97 (depending on the model). All models are 2U height. Improved THDi, THDv, and Power Efficiency features. High performance and reliability thanks a state-of-the-art design based on Microprocessor.



True ON-LINE Double Conversion and IGBT Technology

True ON-LINE Double Conversion Technology and IGBT (both in rectifier and Inverter stages) allows our UPS to generate full time, noiseless, impeccable, and pure sine wave power for your equipment.

Output Power Factor 1.0 & 0.97

Power Factor has been improved up to 1.0 for 1K model and 0.97 for the rest of the models.

Dual Installation: Rack & Tower

This Series can be installed vertically thanks to support accessories included with each product, but also can be installed in 19" Racks with optional Xmart rails.

Rotating LCD Screen:

From this versatile LCD all parameter of the UPS, as well as AC Line conditions, can be monitored. It is also a very intuitive interface to set up all configurable functions of this state-of-the-art unit. LCD can be rotated 90° to match either Tower or 19" Rack installation.

Shortcircuit protected

This system avoids internal electronic damages triggering automatically when a shortcircuit is detected on its output. Outlets are turned off and an error message is shown on LCD.

Automatic Bypass:

Includes a smart and automatic bypass which activates when the UPS fails to keep your valuable electronic equipment working. Smart bypass also activates when the UPS is overloaded.

Emergency Power Off (EPO)

Our EPO port can be connected to an Emergency Stop Switch to turn off the UPS output when activated, for safety reasons.

Power Generators Compatible

Only True On-Line Double conversion UPS can filter voltage fluctuation and other particularities generated by Power Generators to generate a clean, perfect, and pure sine wave power to feed your installation.

Frequency Converter Function

UPS Output can be configured to 50Hz or 60Hz, regardless the input frequency, as long as it stays in the acceptable range.

Cold Start

This UPS series can be turned on even during power outage.

Conformal Coating

This XSMART equipment features a Conformal Coating treatment on its internal boards and components. Conformal coating is a technique that protects against moisture and corrosive contaminants to ensure stable performance and extend its lifespan in various environments, as long as the requirements of the technical specifications of the equipment are met.

Space Saving

All models (1K to 3K) are 2U height, including electronic parts and batteries.

Programmable Outputs:

This UPS family offers 2 kind of power outlets: Standard and Programmable. During Battery Mode Programmable outputs can be configured to power off at a given time (previously configured), without causing severe battery discharge.

Auto-Recovery

Auto-Recovery function restarts the UPS automatically when AC Line comes back to normal.

Smart Battery Charger

With a smart battery charger this UPS family can charge batteries in an outstanding time (4 hours up to 90%), offering a better availability than similar products.

Eco-Mode Operation, for power saving

ECO-Mode is a power saving function which reduces electrical consumption over 5%.

Battery Protections for Long Storage

Originally, internal batteries are disconnected to minimize the self-discharge during storage. Batteries can be easily connected by end-user or a technician during first start-up.

Hot Swappable Batteries

Batteries can be safely replaced while UPS is working allowing to perform maintenance procedures without shutting down the system.

Applications: Small-Sized Businesses Rack or Tower Critical Servers, IT Equipment.



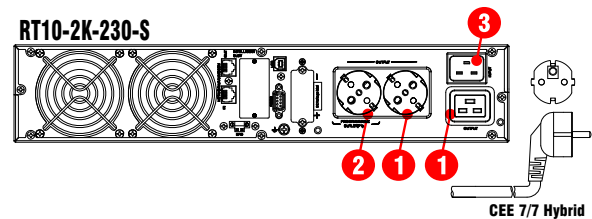
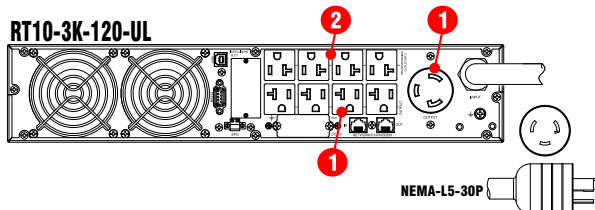
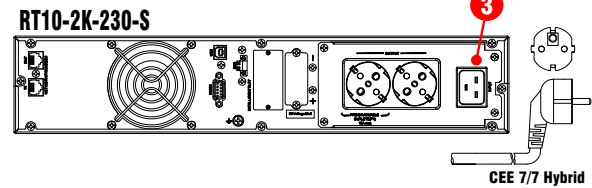
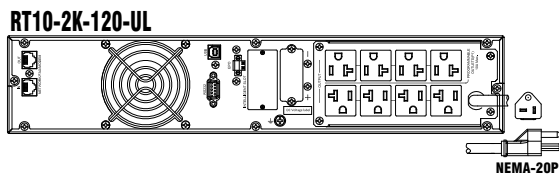
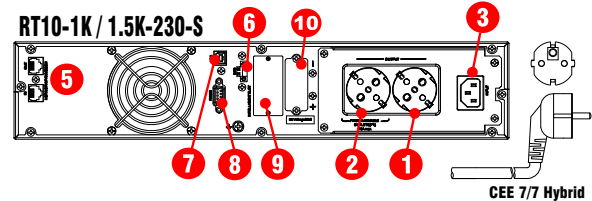
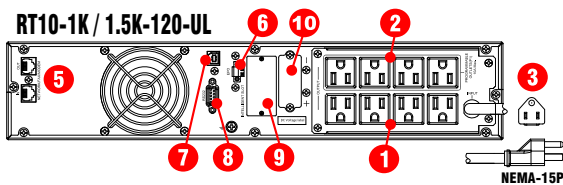
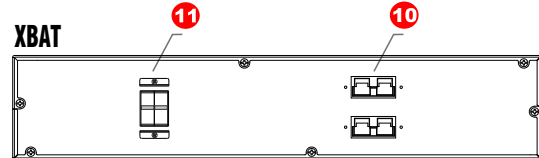
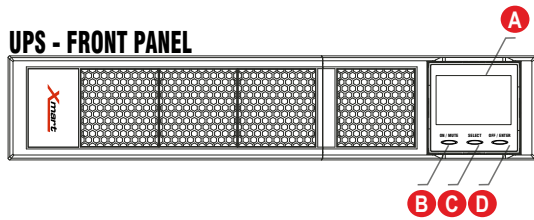
Technical Features / Características Técnicas

A.- LCD Screen
 B.- ON / Mute
 C.- Select
 D.- OFF / Enter

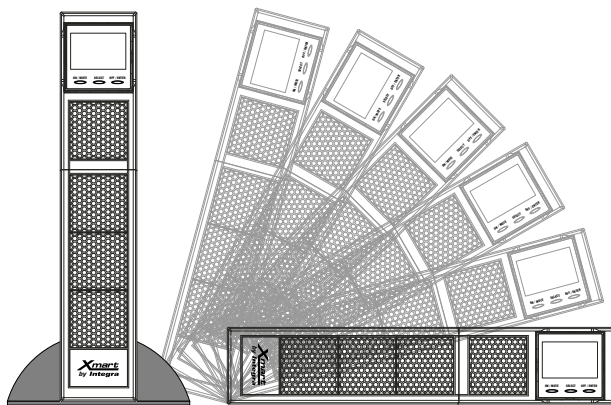
1. Standard Power Outlets
 2. Programmable Power Outlets
 3. AC Input
 4. AC Input Circuit Breaker
 5. RJ-45 Connectors (Protected)

6. Emergency Power Off (EPO) Connector
 7. USB Port
 8. RS-232 Port
 9. Smart Port: SNMP / AS.400
 10. External Bat. XBAT Connector (optional)
 11. DC Circuit Breaker

Rear and Front Panels



Instalación Dual Rack - Torre (RT)



Accesorios / Accesorios

- LAN Card:
- AS-400:
- RS-485:
- DC Connector:
- Environmental Sensors:

: Included
 : Available Option
 : Non-Available

Technical Features / Características Técnicas

ONLINE - OPTIMA RT10 (UL/CSA/CE)		1K	1.5K	2K	3K
Capacity / Capacidad		1000VA / 1000W	1500VA / 1450W	2000VA / 1930W	3000VA / 2880W
Output PF / FP de Salida	120V (UL)	1.00	0.97	0.97	0.96
Capacity / Capacidad		1000VA / 1000W	1500VA / 1500W	2000VA / 2000W	3000VA / 3000W
Output PF / FP de Salida	220V/230V	1.00	1.00	1.00	1.00
INPUT / ENTRADA					
Range / Rango - Vac	120V (UL)	@100% load:[80-150Vac] - @80% load:[70-150Vac] - @60% load:[55-150Vac]			
Range / Rango - Vac	(220V/230V)	@100% load:[160-300Vac] - @80% load:[140-300Vac] - @60% load:[110-300Vac]			
Frequency Input / Frecuencia de Entrada		50Hz / 60Hz autosensing / detección automática			
Frequency Range / Rango de Frecuencia		40 Hz - 70Hz			
Max. Amps / Corriente Max. (normal mode) (120V UL)		13.2A (RMS)	13.2A (RMS)	17.6A (RMS)	26.4A (RMS)
Max. Amps / Corriente Max. (normal mode) (230V)		7.6A (RMS)	11.0A (RMS)	15.3A (RMS)	17.6A (RMS)
Phase / Fases		Single phase with ground / (1 fase + Tierra)			
Power Factor / Factor de Potencia		> 0.99 @ 100% Load - > 92% @ 0% Load			
Input Current THDi / THDi de Corriente de Entrada		< 5% @ 100% load			
Input Powercord / Cable de entrada		6 feet (1.83m) NEMA Plug			
OUTPUT / SALIDA					
Voltage / Voltaje AC	120V (UL)	(*N1) Model 120V: 100/110/115/120/127Vac			
Voltage / Voltaje AC	220V/230V	(*N1) Model 220V/230V: 200/208/220/230/240Vac			
Output Regulation / Rango de Salida:		+/-1% (all modes / en todos los modos de operación)			
Frequency / Frecuencia (Batt. Mode)		(*N2) 50 Hz +/- 0.1 Hz - 60Hz +/- 0.1 Hz			
Slew Rate / Seguimiento de Frecuencia		1 Hz / s			
Current Crest Ratio / Factor de Cresta		3:1 max. @ 100% load			
Harmonic Distortion / Dist. Armónica (THDv)		< 2% @ Linear Load / Carga Lineal (100% load) <4% @ No Linear Load / Carga no Lineal (100% load)			
Dynamic Accuracy / Regulación Carga Variable		< +/- 5% in Online (variation 0%-100% & 100%-0% R Load) (online mode)			
Transient response / Respuesta ante Carga Variable		Variation 0%-100% or 100%-0%: 30ms, up to 90% of regulation - 60ms, up to 100% regulation.			
AC to Inverter / Modo Online a modo Battery		0 ms			
Waveform / Forma de Onda		Pure Sinewave / Sinusoidal Pura			
DC component / Componente DC		100mV max. (no load / full load) (EN50091-3)			
BYPASS					
Internal Auto bypass / Modo Bypass Automático:		Default Input Range in BYPASS (Configurable): 120V: [85-132Vac] - 230V: [170-264Vac]			
PROTECTION SYSTEMS / SISTEMAS DE PROTECCION					
Surge & Spikes Suppression / Supresión de Picos		(L-N, L-G, N-G) : > 1370 Joules (EN61000-4-5)			
RJ45 Surge Suppression / Supresión picos RJ45		IN/OUT RJ45 socket surge protected / Tomas RJ45 protegidas contra picos			
Output Short-Circuits / Cortocircuitos a la Salida (Online & Battery Mode)		Electronic inverter shortcircuit protection: / Protección contra cortocircuitos en la salida: Output current >280% of nominal current during 100 ms. UPS goes to Fault Mode / Corriente de Salida >280% de corriente nominal por 100 ms. UPS pasa a Modo Falla			
Noise Protection / Protección contra ruido eléctrico		Input filter (TVSS & EMI/RFI) + Output Filter (EMI/RFI)			
AC Input Current / Sobre-Corriente de Entrada AC		Input breaker or fuse / Disyuntor o fusible de entrada			
Battery overcurrent / Sobrecorriente de baterías		Fuse protection for battery line / Protección por fusible en línea interna de baterías (80A)			
Starting Time / Tiempo de Arranque (@ 100% load)		7s - 10s			
EFFICIENCY / EFICIENCIA					
Eco Mode		(100% LOAD: 97%) - (75% LOAD: 96%) - (50% LOAD: 96%) - (25% LOAD: 94%)			
AC Mode / Modo AC (Online)		(100% LOAD: 91%) - (75% LOAD: 91%) - (50% LOAD: 90%) - (25% LOAD: 89%)			
Battery Mode / Modo Batería		(100% LOAD: 90%) - (75% LOAD: 90%) - (50% LOAD: 89%) - (25% LOAD: 88%)			
Inverter Efficiency / Eficiencia Inversor (100%)		(100% LOAD: 97%)			
Max. Internal Loss / Pérdidas internas máx. (BTU)		307	460	546	818
OVERLOAD/ SOBRECARGA					
AC Mode / Modo Normal (to Bypass)		[100%-110%: Warning]	[110%-130%: 5min]	[130%-140%: 30s]	[>140%: 2s] to Bypass
Battery Mode / Modo Batería (to Off)		[100%-110%: Warning]	[110%-130%: 2min]	[130%-140%: 10s]	[>140%: 2s] to Cut-Off
Bypass Mode / Modo Bypass (to Off)		[100%-110%: Warning]	[110%-120%: 30min]	[120%-130%: 10min]	[>130%: 1min]
BATTERIES / BATERIAS					
Technology / Tecnología		YUASA or CSB: Sealed Lead Acid VRLA-AGM / Sellada Sin Mantenimiento VRLA-AGM			
Qty & Type / Cantidad&Tipo		2 x 12V-9AH	3 x 12V-9AH	4 x 12V-9AH	6 x 12V-9AH
Charging VDC / Voltaje del cargador (Floating)		27.4 VDC +/- 1%	41.1 VDC +/- 1%	54.7 VDC +/-1%	82.1 VDC +/-1%
Typical Recharge Time / T. de Recarga		4 Hours for 90% capacity / 4 Horas para recuperar el 90% de carga (*N3)			
Shutdown battery Voltage / Voltaje DC Apagado		10.0 Vdc per battery typical (*N4)			
Charging Amps / Corriente de Carga		Configurable 2A to 8A. // (0.1C min / 0.2C recommended / 0.3C max.)			
Batteries charger / Cargador de baterías		3 steps technology according to DIN41773 / Tecnología de 3 etapas según DIN41773 (Constant Current / Equalizing / Floating)			
Charging Compensation / Compensación Recarga		>30°C : -5mV/°C per cell (Equalization) / -3mV per cell (Floating)			

ONLINE - OPTIMA RT10 (UL/CSA/CE)	1K	1.5K	2K	3K
INDICATORS / INDICADORES				
LCD / Pantalla de Cristal Liquido (LCD)	UPS status, Load level, Battery, Input/Output voltage, Discharge timer, and Fault Estado del UPS, Consumo, Baterías, Voltaje Entrada/Salida, Autonomía, Diagnóstico			
ALARM / ALARMAS				
Beep Alarms / Alarma Sonora:	(Batt. Mode: 1 beep/5s)-(Low batt.: 1 beep/s)-(Overload: 2 beep/s)-(Failure: Continuous)			
OUTLETS: QTY & TYPE / SALIDAS: CANTIDAD Y TIPO				
UPS Model 120Vac (UL) - Total Outlets	8	8	8	9
Std. Outlets / Salidas Estándar (120Vac)	NEMA5-15R*4	NEMA5-15R*4	NEMA5-20R*4	NEMA5-20R*4 + 1 L5-30R
Prog. Outlets / Salidas Prog. (120Vac) (*N5)	NEMA5-15R*4	NEMA5-15R*4	NEMA5-20R*4	NEMA5-20R*4
Input / Entrada (120Vac)	NEMA5-15P	NEMA5-15P	NEMA5-20P	L5-30P
UPS Model 230Vac / Schuko - Total Outlets	2	2	2	2
Std. Outlets / Salidas Estándar (230Vac)	CEE*(Schuko)*1	CEE*(Schuko)*1	CEE*(Schuko)*1	CEE*(Schuko)*1
Prog. Outlets / Salidas Prog. (230Vac) (*N5)	CEE*(Schuko)*1	CEE*(Schuko)*1	CEE*(Schuko)*1	CEE*(Schuko)*1
Input / Entrada (230Vac)	IEC C14 + Schuko plug		IEC C20 + Schuko plug	
PHYSICAL / FISICAS				
W*H*D / Ancho * Altura * Profundidad (mm)	438*88*410 [2U]	438*88*410 [2U]	438*88*510 [2U]	438*88*630 [2U]
Net Weight / Peso Neto (kgs)	12	16	20	28
PHYSICAL / FISICAS: External Battery Pack / Paquete de Baterías Externas				
W*H*D / Ancho*Altura*Profundidad (mm)	438*88*410 [2U]	438*88*410 [2U]	438*88*630 [2U]	438*88*630 [2U]
Net Weight / Peso Neto (kgs)	26	26	31	41
UPS PACKING / EMPAQUE UPS				
Unit Carton W*H*D (mm)	560*180*500	560*180*500	565*200*700	600*200*760
Unit Gross Weight / Peso Bruto (kgs)	14	18	22	30
Half Pallet / Medio Pallet (cm : pcs)	(120*100*107): 20pcs	(120*100*107): 20pcs	(115*72*94): 8pcs	(120*80*96): 8pcs
Full Pallet / Pallet Completo (cm : pcs)	(112*100*215): 40pcs	(112*100*215): 40pcs	(115*72*166): 14pcs	(120*80*96): 14pcs
Container (FCL20' / FCL40')	400pcs / 840pcs	400pcs / 840pcs	210pcs / 420pcs	154pcs / 336pcs
EXT BATT PACKING / EMPAQUE BATERIAS EXTERNAS				
Unit Carton W*H*D (mm)	500*200*600	500*200*600	600*200*760	600*200*760
Gross Weight / Peso Bruto (kgs)	28	28	33	43
OPERATIONAL CONDITIONS / CONDICIONES DE OPERACION				
Temperature / Temperaturas (IEC-62040-3)	Operation / En Operación: (-0 to +40°C)			
Storage Temperature / Temperatura Almacenaje	UPS (w/o batteries): -25 to +55 °C / UPS (with batteries): (-20 to +50°C)			
Humidity / Humedad Relativa (IEC-62040-3)	< 95 % RH (non-condensing / no condensante)			
Audible Noise / Ruido Acústico (ISO 7779)	<50dBA @ 1m			
Protecting Coating / Tropicalizado de Tarjetas	Yes / Si			
Max. Altitude / Altura de Operación Max.	Max. 4.500 meters over sea level / sobre nivel del mar. * Power output de-rate of 1% every 100m (over 1.000m) * Disminución de potencia de 1% cada 100m (sobre los 1.000m)			
SAFETY & STANDARDS / NORMATIVAS Y ESTANDARES				
CE Directives (for 220V & 230V models)	73 / 23 & 93 / 68 (LV Safety) and 89 / 336 (EMC)			
UL & CSA (for 120V models)	UL1778 & CSA C22.2 (certified by cTUVus)			
UPS General Safety / Seguridad General	IEC 62040 - 1			
UPS EMC / Compatibilidad. Electromag.	IEC 62040 - 2			
UPS Tests / Procedimiento Pruebas UPS	IEC 62040 - 3			
ESD / RS / EFT / Surge / CS / F. Mag. Field	EN 61000-4-2 & 4-3 & 4-4 & 4-5 & 4-6 & 4-8 & 4-11			
Low Frequency Signals	IEC / EN 61000 - 2 - 2			
Degree of protection / Grado de Protección	IP21			
Conduction & Radiation	FCC Part 15 Class A ; IEC / EN 62040-2 (Cat 2)			
Safety / Seguridad	CE - IEC/EN 62040-1			
Quality, Enviroment, Others	RoHS, ISO9001 & ISO14001			
Transportation / Transporte	IEC 60068-2-32 (Drop test) / IEC 60068-2-64 (Vibration) / IEC 60068-2-27 (Shock test)			
COMMUNICATION / COMUNICACION				
Serial comm. / Comunicación serial	RS232 & USB (HID compatible)			
Software	Windows family; Linux; Mac OS; VMWare			
SNMP Intelligent Port:	LAN Card SNMP type - optional / Comunicación con LAN mediante SNMP opcional AS400 Interface (optional comm. Card) / Interfaz con AS400 (tarjeta opcional)			

Technical specifications can be modified without further notice or to comply to special requirements / Las especificaciones pueden cambiar sin previo aviso o bajo requerimiento adaptarse a proyectos especiales
(*N1): Output voltage is selectable by LCD / El Voltaje de salida es configurable entre 4 alternativas seleccionables en el LCD

(*N2): Frequency Conversion mode allows to set output frequency at constant value: 50Hz or 60Hz / El modo de Conversión de Frecuencia permite fijar la salida a 50 o 60Hz

(*N3): Recharging time based on previous 10min to 20min full discharging cycles. Tiempo de recarga basado en ciclos previos de descarga profunda de 10 a 20min.

(*N4): Shutdown battery voltage depends of operating conditions (load & runtime) / Voltaje de corte de baterías depende de condiciones operativas (carga y runtime)

(*N5): Backup time for programmable outlets can be configurable (in minutes) / Las salidas programables pueden configurarse en minutos

** Derate Watts capacity to 70% in Frequency Converter Mode. Derate to 70% when output voltage is set to 200Vac or 100Vac

** La capacidad en Watts se degrada y baja hasta el 70% en modo "Convertidor de Frecuencia". También baja al 70% si se ajusta la salida a 200Vac ó 100Vac

Online 1Ph

OPTIMA-RT11 1K/2K/3K & 1.5K-NB/3K-NB

UPS family based on Online Double Conversion Technology, with IGBT in Rectifier and Inverter sections and a strong and reliable Microprocessor-based design (DSP), able to offer state of the art features. Dual design Rack/Tower with rotating LCD and unbeatable Power Factor of 1.0 . All models are 2U height. Improved THDi, THDv, and Power Efficiency features. High performance and reliability thanks a state-of-the-art design based on Microprocessor.



True ON-LINE Double Conversion and IGBT Technology

True ON-LINE Double Conversion Technology and IGBT (both in rectifier and Inverter stages) allows our UPS to generate full time, noiseless, impeccable, and pure sine wave power for your equipment.

Output Power Factor 1.0

Unbeatable Power Factor of 1.0 allows the highest capacity in Watts for each model.

Dual Installation: Rack & Tower

This Series can be installed vertically thanks to support accessories included with each product, but also can be installed in 19" Racks with optional Xmart rails.

Rotating LCD Screen:

From this versatile LCD all parameter of the UPS, as well as AC Line conditions, can be monitored. It is also a very intuitive interface to set up all configurable functions of this state-of-the-art unit. LCD can be rotated 90° to match either Tower or 19" Rack installation.

Shortcircuit protected

This system avoids internal electronic damages triggering automatically when a shortcircuit is detected on its output. Outlets are turned off and an error message is shown on LCD.

Automatic Bypass:

Includes a smart and automatic bypass which activates when the UPS fails to keep your valuable electronic equipment working. Smart bypass also activates when the UPS is overloaded.

Power Generators Compatible

Only True On-Line Double conversion UPS can filter voltage fluctuation and other particularities generated by Power Generators to generate a clean, perfect, and pure sine wave power to feed your installation.

Emergency Power Off (EPO)

Our EPO port can be connected to an Emergency Stop Switch to turn off the UPS output when activated, for safety reasons.

Frequency Converter Function

UPS Output can be configured to 50Hz or 60Hz, regardless the input frequency, as long as it stays in the acceptable range.

Cold Start

This UPS series can be turned on even during power outage.

Conformal Coating

This XSMART equipment features a Conformal Coating treatment on its internal boards and components. Conformal coating is a technique that protects against moisture and corrosive contaminants to ensure stable performance and extend its lifespan in various environments, as long as the requirements of the technical specifications of the equipment are met.

Space Saving and Long Backup Versions

All models (1K to 3K) are 2U height.

This series is divided into two lines: the Standard line, with internal batteries, and the Long Backup line (NB), featuring chargers designed to handle large external battery banks to meet installations that require extended backup times.

Programmable Outputs:

This UPS family offers 2 kind of power outlets: Standard and Programmable. During Battery Mode Programmable outputs can be configured to power off at a given time (previously configured), without causing severe battery discharge.

Auto-Recovery

Auto-Recovery function restarts the UPS automatically when AC Line comes back to normal.

Smart Battery Charger

With a smart battery charger this UPS family can charge batteries in an outstanding time (4 hours up to 90%), offering a better availability than similar products.

Eco-Mode Operation, for power saving

ECO-Mode is a power saving function which reduces electrical consumption over 5%.

Battery Protections for Long Storage

Originally, internal batteries are disconnected to minimize the self-discharge during storage. Batteries can be easily connected by end-user or a technician during first start-up.

Hot Swappable Batteries

Batteries can be safely replaced while UPS is working allowing to perform maintenance procedures without shutting down the system.

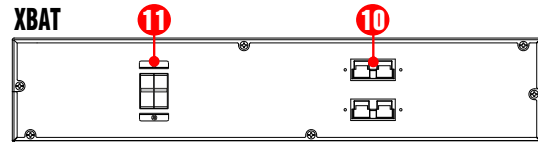
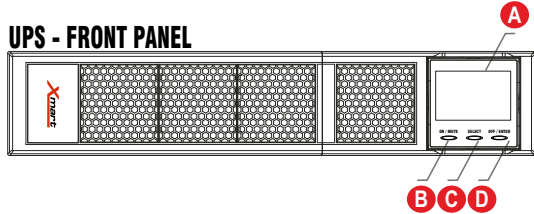
Applications: Small-Sized Businesses Rack or Tower Critical Servers, IT Equipment.



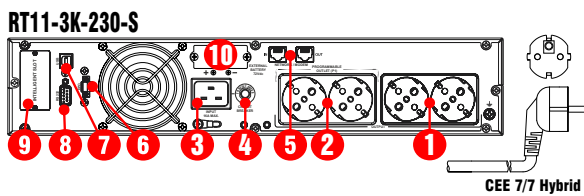
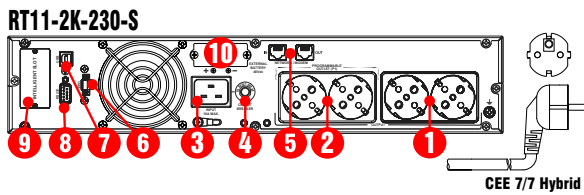
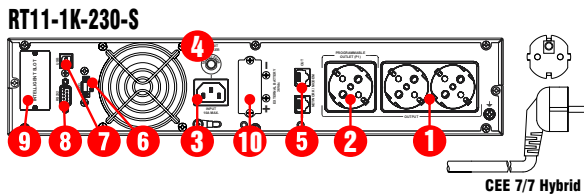
Technical Features / Características Técnicas

- | | | |
|-----------------|---------------------------------|--|
| A.- LCD Screen | 1. Standard Power Outlets | 6. Emergency Power Off (EPO) Connector |
| B.- ON / Mute | 2. Programmable Power Outlets | 7. USB Port |
| C.- Select | 3. AC Input | 8. RS-232 Port |
| D.- OFF / Enter | 4. AC Input Circuit Breaker | 9. Smart Port: SNMP / AS.400 |
| | 5. RJ-45 Connectors (Protected) | 10. External Bat. XBAT Connector |
| | | 11. DC Circuit Breaker |

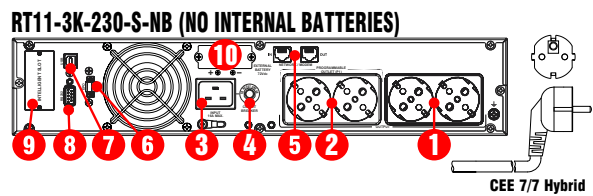
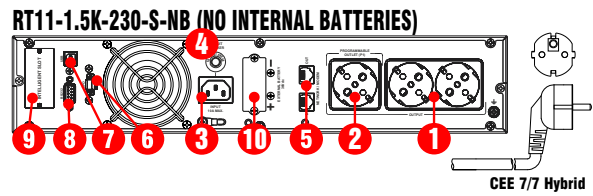
Front And Rear Panel / Panel Frontal y Trasero



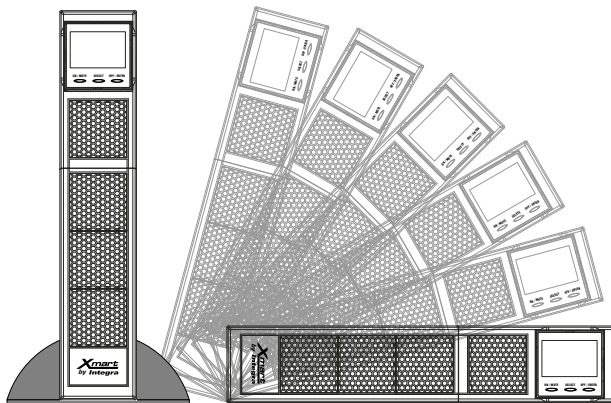
LÍNEA ESTÁNDAR CON BATERÍAS INTERNAS



LÍNEA "NB" PARA LARGA AUTONOMÍA



Dual Rack / Tower (RT) Installation



Accesorios / Accesorios

- LAN Card:
- AS-400:
- RS-485:
- DC Connector:
- Environmental Sensors:

: Included
 : Available Option
 : Non-Available

Technical Features / Características Técnicas

ONLINE - OPTIMA RT11-230S (1/2)	1K	2K	3K									
Capacity / Capacidad	1000VA / 1000W	2000VA / 2000W	3000VA / 3000W									
Output PF / FP de Salida	1.00	1.00	1.00									
INPUT / ENTRADA												
Range / Rango - Vac	100% load:[160-300Vac] - 80% load:[140-300Vac] - 70% load:[120-300Vac] - 60% load:[110-300Vac]											
Frequency Input / Frecuencia de Entrada	50Hz / 60Hz autosensing / detección automática											
Frequency Range / Rango de Frecuencia	40 Hz - 70Hz											
Max. Amps / Corriente Max.	7.6A (RMS)	15.3A (RMS)	22.5A (RMS)									
Phase / Fases	Single phase with ground / (1 fase + Tierra)											
Power Factor / Factor de Potencia	> 0.99 @ 100% Load											
Input Current THDi / THDi de Corriente de Entrada	< 5% @ 100% Load (Nominal Input Voltage / Voltaje Nominal de Entrada)											
Input Powercord / Cable de entrada	6 feet (1.83m) NEMA Plug											
OUTPUT / SALIDA												
Voltage / Voltaje AC	(*N1) 200/208/220/230/240Vac											
Output Regulation / Rango de Salida:	+/-1% (all modes / en todos los modos de operación)											
Frequency / Frecuencia (Batt. Mode)	(*N2) 50 Hz +/- 0.25 Hz - 60Hz +/- 0.3 Hz											
Slew Rate / Seguimiento de Frecuencia	1 Hz / s											
Current Crest Ratio / Factor de Cresta	3:1 max. @ 100% load											
Harmonic Distortion / Dist. Armónica (THDv)	< 2% @ Linear Load / Carga Lineal (100% load) <4% @ No Linear Load / Carga no Lineal (100% load)											
Dynamic Accuracy / Regulación Carga Variable	< +/- 6% in Online (variation 20%-100% & 100%-20% R Load) (online mode)											
Transient response / Respuesta ante Carga Variable	Variation 0%-100% or 100%-0%: 30ms, up to 90% of regulation - 60ms, up to 100% regulation.											
AC to Inverter / Modo Online a modo Battery	0 ms											
Waveform / Forma de Onda	Pure Sinewave / Sinusoidal Pura											
DC component / Componente DC	Output Voltage /1000 max. (no load / full load) (EN50091-3)											
BYPASS												
Internal Auto bypass / Modo Bypass Automático:	Default Input Range in BYPASS (Configurable): [170-264Vac]											
PROTECTION SYSTEMS / SISTEMAS DE PROTECCION												
Surge & Spikes Suppression / Supresión de Picos	(L-N, L-G, N-G) : 1102 Joules (EN61000-4-5)											
RJ45 Surge Suppression / Supresión picos RJ45	IN/OUT RJ45 socket surge protected / Tomas RJ45 protegidas contra picos											
Output Short-Circuits / Cortocircuitos a la Salida (Online & Battery Mode, Temp. <35°C)	Electronic shortcircuit protection: Output current >380% of nominal current during 100 ms. UPS goes to Fault Mode. UPS automatically restarts after shortcircuit max. 3 times within 10min / Protección contra cortocircuitos en la salida: Corriente de Salida >380% de corriente nominal por 100 ms. UPS pasa a Modo Falla. Rearmado automático del UPS luego del cortocircuito. Máx. 3 veces en 10 min											
Noise Protection / Protección contra ruido eléctrico	Input filter (TVSS & EMI/RFI) + Output Filter (EMI/RFI)											
AC Input Current / Sobre-Corriente de Entrada AC	Input breaker and fuse / Disyuntor y fusible de entrada											
Battery overcurrent / Sobrecorriente de baterías	Fuse protection for battery line / Protección por fusible en línea interna de baterías											
Starting Time / Tiempo de Arranque (@ 100% load)	7s - 10s											
EFFICIENCY / EFICIENCIA (25% - 50% - 75% - 100%)												
Eco Mode	89%	93%	95%	96%	93%	96%	96%	97%	95%	96%	97%	97%
AC Mode / Modo AC (Online)	86%	90%	91%	92%	89%	91%	92%	93%	91%	93%	94%	94%
Battery Mode / Modo Batería	84%	88%	88%	86%	87%	90%	90%	90%	91%	92%	92%	91%
Max. Internal Loss / Pérdidas internas máx. (BTU)	273			477			614					
OVERLOAD/ SOBRECARGA (OPERATION TEMPERATURE <35°C, *N3)												
AC Mode / Modo Normal (to Bypass)	[100%-105%: Warning] [105%-110%: 10min] [110%-130%: 1min] [130%-150%: 3s] [>150%: 0.5s] to Bypass											
Battery Mode / Modo Batería (to OFF)	[100%-105%: Warning] [105%-110%: 10min] [110%-130%: 1min] [130%-150%: 3s] [>150%: 0.5s] to Cut-Off											
Bypass Mode / Modo Bypass (to OFF)	[100%-110%: Warning] [110%-120%: 30min] [120%-130%: 10min] [>130%: 1min]											
BATTERIES / BATERIAS												
Technology / Tecnología	YUASA or CSB: Sealed Lead Acid VRLA-AGM / Sellada Sin Mantenimiento VRLA-AGM											
Qty & Type / Cantidad&Tipo	3 x 12V-9AH			4 x 12V-9AH			6 x 12V-9AH					
Charging VDC / Voltaje del cargador (Floating)	41.0 VDC +/- 1%			54.7 VDC +/-1%			82.1 VDC +/--1%					
Typical Recharge Time / T. de Recarga	4 Hours for 95% capacity / 4 Horas para recuperar el 95% de carga (*N4)											
Shutdown battery Voltage / Voltaje DC Apagado	10.0 Vdc per battery typical (*N5)											
Charging Amps / Corriente de Carga	1.5A											
Batteries charger / Cargador de baterías	3 steps technology according to DIN41773 / Tecnología de 3 etapas según DIN41773 (Constant Current, Absortion, & Floating)											
Charging Compensation /Compensación Recarga	>30°C : -5mV/°C per cell (Absortion) / -3mV per cell (Floating)											
External Batt.Connector / Conector de Bat. Externas	Yes / Si											

ONLINE - OPTIMA RT11-230S (2/2)	1K	2K	3K
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INDICATORS / INDICADORES

LCD / Pantalla de Cristal Liquido (LCD) UPS status, Load level, Battery, Input/Output voltage, Discharge timer, and Fault Estado del UPS, Consumo, Baterías, Voltaje Entrada/Salida, Autonomía, Diagnóstico

ALARM / ALARMAS

Beep Alarms / Alarma Sonora: (Batt. Mode: 1 beep/4s)-(Low batt.: 1 beep/s)-(Overload: 2 beep/s)-(Failure: Continuous)-(Bypass: beep/10s)

OUTLETS: QTY & TYPE / SALIDAS: CANTIDAD Y TIPO

Total Number of Outlets / Salidas en Total	CEE*(Schuko)*3	CEE*(Schuko)*4	CEE*(Schuko)*4
Std. Outlets / Salidas Estándar	CEE*(Schuko)*2	CEE*(Schuko)*2	CEE*(Schuko)*2
Prog. Outlets / Salidas Prog. (*N6)	CEE*(Schuko)*1	CEE*(Schuko)*2	CEE*(Schuko)*2
Input / Entrada	IEC 320 C14 (10A) + Schuko plug	IEC 320 C20 (16A) + Schuko plug	IEC 320 C20 (16A) + Schuko plug

PHYSICAL / FISICAS: UPS

W*H*D / Ancho * Altura * Profundidad (mm)	438*88*410 [2U]	438*88*410 [2U]	438*88*550 [2U]
Net Weight / Peso Neto (kgs)	14.0	18.0	28.3

PHYSICAL / FISICAS: External Battery Pack / Paquete de Baterías Externas

W*H*D / Ancho*Altura*Profundidad (mm)	438*88*410 [2U]	438*88*630 [2U]	438*88*630 [2U]
Net Weight / Peso Neto (kgs)	26	31	41

UPS PACKING / EMPAQUE UPS

Unit Carton W*H*D (mm)	560*180*500	565*180*700	600*200*760
Unit Gross Weight / Peso Bruto (kgs)	16	21	31.3
Half Pallet / Medio Pallet (cm : pcs)	(120*100*107): 20pcs	(120*100*105): 10pcs	(120*100*95): 8pcs
Full Pallet / Pallet Completo (cm : pcs)	(120*100*215): 40pcs	(120*100*210): 20pcs	(120*100*190): 16pcs
Container (FCL20' / FCL40')	400pcs / 840pcs	200pcs / 420pcs	160pcs / 336pcs

EXT BATT PACKING / EMPAQUE BATERIAS EXTERNAS

Unit Carton W*H*D (mm)	500*200*600	600*200*760	600*200*760
Gross Weight / Peso Bruto (kgs)	28	33	43

OPERATIONAL CONDITIONS / CONDICIONES DE OPERACION

Operation Temperature / Temperatura de Operación (IEC-62040-3)	0 to +50°C. 20% Derrating >40°C. >50°C Switches to Bypass / 0 a +50°C. Derrateo de 20% >40°C. >50°C Pasa a Bypass
Storage Temperature / Temperatura Almacenaje	UPS (w/o batteries): -25 to +55 °C / UPS (with batteries): (-20 to +50°C)
Humidity / Humedad Relativa (IEC-62040-3)	< 95 % RH (non-condensing / no condensante)
Audible Noise / Ruido Acústico (ISO 7779)	<50dBA @ 1m
Protecting Coating / Tropicalizado de Tarjetas	Yes / Si

Max. Altitude / Altura de Operación Max.

Max. 4.500 meters over sea level / sobre nivel del mar.
(*N7) Power output de-rate of 1% every 100m (over 1.000m)
(*N7) Disminución de potencia de 1% cada 100m (sobre los 1.000m)

SAFETY & STANDARDS / NORMATIVAS Y ESTANDARES

UPS General Safety / Seguridad General	IEC 62040 - 1: 2017
UPS EMC / Compatibilidad. Electromag.	IEC 62040 - 2: 2016
UPS Tests / Procedimiento Pruebas UPS	IEC 62040 - 3
ESD / RS / EFT / Surge / CS / F. Mag. Field	EN 61000-4-2 (Lev. 3), 4-3 (Lev. 3), 4-4 (Lev. 4), 4-5 (Lev. 4), 4-6 (Lev. 3), 4-8
Low Frequency Signals	IEC / EN 61000 - 2 - 2
Input Harmonic Curr. / Harmónicos Corr. de Entrada	IEC / EN 61000 - 3 - 2
Degree of protection / Grado de Protección	IP20
EMI	IEC / EN 62040-2 (Cat 2)
Quality, Enviroment, Others	RoHS, ISO9001 & ISO14001
Transportation / Transporte	IEC 60068-2-32 (Drop Test) / IEC 60068-2-64 (Vibration Test) / IEC 60068-2-27 (Shock Test)

COMMUNICATION / COMUNICACION

Serial comm. / Comunicación serial	RS232 & USB (HID compatible)
Software	Windows family; Linux; Mac OS; VMWare
SNMP Intelligent Port:	LAN Card SNMP type - optional / Comunicación con LAN mediante SNMP opcional AS400, ModBus Interface (optional comm. Card) / Interfaz con AS400, ModBus (tarjeta opcional)

Technical specifications can be modified without further notice or to comply to special requirements / Las especificaciones pueden cambiar sin previo aviso o bajo requerimiento adaptarse a proyectos especiales

(*N1): Output voltage is selectable by LCD / El Voltaje de salida es configurable desde el LCD

(*N2): Frequency Conversion mode allows to set output frequency at constant value: 50Hz or 60Hz / El modo de Conversión de Frecuencia permite fijar la salida a 50 o 60Hz

(*N3): For Temperature >35°C, times are reduced by half / Para temperatura >35°C los tiempos se reducen a la mitad.

(*N4): Recharging time based on previous 10min to 20min full discharging cycles (Internal Batt. Only) / Tiempo de recarga basado en ciclos previos de descarga profunda de 10 a 20min (Solo con Bat. internas)

(*N5): Shutdown battery voltage depends of operating conditions (load & runtime) / Voltaje de corte de baterías depende de condiciones operativas (carga y runtime)

(*N6): Backup time for programable outlets can be configurable (in minutes) / Las salidas programables pueden configurarse en minutos

(*N7): Derate Watts capacity to 80% in Frequency Converter Mode and when output voltage is set to 200Vac or 100Vac / La capacidad en Watts se degrada a 80% en modo Convertidor de Frecuencia y cuando se ajusta la salida a 200/208Vac

Technical Features / Características Técnicas

ONLINE - OPTIMA RT11-230S-NB (1/2)	1.5K-NB	3K-NB						
Capacity / Capacidad	1500VA / 1500W	3000VA / 3000W						
Output PF / FP de Salida	1.00	1.00						
INPUT / ENTRADA								
Range / Rango - Vac	100% load:[160-300Vac] - 80% load:[140-300Vac] - 70% load:[120-300Vac] - 60% load:[110-300Vac]							
Frequency Input / Frecuencia de Entrada	50Hz / 60Hz autosensing / detección automática							
Frequency Range / Rango de Frecuencia	40 Hz - 70Hz							
Max. Amps / Corriente Max.	11.5A (RMS)	22.5A (RMS)						
Phase / Fases	Single phase with ground / (1 fase + Tierra)							
Power Factor / Factor de Potencia	> 0.99 @ 100% Load							
Input Current THDi / THDi de Corriente de Entrada	< 5% @ 100% Load (Nominal Input Voltage / Voltaje Nominal de Entrada)							
Input Powercord / Cable de entrada	6 feet (1.83m) NEMA Plug							
OUTPUT / SALIDA								
Voltage / Voltaje AC	(*N1) 200/208/220/230/240Vac							
Output Regulation / Rango de Salida:	+/-1% (all modes / en todos los modos de operación)							
Frequency / Frecuencia (Batt. Mode)	(*N2) 50 Hz +/- 0.25 Hz - 60Hz +/- 0.3 Hz							
Slew Rate / Seguimiento de Frecuencia	1 Hz / s							
Current Crest Ratio / Factor de Cresta	3:1 max. @ 100% load							
Harmonic Distortion / Dist. Armónica (THDv)	< 2% @ Linear Load / Carga Lineal (100% load) < 4% @ No Linear Load / Carga no Lineal (100% load)							
Dynamic Accuracy / Regulación Carga Variable	< +/- 6% in Online (variation 20%-100% & 100%-20% R Load) (online mode)							
Transient response / Respuesta ante Carga Variable	Variation 0%-100% or 100%-0%: 30ms, up to 90% of regulation - 60ms, up to 100% regulation.							
AC to Inverter / Modo Online a modo Battery	0 ms							
Waveform / Forma de Onda	Pure Sinewave / Sinusoidal Pura							
DC component / Componente DC	Output Voltage /1000 max. (no load / full load) (EN50091-3)							
BYPASS								
Internal Auto bypass / Modo Bypass Automático:	Default Input Range in BYPASS (Configurable): [170-264Vac]							
PROTECTION SYSTEMS / SISTEMAS DE PROTECCION								
Surge & Spikes Suppression / Supresión de Picos	(L-N, L-G, N-G) : 1102 Joules (EN61000-4-5)							
RJ45 Surge Suppression / Supresión picos RJ45	IN/OUT RJ45 socket surge protected / Tomas RJ45 protegidas contra picos							
Output Short-Circuits / Cortocircuitos a la Salida (Online & Battery Mode, Temp. <35°C)	Electronic shortcircuit protection: Output current >380% of nominal current during 100 ms. UPS goes to Fault Mode. UPS automatically restarts after shortcircuit max. 3 times within 10min / Protección contra cortocircuitos en la salida: Corriente de Salida >380% de corriente nominal por 100 ms. UPS pasa a Modo Falla. Rearmado automático del UPS luego del cortocircuito. Máx. 3 veces en 10 min							
Noise Protection / Protección contra ruido eléctrico	Input filter (TVSS & EMI/RFI) + Output Filter (EMI/RFI)							
AC Input Current / Sobre-Corriente de Entrada AC	Input breaker and fuse / Disyuntor y fusible de entrada							
Battery overcurrent / Sobrecorriente de baterías	Fuse protection for battery line / Protección por fusible en línea interna de baterías							
Starting Time / Tiempo de Arranque (@ 100% load)	7s - 10s							
EFFICIENCY / EFICIENCIA (25% - 50% - 75% - 100%)								
Eco Mode	89%	93%	95%	96%	95%	96%	97%	97%
AC Mode / Modo AC (Online)	86%	90%	91%	92%	91%	93%	94%	94%
Battery Mode / Modo Batería	84%	88%	88%	86%	91%	92%	92%	91%
Max. Internal Loss / Pérdidas internas máx. (BTU)	273				614			
OVERLOAD/ SOBRECARGA (OPERATION TEMPERATURE <35°C, *N3)								
AC Mode / Modo Normal (to Bypass)	[100%-105%: Warning] [105%-110%: 10min] [110%-130%: 1min] [130%-150%: 3s] [>150%: 0.5s] to Bypass							
Battery Mode / Modo Batería (to OFF)	[100%-105%: Warning] [105%-110%: 10min] [110%-130%: 1min] [130%-150%: 3s] [>150%: 0.5s] to Cut-Off							
Bypass Mode / Modo Bypass (to OFF)	[100%-110%: Warning] [110%-120%: 30min] [120%-130%: 10min] [>130%: 1min]							
BATTERIES / BATERIAS								
Technology / Tecnología	3 x 12V (Series / En serie)				6 x 12V (Series / En serie)			
Qty & Type / Cantidad&Tipo	Depends on selected Battery array / Depende del arreglo de baterías seleccionado							
Charging VDC / Voltaje del cargador (Floating)	41.0 VDC +/- 1%				82.1 VDC +/-1%			
Typical Recharge Time / T. de Recarga	Depends on the Battery array / Depende del arreglo de baterías usado							
Shutdown battery Voltage / Voltaje DC Apagado	10.0 Vdc per battery typical (*N4)							
Charging Amps / Corriente de Carga	Configurable 1A, 2A, 4A, 6A, 8A (Default: 8A) // (0.1C min / 0.2C recommended / 0.3C max.)							
Batteries charger / Cargador de baterías	3 steps technology according to DIN41773 / Tecnología de 3 etapas según DIN41773 (Constant Current, Absortion, & Floating)							
Charging Compensation /Compensación Recarga	>30°C : -5mV/°C per cell (Absortion) / -3mV per cell (Floating)							

ONLINE - OPTIMA RT11-230S-NB (2/2)	1.5K-NB	3K-NB
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INDICATORS / INDICADORES

LCD / Pantalla de Cristal Liquido (LCD) UPS status, Load level, Battery, Input/Output voltage, Discharge timer, and Fault
Estado del UPS, Consumo, Baterías, Voltaje Entrada/Salida, Autonomía, Diagnóstico

ALARM / ALARMAS

Bleep Alarms / Alarma Sonora: (Batt. Mode: 1 beep/4s)-(Low batt.: 1 beep/s)-(Overload: 2 beep/s)-(Failure: Continuous)-(Bypass: beep/10s)

OUTLETS: QTY & TYPE / SALIDAS: CANTIDAD Y TIPO

Total Number of Outlets / Salidas en Total	CEE*(Schuko)*3	CEE*(Schuko)*4
Std. Outlets / Salidas Estándar	CEE*(Schuko)*2	CEE*(Schuko)*2
Prog. Outlets / Salidas Prog. (*N5)	CEE*(Schuko)*1	CEE*(Schuko)*2
Input / Entrada	IEC 320 C14 (10A) + Schuko plug	IEC 320 C20 (16A) + Schuko plug

PHYSICAL / FISICAS: UPS

W*H*D / Ancho * Altura * Profundidad (mm)	438*88*410 [2U]	438*88*510 [2U]
Net Weight / Peso Neto (kgs)	7.1	9.1

PHYSICAL / FISICAS: External Battery Pack / Paquete de Baterías Externas

W*H*D / Ancho*Altura*Profundidad (mm)	438*88*410 [2U]	438*88*630 [2U]
Net Weight / Peso Neto (kgs)	26	41

UPS PACKING / EMPAQUE UPS

Unit Carton W*H*D (mm)	560*180*500	565*180*700
Unit Gross Weight / Peso Bruto (kgs)	9.1	11.1
Half Pallet / Medio Pallet (cm : pcs)	(120*100*105): 20pcs	(120*100*105): 10pcs
Full Pallet / Pallet Completo (cm : pcs)	(120*100*210): 40pcs	(120*100*210): 20pcs
Container (FCL20' / FCL40')	400pcs / 840pcs	200pcs / 420pcs

EXT BATT PACKING / EMPAQUE BATERIAS EXTERNAS

Unit Carton W*H*D (mm)	500*200*600	600*200*760
Gross Weight / Peso Bruto (kgs)	28	43

OPERATIONAL CONDITIONS / CONDICIONES DE OPERACION

Operation Temperature / Temperatura de Operación (IEC-62040-3)	0 to +50°C. 20% Derrating over 40°C. Over 50°C Switches to Bypass / 0 a +50°C. Derrateo de 20% sobre 40°C. Sobre 50°C Pasa a Bypass
Storage Temperature / Temperatura Almacenaje	UPS (w/o batteries): -25 to +55 °C / UPS (with batteries): -20 to +50°C
Humidity / Humedad Relativa (IEC-62040-3)	< 95 % RH (non-condensing / no condensante)
Audible Noise / Ruido Acústico (ISO 7779)	<50dBA @ 1m
Protecting Coating / Tropicalizado de Tarjetas	Yes / Si

Max. Altitude / Altura de Operación Max.

