

CATALOGUE



**EMPOWERING
YOUR WORLD
WITH PRECISION**



**EMPOWERING
YOUR WORLD
WITH PRECISION**

TABLE OF CONTENTS

Ablerex

| | |
|---------------------------------|---|
| About us | 2 |
| A complete range for every need | 6 |

Single-phase line-interactive UPS

| | |
|--|----|
| For PCs, Wi-Fi routers, home and networking devices - Ideal for home, small businesses and SMEs | 8 |
| GLAMOR 650-2200 VA • GLAMOR S 600-2000 VA | 10 |

Single-phase online UPS

| | |
|--|----|
| For workstations and telecommunications, networking and video surveillance equipment, server rooms - Ideal for SMEs and large businesses | 14 |
| ARES PRO Tower • RT 1000-3000 VA | 16 |
| ODIN • ODIN HARSH RT 1000-3000 VA | 20 |
| MARS Tower • RT 6000-10000 VA | 22 |

Three-phase UPS

| | |
|--|----|
| For server room, data centres, industrial automation, electromedical equipment - Ideal for SMEs and large businesses | 28 |
| GLM | 30 |
| KRONOS PLUS 10-40 kVA • KRONOS PLUS XL 10-40 kVA | 31 |
| TAURUS 10-80 kVA | 35 |
| TITAN 100-500 kVA • TITAN GT 100-800 kVA | 38 |
| THOR 15-900 kVA | 46 |

Single- and three-phase CPSS

| | |
|--|-----------|
| For EN 50171 applications: fire protection, smoke detection, emergency lighting, security and alarm systems | 50 |
| CPSS ZEN single-phase 4000-10000 VA | 52 |
| CPSS ZEN three-phase 10-40 kVA | 52 |

Power quality device

| | |
|--|-----------|
| For the medical, telecommunications, industrial, energy distribution, transport, finance, tertiary and broadcasting sectors | 58 |
| ENERSINE Wall mount active filters • ENERSINE Modular active filters | 60 |
| ERMES Automatic transfer systems | 64 |
| ENERBATT 3G Wireless battery analysis, monitoring and protection system | 66 |

ABOUT US

Pleased to meet you

We are an ISO 9001 and 14001 certified multinational that designs and manufactures UPS and PQD (Uninterruptible Power Supply and Power Quality Device) for applications of all types and sizes.

In business since 1994 and with over 100 patents, we guarantee power continuity and quality to companies, IT or electromedical facilities, telecommunications, services in everyday locations and for everyday activities, and technology at home or in the workplace.



Providing answers

Our 150 engineers and a team of 1000 sales, marketing, logistics and production operators deliver projects, products and multilingual technical assistance worldwide.

Product assistance, transport and delivery optimisation, personalised documents, technical support: our watchwords are continuity, quality, reliability and transparency.

Count on us

Over thirty years of international relations and experience have taught us the importance of establishing transparent and direct relations, and of guaranteeing excellent products to meet the specific needs of every business, from large to small companies, from the office to home.

We are a flexible and reliable partner, to guarantee energy and continuity in any situation.



Picking up on the signs

Providing high-quality solutions to major international UPS manufacturers for three decades has given us authority and credibility. We have therefore decided to identify ourselves with a brand to respond to the needs of an increasingly demanding user base, attentive to the most sophisticated technologies that require continuity.

The AblereX product line was created on the basis of our experience.



Sharing the future

We track the market trends, technological innovations, and the impact of the Internet of Things on goods and production.

Investing constantly in research and development, innovation, smart facilities for conscious production, synergies with other manufacturers, new *training tools*, *services* and more is a sign of our commitment to tackling the challenges of Economy 4.0 and looking to the future to build it day after day with clients who select us to work alongside them.

The best follow-up there is

We serve large companies, as well as small companies aiming to grow by investing in steps. We choose a streamlined, tailor-made approach to simplify as much as possible and provide more efficient assistance.

We select a limited number of partners to build a development and action plan together in order to fully satisfy end customers.

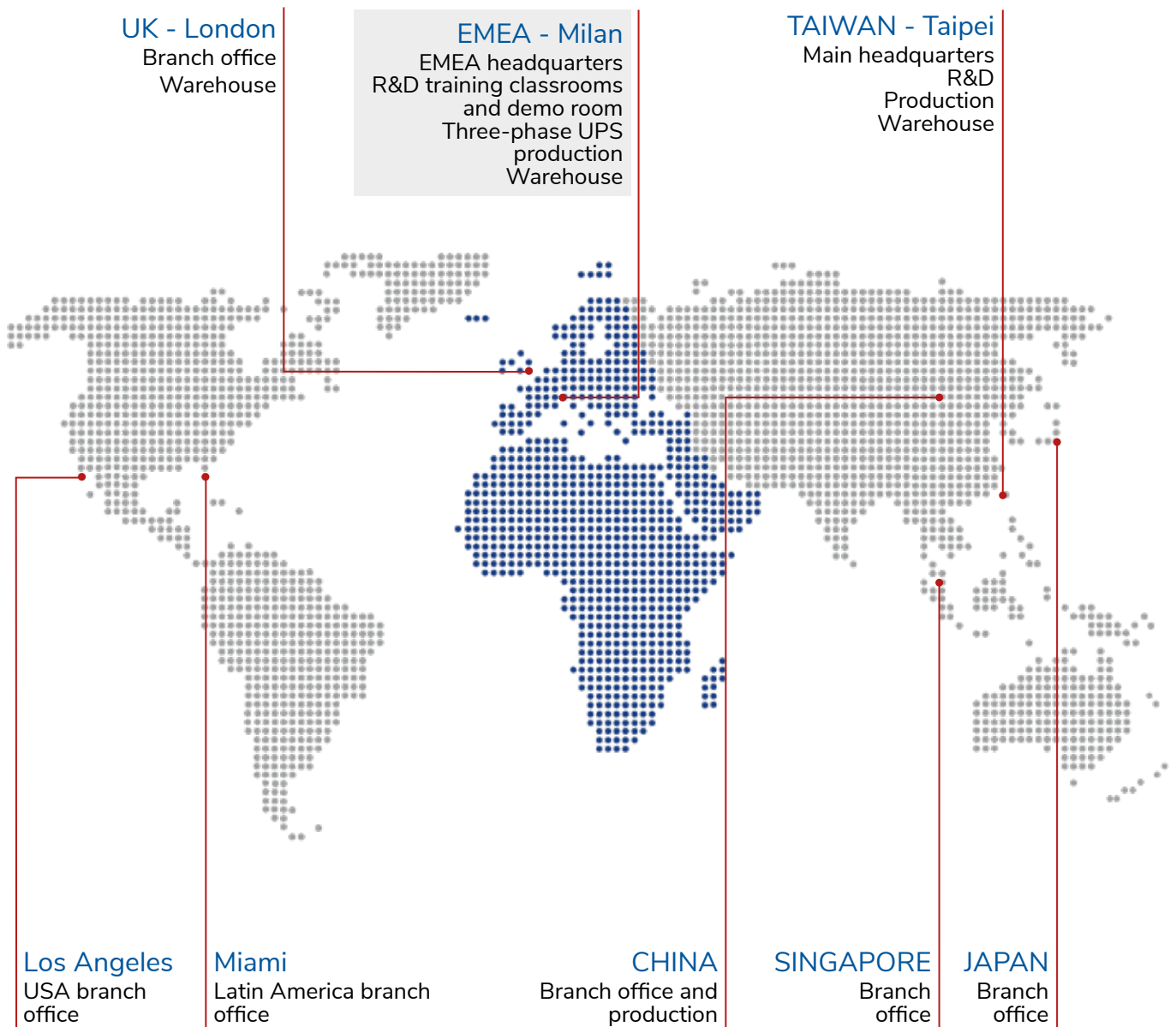
Guaranteeing flexibility, promptness, speed, efficiency.



ABOUT OUR RANGE FOR EVERY NEED

In the right places

We have international production sites, EMEA headquarters in Milan, Italy - in an ideal time zone for communications, in a great location close to the international hub at Malpensa, - a warehouse near the port of Venice to optimise logistics and distribution times for faster deliveries throughout the country.



Ten reasons to choose us



From small to extra-large

specific solutions for applications of all types and sizes and for large and small companies.



Prioritising excellence

constant investments in research, development and technologies to optimise production and create new product lines.



More than one flagship

over 100 patents and safety certifications, and a full range of quality products.



For all budgets, but not for everyone

advantageous prices, many previews and discounts on special orders, to access exclusive quality.



Seniority in the field

three decades of business in the sector guarantee experience, reliability, support and efficient services.



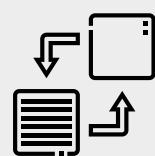
We get straight to the point

EMEA headquarters and warehouses in strategic areas to be in the right time zone for communications ensure faster and more efficient shipments and deliveries.



Not only UPS for standard applications

we develop unique features for specific applications, and offer a range of products that can improve power quality to maximise efficiency and guarantee significant energy savings.