Max. 4.500 meters over sea level / sobre nivel del mar.
(*N6) Power output de-rate of 1% every 100m (over 1.000m)
(*N6) Disminución de potencia de 1% cada 100m (sobre los 1.000m)

SAFETY & STANDARDS / NORMATIVAS Y ESTANDARES

UPS General Safety / Seguridad General	IEC 62040 - 1: 2017
UPS EMC / Compatibilidad. Electromag.	IEC 62040 - 2: 2016
UPS Tests / Procedimiento Pruebas UPS	IEC 62040 - 3
ESD / RS / EFT / Surge / CS / F. Mag. Field	EN 61000-4-2 (Lev. 3), 4-3 (Lev. 3), 4-4 (Lev. 4), 4-5 (Lev. 4), 4-6 (Lev. 3), 4-8
Low Frequency Signals	IEC / EN 61000 - 2 - 2
Input Harmonic Curr. / Harmónicos Corr. de Entrada	IEC / EN 61000 - 3 - 2
Degree of protection / Grado de Protección	IP20
EMI	IEC / EN 62040-2 (Cat 2)
Quality, Enviroment, Others	RoHS, ISO9001 & ISO14001
Transportation / Transporte	IEC 60068-2-32 (Drop Test) / IEC 60068-2-64 (Vibration Test) / IEC 60068-2-27 (Shock Test)

COMMUNICATION / COMUNICACION

Serial comm. / Comunicación serial	RS232 & USB (HID compatible)
Software	Windows family; Linux; Mac OS; VMWare
SNMP Intelligent Port:	LAN Card SNMP type - optional / Comunicación con LAN mediante SNMP opcional AS400, ModBus Interface (optional comm. Card) / Interfaz con AS400, ModBus (tarjeta opcional)

Technical specifications can be modified without further notice or to comply to special requirements / Las especificaciones pueden cambiar sin previo aviso o bajo requerimiento adaptarse a proyectos especiales

(*N1): Output voltage is selectable by LCD / El Voltaje de salida es configurable desde el LCD

(*N2): Frequency Conversion mode allows to set output frequency at constant value: 50Hz or 60Hz / El modo de Conversión de Frecuencia permite fijar la salida a 50 o 60Hz

(*N3): For Temperature >35°C, times are reduced by half / Para temperatura >35°C los tiempos se reducen a la mitad.

(*N4): Shutdown battery voltage depends of operating conditions (load & runtime) / El Voltaje de corte de baterías depende de condiciones operativas (carga y runtime)

(*N5): Backup time for programmable outlets can be configurable (in minutes) / Las salidas programables pueden configurarse en minutos

(*N6): Derate Watts capacity to 80% in Frequency Converter Mode and when output voltage is set to 200Vac or 100Vac / La capacidad en Watts se degrada a 80% en modo Convertidor de Frecuencia y cuando se ajusta la salida a 200/208Vac

Online 1Ph

OPTIMA-RT10 6K/10K (UL)

Robust and reliable UPS with True ONLINE Double Conversion Technology based on IGBT in rectifier and inverter stages. With improved output power factor (1.0). Designed for Tower and 19" Rack installations. Available with 220/230/240 Vac output. Optional: ISOTX Transformer Module, with 2x 120V isolated output.



True ON-LINE Double Conversion and IGBT Technology

True ON-LINE Double Conversion Technology and IGBT (both in rectifier and Inverter stages) allows our UPS to generate full time, noiseless, impeccable, and pure sine wave power for your equipment.

Dual Installation: Rack & Tower

Designed for vertical installation (Tower) as well as 19" RACK de 19". Power module high is 2U for 6KVA model and 3U para 10KVA model. Batteries come in a separated 3U module

ISOTX Module (OPTIONAL)

ISOTX is an optional module to generate 2 isolated outputs 110/115/120Vac. These outputs can be used individually or adding each other.

Parallel operation

Up to 3 units can be installed in parallel either to grow in capacity or for redundancy purposes.

Shortcircuit protected

This system avoids internal electronic damages triggering automatically when a shortcircuit is detected on its output. Outlets are turned off and an error message is shown on LCD.

Automatic Bypass:

Our UPS includes an internal static, smart, and automatic bypass which activates when the UPS fails or when it is overloaded. For maintenance purposes an Xmart external bypass can be installed to support this unit.

Emergency Power Off (EPO)

This feature allows to turn off the UPS output activating an emergency external switch, which can be wired to EPO port located on the rear panel of the UPS

Conformal Coating

This XSMART equipment features a Conformal Coating treatment on its internal boards and components. Conformal coating is a protection against moisture and corrosive contaminants to ensure stable performance and extend its lifespan in various environments, as long as technical specifications requirements of the equipment are met.

Frequency Converter Function

Output frequency of the UPS can be configured to 50Hz or 60Hz, regardless the input frequency, as long as it stays in the acceptable range.

Expandable Backup

External battery packs can be connected to this UPS to offer longer backup. Battery Packs are easily connected to UPS thanks to a DC connector located on the UPS rear panel. Xmart battery packs include the DC Cable for a safe operation. battery packs can be plugged in and out without turning off the UPS.

Cold Start

This UPS series can be turned on even during power outage.

Auto-Recovery

Auto-Recovery function restarts the UPS automatically when AC Line comes back.

Smart Battery Charger

With a smart battery charger this UPS family can charge batteries in an outstading time (2-4 hours up to 90%), offering a better availability than similar products.

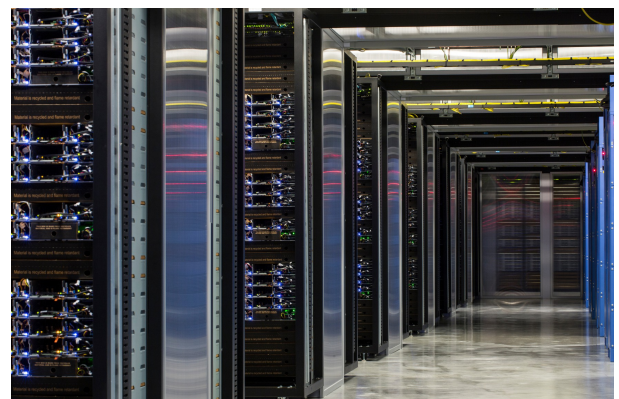
Power Generators Compatible

Only True On-Line Double conversion UPS can filter voltage fluctuation and other particularities generated by Power Generators to generate a clean, perfect, and pure sine wave power to feed your installation.

Eco-Mode Operation, for power saving

ECO-Mode is a power saving function which reduces electrical consumption over 5%.

Applications: Medium-Sized Businesses Data Centers, Servers, Multiple PC.



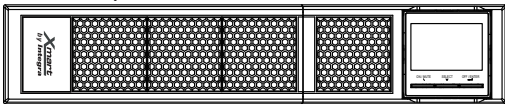
Technical Features / Características Técnicas

- | | | |
|--|--|-------------------------------------|
| 1.- AC Input/Output Terminal Block | 6.- Smart Port (SNMP) | 11.- ISOTX Temperature signal port |
| 2.- ISOTX Temperature signal input | 7.- RS232 & USB Ports | 12.- ISOTX Module Fan (opcional) |
| 3.- AC input Breaker | 8.- Emergency Power Off (EPO) | 13.- ISOTX Module Input (opcional) |
| 4.- External Bypass status Connector | 9.- Shared current port (PARALLEL) | 14.- ISOTX Module Output (opcional) |
| 5.- External Battery (XBAT) DC Connector | 10.- Parallel control ports (PARALLEL) | |

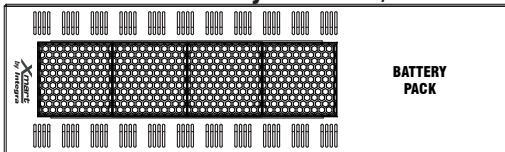
Front and Rear Panels

FRONT

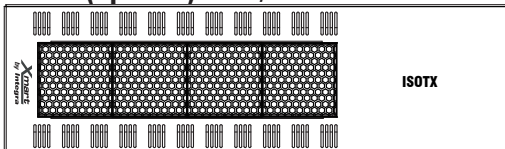
UPS 06K / 10K



XBAT: External Battery Pack 06K / 10K

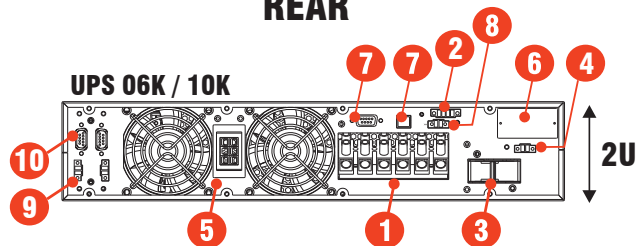


ISOTX (Optional) 06K / 10K

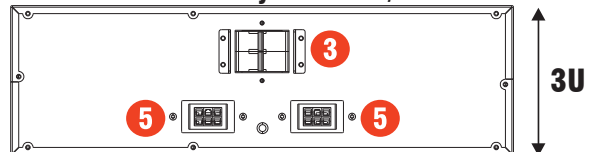


REAR

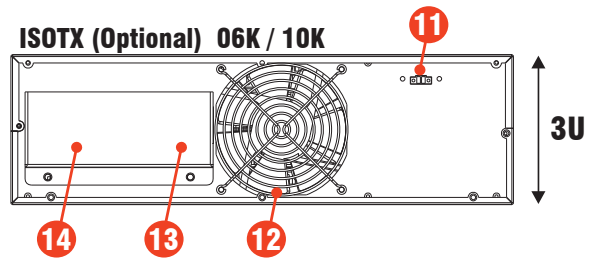
UPS 06K / 10K



XBAT: External Battery Pack 06K / 10K



ISOTX (Optional) 06K / 10K



Accesories / Accesorios

- | | | |
|-----------------------|---------------------|-----------------------------------|
| Dry Contacts: ✓ | SNMP: ✓ | Parallel Function: <i>i</i> |
| RS-485: ✓ | LAN Card: ✓ | ISOTX: ✓ |
| RS-232: ✓ | T/H Sensor: ✓ | |

- | | |
|----------|--------------------|
| <i>i</i> | : Included |
| ✓ | : Option Available |
| ○ | : Non-Available |

Technical Features / Características Técnicas

ONLINE - OPTIMA RT10 (UL)	(RT10 6KVA-230)	(RT10 10KVA-230)
Capacity / Capacidad	6.000VA / 6.000W	10.000VA / 10.000W
INPUT / ENTRADA		
Input Voltage / Voltaje de Entrada	Rated Input / Entrada Nominal: 208/220/230/240 Vac (single phase: L-N-G)	
Input Range / Rango de Entrada	(110Vac-300Vac) @ 0-60% load (140Vac-300Vac) @ 61-80% load (176Vac-300Vac) @ 81-100% load	
Frequency Range / Rango Frecuencia	40 - 70 Hz	
Max. Current / Corriente Max.	30A (RMS)	50A (RMS)
Inrush Current / Corriente Pico max.	200A max.	200A max.
Phase / Fases	1 Phase+Neutral+Ground / 1 Fase+Neutro+Tierra	
Power Factor / Factor de Potencia	> 0.99 @ 100%load	
THDi	<4% @ 100%load / < 6% @ 50%load	
Slew Rate / Seguimiento Frecuencia	1 Hz / s	
OUTPUT / SALIDA		
Model 230:	1 phase (L-N): 208/220/230/240Vac	
Model ISOTX:	Dual Isolated Outputs: (L-N): 104/110/115/120Vac	
Voltage Regulation / Regulación Salida	+/- 1%	
Frequency / Frecuencia (Batt. Mode)	50 Hz +/- 0.1 Hz / 60 Hz +/- 0.1 Hz (auto sense)	
Current Crest Ratio / Factor de Cresta	3:1 @ 100% load.	
THDv	< 1% @ Linear Load / Carga Lineal <4 @ No Linear Load / Carga no Lineal	
Dynamic Accuracy / Regulación Carga Variable	<5% (load variations 20%-100% & 100%-20% R Load)	
Operating mode transient Response	Comply to IEC 62040-3 (Class 1)	
Dynamic Load Transient Response	Comply to IEC 62040-3 (Class 1)	
Recovery Time after Non-Linear Load Step	100ms (IEC 62040-3, ref Non-linear load)	
Transfer Times / Tiempos Transfer.	0 ms	
Waveform / Forma de Onda	Sine Wave / Sinusoidal Pura	
DC offset / Componente DC en la salida	50 mV	
Power Outlets / Salidas	Terminal Block / Regleta de Conexión	
OVERLOAD / SOBRECARGA		
AC Mode / Modo Normal	[100%-110%: 10m] [110%-130%: 1m] [>130% : 1s] to Bypass	
Battery Mode / Modo Batería	[100%-110%: 30s] [110%-130%: 10s] [>130% : 1s] to Cut-Off	
Bypass Mode / Modo Bypass	[100%-130%: Warning] [>130% : 1min] to Cut-Off	
EFFICIENCY / EFICIENCIA @ (100%/75%/50%/25%) R LOAD		
Eco Mode / Modo ECO	MODEL 230V: 99% / 99% / 98% / 97% - MODEL ISOTX: 95% / 95% / 94% / 93%	
AC Mode / Modo AC	MODEL 230V: 94% / 93% / 87% / 83% - MODEL ISOTX: 90% / 89% / 83% / 80%	
Battery Mode / Modo Batería	MODEL 230V: 92% / 91% / 85% / 81% - MODEL ISOTX: 88% / 87% / 82% / 81%	
Inverter Efficiency / Eficiencia Inversor	97% Inverter (@ 100 LOAD)	
BTU @ 100% LOAD	1228	2046
PROTECTIONS / PROTECCIONES		
Surge / Contra Picos	All lines protection / Protección en todas las líneas (L-N, L-G, N-G): > 650J (10/1000us)	
Short Circuit / Cortos en la salida	Electronic inverter shortcircuit protection / Protección del inversor contra cortocircuitos: <100ms: Current limited to max. capacity / Corriente limitada al 100% de Capacidad >=100ms: Output shutdown. UPS goes to Fault Mode / UPS apaga salida y pasa a Modo Falla	
Input Current / Corriente de Entrada	Fuse protected / protegido por fusibles	
Starting Time / Tiempo de Arranque	7s - 10s (@ 100% load)	

ONLINE - OPTIMA RT10 (UL)	(RT10 6KVA-230)	(RT10 10KVA-230)
BATTERIES / BATERIAS		
Technology / Tecnología	YUASA or CSB: Sealed Lead Acid VRLA-AGM / Sellada Sin Mantenimiento VRLA-AGM	
Each XBAT / Cada XBAT	12V/7AH x 20 pcs (20pcs x 1: 240VDC)	12V/9AH x 20 pcs (20pcs x 1: 240VDC)
Recharge Time / Tiempo Recarga 1 XBAT	3.5 H (90%, Typical)	
Extra XBAT / XBAT adicionales	Depending on external battery configuration / Según cantidad de baterías adicionales	
Hot-Swap / Intercambiables en Caliente	Yes / Si	
Batteries charger / Cargador de baterías	3 steps technology according to DIN41773 / Tecnología de 3 etapas según DIN41773 (Constant Current / Equalizing / Floating)	
Charging Amps / Corriente de Carga	1A, 2A, 3A & 4A Configurable // (0.1C min / 0.2C recommended)	
Recharging Time / Tiempo Recarga (90%)	1h - 2h (*N5)	
Charging VDC / Voltaje Cargador (Floating)	273.0 VDC	
Temp. Compensation / Compensación Temp.	120mV/°C per battery (Temp: 25°C-50°C)	
Batt. Management / Manejo de Baterías	Optimiced Battery Management (OBM) / Manejo Optimizado de Baterías (OBM)	
Shutdown battery Voltage / Voltaje DC Apag.	214VDC (0-30% load) / 204VDC (30-70% load) / 192VDC (load >70%)	
INDICATORS / INDICADORES		
LCD / Pantalla LCD	UPS status, Load level, Battery, Input/Output voltage, Discharge timer, and Fault conditions Estado del UPS, Consumo, Baterías, Voltaje Entrada-Salida, Tiempo Descarga, Diagnóstico	
ALARM / ALARMAS		
Beep Alarm / Alarma sonora:	Battery Mode, Low battery, Overload, UPS Failure / Modo Batería, Baja batería, Sobrecargas, Falla	
PRODUCT SIZE & WEIGHT / DIMENSIONES Y PESOS DEL EQUIPO		
UPS (DxWxH)	610x438x88 mm	610x438x88 mm
XBAT (DxWxH)	715x438x133 mm	715x438x133 mm
ISOTX (DxWxH)	607x438x133 mm	607x438x133 mm
UPS (Net weight / Kg)	17	20
XBAT (Net weight / Kg)	47	53
ISOTX (Net weight / Kg)	62	92
PACKING / EMPAQUE		
UPS (DxWxH)	700x565x240 mm	700x565x240 mm
XBAT (DxWxH)	870x580x250 mm	870x580x250 mm
ISOTX (DxWxH)	870x580x250 mm	870x580x250 mm
UPS (Gross weight / Kg)	19	22
XBAT (Gross weight / Kg)	52	58
ISOTX (Gross weight / Kg)	67	97
OPERATING / AMBIENTALES		
Humidity / Humedad	<95 % (non-condensing / no condensante)	
Temperature / Temperatura	0 to 40 °C	
Storage Temp / Temp. Almacenaje	-40°C to +60°C (without batteries) // -15°C to +40°C (with batteries)	
Noise Level / Ruido Producido	< 55dB @ 1m	
Protecting Coating / Tropicalizado de Tarjetas	Yes / Si	
Max. Altitude / Altura de Operación Max.	4.500 meters over sea level / sobre nivel del mar. * Power output de-rate of 1% every 100m (over 1.000m)	
COMMUNICATION / COMUNICACION		
Smart RS-232 & USB ports	Windows family, Linux, and MAC	
Intelligent Port (SNMP)	Optional LAN card / Comunicación LAN Ethernet opcional AS400 optional interface board / Interfaz AS400 - opcional	
SAFETY / ESTÁNDARES		
Safety / Seguridad	CE / 62040-1 // UL1778 & CSA C22.2	
EMC	62040-2 & FCC Part 15, Class A	
Others / Otros	Check in user manual (section 2) / En manual de usuario, sección 2	
Quality and Enviroment	RoHS / ISO9001 & ISO14001	
Degree of protection / Grado de Protección	IP 21	

Note 1: Max. output power is derated to 90% when output voltage is set to 208V. La potencia máx. de salida se reduce al 90% si se fija voltaje en 208V

Note 2: Max. output power is derated to 70% when CF function is activated. La potencia máxima de salida se reduce al 70% si se activa la función CF.

Note 3: If installed over 1.000m altitude, output power is derated 1%/100m over 1.000m. La salida se reduce en 1% cada 100m, sobre los 1.000msnm.

Note 4: Bypass mode is automatically prohibited when CF function is activated. El modo bypass se anula automáticamente cuando se activa la función CF.

(*N5): Recharging time based on previous 10min to 20min full discharging cycles. Tiempo de recarga basado en ciclos previos de descarga profunda de 10 a 20min.

Online 3ph/3ph - 3ph/1ph

OPTIMA-33-RT10 05K TO 20K

Online de Doble Conversion UPS with Output PF 1.0 and IGBT technology in rectifier and inverter stages. Three-Phase Input and Output, Output can be configured as Single-Phase. Designed to offer the best protection to critical systems requiring a high level of power protection and high operational availability. Dual installation Rack & Tower, simply the best choice for any application.



Available for Three-Phase: 208, 400, and 480V Installations

Three-Phase Input and Output (3 Phases + Neutral + Ground) and models to operate in 208/120V (05K to 20K) and 400/230V (10K to 20K) systems.

Flexibility & Versatility

Standard UPS Output can be configured to operate as Single-Phase, turning these 3/3 UPS into 3/1 UPS. This setting is reserved for XSMART Technical Service.

IGBT + ON-LINE Doble Conversion Technology

New generation On Line Doble Conversion Technology offers high reliability and strength as well as outstanding features. DSP signal control system and an efficient rectifier/inverter system based in IGBT technology give exceptional attributes to this product family and an input power factor over 0.99 at full load.

Touch Screen

From this versatile 3.5 inches color touch screen LCD, all UPS parameter, as well as AC Line conditions, can be monitored. It is also a very intuitive interface to set up all configurable functions of this avant-garde unit.

Communication (USB - RS232 - SNMP) & Software de Control

Several communications options are available: USB, RS232 and Smart SNMP port. Smart SNMP port supports LAN cards, RS485 cards, or dry contact cards (AS400).

Multiple Bypass System

Includes an internal automatic bypass which activates if UPS fails or gets overloaded. This keeps the system powered and working while the situation is solved. Besides, UPS includes control port for external bypass switch for major maintenance.

Eco-Mode Operation, for power saving

Eco-Mode is a power saving function which reduces electrical consumption over 5%. In this mode the load is powered directly by AC Line as long as it keeps between pre-configured limits. Otherwise, the UPS goes to regular ONLINE mode. During power outage, the UPS goes into Battery Mode to keep your equipment working perfectly safe.

Conformal Coating

This XSMART equipment features a Conformal Coating treatment on its internal boards and components. Conformal coating is a protection against moisture and corrosive contaminants to ensure stable performance and extend its lifespan in various environments, as long as technical specifications requirements of the equipment are met.

Parallel Operation

Up to 4 units can be installed in parallel either to grow in capacity or for redundancy purposes (N+1). 2 UPS in parallel systems can operate either with one shared battery pack, or with separate battery packs, according to installation requirements.

Emergency Power Off (EPO)

EPO port to connect an emergency switch which turns off the UPS output when activated.

High Energy Efficiency

One of the main features of this family is high energy efficiency (>94%). This generates high operational savings and contributes with the environment.

Expandable Backup

External battery packs (as many as you need) can be connected to this UPS to offer longer backup.

Power Generators Compatible

Only True On-Line Double conversion UPS can filter voltage fluctuation and other particularities generated by Power Generators to generate a clean, perfect, and pure sine wave power to feed your installation.

Smart Battery Charger

With a smart battery charger this UPS family can charge batteries in an outstanding time (2-4 hours up to 90%), offering a better availability than similar products. A smart 3 stages charging algorithm, along with temperature compensation improves battery lifespan.

Applications: IT Systems, Industrial Installations, etc.



Technical Features / Características Técnicas

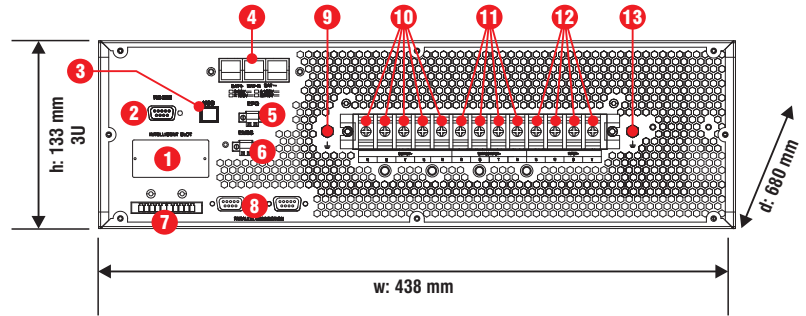
- 1.- SNMP Smart Port
- 2.- RS232 Port
- 3.- USB Port
- 4.- External Battery Connector
- 5.- EPO Connector (Off)

- 6.- External Maintenance Bypass Switch Port
- 7.- Shared Current Connectors
- 8.- Parallel Control Connectors
- 9.- Input Ground Terminal

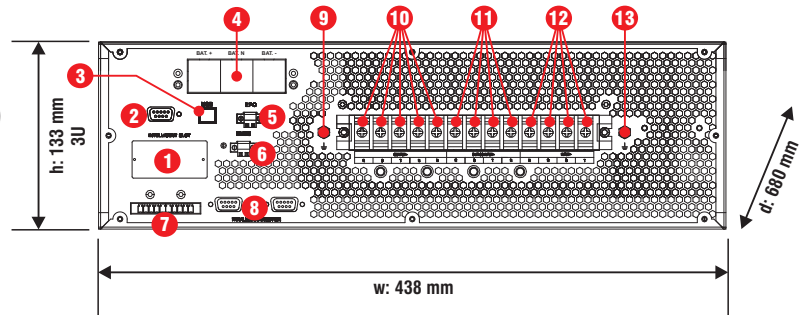
- 10.- AC Output Terminals
- 11.- Bypass Input Terminals
- 12.- AC Input Terminals
- 13.- Output Ground Terminal

Rear View / Vista Trasera

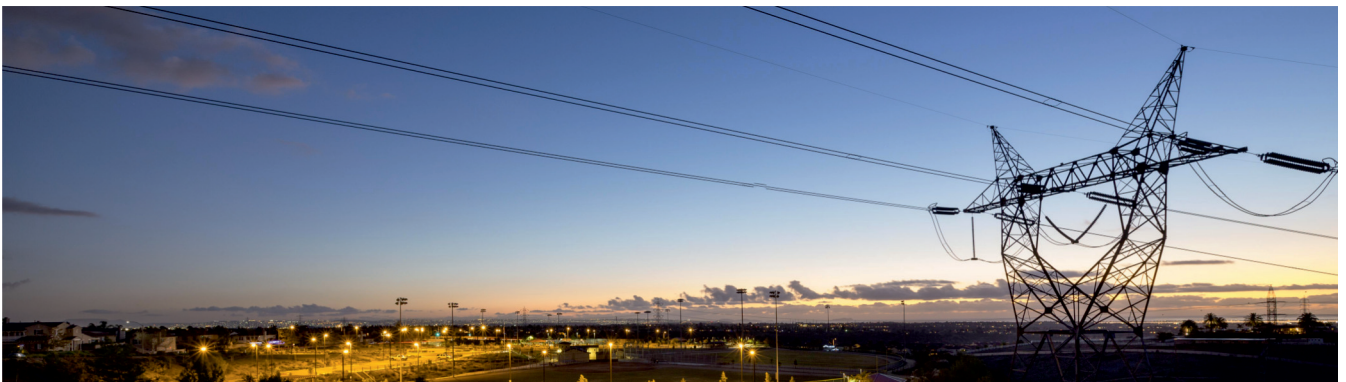
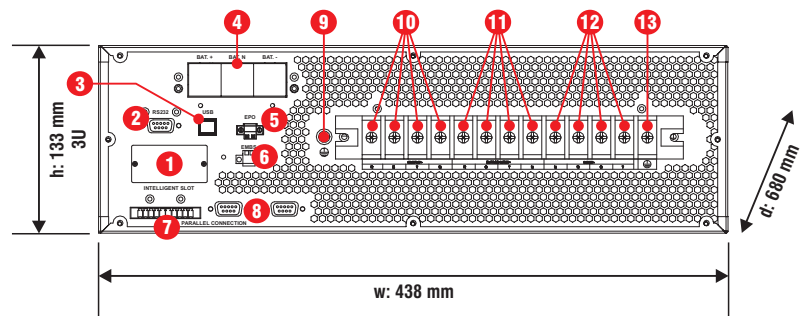
OPT-33-RT10 10K (400V/230V)
OPT-33-RT10 05K (208V/120V)



OPT-33-RT10 15K & 20K (400V/230V)
OPT-33-RT10 10K (208V/120V)



OPT-33-RT10 20K (208V/120V)

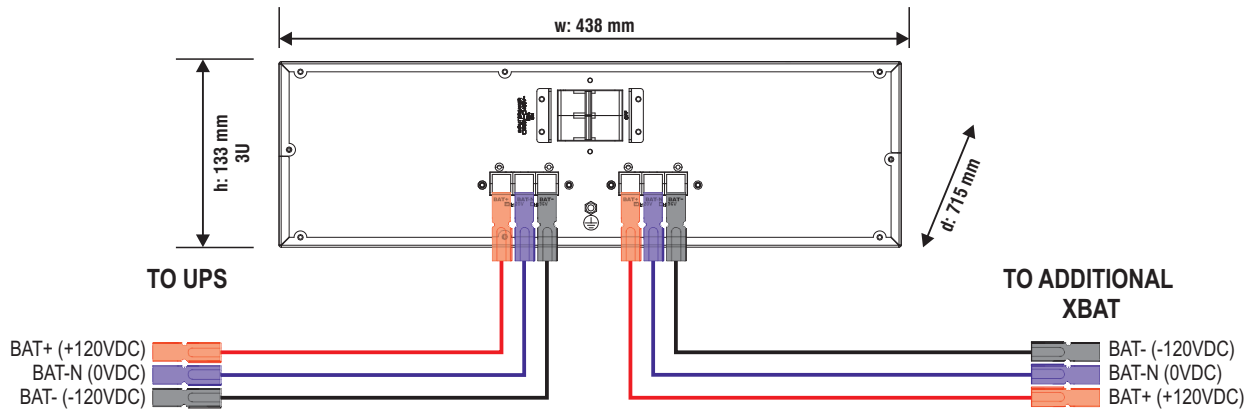


Technical Features / Características Técnicas

XBAT - External Battery Packs / Paquetes de Baterías Externas

XBAT-OPT33-RT-2x120V-H (20 batteries 12V/9AH)

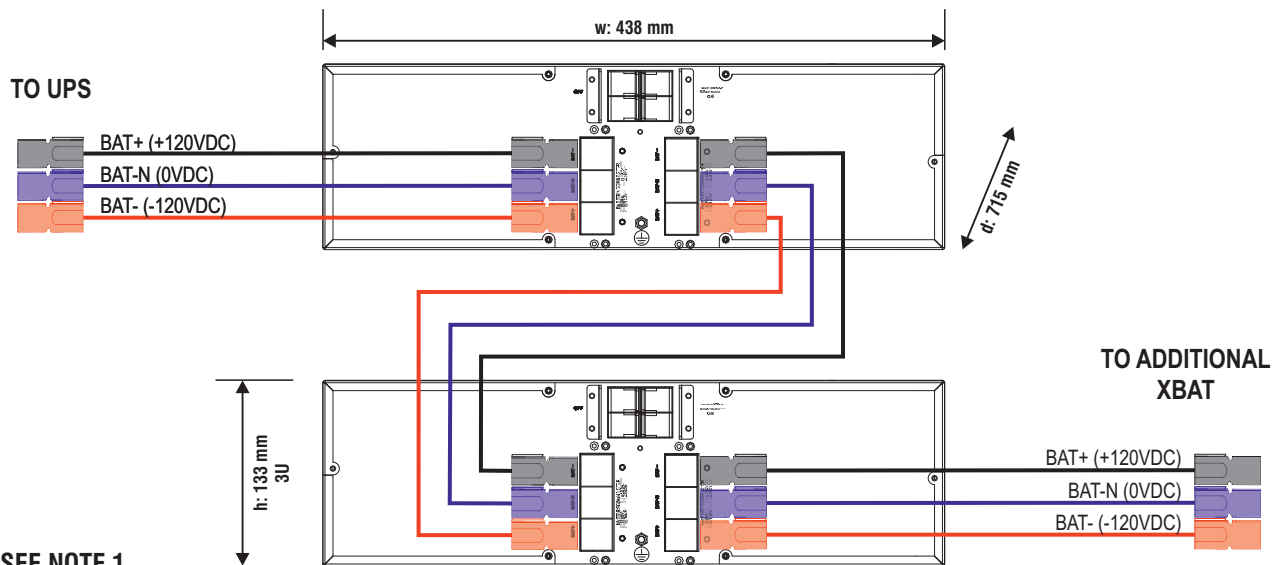
XBAT Array For:
OPTIMA-33-RT10-05K-208V
OPTIMA-33-RT10-10K-208V
OPTIMA-33-RT10-10K-400V



SEE NOTE 1

XBAT-OPT33-RT-2x120V-V (20 batteries 12V/9AH)

XBAT Array For:
OPTIMA-33-RT10-20K-208V



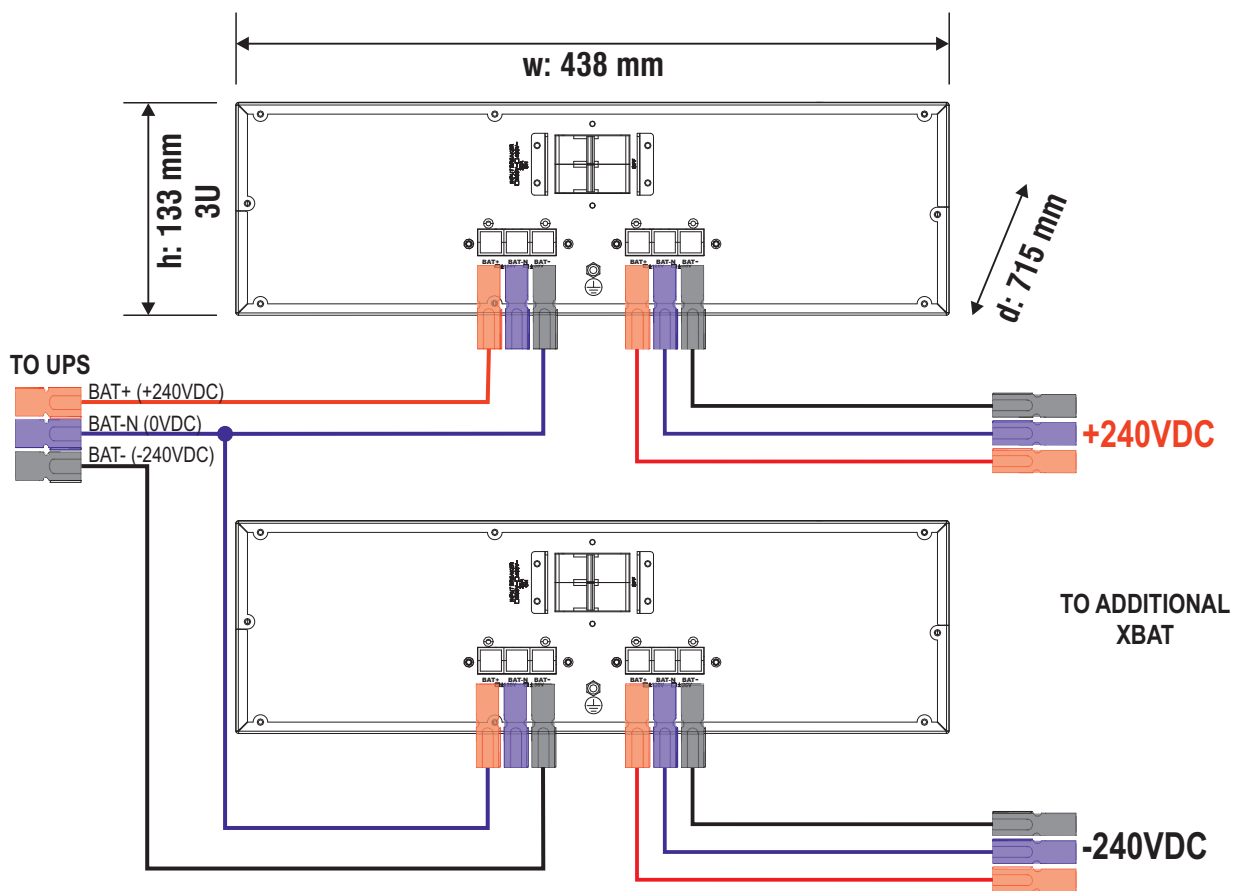
SEE NOTE 1

NOTE 1: DC cables are either included with UPS or with XBAT. All details, including Part Numbers, are clearly described in User Manual for OPTIMA-33-RT10 family

External Battery Packs / Paquetes de Baterías Externas

XBAT-OPT33-RT-2x120V-H (20 batteries 12V/9AH)

XBAT Array For:
OPTIMA-33-RT10-15K-400V
OPTIMA-33-RT10-20K-400V



SEE NOTE 1

NOTE 1: DC cables are either included with UPS or with XBAT. All details, including Part Numbers, are clearly described in User Manual for OPTIMA-33-RT10 family

Technical Features / Características Técnicas

400V/230V (1/2)

OPTIMA-33-RT10 (400/230V) Page 1 of 2	10K-400-NB	15K-400-NB	20K-400-NB
Capacity / Capacidad (VA)	10KVA/10KW	15KVA/15KW	20KVA/20KW
Parallel Units / Unidades en Paralelo	4		
Installation / Instalación	Rack & Tower / Rack y Torre		
Input-Output / Entrada-Salida	3Ph-3Ph (3ph-1ph Configurable)		
INPUT / ENTRADA			
Phase / Fases	(Y) : 3Ph + N + G		
Input Range / Rango de Entrada	L-N: (176Vac-276Vac) @ >=80% Load L-N: (X-276Vac) @ 50% < Load < 80%; X=110 + (220*(Load-50%)) L-N: (110Vac-300Vac) @ <=50% Load		
Max. Current / Corriente Max. (130% load, A x ph.)	25A	37A	50A
Frequency Range / Rango de Frecuencia	Autosensing: 50Hz: (46-54Hz) / 60Hz: (56-64Hz)		
Power Factor / Factor de Potencia	>= 0.99 @ 100%load		
THDi (IEC 62040-3)	< 4% @ 100% load < 6% @ 50% load (IEC61000-3-4)		
Slew Rate / Seguimiento de Frecuencia:	1 Hz / s		
OUTPUT / SALIDA			
Phase / Fases	(Y): 3Ph + N + G or (DELTA): 3Ph + G or (Configurable): 1Ph + N + G		
Voltage / Tensión de Salida	360/208Vac - 380/220Vac - 400/230Vac - 415/240Vac - 230Vac Configurable (*N1)		
Voltage Regulation / Regulación de Salida:	+/- 1%		
Max. Angle Deviation / Max. Desviación de Fase	2° (EN-62040-3)		
Max. Voltage Unbalance Ratio / Desbalance Max.	1% (EN-62040-3)		
Frequency / Frecuencia (Batt. Mode)	50 Hz +/- 0.1 Hz / 60 Hz +/- 0.1 Hz		
Current Crest Ratio / Factor de Cresta	3:1 @ 100% load		
THDv (IEC 62040-3)	<= 2% @ Linear Load / Carga Lineal <= 5% @ No Linear Load / Carga no Lineal		
Dynamic Accuracy / Regulación Carga Variable	6% (load variations 0%-100% & 100%-0% R Load)		
Transient Recovery / Recuperación Cambio Carga	100ms/90% vs (0%-100% & 100%-0% R load)		
Transfer Time / Tiempo de Transferencia:	0 ms		
Waveform / Forma de Onda	Sine Wave / Sinusoidal Pura		
Power Output / Salidas	Terminal Block / Regleta de Conexión		
DC Offset / Componente DC	+/-50mV max.		
INTERNAL BYPASS			
Bypass type / Tipo de Bypass:	SCR board / Tarjeta SCR		
Input Range in Bypass / Rango entrada en Bypass:	176-264Vac (L-N) & 50/60 +/- 4Hz Freq.		
PROTECTION SYSTEMS / SISTEMAS DE PROTECCION			
Surge & Spikes Suppression / Supresión de Picos	(L-N: 1.490J) + (LG: 1.490J) + (N-G: 490J) = TOTAL=3.470J (10/1000us)		
Output Short-Circuits / Cortocircuitos a la Salida (ONLINE)	Electronic inverter shortcircuit protection / Protección del inversor contra cortocircuitos: <100ms: Current limited to max. capacity / Corriente limitada al 100% de Capacidad >=100ms: Output shutdown. UPS in Fault Mode / Salida se apaga. SAI/UPS en Modo Falla		
AC Input Current / Sobre-Corriente de Entrada AC	Input breaker or fuse / Disyuntor o fusible de entrada		
Battery overcurrent / Sobrecorriente de baterías	Internal Fuse protection in battery line / Protección por fusible interno en línea de baterías		
Phase rotation / Fases de entrada intercambiadas	Alarm & turn-on disable / Alarma y encendido inhabilitado		
Repetitive Overloads / Overloads repetitivos	3 overloads in 30min =UPS locks in bypass / 3 overloads in 30min = UPS a bypass		
Starting Time / Tiempo de Arranque	7s - 10s (@ 100% load)		
EFFICIENCY / EFICIENCIA			
Eco Mode (100%/50% load)	98,5% / 98.0%		
AC Mode / Modo AC (100%/50% load)	94,8% / 95.5%		
Battery / En Batería (100%/50% load)	93.8% / 94.5%		
Inverter Efficiency / Eficiencia Inversor	94.8% inverter @ 100% load		
OVERLOAD / SOBRECARGA			
AC Mode / Modo Normal	[100%-110%: 60m]	[110%-125%: 10m]	[125%-150%: 1m] [>150%: 0.4s] to bypass
Battery Mode / Modo Batería	[100%-110%: 60m]	[110%-125%: 10m]	[125%-150%: 1m] [>150%: 0.4s] to Cut-Off
Bypass	[100%-130%: OK] [>130%: 1min]		

OPTIMA-33-RT10 (400/230V) Page 2 of 2	10K-400-NB	15K-400-NB	20K-400-NB
BATTERIES / BATERIAS			
Battery Type / Tipo de Baterías	VRLA Sealed & Free maintenance / Sellada de libre mantenimiento VRLA (12V-9AH)		
Batteries location / Ubicación de las Baterías	External (XBAT) / Externas (XBAT)		
Battery Voltage / Voltaje de Baterías	+/- 120 Vdc	+/- 240 Vdc	
Charging Amps / Corriente de Carga	1A - 12A Configurable (According to/ De acuerdo con DIN41773)		
Recharging Time / Tiempo de recarga (90%)	According to Battery Array / Según el arreglo de baterías usado (*N2)		
Charging Voltage / Voltaje del cargador (Floating)	+/- 136.5 Vdc	+/- 273 Vdc	
Temp. Compensation / Compensación Temp.	20mV/°C per battery (Input Air Temp/ Temp. Aire entrada: 25-50°C)		
Shutdown battery Voltage / Voltaje DC Apagado	10.7Vdc/batt		
Low Battery Warning / Aviso de Baterías Baja	11.4Vdc per Battery		
Max. DC Current / Corriente DC Max. (150% load)	140A	105A	140A
INDICATORS / INDICADORES			
3.5 Inches Touch Screen / Pantalla Táctil de 3.5 Pulgadas	Full Status, Error Codes, & Real Time Values Estado, Códigos de Error y Valores en Tiempo Real		
ALARM / ALARMAS			
Acoustic Beep Alarm / Alarma sonora:	Battery Mode, Low Battery, Overload, UPS Failure Modo Batería, Baja Batería, Sobrecargas, Falla		
PRODUCT SIZE & NET WEIGHT / TAMAÑO Y PESO NETO (DxWxH) / (mm) / (Kg)			
SIZE: UPS (no internal batteries)	680*438*133 (3U)		
WEIGHT: UPS (no internal batteries)	26	28	28
SIZE: Ext. Batt Pack / Baterías Externas	606*438*133 (3U)		
WEIGHT: Ext. batt Pack / Baterías Externas	67		
PACKING: Individual Small Pallet per Unit / EMPAQUE: Equipo en Pallet Individual (DxWxH) / (mm) / (Kg)			
SIZE: UPS	870*580*250		
WEIGHT: UPS	30	32	32
SIZE: Ext. Batt Cab. / Baterías Externas	870*580*250		
WEIGHT: Ext. batt Cab. / Baterías Ext.	74		
OPERATING / AMBIENTALES			
Operating Conditions / Condiciones de Operación	(0 to +40°C) (*N3) <95 % (non-condensing / no condensante)		
Storage Temperature/ Temperatura de Almacenaje	-15 °C to +60 °C		
Noise Level / Ruido Producido (dB @ 1m)	<62	<65	<65
Protecting Coating / Tropicalizado de Tarjetas	Yes / Si		
Altitude / Altura	Max Altitude: 4.500m. (over 1.000m output capacity is de-rated 1% every 100m) Altura máx 4.500msnm (sobre 1.000m la capacidad de salida disminuye 1% cada 100m)		
COMMUNICATION / COMUNICACION			
Smart RS-232 & USB ports	Built-In, Supports / De fábrica, soporta: Windows family, Linux, Unix and MAC		
Smart Port (SNMP)	Optional / Opcional: LAN, AS400 & RS485		
SAFETY & STANDARDS / NORMATIVAS Y ESTANDARES			
CE Directives	IEC 62040 - 1		
UPS General Safety / Seguridad General	IEC 62040 - 1		
UPS EMC / Compatibilidad. Electromag.	IEC 62040 - 2 (Class C3)		
UPS Tests / Procedimiento Pruebas UPS	IEC 62040 - 3		
ESD / RS / EFT / Surge / CS / F. Mag. Field	IEC / EN 61000 - 4-2 & 4-3 & 4-4 & 4-5 & 4-6 & 4-8		
Low Frequency Signals	IEC / EN 61000 - 2 - 2		
Degree of protection / Grado de Protección	IP20		
Conduction & Radiation	IEC / EN 62040-2 (Cat 3)		
Quality and Enviroment	RoHS / ISO9001 & ISO14001		
Transportation / Transporte	ETS 300019 - 2 - 2 class 2.3		

Specifications can be modified to comply with special requirements. Technical specifications may change without further notice

Las especificaciones pueden bajo requerimiento adaptarse a proyectos especiales y pueden cambiar sin previo aviso.

(*N1): **Output voltage selectable by Screen. Capacity derrated to 90% for 360/208V** / Voltaje de salida configurable desde LCD. Cap. disminuida a 90% para 360/208V

(*N2): **Recharging time based on previous 10min to 20min full discharging cycles** / Tiempo de recarga basado en ciclos previos de descarga profunda de 10 a 20min.