Consider us your alter ego

Rapid and comprehensive product customisation, and technical and sales documentation; studies and implementation of customer projects.



All for one, one for all

technical assistance, demo room, on-site training in Italy and remotely.



Continuity with a capital C

we understand the importance of technology in all our daily lives, and we are committed to ensuring its continuity at all times.

A COMPLETE RANGE FOR EVERY NEED

Single-phase line-interactive UPS

Tower 650-2200 VA



Glamor
650-2200 VA



Glamor S
600-2000 VA

Single-and three-phase CPSS

Tower 4000-40000 VA



CPSS ZEN 1/1
4000-10000 VA



CPSS ZEN 3/3
10-40 kVA

Single-phase online UPS

Tower 1000-10000 VA



Ares Pro
1000-3000 VA



Mars
6000-10000 VA

Rack/Tower convertibles 1000-10000 VA



Ares Pro RT
1000-3000 VA



Mars RT
6000-10000 VA

Single-phase online UPS

Convertible Rack/Tower 1000-3000 VA



Odin RT
1000-3000 VA



Odin Harsh
1000-3000 VA

Active filters

Modular

Wall mount



Enersine

Three-phase monolithic UPS

Tower 10-800 kVA



Kronos Plus
10-40 kVA

Kronos Plus XL
10-40 kVA

Taurus
10-80 kVA

Titan
100-500 kVA

Titan GT
100-800 kVA

Three-phase modular UPS

THOR 15-900 kVA



Transfer systems

Single-phase



Ermes

Battery monitoring

Wireless



Enerbatt 3G

SINGLE-PHASE LINE-INTERACTIVE UPS

Plug and play line-interactive
UPS to protect home and small
business devices



Glamor
650-2200 VA



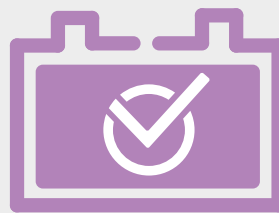
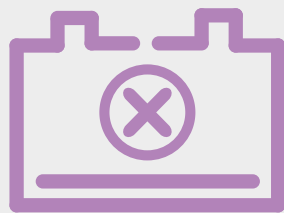
Glamor S
600-2000 VA

GLAMOR - GLAMOR S

- Line-interactive UPS to protect devices in the home, micro business and SMEs.
- Connected devices are always available because they can be powered up when there is no mains power.
- Automatic restart after prolonged blackouts means that it is always ready to protect your loads.
- The built-in automatic voltage regulator (AVR) stabilises the power when there are mains faults (e.g. spikes, sags, over- and under-voltages etc.), providing high levels of power protection and quality.
- Supplied with PowerMaster, intuitive software that can be downloaded for free. All you need in a box: supplied with input, output power cables and USB cable to protect hardware and data.
- The backlit LCD display makes it easy to read the UPS status, so all parameters can be kept under control.
- Easy battery replacement.
- The plug-in feature ensures that the battery is always charged: the UPS charges the battery even when it is switched off.
- The built-in USB communication port makes it easy to connect to the PC.
- All needed cables included: input, output power and USB cables.

Low cost of ownership due to longer expected battery life

- Wide input allowable tolerance in both voltage and frequency (160-290V - 45-65 Hz): prevents batteries from going into operation when there is a major variation in input power.
- ABDM (Automatic Battery Discharge Management) protects batteries from deep discharge by increasing the cut-off voltage (battery cut voltage), the voltage at which a battery is considered fully discharged.
- Charge control: prevents overcharging of batteries that leads to their degradation by modulating the voltage to the battery to maintain a full charge during its operation.
- Automatic testing every 24 hours allows early detection of problems protecting batteries from failure.



PowerMaster: UPS monitoring and management software

Main features of the monitoring and control software (available free of charge at www.ablerex.eu/download):

- quick and easy installation and configuration via USB;
- orderly, automatic closure of the applications and operating system, even if the user is not there;
- UPS monitoring and power supply event reporting;
- transmission of alarms for the most common power supply problems and notification of system shutdown via email and text message;
- automatic testing of UPS and battery;
- available for Windows, MAC, Linux, etc. (full list available at www.ablerex.eu/download).

GLAMOR 650-2200 VA

Plug&play UPS for the protection of home and small business devices



GLAMOR S 600-2000 VA

Pure sine wave UPS for the non-stop supply of high end devices or with PFC power supply.
UPS equipped with phone and data lines protection



Applications

- PCs
- Wi-Fi routers
- Video game consoles
- TVs
- Satellite receivers
- POS
- Cash registers
- Surveillance cameras
- Home monitoring devices

Applications

- Workstations
- Gaming PCs
- Small servers
- Networking equipment
- Hi-Fi and home theatre TV
- Video game consoles
- Satellite receivers
- Video surveillance
- Pellet stoves

Uptime table

Consulting the summary table below will let you quickly identify a model based on the total VA/W consumption of the devices to be protected.

| Model | GLAMOR - Line-interactive | | | | | GLAMOR S - Line-interactive | | | | |
|-----------------------------|---------------------------|-------------------|-------------------|-------------------|-------------------|-----------------------------|-------------------|-------------------|-------------------|-------------------|
| | 650 VA | 1000 VA | 1200 VA | 1600 VA | 2200 VA | 600 VA | 800 VA | 1000 VA | 1500 VA | 2000 VA |
| UPS power in W | 360 | 500 | 600 | 900 | 1200 | 420 | 560 | 700 | 1050 | 1400 |
| Battery | 1 of 12V | | 2 of 12V | | | 1 of 12V | | 2 of 12V | | |
| Device input power in Watts | Uptime in minutes | Uptime in minutes | Uptime in minutes | Uptime in minutes | Uptime in minutes | Uptime in minutes | Uptime in minutes | Uptime in minutes | Uptime in minutes | Uptime in minutes |
| 52.5 | 29 | 42 | 70 | 72 | >90 | 30 | 42 | 72 | >90 | >90 |
| 105 | 5 | 17 | 30 | 31 | 42 | 13 | 17 | 30 | 43 | 43 |
| 210 | 4 | 4 | 12 | 12 | 16 | 4 | 6 | 13 | 17 | 17 |

Indicative input power of various devices (you are advised to check actual input power)

- WI-Fi router 20/30 W • POS + Cash register 40/50 W • NAS 30/60 W • 43" TV 100 W • Inkjet printer / Scanner 180 W • Desktop PC + 21" LCD monitor 250 W • Desktop Gaming PC + 24" LCD monitor 500 W • High-end dual-processor PC + 32" LCD monitor 800 W • Rack/tower server from 300 to 1000 W • Video game console 140 W

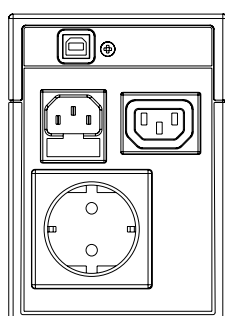
GLAMOR - GLAMOR S

GLAMOR TECHNICAL DATA SHEET

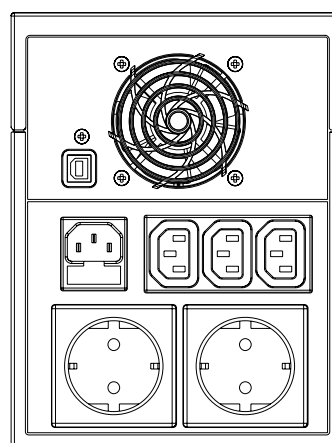
| MODEL | | GLAMOR 650 | GLAMOR 1000 | GLAMOR 1200 | GLAMOR 1600 | GLAMOR 2200 |
|--------------------------|---|--|--|--------------------------|-------------|-------------|
| POWER | VA | 650 | 1000 | 1200 | 1600 | 2200 |
| | W | 360 | 500 | 600 | 900 | 1200 |
| INPUT | Rated voltage | 160 – 290 Vac | | | | |
| | Frequency | 45 – 65 Hz | | | | |
| OUTPUT | Rated voltage | 220/230/240 Vac ± 10% | | | | |
| | Frequency on battery power | 50/60 Hz ±1 Hz | | | | |
| | Waveform | Pseudo-sine wave | | | | |
| | Output sockets | 1 IEC 320-C13 + 1 Schuko | | 3 IEC 320-C13 + 2 Schuko | | |
| GENERAL | Dimensions (WxDxH) mm | 100x292x140 | | 148x315x198 | | |
| | Weight (kg) | 5 | 5.5 | 9 | 10.5 | 11.8 |
| | Alarms | Audible and visual alarm alerts for: power failure, low battery, overload, and UPS fault | | | | |
| | Protection | Overload, short circuit, deep discharge, overcharging | | | | |
| | Plug-in battery charging feature | Standard for all models | | | | |
| | Cold start from the battery without mains power | Standard for all models | | | | |
| BATTERY | Number and battery type | | 12V VRLA, AGM (maintenance-free lead) | | | |
| | | | 1 of 12V | | 2 of 12V | |
| | Uptime with internal battery (in minutes)* | 50% load | 4 | 4 | 12 | 9 |
| 75% load | | 1 | 1 | 6 | 5 | 4 |
| ENVIRONMENTAL PARAMETERS | Operating temperature** | | 0 – 40°C | | | |
| | Relative humidity | | 0% – 90% (without condensing) | | | |
| | Altitude (a.s.l.) | | <1000 m with no power derating, >1000 m with 1% derating for every 100 m. | | | |
| | Audible noise at 1 m. | | ≤40 dB | | | |
| CONNECTIVITY | Communication ports | | USB | | | |
| | User interface | | LCD display showing: Operating mode (AC Mode/AVR Mode/Battery Mode), battery charge level, input and output voltage, percentage load, fault, or near end of battery life | | | |
| | Compatible software platforms | | Microsoft Windows, Linux, Mac | | | |
| REGULATIONS | Standards | | IEC EN 62040-1, IEC EN 62040-2, IEC EN 62040-3 | | | |
| | Marking | | CE, UKCA | | | |