(*N3): **UPS can work up to 40°C but batteries short their life over 25°C** / El UPS puede trabajar hasta los 40°C, pero las baterías acortan su vida útil por encima de 25°C

Technical Features / Características Técnicas

208V/120V (1/2)

OPTIMA-33-RT10 (208/120V) Page 1 of 2	5K-208-NB	10K-208-NB	20K-208-NB
Capacity / Capacidad (VA)	5KVA / 5KW	10KVA / 10KW	20KVA / 20KW
Parallel Units / Unidades en Paralelo	4		
Installation / Instalación	Rack & Tower / Rack y Torre		
Input-Output / Entrada-Salida	3Ph-3Ph (3ph-1ph Configurable)		
INPUT / ENTRADA			
Phase / Fases	(Y) : 3Ph + N + G		
Input Range / Rango de Entrada	L-N: (88Vac-146Vac) @ >=80% Load L-N: (X-146Vac) @ 50% < Load < 80%; X=70 + (60*(Load-50%)) L-N: (70Vac-156Vac) @ <=50% Load		
Max. Current / Corriente Max. (130% load, A x ph.)	25A	50A	99A
Frequency Range / Rango de Frecuencia	Autosensing: 50Hz: (46-54Hz) / 60Hz: (56-64Hz)		
Power Factor / Factor de Potencia	>= 0.99 @ 100%load < 4% @ 100% load		
THDi (IEC 62040-3)	< 6% @ 50% load (IEC61000-3-4)		
Slew Rate / Seguimiento de Frecuencia:	1 Hz / s		
OUTPUT / SALIDA			
Phase / Fases	(Y): 3Ph + N + G or (DELTA): 3Ph + G (1Ph + N + G, Configurable) (*N)		
Voltage / Tensión de Salida	208/120Vac - 220/127Vac (*N1)		
Voltage Regulation / Regulación de Salida:	+/- 1%		
Max. Angle Deviation / Max. Desviación de Fase	2° (EN-62040-3)		
Max. Voltage Unbalance Ratio / Desbalance Max.	1% (EN-62040-3)		
Frequency / Frecuencia (Batt. Mode)	50 Hz +/- 0.1 Hz / 60 Hz +/- 0.1 Hz		
Current Crest Ratio / Factor de Cresta	3:1 @ 100% load		
THDv (IEC 62040-3)	<= 2% @ Linear Load / Carga Lineal		
Dynamic Accuracy / Regulación Carga Variable	6% (load variations 0%-100% & 100%-0% R Load)		
Transient Recovery / Recuperación Cambio Carga	100ms/90% vs (0%-100% & 100%-0% R load)		
Transfer Time / Tiempo de Transferencia:	0 ms		
Waveform / Forma de Onda	Sine Wave / Sinusoidal Pura		
Power Output / Salidas	Terminal Block / Regleta de Conexión		
DC Offset / Componente DC	+/-50mV max.		
INTERNAL BYPASS			
Bypass type / Tipo de Bypass:	SCR board / Tarjeta SCR		
Input Range in Bypass / Rango entrada en Bypass:	96-146Vac (L-N) & 50/60 +/- 4Hz Freq.		
PROTECTION SYSTEMS / SISTEMAS DE PROTECCION			
Surge & Spikes Suppression / Supresión de Picos	(L-N: 1.490J) + (LG: 1.490J) + (N-G: 490J) = TOTAL=3.470J (10/1000us)		
Output Short-Circuits / Cortocircuitos a la Salida (ONLINE)	Electronic inverter shortcircuit protection / Protección del inversor contra cortocircuitos: <100ms: Current limited to max. capacity / Corriente limitada al 100% de Capacidad >=100ms: Output shutdown. UPS in Fault Mode / Salida se apaga. SAI/UPS en Modo Falla		
AC Input Current / Sobre-Corriente de Entrada AC	Input breaker or fuse / Disyuntor o fusible de entrada		
Battery overcurrent / Sobrecorriente de baterías	Internal Fuse protection in battery line / Protección por fusible interno en línea de baterías		
Phase rotation / Fases de entrada intercambiadas	Alarm & turn-on disable / Alarma y encendido inhabilitado		
Repetitive Overloads / Overloads repetitivos	3 overloads in 30min = UPS locks in bypass / 3 overloads in 30min = UPS a bypass		
Starting Time / Tiempo de Arranque	7s - 10s (@ 100% load)		
EFFICIENCY / EFICIENCIA			
Eco Mode (100%/50% load)	97% / 96.5%		
AC Mode / Modo AC (100%/50% load)	92.5% / 93.5%		
Battery / En Batería (100%/50% load)	91.5% / 92.5%		
Inverter Efficiency / Eficiencia Inversor	92.5% inverter @ 100% load		
OVERLOAD / SOBRECARGA			
AC Mode / Modo Normal	[100%-110%: 60m]	[110%-125%: 10m]	[125%-150%: 1m] [>150%: 0.4s] to bypass
Battery Mode / Modo Batería	[100%-110%: 60m]	[110%-125%: 10m]	[125%-150%: 1m] [>150%: 0.4s] to Cut-Off
Bypass	[100%-130%: OK] [>130%: 1min]		

OPTIMA-33-RT10 (208/120V) Page 2 of 2	5K-208-NB	10K-208-NB	20K-208-NB
BATTERIES / BATERIAS			
Battery Type / Tipo de Baterías	VRLA Sealed & Free maintenance / Sellada de libre mantenimiento VRLA (12V-9AH)		
Batteries location / Ubicación de las Baterías	External (XBAT) / Externas (XBAT)		
Battery Voltage / Voltaje de Baterías	+/- 120 Vdc		
Charging Amps / Corriente de Carga	1A - 12A Configurable (According to/ De acuerdo con DIN41773)		
Recharging Time / Tiempo de recarga (90%)	According to Battery Array / Según el arreglo de baterías usado (*N2)		
Charging Voltage / Voltaje del cargador (Floating)	+/- 136.5 Vdc		
Temp. Compensation / Compensación Temp.	20mV/°C per battery (Input Air Temp/ Temp. Aire entrada: 25-50°C)		
Shutdown battery Voltage / Voltaje DC Apagado	10.7Vdc/batt		
Low Battery Warning / Aviso de Baterías Baja	11.4Vdc per Battery		
Max. DC Current / Corriente DC Max. (150% load)	70A	140A	280A
INDICATORS / INDICADORES			
3.5 Inches Touch Screen / Pantalla Táctil de 3.5 Pulgadas	Full Status, Error Codes, & Real Time Values Estado, Códigos de Error y Valores en Tiempo Real		
ALARM / ALARMAS			
Acoustic Beep Alarm / Alarma sonora:	Battery Mode, Low Battery, Overload, UPS Failure Modo Batería, Baja Batería, Sobrecargas, Falla		
PRODUCT SIZE & NET WEIGHT / TAMAÑO Y PESO NETO (DxWxH) / (mm) / (Kg)			
SIZE: UPS (no internal batteries)	680*438*133 (3U)		797*438*176 (4U)
WEIGHT: UPS (no internal batteries)	26	28	42
SIZE: Ext. Batt Cab. / Baterías Externas	606*438*133 (3U)		
WEIGHT: Ext. batt Cab. / Baterías Externas	67		
PACKING: Individual Small Pallet per Unit / EMPAQUE: Equipo en Pallet Individual (DxWxH) / (mm) / (Kg)			
SIZE: UPS	870*580*250		980*580*285
WEIGHT: UPS	30	32	47
SIZE: Ext. Batt Cab. / Baterías Externas	870*580*250		
WEIGHT: Ext. batt Cab. / Baterías Ext.	74		
OPERATING / AMBIENTALES			
Operating Conditions / Condiciones de Operación	(0 to +40°C) (*N3) <95 % (non-condensing / no condensante)		
Storage Temperature/ Temperatura de Almacenaje	-15 °C to +60 °C		
Noise Level / Ruido Producido (dB @ 1m)	<62	<65	<70
Protecting Coating / Tropicalizado de Tarjetas	Yes / Si		
Altitude / Altura	Max Altitude: 4.500m. (over 1.000m output capacity is de-rated 1% every 100m) Altura máx 4.500msnm (sobre 1.000m la capacidad de salida disminuye 1% cada 100m)		
COMMUNICATION / COMUNICACION			
Smart RS-232 & USB ports	Built-In, Supports / De fábrica, soporta: Windows family, Linux, Unix and MAC		
Smart Port (SNMP)	Optional / Opcional: LAN, AS400 & RS485		
SAFETY & STANDARDS / NORMATIVAS Y ESTANDARES			
CE Directives	IEC 62040 - 1		
UPS General Safety / Seguridad General	IEC 62040 - 1		
UPS EMC / Compatibilidad. Electromag.	IEC 62040 - 2 (Class C3)		
UPS Tests / Procedimiento Pruebas UPS	IEC 62040 - 3		
ESD / RS / EFT / Surge / CS / F. Mag. Field	IEC / EN 61000 - 4-2 & 4-3 & 4-4 & 4-5 & 4-6 & 4-8		
Low Frequency Signals	IEC / EN 61000 - 2 - 2		
Degree of protection / Grado de Protección	IP20		
Conduction & Radiation	IEC / EN 62040-2 (Cat 3)		
Safety / Seguridad	IEC / EN60950 - 1		
Quality and Environment	RoHS / ISO9001 & ISO14001		
Transportation / Transporte	ETS 300019 - 2 - 2 class 2.3		

Specifications can be modified to comply with special requirements. Technical specifications may change without further notice

Las especificaciones pueden bajo requerimiento adaptarse a proyectos especiales y pueden cambiar sin previo aviso.

(*N): Model 20K-208 does not support Single-Phase output configuration / El modelo 20K-208, no admite configuración de salida Monofásica.

(*N1): Output voltage is selectable by Screen / Voltaje de salida configurable desde LCD

(*N2): Recharging time based on previous 10min to 20min full discharging cycles / Tiempo de recarga basado en ciclos previos de descarga profunda de 10 a 20min.

(*N3): UPS can work up to 40°C but batteries short their life over 25°C / El UPS puede trabajar hasta los 40°C, pero las baterías acortan su vida útil por encima de 25°C

Online 3ph/3ph

OPTIMA-33-T10 10K TO 80K

Online de Doble Conversion UPS with Output PF 1.0 and IGBT technology in rectifier and inverter stages. Three-Phase Input and Output. Designed to offer the best protection to critical systems requiring a high level of power protection and high operational availability.



Available for Three-Phase: 208, 400, and 480V Installations

Three-Phase Input and Output (3 Phases + Neutral + Ground) and models to operate 208/120V (10K to 40K), 400/230V (10K to 80K), and 480V (10K to 80K). Models for 480V Installations are based in 400V models with internal input and output autotransformers, fully integrated solution.

IGBT + ON-LINE Doble Conversion Technology

New generation On Line Doble Conversion Technology offers high reliability and strength as well as outstanding features. DSP signal control system and an efficient rectifier/inverter system based in IGBT technology give exceptional attributes to this product family and an input power factor over 0.99 at full load.

5 Inches Touch Screen/Color LCD

From this versatile color touch screen LCD, all parameter of the UPS, as well as AC Line conditions, can be monitored. It is also a very intuitive interface to set up all configurable functions of this avant-garde unit.

Communication (USB - RS232 - SNMP) & Software de Control

Several Comm. options are available: USB, RS232 & Smart port. Smart port supports LAN cards, RS485 cards, & dry contact cards (AS400).

Multiple Bypass System

Includes an internal automatic bypass which activates if UPS fails or gets overloaded. This keeps the system powered and working while the situation is solved. Besides, counts on an external bypass switch for major maintenance.

Parallel operation

Up to 3 units can be installed in parallel either to grow in capacity or for redundancy purposes. UPS in parallel systems can operate either with one shared battery pack, or with separate battery packs, according to installation requirements.

Emergency Power Off (EPO)

EPO port to connect an emergency switch which turns off the UPS output when activated.

Auto-Recovery

Auto-Recovery function restarts the UPS automatically when AC Line comes back.

Conformal Coating

This XSMART equipment features a Conformal Coating treatment on its internal boards and components. Conformal coating is a protection against moisture and corrosive contaminants to ensure stable performance and extend its lifespan in various environments, as long as technical specifications requirements of the equipment are met.

High Energy Efficiency

One of the main features of this family is high energy efficiency (>94%). This generates high operational savings and contributes with the environment.

Safety and Performance Directives UL/CSA & CE

UL (UL1778 y CSA C22.2) directive for 208/120V models (10K, 20K, 30K, & 40K). CE for 400/230V & 480/277V models.

Expandable Backup

External battery packs (as many as you need) can be connected to this UPS to offer longer backup.

Galvanic Isolation

Optional transformers and accessories are available for those systems requiring safe and galvanically isolated power.

Power Generators Compatible

Only True On-Line Double conversion UPS can filter voltage fluctuation and other particularities generated by Power Generators to generate a clean, perfect, and pure sine wave power to feed your installation.

Smart Battery Charger

With a smart battery charger this UPS family can charge batteries in an outstanding time (2-4 hours up to 90%), offering a better availability than similar products. A smart 3 stages charging algorithm, along with temperature compensation improves battery lifespan.

Eco-Mode Operation, for power saving

ECO-Mode is a power saving function which reduces electrical consumption over 5%. In this mode the load is powered directly by AC Line as long as it keeps between pre-configured limits. Otherwise, the UPS goes to regular ONLINE mode. During power outage, the UPS goes into Battery Mode to keep your equipment working perfectly safe.

Aplicacions:

Large IT Systems, Industrial Installations, etc.

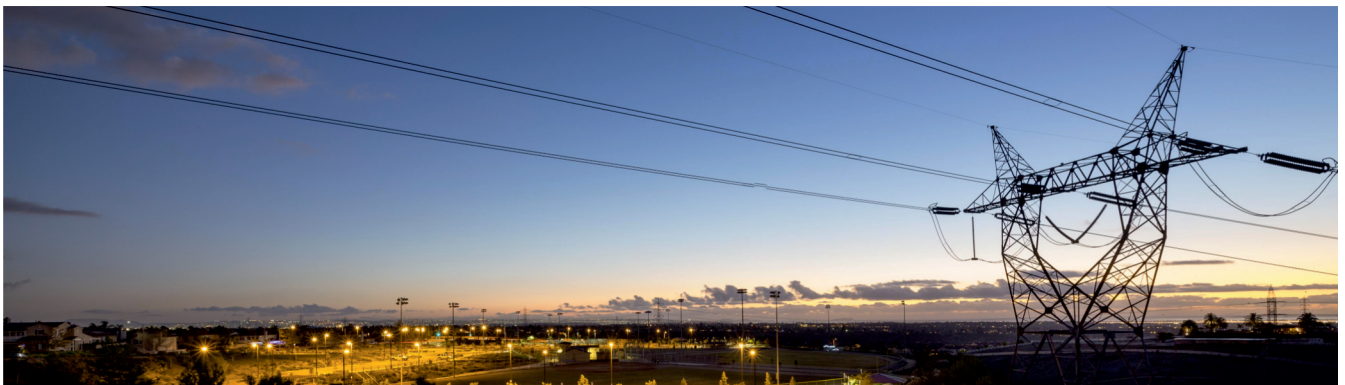
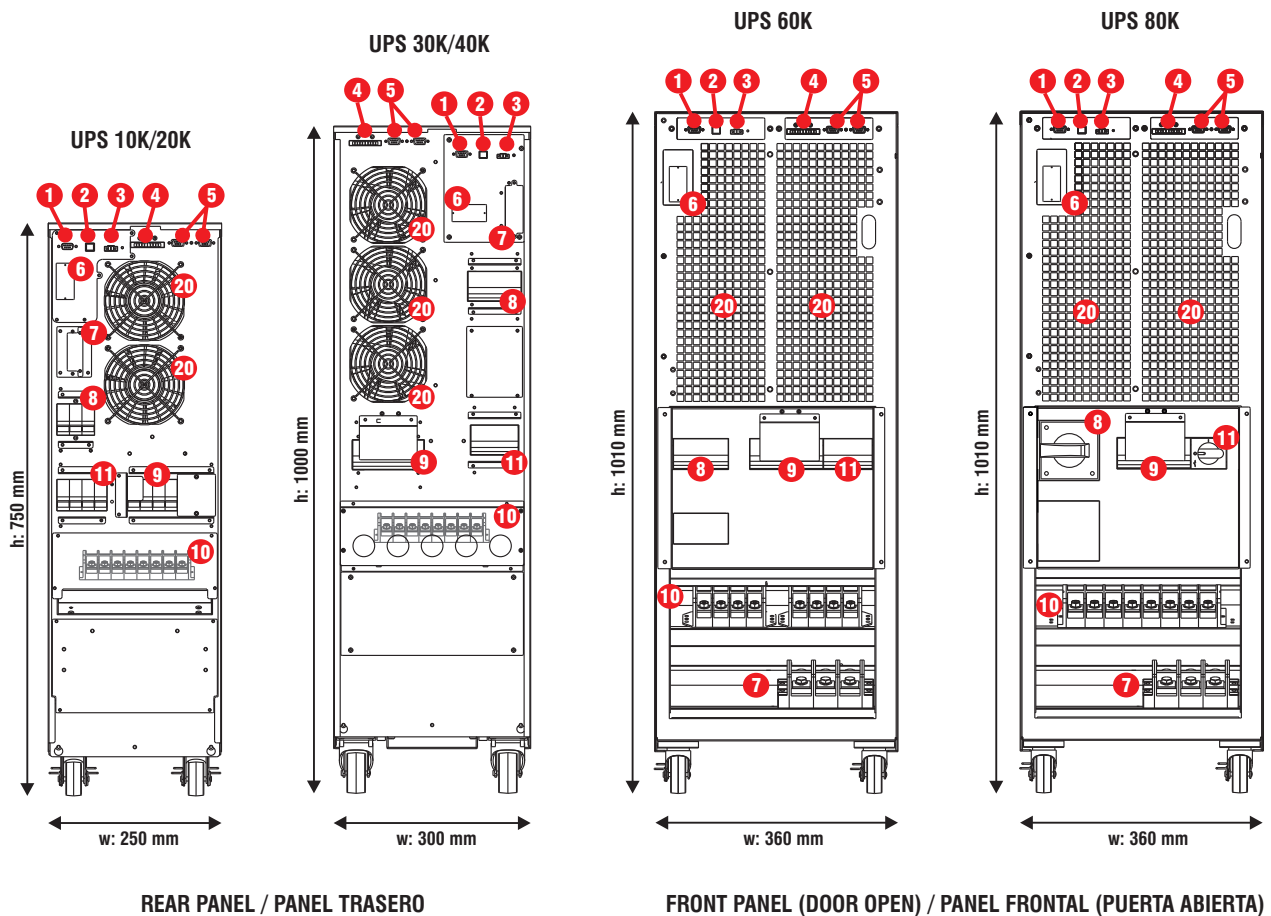


Technical Features / Características Técnicas

- | | |
|--|---|
| 1.- RS232 Port | 7.- External Battery Connector/Terminal Block |
| 2.- USB Port | 8.- Three-Phase Input Breaker |
| 3.- EPO Connector (Emergencia Power Off) | 9.- Maintenance-Bypass Switch (MBS) |
| 4.- Shared Current Connectors | 10.- Three-Phase Input/Output Terminal Block |
| 5.- Parallel Control Connectors | 11.- AC Output Breaker |
| 6.- SNMP Smart Port | 20.- Forced Ventilation - Power Stage |

Front-Rear View / Vista Frontal-Trasera

UPS / SAI (400V/230V y 480/277V)

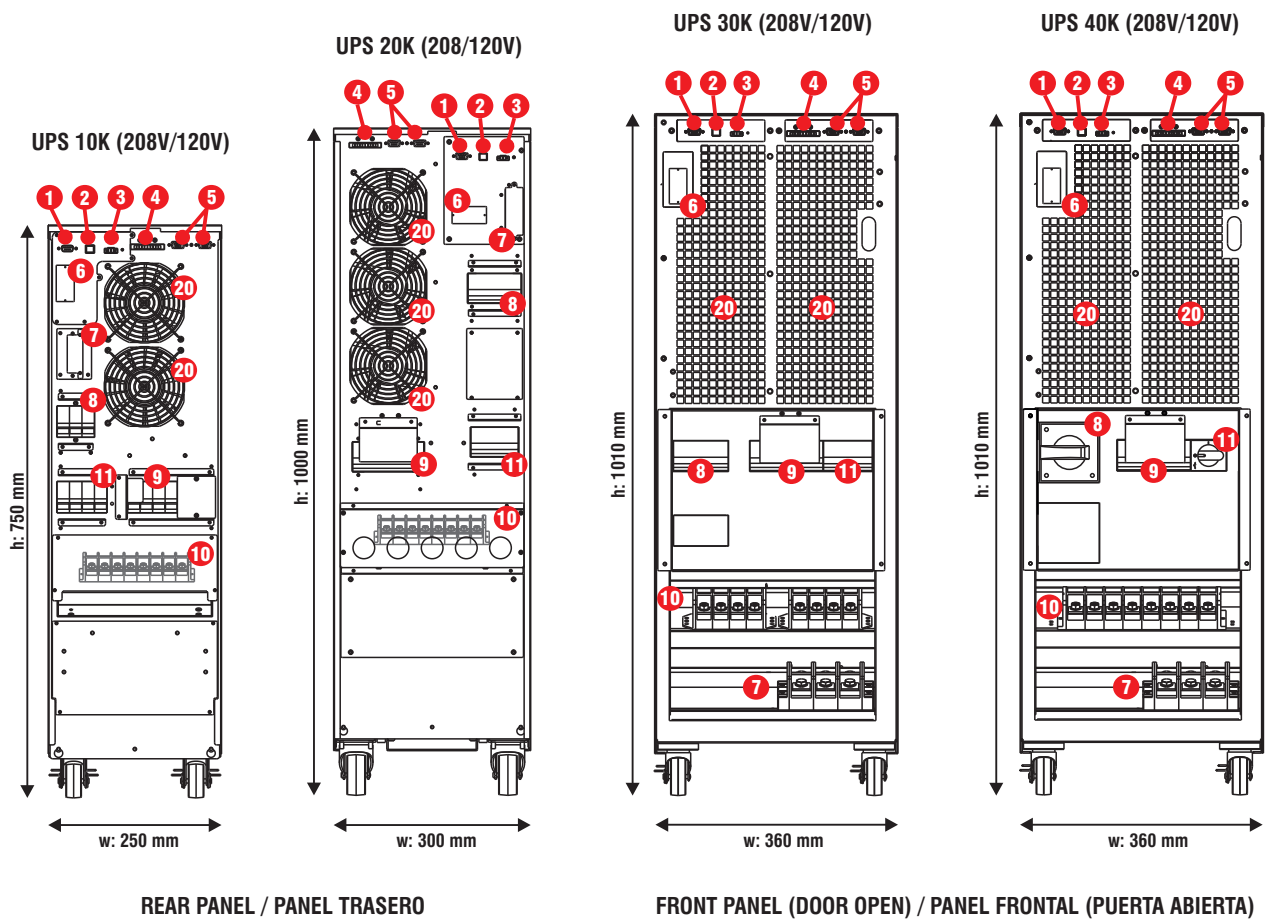


Technical Features / Características Técnicas

- | | |
|---|--|
| <ul style="list-style-type: none"> 1.- RS232 Port 2.- USB Port 3.- EPO Connector (Emergencia Power Off) 4.- Shared Current Connectors 5.- Parallel Control Connectors 6.- SNMP Smart Port | <ul style="list-style-type: none"> 7.- External Battery Connector/Terminal Block 8.- Three-Phase Input Breaker 9.- Maintenance-Bypass Switch (MBS) 10.- Three-Phase Input/Output Terminal Block 11.- AC Output Breaker 20.- Forced Ventilation - Power Stage |
|---|--|

Front-Rear View / Vista Frontal-Trasera

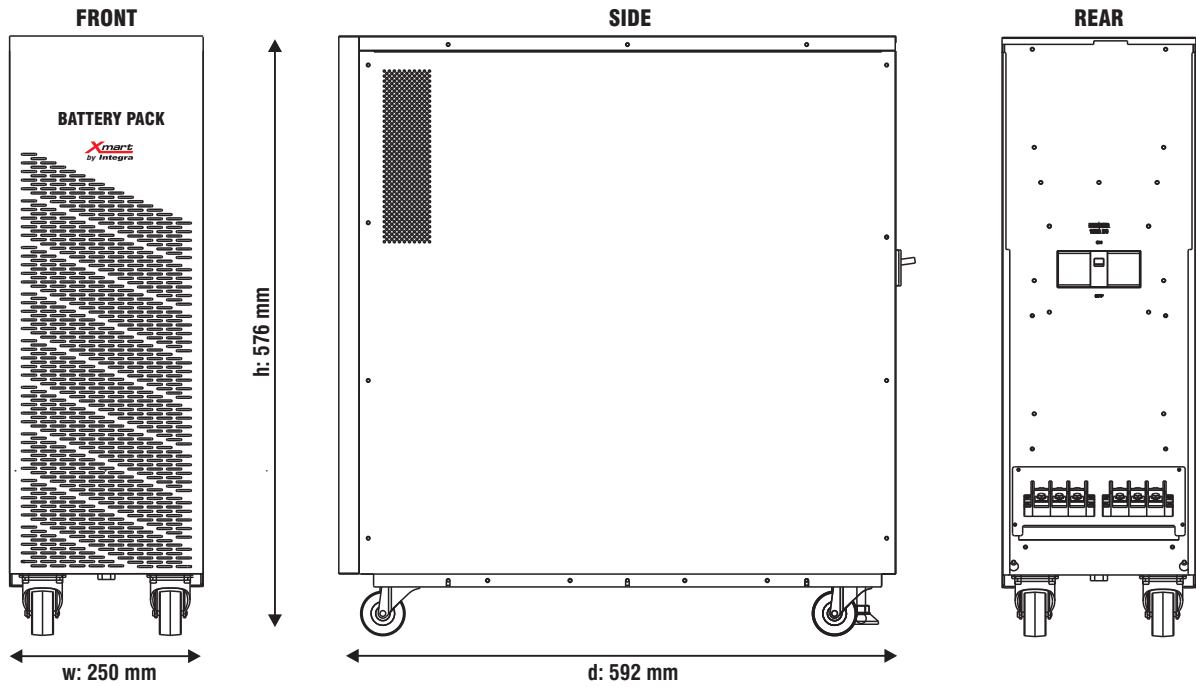
UPS / SAI (208/120V)



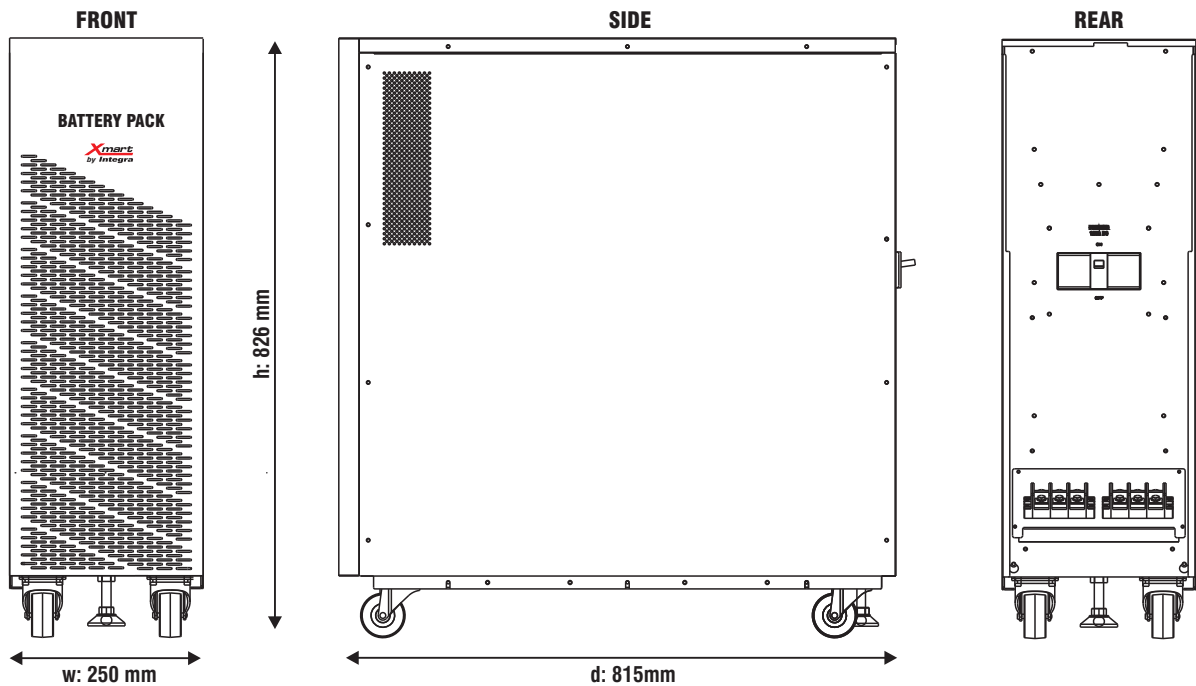
Front-Rear View / Vista Frontal-Trasera

External Battery Packs / Paquetes de Baterías Externas

XBAT-OPT33-40P: 40 batteries 12V/9AH



XBAT-OPT33-80P: 80 batteries 12V/9AH



Technical Features / Características Técnicas
400V/230V (1/2)

OPTIMA-33 T10 (400/230V) Page 1 of 2	10K-400	20K-400	30K-400	40K-400	60K-400-NB	80K-400-NB
Capacity / Capacidad (VA)	10KVA	20KVA	30KVA	40KVA	60KVA	80KVA
Capacity / Capacidad (W)	10KW	20KW	30KW	40KW	60KW	80KW
Parallel Units / Unidades en Paralelo	3					
Input-Output / Entrada-Salida	3Ph-3Ph					
INPUT / ENTRADA						
Phase / Fases	(Y) : 3Ph + N + G					
Input Range / Rango de Entrada	L-N: (176Vac-276Vac) @ >=80% Load L-N: (X-276Vac) @ 50% <= Load < 80%; X=110V + (220*(Load-50%)) L-N: (110Vac-300Vac) @ < 50% Load					
Max. Current / Corriente Max. (130% load, A x ph.)	22A	43A	65A	87A	130A	173A
Frequency Range / Rango de Frecuencia	Autosensing: 50Hz: (46-54Hz) / 60Hz: (56-64Hz)					
Power Factor / Factor de Potencia	> 0.99 @ 100%load					
THDi (IEC 62040-3)	< 4% @ 100% load					
Slew Rate / Seguimiento de Frecuencia:	< 6% @ 50% load (IEC61000-3-4)					
	1 Hz / s					
OUTPUT / SALIDA						
Phase / Fases	(Y): 3Ph + N + G or (DELTA): 3Ph + G					
Voltage / Tensión de Salida	360/208Vac - 380/220Vac - 400/230Vac - 415/240Vac (*N1)					
Voltage Regulation / Regulación de Salida:	+/- 1%					
Max. Angle Deviation / Max. Desviación de Fase	2° (EN-62040-3)					
Max. Voltage Unbalance Ratio / Desbalance Max.	1% (EN-62040-3)					
Frequency / Frecuencia (Batt. Mode)	50 Hz +/- 0.1 Hz / 60 Hz +/- 0.1 Hz					
Current Crest Ratio / Factor de Cresta	3:1 @ 100% load					
THDv (IEC 62040-3)	< 2% @ Linear Load / Carga Lineal					
	<5% @ No Linear Load / Carga no Lineal					
Dynamic Accuracy / Regulación Carga Variable	<5% (load variations 0%-100% & 100%-0% R Load)					
Transient Recovery / Recuperación Cambio Carga	100ms / 90% vs (0%-100% & 100%-0% R load)					
Transfer Times / Tiempos Transferencia:	0 ms					
Waveform / Forma de Onda	Sine Wave / Sinusoidal Pura					
Power Output / Salidas	Terminal Block / Regleta de Conexión					
DC Offset / Componente DC	50mV max.					
INTERNAL BYPASS						
Bypass type / Tipo de Bypass:	SCR board / Tarjeta SCR					
Input Range in Bypass / Rango entrada en Bypass:	176-264Vac (L-N) & 50/60 +/- 4Hz Freq.					
PROTECTION SYSTEMS / SISTEMAS DE PROTECCION						
Surge & Spikes Suppression / Supresión de Picos	(L-N: 2.340J) + (LG: 2.340J) + (N-G: 780J) = TOTAL=5.460J (10/1000us)					
Output Short-Circuits / Cortocircuitos a la Salida (ONLINE)	Electronic inverter shortcircuit protection / Protección del inversor contra cortocircuitos: <100ms: Current limited to max. capacity / Corriente limitada al 100% de Capacidad >=100ms: Outputs shutdown. UPS goes to Fault Mode / SAI/UPS apaga las salidas y pasa a Modo Falla					
AC Input Current / Sobre-Corriente de Entrada AC	Input breaker or fuse Disyuntor o fusible de entrada					
Battery overcurrent / Sobrecorriente de baterías	Internal Fuse protection in battery line Protección por fusibles en línea de baterías interna					
Phase rotation / Fases de entrada intercambiadas	Alarm & turn-on disable Alarma y arranque prohibido					
Repetitive Overloads / Overloads repetitivos	3 overloads in 30min = UPS locks in bypass 3 overloads en 30min = UPS a bypass					
Starting Time / Tiempo de Arranque	7s - 10s (@ 100% load)					
EFFICIENCY / EFICIENCIA						
Eco Mode (100%/75%/50%/25% load)	98% / 98% / 97% / 97%					
AC Mode / Modo AC (100%/75%/50%/25% load)	95.5% / 94.5% / 93.5% / 91.5%					
Battery / En Batería (100%/75%/50%/25% load)	94.5% / 93.5% / 92.5% / 90.5%					
Inverter Efficiency / Eficiencia Inversor	97% inverter @ 100% load					
BTU @ 100% LOAD	1536	3071	4607	6142	9213	12284
OVERLOAD / SOBRECARGA						
AC Mode / Modo Normal	[100%-110%: 60m] [110%-125%: 10m] [125%-150%: 1m] [>150%: 1s] to bypass					
Battery Mode / Modo Batería	[100%-110%: 60m] [110%-125%: 10m] [125%-150%: 1m] [>150%: 1s] to cut-off					
Bypass	[100%-130%: OK] [>130%: 1min]					

OPTIMA-33 T10 (400/230V) Page 2 of 2 10K-400 20K-400 30K-400 40K-400 60K-400-NB 80K-400-NB

BATTERIES / BATERIAS						
Battery Type / Tipo de Baterías	VRLA Sealed & Free maintenance / Sellada de libre mantenimiento VRLA (12V-9AH)					
Batteries location / Ubicación de las Baterías	Internal / Internas			External (XBAT) / Externas (XBAT)		
Battery Voltage / Voltaje de Baterías	+/-120VDC	+/- 240 VDC				
Charging Amps / Corriente de Carga	1A - 12A Adjustable (According to/ De acuerdo con DIN41773).					
Recharging Time / Tiempo de recarga (90%)	2h - 3h (*N2)					
Charging Voltage / Voltaje del cargador (Floating)	+/- 136.5V	+/- 273 V				
Temp. Compensation / Compensación Temp.	120mV/°C per battery (Input Air Temp/ Temp. Aire entrada: 25-50°C)					
Shutdown battery Voltage / Voltaje DC Apagado	10.7V/batt (0-30% load) 10.2V/batt (30-70% load) 9.6V/batt (load >70%)			10.7V/batt		
Low Battery Warning / Aviso de Baterías Baja	11.4VDC per Battery					
Max. DC Current / Corriente DC Max.	52A DC	104A DC	156A DC	208A DC	281A DC	374A DC
INDICATORS / INDICADORES						
5 Inches Touch Screen / Pantalla Táctil de 5 Pulg.	Full Status, Error Codes and Real Time Values Estado, Códigos Error y Valores en Tiempo Real					
ALARM / ALARMAS						
Acoustic Beep Alarm / Alarma sonora:	Battery, Low Battery, Overload, UPS Failure Modo Batería, Batería Baja, Sobrecargas, Falla del UPS					
PRODUCT SIZE & NET WEIGHT / TAMAÑO Y PESO NETO (DxWxH) / (mm) / (Kg)						
SIZE: UPS (with internal batteries)	626*250*750		815*300*1000		-	-
WEIGHT: UPS (with internal batteries)	126	141	230	260	-	-
SIZE: UPS (no internal batteries)	-	-	-	-	790*360*1010	
WEIGHT: UPS (no internal batteries)	-	-	-	-	112	117
SIZE: Ext. Batt Cab. / Baterías Externas	592*250*576 (40P)		815*250*826 (80P)			
WEIGHT: Ext. batt Cab. / Baterías Externas	119 (40P)		240 (80P)			
PACKING: Individual Small Pallet per Unit / EMPAQUE: Equipo en Pallet Individual (DxWxH) / (mm) / (Kg)						
SIZE: UPS	720*380*900		920*380*1250		920*400*1260	
WEIGHT: UPS	156	171	260	290	142	147
SIZE: Ext. Batt Cab. / Baterías Externas	720*380*730		920*380*900			
WEIGHT: Ext. batt Cab. / Baterías Ext.	149		270			
OPERATING / AMBIENTALES						
Operating Conditions / Condiciones de Operación	-5°C to +40 °C (*N3) <95 % (non-condensing / no condensante)					
Storage / Almacenaje	UPS: -15 °C to +60 °C Batteries: 0 °C to +35 °C)					
Noise Level / Ruido Producido (@ 1m)	< 55dB		< 58dB		< 63dB	
Protecting Coating / Tropicalizado de Tarjetas	Yes / Si					
Altitude / Altura	Max Altitude: 4.500m. (over 1.000m output capacity is de-rated 1% every 100m) / Altura máx 4.500msnm (sobre 1.000m la capacidad de salida disminuye 1% cada 100m)					
COMMUNICATION / COMUNICACION						
Smart RS-232 & USB ports	Windows family, Linux, Unix and MAC					
Intelligent Port (SNMP)	Optional / Opcional: LAN, AS400 & RS485					
SAFETY & STANDARDS / NORMATIVAS Y ESTANDARES						
Certification / Certificación	CE					
UPS General Safety / Seguridad General	IEC 62040 - 1 - 1					
UPS EMC / Compatibilidad. Electromag.	IEC 62040 - 2 (Class C3) (radiation)					
UPS Tests / Procedimiento Pruebas UPS	IEC 62040 - 3					
ESD / RS / EFT / Surge / CS / Freq. Mag. Field	EN 61000-4-2 & 4-3 & 4-4 & 4-5 & 4-6 & 4-8 (level 3)					
Low Frequency Signals	IEC / EN 61000 - 2 - 2 (level 10)					
Degree of protection / Grado de Protección	IP21					
Conduction & Radiation	FCC Part 15, Subpart B, Class A ; IEC / EN 62040-2 (Cat 3)					
Safety / Seguridad	IEC / EN60950 - 1					
Quality and Environment	RoHS / ISO9001 & ISO14001					
Transportation / Transporte	ETS 300019 - 2 - 2 class 2.3					

Specifications can be modified to comply with special requirements or change without further notice

Las especificaciones pueden bajo requerimiento adaptarse a proyectos especiales o cambiar sin previo aviso.

(*N1): Output voltage is selectable by Screen / El Voltaje de salida es configurable desde la pantalla

(*N2): Recharging time based on previous 10 to 20 min full discharging cycles . Tiempo de recarga basado en ciclos previos de descarga profunda de 10 a 20min.

(*N3): UPS can work up to 40°C but batteries will short their life over 25°C / El UPS puede trabajar hasta los 40°C, pero las baterías acortan su vida útil por encima de 25°C

** Derrate capacity to 60% of total capacity when Frequency converter mode is activated / La capacidad en VA/ Watts se degrada y baja hasta el 60% en modo "Convertidor de Frecuencia".

Technical Features / Características Técnicas
208V/120V (1/2)

OPTIMA-33 T10 (208/120V) Page 1 of 2	10K-208	20K-208	30K-208-NB	40K-208-NB
Capacity / Capacidad (VA)	10KVA	20KVA	30KVA	40KVA
Capacity / Capacidad (W)	10KW	20KW	30KW	40KW
Parallel Units / Unidades en Paralelo	3			
Input-Output / Entrada-Salida	3Ph-3Ph			
INPUT / ENTRADA				
Phase / Fases	(Y) : 3Ph + N + G			
Input Range / Rango de Entrada	L-N: (88Vac-146Vac) @ $\geq 80\%$ Load L-N: (X-146Vac) @ $50\% < \text{Load} < 80\%$; X=70V + (60*(Load-50%)) L-N: (70Vac-156Vac) @ $\leq 50\%$ Load			
Max. Current / Corriente Max. (130% load)	43A per ph.	86A per ph.	130A per ph.	173A per ph.
Frequency Range / Rango de Frecuencia	Autosensing: 50Hz: (46-54Hz) / 60Hz: (56-64Hz)			
Power Factor / Factor de Potencia	> 0.99 @ 100%load			
THDi (IEC 62040-3)	$< 4\%$ @ 100% load $< 6\%$ @ 50% load (IEC61000-3-4)			
Slew Rate / Seguimiento de Frecuencia:	1 Hz / s			
OUTPUT / SALIDA				
Phase / Fases	(Y): 3Ph + N + G or (DELTA): 3Ph + G			
Voltage / Tensión de Salida	190/110Vac - 200/115Vac - 208/120Vac - 215/125Vac (*N1)			
Voltage Regulation / Regulación de Salida:	$\pm 1\%$			
Max. Angle Deviation / Max. Desviación de Fase	2° (EN-62040-3)			
Max. Voltage Unbalance Ratio / Desbalance Max.	1% (EN-62040-3)			
Frequency / Frecuencia (Batt. Mode)	50 Hz +/- 0.1 Hz / 60 Hz +/- 0.1 Hz			
Current Crest Ratio / Factor de Cresta	3:1 @ 100% load			
THDv (IEC 62040-3)	$< 2\%$ @ Linear Load / Carga Lineal $< 5\%$ @ No Linear Load / Carga no Lineal			
Dynamic Accuracy / Regulación Carga Variable	$< 5\%$ (load variations 0%-100% & 100%-0% R Load)			
Transient Recovery / Recuperación Cambio Carga	100ms / 90% vs (0%-100% & 100%-0% R load)			
Transfer Times / Tiempos Transferencia:	0 ms			
Waveform / Forma de Onda	Sine Wave / Sinusoidal Pura			
Power Output / Salidas	Terminal Block / Regleta de Conexión			
DC Offset / Componente DC	50mV max.			
INTERNAL BYPASS				
Bypass type / Tipo de Bypass:	SCR board / Tarjeta SCR			
Input Range in Bypass / Rango entrada en Bypass:	96-146Vac up to 88-156Vac (L-N) Adjustable & 50/60 +/- 4Hz Freq.			
PROTECTION SYSTEMS / SISTEMAS DE PROTECCION				
Surge & Spikes Suppression / Supresión de Picos	(L-N: 2.340J) + (LG: 2.340J) + (N-G: 780J) = TOTAL=5.460J (10/1000us)			
Output Short-Circuits / Cortocircuitos a la Salida (ONLINE)	Electronic inverter shortcircuit protection / Protección del inversor contra cortocircuitos: $< 100\text{ms}$: Current limited to max. capacity / Corriente limitada al 100% de Capacidad $\geq 100\text{ms}$: Outputs shutdown. UPS to Fault Mode / SAI/UPS apaga las salidas y pasa a Modo Falla			
AC Input Current / Sobre-Corriente de Entrada AC	Input breaker or fuse / Disyuntor o fusible de entrada			
Battery overcurrent / Sobrecorriente de baterías	Internal Fuse protection in battery line / Protección por fusibles en línea de baterías interna			
Phase rotation / Fases de entrada intercambiadas	Alarm & turn-on disable / Alarma y arranque prohibido			
Repetitive Overloads / Overloads repetitivos	3 overloads in 30min =UPS locks in bypass / 3 overloads en 30min = UPS a bypass			
Starting Time / Tiempo de Arranque	7s - 10s (@ 100% load)			
EFFICIENCY / EFICIENCIA				
Eco Mode (100%/75%/50%/25% load)	98% / 98% / 97% / 97%			
AC Mode / Modo AC (100%/75%/50%/25% load)	93.5% / 92.5% / 91.5% / 90.0%			
Battery / En Batería (100%/75%/50%/25% load)	93.5% / 92.5% / 91.5% / 90.0%			
Inverter Efficiency / Eficiencia Inversor	97% inverter @ 100% load			
BTU @ 100% LOAD	2218	4436	6654	8872
OVERLOAD / SOBRECARGA				
AC Mode / Modo Normal	[100%-110%: 60m]	[110%-125%: 10m]	[125%-150%: 1m]	[$> 150\%$: 1s] to bypass
Battery Mode / Modo Batería	[100%-110%: 60m]	[110%-125%: 10m]	[125%-150%: 1m]	[$> 150\%$: 1s] to cut-off
Bypass	[100%-130%: OK] [$> 130\%$: 1min]			

BATTERIES / BATERIAS

Battery Type / Tipo de Baterías	VRLA Sealed & Free maintenance / Sellada de libre mantenimiento VRLA (12V-9AH)			
Batteries location / Ubicación de las Baterías	Internal / Internas		External (XBAT) / Externas (XBAT)	
Battery Voltage / Voltaje de Baterías	+/- 120 VDC			
Charging Amps / Corriente de Carga	1A - 12A Adjustable (According to/ De acuerdo con DIN41773).			
Recharging Time / Tiempo de recarga (90%)	2h - 3h (*N2)			
Charging Voltage / Voltaje del cargador (Floating)	+/- 136.5 V			
Temp. Compensation / Compensación Temp.	120mV/°C per battery (Input Air Temp/ Temp. Aire entrada: 25-50°C)			
Shutdown battery Voltage / Voltaje DC Apagado	10.7V/batt (0-30% load) 10.2V/batt (30-70% load) 9.6V/batt (load >70%)		10.7V/batt	
Low Battery Warning / Aviso de Baterías Baja	11.4VDC per Battery			
Max. DC Current / Corriente DC Max.	104A DC	208A DC	281A DC	374A DC

INDICATORS / INDICADORES

5 Inches Touch Screen / Pantalla Táctil de 5 Pulg.	Full Status, Error Codes and Real Time Values / Estado, Códigos Error y Valores en Tiempo Real			
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ALARM / ALARMAS

Acoustic Beep Alarm / Alarma sonora:	Battery, Low Battery, Overload, UPS Failure / Modo Batería, Batería Baja, Sobrecargas, Falla del UPS			
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PRODUCT SIZE & NET WEIGHT / TAMAÑO Y PESO NETO (DxWxH) / (mm) / (Kg)

SIZE: UPS (with internal batteries)	626*250*750	815*300*1000	-	-
WEIGHT: UPS (with internal batteries)	126	152	-	-
SIZE: UPS (no internal batteries)	-	-	790*360*1010	
WEIGHT: UPS (no internal batteries)	-	-	112	117
SIZE: Ext. Batt Cab. / Baterías Externas	592*250*576 (40P)		815*250*826 (80P)	
WEIGHT: Ext. batt Cab. / Baterías Externas	119 (40P)		240 (80P)	

PACKING: Individual Small Pallet per Unit / EMPAQUE: Equipo en Pallet Individual (DxWxH) / (mm) / (Kg)

SIZE: UPS	720*380*900	920*380*1250	920*400*1260	
WEIGHT: UPS	156	182	142	147
SIZE: Ext. Batt Cab. / Baterías Externas	720*380*730		920*380*900	
WEIGHT: Ext. batt Cab. / Baterías Ext.	149		270	

OPERATING / AMBIENTALES

Operating Conditions / Condiciones de Operación	-5°C to +40 °C (*N3) <95 % (non-condensing / no condensante)			
Storage / Almacenaje	UPS: -15 °C to +60 °C Batteries: 0 °C to +35 °C			
Noise Level / Ruido Producido (@ 1m)	< 55dB	< 58dB	< 63dB	
Protecting Coating / Tropicalizado de Tarjetas	Yes / Si			
Altitude / Altura	Max Altitude: 4.500m. (over 1.000m output capacity is de-rated 1% every 100m) / Altura máx 4.500msnm (sobre 1.000m la capacidad de salida disminuye 1% cada 100m)			

COMMUNICATION / COMUNICACION

Smart RS-232 & USB ports	Windows family, Linux, Unix and MAC			
Intelligent Port (SNMP)	Optional / Opcional: LAN, AS400 & RS485			

SAFETY & STANDARDS / NORMATIVAS Y ESTANDARES

UL/CSA	By UL: UL1778 & CSA C22.2			
Certification / Certificación	CE			
UPS General Safety / Seguridad General	IEC 62040 - 1 - 1			
UPS EMC / Compatibilidad. Electromag.	IEC 62040 - 2 (Class C3) (radiation)			
UPS Tests / Procedimiento Pruebas UPS	IEC 62040 - 3			
ESD / RS / EFT / Surge / CS / F. Mag. Field	EN 61000-4-2 & 4-3 & 4-4 & 4-5 & 4-6 & 4-8 (level 3)			
Low Frequency Signals	IEC / EN 61000 - 2 - 2 (level 10)			
Degree of protection / Grado de Protección	IP21			
Conduction & Radiation	FCC Part 15, Subpart B, Class A ; IEC / EN 62040-2 (Cat 3)			
Safety / Seguridad	IEC / EN60950 - 1			
Quality and Environment	RoHS / ISO9001 & ISO14001			
Transportation / Transporte	ETS 300019 - 2 - 2 class 2.3			

Specifications can be modified to comply with special requirements. Technical specifications may change without further notice

Las especificaciones pueden bajo requerimiento adaptarse a proyectos especiales. Las especificaciones pueden cambiar sin previo aviso.

(*N1): **Output voltage is selectable by Screen** / El Voltaje de salida es configurable desde la pantalla

(*N2): **Recharging time based on previous 10 to 20 min full discharging cycles** . Tiempo de recarga basado en ciclos previos de descarga profunda de 10 a 20min.

(*N3): **UPS can work up to 40°C but batteries will short their life over 25°C** / El UPS puede trabajar hasta los 40°C, pero las baterías acortan su vida útil por encima de 25°C

** **Derate capacity to 60% of total capacity when Frequency converter mode is activated**

** La capacidad en VA/ Watts se degrada y baja hasta el 60% en modo "Convertidor de Frecuencia".

Technical Features / Características Técnicas

480V/277V (1/2)

OPTIMA-33 T10 (480/277V) Page 1 of 2	10K-480-NB	20K-480-NB	30K-480-NB	40K-480-NB	60K-480-NB	80K-480-NB
La familia OPT33-T10 480/277 se basa en los modelos OPT33-T10 400/230, con autotransformadores internos de entrada y salida para 480/277V						
Los modelos 480/277V no incluyen baterías internas, así que requieren gabinetes de baterías externos						
Capacity / Capacidad (VA)	10KVA	20KVA	30KVA	40KVA	60KVA	80KVA
Capacity / Capacidad (W)	10KW	20KW	30KW	40KW	60KW	80KW
Parallel Units / Unidades en Paralelo	3					
Input-Output / Entrada-Salida	3Ph-3Ph					
INPUT / ENTRADA						
Phase / Fases	(Y) : 3Ph + N + G					
Input Range / Rango de Entrada	L-N: (212Vac-332Vac) @ >=80% Load L-N: (X-332Vac) @ 50% < Load < 80%; X=132V + (266,67*(Load-50%)) L-N: (132Vac-360Vac) @ <=50% Load					
Max. Current / Corriente Max. (130% load, A x ph.)	18A	36A	54A	72A	108A	144A
Frequency Range / Rango de Frecuencia	Autosensing: 50Hz: (46-54Hz) / 60Hz: (56-64Hz)					
Power Factor / Factor de Potencia	> 0.99 @ 100%load					
THDi (IEC 62040-3)	< 4% @ 100% load < 6% @ 50% load (IEC61000-3-4)					
Slew Rate / Seguimiento de Frecuencia	1 Hz / s					
OUTPUT / SALIDA						
Phase / Fases	(Y): 3Ph + N + G or (DELTA): 3Ph + G					
Voltage / Tensión de Salida	432/250Vac - 455/265Vac - 480/277Vac - 498/288Vac (*N1)					
Voltage Regulation / Regulación de Salida:	+/- 1%					
Max. Angle Deviation / Max. Desviación de Fase	2° (EN-62040-3)					
Max. Voltage Unbalance Ratio / Desbalance Max.	1% (EN-62040-3)					
Frequency / Frecuencia (Batt. Mode)	50 Hz +/- 0.1 Hz / 60 Hz +/- 0.1 Hz					
Current Crest Ratio / Factor de Cresta	3:1 @ 100% load					
THDv (IEC 62040-3)	< 2% @ Linear Load / Carga Lineal <5% @ No Linear Load / Carga no Lineal					
Dynamic Accuracy / Regulación Carga Variable	<5% (load variations 0%-100% & 100%-0% R Load)					
Transient Recovery / Recuperación Cambio Carga	100ms / 90% vs (0%-100% & 100%-0% R load)					
Transfer Times / Tiempos Transferencia:	0 ms					
Waveform / Forma de Onda	Sine Wave / Sinusoidal Pura					
Power Output / Salida	Terminal Block / Regleta de Conexión					
DC Offset / Componente DC	50mV max.					
INTERNAL BYPASS						
Bypass type / Tipo de Bypass	SCR board / Tarjeta SCR					
Input Range in Bypass / Rango entrada en Bypass	211-317Vac (L-N) & 50/60 +/- 4Hz Freq.					
PROTECTION SYSTEMS / SISTEMAS DE PROTECCION						
Surge & Spikes Suppression / Supresión de Picos	(L-N: 2.340J) + (LG: 2.340J) + (N-G: 780J) = TOTAL=5.460J (10/1000us)					
Output Short-Circuits / Cortocircuitos a la Salida (ONLINE)	Electronic inverter shortcircuit protection / Protección del inversor contra cortocircuitos: < 100ms: Current limited to max. capacity / Corriente limitada al 100% de Capacidad > =100ms: Outputs shutdown. UPS goes to Fault Mode / SAI/UPS apaga las salidas y pasa a Modo Falla					
AC Input Current / Sobre-Corriente de Entrada AC	Input breaker or fuse / Disyuntor o fusible de entrada					
Battery overcurrent / Sobrecorriente de baterías	Internal Fuse protection in battery line / Protección por fusibles en línea de baterías interna					
Phase rotation / Fases de entrada intercambiadas	Alarm & turn-on disable / Alarma y arranque prohibido					
Repetitive Overloads / Overloads repetitivos	3 overloads in 30min =UPS locks in bypass / 3 overloads en 30min = UPS a bypass					
Starting Time / Tiempo de Arranque	7s - 10s (@ 100% load)					
UPS EFFICIENCY / EFICIENCIA DEL UPS						
Eco Mode (100%/75%/50%/25% load)	98% / 98% / 97% / 97%					
AC Mode / Modo AC (100%/75%/50%/25% load)	95.5% / 94.5% / 93.5% / 91.5%					
Battery / En Batería (100%/75%/50%/25% load)	94.5% / 93.5% / 92.5% / 90.5%					
Inverter Efficiency / Eficiencia Inversor	97% inverter @ 100% load					
BTU @ 100% LOAD	1536	3071	4607	6142	9213	12284
OVERLOAD / SOBRECARGA						
AC Mode / Modo Normal	[100%-110%: 60m]	[110%-125%: 10m]	[125%-150%: 1m]	[>150%: 1s] to bypass		
Battery Mode / Modo Batería	[100%-110%: 60m]	[110%-125%: 10m]	[125%-150%: 1m]	[>150%: 1s] to cut-off		
Bypass	[100%-130%: OK] [>130%: 1min]					

OPTIMA-33 T10 (480/277V) Page 2 of 2 10K-480-NB 20K-480-NB 30K-480-NB 40K-480-NB 60K-480-NB 80K-480-NB

BATTERIES / BATERIAS						
Battery Type / Tipo de Baterías	VRLA Sealed & Free maintenance / Sellada de libre mantenimiento VRLA (12V-9AH)					
Batteries location / Ubicación de las Baterías	Batteries located in external cabinet (XBAT) / Baterías en armario externo (XBAT)					
External Battery Cabinet / Armario de baterías (XBAT)	1 x XBAT P40 120	1 x XBAT P40 240	1 x XBAT P80 240	1 x XBAT P80 240	2 x XBAT P80 240	2 x XBAT P80 240
Battery Voltage / Voltaje de Baterías	+/-120VDC	+/- 240 VDC	+/- 240 VDC	+/- 240 VDC	+/- 240 VDC	+/- 240 VDC
Charging Amps / Corriente de Carga	1A - 12A Adjustable (According to/ De acuerdo con DIN41773).					
Recharging Time / Tiempo de recarga (90%)	2h - 3h (*N2)					
Charging Voltage / Voltaje del cargador (Floating)	+/- 136.5V	+/- 273 V	+/- 273 V	+/- 273 V	+/- 273 V	+/- 273 V
Temp. Compensation / Compensación Temp.	120mV/°C per battery (Input Air Temp/ Temp. Aire entrada: 25-50°C)					
Shutdown battery Voltage / Voltaje DC Apagado	10.7V/batt (0-30% load) 10.2V/batt (30-70% load) 9.6V/batt (load >70%)				10.7V/batt	
Low Battery Warning / Aviso de Baterías Baja	11.4VDC per Battery					
Max. DC Current / Corriente DC Max.	52A DC	104A DC	156A DC	208A DC	281A DC	374A DC
INDICATORS / INDICADORES						
5 Inches Touch Screen / Pantalla Táctil de 5 Pulg.	Full Status, Error Codes and Real Time Values Estado, Códigos de Error y Valores en Tiempo Real					
ALARM / ALARMAS						
Acoustic Beep Alarm / Alarma sonora:	Battery, Low Battery, Overload, UPS Failure Modo Batería, Batería Baja, Sobrecargas, Falla del UPS					
PRODUCT SIZE & NET WEIGHT / TAMAÑO Y PESO NETO (DxWxH in mm) / (Kg)						
SIZE: UPS (no internal batteries)	626*250*750		815*300*1000		790*360*1010	
WEIGHT: UPS (no internal batteries)	90	149	207	276	406	471
SIZE: Ext. Batt Cab. / Baterías Externas	592*250*576 (XBAT 40P)		815*250*826 (XBAT 80P)		2x(815*250*826) (2 x XBAT 80P)	
WEIGHT: Ext. batt Cab. / Baterías Externas	119 (XBAT model 40P)		240 (1 x XBAT model 80P)		2 x 240 (2 x XBAT model 80P)	
PACKING: Individual Small Pallet per Unit / EMPAQUE: Equipo en Pallet Individual (DxWxH) / (mm) / (Kg)						
SIZE: UPS	720*380*900		920*380*1250		920*400*1260	
WEIGHT: UPS	120	179	237	306	436	501
SIZE: Ext. Batt Cab. / Baterías Externas	720*380*730		920*380*900		2 x (920*380*900)	
WEIGHT: Ext. batt Cab. / Baterías Ext.	149		270		2 x 270	
OPERATING / AMBIENTALES						
Operating Conditions / Condiciones de Operación	-5°C to +40 °C (*N3) <95 % (non-condensing / no condensante)					
Storage / Almacenaje	UPS: -15 °C to +60 °C Batteries: 0 °C to +35 °C					
Noise Level / Ruido Producido (@ 1m)	< 55dB		< 58dB		< 63dB	
Protecting Coating / Tropicalizado de Tarjetas	Yes / Si					
Altitude / Altura	Max Altitude: 4.500m. (over 1.000m output capacity is de-rated 1% every 100m) / Altura máx 4.500msnm (sobre 1.000m la capacidad de salida disminuye 1% cada 100m)					
COMMUNICATION / COMUNICACION						
Smart RS-232 & USB ports	Windows family, Linux, Unix and MAC					
Intelligent Port (SNMP)	Optional / Opcional: LAN, AS400 & RS485					
SAFETY & STANDARDS / NORMATIVAS Y ESTANDARES						
Certification / Certificación	CE					
UPS General Safety / Seguridad General	IEC 62040 - 1 - 1					
UPS EMC / Compatibilidad. Electromag.	IEC 62040 - 2 (Class C3) (radiation)					
UPS Tests / Procedimiento Pruebas UPS	IEC 62040 - 3					
ESD / RS / EFT / Surge / CS / F. Mag. Field	EN 61000-4-2 & 4-3 & 4-4 & 4-5 & 4-6 & 4-8 (level 3)					
Low Frequency Signals	IEC / EN 61000 - 2 - 2 (level 10)					
Degree of protection / Grado de Protección	IP21					
Conduction & Radiation	FCC Part 15, Subpart B, Class A ; IEC / EN 62040-2 (Cat 3)					
Safety / Seguridad	IEC / EN60950 - 1					
Quality and Environment	RoHS / ISO9001 & ISO14001					
Transportation / Transporte	ETS 300019 - 2 - 2 class 2.3					

Specifications can be modified to comply with special requirements. Technical specifications may change without further notice

Las especificaciones pueden bajo requerimiento adaptarse a proyectos especiales. Las especificaciones pueden cambiar sin previo aviso.

(*N1): Output voltage is selectable by Screen / El Voltaje de salida es configurable desde la pantalla

(*N2): Recharging time based on previous 10 to 20 min full discharging cycles . Tiempo de recarga basado en ciclos previos de descarga profunda de 10 a 20min.

(*N3): UPS can work up to 40°C but batteries will short their life over 25°C / El UPS puede trabajar hasta los 40°C, pero las baterías acortan su vida útil por encima de 25°C

** Derate capacity to 60% of total capacity when Frequency converter mode is activated / La capacidad en VA/ Watts se degrada y baja hasta el 60% en modo "Convertidor de Frecuencia".

Online 3ph/3ph

OPTIMA-33-T10 60K UP TO 200K

Online de Doble Conversion UPS with Output PF 1.0 and IGBT technology in rectifier and inverter stages. Three-Phase Input and Output. Designed to offer the best protection to critical systems requiring a high level of power protection and high operational availability.



Available for Three-Phase: 208, 400, and 480V Installations

Three-Phase Input and Output (3 Phases + Neutral + Ground) and models to operate 208/120V (10K to 90K), 400/230V (10K to 200K), and 480V (10K to 80K). Models for 480V Installations are based in 400V models with internal input and output autotransformers for a fully integrated solution.

IGBT + ON-LINE Doble Conversion Technology

New generation On Line Doble Conversion Technology offers high reliability and strength as well as outstanding features. DSP signal control system and an efficient rectifier/inverter system based in IGBT technology give exceptional attributes to this product family and an input power factor over 0.99 at full load.

7 Inches Touch Screen/Color LCD

From this versatile color touch screen LCD, all parameter of the UPS, as well as AC Line conditions, can be monitored. It is also a very intuitive interface to set up all configurable functions of this avant-garde unit.

Communication (USB - RS232 - SNMP) & Software de Control

Several communications options are available: USB, RS232 and Smart SNMP port. Smart SNMP port supports LAN cards, RS485 cards, or dry contact cards (AS400).

Multiple Bypass System

Includes an internal automatic bypass which activates if UPS fails or gets overloaded. This keeps the system powered and working while the situation is solved. Besides, counts on an external bypass switch for major maintenance.

Parallel Operation

Up to 4 units can be installed in parallel either to grow in capacity or for redundancy purposes. UPS in parallel systems can operate either with one shared battery pack, or with separate battery packs, according to installation requirements.

Emergency Power Off (EPO)

EPO port to connect an emergency switch which turns off the UPS output when activated.

Conformal Coating

This XSMART equipment features a Conformal Coating treatment on its internal boards and components. Conformal coating is a protection against moisture and corrosive contaminants to ensure stable performance and extend its lifespan in various environments, as long as technical specifications requirements of the equipment are met.

High Energy Efficiency

One of the main features of this family is high energy efficiency (>94%). This generates high operational savings and contributes with the environment.

Safety and Performance Directives UL/CSA & CE

UL (UL1778 y CSA C22.2) directive for 208/120V models (10K, 20K, 30K, & 40K). CE for 400/230V & 480/277V models.

Galvanic Isolation

Optional transformers and accessories are available for those systems requiring safe and galvanically isolated power.

Auto-Recovery

Auto-Recovery function restarts the UPS automatically when AC Line comes back.

Power Generators Compatible

Only True On-Line Double conversion UPS can filter voltage fluctuation and other particularities generated by Power Generators to generate a clean, perfect, and pure sine wave power to feed your installation.

Smart Battery Charger

With a smart battery charger this UPS family can charge batteries in an outstanding time (2-4 hours up to 90%), offering a better availability than similar products. A smart 3 stages charging algorithm, along with temperature compensation improves battery lifespan.

Eco-Mode Operation, for power saving

ECO-Mode is a power saving function which reduces electrical consumption over 5%. In this mode the load is powered directly by AC Line as long as it keeps between pre-configured limits. Otherwise, the UPS goes to regular ONLINE mode. During power outage, the UPS goes into Battery Mode to keep your equipment working perfectly safe.

Aplicacions:

Large IT Systems, Industrial Installations, etc.



Technical Features / Características Técnicas

- 1.- Cold Start Button
- 2.- SNMP Smart Port
- 3.- EPO Connector
- 4.- Dry Contacts Port
- 5.- USB Port
- 6.- RS232 Port

- 7.- Parallel Control Connectors
- 8.- Shared Current Connectors
- 9.- AC input Breaker
- 10.- BYPASS Input Breaker
- 11.- Maintenance-Bypass Switch (MBS)
- 12.- AC Output Breaker

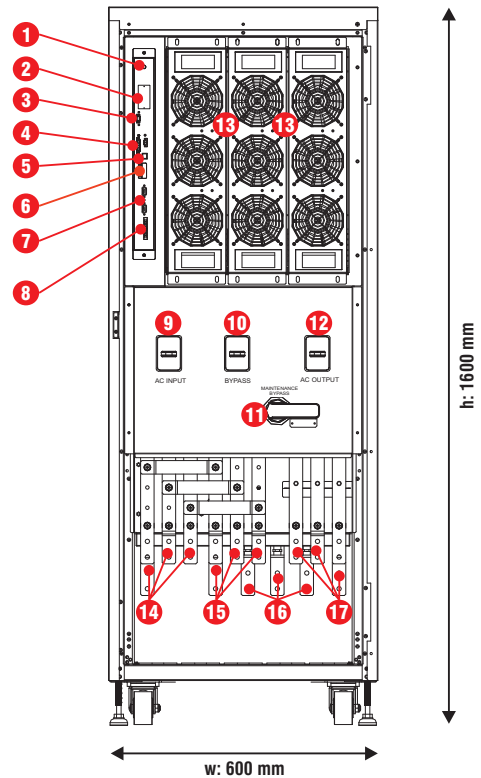
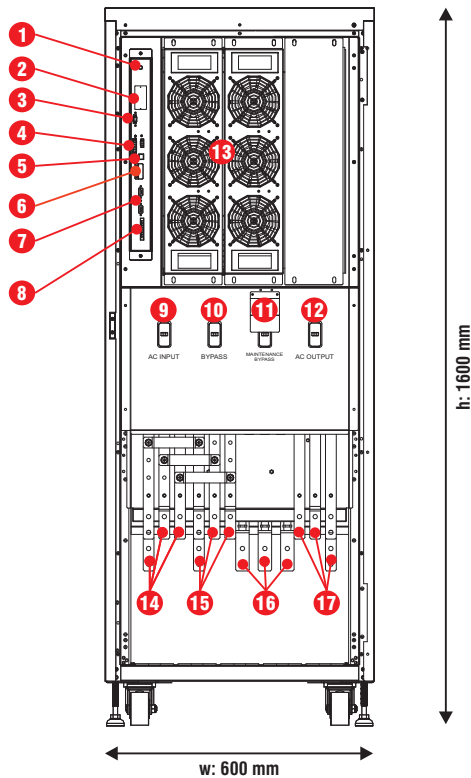
- 13.- Power Modules
- 14.- AC Input Terminal
- 15.- Bypass Input Terminal
- 16.- External Battery Terminal
- 17.- AC Output Terminal

Front View / Vista Frontal

UPS / SAI (400V/230V)

UPS 100K / 120K (400V/230V)

UPS 180K / 200K (400V/230V)



FRONT PANEL (OPEN DOOR) / PANEL FRONTAL (PUERTA ABIERTA)



Technical Features / Características Técnicas

- 1.- Cold Start Button
- 2.- SNMP Smart Port
- 3.- EPO Connector
- 4.- Dry Contacts Port
- 5.- USB Port
- 6.- RS232 Port

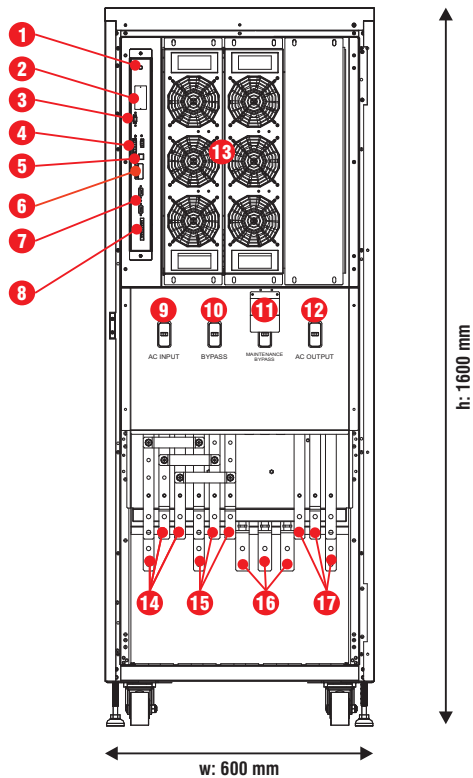
- 7.- Parallel Control Connectors
- 8.- Shared Current Connectors
- 9.- AC input Breaker
- 10.- BYPASS Input Breaker
- 11.- Maintenance-Bypass Switch (MBS)
- 12.- AC Output Breaker

- 13.- Power Modules
- 14.- AC Input Terminal
- 15.- Bypass Input Terminal
- 16.- External Battery Terminal
- 17.- AC Output Terminal

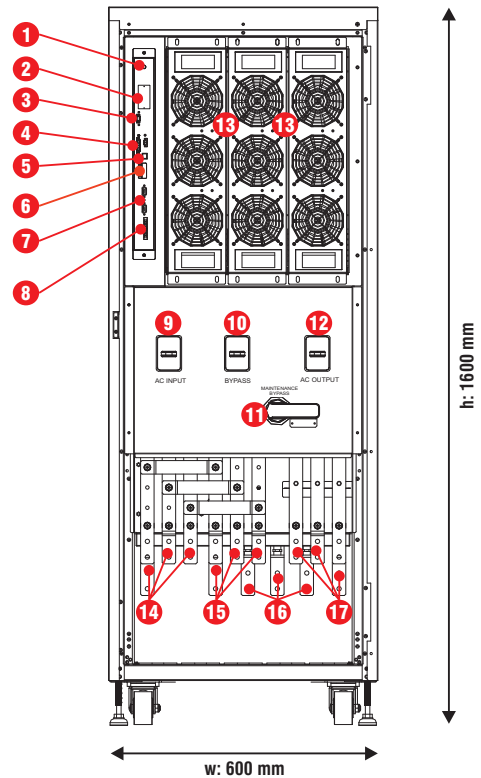
Front View / Vista Frontal

UPS / SAI (208/120V)

UPS 60K (208V/120V)



UPS 90K (208V/120V)



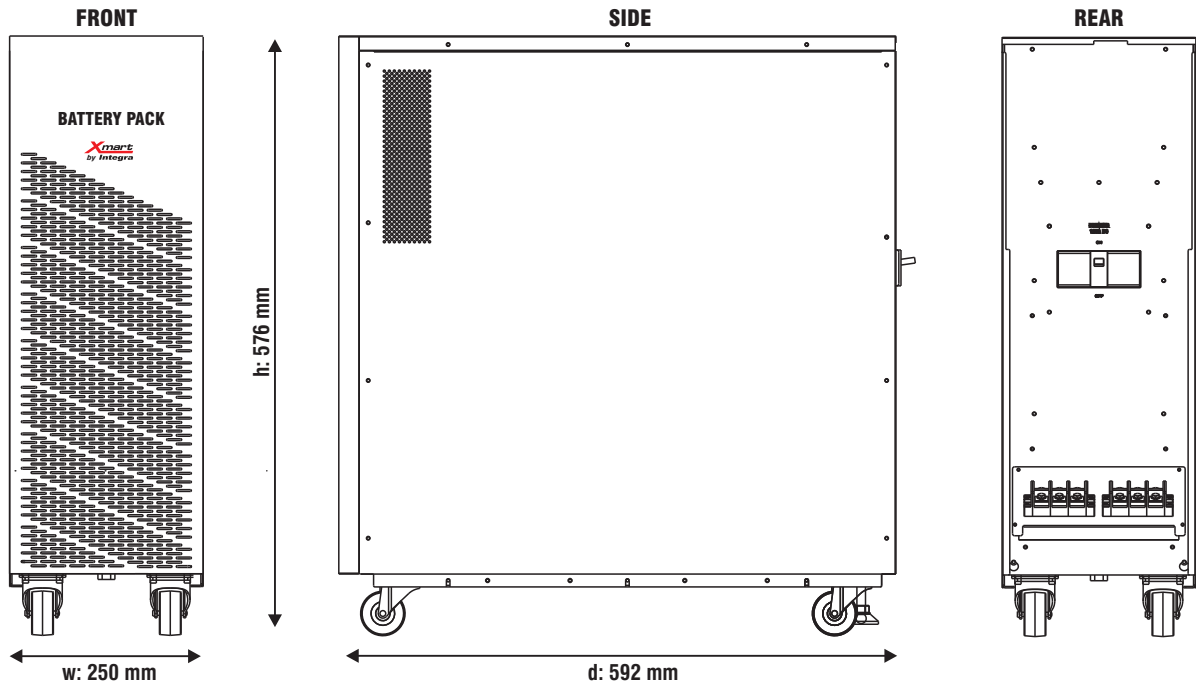
FRONT PANEL (OPEN DOOR) / PANEL FRONTAL (PUERTA ABIERTA)



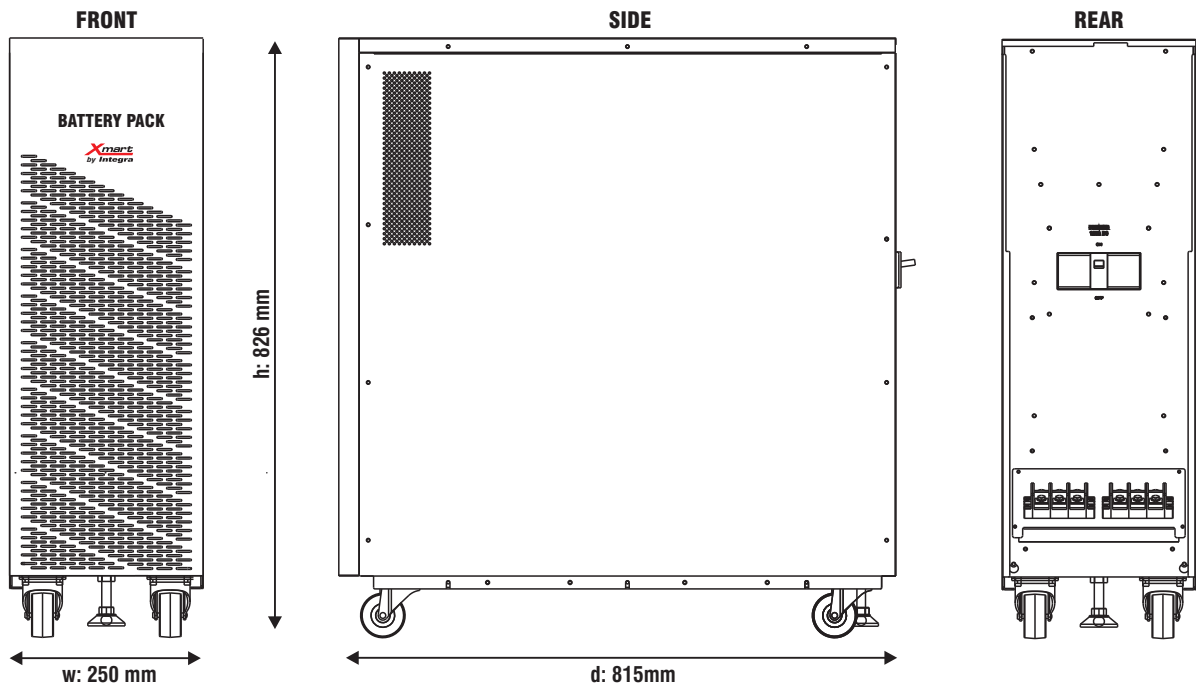
Front-Rear View / Vista Frontal-Trasera

External Battery Packs / Paquetes de Baterías Externas

XBAT-OPT33-40P: 40 batteries 12V/9AH



XBAT-OPT33-80P: 80 batteries 12V/9AH



Technical Features / Características Técnicas
400V/230V (1/2)

OPTIMA-33 T10 (400/230V) Page 1 of 2	100K-400-NB	120K-400-NB	180K-400-NB	200K-400-NB
Capacity / Capacidad (VA)	100KVA	120KVA	180KVA	200KVA
Capacity / Capacidad (W)	100KW	120KW	180KW	200KW
Parallel Units / Unidades en Paralelo	4			
Input-Output / Entrada-Salida	3Ph-3Ph			
INPUT / ENTRADA				
Phase / Fases	(Y) : 3Ph + N + G			
Input Range / Rango de Entrada	L-N: (176Vac-276Vac) @ >80% load			
Max. Current / Corriente Max. (130% load, A x ph.)	246A	296A	443A	492A
Frequency Range / Rango de Frecuencia	Autosensing: 50Hz: (46-54Hz) / 60Hz: (56-64Hz)			
Power Factor / Factor de Potencia	> 0.99 @ 100%load			
THDi (IEC 62040-3)	< 4% @ 100% load < 6% @ 50% load (IEC61000-3-4)			
Slew Rate / Seguimiento de Frecuencia:	1 Hz / s			
OUTPUT / SALIDA				
Phase / Fases	(Y): 3Ph + N + G or (DELTA): 3Ph +G			
Voltage / Tensión de Salida	360/208Vac - 380/220Vac - 400/230Vac - 415/240Vac (*N1)			
Voltage Regulation / Regulación de Salida:	+/- 1%			
Max. Angle Deviation / Max. Desviación de Fase	2° (EN-62040-3)			
Max. Voltage Unbalance Ratio / Desbalance Max.	1% (EN-62040-3)			
Frequency / Frecuencia (Batt. Mode)	50 Hz +/- 0.1 Hz / 60 Hz +/- 0.1 Hz			
Current Crest Ratio / Factor de Cresta	3:1 @ 100% load			
THDv (IEC 62040-3)	< 2% @ Linear Load / Carga Lineal <5% @ No Linear Load / Carga no Lineal			
Dynamic Accuracy / Regulación Carga Variable	<6% (load variations 0%-100% & 100%-0% R Load)			
Transient Recovery / Recuperación Cambio Carga	100ms / 90% vs (0%-100% & 100%-0% R load)			
Transfer Times / Tiempos Transferencia:	0 ms			
Waveform / Forma de Onda	Sine Wave / Sinusoidal Pura			
Power Output / Salida	Terminal Block / Regleta de Conexión			
DC Offset / Componente DC	+/-50mV max.			
INTERNAL BYPASS				
Bypass type / Tipo de Bypass:	SCR board / Tarjeta SCR			
Input Range in Bypass / Rango entrada en Bypass:	176-264Vac (L-N) & 50/60 +/- 4Hz Freq.			
PROTECTION SYSTEMS / SISTEMAS DE PROTECCION				
Surge & Spikes Suppression / Supresión de Picos	(L-N: 1.470J) + (LG: 1.470J) + (N-G: 490J) = TOTAL=3.430J (10/1000us)			
Output Short-Circuits / Cortocircuitos a la Salida (ONLINE)	Electronic inverter shortcircuit protection / Protección del inversor contra cortocircuitos: <100ms: Current limited to max. capacity / Corriente limitada al 100% de Capacidad > =100ms: Outputs shutdown. UPS goes to Fault Mode / SAI/UPS apaga salidas y pasa a Modo Falla			
AC Input Current / Sobre-Corriente de Entrada AC	Input breaker or fuse / Disyuntor o fusible de entrada			
Battery overcurrent / Sobrecorriente de baterías	Internal Fuse protection in battery line / Protección por fusibles en línea de baterías interna			
Phase rotation / Fases de entrada intercambiadas	Alarm & turn-on disable / Alarma y encendido inhabilitado			
Repetitive Overloads / Overloads repetitivos	3 overloads in 30min =UPS locks in bypass / 3 overloads in 30min = UPS a bypass			
Starting Time / Tiempo de Arranque	7s - 10s (@ 100% load)			
EFFICIENCY / EFICIENCIA				
Eco Mode (100%/50% load)	97% / 98.5%			
AC Mode / Modo AC (100%/50% load)	94.8% / 95.5%			
Battery / En Batería (100%/50% load)	93.8% / 94.5%			
Inverter Efficiency / Eficiencia Inversor	94.8% inverter @ 100% load			
OVERLOAD / SOBRECARGA				
AC Mode / Modo Normal	[100%-110%: 60m]	[110%-125%: 10m]	[125%-150%: 1m]	[>150%: 0.1s] to Bypass
Battery Mode / Modo Batería	[100%-110%: 60m]	[110%-125%: 10m]	[125%-150%: 1m]	[>150%: 0.1s] to Cut-Off
Bypass	[100%-130%: OK] [>130%: 1min]			

BATTERIES / BATERIAS

Battery Type / Tipo de Baterías	VRLA Sealed & Free maintenance / Sellada de libre mantenimiento VRLA (12V-9AH)			
Batteries location / Ubicación de las Baterías	External (XBAT) / Externas (XBAT)			
Battery Voltage / Voltaje de Baterías	+/- 240 VDC			
Charging Amps / Corriente de Carga	2A - 36A (According to/ De acuerdo con DIN41773)	3A - 54A (According to/ De acuerdo con DIN41773)		
Recharging Time / Tiempo de recarga (90%)	2h - 8h (Adjustable, *N3)			
Charging Voltage / Voltaje del cargador (Floating)	+/- 273 V			
Temp. Compensation / Compensación Temp.	20mV/°C per battery (Input Air Temp/ Temp. Aire entrada: 25-50°C)			
Shutdown battery Voltage / Voltaje DC Apagado	10.7V/batt			
Low Battery Warning / Aviso de Baterías Baja	11.4VDC per Battery			
Max. DC Current / Corriente DC Max. (150% load)	701A DC	841A DC	1262A DC	1402A DC

INDICATORS / INDICADORES

7 Inches Touch Screen / Pantalla Táctil de 7 Pulg.	Full Status, Error Codes, & Real Time Values Estado, Códigos de Error y Valores en Tiempo Real			
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ALARM / ALARMAS

Acoustic Beep Alarm / Alarma sonora:	Battery Mode, Low Battery, Overload, UPS Failure Modo Batería, Baja Batería, Sobrecargas, Falla			
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PRODUCT SIZE & NET WEIGHT / TAMAÑO Y PESO NETO (DxWxH) / (mm) / (Kg)

SIZE: UPS (no internal batteries)	979*600*1600		979*600*1600	
WEIGHT: UPS (no internal batteries)	250		382	
SIZE: Ext. Batt Cab. / Baterías Externas	815*250*826 (80P)			
WEIGHT: Ext. batt Cab. / Baterías Externas	240 (80P)			

PACKING: Individual Small Pallet per Unit / EMPAQUE: Equipo en Pallet Individual (DxWxH) / (mm) / (Kg)

SIZE: UPS	1125*665*1800		1125*665*1800	
WEIGHT: UPS	278		412	
SIZE: Ext. Batt Cab. / Baterías Externas	920*380*900			
WEIGHT: Ext. batt Cab. / Baterías Ext.	270			

OPERATING / AMBIENTALES

Operating Conditions / Condiciones de Operación	(0 to +40°C) (*N2) <95 % (non-condensing / no condensante)			
Storage Temperature/ Temperatura de Almacenaje	UPS: -15 °C to +60 °C Batteries: 0 °C to +35 °C			
Noise Level / Ruido Producido (@ 1m)	75			
Protecting Coating / Tropicalizado de Tarjetas	Yes / Si			
Altitude / Altura	Max Altitude: 4.500m. (over 1.000m output capacity is de-rated 1% every 100m) Altura máx 4.500msnm (sobre 1.000m la capacidad de salida disminuye 1% cada 100m)			

COMMUNICATION / COMUNICACION

Smart RS-232 & USB ports	Built-In, Supports / De fábrica, soporta: Windows family, Linux, Unix and MAC			
Intelligent Port (SNMP)	Optional / Opcional: LAN, AS400 & RS485			

SAFETY & STANDARDS / NORMATIVAS Y ESTANDARES

CE Directives	IEC 62040 - 1			
UPS General Safety / Seguridad General	IEC 62040 - 1			
UPS EMC / Compatibilidad. Electromag.	IEC 62040 - 2 (Class C3)			
UPS Tests / Procedimiento Pruebas UPS	IEC 62040 - 3			
ESD / RS / EFT / Surge / CS / F. Mag. Field	EN 61000 - 4-3 & 4-4 & 4-5 & 4-6 & 4-8			
Low Frequency Signals	IEC / EN 61000 - 2 - 2			
Degree of protection / Grado de Protección	IP20			
Conduction & Radiation	IEC / EN 62040-2 (Cat 3)			
Quality and Environment	RoHS / ISO9001 & ISO14001			
Transportation / Transporte	ETS 300019 - 2 - 2 class 2.3			

Specifications can be modified to comply with special requirements. Technical specifications may change without further notice

Las especificaciones pueden bajo requerimiento adaptarse a proyectos especiales y pueden cambiar sin previo aviso.

(*N1): Output voltage is selectable by Screen / El Voltaje de salida es configurable desde la pantalla

(*N2): UPS can work up to 40°C but batteries will short their life over 25°C / El UPS puede trabajar hasta los 40°C, pero las baterías acortan su vida útil por encima de 25°C

(*N3): Recharging time based on previous 10min to 20min full discharging cycles . Tiempo de recarga basado en ciclos previos de descarga profunda de 10 a 20min.

Technical Features / Características Técnicas
208V/120V (1/2)

OPTIMA-33 T10 (208/120V) Page 1 of 2	60K-208-NB	90K-208-NB
Capacity / Capacidad (VA)	60KVA	90KVA
Capacity / Capacidad (W)	60KW	90KW
Parallel Units / Unidades en Paralelo	4	
Input-Output / Entrada-Salida	3Ph-3Ph	
INPUT / ENTRADA		
Phase / Fases	(Y) : 3Ph + N + G	
Input Range / Rango de Entrada	L-N: (88Vac-146Vac) @ >80% load L-N: (70Vac-156Vac) @ 50% load	
Max. Current / Corriente Max. (130% load)	295A per ph.	443A per ph.
Frequency Range / Rango de Frecuencia	Autosensing: 50Hz: (46-54Hz) / 60Hz: (56-64Hz)	
Power Factor / Factor de Potencia	> 0.99 @ 100%load	
THDi (IEC 62040-3)	< 4% @ 100% load / < 6% @ 50% load (IEC61000-3-4)	
Slew Rate / Seguimiento de Frecuencia:	1 Hz / s	
OUTPUT / SALIDA		
Phase / Fases	(Y): 3Ph + N + G or (DELTA): 3Ph + G	
Voltage / Tensión de Salida	208/120Vac - 220/127Vac (*N1)	
Voltage Regulation / Regulación de Salida:	+/- 1%	
Max. Angle Deviation / Max. Desviación de Fase	2° (EN-62040-3)	
Max. Voltage Unbalance Ratio / Desbalance Max.	1% (EN-62040-3)	
Frequency / Frecuencia (Batt. Mode)	50 Hz +/- 0.1 Hz / 60 Hz +/- 0.1 Hz	
Current Crest Ratio / Factor de Cresta	3:1 @ 100% load	
THDv (IEC 62040-3)	< 2% @ Linear Load / Carga Lineal - <5% @ No Linear Load / Carga no Lineal	
Dynamic Accuracy / Regulación Carga Variable	<6% (load variations 0%-100% & 100%-0% R Load)	
Transient Recovery / Recuperación Cambio Carga	100ms / 90% vs (0%-100% & 100%-0% R Load)	
Transfer Times / Tiempos Transferencia:	0 ms	
Waveform / Forma de Onda	Sine Wave / Sinusoidal Pura	
Power Output / Salidas	Terminal Block / Regleta de Conexión	
DC Offset / Componente DC	+/- 50mV max.	
INTERNAL BYPASS		
Bypass type / Tipo de Bypass:	SCR board / Tarjeta SCR	
Input Range in Bypass / Rango entrada en Bypass:	96-146Vac Adjustable to 88-156Vac (L-N) & 50/60 +/- 4Hz Freq.	
PROTECTION SYSTEMS / SISTEMAS DE PROTECCION		
Surge & Spikes Suppression / Supresión de Picos	(L-N: 1.470J) + (LG: 1.470J) + (N-G: 490J) = TOTAL=3.430J (10/1000us)	
Output Short-Circuits / Cortocircuitos a la Salida (ONLINE)	Electronic inverter shortcircuit protection / Protección del inversor contra cortocircuitos: <100ms: Current limited to max. capacity / Corriente limitada al 100% de Capacidad >=100ms: Outputs shutdown. UPS goes to Fault Mode / Las salidas se apagan. SAI/UPS pasa a Modo Falla	
AC Input Current / Sobre-Corriente de Entrada AC	Input breaker or fuse / Disyuntor o fusible de entrada	
Battery overcurrent / Sobrecorriente de baterías	Internal Fuse protection in battery line / Protección por fusibles en línea de baterías interna	
Phase rotation / Fases de entrada intercambiadas	Alarm & turn-on disable / Alarma y encendido inhabilitado	
Repetitive Overloads / Overloads repetitivos	3 overloads in 30min =UPS locks in bypass / 3 overloads en 30min = UPS a bypass	
Starting Time / Tiempo de Arranque	7s - 10s (@ 100% load)	
EFFICIENCY / EFICIENCIA		
Eco Mode (100%/50% load)	97% / 96.5%	
AC Mode / Modo AC (100%/50% load)	92.5% / 93.5%	
Battery / En Batería (100%/50% load)	91.5% / 92.5%	
Inverter Efficiency / Eficiencia Inversor	92.5% inverter @ 100% load	
OVERLOAD / SOBRECARGA		
AC Mode / Modo Normal	[100%-110%: 60m] [110%-125%: 10m] [125%-150%: 1m] [>150%: 0.1s] to Bypass	
Battery Mode / Modo Batería	[100%-110%: 60m] [110%-125%: 10m] [125%-150%: 1m] [>150%: 0.1s] to Cut-Off	
Bypass	[100%-130%: OK] [>130%: 1min]	

OPTIMA-33 T10 (208/120V) Page 2 of 2 **60K-208-NB** **90K-208-NB**

BATTERIES / BATERIAS		
Battery Type / Tipo de Baterías	VRLA Sealed & Free maintenance / Sellada de libre mantenimiento VRLA (12V-9AH)	
Batteries location / Ubicación de las Baterías	External (XBAT) / Externas (XBAT)	
Battery Voltage / Voltaje de Baterías	+/- 120 VDC	
Charging Amps / Corriente de Carga (Adjustable)	2A - 36A (According to/ De acuerdo con DIN41773)	3A - 54A (According to/ De acuerdo con DIN41773)
Recharging Time / Tiempo de recarga (90%)	2h - 8h (Adjustable, *N3)	
Charging Voltage / Voltaje del cargador (Floating)	+/- 136.5 V	
Temp. Compensation / Compensación Temp.	20mV/°C per battery (Input Air Temp/ Temp. Aire entrada: 25-50°C)	
Shutdown battery Voltage / Voltaje DC Apagado	10.7VDC/batt	
Low Battery Warning / Aviso de Baterías Baja	11.4VDC per Battery	
Max. DC Current / Corriente DC Max.	841A DC	1262A DC
INDICATORS / INDICADORES		
7 Inches Touch Screen / Pantalla Táctil de 7 Pulg.	Full Status, Error Codes, & Real Time Values Estado, Códigos de Error y Valores en Tiempo Real	
ALARM / ALARMAS		
Acoustic Beep Alarm / Alarma sonora:	Battery Mode, Low Batt., Overload, UPS Failure Modo Batería, Baja Bat., Sobrecargas, Falla	
PRODUCT SIZE & NET WEIGHT / TAMAÑO Y PESO NETO (DxWxH) / (mm) / (Kg)		
SIZE: UPS (no internal batteries)	979*600*1600	979*600*1600
WEIGHT: UPS (no internal batteries)	250	382
SIZE: Ext. Batt Cab. / Baterías Externas	815*250*826 (80P)	
WEIGHT: Ext. batt Cab. / Baterías Externas	240 (80P)	
PACKING: Individual Small Pallet per Unit / EMPAQUE: Equipo en Pallet Individual (DxWxH) / (mm) / (Kg)		
SIZE: UPS	1125*665*1800	1125*665*1800
WEIGHT: UPS	278	412
SIZE: Ext. Batt Cab. / Baterías Externas	920*380*900	
WEIGHT: Ext. batt Cab. / Baterías Ext.	270	
OPERATING / AMBIENTALES		
Operating Conditions / Condiciones de Operación	0°C to +40 °C (*N2) <95 % (non-condensing / no condensante)	
Storage / Almacenaje	UPS: -15 °C to +60 °C Batteries: (0 °C to +35 °C)	
Noise Level / Ruido Producido (dB @ 1m)	75	
Protecting Coating / Tropicalizado de Tarjetas	Yes / Si	
Altitude / Altura	Max Altitude: 4.500m. (over 1.000m output capacity is de-rated 1% every 100m) / Altura máx 4.500msnm (sobre 1.000m la capacidad de salida disminuye 1% cada 100m)	
COMMUNICATION / COMUNICACION		
Smart RS-232 & USB ports	Built-In, Supports / De fábrica, soporta: Windows family, Linux, Unix and MAC	
Intelligent Port (SNMP)	Optional / Opcional: LAN, AS400 & RS485	
SAFETY & STANDARDS / NORMATIVAS Y ESTANDARES		
CE Directives	IEC 62040 - 1	
UPS General Safety / Seguridad General	IEC 62040 - 1	
UPS EMC / Compatibilidad. Electromag.	IEC 62040 - 2 (Class C3)	
ESD / RS / EFT / Surge / CS / F. Mag. Field	EN 61000 - 4-3 & 4-4 & 4-5 & 4-6 & 4-8	
Low Frequency Signals	IEC / EN 61000 - 2 - 2	
Degree of protection / Grado de Protección	IP20	
Conduction & Radiation	IEC / EN 62040-2 (Cat 3)	
Quality and Environment	RoHS / ISO9001 & ISO14001	
Transportation / Transporte	ETS 300019 - 2 - 2 class 2.3	

Specifications can be modified to comply with special requirements. Technical specifications may change without further notice

Las especificaciones pueden bajo requerimiento adaptarse a proyectos especiales y pueden cambiar sin previo aviso.

(*N1): Output voltage is selectable by Screen / El Voltaje de salida es configurable desde la pantalla

(*N2): UPS can work up to 40°C but batteries will short their life over 25°C / El UPS puede trabajar hasta los 40°C, pero las baterías acortan su vida útil por encima de 25°C

(*N3): Recharging time based on previous 10min to 20min full discharging cycles / Tiempo de recarga basado en ciclos previos de descarga profunda de 10 a 20min.

Online 3ph/1ph

OPTIMA-31-T10 10K/15K/20K

Online de Doble Conversion UPS with Output PF 1.0 and IGBT technology in rectifier and inverter stages. Three-Phase Input and Single Phase Output. Designed to offer the best protection to critical systems requiring a high level of power protection and high operational availability.



Available for Three-Phase 208/120V and 400/230V Installations

Three-Phase Input (3 Phases+Neutral+Ground) and Single Phase Output, this UPS family includes models to operate 208/120V (10KVA) and 400/230V (10K to 20KVA) systems, without additional transformers.

IGBT + ON-LINE Doble Conversion Technology

New generation On Line Doble Conversion Technology offers high reliability and strength as well as outstanding features. DSP signal control system and an efficient rectifier/inverter system based in IGBT technology give exceptional attributes to this product family and an input power factor over 0.99 at full load.

LCD Screen

From this versatile LCD all parameter of the UPS, as well as AC Line conditions, can be monitored. It is also a very intuitive interface to set up all configurable functions of this avantgarde unit.

Communication (USB - RS232 - SNMP) & Software de Control

Several communications options are available: USB, RS232 and Smart SNMP port. Smart SNMP port supports LAN cards, RS485 cards, or dry contact cards (AS400).

Multiple Bypass System With Separate Input

Includes an internal automatic bypass which activates if UPS fails or gets overloaded. This keeps the system powered and working while the situation is solved. Besides, counts on an external bypass switch for major maintenance. Bypass power input is separate from main AC input.

Parallel operation

Up to 4 units can be installed in parallel either to grow in capacity or for redundancy purposes.

Emergency Power Off (EPO)

EPO port to connect an emergency switch which turns off the UPS output when activated.

Galvanic Isolation

Optional transformers and accesories are available for those systems requiring safe and galvanically isolated power.

High Energy Efficiency

One of the main features of this family is high energy efficiency (>94%). This generates high operational savings and contributes with the environment.

Expandable Backup

External battery packs (as many as you need) can be connected to this UPS to offer longer backup.

Cold Start

This UPS series can be turned on even during power outage using batteries to feed protected equipments.

Auto-Recovery

Auto-Recovery function restarts the UPS automatically when AC Line comes back.

Power Generators Compatible

Only True On-Line Double conversion UPS can filter voltage fluctuation and other particularities generated by Power Generators to generate a clean, perfect, and pure sine wave power to feed your installation.

3 Stages Smart Battery Charger

With a smart battery charger this UPS family can charge batteries in an outstanding time (2-4 hours up to 90%), offering a better availability than similar products, thanks to a highly efficient 3 stages charging algorithm for optimus battery management.

Eco-Mode Operation, for power saving

ECO-Mode is a power saving function which reduces electrical consumption over 5%. In this mode the load is powered directly by AC Line as long as it keeps between pre-configured limits. Otherwise, the UPS goes to regular ONLINE mode. During power outage, the UPS goes into Battery Mode to keep your equipment working perfectly safe.

Aplicacions: Large IT Systems, Industrial Installations, etc.