* To be verified according to the battery parameters ** Subject to conditions

GLAMOR 650/1000



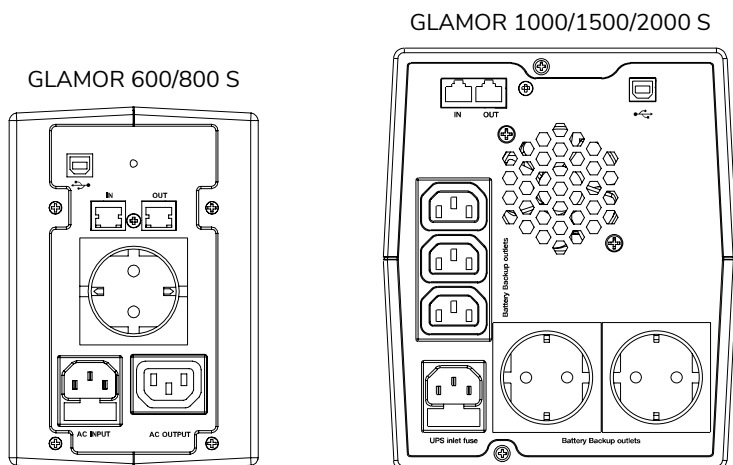
GLAMOR 1200/1600/2200



GLAMOR S TECHNICAL DATA SHEET

| MODEL | | GLAMOR 600S | GLAMOR 800S | GLAMOR 1000S | GLAMOR 1500S | GLAMOR 2000S |
|--------------------------|---|--|---------------------------------------|--------------------------|--------------|--------------|
| POWER | VA | 600 | 800 | 1000 | 1500 | 2000 |
| | W | 420 | 560 | 700 | 1050 | 1400 |
| INPUT | Rated voltage | 160 – 290 Vac | | | | |
| | Frequency | 45 – 65 Hz | | | | |
| OUTPUT | Rated voltage | 220/230/240 Vac ± 10% | | | | |
| | Frequency on battery power | 50/60 Hz ± 1 Hz | | | | |
| | Waveform | Sine wave | | | | |
| | Output sockets | 1 IEC 320-C13 + 1 Schuko | | 3 IEC 320-C13 + 2 Schuko | | |
| GENERAL | Dimensions (WxDxH) mm | 116x305x171 | | 165x393x198 | | |
| | Weight (kg) | 5.5 | 7.1 | 9.3 | 12.4 | 12.6 |
| | Alarms | Audible and visual alarm alerts for: power failure, low battery, overload, and UPS fault. | | | | |
| | Protection | Overload, short circuit, deep discharge, overcharging | | | | |
| | Plug-in battery charging feature | Standard for all models | | | | |
| | Cold start from the battery without mains power | Standard for all models | | | | |
| BATTERY | Number and battery type | | 12V VRLA, AGM (maintenance-free lead) | | | |
| | | | 1 of 12V | | 2 of 12V | |
| | Uptime with internal battery (in minutes)* | 50% load | 7 | 4 | 5 | 4 |
| 75% load | | 2 | 2 | 3 | 2 | 1 |
| ENVIRONMENTAL PARAMETERS | Operating temperature** | 0 – 40°C | | | | |
| | Relative humidity | 0% – 90% (without condensing) | | | | |
| | Altitude (a.s.l.) | <1000 m with no power derating, >1000 m with 1% derating for every 100 m. | | | | |
| | Audible noise at 1 m. | ≤40 dB | | | | |
| CONNECTIVITY | Communication ports | USB | | | | |
| | User interface | LCD display showing: Operating mode (AC Mode/AVR Mode/Battery Mode), battery charge level, input and output voltage, percentage load, fault, or near end of battery life | | | | |
| | Compatible software platforms | Microsoft Windows, Linux, Mac OS | | | | |
| REGULATIONS | Standards | IEC EN 62040-1, IEC EN 62040-2, IEC EN 62040-3 | | | | |
| | Marking | CE, UKCA | | | | |