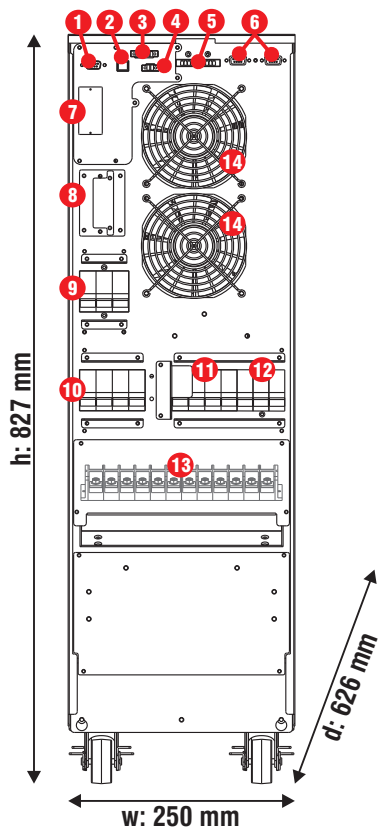


Technical Features / Características Técnicas

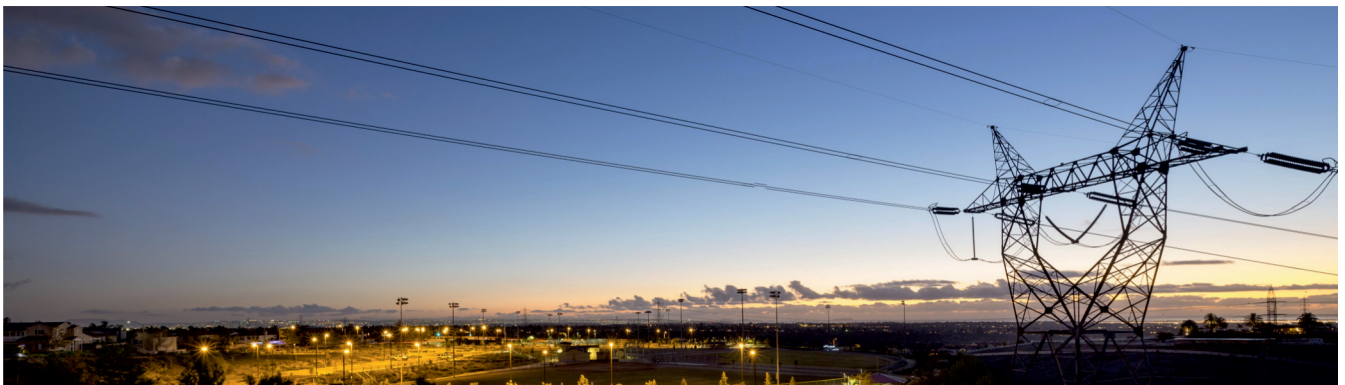
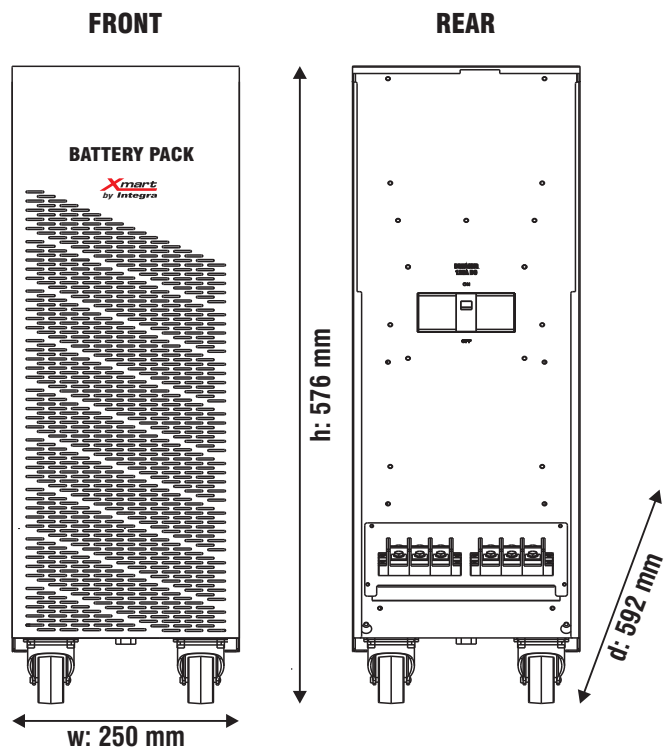
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|--|---|
| 1.- RS232 Port | 8.- External Battery Connector/Terminal Block |
| 2.- USB Port | 9.- Three-Phase Input Breaker |
| 3.- Dry Contacts Port (Contactos Secos) | 10.- AC Output Switch |
| 4.- EPO Connector (Emergencia Power Off) | 11.- Maintenance-Bypass Switch (MBS) |
| 5.- Shared Current Connectors | 12.- Bypass Input Breaker |
| 6.- Parallel Control Connectors | 13.- AC Input, AC Output, Bypass Input Terminal Block (Covered) |
| 7.- SNMP Smart Port | 14.- Forced Ventilation (Fan) |

Front-Rear View / Vista Frontal-Trasera

UPS / SAI (400V/230V & 208/120V)
UPS 10K / 15K / 20K



XBAT-OPT33-40P: 40 batteries 12V/9AH
EXTERNAL BATTERY PACK



Technical Features / Características Técnicas

400V/230V (1/2)

OPTIMA-31 T10 (400/230V) Page 1 of 2	10K-400	15K-400	20K-400
Capacity / Capacidad (VA)	10KVA	15KVA	20KVA
Capacity / Capacidad (W)	10KW	15KW	20KW
Parallel Units / Unidades en Paralelo	Up to 4 units / Hasta 4 unidades		
Input-Output / Entrada-Salida	3Ph-1Ph		
INPUT / ENTRADA			
Phase / Fases	(Y) : 3Ph + N + G		
Input Range / Rango de Entrada	L-N: (176Vac-276Vac) @ 100% load L-N: (110Vac-300Vac) @ 50% load		
Max. Current / Corriente Max. (*N1)	67A	100.6A	131.7A
Frequency Range / Rango de Frecuencia	Autosensing / Detección Automática: 50Hz: (46-54Hz) // 60Hz: (56-64Hz)		
Power Factor / Factor de Potencia	> 0.99 @ 100%load		
THDi (IEC 62040-3)	< 4% @ 100% load < 6% @ 50% load		
Slew Rate / Seguimiento de Frecuencia:	1 Hz / s		
OUTPUT / SALIDA			
Phase / Fases	Ph + N + G		
Voltage / Tensión de Salida	208Vac - 220Vac - 230Vac - 240Vac (*N2)		
Voltage Regulation / Regulación de Salida:	+/- 1%		
Output Power Factor / Factor de Potencia de Salida	1		
Frequency / Frecuencia (Batt. Mode)	50 Hz +/- 0.1 Hz // 60 Hz +/- 0.1 Hz		
Current Crest Ratio / Factor de Cresta	3:1 @ 100% load		
THDv (IEC 62040-3)	< 2% @ Linear Load / Carga Lineal < 5% @ No Linear Load / Carga no Lineal		
Dynamic Accuracy / Regulación Carga Variable	< 6% (load variations 0%-100% & 100%-0% R Load)		
Transient Recovery / Recuperación Cambio Carga	100ms / 90% vs (0%-100% & 100%-0% R load)		
Transfer Times / Tiempos Transferencia:	0 ms		
Waveform / Forma de Onda	Sine Wave / Sinusoidal Pura		
Power Output / Salidas	Terminal Block / Regleta de Conexión		
Frequency Converter / Convertidor de Frecuencia	50/60 Hz (User selectable / Seleccionable por el Usuario) (*N3)		
DC Offset / Componente DC	50mV max.		
INTERNAL BYPASS			
Input / Entrada:	Separate / Independiente		
Bypass type / Tipo de Bypass:	SCR board / Tarjeta SCR		
Input Range in Bypass / Rango entrada en Bypas:	176-264Vac (L-N) & 50/60 +/- 4Hz Freq.		
PROTECTION SYSTEMS / SISTEMAS DE PROTECCION			
Output Short-Circuits / Cortocircuitos a la Salida (ONLINE)	Electronic inverter shortcircuit protection / Protección contra cortocircuitos en invector: < 4s: Limited to max. capacity / Corriente limitada al 100% > 4s: automatic Output shutdown / Salidas se apagan		
AC Input Current / Sobre-Corriente de Entrada AC	Input breaker or fuse / Disyuntor o fusible de entrada		
Phase rotation / Fases de entrada intercambiadas	Alarm & turn-on disable / Alarma y arranque prohibido		
Repetitive Overloads / Overloads repetitivos	3 overloads in 30min = UPS locks in bypass / 3 overloads en 30min = UPS a bypass		
EFFICIENCY / EFICIENCIA			
Eco Mode (100% / 50% load)	98.5% / 98.0%		
AC Mode / Modo AC (@ 100% / 50% load)	94.8% / 95.5%		
Battery / En Batería (100% / 50% load)	93.8% / 94.5%		
Inverter Efficiency / Eficiencia Invector	97% inverter @ 100% load		
OVERLOAD / SOBRECARGA			
AC Mode / Modo Normal	(100%-110%: 60m) (110%-125%: 10m) (125%-150%: 1m) (>150%: <1s) to bypass		
Battery Mode / Modo Batería	(100%-110%: 60m) (110%-125%: 10m) (125%-150%: 1m) (>150%: <1s) to bypass		
Bypass	(100%-130%: OK) (>130%: 1min)		

OPTIMA-31 T10 (400/230V) Page 2 of 2

10K-400

15K-400

20K-400

BATTERIES / BATERIAS

Battery Type / Tipo de Baterías (VRLA)	(12V-7AH)	(12V-9AH)
Battery Quantity / Cantidad de Baterías	20 (10 + 10)	40 (20 + 20) Adjustable
Battery Voltage / Voltaje de Baterías	+/-120VDC	+/- 240 VDC
Charging Amps / Corriente de Carga	1A - 12A Adjustable	
Recharging Time / Tiempo de recarga (90%)	9h (*N4)	
Charging Voltage / Voltaje del cargador (Floating)	+/- 136.5V	+/- 273 V
Temp. Compensation / Compensación Temp.	20mV/°C per battery (Input Air Temp/ Temp. Aire entrada: 25-50°C)	
Shutdown battery Voltage / Voltaje DC Apagado	10.7V/batt (0-30% load) 10.2V/batt (30-70% load) 9.6V/batt (load >70%)	
Low Battery Warning / Aviso de Baterías Baja	11.4VDC per Battery	
Max. DC Current / Corriente DC Max.	52A DC	78A DC 104A DC

INDICATORS / INDICADORES

LCD / Pantalla Digital LCD Full Status, Error Codes and Real Time Values / Estado, Códigos Error y Valores

ALARM / ALARMAS

Acoustic Beep Alarm / Alarma sonora: Battery, Low Batt., Overload, UPS Failure / Modo Batería, Baja Bat., Sobrecargas, Falla

PRODUCT SIZE & NET WEIGHT / TAMAÑO Y PESO NETO (DxWxH) / (mm) / (Kg)

SIZE: UPS (with internal batteries)	626*250*827	
WEIGHT: UPS (with internal batteries)	86	146,5
SIZE: Ext. Batt Cab. / Baterías Externas	592*250*576 (40P)	
WEIGHT: Ext. batt Cab. / Baterías Externas	119 (40P)	
PACKING: Individual Small Pallet per Unit / EMPAQUE: Equipo en Pallet Individual (DxWxH) / (mm) / (Kg)	720*380*1000	
WEIGHT: UPS	116	176,5
SIZE: Ext. Batt Cab. / Baterías Externas	720*380*730	
WEIGHT: Ext. batt Cab. / Baterías Ext.	149	

OPERATING / AMBIENTALES

Operating Conditions / Condiciones de Operación	(-0°C to +40 °C) (*N5) // <95 % (non-condensing / no condensante)	
Storage / Almacenaje	(-15 °C to +60 °C) : UPS (0 °C to +35 °C) : Batteries	
Noise Level / Ruido Producido (@ 1m)	< 55dB	< 58dB
Altitude / Altura	Max Altitude: 4.500m. (over 1.000m output capacity is de-rated 1% every 100m) Altura máx 4.500msnm (sobre 1.000m la capacidad de salida disminuye 1% cada 100m)	

COMMUNICATION / COMUNICACION

Smart RS-232 & USB ports	Windows family, Linux, Unix and MAC
Intelligent Port (SNMP)	Optional / Opcional: LAN, AS400 & RS485

SAFETY & STANDARDS / NORMATIVAS Y ESTANDARES

CE Directives	73 / 23 & 93 / 68 (LV Safety) and 89 / 336 (EMC)
UPS General Safety / Seguridad General	IEC 62040 - 1 - 1
UPS EMC / Compatibilidad. Electromag.	IEC 62040 - 2 (Class C3) (radiation)
ESD / RS / EFT / Surge / CS / F. Mag. Field	EN 61000-4-2 & 4-3 & 4-4 & 4-5 & 4-6 & 4-8 (level 3)
Low Frequency Signals	IEC / EN 61000 - 2 - 2 (level 10)
Degree of protection / Grado de Protección	IP20
Quality and Environment	ISO9001 & ISO14001
Transportation / Transporte	ETS 300019 - 2 - 2 class 2.3

Specifications can be modified to comply with special requirements. Technical specifications may change without further notice

Las especificaciones pueden bajo requerimiento adaptarse a proyectos especiales. Las especificaciones pueden cambiar sin previo aviso.

(*N1): Input 209V, Bypass Mode (130% Capacity) and 12 A Charge Current / Entrada a 209V, Modo Bypass (130% de capacidad) y 12A de Corriente de Carga

(*N2): Output voltage is selectable by LCD / El Voltaje de salida es configurable entre 4 alternativas seleccionables en el LCD

(*N3) Derate capacity to 60% of total capacity when Frequency converter mode is activated.

La capacidad en VA/ Watts se degrada y baja hasta el 60% en modo "Convertidor de Frecuencia".

(*N4): Recharging time based on previous 10m to 20m full discharge cycles. Tiempo de recarga basado en ciclos previos de descarga profunda de 10 a 20m.

(*N5): UPS can work up to 40°C, batteries life will short over 25°C / El UPS trabaja hasta 40°C, pero las baterías acortan su vida útil por encima de 25°C

Technical Features / Características Técnicas
208V/120V (1/2)

OPTIMA-31 T10 (208/120V) Page 1 of 2		10K-208
Capacity / Capacidad (VA)		10KVA
Capacity / Capacidad (W)		10KW
Parallel Units / Unidades en Paralelo		Up to 4 units / Hasta 4 unidades
Input-Output / Entrada-Salida		3Ph-1Ph
INPUT / ENTRADA		
Phase / Fases		(Y) : 3Ph + N + G
Input Range / Rango de Entrada		L-N: (88Vac-146Vac) @ 100% load L-N: (70Vac-156Vac) @ 50% load
Max. Current / Corriente Max. (130% load)		131.7A (N1)
Frequency Range / Rango de Frecuencia		Autosensing / Detección Automática: 50Hz: (46-54Hz) // 60Hz: (56-64Hz)
Power Factor / Factor de Potencia		> 0.99 @ 100%load
THDi (IEC 62040-3)		< 4% @ 100% load < 6% @ 50% load
Slew Rate / Seguimiento de Frecuencia:		1 Hz / s
OUTPUT / SALIDA		
Phase / Fases		Ph + N + G
Voltage / Tensión de Salida		120Vac - 127Vac (*N2)
Voltage Regulation / Regulación de Salida:		+/- 1%
Output Power Factor / Factor de Potencia de Salida		1
Frequency / Frecuencia (Batt. Mode)		50 Hz +/- 0.1 Hz // 60 Hz +/- 0.1 Hz
Current Crest Ratio / Factor de Cresta		3:1 @ 100% load
THDv (IEC 62040-3)		< 2% @ Linear Load / Carga Lineal <5% @ No Linear Load / Carga no Lineal
Dynamic Accuracy / Regulación Carga Variable		<6% (load variations 0%-100% & 100%-0% R Load)
Transient Recovery / Recuperación Cambio Carga		100ms / 90% vs (0%-100% & 100%-0% R load)
Transfer Times / Tiempos Transferencia:		0 ms
Waveform / Forma de Onda		Sine Wave / Sinusoidal Pura
Power Output / Salidas		Terminal Block / Regleta de Conexión
Frequency Converter / Convertidor de Frecuencia		50/60 Hz (User selectable / Seleccionable por el Usuario) (*N3)
DC Offset / Componente DC		50mV max.
INTERNAL BYPASS		
Input / Entrada:		Separate / Independiente
Bypass type / Tipo de Bypass:		SCR board / Tarjeta SCR
Input Range in Bypass / Rango entrada en Bypass:		88-156Vac (L-N, Adjustable / Ajustable) & 50/60 +/- 4Hz Freq.
PROTECTION SYSTEMS / SISTEMAS DE PROTECCION		
Output Short-Circuits / Cortocircuitos a la Salida (ONLINE)		Electronic inverter shortcircuit protection / Protección contra cortocircuitos en el inverter: <4s: Limited to max. capacity / Corriente limitada al 100% >4s: automatic Output shutdown / Salidas se apagan
AC Input Current / Sobre-Corriente de Entrada AC		Input breaker or fuse / Disyuntor o fusible de entrada
Phase rotation / Fases de entrada intercambiadas		Alarm & turn-on disable / Alarma y arranque prohibido
Repetitive Overloads / Overloads repetitivos		3 overloads in 30min =UPS locks in bypass / 3 overloads en 30min = UPS a bypass
EFFICIENCY / EFICIENCIA		
Eco Mode (100% / 50% load)		97.0% / 96.5%
AC Mode / Modo AC (@ 100% / 50% load)		92.5% / 93.5%
Battery / En Batería (100% / 50% load)		91.5% / 92.5%
Inverter Efficiency / Eficiencia Inversor		95% inverter @ 100% load
OVERLOAD / SOBRECARGA		
AC Mode / Modo Normal		(100%-110%: 60m) (110%-125%: 10m) (125%-150%: 1m) (>150%: <1s) to bypass
Battery Mode / Modo Batería		(100%-110%: 60m) (110%-125%: 10m) (125%-150%: 1m) (>150%: <1s) to bypass
Bypass		(100%-130%: OK) (>130%: 1min)

BATTERIES / BATERIAS

Battery Type / Tipo de Baterías	(12V-9AH)
Battery Quantity / Cantidad de Baterías	20 (10 + 10) Adjustable
Battery Voltage / Voltaje de Baterías	+/-120VDC
Charging Amps / Corriente de Carga	1A - 12A Adjustable
Recharging Time / Tiempo de recarga (90%)	9h (*N4)
Charging Voltage / Voltaje del cargador (Floating)	+/- 136.5V
Temp. Compensation / Compensación Temp.	20mV/°C per battery (Input Air Temp/ Temp. Aire entrada: 25-50°C)
Shutdown battery Voltage / Voltaje DC Apagado	10.7V/batt (0-30% load)
	10.2V/batt (30-70% load)
	9.6V/batt (load >70%)
Low Battery Warning / Aviso de Baterías Baja	11.4VDC per Battery
Max. DC Current / Corriente DC Max.	104A DC

INDICATORS / INDICADORES

Touch Screen / Pantalla Táctil	Full Status, Error Codes and Real Time Values / Estado, Códigos Error y Valores
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ALARM / ALARMAS

Acoustic Beep Alarm / Alarma sonora:	Battery, Low Batt., Overload, UPS Failure / Modo Batería, Baja Bat., Sobrecargas, Falla
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PRODUCT SIZE & NET WEIGHT / TAMAÑO Y PESO NETO (DxWxH) / (mm) / (Kg)

SIZE: UPS (with internal batteries)	626*250*827
WEIGHT: UPS (with internal batteries)	87,5
SIZE: Ext. Batt Cab. / Baterías Externas	592*250*576 (40P)
WEIGHT: Ext. batt Cab. / Baterías Externas	119 (40P)

PACKING: Individual Small Pallet per Unit / EMPAQUE: Equipo en Pallet Individual (DxWxH) / (mm) / (Kg)

SIZE: UPS	720*380*1000
WEIGHT: UPS	117,5
SIZE: Ext. Batt Cab. / Baterías Externas	720*380*730
WEIGHT: Ext. batt Cab. / Baterías Ext.	149

OPERATING / AMBIENTALES

Operating Conditions / Condiciones de Operación	(-0°C to +40 °C) (*N5) // <95 % (non-condensing / no condensante)
Storage / Almacenaje	(-15 °C to +60 °C) : UPS
	(0 °C to +35 °C) : Batteries
Noise Level / Ruido Producido (@ 1m)	< 58dB
Altitude / Altura	Max Altitude: 4.500m. (over 1.000m output capacity is de-rated 1% every 100m) Altura máx 4.500msnm (sobre 1.000m la capacidad de salida disminuye 1% cada 100m)

COMMUNICATION / COMUNICACION

Smart RS-232 & USB ports	Windows family, Linux, Unix and MAC
Intelligent Port (SNMP)	Optional / Opcional: LAN, AS400 & RS485

SAFETY & STANDARDS / NORMATIVAS Y ESTANDARES

CE Directives	73 / 23 & 93 / 68 (LV Safety) and 89 / 336 (EMC)
UPS General Safety / Seguridad General	IEC 62040 - 1 - 1
UPS EMC / Compatibilidad. Electromag.	IEC 62040 - 2 (Class C3) (radiation)
ESD / RS / EFT / Surge / CS / F. Mag. Field	EN 61000-4-2 & 4-3 & 4-4 & 4-5 & 4-6 & 4-8 (level 3)
Low Frequency Signals	IEC / EN 61000 - 2 - 2 (level 10)
Degree of protection / Grado de Protección	IP20
Quality and Environment	ISO9001 & ISO14001
Transportation / Transporte	ETS 300019 - 2 - 2 class 2.3

Specifications can be modified to comply with special requirements. Technical specifications may change without further notice

Las especificaciones pueden bajo requerimiento adaptarse a proyectos especiales. Las especificaciones pueden cambiar sin previo aviso.

(*N1): Input 209V, Bypass Mode (130% Capacity) and 12 A Charge Current / Entrada a 209V, Modo Bypass (130% de capacidad) y 12A de Corriente de Carga

(*N2): Output voltage is selectable by LCD / El Voltaje de salida es configurable desde el LCD

(*N3) Derate capacity to 60% of total capacity when Frequency converter mode is activated.

La capacidad en VA/ Watts se degrada y baja hasta el 60% en modo "Convertidor de Frecuencia".

(*N4): Recharging time based on previous 10m to 20m full discharge cycles. Tiempo de recarga basado en ciclos previos de descarga profunda de 10 a 20m.

(*N5): UPS can work up to 40°C, batteries life will short over 25°C / El UPS trabaja hasta 40°C, pero las baterías acortan su vida útil por encima de 25°C

Modular 3ph

MODPRO-33 20K - 420K

Three-Phase true Online Doble Conversion UPS with modular architecture. Hot swappable power and battery modules. N+1 and N+X Redundancy. Advanced DSP digital control and IGBT technology in Rectifier and Inverter stages. Ideal for systems requiring high availability and operational safety. Offers high operation efficiency. Available for 208/120V systems up to 280KW and for 380/220V systems up to 420KW. Compatible with VRLA, GEL & LiFePO4 batteries.



Modular Design

MODPRO is formed by Power Modules and Battery Modules, allowing gradual growth. All modules can be added or removed on line, shortening maintenance times, no need to shut down the system.

Voltages 208/120V and 380/220V - 3PH/3PH

Available models for 208/120V systems (up to 140KW) and 380/220V systems (up to 210KW) without transformers. Moreover, total capacity can be doubled with parallel connection of 2 power cabinets.

IGBT + ON-LINE Doble Conversion Technology

New generation On Line Doble Conversion Technology offers high reliability and strength as well as outstanding features. DSP signal control system and an efficient rectifier/inverter system based in IGBT technology give exceptional attributes to this product family and an input power factor over 0.99 at full load.

High Power Efficiency

As power efficiency is one of our main targets, power modules can reach efficiency level over 94% at 50% of load. For this reason MODPRO can offer efficiency levels over most UPS in the market.

Different Sizes and Capacities

MODPRO includes 3 cabinet sizes:

- Small up to 3 Power Modules
- 30U up to 6 Power Modules
- 42U up to 8 Power Modules (Redundancy 7+1)

Adaptation for all kind of loads

A modern technology allows MODPRO to protect diverse and complicated loads, like extremely inductive or capacitive ones.

N+X Redundancy

Modular architecture of MODPRO allows installing systems with N+1 and N+X redundancy.

Supervision, Configuration, Stats and a lot more...

This system offers a versatile interface LCD for monitoring UPS and AC Lines, as well as configuring all operational parameters of the system, but also offers access to a detailed Event/Alarms internal record. Besides, a remote Event/Alarm/Messages record can be generated via software.

Multiple Bypass Systems

An automatic bypass system (BYS Module) is included to assure power continuity even during UPS overloads or failures. Besides includes a Manual Bypass Switch for major maintenance purposes.

Multiple Communication Systems

All models include several communication options: USB, RS232, RS485, Relay Contacts and smart port for LAN Cards, etc .

State of the Art LCD Interface

Full color, graphic, touch screen LCD to show large amount of information simultaneously. Available for 30U and 42U models.

Safety Standards and Certifications

Equipment for 208/120V systems count on UL-1778 & CSA C22.2 certification (certified by TUV - cTUVus) and comply with FCC rules part 15 (subpart B, class A and ANSI C62.41). Equipment for 380/220V systems count on CE directives certification (EN 62040-1/EN-62040-2/EN-62040-3 / EN-60950-1 and EN-61000 related directives).

Technical Features / Características Técnicas

Front View / Vista frontal

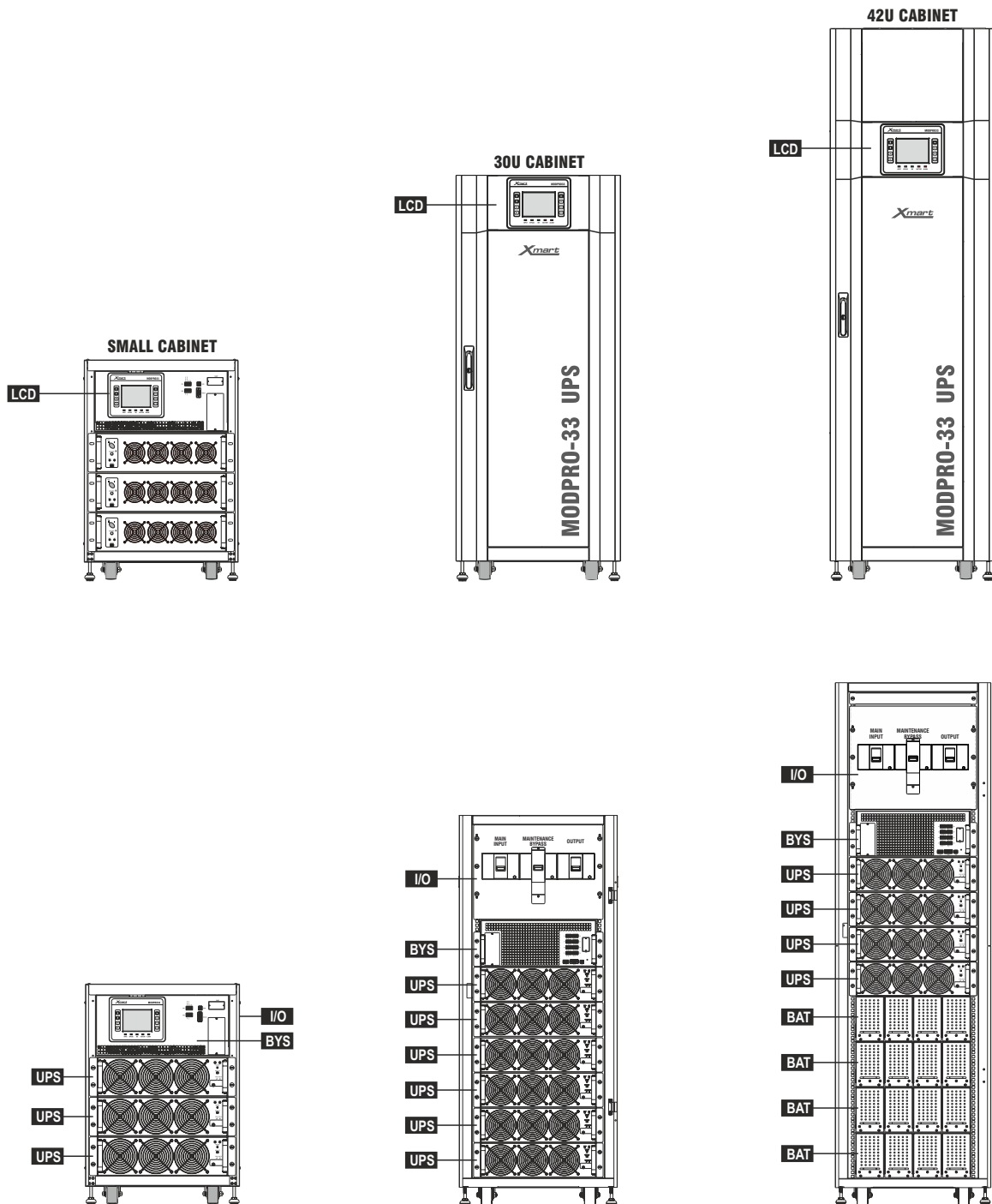
I/O: Input / Output Module: Terminal block + breakers

UPS: UPS Power Module

BYS: Bypass module: Static bypass module

BA: Battery Module (10 x 12V/9AH per module).

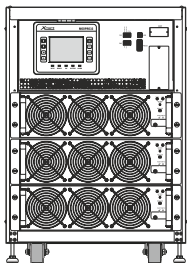
LCD: 10" Color Touch LCD. Available for 30U & 42U. Standard LCD + Keyboard for "SMALL" models



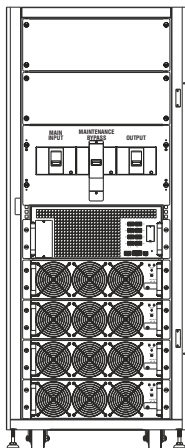
Cabinets Configurations / Configuraciones Típicas

208/120V
 UPS MODULE: 20KVA/20KW each

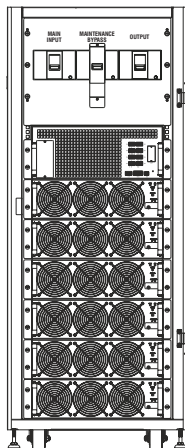
UPS SMALL CABINET
 Max 3 : 60KVA



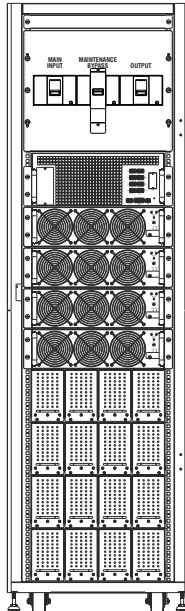
MP-CAB 30U-NB
 UPS (Max 4) : 80KVA
 BAT: NO batteries cabinet



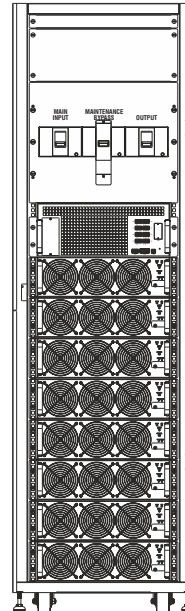
MP-CAB 30U (NB)
 UPS (Max 6) : 120KVA
 BAT: NO batteries cabinet



MP-CAB 42U
 UPS (Max 4) : 80KVA
 BAT (Max 4) : 160pcs 9AH

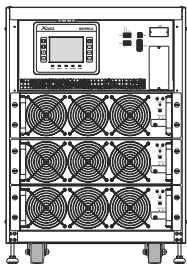


MP-CAB 42U (NB)
 UPS (Max 8) : 140KVA (7+1)
 BAT: NO batteries cabinet

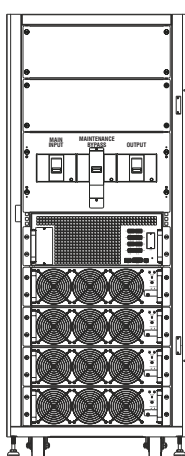


380V/220V
 UPS MODULE: 30KVA/30KW each

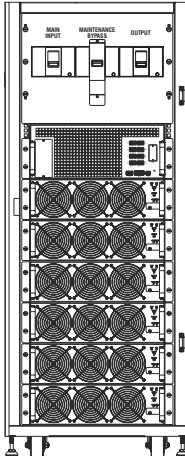
UPS SMALL CABINET
 Max 3 : 90KVA



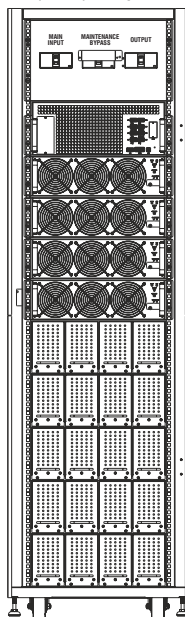
MP-CAB 30U-NB
 UPS (Max 4) : 120KVA
 BAT: NO batteries cabinet



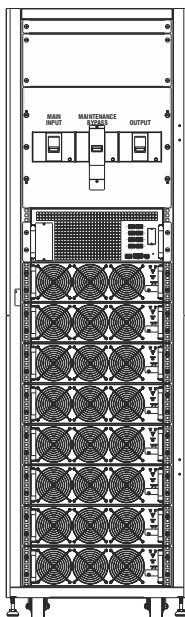
MP-CAB 30U (NB)
 UPS (Max 6) : 180KVA
 BAT: NO batteries cabinet



MP-CAB 42U
 UPS (Max 4) : 120KVA
 BAT (Max 5) : 200pcs 9AH



MP-CAB 42U (NB)
 UPS (Max 8) : 210KVA (7+1)
 BAT: NO batteries cabinet



Technical Features / Características Técnicas

MODPRO-33 : 208/120V - "SMALL" CABINET (1/2)			
CABINET / ARMARIO: "SMALL"	(SMALL)		
UPS Module Cap. / Capacidad Módulo UPS	20KW	20KW	20KW
UPS CABINET / Armario UPS:	3 UPS Max.		
Qty UPS Modules / Cantidad Módulos UPS	1	2	3
BATTERY CABINET / Armario baterías:	3 Battery packs Max. = 12 Battery Modules Max.		
Max. Qty Batt Packs / Cant. Max. Paq. Bat.:	3	3	3
SYSTEM CAPACITY / POTENCIA SISTEMA:	20KW	40KW	60KW
Output Power Factor / FP de Salida:	1	1	1
Extended Max / Máx. Ampliable (KW)	20	40	60
Parallel Connection / Conexión en Paralelo	Yes, up to 2 Cabinets / Si, hasta 2 Armarios		
Max. Capacity - 2 Cabinets in Parallel (KW) Cap. Máxima - 2 Armarios en Paralelo (KW)	40	80	120
INPUT / ENTRADA			
Rated Voltage / Voltaje Nominal	3PH : 208/120Vac : 3 x 120VAC Line to Neutral (Voltaje Fase a Neutro) 3PH : 220/127Vac : 3 x 127VAC Line to Neutral (Voltaje Fase a Neutro)		
Wiring / Cableado	Y: (3Ph+N) + G		
Voltage Range / Rango de Voltaje (L-N)	(69-146VAC @ Load < 63%) / (89-146VAC @ Load: 63%-70%) / (105-146VAC @ Load: 90%-100%)		
Frequency Range / Rango de Frecuencia	40 - 70Hz		
Power Factor / Factor de Potencia	> 0,99 @ 100% Load		
THDi (100% LOAD / CARGA)	< 3% @ 100% load		
Max Input Current / Corriente Max Entrada (A)	74	148	222
OUTPUT / SALIDA			
Output Voltage / Voltaje de Salida	208/120Vac or 220/127Vac (user configurable)		
Wiring / Cableado	(Y: 3Ph+N + G) or (DELTA: 3Ph + G)		
Regulation Voltage / Regulación Voltaje	Balanced : <1% / Non Balanced: < 2%		
Dynamic Accuracy / Regulación Carga Variable	<5% (load variations 0%-100% & 100%-0% R Load) - <3% (load variations 0-50% & 50%-0% R Load)		
Recovery Time / Tiempo de Recuperación	90% nominal voltage < 100ms (Resistive load variation 0%-100% & 100%-0%)		
Waveform / Forma de Onda	Sine wave / Sinusoidal		
Crest Factor / factor Cresta	3:1		
Rated Frequency / Frecuencia Nominal	50Hz / 60Hz Autoselectable / Autoseleccionable		
Frequency Precision / Precisión Frecuencia	0.1 Hz (+/-)		
Frequency Range Sync. / Rango Frec. Sinc.	+/- 1Hz , +/-2Hz , +/-4Hz (configurable)		
Slew rate / Seguimiento de frecuencia	1Hz / s		
THDv	< 1.5% (100% Linear Load / Carga Lineal) - < 4% (100% Non-linear Load / Carga No Lineal): EN-62040-3		
Power Factor / Factor de Potencia	PF : 1		
Transfer Time / Tiempo transferencia	ONLINE <--> BATTERY : 0ms		
Max. DC Offset / Max. Voltaje DC:	50mVdc		
Overload Capability / Sobrecarga	(105%-110% : 60min); (111%-125% : 10min) ; (126%-150% : 1min) ; (>150% : 250ms)		
Shortcircuit Detection / Detección de corto salida	0Vac & max current limit 150A during 5 cycles / 150A y caída de tensión a 0Vac durante 5 ciclos		
Shortcircuit Protection / Protección contra cortos	Output power-off / Apagado de la salida		
PROTECCIONES / PROTECCIONES			
Total Surge Protection / Protección Total	13.746 Total Joules (10/1000us) (3*2.054J L-N + 3*2.054J L-G + 1.422J N-G)		
Enhanced Protection / Protección Ampliada	Shortcircuit, high/low AC Input Volt., overload, overheating, abnormal communication / Cortocircuitos, alto/bajo voltaje en línea AC, sobrecarga, sobretemperatura, comunicación anormal.		
Short-circuit Max. Current / Corriente Máx. de Cortocircuito	65kA		
STATIC BYPASS SWITCH / INTERRUPTOR BYPASS ESTÁTICO			
Voltage Range / Rango de Voltaje	Configurable: NOMINAL (-30%, -20% or -10%) / NOMINAL (+10% or +15% or +20%)		
Frequency Range / Rango de Frecuencia	Configurable: NOMINAL (-1Hz or -2Hz or -4Hz) / NOMINAL (+1Hz or +2Hz or +4Hz)		
Transfer Time / Tiempo de Transferencia	0ms		
BYS / Switch Bypass Estático (Max KW)	60 KW		
Bypass Current / Corriente Max. (L-N) (A)	215	215	215
Max BYS Overload / Overload Max. BYS	455%	228%	152%
BATTERIES / BATERIAS			
Type / Tipo	VRLA AGM 12VDC / 9AH / Baterías Selladas Libres de Mantenimiento.		
DC Voltage / Voltage DC	(120VDC Positive to Batt. Neutral) & (120VDC Negative to Batt. Neutral)		
UPS Battery Location / Ubicación Baterías	Internal		
Ext. Battery Conn. / Conex. baterías Ext.	3 bar terminals for EXT BATTs / 3 Barras de conexión para Bat. Ext. (POS, NEG, N)		
Temp. Comp. / Compensación por Temp.	Configurable: 0 to -30mV / °C per battery		
Charging Time / Tiempo de recarga	2h-4h (90%) (standard battery Pack / Paquete Baterías Estándar)		
Charging Current / Corriente de recarga	8A max. per UPS module / 8A max. por cada módulo UPS (configurable)		
Charging Voltage / Voltaje de carga	Floating / Flotante: 13.65Vdc/bat +/-1% - Boost Charging / Cargando: 14.0Vdc/bat.		
Cut-off DC Voltage / Voltaje Corte DC	10.0Vdc per battery / por batería		

Technical Features / Características Técnicas

MODPRO-33 : 208/120V - "SMALL" CABINET (2/2)			
CABINET / ARMARIO: "SMALL"	(SMALL)		
Qty UPS Modules / Cantidad Módulos UPS	1	2	3
UPS EFFICIENCY / EFICIENCIA UPS @ LOAD 100% / 75% / 50% / 25%			
Efficiency (ECO) / Eficiencia (ECO)	98.0% / 98.0% / 97.0% / 96.0%		
Efficiency (on Battery) / Eficiencia (Batería)	94.2% / 94.0% / 93.7% / 93.0%		
Efficiency (Online) / Eficiencia (Online)	93.0% / 93.0% / 92.5% / 92.0%		
Inverter Efficiency / Eficiencia Inversor	97% @ 100% LOAD		
Max. Heat Dissipation / Disipación Térmica (BTU/h)	4,774	9,548	14,322
OPERATING PARAMETERS / CONDICIONES OPERATIVAS			
Max. Noise / Ruido Acústico Max. dB @ 1m	64.0	65.4	66.8
Running Conditions / Cond. de Operación	(0 to +40 °C) / < 95%RH (non-condensing / no condensante)		
Max. Altitude / Altura Max.	4.500m		
Altitude Max. Power / Altura a Potencia Max.	100% rated power up to / 100% Potencia Nominal hasta : 1.000m		
De-rating / Pérdida de potencia	Above 1.000m / Sobre 1.000m : -1% / 100m		
Communication Ports / Puertos Com.	USB, RS232 + SNMP Slot (optional: LAN card, Relay Contact card, RS485)		
Communication Software / Software	Windows family, Linux, Unix & Mac OS		
Operation Panel / Panel de Operación	Standard (B&W) LCD + Keyboard / LCD Estándar (B&N) + Teclado		
Storage Conditions / Almacenaje	(-15 to +60 °C) / < 95%RH (non-condensing / no condensante)		
SIZE & WEIGHT / PESO Y MEDIDAS			
UNPACKED PRODUCT / PRODUCTO SIN EMPAQUE			
UPS CABINET (INCLUDING BYPASS SWITCH - NO UPS MODULES, NO BATT) / GABINETE (INCLUYE BYS - SIN UPS, NI BATERIAS)			
Size / Dimensiones (D*W*H)	1000 x 520 x 760 mm		
Weight / Peso (Kg)	182		
BATTERY CABINET (With 12 Empty batt modules) / GABINETE DE BATERIAS (con 12 módulos baterías vacías)			
Size / Dimensiones (D*W*H)	1000 x 520 x 740 mm		
Weight / Peso (Kg)	83		
INDIVIDUAL UPS MODULE / MODULO UPS 20KW			
Size / Dimensiones (D*W*H)	736.5 x 490 x 130 mm		
Weight / Peso (Kg)	35 each (c/u)		
UNIT EMPTY BATTERY TRAY / GAVETA VACIA BATERIAS (4 x PACK)			
Size / Dimensiones (D*W*H)	767 x 107 x 170		
Weight / Peso (Kg)	2.5 each (c/u)		
UNIT BATTERY MODULE / MODULO BATERIAS (10pcs x 12V/9AH)			
Size / Dimensiones (D*W*H)	767 x 107 x 170		
Weight / Peso (Kg)	28 each (c/u)		
PACKING / PRODUCTO EMPACADO			
UPS CABINET (INCLUDING BYPASS SWITCH - NO UPS MODULES, NO BATT) / GABINETE (INCLUYE BYS - SIN UPS, NI BATERIAS)			
Size / Dimensiones (D*W*H)	1125 x 705 x 940 mm (1 unit / pallet)		
Weight / Peso (Kg)	222		
BATTERY CABINET (With 12 Empty batt modules) / GABINETE DE BATERIAS (con 12 módulos baterías vacías)			
Size / Dimensiones (D*W*H)	1125 x 705 x 920 mm (1 unit / pallet)		
Weight / Peso (Kg)	123		
EMPTY UPS CABINET + EMPTY BATTERY CABINET (BOTH IN 1 PALLET) / GABINETES VACIOS DE UPS & BATERIAS EN 1 PALLET			
Size / Dimensiones (D*W*H)	1125 x 705 x 1580 mm (1 unit / pallet)		
Weight / Peso (Kg)	345		
UPS MODULE / MODULO UPS 20KW			
Size / Dimensiones (D*W*H)	870 x 580 x 250 mm (1 unit / carton)		
Carton Weight / Peso Carton (Kg)	38 each (c/u)		
EMPTY BATTERY PACK = 4 EMPTY TRAYS (4 GAVETAS DE BATERIAS VACIAS)			
Size / Dimensiones (D*W*H)	870 x 580 x 250 (4 / carton)		
Carton Weight / Peso Carton (Kg)	17 (4 trays / carton)		
2 BATTERY MODULES PER CARTON (EACH MODULE w/ 10pcs x 12V/9AH)			
Size / Dimensiones (D*W*H)	870 x 580 x 250 (2 / carton)		
Carton Weight / Peso Carton (Kg)	55 (2 units / carton)		
SAFETY & STANDARDS / NORMATIVAS Y ESTANDARES			
CE Directives	73 / 23 & 93 / 68 (LV Safety) and 89 / 336 (EMC)		
UPS General Safety / Seguridad General	IEC 62040 - 1 - 1		
UPS EMC / Compatibilidad. Electromag.	IEC 62040 - 2 (Class C3) (radiation)		
UPS Tests / Procedimiento Pruebas UPS	IEC 62040 - 3		
ESD / RS / EFT / Surge / CS / F. Mag. Field	EN 61000-4-2 & 4-3 & 4-4 & 4-5 & 4-6 & 4-8 (level 3)		
Low Frequency Signals	IEC / EN 61000 - 2 - 2 (level 10)		
Degree of protection / Grado de Protección	IP20		
Conduction & Radiation	FCC Part 15, Subpart B, Class A ; IEC / EN 62040-2 (Cat 3)		
Safety / Seguridad	UL1778 - CSA C22.2 (by cTUVus) - CE - IEC / EN60950-1		
Quality and Enviroment	ISO9001 & ISO14001		
Transportation / Transporte	U.S. ISTA 2A & ETS 300019 - 2 - 2 class 2.3		
Technical specifications can be modified to comply with projects / Las especificaciones pueden modificarse para adaptarse a proyectos especiales			
Technical specifications may change without further notice / Por motivos comerciales o técnicos las especificaciones pueden cambiar sin previo aviso.			
Noise measured in semi-anechoic room at 1m under special conditions / Ruido medido en sala semi-anechoica a 1m bajo condiciones específicas			

Technical Features / Características Técnicas

MODPRO-33 : 208/120V - 30U CABINET (1/2)											
CABINET / ARMARIO: 30U	(NB 30U : ONLY UPS - NO BATTERIES)				(NB 30U : ONLY UPS - NO BATTERIES)						
Cabinet size / Tamaño gabinete	30U				30U						
UPS Module Cap. / Capacidad Módulo UPS	20KW	20KW	20KW	20KW	20KW	20KW	20KW	20KW	20KW	20KW	20KW
Qty UPS Modules / Cantidad Módulos UPS	1	2	3	4	1	2	3	4	5	6	
Max. Qty Batt Packs / Cant. Max. Paq. Bat.:	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SYSTEM CAPACITY / POTENCIA SISTEMA:	20KW	40KW	60KW	80KW	20KW	40KW	60KW	80KW	100KW	120KW	
Output Power Factor / FP de Salida:	1	1	1	1	1	1	1	1	1	1	1
Extended Max KVA / KV Máx. Ampliable	20KW	40KW	60KW	80KW	20KW	40KW	60KW	80KW	100KW	120KW	
Parallel Connection / Conexión en Paralelo	Yes, up to 2 Cabinets / Si, hasta 2 Armarios										
Max. Capacity - 2 Cabinets in Parallel (KW)	40KW	80KW	120KW	160KW	40KW	80KW	120KW	160KW	200KW	240KW	
Cap. Máxima - 2 Armarios en Paralelo (KW)											
INPUT / ENTRADA											
Rated Voltage / Voltaje Nominal	3PH : 208/120Vac : 3 x 120VAC Line to Neutral (Voltaje Fase a Neutro) 3PH : 220/127Vac : 3 x 127VAC Line to Neutral (Voltaje Fase a Neutro)										
Wiring / Cableado	Y: (3Ph+N) + G										
Voltage Range / Rango de Voltaje	(69-146VAC @ Load < 63%) / (89-146VAC @ Load: 63%-70%) / (105-146VAC @ Load: 90%-100%)										
Frequency Range / Rango de Frecuencia	40 - 70Hz										
Power Factor / Factor de Potencia	> 0,99 @ 100% Load										
THDi (100% LOAD / CARGA)	< 3% @ 100% load										
Max Input Current / Corriente Max Entrada (A)	74	148	222	296	74	148	222	296	370	444	
OUTPUT / SALIDA											
Output Voltage / Voltaje de Salida	208/120Vac or 220/127Vac (user configurable)										
Wiring / Cableado	(Y: 3Ph+N + G) or (DELTA: 3Ph + G)										
Regulation Voltage / Regulación Voltaje	Balanced : <1% / Non Balanced: < 2%										
Dynamic Accuracy / Reg. Carga Variable	<5% (load variations 0%-100% & 100%-0% R Load) - <3% (load variations 0-50% & 50%-0% R Load)										
Recovery Time / Tiempo de Recuperación	90% nominal voltage < 100ms (Resistive load variation 0%-100% & 100%-0%)										
Waveform / Forma de Onda	Sine wave / Sinusoidal										
Crest Factor / factor Cresta	3:1										
Rated Frequency / Frecuencia Nominal	50Hz / 60Hz Autoselectable /Autoseleccionable										
Frequency Precision / Precisión Frecuencia	0.1 Hz (+/-)										
Frequency Range Sync. / Rango Frec. Sinc.	+/- 1Hz , +/-2Hz , +/-4Hz (configurable)										
Slew rate / Seguimiento de frecuencia	1Hz / s										
THDv	< 1.5% (100% Linear Load / Carga Lineal) - < 4% (100% Non-linear Load / Carga No Lineal): EN-62040-3										
Power Factor / Factor de Potencia	PF : 1										
Transfer Time / Tiempo transferencia	ONLINE <--> BATTERY : 0ms										
Max. DC Offeset / Max. Voltaje DC:	50mVdc										
Overload Capability / Sobrecarga	(105%-110% : 60min); (111%-125% : 10min) ; (126%-150% : 1min) ; (>150% : 250ms)										
Shortcircuit Detection / Detección de corto salida	0Vac & max current limit 150A during 5 cycles / 150A y caída de tensión a 0Vac durante 5 ciclos										
Shortcircuit Protection / Protección contra cortos	Output power-off / Apagado de la salida										
PROTECCIONES / PROTECCIONES											
Total Surge Protection / Protección Total	13.746 Total Joules (10/1000us)				14.852 Total Joules (10/1000us)						
Enhanced Protection / Protección Ampliada	Shortcircuit, high/low AC Input Volt., overload, overheating, abnormal communication / Cortocircuitos, alto/bajo voltaje en línea AC, sobrecarga, sobretemperatura, comunicación anormal.										
Short-circuit Max. Current / Corriente Máx. de Cortocircuito	50kA										
STATIC BYPASS SWITCH / INTERRUPTOR BYPASS ESTÁTICO											
Voltage Range / Rango de Voltaje	Configurable: NOMINAL (-30%, -20% or -10%) / NOMINAL (+10% or +15% or +20%)										
Frequency Range / Rango de Frecuencia	Configurable: NOMINAL (-1Hz or -2Hz or -4Hz) / NOMINAL (+1Hz or +2Hz or +4Hz)										
Transfer Time / Tiempo de Transferencia	0ms										
BYS / Switch Bypass Estático (Max KW)	80 KW				120KW						
Bypass Current / Corriente Max. (L-N) (A)	285	285	285	285	425	425	425	425	425	425	
Max BYS Overload / Overload Max. BYS	603%	302%	201%	151%	900%	450%	300%	225%	180%	150%	
BATTERIES / BATERIAS											
Type / Tipo	VRLA AGM 12VDC / 9AH / Baterías Selladas Libres de Mantenimiento.										
DC Voltage / Voltage DC	(120VDC Positive to Batt. Neutral) & (120VDC Negative to Batt. Neutral)										
UPS Battery Location / Ubicación Baterías	External / Externas										
Ext. Battery Conn. / Conex. baterías Ext.	3 bar terminals for EXT BATTs / 3 Barras de conexión para Bat. Ext. (POS, NEG, N)										
Temp. Comp. / Compensación por Temp.	Configurable: 0 to -30mV / °C per battery										
Charging Time / Tiempo de recarga	2h-4h (90%) (standard battery Pack / Paquete Baterías Estándar)										
Charging Current / Corriente de recarga	8A max. per UPS module / 8A max. por cada módulo UPS (configurable)										
Charging Voltage / Voltaje de carga:	Floating / Flotante: 13.65Vdc/bat +/-1%. - Charging / Cargando: 14.0Vdc/bat.										
Cut-off DC Voltage / Voltaje Corte DC	10.0Vdc per battery / por batería										

Technical Features / Características Técnicas

MODPRO-33 : 208/120V - 30U CABINET (2/2)										
CABINET / ARMARIO: 30U	(STD 30U : UPS MOD + BATT)				(NB 30U : ONLY UPS - NO BATTERIES)					
Qty UPS Modules / Cantidad Módulos UPS	1	2	3	4	1	2	3	4	5	6
UPS EFFICIENCY / EFICIENCIA UPS @ LOAD 100% / 75% / 50% / 25%										
Efficiency (ECO) / Eficiencia (ECO)					98.0% / 98.0% / 97.0% / 96.0%					
Efficiency (on Battery) / Eficiencia (Batería)					94.2% / 94.0% / 93.7% / 93.0%					
Efficiency (Online) / Eficiencia (Online)					93.0% / 93.0% / 92.5% / 92.0%					
Inverter Efficiency / Eficiencia Inversor					97% @ 100% LOAD					
Max. Heat Dissipation / Disipación Térmica (BTU/h)	4,774	9,548	14,322	19,096	4,774	9,548	14,322	19,096	23,870	28,644
OPERATING PARAMETERS / CONDICIONES OPERATIVAS										
Max. Noise / Ruido Acústico Max. dB @ 1m	63.0	64.5	65.2	66.4	63.0	64.5	65.3	66.4	66.9	67.5
Running Conditions / Cond. de Operación	(0 to +40 ° C)				< 95%RH (non-condensing / no condensante)					
Max. Altitude / Altura Max.					4.500m					
Altitude Max. Power / Altura a Potencia Max.					100% rated power up to / 100% Potencia Nominal hasta : 1.000m					
De-rating / Pérdida de potencia					Above 1.000m / Sobre 1.000m : -1% / 100m					
Communication Ports / Puertos Com.					USB, RS232 + SNMP Slot (optional: LAN card, Relay Contact card, RS485)					
Communication Software / Software					Windows family, Linux, Unix & Mac OS					
Operation Panel / Panel de Operación					Color 10" Touch Screen / Pantalla Táctil a Color de 10 pulgadas					
Storage Conditions / Almacenaje					(-15 to +60 ° C) / < 95%RH (non-condensing / no condensante)					
SIZE & WEIGHT / PESO Y MEDIDAS										
UNPACKED PRODUCT / PRODUCTO SIN EMPAQUE										
UPS CABINET (INCLUDING BYPASS SWITCH - NO MODULES, NO BATTERIES) / GABINETE (INCLUYE BYS - SIN MODULOS NI BATERIAS)										
Size / Dimensiones (D*W*H)					1100 x 600 x 1475 mm					
Weight / Peso (Kg)	260				246					
INDIVIDUAL UPS MODULE / MODULO UPS 20KW										
Size D*W*H (mm) - Weight (Kg)					736.5 x 490 x 130mm - 35Kg each					
UNIT EMPTY BATTERY TRAY / GAVETA VACIA BATERIAS (4 x PACK)										
Size D*W*H (mm) - Weight (Kg)					767 x 107 x 170mm - 3.5 Kg each					
UNIT BATTERY MODULE / MODULO BATERIAS (10pcs x 12V/9AH)										
Size D*W*H (mm) - Weight (Kg)					767 x 107 x 170mm - 28 Kg each					
BATTERY 30U CABINET (EMPTY) / GABINETE 30U BATERIAS VACIO										
Size (D*W*H) - Weight (Kg)					1110 x 600 x 1475 mm - 207Kg					
BATTERY 42U CABINET (EMPTY) / GABINETE 42U BATERIAS VACIO										
Size (D*W*H) - Weight (Kg)					1110 x 600 x 2010 mm - 235Kg					
PACKING / PRODUCTO EMPACADO										
UPS CABINET (INCLUDING BYPASS SWITCH - NO MODULES, NO BATTERIES) / GABINETE (INCLUYE BYS - SIN MODULOS NI BATERIAS)										
Size / Dimensiones (D*W*H)					1223 x 753 x 1663 mm (1 unit / pallet)					
Weight / Peso (Kg)	310				296					
UPS MODULE / MODULO UPS 20KW										
Size D*W*H (mm) - Weight (Kg)					870 x 580 x 250 mm (1 unit / carton) - 38Kg each (c/u)					
EMPTY BATTERY PACK = 4 EMPTY TRAYS (4 GAVETAS DE BATERIAS VACIAS)										
Size D*W*H (mm) - Weight (Kg)					870 x 580 x 250 (4 / carton) - 17Kg (4 trays/carton)					
2 BATTERY MODULES PER CARTON (EACH MODULE w/ 10pcs x 12V/9AH)										
Size D*W*H (mm) - Weight (Kg)					870 x 580 x 250 (2 / carton) - 55Kg					
BATTERY 30U CABINET (EMPTY) / GABINETE 30U BATERIAS VACIO										
Size (D*W*H) - Weight (Kg)					1110 x 600 x 1650 mm - 267Kg					
BATTERY 42U CABINET (EMPTY) / GABINETE 42U BATERIAS VACIO										
Size (D*W*H) - Weight (Kg)					1230 x 750 x 2170 mm - 295Kg					
SAFETY & STANDARDS / NORMATIVAS Y ESTANDARES										
CE Directives					73 / 23 & 93 / 68 (LV Safety) and 89 / 336 (EMC)					
UPS General Safety / Seguridad General					IEC 62040 - 1 - 1					
UPS EMC / Compatibilidad. Electromag.					IEC 62040 - 2 (Class C3) (radiation)					
UPS Tests / Procedimiento Pruebas UPS					IEC 62040 - 3					
ESD / RS / EFT / Surge / CS / F. Mag. Field					EN 61000-4-2 & 4-3 & 4-4 & 4-5 & 4-6 & 4-8 (level 3)					
Low Frequency Signals					IEC / EN 61000 - 2 - 2 (level 10)					
Degree of protection / Grado de Protección					IP20					
Conduction & Radiation					FCC Part 15, Subpart B, Class A ; IEC / EN 62040-2 (Cat 3)					
Safety / Seguridad					UL1778 (by cTUVus) - CE - IEC / EN60950-1					
Safety Others / Seguridad Otros					IEC / EN60950 - 1					
Quality and Enviroment					ISO9001 & ISO14001					
Transportation / Transporte					U.S. ISTA 2A & ETS 300019 - 2 - 2 class 2.3					

Technical specifications can be modified to comply with special projects / Las especificaciones pueden modificarse para adaptarse a proyectos especiales

Technical specifications may change without further notice / Por motivos comerciales o técnicos las especificaciones pueden cambiar sin previo aviso.

Noise measured in semi-anechoic room at 1m under special conditions / Ruido medido en sala semi-anechoica a 1m bajo condiciones específicas

Technical Features / Características Técnicas
MODPRO-33 : 208/120V - 42U CABINET (1/2)

CABINET / ARMARIO: 42U	(STD 42U : UPS MOD + BATT)				(NB 42U : ONLY UPS - NO BATTERIES)							
Cabinet size / Tamaño gabinete	42U				42U							
UPS Module Cap. / Capacidad Módulo UPS	20KW	20KW	20KW	20KW	20KW	20KW	20KW	20KW	20KW	20KW	20KW	20KW
Qty UPS Modules / Cantidad Módulos UPS	1	2	3	4	1	2	3	4	5	6	7	8
Max. Qty Batt Packs / Cant. Max. Paq. Bat.:	4	4	4	4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SYSTEM CAPACITY / POTENCIA SISTEMA:	20KW	40W	60KW	80KW	20KW	40KW	60KW	80KW	100KW	120KW	140KW	140KW*
Output Power Factor / FP de Salida:	1	1	1	1	1	1	1	1	1	1	1	1
Extended Max KVA / KV Máx. Ampliable	20	40	60	80	20	40	60	80	100	120	140	140
Parallel Connection / Conexión en Paralelo	Yes, up to 2 Cabinets / Si, hasta 2 Armarios											
Max. Capacity - 2 Cabinets in Parallel (KW) Cap. Máxima - 2 Armarios en Paralelo (KW)	40	80	120	160	40	80	120	160	200	240	280	280
INPUT / ENTRADA												
Rated Voltage / Voltaje Nominal	3PH : 208/120Vac : 3 x 120VAC Line to Neutral (Voltaje Fase a Neutro) 3PH : 220/127Vac : 3 x 127VAC Line to Neutral (Voltaje Fase a Neutro)											
Wiring / Cableado	Y: (3Ph+N) + G											
Voltage Range / Rango de Voltaje	(69-146VAC @ Load < 63%) / (89-146VAC @ Load: 63%-70%) / (105-146VAC @ Load: 90%-100%)											
Frequency Range / Rango de Frecuencia	40 - 70Hz											
Power Factor / Factor de Potencia	> 0,99 @ 100% Load											
THDi (100% LOAD / CARGA)	< 3% @ 100% load											
Max Input Current / Corriente Max Entrada (A)	74	148	222	296	74	148	222	296	370	444	518	518
OUTPUT / SALIDA												
Output Voltage / Voltaje de Salida	208/120Vac or 220/127Vac (user configurable)											
Wiring / Cableado	(Y: 3Ph+N + G) or (DELTA: 3Ph + G)											
Regulation Voltage / Regulación Voltaje	Balanced : <1% / Non Balanced: < 2%											
Dynamic Accuracy / Reg. Carga Variable	<5% (load variations 0%-100% & 100%-0% R Load) - <3% (load variations 0-50% & 50%-0% R Load)											
Recovery Time / Tiempo de Recuperación	90% nominal voltage < 100ms (Resistive load variation 0%-100% & 100%-0%)											
Waveform / Forma de Onda	Sine wave / Sinusoidal											
Crest Factor / factor Cresta	3:1											
Rated Frequency / Frecuencia Nominal	50Hz / 60Hz Autoselectable /Autoseleccionable											
Frequency Precision / Precisión Frecuencia	0.1 Hz (+/-)											
Frequency Range Sync. / Rango Frec. Sinc.	+/- 1Hz , +/-2Hz , +/-4Hz (configurable)											
Slew rate / Seguimiento de frecuencia	1Hz / s											
THDv	< 1.5% (100% Linear Load / Carga Lineal) - < 4% (100% Non-linear Load / Carga No Lineal): EN-62040-3											
Power Factor / Factor de Potencia	PF : 1											
Transfer Time / Tiempo transferencia	ONLINE <-> BATTERY : 0ms											
Max. DC Offset / Max. Voltaje DC:	50mVdc											
Overload Capability / Sobrecarga	(105%-110% : 60min); (111%-125% : 10min) ; (126%-150% : 1min) ; (>150% : 250ms)											
Shortcircuit Detection / Detección de corto salida	0Vac & max current limit 150A during 5 cycles / 150A y caída de tensión a 0Vac durante 5 ciclos											
Shortcircuit Protection / Protección contra cortos	Output power-off / Apagado de la salida											
PROTECCIONES / PROTECCIONES												
Surge Protection / Protecc. Picos (Joules)	13.746 Total Joules (10/1000us)				14.852 Total Joules (10/1000us)							
Enhanced Protection / Protección Ampliada	Batt. Overcharge & deep discharge, high/low AC Input Volt., overtemp., internal comm. failure / Sobrecarga y descarga profunda de bat., alto/bajo voltaje en línea AC, sobretemp., fallas de com. Interna											
Short-circuit Max. Current / Corriente Máx. de Cortocircuito	50kA				42.5kA							
STATIC BYPASS MODE / MODO BYPASS ESTATICO												
Voltage Range / Rango de Voltaje	Configurable: NOMINAL (-30%, -20% or -10%) / NOMINAL (+10% or +15% or +20%)											
Frequency Range / Rango de Frecuencia	Configurable: NOMINAL (-1Hz or -2Hz or -4Hz) / NOMINAL (+1Hz or +2Hz or +4Hz)											
Transfer Time / Tiempo de Transferencia	0ms											
BYS / Switch Bypass Estático (Max KW)	80KW				140KW							
Bypass Current / Corriente Max. (L-N) (A)	285	285	285	285	495	495	495	495	495	495	495	486
Max BYS Overload / Overload Max. BYS	603%	302%	201%	151%	1048%	524%	349%	262%	210%	175%	150%	150%
BATTERIES / BATERIAS												
Type / Tipo	VRLA AGM 12VDC / 9AH / Baterías Selladas Libres de Mantenimiento.											
DC Voltage / Voltage DC	(120VDC Positive to Batt. Neutral) & (120VDC Negative to Batt. Neutral)											
UPS Battery Location / Ubicación Baterías	Internal				No internal batteries in NB cabs / Armarios NB sin baterías internas							
Ext. Battery Conn. / Conex. baterías Ext.	3 bar terminals for EXT BATTs / 3 Barras de conexión para Bat. Ext. (POS, NEG, N)											
Temp. Comp. / Compensación por Temp.	Configurable: 0 to -30mV / °C per battery											
Charging Time / Tiempo de recarga	2h-4h (90%) (standard battery Pack / Paquete Baterías Estándar)											
Charging Current / Corriente de recarga	8A max. per UPS module / 8A max. por cada módulo UPS (configurable)											
Charging Voltage / Voltaje de carga:	Floating / Flotante: 13.65Vdc/bat +/-1%. - Charging / Cargando: 14.0Vdc/bat.											
Cut-off DC Voltage / Voltaje Corte DC	10.0Vdc per battery / por batería											

Technical Features / Características Técnicas

MODPRO-33 : 208/120V - 42U CABINET (2/2)												
CABINET / ARMARIO: 42U	(STD 42U : UPS MOD + BATT)				(NB 42U : ONLY UPS - NO BATTERIES)							
Qty UPS Modules / Cantidad Módulos UPS	1	2	3	4	1	2	3	4	5	6	7	8
UPS EFFICIENCY / EFICIENCIA UPS @ LOAD 100% / 75% / 50% / 25%												
Efficiency (ECO) / Eficiencia (ECO)	98.0% / 98.0% / 97.0% / 96.0%											
Efficiency (on Battery) / Eficiencia (Batería)	94.2% / 94.0% / 93.7% / 93.0%											
Efficiency (Online) / Eficiencia (Online)	93.0% / 93.0% / 92.5% / 92.0%											
Inverter Efficiency / Eficiencia Inversor	97% @ 100% LOAD											
Max. Heat Dissipation / Disipación Térmica (BTU/h)	4,774	9,548	14,322	19,096	4,774	9,548	14,322	19,096	23,870	28,644	33,418	33,418
OPERATING PARAMETERS / CONDICIONES OPERATIVAS												
Max. Noise / Ruido Acústico Max. dB @ 1m	63.0	64.5	65.2	66.4	63.0	64.5	65.3	66.4	66.9	67.5	68.1	68.6
Running Conditions / Cond. de Operación	(0 to +40 ° C) / < 95%RH (non-condensing / no condensante)											
Max. Altitude / Altura Max.	4.500m											
Altitude Max. Power / Altura a Potencia Max.	100% rated power up to / 100% Potencia Nominal hasta : 1.000m											
De-rating / Pérdida de potencia	Above 1.000m / Sobre 1.000m : -1% / 100m											
Communication Ports / Puertos Com.	USB, RS232 + SNMP Slot (optional: LAN card, Relay Contact card, RS485)											
Communication Software / Software	Windows family, Linux, Unix & Mac OS											
Operation Panel / Panel de Operación	Color 10" Touch Screen / Pantalla Táctil a Color de 10 pulgadas											
Storage Conditions / Almacenaje	(-15 to +60 ° C) / < 95%RH (non-condensing / no condensante)											
SIZE & WEIGHT / PESO Y MEDIDAS												
UNPACKED PRODUCT / PRODUCTO SIN EMPAQUE												
UPS CABINET (INCLUDING BYPASS SWITCH - NO MODULES, NO BATTERIES) / GABINETE (INCLUYE BYS - SIN MODULOS NI BATERIAS)												
Size / Dimensiones (D*W*H)	1100 x 600 x 2010 mm											
Weight / Peso (Kg)	280				275							
UPS MODULE / MODULO UPS 20KW												
Size / Dimensiones (D*W*H)	736.5 x 490 x 130mm - 35Kg each											
UNIT EMPTY BATTERY MODULE / MODULO BATERIAS VACIO												
Size / Dimensiones (D*W*H)	767 x 107 x 170mm - 3.5 Kg each											
UNIT BATTERY MODULE / MODULO BATERIAS (10pcs x 12V/9AH)												
Size / Dimensiones (D*W*H)	767 x 107 x 170mm - 28 Kg each											
BATTERY 30U CABINET (EMPTY) / GABINETE 30U BATERIAS VACIO												
Size (D*W*H) - Weight (Kg)	1110 x 600 x 1475 mm - 207Kg											
BATTERY 42U CABINET (EMPTY) / GABINETE 42U BATERIAS VACIO												
Size (D*W*H) - Weight (Kg)	1110 x 600 x 2010 mm - 235Kg											
PACKING / PRODUCTO EMPACADO												
UPS CABINET (INCLUDING BYPASS SWITCH - NO MODULES, NO BATTERIES) / GABINETE (INCLUYE BYS - SIN MODULOS NI BATERIAS)												
Size / Dimensiones (D*W*H)	1223 x 753 x 2170 mm (1 unit / pallet)											
Weight / Peso (Kg)	340				335							
UPS MODULE / MODULO UPS 20KW												
Size / Dimensiones (D*W*H)	870 x 580 x 250 mm (1 unit / carton) - 38Kg each (c/u)											
EMPTY BATTERY PACK = 4 EMPTY TRAYS (4 GAVETAS DE BATERIAS VACIAS)												
Size / Dimensiones (D*W*H)	870 x 580 x 250 (4 / carton) - 17Kg (4 trays/carton)											
2 BATTERY MODULES PER CARTON (EACH MODULE w/ 10pcs x 12V/9AH)												
Size / Dimensiones (D*W*H)	870 x 580 x 250 (2 / carton) - 55Kg											
BATTERY 30U CABINET (EMPTY) / GABINETE 30U BATERIAS VACIO												
Size (D*W*H) - Weight (Kg)	1110 x 600 x 1650 mm - 267Kg											
BATTERY 42U CABINET (EMPTY) / GABINETE 42U BATERIAS VACIO												
Size (D*W*H) - Weight (Kg)	1230 x 750 x 2170 mm - 295Kg											
SAFETY & STANDARDS / NORMATIVAS Y ESTANDARES												
CE Directives	73 / 23 & 93 / 68 (LV Safety) and 89 / 336 (EMC)											
UPS General Safety / Seguridad General	IEC 62040 - 1 - 1											
UPS EMC / Compatibilidad. Electromag.	IEC 62040 - 2 (Class C3) (radiation)											
UPS Tests / Procedimiento Pruebas UPS	IEC 62040 - 3											
ESD / RS / EFT / Surge / CS / F. Mag. Field	EN 61000-4- 2/3/4/5/6/8 (level 3)											
Low Frequency Signals	IEC / EN 61000 - 2 - 2 (level 10)											
Degree of protection / Grado de Protección	IP20											
Conduction & Radiation	FCC Part 15, Subpart B, Class A ; IEC / EN 62040-2 (Cat 3)											
Safety / Seguridad	UL1778 - CSA C22.2 (by cTUVus) - CE - IEC / EN60950-1											
Safety Others / Seguridad Otros	IEC / EN60950 - 1											
Quality and Enviroment	ISO9001 & ISO14001											
Transportation / Transporte	U.S. ISTA 2A & ETS 300019 - 2 - 2 class 2.3											

Technical specifications can be modified to comply with special projects / Las especificaciones pueden modificarse para adaptarse a proyectos especiales

Technical specifications may change without further notice / Por motivos comerciales o técnicos las especificaciones pueden cambiar sin previo aviso.

Noise measured in semi-anechoic room at 1m under special conditions / Ruido medido en sala semi-anechoica a 1m bajo condiciones específicas

Technical Features / Características Técnicas

MODPRO-33 : 380/220V - "SMALL" CABINET (1/2)

CABINET / ARMARIO: "SMALL"	(SMALL)		
UPS Module Cap. / Capacidad Módulo UPS	30KW	30KW	30KW
UPS CABINET / Armario UPS:	3 UPS Max.		
Qty UPS Modules / Cantidad Módulos UPS	1	2	3
BATTERY CABINET / Armario baterías:	3 Battery packs Max. = 12 Battery Modules Max.		
Max. Qty Batt Packs / Cant. Max. Paq. Bat.:	3	3	3
SYSTEM CAPACITY / POTENCIA SISTEMA:	30KW	60KW	90KW
Output Power Factor / FP de Salida:	1	1	1
Extended Max KVA / KV Máx. Ampliable	30	60	90
Parallel Connection / Conexión en Paralelo	Yes, up to 2 Cabinets / Si, hasta 2 Armarios		
Max. Capacity - 2 Cabinets in Parallel (KW) Cap. Máxima - 2 Armarios en Paralelo (KW)	60	120	180
INPUT / ENTRADA			
Rated Voltage / Voltaje Nominal	3PH : 380/220Vac : 3 x 220VAC Line to Neutral (Voltaje Fase a Neutro) 3PH : 400/230Vac : 3 x 230VAC Line to Neutral (Voltaje Fase a Neutro) 3PH : 415/240Vac : 3 x 240VAC Line to Neutral (Voltaje Fase a Neutro)		
Wiring / Cableado	Y: (3Ph+N) + G		
Voltage Range / Rango de Voltaje (L-N)	120-276VAC @ Load < 70% / 175-276VAC (L-N) @ Load > 70%		
Frequency Range / Rango de Frecuencia	40 - 70Hz		
Power Factor / Factor de Potencia	> 0,99 @ 100% Load		
THDi (100% LOAD / CARGA)	< 3% @ 100% load		
Max Input Current / Corriente Max Entrada (A)	60	120	171
OUTPUT / SALIDA			
Output Voltage / Voltaje de Salida	380/220Vac or 400/230Vac or 415/240Vac (user configurable)		
Wiring / Cableado	Y: (3Ph+N + G) or (DELTA: 3Ph + G)		
Regulation Voltage / Regulación Voltaje	Balanced : <1% / Non Balanced: < 2%		
Dynamic Accuracy / Regulación Carga Variable	<5% (load variations 0%-100% & 100%-0% R Load) -- <3% (load variations 0-50% & 50%-0% R Load)		
Recovery Time / Tiempo de Recuperación	90% nominal voltage < 100ms (Resistive load variation 0%-100% & 100%-0%)		
Waveform / Forma de Onda	Sine wave / Sinusoidal		
Crest Factor / factor Cresta	3:1		
Rated Frequency / Frecuencia Nominal	50Hz / 60Hz Autoselectable /Autoseleccionable		
Frequency Precision / Precisión Frecuencia	0.1 Hz (+/-)		
Frequency Range Sync. / Rango Frec. Sync.	+/- 1Hz , +/-2Hz , +/-4Hz (configurable)		
Slew rate / Seguimiento de frecuencia	1Hz / s		
THDv	< 1.5% (100% Linear Load / Carga Lineal) - < 4% (100% Non-linear Load / Carga No Lineal): EN-62040-3		
Power Factor / Factor de Potencia	PF : 1		
Transfer Time / Tiempo transferencia	ONLINE <--> BATTERY : 0ms		
Max. DC Offset / Max. Voltaje DC:	50mVdc		
Overload Capability / Sobrecarga	(105%-110% : 60min); (111%-125% : 10min); (126%-150% : 1min); (> 150% : 250ms)		
Shortcircuit Detection / Detección de corto salida	0Vac & max current limit 135A during 5 cycles / 135A y caída de tensión a 0Vac durante 5 ciclos		
Shortcircuit Protection / Protección contra cortos	Output power-off / Apagado de la salida		
PROTECCIONES / PROTECCIONES			
Total Surge Protection / Protección Total	14.664 Total Joules (10/1000us) (3*2.184J L-N +3*2.184J L-G + 1.560J N-G)		
Enhanced Protection / Protección Ampliada	Shortcircuit, high/low AC Input Volt., overload, overheating, abnormal communication / Cortocircuitos, alto/bajo voltaje en línea AC, sobrecarga, sobretemperatura, comunicación anormal.		
Short-circuit Max. Current / Corriente Máx. de Cortocircuito	25kA		
STATIC BYPASS SWITCH / INTERRUPTOR BYPASS ESTÁTICO			
Voltage Range / Rango de Voltaje	Configurable: NOMINAL (-30%, -20% or -10%) / NOMINAL (+10% or +15% or +20%)		
Frequency Range / Rango de Frecuencia	Configurable: NOMINAL (-1Hz or -2Hz or -4Hz) / NOMINAL (+1Hz or +2Hz or +4Hz)		
Transfer Time / Tiempo de Transferencia	0ms		
BYS / Switch Bypass Estático (Max KW)	90 KW		
Bypass Current / Corriente Max. (L-N) (A)	190	190	190
Max BYS Overload / Overload Max. BYS	456%	228%	152%
BATTERIES / BATERÍAS			
Type / Tipo	VRLA AGM 12VDC / 9AH & LiFePO4 51.2V 50AH & 100AH.		
DC Voltage / Voltage DC	(240VDC Positive to Batt. Neutral) & (240VDC Negative to Batt. Neutral)		
UPS Battery Location / Ubicación Baterías	Internal		
Ext. Battery Conn. / Conex. baterías Ext.	3 bar terminals for EXT BATTs / 3 Barras de conexión para Bat. Ext. (POS, NEG, N)		
Temp. Comp. / Compensación por Temp.	Configurable: 0 to -30mV / °C per battery		
Charging Time / Tiempo de recarga	2h-4h (90%) (standard battery Pack / Paquete Baterías Estándar)		
Charging Current / Corriente de recarga	8A max. per UPS module / 8A max. por cada módulo UPS (configurable)		
Charging Voltage / Voltaje de carga:	Floating / Flotante: 13.65Vdc/bat +/-1% - Boost Charging / Cargando: 14.0Vdc/bat.		
Cut-off DC Voltage / Voltaje Corte DC	10.0Vdc per battery / por batería		

Technical Features / Características Técnicas

MODPRO-33 : 380/220V - "SMALL" CABINET (2/2)			
CABINET / ARMARIO: "SMALL"	(SMALL)		
Qty UPS Modules / Cantidad Módulos UPS	1	2	3
UPS EFFICIENCY / EFICIENCIA UPS @ LOAD 100% / 75% / 50% / 25%			
Efficiency (ECO) / Eficiencia (ECO)	98.0% / 98.0% / 97.0% / 96.0%		
Efficiency (on Battery) / Eficiencia (Batería)	94.8% / 94.7% / 94.5% / 94.0%		
Efficiency (Online) / Eficiencia (Online)	96.0% / 95.9% / 95.7% / 95.0%		
Inverter Efficiency / Eficiencia Inversor	97% @ 100% LOAD		
Max. Heat Dissipation / Disipación Térmica (BTU/h)	4,092	8,184	12,276
OPERATING PARAMETERS / CONDICIONES OPERATIVAS			
Max. Noise / Ruido Acústico Max. dB @ 1m	64.0	65.4	66.8
Running Conditions / Cond. de Operación	(0 to +40 ° C) / < 95%RH (non-condensing / no condensante)		
Max. Altitude / Altura Max.	4.500m		
Altitude Max. Power / Altura a Potencia Max.	100% rated power up to / 100% Potencia Nominal hasta : 1.000m		
De-rating / Pérdida de potencia	Above 1.000m / Sobre 1.000m : -1% / 100m		
Communication Ports / Puertos Com.	USB, RS232 + SNMP Slot (optional: LAN card, Relay Contact card, RS485)		
Communication Software / Software	Windows family, Linux, Unix & Mac OS		
Operation Panel / Panel de Operación	Standard (B&W) LCD + Keyboard / LCD Estándar (B&N) + Teclado		
Storage Conditions / Almacenaje	(-15 to +60 ° C) / < 95%RH (non-condensing / no condensante)		
SIZE & WEIGHT / PESO Y MEDIDAS			
UNPACKED PRODUCT / PRODUCTO SIN EMPAQUE			
UPS CABINET (INCLUDING BYPASS SWITCH - NO UPS MODULES, NO BATT) / GABINETE (INCLUYE BYS - SIN UPS, NI BATERIAS)			
Size / Dimensiones (D*W*H)	1000 x 520 x 760 mm		
Weight / Peso (Kg)	182		
BATTERY CABINET (With 12 Empty batt modules) / GABINETE DE BATERIAS (con 12 módulos baterías vacías)			
Size / Dimensiones (D*W*H)	1000 x 520 x 740 mm		
Weight / Peso (Kg)	83		
INDIVIDUAL UPS MODULE / MODULO UPS 30KW			
Size / Dimensiones (D*W*H)	736.5 x 490 x 130 mm		
Weight / Peso (Kg)	35 each (c/u)		
UNIT EMPTY BATTERY TRAY / GAVETA VACIA BATERIAS (4 x PACK)			
Size / Dimensiones (D*W*H)	767 x 107 x 170		
Weight / Peso (Kg)	2.5 each (c/u)		
UNIT BATTERY MODULE / MODULO BATERIAS (10pcs x 12V/9AH)			
Size / Dimensiones (D*W*H)	767 x 107 x 170		
Weight / Peso (Kg)	28 each (c/u)		
PACKING / PRODUCTO EMPACADO			
UPS CABINET (INCLUDING BYPASS SWITCH - NO UPS MODULES, NO BATT) / GABINETE (INCLUYE BYS - SIN UPS, NI BATERIAS)			
Size / Dimensiones (D*W*H)	1125 x 705 x 940 mm (1 unit / pallet)		
Weight / Peso (Kg)	222		
BATTERY CABINET (With 12 Empty batt modules) / GABINETE DE BATERIAS (con 12 módulos baterías vacías)			
Size / Dimensiones (D*W*H)	1125 x 705 x 920 mm (1 unit / pallet)		
Weight / Peso (Kg)	123		
EMPTY UPS CABINET + EMPTY BATTERY CABINET (BOTH IN 1 PALLET) / GABINETES VACIOS DE UPS & BATERIAS EN 1 PALLET			
Size / Dimensiones (D*W*H)	1125 x 705 x 1580 mm (1 unit / pallet)		
Weight / Peso (Kg)	345		
UPS MODULE / MODULO UPS 30KW			
Size / Dimensiones (D*W*H)	870 x 580 x 250 mm (1 unit / carton)		
Carton Weight / Peso Carton (Kg)	38 each (c/u)		
EMPTY BATTERY PACK = 4 EMPTY TRAYS (4 GAVETAS DE BATERIAS VACIAS)			
Size / Dimensiones (D*W*H)	870 x 580 x 250 (4 / carton)		
Carton Weight / Peso Carton (Kg)	17 (4 trays / carton)		
2 BATTERY MODULES PER CARTON (EACH MODULE w/ 10pcs x 12V/9AH)			
Size / Dimensiones (D*W*H)	870 x 580 x 250 (2 / carton)		
Carton Weight / Peso Carton (Kg)	55 (2 units / carton)		
SAFETY & STANDARDS / NORMATIVAS Y ESTANDARES			
CE Directives	73 / 23 & 93 / 68 (LV Safety) and 89 / 336 (EMC)		
UPS General Safety / Seguridad General	IEC 62040 - 1 - 1		
UPS EMC / Compatibilidad. Electromag.	IEC 62040 - 2 (Class C3) (radiation)		
UPS Tests / Procedimiento Pruebas UPS	IEC 62040 - 3		
ESD / RS / EFT / Surge / CS / F. Mag. Field	EN 61000-4-2 & 4-3 & 4-4 & 4-5 & 4-6 & 4-8 (level 3)		
Low Frequency Signals	IEC / EN 61000 - 2 - 2 (level 10)		
Degree of protection / Grado de Protección	IP20		
Conduction & Radiation	FCC Part 15, Subpart B, Class A ; IEC / EN 62040-2 (Cat 3)		
Safety / Seguridad	CE - IEC / EN60950-1		
Quality and Enviroment	ISO9001 & ISO14001		
Transportation / Transporte	U.S. ISTA 2A & ETS 300019 - 2 - 2 class 2.3		

Technical specifications can be modified to comply with special projects / Las especificaciones pueden modificarse para adaptarse a proyectos especiales

Technical specifications may change without further notice / Por motivos comerciales o técnicos las especificaciones pueden cambiar sin previo aviso.

Noise measured in semi-anechoic room at 1m under special conditions / Ruido medido en sala semi-anechoica a 1m bajo condiciones específicas

Technical Features / Características Técnicas

MODPRO-33 : 380/220V - 30U CABINET (1/2)

CABINET / ARMARIO: 30U	(NB 30U : ONLY UPS MODULES)				(NB 30U : ONLY UPS MODULES)					
Cabinet size / Tamaño gabinete	30U									
UPS Module Cap. / Capacidad Módulo UPS	30KW	30KW	30KW	30KW	30KW	30KW	30KW	30KW	30KW	30KW
Qty UPS Modules / Cantidad Módulos UPS	1	2	3	4	1	2	3	4	5	6
Max. Qty Batt Packs / Cant. Max. Paq. Bat.:	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SYSTEM CAPACITY / POTENCIA SISTEMA:	30KW	60KW	90KW	120KW	30KW	60KW	90KW	120KW	150KW	180KW
Output Power Factor / FP de Salida:	1	1	1	1	1	1	1	1	1	1
Extended Max KVA / KV Máx. Ampliable	30KW	60KW	90KW	120KW	30KW	60KW	90KW	120KW	150KW	180KW
Parallel Connection / Conexión en Paralelo	Yes, up to 2 Cabinets / Si, hasta 2 Armarios									
Max. Capacity - 2 Cabinets in Parallel (KW) Cap. Máxima - 2 Armarios en Paralelo (KW)	60KW	120KW	180KW	240KW	60KW	120KW	180KW	240KW	300KW	360KW
INPUT / ENTRADA										
Rated Voltage / Voltaje Nominal	3PH : 380/220Vac : 3 x 220VAC Line to Neutral (Voltaje Fase a Neutro) 3PH : 400/230Vac : 3 x 230VAC Line to Neutral (Voltaje Fase a Neutro) 3PH : 415/240Vac : 3 x 240VAC Line to Neutral (Voltaje Fase a Neutro)									
Wiring / Cableado	Y: (3Ph+N) + G									
Voltage Range / Rango de Voltaje (L-N)	120-276VAC @ Load < 70% / 175-276VAC (L-N) @ Load > 70%									
Frequency Range / Rango de Frecuencia	40 - 70Hz									
Power Factor / Factor de Potencia	> 0.99 @ 100% Load									
THDi (100% LOAD / CARGA)	< 3% @ 100% load									
Max Input Current / Corriente Max Entrada (A)	60	120	171	171	60	120	171	228	285	342
OUTPUT / SALIDA										
Output Voltage / Voltaje de Salida	380/220Vac or 400/230Vac or 415/240Vac (user configurable)									
Wiring / Cableado	Y: (3Ph+N+G) or (DELTA: 3Ph + G)									
Regulation Voltage / Regulación Voltaje	Balanced : <1% / Non Balanced: < 2%									
Dynamic Accuracy / Reg. Carga Variable	<5% (load variations 0%-100% & 100%-0% R Load) - <3% (load variations 0-50% & 50%-0% R Load)									
Recovery Time / Tiempo de Recuperación	90% nominal voltage < 100ms (Resistive load variation 0%-100% & 100%-0%)									
Waveform / Forma de Onda	Sine wave / Sinusoidal									
Crest Factor / factor Cresta	3:1									
Rated Frequency / Frecuencia Nominal	50Hz / 60Hz Autoselectable /Autoseleccionable									
Frequency Precision / Precisión Frecuencia	0.1 Hz (+/-)									
Frequency Range Sync. / Rango Frec. Sinc.	+/- 1Hz , +/-2Hz , +/-4Hz (configurable)									
Slew rate / Seguimiento de frecuencia	1Hz / s									
THDv	<1.5% (100% Linear Load / Carga Lineal) - <4% (100% Non-linear Load / Carga No Lineal): EN-62040-3									
Power Factor / Factor de Potencia	PF : 1									
Transfer Time / Tiempo transferencia	ONLINE <--> BATTERY : 0ms									
Max. DC Offset / Max. Voltaje DC:	50mVdc									
Overload Capability / Sobrecarga	(105%-110% : 60min); (111%-125% : 10min) ; (126%-150% : 1min) ; (>150% : 250ms)									
Shortcircuit Detection / Detección de corto salida	0Vac & max current limit 135A during 5 cycles / 135A y caída de tensión a 0Vac durante 5 ciclos									
Shortcircuit Protection / Protección contra cortos	Output power-off / Apagado de la salida									
PROTECCIONES / PROTECCIONES										
Total Surge Protection / Protección Total	14.664 Total Joules				16.848 Total Joules (10/1000us)					
Enhanced Protection / Protección Ampliada	Shortcircuit, high/low AC Input Volt., overload, overheating, abnormal communication / Cortocircuitos, alto/bajo voltaje en línea AC, sobrecarga, sobretemperatura, comunicación anormal.									
Short-circuit Max. Current / Corriente Máx. de Cortocircuito	25kA				50kA					
STATIC BYPASS SWITCH / INTERRUPTOR BYPASS ESTATICO										
Voltage Range / Rango de Voltaje	Configurable: NOMINAL (-30%, -20% or -10%) / NOMINAL (+10% or +15% or +20%)									
Frequency Range / Rango de Frecuencia	Configurable: NOMINAL (-1Hz or -2Hz or -4Hz) / NOMINAL (+1Hz or +2Hz or +4Hz)									
Transfer Time / Tiempo de Transferencia	0ms									
BYS / Switch Bypass Estático (Max KW)	120 KW				180KW					
Bypass Current / Corriente Max. (L-N) (A)	250	250	250	250	380	380	380	380	380	380
Max BYS Overload / Overload Max. BYS	600%	300%	200%	150%	912%	456%	304%	228%	182%	152%
BATTERIES / BATERIAS										
Type / Tipo	VRLA AGM 12VDC / 9AH & LiFePO4 51.2V 50AH & 100AH.									
DC Voltage / Voltage DC	(240VDC Positive to Batt. Neutral) & (240VDC Negative to Batt. Neutral)									
UPS Battery Location / Ubicación Baterías	External / Externas									
Ext. Battery Conn. / Conex. baterías Ext.	3 bar terminals for EXT BATTS / 3 Barras de conexión para Bat. Ext. (POS, NEG, N)									
Temp. Comp. / Compensación por Temp.	Configurable: 0 to -30mV / °C per battery									
Charging Time / Tiempo de recarga	2h-4h (90%) (standard battery Pack / Paquete Baterías Estándar)									
Charging Current / Corriente de recarga	8A max. per UPS module / 8A max. por cada módulo UPS (configurable)									
Charging Voltage / Voltaje de carga:	Floating / Flotante: 13.65Vdc/bat +/-1%. - Boost Charging / Cargando: 14.0Vdc/bat.									
Cut-off DC Voltage / Voltaje Corte DC	10.0Vdc per battery / por batería									

Technical Features / Características Técnicas

MODPRO-33 : 380/220V - 30U CABINET (2/2)

CABINET / ARMARIO: 30U	(STD 30U : UPS MOD + BATT)				(NB 30U : ONLY UPS MODULES)					
Qty UPS Modules / Cantidad Módulos UPS	1	2	3	4	1	2	3	4	5	6
UPS EFFICIENCY / EFICIENCIA UPS @ LOAD 100% / 75% / 50% / 25%										
Efficiency (ECO) / Eficiencia (ECO)	98% / 98% / 97% / 96%									
Efficiency (on Battery) / Eficiencia (Batería)	94.8% / 94.7% / 94.5% / 94.0%									
Efficiency (Online) / Eficiencia (Online)	96.0% / 95.9% / 95.7% / 95.0%									
Inverter Efficiency / Eficiencia Inversor	97% @ 100% LOAD									
Max. Heat Dissipation / Disipación Térmica (BTU/h)	4,092	8,184	12,276	16,368	4,092	8,184	12,276	16,368	20,460	24,552
OPERATING PARAMETERS / CONDICIONES OPERATIVAS										
Max. Noise / Ruido Acústico Max. dB @ 1m	63.0	64.5	65.3	66.4	63.0	64.5	65.3	66.4	66.9	67.5
Running Conditions / Cond. de Operación	(0 to +40 ° C) / < 95%RH (non-condensing / no condensante)									
Max. Altitude / Altura Max.	4.500m									
Altitude Max. Power / Altura a Potencia Max.	100% rated power up to / 100% Potencia Nominal hasta : 1.000m									
De-rating / Pérdida de potencia	Above 1.000m / Sobre 1.000m : -1% / 100m									
Communication Ports / Puertos Com.	USB, RS232 + SNMP Slot (optional: LAN card, Relay Contact card, RS485)									
Communication Software / Software	Windows family, Linux, Unix & Mac OS									
Operation Panel / Panel de Operación	Color 10" Touch Screen / Pantalla Táctil a Color de 10 pulgadas									
Storage Conditions / Almacenaje	(-15 to +60 ° C) / < 95%RH (non-condensing / no condensante)									
SIZE & WEIGHT / PESO Y MEDIDAS										
UNPACKED PRODUCT / PRODUCTO SIN EMPAQUE										
UPS CABINET (INCLUDING BYPASS SWITCH - NO MODULES, NO BATTERIES) / GABINETE (INCLUYE BYS - SIN MODULOS NI BATERIAS)										
Size / Dimensiones (D*W*H)	1100 x 600 x 1475 mm									
Weight / Peso (Kg)	260				246					
INDIVIDUAL UPS MODULE / MODULO UPS 30KW										
Size D*W*H (mm) - Weight (Kg)	736.5 x 490 x 130mm - 35Kg each									
UNIT EMPTY BATTERY TRAY / GAVETA VACIA BATERIAS (4 x PACK)										
Size D*W*H (mm) - Weight (Kg)	767 x 107 x 170mm - 3.5 Kg each									
UNIT BATTERY MODULE / MODULO BATERIAS (10pcs x 12V/9AH)										
Size D*W*H (mm) - Weight (Kg)	767 x 107 x 170mm - 28 Kg each									
BATTERY 30U CABINET (EMPTY) / GABINETE 30U BATERIAS VACIO										
Size (D*W*H) - Weight (Kg)	1110 x 600 x 1475 mm - 207Kg									
BATTERY 42U CABINET (EMPTY) / GABINETE 42U BATERIAS VACIO										
Size (D*W*H) - Weight (Kg)	1110 x 600 x 2010 mm - 235Kg									
PACKING / PRODUCTO EMPACADO										
UPS CABINET (INCLUDING BYPASS SWITCH - NO MODULES, NO BATTERIES) / GABINETE (INCLUYE BYS - SIN MODULOS NI BATERIAS)										
Size / Dimensiones (D*W*H)	1223 x 753 x 1663 mm (1 unit / pallet)									
Weight / Peso (Kg)	310				296					
UPS MODULE / MODULO UPS 30KW										
Size D*W*H (mm) - Weight (Kg)	870 x 580 x 250 mm (1 unit / carton) - 38Kg each (c/u)									
EMPTY BATTERY PACK = 4 EMPTY TRAYS (4 GAVETAS DE BATERIAS VACIAS)										
Size D*W*H (mm) - Weight (Kg)	870 x 580 x 250 (4 / carton) - 17Kg (4 trays/carton)									
2 BATTERY MODULES PER CARTON (EACH MODULE w/ 10pcs x 12V/9AH)										
Size D*W*H (mm) - Weight (Kg)	870 x 580 x 250 (2 / carton) - 55Kg									
BATTERY 30U CABINET (EMPTY) / GABINETE 30U BATERIAS VACIO										
Size (D*W*H) - Weight (Kg)	1110 x 600 x 1650 mm - 267Kg									
BATTERY 42U CABINET (EMPTY) / GABINETE 42U BATERIAS VACIO										
Size (D*W*H) - Weight (Kg)	1230 x 750 x 2170 mm - 295Kg									
SAFETY & STANDARDS / NORMATIVAS Y ESTANDARES										
CE Directives	73 / 23 & 93 / 68 (LV Safety) and 89 / 336 (EMC)									
UPS General Safety / Seguridad General	IEC 62040 - 1 - 1									
UPS EMC / Compatibilidad. Electromag.	IEC 62040 - 2 (Class C3) (radiation)									
UPS Tests / Procedimiento Pruebas UPS	IEC 62040 - 3									
ESD / RS / EFT / Surge / CS / F. Mag. Field	EN 61000-4-2 & 4-3 & 4-4 & 4-5 & 4-6 & 4-8 (level 3)									
Low Frequency Signals	IEC / EN 61000 - 2 - 2 (level 10)									
Degree of protection / Grado de Protección	IP20									
Conduction & Radiation	FCC Part 15, Subpart B, Class A ; IEC / EN 62040-2 (Cat 3)									
Safety / Seguridad	CE - IEC / EN60950-1									
Quality and Enviroment	ISO9001 & ISO14001									
Transportation / Transporte	U.S. ISTA 2A & ETS 300019 - 2 - 2 class 2.3									

Technical specifications can be modified to comply with special projects / Las especificaciones pueden modificarse para adaptarse a proyectos especiales

Technical specifications may change without further notice / Por motivos comerciales o técnicos las especificaciones pueden cambiar sin previo aviso.