* To be verified according to the battery parameters ** Subject to conditions



SINGLE-PHASE ONLINE UPS

Online UPS for maximum protection and longer uptime of critical devices for small, medium and large businesses



Ares Pro
1000-3000 VA

Mars
6000-10000 VA

Ares Pro RT
1000-3000 VA



Mars RT
6000-10000 VA



Odin
Odin Harsh
1000-3000 VA

ARES PRO - ARES PRO RT

- Online double conversion technology (VFI) from 1000 VA to 3000 VA with a power factor of 0.9.
- Easy to install.
- Low running costs: the high efficiency VFI and ECO features minimise energy consumption.
- High uptime expandability.
- User-friendly monitoring software can be downloaded free and is compatible with the principle operating systems, for: monitoring functions, diagnostics, controlled shutdown of loads in the event of blackouts.
- High overload handling capacity.
- Constant voltage constant frequency (CVCF) output mode for maximum protection of particularly sensitive loads (e.g. electro-medical equipment).
- Wide input voltage and frequency ranges reduce battery switching, thereby increasing battery life and efficiency.
- Option to set the percentage residual battery charge from 3% to 100% of the available capacity.
- Accurate calculated remaining uptime is shown on the display.
- Two sets of IEC sockets that can be programmed separately.
- Cold start option without mains power.
- Firmware can be upgraded easily to implement new features.
- EPO or On/Off, with remote option.
- RS232 and USB ports, slots for additional communication cards.
- Suitable for CEI 0-16 applications.
- Supplied with input and output power cables.
- Lockable IEC fitted as standard to provide additional protection against accidental disconnection of critical loads.

Key options

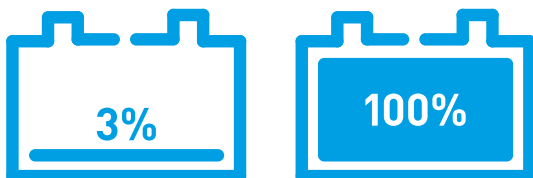
- Cards: RS485, SNMP/web and relay card with dry contacts to send the UPS status to various systems, such as BMS, PLC, SCADA and AS400.
- External manual bypass with additional sockets.
- External battery cabinets.
- Rack mounting rail kit for RT models.

Longer battery life

- Set the battery discharge level (3-100%) with the free software.

Battery reserve management

- The UPS turns off when it reaches the set residual battery charge level.
- The UPS can be switched on again manually even without mains power.



Indicative input power of various devices
(you are advised to check actual input power)

- Router 30 W • POS + Cash register 50 W • NAS 60 W • 43" TV 100 W • Inkjet printer / Scanner 180 W • Desktop PC + 21" LCD monitor 250 W • Desktop Gaming PC + 24" LCD monitor 500 W • High-end dual-processor PC + 32" LCD monitor 800 W • Rack/tower server from 300 to 1000 W • Video game console 140 W

Uptime table

Consulting the summary table below will let you quickly identify a model based on the total VA/W consumption of the devices to be protected.

| ARES PRO Online | | | |
|-----------------------------|-------------------|-------------------|-------------------|
| Model | 1000 VA | 2000 VA | 3000 VA |
| UPS power in W | 900 | 1800 | 2700 |
| Device input power in Watts | Uptime in minutes | Uptime in minutes | Uptime in minutes |
| 52,5 | > 90 | > 90 | > 90 |
| 105 | 60 | 90 | > 90 |
| 210 | 33 | 72 | > 90 |
| 315 | 20 | 50 | 65 |
| 455 | 14 | 33 | 42 |
| 595 | 9 | 21 | 31 |
| 700 | 7 | 18 | 26 |
| 900 | 5 | 15 | 18 |
| 1050 | | 12 | 15 |
| 1225 | | 9 | 13 |
| 1400 | | 7 | 12 |
| 1800 | | 5 | 8 |
| 2100 | | | 6 |
| 2700 | | | 4 |

ARES PRO and ODIN are the ideal UPS for applications that require extended battery operation and for medium-voltage substations in accordance with CEI 0-16. Their advanced technology maximises battery life and ensures high efficiency.

ARES PRO 1000-3000 VA

For applications that require tower models.



ARES PRO RT 1000-3000 VA

Suitable for all rack types including compact. RT models with lockable sockets are extremely versatile: the rotating display panel means they can be easily transformed into tower versions.



Applications

- High-end PCs
- Workstations and servers
- Server rooms and micro data centres
- Electromedical equipment
- Network and telecommunications equipment
- Medium-voltage substations
- PLC control cabinets
- BMS and SCADA systems
- Video surveillance, security and IoT devices

Special applications

Medium-voltage substations and control cabinets (PLC)

AblereX has a solution whenever you need residual battery capacity. With AblereX firmware, you can be sure that the UPS always has enough battery capacity to be turned on again and power the load.

Benefits

- Built-in feature that is free and easy to implement.
- Backup of at least 60 minutes, residual charge control in accordance with CEI 0-16.
- Easily customisable residual battery capacity.
- Cold UPS start-up.
- Battery alarm and residual backup time indicator.
- Maximises battery protection and life.

To ensure in any conditions 24/7 opening of electric shutters or doors of shops, bars, restaurants, warehouses and service businesses

If an electric shutter is protected by a UPS, and for some reason the mains circuit breaker trips or there is no power, the open/close mechanisms cannot be operated. The "remote on/off" option means that the AblereX UPS can be switched on even without mains power so the electric shutter can be opened or closed.

Benefits

- Option that is easy to implement on request.
- Reduces TCO by avoiding the need to overdimension the UPS and batteries to overcome long periods without power (e.g. when closing a business for holidays).
- Maximises battery protection and life.

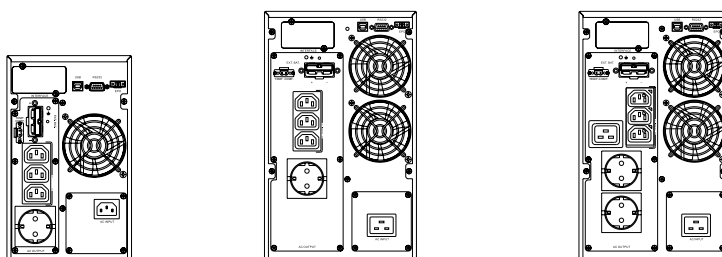
ARES PRO - ARES PRO RT

ARES PRO TECHNICAL DATA SHEET

| MODEL | | ARES PRO 1000 | ARES PRO 2000 | ARES PRO 3000 | |
|--------------------------|---|--|-------------------------|---|----|
| UPS | VA | 1000 | 2000 | 3000 | |
| | W | 900 | 1800 | 2700 | |
| INPUT | Rated voltage* | 110 – 300 Vac | | | |
| | Frequency | 44 – 66 Hz | | | |
| | Power factor | >0.99 | | | |
| OUTPUT | Rated voltage | 200/208/220/230/240 Vac | | | |
| | Voltage distortion | <3% with linear load I, <7% with distorting load | | | |
| | Voltage stability | ±1% | | | |
| | Frequency | 50/60 Hz (selectable) | | | |
| | Frequency stability | ±1 Hz or ±3 Hz (selectable) | | | |
| | Power factor | 0.9 | | | |
| | Crest factor | 3:1 | | | |
| | Waveform | Pure sine wave | | | |
| | Output sockets | 3 x IEC C13 1 Schuko | 3 x IEC C13 2 Schuko | 3 x IEC C13 1 x IEC C19 lockable 2 Schuko | |
| EFFICIENCY | VFI mode | Up to 92% | | | |
| | ECO mode | Up to 97% | | | |
| GENERAL | Dimensions (WxDxH) mm | 154x382x211 | 192x470x250 | 192x451x319.9 | |
| | Weight (kg) | 11.6 | 22.2 | 29.8 | |
| | Alarms | Audible and visual alarm alerts for: power failure, low battery, bypass transfer, and UPS fault. | | | |
| | Protection | Overload, overheating, short circuit, deep discharge, battery overcharging. | | | |
| | Operating mode | Multi-mode: VFI, ECO, Constant voltage constant frequency (CVCF) output. | | | |
| | Cold start from the battery without mains power | Included | | | |
| BATTERY | Battery type | 12V VRLA, AGM (maintenance-free lead) | | | |
| | Uptime with internal battery in minutes | 50% load | 14 | 15 | 12 |
| | | 100% load | 5 | 5 | 4 |
| | Charging time (90%) | 4 – 6 hours | | | |
| | Battery expansion module dimensions (WxDxH) mm ** | 154x403.6x258.2 | 192x552.8x319.9 | | |
| ENVIRONMENTAL PARAMETERS | Operating temperature*** | 0 – 40°C | | | |
| | Relative humidity | 0% – 90% (without condensing) | | | |
| | Altitude (a.s.l.) | <1000 m with no power derating, >1000 m with 1% derating for every 100 m. | | | |
| | Audible noise at 1 m. | ≤50 dBA | | | |
| CONNECTIVITY | Built-in communication ports | USB, RS232, EPO and additional slots for optional cards | | | |
| | User interface | LCD and function keys (parameters: voltage, frequency, percentage load, battery voltage, output voltage, estimated uptime, UPS temperature). | | | |
| | Optional accessories | Cards: SNMP, RS485 ModBus and dry relay contacts | | | |
| | Compatible software platforms | Microsoft Windows, Linux, Mac OS, VMware | | | |
| REGULATIONS | Standards | IEC EN 62040-1, IEC EN 62040-2, IEC EN 62040-3 | | | |
| | Marking | CE, UKCA | | | |