Noise measured in semi-anechoic room at 1m under special conditions / Ruido medido en sala semi-anechoica a 1m bajo condiciones específicas

Technical Features / Características Técnicas

MODPRO-33 : 380/220V - 42U CABINET (1/4)

CABINET / ARMARIO: 42U	(STD 42U : UPS MOD + BATT)				(NB 42U : ONLY UPS MODULES)							
Cabinet size / Tamaño gabinete	42U											
UPS Module Cap. / Capacidad Módulo UPS	30KW	30KW	30KW	30KW	30KW	30KW	30KW	30KW	30KW	30KW	30KW	30KW
Qty UPS Modules / Cantidad Módulos UPS	1	2	3	4	1	2	3	4	5	6	7	8
Max. Qty Batt Packs / Cant. Max. Paq. Bat.:	5	5	5	5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SYSTEM CAPACITY / POTENCIA SISTEMA:	30KW	60KW	90KW	120KW	30KW	60KW	90KW	120KW	150KW	180KW	210KW	210KW*
Output Power Factor / FP de Salida:	1	1	1	1	1	1	1	1	1	1	1	1
Extended Max KVA / KV Máx. Ampliable	30	60	90	120	30	60	90	120	150	180	210	210
Parallel Connection / Conexión en Paralelo	Yes, up to 2 Cabinets / Si, hasta 2 Armarios											
Max. Capacity - 2 Cabinets in Parallel (KW) Cap. Máxima - 2 Armarios en Paralelo (KW)	60	120	180	240	60	120	180	240	300	360	420	420
INPUT / ENTRADA												
Rated Voltage / Voltaje Nominal	3PH : 380/220Vac : 3 x 220VAC Line to Neutral (Voltaje Fase a Neutro) 3PH : 400/230Vac : 3 x 230VAC Line to Neutral (Voltaje Fase a Neutro) 3PH : 415/240Vac : 3 x 240VAC Line to Neutral (Voltaje Fase a Neutro)											
Wiring / Cableado	Y: (3Ph+N) + G											
Voltage Range / Rango de Voltaje	120-276VAC @ Load < 70% / 175-276VAC (L-N) @ Load > 70%											
Frequency Range / Rango de Frecuencia	40 - 70Hz											
Power Factor / Factor de Potencia	> 0.99 @ 100% Load											
THDi (100% LOAD / CARGA)	< 3% @ 100% load											
Max Input Current / Corriente Max Entrada (A)	60	120	171	228	60	120	171	228	285	342	399	399
OUTPUT / SALIDA												
Output Voltage / Voltaje de Salida	380/220Vac or 400/230Vac or 415/240Vac (user configurable)											
Wiring / Cableado	Y: (3Ph+N + G) or (DELTA: 3Ph + G)											
Regulation Voltage / Regulación Voltaje	Balanced : <1% / Non Balanced: < 2%											
Dynamic Accuracy / Reg. Carga Variable	<5% (load variations 0%-100% & 100%-0% R Load) - <3% (load variations 0-50% & 50%-0% R Load)											
Recovery Time / Tiempo de Recuperación	90% nominal voltage < 100ms (Resistive load variation 0%-100% & 100%-0%)											
Waveform / Forma de Onda	Sine wave / Sinusoidal											
Crest Factor / factor Cresta	3:1											
Rated Frequency / Frecuencia Nominal	50Hz / 60Hz Autoselectable / Autoseleccionable											
Frequency Precision / Precisión Frecuencia	0.1 Hz (+/-)											
Frequency Range Sync. / Rango Frec. Sync.	+/- 1Hz , +/-2Hz , +/-4Hz (configurable)											
Slew rate / Seguimiento de frecuencia	1Hz / s											
THDv	< 1.5% (100% Linear Load / Carga Lineal) - < 4% (100% Non-linear Load / Carga No Lineal): EN-62040-3											
Power Factor / Factor de Potencia	PF: 1											
Transfer Time / Tiempo transferencia	ONLINE <--> BATTERY : 0ms											
Max. DC Offset / Max. Voltaje DC:	50mVdc											
Overload Capability / Sobrecarga	(105%-110% : 60min); (111%-125% : 10min) ; (126%-150% : 1min) ; (>150% : 250ms)											
Shortcircuit Detection / Detección de corto salida	0Vac & max current limit 135A during 5 cycles / 135A y caída de tensión a 0Vac durante 5 ciclos											
Shortcircuit Protection / Protección contra cortos	Output power-off / Apagado de la salida											
PROTECCIONES / PROTECCIONES												
Surge Protection / Protecc. Picos (Joules)	14.664 Total Joules				16.848 Total Joules (10/1000us)							
Enhanced Protection / Protección Ampliada	Shortcircuit, high/low AC Input Volt., overload, overheating, abnormal communication / Cortocircuitos, alto/bajo voltaje en línea AC, sobrecarga, sobretemperatura, comunicación anormal.											
Short-circuit Max. Current / Corriente Máx. de Cortocircuito	25kA				50kA							
STATIC BYPASS MODE / MODO BYPASS ESTÁTICO												
Voltage Range / Rango de Voltaje	Configurable: NOMINAL (-30%, -20% or -10%) / NOMINAL (+10% or +15% or +20%)											
Frequency Range / Rango de Frecuencia	Configurable: NOMINAL (-1Hz or -2Hz or -4Hz) / NOMINAL (+1Hz or +2Hz or +4Hz)											
Transfer Time / Tiempo de Transferencia	0ms											
BYS / Switch Bypass Estático (Max KW)	120KW				210KW							
Bypass Current / Corriente Max. (L-N) (A)	250	250	250	250	495	495	495	495	495	495	495	495
Max BYS Overload / Overload Max. BYS	600%	300%	200%	150%	1188%	594%	396%	297%	238%	198%	170%	170%
BATTERIES / BATERIAS												
Type / Tipo	VRLA AGM 12VDC / 9AH & LiFePO4 51.2V 50AH & 100AH.											
DC Voltage / Voltage DC	(240VDC Positive to Batt. Neutral) & (240VDC Negative to Batt. Neutral)											
UPS Battery Location / Ubicación Baterías	Internal				No internal batteries in NB cabs / Armarios NB sin baterías internas							
Ext. Battery Conn. / Conex. baterías Ext.	3 bar terminals for EXT BATTS / 3 Barras de conexión para Bat. Ext. (POS, NEG, N)											
Temp. Comp. / Compensación por Temp.	Configurable: 0 to -30mV / °C per battery											
Charging Time / Tiempo de recarga	2h-4h (90%) (standard battery Pack / Paquete Baterías Estándar)											
Charging Current / Corriente de recarga	8A max. per UPS module / 8A max. por cada módulo UPS (configurable)											
Charging Voltage / Voltaje de carga:	Floating / Flotante: 13.65Vdc/bat +/-1% - Boost Charging / Cargando: 14.0Vdc/bat.											
Cut-off DC Voltage / Voltaje Corte DC	10.0Vdc per battery / por batería											

Technical Features / Características Técnicas

MODPRO-33 : 380/220V - 42U CABINET (2/4)												
CABINET / ARMARIO: 42U	(STD 42U : UPS MOD + BATT)				(NB 42U : ONLY UPS MODULES)							
Qty UPS Modules / Cantidad Módulos UPS	1	2	3	4	1	2	3	4	5	6	7	8
UPS EFFICIENCY / EFICIENCIA UPS @ LOAD 100% / 75% / 50% / 25%												
Efficiency (ECO) / Eficiencia (ECO)	98% / 98% / 97% / 96%											
Efficiency (on Battery) / Eficiencia (Batería)	94.8% / 94.7% / 94.5% / 94.0%											
Efficiency (Online) / Eficiencia (Online)	96.0% / 95.9% / 95.7% / 95.0%											
Inverter Efficiency / Eficiencia Inversor	97% @ 100% LOAD											
Max. Heat Dissipation / Disipación Térmica (BTU/h)	4,092	8,184	12,276	16,368	4,092	8,184	12,276	16,368	20,460	24,552	28,644	28,644
OPERATING PARAMETERS / CONDICIONES OPERATIVAS												
Max. Noise / Ruido Acústico Max. dB @ 1m	63.0	64.5	65.3	66.4	63.0	64.5	65.3	66.4	66.9	67.5	68.1	68.6
Running Conditions / Cond. de Operación	(0 to +40 °C) / < 95%RH (non-condensing / no condensante)											
Max. Altitude / Altura Max.	4,500m											
Altitude Max. Power / Altura a Potencia Max.	100% rated power up to / 100% Potencia Nominal hasta : 1.000m											
De-rating / Pérdida de potencia	Above 1.000m / Sobre 1.000m : -1% / 100m											
Communication Ports / Puertos Com.	USB, RS232 + SNMP Slot (optional: LAN card, Relay Contact card, RS485)											
Communication Software / Software	Windows family, Linux, Unix & Mac OS											
Operation Panel / Panel de Operación	Color 10" Touch Screen / Pantalla Táctil a Color de 10 pulgadas											
Storage Conditions / Almacenaje	(-15 to +60 °C) / < 95%RH (non-condensing / no condensante)											
SIZE & WEIGHT / PESO Y MEDIDAS												
UNPACKED PRODUCT / PRODUCTO SIN EMPAQUE												
UPS CABINET (INCLUDING BYPASS SWITCH - NO MODULES, NO BATTERIES) / GABINETE (INCLUYE BYS - SIN MODULOS NI BATERIAS)												
Size / Dimensiones (D*W*H)	1100 x 600 x 2010 mm											
Weight / Peso (Kg)	344				273							
INDIVIDUAL UPS MODULE / MODULO UPS 30KW												
Size D*W*H (mm) - Weight (Kg)	736.5 x 490 x 130mm - 35Kg each											
UNIT EMPTY BATTERY TRAY / GAVETA VACIA BATERIAS (4 x PACK)												
Size D*W*H (mm) - Weight (Kg)	767 x 107 x 170mm - 3.5 Kg each											
UNIT BATTERY MODULE / MODULO BATERIAS (10pcs x 12V/9AH)												
Size D*W*H (mm) - Weight (Kg)	767 x 107 x 170mm - 28 Kg each											
BATTERY 30U CABINET (EMPTY) / GABINETE 30U BATERIAS VACIO												
Size (D*W*H) - Weight (Kg)	1110 x 600 x 1475 mm - 207Kg											
BATTERY 42U CABINET (EMPTY) / GABINETE 42U BATERIAS VACIO												
Size (D*W*H) - Weight (Kg)	1110 x 600 x 2010 mm - 235Kg											
PACKING / PRODUCTO EMPACADO												
UPS CABINET (INCLUDING BYPASS SWITCH - NO MODULES, NO BATTERIES) / GABINETE (INCLUYE BYS - SIN MODULOS NI BATERIAS)												
Size / Dimensiones (D*W*H)	1223 x 753 x 2170 mm (1 unit / pallet)											
Weight / Peso (Kg)	405				335							
UPS MODULE / MODULO UPS 30KW												
Size / Dimensiones (D*W*H)	870 x 580 x 250 mm (1 unit / carton) - 38Kg each (c/u)											
EMPTY BATTERY PACK = 4 EMPTY TRAYS (4 GAVETAS DE BATERIAS VACIAS)												
Size / Dimensiones (D*W*H)	870 x 580 x 250 (4 / carton) - 17Kg (4 trays/carton)											
2 BATTERY MODULES PER CARTON (EACH MODULE w/ 10pcs x 12V/9AH)												
Size / Dimensiones (D*W*H)	870 x 580 x 250 (2 / carton) - 55Kg											
BATTERY 30U CABINET (EMPTY) / GABINETE 30U BATERIAS VACIO												
Size (D*W*H) - Weight (Kg)	1110 x 600 x 1650 mm - 267Kg											
BATTERY 42U CABINET (EMPTY) / GABINETE 42U BATERIAS VACIO												
Size (D*W*H) - Weight (Kg)	1230 x 750 x 2170 mm - 295Kg											
SAFETY & STANDARDS / NORMATIVAS Y ESTANDARES												
CE Directives	73 / 23 & 93 / 68 (LV Safety) and 89 / 336 (EMC)											
UPS General Safety / Seguridad General	IEC 62040 - 1 - 1											
UPS EMC / Compatibilidad. Electromag.	IEC 62040 - 2 (Class C3) (radiation)											
UPS Tests / Procedimiento Pruebas UPS	IEC 62040 - 3											
ESD / RS / EFT / Surge / CS / F. Mag. Field	EN 61000-4- 2/3/4/5/6/8 (level 3)											
Low Frequency Signals	IEC / EN 61000 - 2 - 2 (level 10)											
Degree of protection / Grado de Protección	IP20											
Conduction & Radiation	FCC Part 15, Subpart B, Class A ; IEC / EN 62040-2 (Cat 3)											
Safety / Seguridad	CE - IEC / EN60950-1											
Quality and Enviroment	ISO9001 & ISO14001											
Transportation / Transporte	U.S. ISTA 2A & ETS 300019 - 2 - 2 class 2.3											

Technical specifications can be modified to comply with special projects / Las especificaciones pueden modificarse para adaptarse a proyectos especiales

Technical specifications may change without further notice / Por motivos comerciales o técnicos las especificaciones pueden cambiar sin previo aviso.

Noise measured in semi-anechoic room at 1m under special conditions / Ruido medido en sala semi-anechoica a 1m bajo condiciones específicas

Technical Features / Características Técnicas

MODPRO-33 : 380/220V - 42U CABINET (3/4)

CABINET / ARMARIO: 42U	(NB 42U : ONLY UPS MODULES)									
Cabinet size / Tamaño gabinete	42U									
UPS Module Cap. / Capacidad Módulo UPS	30KW	30KW	30KW	30KW	30KW	30KW	30KW	30KW	30KW	30KW
Qty UPS Modules / Cantidad Módulos UPS	1	2	3	4	5	6	7	8	9	10
Max. Qty Batt Packs / Cant. Max. Paq. Bat.:	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SYSTEM CAPACITY / POTENCIA SISTEMA:	30KW	60KW	90KW	120KW	150KW	180KW	210KW	240KW	270KW	300KW
Output Power Factor / FP de Salida:	1	1	1	1	1	1	1	1	1	1
Extended Max KVA / KV Máx. Ampliable	30	60	90	120	150	180	210	240	270	300
Parallel Connection / Conexión en Paralelo	Yes, up to 2 Cabinets / Si, hasta 2 Armarios									
Max. Capacity - 2 Cabinets in Parallel (KW) Cap. Máxima - 2 Armarios en Paralelo (KW)	60	120	180	240	300	360	420	480	540	600
INPUT / ENTRADA										
Rated Voltage / Voltaje Nominal	3PH : 380/220Vac : 3 x 220VAC Line to Neutral (Voltaje Fase a Neutro) 3PH : 400/230Vac : 3 x 230VAC Line to Neutral (Voltaje Fase a Neutro) 3PH : 415/240Vac : 3 x 240VAC Line to Neutral (Voltaje Fase a Neutro)									
Wiring / Cableado	Y: (3Ph+N) + G									
Voltage Range / Rango de Voltaje	120-276VAC @ Load < 70% / 175-276VAC (L-N) @ Load > 70%									
Frequency Range / Rango de Frecuencia	40 - 70Hz									
Power Factor / Factor de Potencia	> 0.99 @ 100% Load									
THDi (100% LOAD / CARGA)	< 3% @ 100% load									
Max Input Current / Corriente Max Entrada (A)	60	120	171	228	285	342	399	456	513	570
OUTPUT / SALIDA										
Output Voltage / Voltaje de Salida	380/220Vac or 400/230Vac or 415/240Vac (user configurable)									
Wiring / Cableado	Y: (3Ph+N + G) or (DELTA: 3Ph + G)									
Regulation Voltage / Regulación Voltaje	Balanced : <1% / Non Balanced: < 2%									
Dynamic Accuracy / Reg. Carga Variable	<5% (load variations 0%-100% & 100%-0% R Load) - <3% (load variations 0-50% & 50%-0% R Load)									
Recovery Time / Tiempo de Recuperación	90% nominal voltage < 100ms (Resistive load variation 0%-100% & 100%-0%)									
Waveform / Forma de Onda	Sine wave / Sinusoidal									
Crest Factor / factor Cresta	3:1									
Rated Frequency / Frecuencia Nominal	50Hz / 60Hz Autoselectable / Autoseleccionable									
Frequency Precision / Precisión Frecuencia	0.1 Hz (+/-)									
Frequency Range Sync. / Rango Frec. Sinc.	+/- 1Hz , +/-2Hz , +/-4Hz (configurable)									
Slew rate / Seguimiento de frecuencia	1Hz / s									
THDv	< 1.5% (100% Linear Load / Carga Lineal) - < 4% (100% Non-linear Load / Carga No Lineal): EN-62040-3									
Power Factor / Factor de Potencia	PF : 1									
Transfer Time / Tiempo transferencia	ONLINE <--> BATTERY : 0ms									
Max. DC Offset / Max. Voltaje DC:	50mVdc									
Overload Capability / Sobrecarga	(105%-110% : 60min); (111%-125% : 10min) ; (126%-150% : 1min) ; (>150% : 250ms)									
Shortcircuit Detection / Detección de corto salida	0Vac & max current limit 135A during 5 cycles / 135A y caída de tensión a 0Vac durante 5 ciclos									
Shortcircuit Protection / Protección contra cortos	Output power-off / Apagado de la salida									
PROTECCIONES / PROTECCIONES										
Surge Protection / Protecc. Picos (Joules)	12.480 Total Joules (10/1000us)									
Enhanced Protection / Protección Ampliada	Shortcircuit, high/low AC Input Volt., overload, overheating, abnormal communication / Cortocircuitos, alto/bajo voltaje en línea AC, sobrecarga, sobretemperatura, comunicación anormal.									
Short-circuit Max. Current / Corriente Máx. de Cortocircuito	70kA									
STATIC BYPASS MODE / MODO BYPASS ESTÁTICO										
Voltage Range / Rango de Voltaje	Configurable: NOMINAL (-30%, -20% or -10%) / NOMINAL (+10% or +15% or +20%)									
Frequency Range / Rango de Frecuencia	Configurable: NOMINAL (-1Hz or -2Hz or -4Hz) / NOMINAL (+1Hz or +2Hz or +4Hz)									
Transfer Time / Tiempo de Transferencia	0ms									
BYS / Switch Bypass Estático (Max KW)	300KW									
Bypass Current / Corriente Max. (L-N) (A)	625	625	625	625	625	625	625	625	625	625
Max BYS Overload / Overload Max. BYS	1500%	750%	500%	375%	300%	250%	214%	188%	167%	150%
BATTERIES / BATERIAS										
Type / Tipo	VRLA AGM 12VDC / 9AH & LifePO4 51.2V 50AH & 100AH.									
DC Voltage / Voltage DC	(240VDC Positive to Batt. Neutral) & (240VDC Negative to Batt. Neutral)									
UPS Battery Location / Ubicación Baterías	No internal batteries in NB cabs / Armarios NB sin baterías internas									
Ext. Battery Conn. / Conex. baterías Ext.	3 bar terminals for EXT BATTs / 3 Barras de conexión para Bat. Ext. (POS, NEG, N)									
Temp. Comp. / Compensación por Temp.	Configurable: 0 to -30mV / °C per battery									
Charging Time / Tiempo de recarga	2h-4h (90%) (standard battery Pack / Paquete Baterías Estándar)									
Charging Current / Corriente de recarga	8A max. per UPS module / 8A max. por cada módulo UPS (configurable)									
Charging Voltage / Voltaje de carga:	Floating / Flotante: 13.65Vdc/bat +/-1% - Boost Charging / Cargando: 14.0Vdc/bat.									
Cut-off DC Voltage / Voltaje Corte DC	10.0Vdc per battery / por batería									

Technical Features / Características Técnicas

MODPRO-33 : 380/220V - 42U CABINET (4/4)										
CABINET / ARMARIO: 42U	(NB 42U : ONLY UPS MODULES)									
Qty UPS Modules / Cantidad Módulos UPS	1	2	3	4	5	6	7	8	9	10
UPS EFFICIENCY / EFICIENCIA UPS @ LOAD 100% / 75% / 50% / 25%										
Efficiency (ECO) / Eficiencia (ECO)	98% / 98% / 97% / 96%									
Efficiency (on Battery) / Eficiencia (Batería)	94.8% / 94.7% / 94.5% / 94.0%									
Efficiency (Online) / Eficiencia (Online)	96.0% / 95.9% / 95.7% / 95.0%									
Inverter Efficiency / Eficiencia Inversor	97% @ 100% LOAD									
Max. Heat Dissipation / Disipación Térmica (BTU/h)	4,092	8,184	12,276	16,368	20,460	24,552	28,644	32,736	36,828	40,920
OPERATING PARAMETERS / CONDICIONES OPERATIVAS										
Max. Noise / Ruido Acústico Max. dB @ 1m	63.0	64.5	65.3	66.4	66.9	67.5	68.1	68.6	69.1	69.6
Running Conditions / Cond. de Operación	(0 to +40 ° C) / < 95%RH (non-condensing / no condensante)									
Max. Altitude / Altura Max.	4,500m									
Altitude Max. Power / Altura a Potencia Max.	100% rated power up to / 100% Potencia Nominal hasta : 1.000m									
De-rating / Pérdida de potencia	Above 1.000m / Sobre 1.000m : -1% / 100m									
Communication Ports / Puertos Com.	USB, RS232 + SNMP Slot (optional: LAN card, Relay Contact card, RS485)									
Communication Software / Software	Windows family, Linux, Unix & Mac OS									
Operation Panel / Panel de Operación	Color 10" Touch Screen / Pantalla Táctil a Color de 10 pulgadas									
Storage Conditions / Almacenaje	(-15 to +60 ° C) / < 95%RH (non-condensing / no condensante)									
SIZE & WEIGHT / PESO Y MEDIDAS										
UNPACKED PRODUCT / PRODUCTO SIN EMPAQUE										
UPS CABINET (INCLUDING BYPASS SWITCH - NO MODULES, NO BATTERIES) / GABINETE (INCLUYE BYS - SIN MODULOS NI BATERIAS)										
Size / Dimensiones (D*W*H)	1100 x 600 x 2010 mm									
Weight / Peso (Kg)	275									
INDIVIDUAL UPS MODULE / MODULO UPS 30KW										
Size D*W*H (mm) - Weight (Kg)	736.5 x 490 x 130mm - 35Kg each									
UNIT EMPTY BATTERY TRAY / GAVETA VACIA BATERIAS (4 x PACK)										
Size D*W*H (mm) - Weight (Kg)	767 x 107 x 170mm - 3.5 Kg each									
UNIT BATTERY MODULE / MODULO BATERIAS (10pcs x 12V/9AH)										
Size D*W*H (mm) - Weight (Kg)	767 x 107 x 170mm - 28 Kg each									
BATTERY 30U CABINET (EMPTY) / GABINETE 30U BATERIAS VACIO										
Size (D*W*H) - Weight (Kg)	1110 x 600 x 1475 mm - 207Kg									
BATTERY 42U CABINET (EMPTY) / GABINETE 42U BATERIAS VACIO										
Size (D*W*H) - Weight (Kg)	1110 x 600 x 2010 mm - 235Kg									
PACKING / PRODUCTO EMPACADO										
UPS CABINET (INCLUDING BYPASS SWITCH - NO MODULES, NO BATTERIES) / GABINETE (INCLUYE BYS - SIN MODULOS NI BATERIAS)										
Size / Dimensiones (D*W*H)	1223 x 753 x 2170 mm (1 unit / pallet)									
Weight / Peso (Kg)	337									
UPS MODULE / MODULO UPS 30KW										
Size / Dimensiones (D*W*H)	870 x 580 x 250 mm (1 unit / carton) - 38Kg each (c/u)									
EMPTY BATTERY PACK = 4 EMPTY TRAYS (4 GAVETAS DE BATERIAS VACIAS)										
Size / Dimensiones (D*W*H)	870 x 580 x 250 (4 / carton) - 17Kg (4 trays/carton)									
2 BATTERY MODULES PER CARTON (EACH MODULE w/ 10pcs x 12V/9AH)										
Size / Dimensiones (D*W*H)	870 x 580 x 250 (2 / carton) - 55Kg									
BATTERY 30U CABINET (EMPTY) / GABINETE 30U BATERIAS VACIO										
Size (D*W*H) - Weight (Kg)	1110 x 600 x 1650 mm - 267Kg									
BATTERY 42U CABINET (EMPTY) / GABINETE 42U BATERIAS VACIO										
Size (D*W*H) - Weight (Kg)	1230 x 750 x 2170 mm - 295Kg									
SAFETY & STANDARDS / NORMATIVAS Y ESTANDARES										
CE Directives	73 / 23 & 93 / 68 (LV Safety) and 89 / 336 (EMC)									
UPS General Safety / Seguridad General	IEC 62040 - 1 - 1									
UPS EMC / Compatibilidad. Electromag.	IEC 62040 - 2 (Class C3) (radiation)									
UPS Tests / Procedimiento Pruebas UPS	IEC 62040 - 3									
ESD / RS / EFT / Surge / CS / F. Mag. Field	EN 61000-4- 2/3/4/5/6/8 (level 3)									
Low Frequency Signals	IEC / EN 61000 - 2 - 2 (level 10)									
Degree of protection / Grado de Protección	IP20									
Conduction & Radiation	FCC Part 15, Subpart B, Class A ; IEC / EN 62040-2 (Cat 3)									
Safety / Seguridad	CE - IEC / EN60950-1									
Quality and Enviroment	ISO9001 & ISO14001									
Transportation / Transporte	U.S. ISTA 2A & ETS 300019 - 2 - 2 class 2.3									

Technical specifications can be modified to comply with special projects / Las especificaciones pueden modificarse para adaptarse a proyectos especiales

Technical specifications may change without further notice / Por motivos comerciales o técnicos las especificaciones pueden cambiar sin previo aviso.

Noise measured in semi-anechoic room at1m under special conditions / Ruido medido en sala semi-anechoica a 1m bajo condiciones específicas

Modular 3ph/3ph

MODPRO-L-480 70KW - 350KW

Three-Phase true Online Doble Conversion UPS with modular architecture. Hot swappable power and battery modules. N+1 and N+X Redundancy. Advanced DSP digital control and IGBT technology in Rectifier and Inverter stages. Ideal for systems requiring high availability and operational safety. Offers high operation efficiency. For 480V systems up to 350KW.



Modular Design

MODPRO-L-480 is formed by Power Modules and Battery Modules, allowing gradual growth. All modules can be added or removed on line, shortening maintenance times, no need to shut down the system. Power cabinet can support up to 5 Power Modules of 70KW each, 350KW Max. capacity.

480V - 3PH/3PH

MODPRO-L-480 is formed by electronic and 70KW power modules able to operate directly in 480V three-phase systems, without conversion transformers.

IGBT + ON-LINE Doble Conversion Technology

New generation On Line Doble Conversion Technology offers high reliability and strength as well as outstanding features. DSP signal control system and an efficient rectifier/inverter system based in IGBT technology give exceptional attributes to this product family and an input power factor over 0.99 at full load.

Conformal Coating

Our innovative Conformal Coating treatment creates a protective shield against moisture and corrosion, providing a robust defense against adverse environmental conditions, extending the lifespan of our equipment and enhancing safety in the facilities it safeguards.

Supervision, Configuration, Stats and a lot more...

This system offers a versatile interface LCD for monitoring UPS and AC Lines, as well as configuring all operational parameters of the system, but also offers access to a detailed Event/Alarms internal record. Besides, a remote Event/Alarm/Messages record can be generated via software.

High Power Efficiency

As power efficiency is one of our main targets, power modules can reach efficiency level over 94% at 50% of load. For this reason MODPRO can offer efficiency levels over most UPS in the market.

Adaptation for all kind of loads

A modern technology allows MODPRO to protect diverse and complicated loads, like extremely inductive or capacitive ones.

N+X Redundancy

Modular architecture of MODPRO allows installing systems with N+1 and N+X redundancy.

Multiple Bypass Systems

An automatic bypass system (BYS Module) is included to assure power continuity even during UPS overloads or failures. Besides includes a Manual Bypass Switch for major maintenance purposes.

Multiple Communication Systems

All models include several communication options: USB, RS232, RS485, Relay Contacts and smart port for LAN Cards, etc .

State of the Art LCD Interface

Full color, graphic, touch screen LCD to show large amount of information simultaneously.

Safety Standards and Certifications

Power Modules of this UPS count on UL-1778 certification (certified by cTUVus) and comply with FCC rules part 15 (subpart B, class A, and european CE related directives).

MODPRO-33-L-480V-350 - 42U CABINET (2/2)	
CABINET / ARMARIO: 42U	(NB 42U : ONLY UPS MODULES)
BATTERIES / BATERIAS	
Type / Tipo	VRLA AGM 12VDC / 9AH / Baterías Selladas Libres de Mantenimiento.
DC Voltage / Voltage DC	(+240VDC to Batt. Neutral) & (-240VDC to Batt. Neutral)
UPS Battery Location / Ubicación Baterías	No internal batteries / Sin baterías internas
Ext. Battery Conn. / Conex. baterías Ext.	Bar terminals for EXT BATTs / Barras de conexión para Bat. Ext. (POS, NEG, N)
Temp. Comp. / Compensación por Temp.	5mV/°C per battery (Base Temp/ Temp. Base: 25°C)
Charging Time / Tiempo de recarga	2h-4h (90%) (standard battery Pack / Paquete Baterías Estándar)
Charging Current / Corriente de recarga	18A max. (configurable) per UPS module according to DIN41773 / 18A max. por cada módulo UPS (configurable), de acuerdo con DIN41773
Charging Voltage / Voltaje de carga:	Floating / Flotante: 13.65Vdc/bat +/-1% - Boost Charging / Cargando: 14.0Vdc/bat.
Cut-off DC Voltage / Voltaje Corte DC	10.0Vdc per battery / por batería
OPERATING PARAMETERS / CONDICIONES OPERATIVAS	
Relative Humidity / Humedad Relativa	< 95%RH (non-condensing / no condensante)
Operation Temperature / Temp. de Operación:	Range: 0 to +40 °C
Storage Temperature / Temp. de Almacenaje:	Range: -15°C to +60 °C
Acoustic Noise / Ruido Acústico	<75dB
Protecting Coating / Tropicalizado de Tarjetas	Yes / Si
Max. Altitude / Altura Max.	4.500m
Altitude Max. Power / Altura a Potencia Max.	100% rated power up to / 100% Potencia Nominal hasta : 1.000m
De-rating / Pérdida de potencia	Above 1.000m / Sobre 1.000m : -1% / 100m
Communication Ports / Puertos Com.	USB, RS232 + SNMP Slot (Optional: LAN card, AS400, RS485, Dry Contacts) + Extra Comm Card
Communication Software / Software	Windows family, Linux, Unix & Mac OS
Operation Panel / Panel de Operación	Color 10" Touch Screen / Pantalla Táctil a Color de 10 pulgadas
SIZE & WEIGHT / PESO Y MEDIDAS	
UNPACKED PRODUCT / PRODUCTO SIN EMPAQUE	
UPS CABINET (INCLUDING BYPASS SWITCH - NO MODULES, NO BATTERIES) / GABINETE (INCLUYE BYS - SIN MODULOS UPS, NI BATERIAS)	
Size / Dimensiones (D*W*H)	1100 x 600 x 2010 mm
Weight / Peso (Kg)	290
INDIVIDUAL UPS MODULE / MODULO UPS 70KW	
Size D*W*H (mm) - Weight (Kg)	750 x 438 x 130mm (3U) - 44Kg each
UNIT EMPTY BATTERY TRAY / GAVETA VACIA BATERIAS (4 x PACK)	
Size D*W*H (mm) - Weight (Kg)	767 x 107 x 170mm - 3.5 Kg each
UNIT BATTERY MODULE / MODULO BATERIAS (10pcs x 12V/9AH)	
Size D*W*H (mm) - Weight (Kg)	767 x 107 x 170mm - 28 Kg each
BATTERY 30U CABINET (EMPTY) / GABINETE 30U BATERIAS VACIO	
Size (D*W*H) - Weight (Kg)	1110 x 600 x 1475 mm - 207Kg
BATTERY 42U CABINET (EMPTY) / GABINETE 42U BATERIAS VACIO	
Size (D*W*H) - Weight (Kg)	1110 x 600 x 2010 mm - 235Kg
PACKING / PRODUCTO EMPACADO	
UPS CABINET (INCLUDING BYPASS SWITCH - NO MODULES, NO BATTERIES) / GABINETE (INCLUYE BYS - SIN MODULOS UPS, NI BATERIAS)	
Size / Dimensiones (D*W*H)	1220 x 750 x 2175 mm
Weight / Peso (Kg)	350
UPS MODULE / MODULO UPS 70KW	
Size / Dimensiones (D*W*H)	885 x 530 x 260 mm
SAFETY & STANDARDS / NORMATIVAS Y ESTANDARES	
Safety / Seguridad	CE
Safety / Seguridad	UPS Module: UL1778 (by cTUVus) / Módulo UPS: UL1778 (by cTUVus)
Electromagnetic Interference / EMI	FCC Part 15, Subpart B, Class A
Degree of protection / Grado de Protección	IP20
Quality and Environment	RoHS / ISO9001 & ISO14001
Transportation / Transporte	ETS 300019 - 2 - 2 class 2.3

Technical specifications can be modified to comply with projects / Las especificaciones pueden modificarse para adaptarse a proyectos especiales
 Technical specifications may change without further notice / Por motivos comerciales o técnicos las especificaciones pueden cambiar sin previo aviso.
 Noise measured in semi-anechoic room at 1m under special conditions / Ruido medido en sala semi-anechoica a 1m bajo condiciones específicas

MODPRO-33-L-480V-350 - 42U CABINET (1/2)					
CABINET / ARMARIO: 42U	(NB 42U : ONLY UPS MODULES)				
Cabinet Height / Altura del gabinete	42U				
UPS Module Cap. / Capacidad Módulo UPS	70KW				
Qty UPS Modules / Cantidad Módulos UPS	1	2	3	4	5
SYSTEM CAPACITY / POTENCIA SISTEMA:	70KW	140KW	210KW	280KW	350KW
Output Power Factor / FP de Salida:	1				
INPUT / ENTRADA					
Rated Voltage / Voltaje Nominal	3PH 480VAC: 3 x 480Vac Line to Line (Voltaje Fase a Fase)				
Wiring / Cableado	DELTA: 3Ph + G (No Neutral Line / Sin Línea de Neutro)				
Voltage Range / Rango de Voltaje	L-L: (383Vac-528Vac) @ >=80% Load L-L: (X-528Vac) @ 50% < Load < 80%; X=330V + (176,67*(Load-50%)) L-L: (330Vac-528Vac) @ <=50% Load				
Frequency Range / Rango de Frecuencia	40 - 70Hz				
Power Factor / Factor de Potencia	> 0,99 @ 100% Load				
THDi (100% LOAD / CARGA)	< 4% @ 100% load				
Max Input Current / Corriente Max Entrada (per Ph.)	111A	222A	334A	446A	557A
OUTPUT / SALIDA					
Output Voltage / Voltaje de Salida	480VAC				
Wiring / Cableado	DELTA: 3Ph + G (No Neutral Line / Sin Línea de Neutro)				
Regulation Voltage / Regulación Voltaje	<1%				
Dynamic Accuracy / Reg. Carga Variable	<5% for load variations 0%-100% & 100%-0% R Load <3% for load variations 20-100% & 100%-20% R Load				
Recovery Time / Tiempo de Recuperación	90% nominal voltage < 100ms (Resistive load variation 0%-100% & 100%-0%)				
Max. Angle Deviation / Max. Desviación de Fase	2° (EN-62040-3)				
Max. Voltage Unbalance Ratio / Desbalance Max.	1% (EN-62040-3)				
Waveform / Forma de Onda	Sine wave / Sinusoidal				
Crest Factor / factor Cresta	3:1				
Rated Frequency / Frecuencia Nominal	50Hz / 60Hz Autoselectable /Autoseleccionable				
Frequency Precision / Precisión Frecuencia	0.1 Hz (+/-)				
Frequency Range Sync. / Rango Frec. Sinc.	+/-4Hz				
Slew rate / Seguimiento de frecuencia	1Hz / s				
THDv	< 2% (100% Linear Load / Carga Lineal) < 5% (100% Non-linear Load / Carga No Lineal): EN-62040-3				
Transfer Time / Tiempo transferencia	ONLINE <--> BATTERY : 0ms				
Max. DC Offset / Max. Voltaje DC:	50mVdc				
Overload Capability / Sobrecarga	[100%-110%: 60min] [111%-125%: 10min] [126%-150%: 1min] [>150% : 250ms] to Cut-Off				
Shortcircuit Protection / Protección contra cortos	Shortcircuit protection / Protección contra cortocircuitos: <100ms: Current limited to max. capacity / Corriente limitada al 100% de Capacidad >=100ms: Output shutdown. UPS goes to Fault Mode / UPS apaga salida y va a Modo Falla				
WIRING SELECTION / SELECCION DE CABLEADO					
Max Phase Current / Corriente Max Fase (A)	138	274	412	550	686
Max. Neutral Current / Corriente Max. Neutro (A)	234,6	465,8	700,4	935	1166,2
STATIC BYPASS MODE / MODO BYPASS ESTATICO					
Voltage Range / Rango de Voltaje	+/- -10%				
Frequency Range / Rango de Frecuencia	+/-4Hz				
Transfer Time / Tiempo de Transferencia	0ms				
BYS / Switch Bypass Estático (Max KW)	350KW				
Bypass Current / Corriente Max. (L-N) (A)	686	686	686	686	686
Max BYS Overload / Overload Max. BYS	814%	407%	271%	204%	163%
UPS EFFICIENCY / EFICIENCIA UPS @ 100% / 50% LOAD					
Efficiency (ECO) / Eficiencia (ECO)	98.50% / 98.00%				
Efficiency (on Battery) / Eficiencia (Batería)	94.80% / 96.00%				
Efficiency (Online) / Eficiencia (Online)	94.80% / 96.00%				
Inverter Efficiency / Eficiencia Inversor	94.80% / 96.00%				
Max. Heat Dissipation / Disipación Térmica (BTU/h)	12.412	24.825	37.237	49.650	62.062

MODPRO-33-L-480V-350 - 42U CABINET (2/2)	
CABINET / ARMARIO: 42U	(NB 42U : ONLY UPS MODULES)
BATTERIES / BATERIAS	
Type / Tipo	VRLA AGM 12VDC / 9AH / Baterías Selladas Libres de Mantenimiento.
DC Voltage / Voltage DC	(+240VDC to Batt. Neutral) & (-240VDC to Batt. Neutral)
UPS Battery Location / Ubicación Baterías	No internal batteries / Sin baterías internas
Ext. Battery Conn. / Conex. baterías Ext.	Bar terminals for EXT BATTs / Barras de conexión para Bat. Ext. (POS, NEG, N)
Temp. Comp. / Compensación por Temp.	5mV/°C per battery (Base Temp/ Temp. Base: 25°C)
Charging Time / Tiempo de recarga	2h-4h (90%) (standard battery Pack / Paquete Baterías Estándar)
Charging Current / Corriente de recarga	18A max. (configurable) per UPS module according to DIN41773 / 18A max. por cada módulo UPS (configurable), de acuerdo con DIN41773
Charging Voltage / Voltaje de carga:	Floating / Flotante: 13.65Vdc/bat +/-1% - Boost Charging / Cargando: 14.0Vdc/bat.
Cut-off DC Voltage / Voltaje Corte DC	10.0Vdc per battery / por batería
OPERATING PARAMETERS / CONDICIONES OPERATIVAS	
Relative Humidity / Humedad Relativa	< 95%RH (non-condensing / no condensante)
Operation Temperature / Temp. de Operación:	Range: 0 to +40 °C
Storage Temperature / Temp. de Almacenaje:	Range: -15°C to +60 °C
Acoustic Noise / Ruido Acústico	<75dB
Protecting Coating / Tropicalizado de Tarjetas	Yes / Si
Max. Altitude / Altura Max.	4.500m
Altitude Max. Power / Altura a Potencia Max.	100% rated power up to / 100% Potencia Nominal hasta : 1.000m
De-rating / Pérdida de potencia	Above 1.000m / Sobre 1.000m : -1% / 100m
Communication Ports / Puertos Com.	USB, RS232 + SNMP Slot (Optional: LAN card, AS400, RS485, Dry Contacts) + Extra Comm Card
Communication Software / Software	Windows family, Linux, Unix & Mac OS
Operation Panel / Panel de Operación	Color 10" Touch Screen / Pantalla Táctil a Color de 10 pulgadas
SIZE & WEIGHT / PESO Y MEDIDAS	
UNPACKED PRODUCT / PRODUCTO SIN EMPAQUE	
UPS CABINET (INCLUDING BYPASS SWITCH - NO MODULES, NO BATTERIES) / GABINETE (INCLUYE BYS - SIN MODULOS UPS, NI BATERIAS)	
Size / Dimensiones (D*W*H)	1100 x 600 x 2010 mm
Weight / Peso (Kg)	290
INDIVIDUAL UPS MODULE / MODULO UPS 70KW	
Size D*W*H (mm) - Weight (Kg)	750 x 438 x 130mm (3U) - 44Kg each
UNIT EMPTY BATTERY TRAY / GAVETA VACIA BATERIAS (4 x PACK)	
Size D*W*H (mm) - Weight (Kg)	767 x 107 x 170mm - 3.5 Kg each
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BATTERY 30U CABINET (EMPTY) / GABINETE 30U BATERIAS VACIO	
Size (D*W*H) - Weight (Kg)	1110 x 600 x 1475 mm - 207Kg
BATTERY 42U CABINET (EMPTY) / GABINETE 42U BATERIAS VACIO	
Size (D*W*H) - Weight (Kg)	1110 x 600 x 2010 mm - 235Kg
PACKING / PRODUCTO EMPACADO	
UPS CABINET (INCLUDING BYPASS SWITCH - NO MODULES, NO BATTERIES) / GABINETE (INCLUYE BYS - SIN MODULOS UPS, NI BATERIAS)	
Size / Dimensiones (D*W*H)	1220 x 750 x 2175 mm
Weight / Peso (Kg)	350
UPS MODULE / MODULO UPS 70KW	
Size / Dimensiones (D*W*H)	885 x 530 x 260 mm
SAFETY & STANDARDS / NORMATIVAS Y ESTANDARES	
Safety / Seguridad	CE
Safety / Seguridad	UPS Module: UL1778 (by cTUVus) / Módulo UPS: UL1778 (by cTUVus)
Electromagnetic Interference / EMI	FCC Part 15, Subpart B, Class A
Degree of protection / Grado de Protección	IP20
Quality and Environment	RoHS / ISO9001 & ISO14001
Transportation / Transporte	ETS 300019 - 2 - 2 class 2.3

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 Noise measured in semi-anechoic room at 1m under special conditions / Ruido medido en sala semi-anechoica a 1m bajo condiciones específicas

Voltage Regulator

FUTURA 1000

Automatic Voltage Regulator with real time AC Line supervision, with stabilization and filtering to offer a stable, clean, and safe output, always within correct voltage range for your valuable equipment.



“Multitap” Transformation Technology:

“Multitap” transformation technology is very versatile and reliable. Actually, it is the most used technology in low power regulation (under 10KVA). FUTURA 1000 checks on AC Input Line all the time and the control board selects the most appropriate transformation factor to compensate any fluctuation on AC Line.

Wide input range:

Futura 1000 assures a stable power supply even during voltage fluctuation, as long as AC Line remains between our wide voltage range, specially designed for electrically hostile environment. When AC Line fluctuation goes out of appropriate input range, FUTURA 1000 turns off the outputs to protect your valuable hardware.

Multiple power outlets:

Futura 1000 offers 8 power outlets, smartly grouped as follows:

- Regulated Outputs: 4 outlets stabilized with additional protection against spikes and surges.
- Protected Outputs: 4 outlets with protection against spikes and surges.

Convenient Dual Installation Design (Desk-Wall Mount)

Futura 1000 can be installed either on desktop or on the wall to save working space.

Fire Retardant Case

High Impact ABS, which the case is made of, includes a special additive to make it resistant to high temperature and self-extinguishing, to comply with most demanding safety regulations.

Total Protection:

Futura series is not only an excellent voltage regulator, but also an effective protection center against dangerous power failures. Among the protections offered by Futura, are:

- Safe Startup delay: Before powering outputs, FUTURA checks AC Line for a prudential time to make sure it is stable and safe. This time is selectable: 2s, 15s & 25s.
- Voltage Stabilization: Automatic regulation keeps output voltage in safe range,
- Surges and Spikes protection: A MOV-based protection system acts as a heat sink dissipating all energy contained by dangerous spikes generated by storms and lightnings. This protection covers not only AC Line (L-N), but also Internet/Tel/Fax line.
- Overcurrent and Short-circuits Protection: FUTURA includes a breaker which trips cutting power in cases of overcurrent on the regulator output, as there could be a short-circuit or overload.

Over-temperature Protection:

This modern regulator is equipped with a temperature sensor to detect over-temperature in the regulation transformer, to disconnect the outputs. This is a safety system to avoid overloading the regulator.

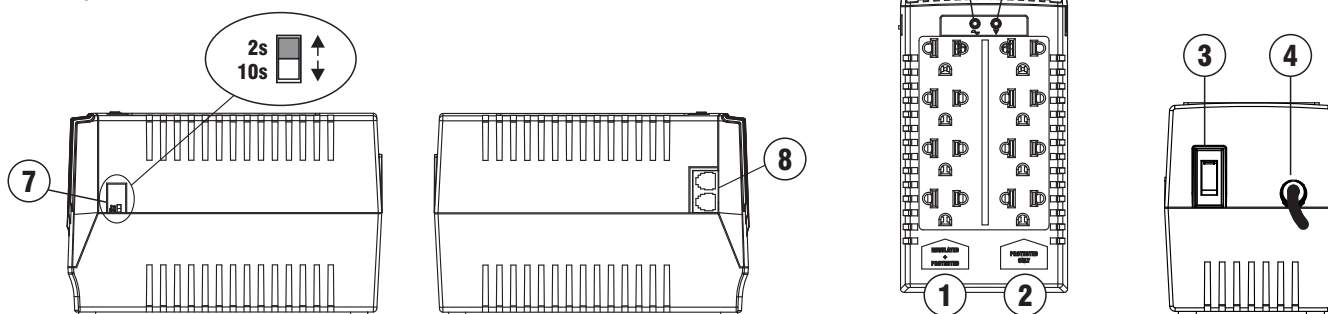
Applications: SOHO Non-critical PC , Electronic Equipment.



Technical Features / Características Técnicas

- 1- Regulated and Protected Power Outlets
- 2- Protected Power Outlets
- 3- ON/OFF Switch + Breaker
- 4- AC Input

- 5- LED: Voltage Regulator On
- 6- LED: Input Voltage Out of Range
- 7- Restart Delay Time Selector
- 8- RJ 11 Protected Connectors



FUTURA-1000

1000

Capacity / Capacidad	1000VA Máx. Total
Surge Protected Outlets / Salidas protegidas contra picos	1000VA / 1000W Total
Regulated Outlets / Salidas Reguladas	1000VA / 600W Total
Input / Entrada	
Model 120V: Voltage / Voltaje (VAC)	115 Vac // (85 - 140 Vac)
Model 220V: Voltage / Voltaje (VAC)	220 Vac // (180 - 280 Vac)
Frequency / Frecuencia (Hz)	50Hz/60 Hz
Output / Salida	
Model 120V: Voltage / Voltaje (VAC)	(115 +/- 10%)
Model 220V: Voltage / Voltaje (VAC)	(220 +/-10%)
Power Outlets / Tomacorrientes de Salida	8 x Nema 5-15R: (4 Regulated & Protected) + (4 Surge Protected)

Protections / Protecciones

Spikes / Sobre-tensiones Transitorias-Picos (AC LINES: L-N)	Metal Oxide Varistor (MOV)
Model 120V:	Clamping / Voltaje de cebado: 455Vac // 99 Joules
Model 220V:	Clamping / Voltaje de cebado: 320Vac // 148 Joules

* Response Time / Respuesta < 1 nano-segundo

Spikes / Sobre-tensiones Transitorias-Picos (SOCKET RJ11)	Metal Oxide Varistor (MOV):
Model 120V:	Clamping / Voltaje de cebado: 455Vac // 48 Joules
Model 220V:	Clamping / Voltaje de cebado: 300Vac // 140 Joules

* Response Time / Respuesta < 1 nano-segundo

Overloads & Shortcircuits / Sobrecarga & Cortocircuitos	Input Breaker / Disyuntor Entrada
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Efficiency / Eficiencia

100% load / A plena carga	97%
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Indicators / Indicadores

LED	(ON / Encendido) & (Input OK / Entrada OK)
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Physical / Físicas

Size / Dimensiones (Cm)	18.0 x 9.5 x 11.9 cm
Net Weight / Peso Neto (Kg.)	1,14

Shipping / Empaque Transporte

Size / Dimensiones (cm)	1 pallet (588 units per pallet)	100 x 120 x 2150 cm
Gross Weight / Peso Bruto (Kg.)	1 pallet (588 units per pallet)	960 Kg

Operating Conditions / Ambientales

Temperature / Temperatura	0-40°C
Humidity / Humedad	< 90% (no condensing)

Technical specifications can be modified to comply with special project requirements / Las especificaciones técnicas pueden modificarse bajo requerimiento para adaptarse a proyectos especiales
 Technical specifications may change without further notice due to either technical or commercial reasons / Por motivos comerciales o técnicos las especificaciones pueden modificarse sin previo aviso
 requerimiento para adaptarse a proyectos especiales

Technical specifications may change without further notice / Las especificaciones pueden cambiar sin previo aviso.



Brands and logos belong to their respective owners. Certifications may apply according to destination market and product model.

FUTURA- (P2)

Voltage Regulator

DEFENDER-PRO 1K-10K

High capacity automatic voltage regulator with wide input range, ideal to protect high capacity equipment such as Laser printers, copiers, or refrigeration equipment. Besides voltage stabilization, offers protection against Spikes. Available for 120V y 220Vac systems in 1K, 1.5K, 2K, 3K, 5K, 8K & 10KVA.



“Multitap” Transformation Technology:

“Multitap” transformation technology is very versatile and reliable. Actually, it is the most used technology in low power regulation (under 10KVA). DEFENDER-PRO checks on AC Input Line all the time and the control board selects the most appropriate transformation factor to compensate any fluctuation on AC Line, offering an output signal within a suitable range for your equipment: -10% / +10%.

Wide input range:

DEFENDER-PRO assures a stable power supply even during voltage fluctuation, as long as AC Line remains between our wide voltage range, specially designed for electrically hostile environment. When AC Line fluctuation goes out of appropriate input range, DEFENDER-PRO turns off the outputs to protect your valuable hardware.

Selectable Protection Time:

All models in this family include a 2 positions selector to choose regulator safety time. During this time, DEFENDER-PRO verify the AC Input stability before supplying energy to power outlets. This helps to prevent repeatedly power on and off, which is potentially harmful for protected equipment

Available options are: 10 Seconds for computer equipment and 3 minutes for refrigeration equipment and air conditioners.

Universal Power Outlets:

With either Universal Power Outlets (220Vac) or NEMA Power Outlets (120Vac) to match any country requirements.

Operation Voltages :

Product family available for 120Vac and 220Vac systems.

Total Protection:

DEFENDER-PRO is not only an excellent voltage regulator, but also an effective protection center against dangerous power failures. Among the protections offered by DEFENDER-PRO, are:

- Safe Startup delay: Before powering outputs, DEFENDER-PRO checks AC Line for a prudential time to make sure it is stable and safe. This time is selectable: 10 seconds (for computer applications) or 3 Minutes (for refrigeration equipment and air conditioner).
- Voltage Stabilization: Automatic regulation keeps output voltage in safe range
- Surges and Spikes protection: A MOV-based protection system acts as a heat sink dissipating all energy contained by dangerous spikes generated by storms and lightnings.
- Overcurrent and Short-circuits Protection: DEFENDER-PRO includes a breaker which trips cutting power in cases of overcurrent on the regulator output, as there could be a short-circuit or overload.

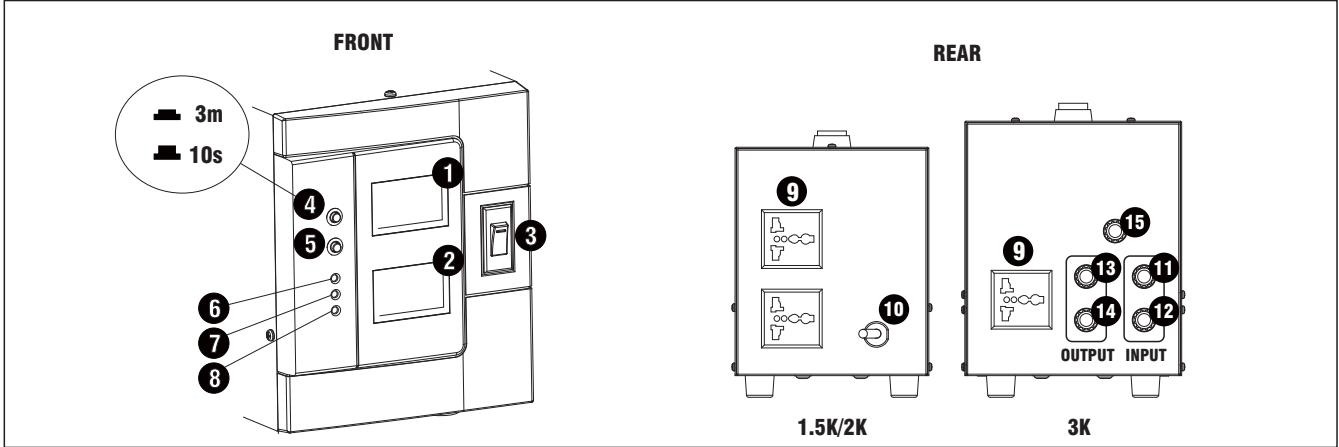
Technical Features / Características Técnicas

1: Input LCD
2: Output LCD
3: ON/OFF Switch + Breaker
4: Delay Selector 10s/3min

5: Input range Selector
6, 7 & 8: Status LED
9: AC Power Outlets
10: AC Input

11 & 12: AC Input Terminals
13 & 14: AC Output Terminals
15: AC Ground Terminal

DEFENDER PRO 1K / 1.5K / 2K / 3K - 220V



DEFENDER PRO (220VAC)	1K	1.5K	2K	3K
Capacity / Capacidad (VA):	1000VA	1500VA	2000VA	3000VA
Capacity / Capacidad (W):	800W	1200W	1600W	2400W
Input / Entrada				
Voltage / Voltaje (VAC)	220 Vac : (140-260Vac Normal) / (110-270Vac Wide) : Selectable / Seleccionable			
Frequency / Frecuencia (Hz)	50Hz/60Hz			
Input / Entrada	Power cord / Cable	Power cord / Cable	Power cord / Cable	Hardwire / Regleta
Output / Salida				
Voltage / Voltaje (VAC) (Normal range)	220V (+10% / -10%) (normal range / con rango normal: 140-260V)			
Voltage / Voltaje (VAC) (Wide range)	220V (+10% / -30%) (in wide input range mode / con rango amplio: 110-270V)			
Outlets / Salidas	2 outlet / 2 tomas	2 outlet / 2 tomas	2 outlet / 2 tomas	1 outlet / toma + 1 TB / 1 regleta
Protections / Protecciones				
Selectable Delay Time / Ciclo de Seguridad:	10s / 3min.			
AC Line Spikes / Picos en Línea AC:	2 MOV:(L-N)			
- Max. Clamping / Cebado Max (8/20 μ -s):	350V			
- Max Peak Current / Corriente Pico Max: (8/20 μ -s):	6500A			
- Energy / Energía Max (10/1000 μ -s) 220V:	2 x 312 Joules = 624 Joules			
Overload & Shortcircuit / Sobrecarga & Cortocircuito (Input Breaker / Disyuntor Entrada) 220V	7.5A	11A	15A	22A
Efficiency / Eficiencia				
at 100% load / A plena carga	95% Max.			
Indicators / Indicadores				
LCD / Pantalla LCD	LCD / Pantalla LCD			
Size & Weight / Características Físicas				
Product Size / Tamaño Equipo (cm)	19.7 x 11 x 12.4 cm	23.4 x 13.4 x 18 cm	23.4 x 13.4 x 18 cm	30 x 15 x 20 cm
Net Weight / Peso Neto (Kg.)	4,00	5,50	6,60	8,60
Shipping / Empaque Transporte				
CARTON:				
Qty per Carton / Cantidad por Cartón:	4	3	3	1
Carton Size / Tamaño Cartón:	50 x 30 x 21 cm	60 x 33 x 27 cm	60 x 33 x 27 cm	35 x 22 x 30 cm
Carton Weight / Peso Cartón (Kg):	18,96	19,50	21,12	9,6
PALLET:				
Qty per Pallet / Cantidad por Pallet:	320	126	126	105
Full Pallet Size / Dimensiones Pallet Completo:	100 x 120 x 202 cm	100 x 120 x 202 cm	100 x 120 x 202 cm	100 x 120 x 212 cm
Pallet Gross Weight / Pallet Peso Bruto (Kg):	1.537	839	907	1.028
Operating Conditions / Ambientales				
Temperature / Temperatura	0-40°C			
Humidity / Humedad	< 90% (no condensing)			
Noise / Ruido	< 40dB			

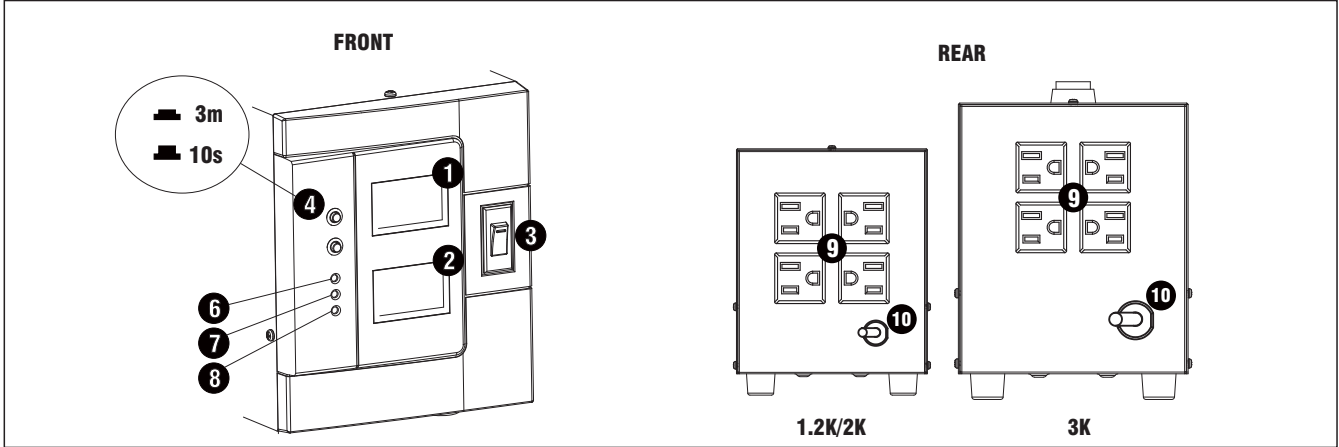
Technical Features / Características Técnicas

1: Pantalla LCD de Entrada
2: Pantalla LCD de Salida
3: Breaker ON/OFF
4: Selector Retardo 10s/3min

5: Selector de rango de Entrada
6, 7 & 8: LEDs de estado
9: Tomacorrientes de Salida AC
10: Cable de entrada AC

11 & 12: Terminales de entrada AC
13 & 14: Terminales de salida AC
15: Terminal de Tierra AC

DEFENDER PRO 1.2K / 2K / 3K - 120VAC



DEFENDER PRO (120VAC)	1.2K	2K	3K
Capacity / Capacidad (VA):	1200VA	2000VA	3000VA
Capacity / Capacidad (W):	600W	1000W	1500W
Input / Entrada			
Voltage / Voltaje (VAC)	120 Vac: 88-146Vac		
Frequency / Frecuencia (Hz)	50Hz/60Hz		
Input / Entrada	Power cord / Cable		
Output / Salida			
Voltage / Voltaje (VAC)	120V (+10% / - 10%)		
Outlets / Salidas	4 NEMA outlets / 4 tomas NEMA		
Protections / Protecciones			
Selectable Delay Time / Ciclo de Seguridad:	10s / 3min.		
AC Line Spikes / Picos en Línea AC:	2 MOV:(L-N)		
- Max. Clamping / Cebado Max (8/20 μ -s):	350V		
- Max Peak Current / Corriente Pico Max: (8/20 μ -s):	6500A		
- Energy / Energía Max (10/1000 μ -s):	2 x 265 Joules = 530 Joules		
Overload & Shortcircuit / Sobrecarga & Cortocircuito (Input Breaker / Disyuntor Entrada)	12A	18A	23A
Efficiency / Eficiencia			
at 100% load / A plena carga	95% Max.		
Indicators / Indicadores			
LCD / Pantalla LCD	LCD / Pantalla LCD		
Size & Weight / Características Físicas			
Product Size / Tamaño Equipo (cm)	19.7 x 11 x 12.4	19.7 x 11 x 12.4	23.4 x 13.4 x 18 cm
Net Weight / Peso Neto (Kg.)	2,66	3,43	5,76
Shipping / Empaque Transporte			
CARTON:			
Qty per Carton / Cantidad por Cartón:	4	4	3
Carton Size / Tamaño Cartón (cm):	50 x 30 x 20	50 x 30 x 20	60 x 33 x 26
Carton Weight / Peso Cartón (Kg):	12,00	15,00	19,00
PALLET:			
Qty per Pallet / Cantidad por Pallet:	320	320	126
Full Pallet Size / Dimensiones Pallet Completo	100 x 120 x 202 cm	100 x 120 x 202 cm	100 x 120 x 190 cm
Pallet Gross Weight / Pallet Peso Bruto (Kg)	980	1.220	818
Operating Conditions / Ambientales			
Temperature / Temperatura	0-40°C		
Humidity / Humedad	< 90% (no condensing)		
Noise / Ruido	< 40dB		

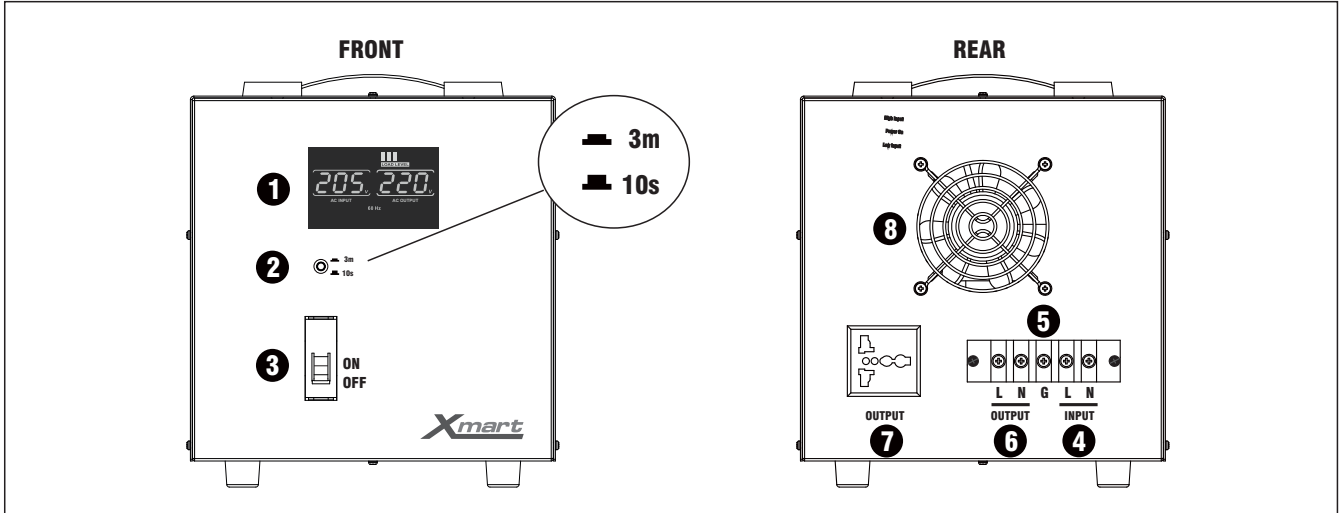
Technical Features / Características Técnicas

- 1.- LCD Screen
- 2.- Delay Switch 10s/3min.
- 3.- ON/OFF Breaker

- 4.- AC Input Terminal Block
- 5.- Ground Terminal
- 6.- AC Output Terminal Block

- 7.- AC Universal Power Outlet (15A)
- 8.- Forced Ventilation Fan

DEFENDER PRO 5K / 8K / 10K



DEFENDER PRO	5K	8K	10K
Capacity / Capacidad :	5000VA / 4000W	8000VA / 6400W	10000VA / 8000W
Input / Entrada			
Voltage / Voltaje (VAC) (MODEL/MODELO: 220Vac)	220 Vac (140-260Vac) - 50Hz/60Hz		
Input / Entrada	Hardwire / Regleta		
Output / Salida			
Voltage / Voltaje (VAC) (MODEL/MODELO: 220Vac)	220V +/- 10%		
Outlets / Salidas	Hardwire / Regleta + 1 outlet / 1 toma univ.		
Protections / Protecciones			
Selectable Delay Time / Ciclo de Seguridad:	10s / 3min.		
AC Line Spikes / Picos en Línea AC:	4 MOV:(L-N; L-G, N-G)		
- Max. Clamping / Cebado Max (8/20 μ -s):	920V		
- Max Peak Current / Corriente Pico Max: (8/20 μ -s):	6500A		
- Energy / Energía Max (10/1000 μ -s):	4 x 312J = 1.248 Joules		
Overload & Shortcircuit / Sobrecarga & Cortocircuito (Input Breaker / Disyuntor Entrada)	Input Breaker / Disyuntor (20A - Curve D)	Input Breaker / Disyuntor (32A - Curve D)	Input Breaker / Disyuntor (40A - Curve D)
Efficiency / Eficiencia			
at 100% load / A plena carga	95% - 98%		
Indicators / Indicadores			
LCD / Pantalla LCD	LCD / Pantalla LCD		
Size & Weight / Características Físicas			
Product Size / Tamaño Equipo (cm)	45 x 21 x 24 cm	45 x 21 x 24 cm	45 x 21 x 24 cm
Net Weight / Peso Neto (Kg.)	11,0	14,5	16,0
Shipping / Empaque Transporte			
CARTON:			
Qty per Carton / Cantidad por Cartón:	1pc	1pc	1pc
Carton Size / Tamaño Cartón:	50 x 30 x 32 cm	50 x 30 x 32 cm	50 x 30 x 32 cm
Carton Weight / Peso Cartón (Kg):	12,0	15,5	17,0
PALLET:			
Qty per Pallet / Cantidad por Pallet:	48pcs	48pcs	48pcs
Full Pallet Size / Dimensiones Pallet Completo	100 x 120 x 205 cm	100 x 120 x 205 cm	100 x 120 x 205 cm
Pallet Gross Weight / Pallet Peso Bruto (Kg)	601	769	841
Operating Conditions / Ambientales			
Temperature / Temperatura	0-40°C		
Humidity / Humedad	< 90% (no condensing)		
Noise / Ruido	< 40dB		

Technical specifications can be modified to comply with special project requirements / Las especificaciones técnicas pueden modificarse bajo requerimiento para adaptarse a proyectos especiales
 Technical specifications may change without further notice due to either technical or commercial reasons / Por motivos comerciales o técnicos las especificaciones pueden cambiar sin previo aviso

DC UPS

DC Power 12V

Uninterruptible Power Supply (UPS) with 12V DC output and 2.1A Max. Capacity . Microprocessor based design with intern Li-ion battery. Ideal for powering and protecting 12V communication equipment , such as routers, network switches de red, videocameras, VOIP phones, etc.



Modern and Reliable Technology:

This UPS DC type, powered by AC voltage to supply a 12V DC output. Max. capacity: 25W, it can supply up to 2.1 A. A microprocessor based design allows a reliable UPS operation. An Internal 3.7VDC / 2600 mAh Li-ion battery offers several hours of backup for protected equipment.

Easy to Use, Direct Connection.

This Ups is small and compact. it is one piece integrated, including input plug-in for direct connection to wall power outlets. Output is a 1 meter long cable with a Jack DC terminal, available in 2 versions:

- 12VDC Jack with OD 5.5mm / ID 2.5mm
- 12VDC Jack with OD 4mm / ID 1.7mm

Ideal choice to replace AC/DC transformers that come with most routers, network switches , and other DC powered equipment . Thanks to a wide input range (90 a 265Vac) and compatibility with 50Hz and 60Hz systems, this UPS can operate power lines of wither 120V or 230V.

Operation:

DC-Power turns on automatically when connected to a wall power outlet and can be turned off by pushing front power button.

Total Protection:

Designed to comply anti-surge K.21 directive (enhanced, 6KV), hence your equipment will be protected against dangerous spikes and surges that might arrive through AC Line. Moreover, it counts on 2 protection systems against short-circuits and overloads.
- AC input includes an integrated fuse that trips by over-current detection.
- To protect DC output, a firmware protection has been programmed to turn off output when either over-current or short-circuit are detected. This protection can be restarted pushing ON/OFF front button for 1 second.

Universal Usage and Options:

DC-Power is a UPS able to operate either in 120Vac or de 230Vac systems thanks to it's wide input range (90Vac to 265Vac). There are several versions to choose input plug-in (NEMA5-15P, UK, or Schuko). Output is available in 2 Jacks types, 12VDC: OD 5.5mm and 4mm.



Applications: TELECOM

Routers, Network Switches, Video cameras, etc.



Technical Features / Características Técnicas

DC POWER UPS		12VDC / 25W
Capacity / Capacidad	25W	
Input / Entrada		
Voltage / Voltaje	90Vac - 265Vac	
Frequency / Frecuencia	60 Hz / 50 Hz: Auto Sensing / Autodetección	
Input Plug / Conector de Entrada	NEMA5 / UK / Schuko	
Output / Salida		
Voltage / Voltaje	12VDC +/- 5%	
Max. Power / Potencia Máxima	25W (2.1 A)	
Waveform / Forma de Onda	DC output / Salida de tensión continua (CD)	
Output Plug / Conector de Salida	- Option/Opción 1: (DC male jack OD 4mm / ID 1.7mm) - 1m cable - Option/Opción 2: (DC male jack OD 5.5mm / ID 2.5mm) - 1m cable	
Batteries / Baterías		
Type / Tipo	Li-ion Battery (3.7VDC / 2600mAh)	
Back-up Time Typical / Autonomía Típica	Load/Consumo 12VDC/2.0A: 90 min	
	Load/Consumo 12VDC/1.5A: 120 min	
	Load/Consumo 12VDC/1.0A: 150 min	
Recharge Time / Tiempo de Recarga	3 hours to 90% capacity / 3 Horas hasta 90% de capacidad	
Protections / Protecciones	Deep discharge and overcharge / Descarga Profundas y Sobre-Cargas	
Alarms-Indications / Alarmas-Indicaciones		
Interface / Interfaz	Multi-color LED indicator / LED multicolor	
LED Information / Información mediante LED	Operation Mode / Modo de operación:	
	- Full battery / batería recargada: Green / Verde continuo	
	- Recharging / Racargando: blinking 1 every 4s (intermitente 4s)	
	- Discharging / Descargando: blinking 1 per second (intermitente 1s)	
- Fault / Falla: Red / Rojo		
Protections / Protecciones		
AC Input: Over current / Sobrecorriente entrada AC	Input AC fuse on main board / Fusible AC en tarjeta electrónica	
DC Output: Shortcircuit/Overload / Salida DC: Sobecorriente	Firmware protection / protección por firmware (Reset by ON/OFF buton)	
Surge/Spikes Protection / Protección contra Picos / Rayos	Complies with K.21 enhanced 6KV / Cumple con K.21 mejorada (6KV)	
Features / Funcionalidades		
Autopower ON	Power-On when plugged in (Autoencendido al conectarse)	
Power-Off / Apagado	OFF button / Botón de apagado	
Dimensions & Weight / Tamaño y Peso		
Dimensions / Tamaño	68 * 42 * 74 mm	
Weight / Peso	240 g	
Packing / Empaque:		
Box Size & Weight / Tamaño y Peso de Caja Individual	113 * 52 * 99 mm (280 g)	
Quantity per Carton / Cantidad por Cartón	28 pcs	
Carton Size & Weight / Tamaño y Peso del Cartón	385 * 235 * 215 mm (7.84 Kg)	
Quantity per Pallet / Cantidad por Pallet	1.680 pcs (60 cartons)	
Safety & Performance		
CE: Electromagnetic Compatibility 2014/30/EU	EN 55032 ; EN 61000-3-2 ; EN 61000-3-3 ;	
CE: Low Voltage 2014/35/EU	EN 55024: 2010+A1: (EN 61000-4-2 / 4-3 / 4-4 / 4-5 / 4-6 / 4-11)	
	EN 60950-1: 2006+A11:2009+A1:2010+A12:2011+A2:2013	

Technical specifications may change without further notice. Las especificaciones pueden cambiar sin aviso previo.

Heater Protector

HEAT MASTER

HEAT MASTER is a modern power protection and backup system specially designed to protect domestic gas heater systems with electronic control. HEAT MASTER regulates and filters AC line avoiding damages and configuration losses in the heater. Moreover, during power blackout, HEAT MASTER keeps the system working smoothly so you can enjoy heating and hot water service at home



TOTAL POWER PROTECTION:

During power outage, AC Line instability or rain cause dangerous spikes, your gas heater electronic control system is exposed to all of these abnormalities, therefore it could get damaged or lose configuration parameters. HEAT MASTER protects your gas heater, stabilizing AC Line voltage and filtering dangerous electric spikes

OPERATION WITHOUT INTERRUPTIONS:

Heat Master also includes an internal battery bank able to maintain your Gas Heater working even during power blackouts. During power losses, Heat Master keeps supplying regulated power to your heater for long time, so your hot water and heating systems can keep working in your house. There are different models according to the runtime required, however if you need even more time, external battery packs can be connected to Heat Master to increase backup time

STATE OF THE ART DESIGN:

Heat Master has been specifically designed to effectively protect heating systems at home and small offices. Inside your heater there are electronic parts, sensors, and a water pump; all these equipment are delicate and do not operate appropriately if connected to standard power protection designed for computer related equipment, actually this could be harmful for your heater. Heat Master is the only equipment designed exclusively to take care of power needs of your Heater.

WALL MOUNTING:

Heat Master can be easily installed on your wall, giving Heat Master a safe installation. You just need to plug your Gas Heater into Heat Master's power outlet to have it completely protected.

DIGITAL LCD DISPLAY:

Heat Master includes a digital screen to easily show the status of AC Line Status and Heat Master as well. LCD always shows AC Line voltage, AC Status (Normal, failure), power outlet voltage and during power blackouts also indicates the runtime left.

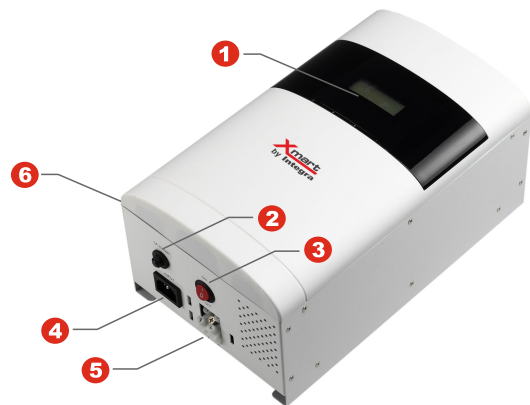
EASY CONNECTION:

HEAT MASTER offers a standard power plug for you to easily plug it to your power outlet on the wall and the power plug of your gas heater directly to the power outlet of HEAT MASTER, there is no need of additional wiring and any extra work.

Technical Features / Características Técnicas

Parts Identification

- 1.- Digital LCD
- 2.- Input Breaker
- 3.- On/Off Switch
- 4.- AC Input connector
- 5.- DC Connector for external batteries
- 6.- AC Power Outlet (Located on non-visible view of the photo)



Electric Installation



HEAT MASTER

Rated Output Capacity / Capacidad Nominal 250 VA / 200 W
 Peak Capacity / Capacidad Pico 800 VA / 640 W (< 6 s)

Input - Entrada

Voltage / Voltaje - Frequency / Frecuencia 230V (162-268 Vac) - 50Hz

Output - Salida

Voltage / Voltaje - Frequency / Frecuencia 230V (+/- 10%) - 50Hz

Auto-restart / Auto-arranque Yes / Si

Internal Batteries - Baterías Internas

Type / Tipo Maintenance Free VRLA-AGM / Sellada Sin Mantenimiento

Backup Time / Autonomía (*)	Heater Mode:	Domestic hot water	Central heating
		"ON" (80W)	circuit "ON" (120W)
Heat Master:		75min	60min
Heat Master + 1 EXBATT:		260min	180min

Recharge Time / Tiempo de Recarga 4-6 hours to 90% capacity / 4-6 Horas hasta 90%

Protections / Protecciones

Overloads / Sobre-Cargas Circuit Breaker with Manual Reset / Disyuntor Rearmable

Surge/Spikes Protection / Protección contra Picos MOV protection L-N / Protección MOV entre L-N

Product Features / Características del Producto

Power Outlets / Tomas 1 x SCHUKO (CEE 7/4) or 1 x FRENCH

Product Size-Weight / Dimensiones-Peso Producto 319 x 190 x 150 - (9 Kg)

Operating / Condiciones de Operación < 95% RH (non condensing) / < 40 dB / 0-40°C

Technical specs can be modified to comply with special project requirements / Las especificaciones se pueden ajustar para proyectos.

Specifications may change without further notice / Las especificaciones pueden cambiar sin previo aviso.

(*) Backup tests based on gas boiler: "ROCA SARA 24/24" dual domestic hot water & central heating functions (20.700Kcal/h ; 24KW max.)

(*) Autonomía con una caldera ROCA SARA 24/24 en modo de agua caliente y calefacción central (20.700Kcal/h ; 24KW max.)

Online Inverter Sine wave

LBU-ONL 1.5K/2.25K/3K/4.5K

DC/AC Online Inverter with sine-wave output and built-in battery charger. This unit can operate as a long backup UPS for hours in Battery Mode, thanks to a robust internal inverter. Online Double Conversion Technology makes it a perfect choice for applications such as: Computer systems, Telecommunication, Video Surveillance, Appliances, etc., supplying stable and filtered power without any interruption. A smart LDC always shows Inverter's real time operative parameter. Available in 120Vac and 230Vac.



True ON-LINE Double Conversion and IGBT Technology

Our True ON-LINE Double Conversion Technology and IGBT (both in rectifier and Inverter stages) allows our LBU-ONL to generate full time, noiseless, impeccable, and pure sine wave power for your equipment, without transfer time when passing from Normal Mode to Battery Mode, as well as offering a wide input voltage range.

Stable Power

A microprocessor based technology allows LBU-ONL generating a very stable output (1%), operating in both Normal Mode, as well as Battery Mode. It is a perfect option for critical equipments such as: Computer Related Products, de Video Surveillance, or Telecommunication.

Short-circuit protected

This system avoids internal electronic damages triggering automatically when a short-circuit is detected on its output. Outlets are turned off and an error message is shown on LCD.

Communication Ports & Control Software

LBU-ONL is equipped with several communications options:

- USB Port
- RS232 Port
- Smart port to install Network Communication Card (SNMP), Dry Contact Card (AS400), RS-485 Communication Card, etc.

Emergency Power Off (EPO)

Our EPO port can be connected to an Emergency Stop Switch to turn off the output when activated, for safety reasons.

Frequency Converter Function

Output frequency can be configured to 50Hz or 60Hz, regardless the input frequency, as long as it stays in the acceptable range.

Programmable Outputs:

This inverter family offers 2 kind of power outlets: Standard and Programmable. During Battery Mode Programmable outputs can be configured to power off at a given time (previously configured), without causing severe battery discharge.

Cold Start

This inverter series can be turned on even during power outage.

Built-In smart Battery Charger

With AC line and external batteries this unit can operate as a long backup UPS. With normal AC Line, LBU-ONL powers and protects your equipments and charge external batteries. When a power failure is detected on AC Line LBU-ONL goes to Battery Mode keeping outlets powered by battery. A great capacity battery charger can manage big battery banks and a modern technology takes good care of them, enlarging their life span. A 3 Stages smart battery charger allows charging batteries in short time, compared with other equipment in the market

Power Generators Compatible

Only a True On-Line Double conversion inverter can filter voltage fluctuation and other particularities generated by Power Generators to generate a clean, perfect, and pure sine wave power to feed your installation.

Eco-Mode Operation, for power saving

ECO-Mode is a power saving function which reduces electrical consumption over 5%. In this mode the load is powered directly by AC Line as long as it keeps between pre-configured limits. Otherwise, the inverter goes to regular ONLINE mode. During power outage, the unit goes into Battery Mode to keep your equipment working perfectly safe.

Aplicaciones: PYME

Servidores Críticos, Workstations, Múltiples PCs.



Technical Specifications

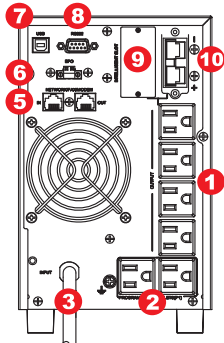
- | | |
|---------------------------------|--------------------------------|
| 1. Standard Power Outlets | 6. Emergency Power Off (EPO) |
| 2. Programmables Power Outlets | 7. USB Port |
| 3. AC Input | 8. RS-232 Port |
| 4. Circuit Breaker | 9. Smart Port - SNMP |
| 5. Surge Protected RJ45 Sockets | 10. External Battery Connector |

Available Accessories

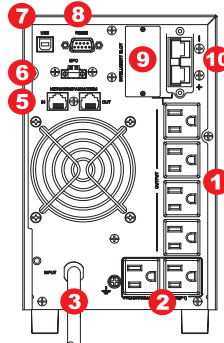
- LAN Card: ✓
 AS-400: ✓
 RS-485: ✓
 DC Connector ⓘ
 Environmental Sensors: ✓

- ⓘ : Included
 ✓ : Available Option
 ○ : Non Available

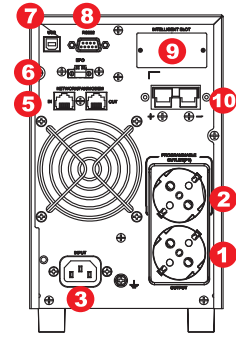
Rear Panel



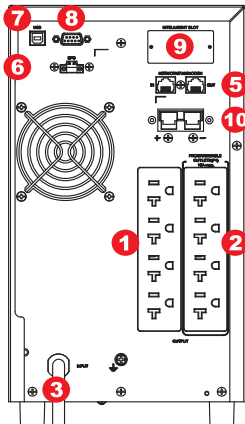
1.5K / 2.25K (120V NEMA)



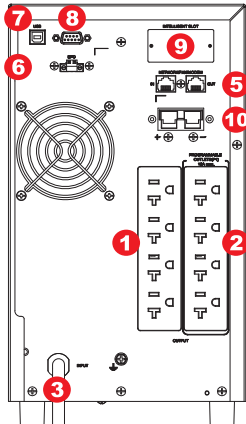
1.5K / 2.25K (220V NEMA)



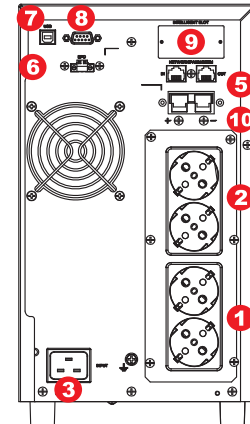
1.5K / 2.25K (220V SCHUKO)



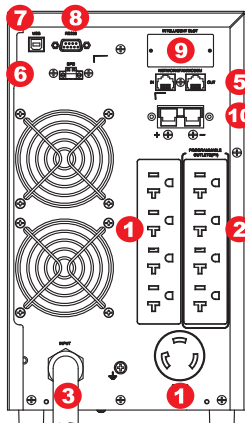
3K (120V NEMA)



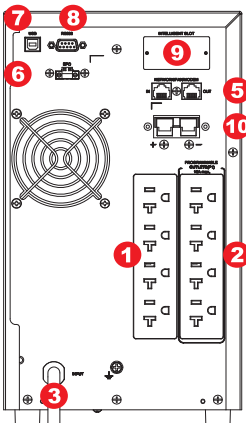
3K (220V NEMA)



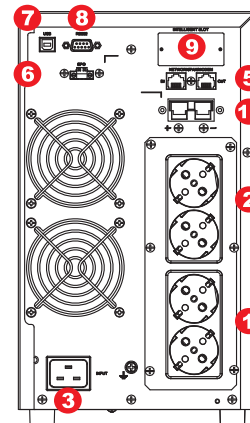
3K (220V SCHUKO)



4.5K (120V NEMA)



4.5K (220V NEMA)



4.5K (220V SCHUKO)

Applications: Long Backup installations up to 4.5KVA
Telecommunication Systems, Video Surveillance, Computer Related Equipment, etc.

Technical Features / Características Técnicas

ONLINE INVERTER - LBU-ONL	1.5K	2.25K	3K	4.5K
Capacity / Capacidad	1500VA / 1000W	2250VA / 1500W	3000VA / 2000W	4500VA / 3000W
AC INPUT / ENTRADA AC				
Range / Rango - Vac	120V	(80Vac-150Vac) @ 100% load / (70Vac-150Vac) @ 80% load / (55Vac-150Vac) @ 60% load		
Range / Rango - Vac	230V	(160Vac-300Vac) @ 100% load / (140Vac-300Vac) @ 80% load / (110Vac-300Vac) @ 60% load		
Frequency Input / Frecuencia de Entrada	50Hz / 60Hz autosensing / detección automática			
Frequency Range / Rango de Frecuencia	40 Hz - 70Hz			
Max. Amps / Corriente Max. (normal mode) 120V	13.2A (RMS)	13.2A (RMS)	17.6A (RMS)	26.4A (RMS)
Max. Amps / Corriente Max. (normal mode) 230V	7.6A (RMS)	11.0A (RMS)	15.3A (RMS)	17.6A (RMS)
Phase / Fases	Single phase with ground / (1 fase + Tierra)			
Power Factor / Factor de Potencia	> 0.99 @ 100% load			
Input Current THDi / THDi de Corriente de Entrada	< 5% @ 100% load			
Input Powercord / Cable de entrada	6 feet (1.83m) NEMA Plug			
AC OUTPUT / SALIDA AC				
Voltage / Voltaje AC	120V	(*N1) Model 120V: 100/110/115/120/127Vac		
Voltage / Voltaje AC	230V	(*N1) Model 230V: 200/208/220/230/240Vac		
Output Regulation / Rango de Salida:	+/-1% (all modes / en todos los modos de operación)			
Frequency / Frecuencia (Batt. Mode)	(*N2) 50 Hz +/- 0.1 Hz - 60Hz +/- 0.1 Hz			
Slew Rate / Seguimiento de Frecuencia	1 Hz / s			
Current Crest Ratio / Factor de Cresta	3:1 max. @ 100% load			
Harmonic Distortion / Dist. Armónica (THDv)	< 2% @ Linear Load / Carga Lineal (100% load) < 4% @ No Linear Load / Carga no Lineal (100% load)			
Dynamic Accuracy / Regulación Carga Variable	< +/- 5% in Online (variation 0%-100% & 100%-0% R Load) (online mode)			
Transient response / Respuesta ante Carga Variable	30ms (up to 90% of regulation) / 60ms (up to 100% regulation) (variation 0%-100% or 100%-0%)			
AC to Inverter / Modo Online a modo Battery	0 ms			
Waveform / Forma de Onda	Pure Sinewave / Sinusoidal Pura			
DC component / Componente DC	100mV max. (no load / full load) (EN50091-3)			
BYPASS				
Internal Auto bypass / Modo Bypass Automático:	Default Input Range in BYPASS: (120V): 85-132Vac // (220V/230V): 170-264Vac (Configurable)			
PROTECTION SYSTEMS / SISTEMAS DE PROTECCION				
Surge & Spikes Suppression / Supresión de Picos	(L-N, L-G, N-G) : > 1370 Joules (EN61000-4-5)			
RJ45 Surge Suppression / Supresión picos RJ45	IN/OUT RJ45 socket surge protected / Tomas RJ45 protegidas contra picos			
Output Short-Circuits / Cortocircuitos a la Salida (Online & Battery Mode)	Electronic inverter shortcircuit protection / Protección contra cortocircuitos en la salida Triggered by output current over 400% of nominal current during 5 cycles / Activación a 400% de la corriente nominal durante 5 ciclos			
Noise Protection / Protección contra ruido eléctrico	Input filter / Filtro de entrada (TVSS EMI/RFI)			
AC Input Current / Sobre-Corriente de Entrada AC	Input breaker or fuse / Disyuntor o fusible de entrada			
Battery overcurrent / Sobrecorriente de baterías	Fuse protection for battery line / Protección por fusible en línea interna de baterías (80A)			
Starting Time / Tiempo de Arranque (@ 100% load)	7s - 10s			
EFFICIENCY / EFICIENCIA				
Eco Mode	(100% Load: 97%) - (75% Load: 96%) - (50% Load: 96%) - (25% Load: 94%)			
AC Mode / Modo AC (Online)	(100% Load: 91%) - (75% Load: 91%) - (50% Load: 90%) - (25% Load: 89%)			
Battery Mode / Modo Batería	(100% Load: 90%) - (75% Load: 90%) - (50% Load: 89%) - (25% Load: 88%)			
Inverter Efficiency / Eficiencia Inversor (100%)	(100% Load: 97%)			
Max. Internal Loss / Pérdidas internas máx. (BTU)	307	460	546	818
OVERLOAD/ SOBRECARGA				
AC Mode / Modo Normal (to Bypass)	100%~110%: (warning) / 110%~130%: 5min / 130%~140%: 30s / > 140%: 2s			
Battery Mode / Modo Batería (to OFF)	100%~110%: (warning) / 110%~130%: 5min / 130%~140%: 30s			
Bypass Mode / Modo Bypass (to OFF)	100%~110%: (warning) / 110%~120%: 30min / 120%~130%: 10min / > 130%: 1min			
BATTERIES / BATERIAS				
Technology / Tecnología	Sealed Lead Acid VRLA-AGM / Sellada Sin Mantenimiento VRLA-AGM			
Battery Location / Ubicación de Baterías	External only. Not included with product / Solo Externas. No incluidas con el producto			
Nominal DC Voltage / Voltaje DC Nominal	24VDC	36VDC	48VDC	72VDC
Charging VDC / Voltaje del cargador (Floating)	27.4 VDC +/- 1%	41.1 VDC +/- 1%	54.8 VDC +/- 1%	82.1 VDC +/- 1%
Backup Time / Tiempo Autonomía:	Based on battery capacity / Según la capacidad de las baterías externas			
Typical Recharge Time / T. de Recarga	According to battery array and discharge cycle / Según el arreglo de baterías y ciclo de descarga (*N3)			
Shutdown battery Voltage / Voltaje DC Apagado	10.0 Vdc per battery typical (*N4)			
Charging Amps / Corriente de Carga	Configurable 2A to 8A. // (0.1C min / 0.2C recommended / 0.3C max.)			
Batteries charger / Cargador de baterías	3 steps technology / Tecnología de 3 etapas (Constant Current / Equalizing / Floating)			
Charging Compensation / Compensación Recarga	> 30°C : -5mV/°C per cell (Equalization) / -3mV per cell (Floating)			

Technical Features / Características Técnicas

ONLINE INVERTER - LBU-ONL	1.5K	2.25K	3K	4.5K
INDICATORS / INDICADORES				
LCD / Pantalla de Cristal Liquido (LCD)	Status, Load level, Battery, Input/Output voltage, Discharge timer, and Fault Estado, Consumo, Baterías, Voltaje Entrada/Salida, Autonomía, Diagnóstico			
ALARM / ALARMAS				
Buzzer Alarms / Alarmas Sonoras:	Battery Mode: 1 beep/5Seg - Low battery: 1 beep/Seg - Overload: 2 beep/seg - Failure: Continuous Modo Batería: 1 Bip/5Seg - Batería baja: 1Bip/Seg - Sobrecarga: 2 Bips/Seg - Falla: Continuo			
OUTLETS: QTY & TYPE / SALIDAS: CANTIDAD Y TIPO				
Model 120Vac - Total Outlets	6	8	8	9
Std. Outlets / Salidas Estándar (120Vac)	NEMA5-15R*4	NEMA5-15R*4	NEMA5-20R*4	NEMA5-20R*4 + 1 L5-30R
Prog. Outlets / Salidas Prog. (120Vac) (*N5)	NEMA5-15R*2	NEMA5-15R*2	NEMA5-20R*4	NEMA5-20R*4
Input / Entrada (120Vac)	NEMA5-15P	NEMA5-15P	NEMA5-20P	L5-30P
Model 230Vac / Schuko - Total Outlets	2	2	4	4
Std. Outlets / Salidas Estándar (230Vac)	CEE (Schuko)*1	CEE (Schuko)*1	CEE (Schuko)*2	CEE (Schuko)*2
Prog. Outlets / Salidas Prog. (230Vac) (*N5)	CEE (Schuko)*1	CEE (Schuko)*1	CEE (Schuko)*2	CEE (Schuko)*2
Input / Entrada (230Vac)	IEC C14 + Schuko plug		IEC C20 + Schuko plug	
PHYSICAL / FISICAS:				
W*H*D / Ancho * Altura * Profundidad (mm)	397x145x220	397x145x220	421x190x318	421x190x318
Net Weight / Peso Neto (kgs)	6,5	6,9	8	11,8
UNIT PACKING / EMPAQUE UNIDAD				
Unit Carton W*H*D (mm)	472x230x325	472x230x325	560x320x460	560x320x460
Unit Gross Weight / Peso Bruto (kgs)	7,5	7,9	9	12,8
Half Pallet / Medio Pallet (cm : pcs)	(120*100*101): 30pcs	(120*100*101): 30pcs	(115*72*104): 12pcs	(115*72*104): 12pcs
Full Pallet / Pallet Completo (cm : pcs)	(112*100*195): 50pcs	(112*100*195): 50pcs	(115*72*216): 24pcs	(115*72*216): 24pcs
Container (FCL20' / FCL40')	500pcs / 1050pcs	500pcs / 1050pcs	240pcs / 504pcs	240pcs / 504pcs
OPERATIONAL CONDITIONS / CONDICIONES DE OPERACIÓN				
Operation Temp. / Temp. en operación (IEC-62040-3)	0 °C to +40 °C			
Storage Temperature / Temperatura Almacenaje	-25 °C to +55 °C			
Humidity / Humedad Relativa (IEC-62040-3)	< 95 % RH (non-condensing / no condensante)			
Audible Noise / Ruido Acústico (ISO 7779)	<50dBA @ 1m			
Max. Altitude / Altura de Operación Max.	Max. 4.500 meters over sea level / sobre nivel del mar. * Power output de-rate of 1% every 100m (over 1.000m) * Disminución de potencia de 1% cada 100m (sobre los 1.000m)			
SAFETY & STANDARDS / NORMATIVAS Y ESTANDARES				
CE Directives (for 220V & 230V models)	73 / 23 & 93 / 68 (LV Safety) and 89 / 336 (EMC)			
General Safety / Seguridad General	IEC 62040 - 1			
EMC / Compatibilidad. Electromag.	IEC 62040 - 2			
Tests / Procedimiento Pruebas	IEC 62040 - 3			
ESD / RS / EFT / Surge / CS / F. Mag. Field	EN 61000-4-2 & 4-3 & 4-4 & 4-5 & 4-6 & 4-8 & 4-11			
Low Frequency Signals	IEC / EN 61000 - 2 - 2			
Degree of protection / Grado de Protección	IP21			
Conduction & Radiation	FCC Part 15 Class A ; IEC / EN 62040-2 (Cat 2)			
Safety / Seguridad	CE - IEC/EN 62040-1			
Quality and Environment	RoHS / ISO9001 & ISO14001			
Transportation / Transporte	IEC 60068-2-32 (Drop test) / IEC 60068-2-64 (Vibration) / IEC 60068-2-27 (Shock test)			
COMMUNICATION / COMUNICACION				
Serial comm. / Comunicación serial	RS232 & USB (HID compatible)			
Software	Windows family; Linux; Mac OS; VMWare			
SNMP Intelligent Port:	LAN Card SNMP type - optional / Comunicación con LAN mediante SNMP opcional AS400 Interface (optional comm. Card) / Interfaz con AS400 (tarjeta opcional)			

Technical specifications can be modified to comply to special requirements / Las especificaciones pueden bajo requerimiento adaptarse a proyectos especiales

Technical specifications may change without further notice / Por motivos comerciales o técnicos las especificaciones pueden cambiar sin previo aviso.

(*N1): Output voltage is selectable by LCD / El Voltaje de salida es configurable en el LCD

(*N2): Frequency Conversion mode allows to set output frequency at constant value: 50Hz or 60Hz / El modo de Conversión de Frecuencia permite fijar la salida a 50 o 60Hz

(*N3): Recharging time is based on previous 10min to 20min full discharging cycles. Tiempo de recarga se basa en ciclos previos de descarga profunda de 10 a 20min.

(*N4): Shutdown battery voltage depends of operating conditions (load & runtime) / Voltaje de corte de baterías depende de condiciones operativas (carga y runtime)

(*N5): Backup time for programmable outlets can be configurable (in minutes) / Las salidas programables pueden configurarse en minutos

** Derate Watts capacity to 70% in frequency converter mode. Derate to 70% when output voltage is set to 200Vac or 100Vac

** La capacidad en Watts se degrada y baja hasta el 70% en modo "Convertidor de Frecuencia". También baja al 70% si se ajusta la salida a 200Vac ó 100Vac

Accessories

Accessories: External Bypass Switches

Our wide range of manual external BYPASS switches enhance our UPS. These devices allow UPS to be replaced or maintained while in operation, without shutting down the protected system. Our models cover the basic range up to 3KVA and intermediate range of 6KVA and 10KVA. We have versions for rack, wall or desktop mounting. These devices offer outlets according to destination country (NEMA, SCHUKO, IEC outlets, etc.)

MBS-T3 & MBS-R3:

Bypass switch for Rack, Wall, or Desktop installation with multiple power outlets, covering also PDU function. For UPS up to 3KVA.



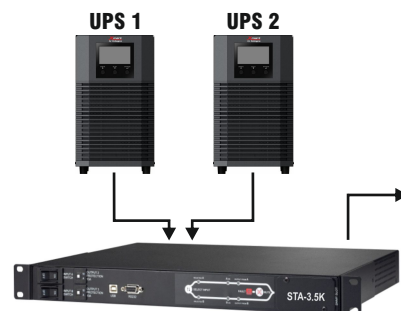
MBS-10K-TB:

Bypass switch for either Rack or Desktop installation for 6K & 10K SAI/UPS, with 0 ms transfer time. Offers rotary switch and input breaker.



Accessories: Automatic Transfer Switch

Our Static Automatic Transfer Switches (STA) have 2 inputs: one primary and one secondary. Main input is supervised in real time so when a fault is detected in the main input, STA transfers to the secondary input, keeping the switch outputs always protected and connected to the input that provides optimal and safe service. Main application of STA is giving external redundancy function to small UPS by connecting them to STA inputs and the protected equipment to the output. STA will switch from UPS No. 1 to No. 2 when a fault is detected in the first one.



Accessories: External Battery Chargers

Our Online UPS support external batteries, to extend their operation back up, recharging these battery packs with their own chargers.

However, for really demanding applications where a shorter recharge time is required in addition to a great backup, our external chargers provide an excellent option as they can be connected in parallel to the UPS charger to reinforce the recharge process.

Moreover, several chargers (of the same type) can be installed in parallel, to further increase the recharging power, for even larger battery banks.

With a compact design, a wide input range (110Vac to 300Vac), electrical protection included and two versions available (12A and 24A), our external chargers are a powerful tool for those high-demand applications.



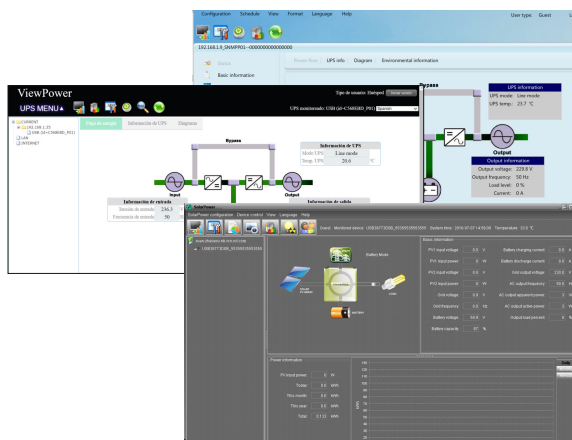
Software de Supervisión y Control

Our UPS series and Solar Inverter have supervision and control software. From small 500VA interactive UPS up to large capacity three-phase equipment. Communication can be through direct connection with either USB or RS232, or via LAN network via LAN network SNMP card, optional for both UPS and inverter. Software provides excellent communication capabilities with equipment and computer systems. There is full compatibility with the most used operating systems in the market: Windows Family, Linux, Unix and Mac OSX.

Features:

- Device status monitoring
- Grid supervision
- Device parameters setting
- Files and operating systems shutdown in local and remote PC
- Scheduled Power On/Off of UPS
- Scheduled battery tests
- Data and Events Logs
- Events and Alarms messaging via LAN, email, & SMS
- Exportable Reports

All required software, as well as user manuals, are available in Download section in our web site: www.xmart-ups.com



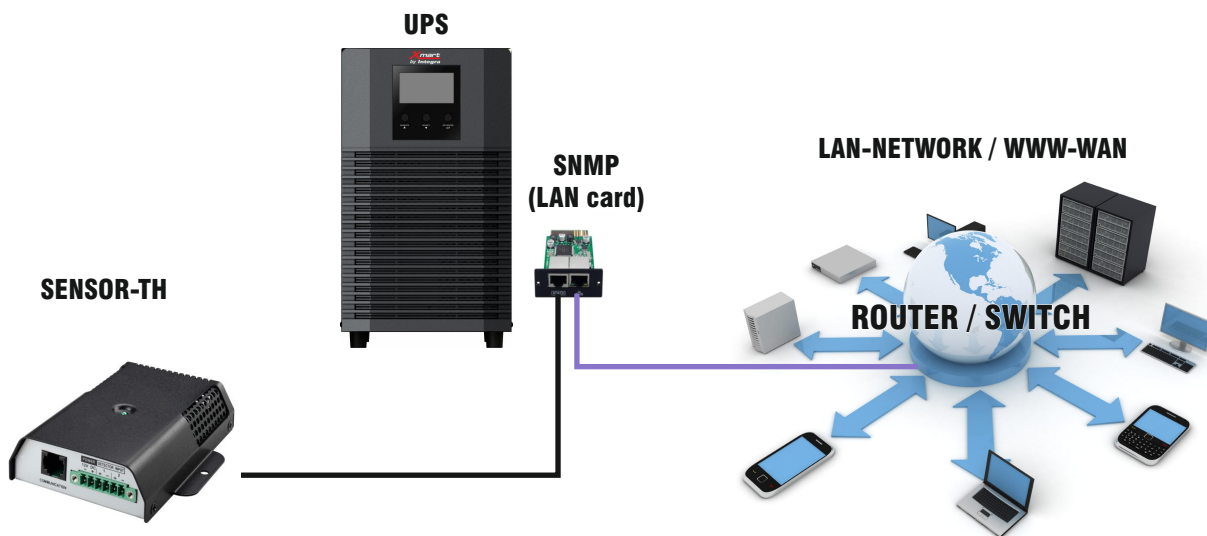
Communication Options: LAN / AS-400 / RS485

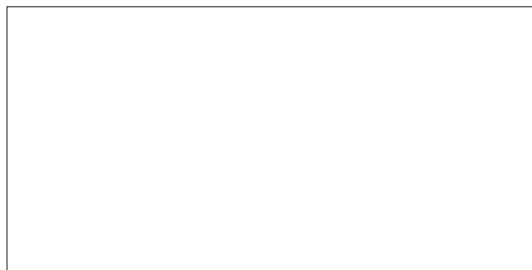
In addition to the communication ports built-in our UPS, such as the USB or RS-232, there are optional choices to communicate with them by installing cards connected into UPS's smart port:

- LAN communication: An SNMP card integrates UPS or inverter in the LAN network allowing supervision from any of the PCs on the network. There is a version to install in UPS Smart Port and an external version to connect through the equipment's serial port.
- AS-400 Interface: AS-400 Card which offers Dry Contact terminals according to IBM AS-400 protocol.
- RS485 Interface: RS485 Card with MODBUS protocol.

Accessories: Environmental Measurement Device

To take advantage of the extraordinary ability to report events and alarms of our communication software and knowing how important it is to keep the environment where the system is located, under control, XMART has a temperature and humidity measurement device compatible with all our UPS with Smart Port. This device connects to the SNMP card installed in the UPS's Smart Port. The measurement device sends the temperature and humidity values to SNMP card, which transmits them to the network. These values can be supervised either by direct communication with SNMP card through its IP or from the XMART supervision software installed on any PCs on the LAN network. Alarm levels can be set to generate warnings when values exceed configured threshold.





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