* Depending on the load ** Battery weight and configuration depends on the required uptime *** To be verified according to the battery parameters

ARES PRO 1000/2000/3000

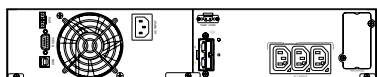


ARES PRO RT TECHNICAL DATA SHEET

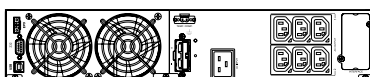
| MODEL | | ARES PRO 1000RT | ARES PRO 2000RT | ARES PRO 3000RT | |
|--------------------------|---|---|----------------------|--|----|
| POWER | VA | 1000 | 2000 | 3000 | |
| | W | 900 | 1800 | 2700 | |
| INPUT | Rated voltage* | 110 – 300 Vac | | | |
| | Frequency | 44 – 66 Hz | | | |
| | Power factor | >0.99 | | | |
| OUTPUT | Rated voltage | 200/208/220/230/240 Vac | | | |
| | Voltage distortion | <3% with linear load, <7% with distorting load | | | |
| | Voltage stability | ±1% | | | |
| | Frequency | 50/60 Hz (selectable) | | | |
| | Frequency stability | ±1 Hz or ±3 Hz (selectable) | | | |
| | Power factor | 0.9 | | | |
| | Crest factor | 3:1 | | | |
| | Waveform | Pure sine wave | | | |
| | Output sockets | 3 x IEC C13 lockable | 6 x IEC C13 lockable | 1 x IEC C19 lockable 6 x IEC C13 lockable | |
| | EFFICIENCY | VFI mode | Up to 92% | | |
| ECO mode | | Up to 97% | | | |
| GENERAL | Dimensions (WxDxH) mm | 440x405x88 (2U) | 440x600x88 (2U) | 440x600x88 (2U) | |
| | Weight (kg) | 11.7 | 21.8 | 24.6 | |
| | Alarms | Audible and visual alarm alerts for: power failure, low battery, bypass transfer, and UPS fault. | | | |
| | Protection | Overload, overheating, short circuit, deep discharge, battery overcharging. | | | |
| | Operating mode | Multi-mode: VFI, ECO, Constant voltage constant frequency (CVCF) output. | | | |
| | Cold start from the battery without mains power | Included | | | |
| | Battery type | 12V VRLA, AGM (maintenance-free lead) | | | |
| BATTERY | Uptime with internal battery in minutes | 50% load | 14 | 15 | 12 |
| | | 100% load | 5 | 5 | 4 |
| | Charging time (90%) | 4 – 6 hours | | | |
| | Battery expansion module dimensions (WxDxH) mm ** | 440x430x88(2U) | 440x581x88 (2U) | | |
| ENVIRONMENTAL PARAMETERS | Operating temperature*** | 0 – 40°C | | | |
| | Relative humidity | 0% – 90% (without condensing) | | | |
| | Altitude (a.s.l.) | <1000 m with no power derating, >1000 m with 1% derating for every 100 m. | | | |
| | Audible noise at 1 m. | ≤50 dBA | | | |
| CONNECTIVITY | Built-in communication ports | USB, RS232, EPO and additional slots for optional cards | | | |
| | User interface | LED, LCD and function keys (parameters: voltage, frequency, percentage load, battery voltage, output voltage, estimated uptime, UPS temperature). | | | |
| | Optional accessories | Cards: SNMP, RS485 ModBus and dry relay contacts | | | |
| | Compatible software platforms | Microsoft Windows, Linux, Mac OS, VMware | | | |
| REGULATIONS | Standards | IEC EN 62040-1, IEC EN 62040-2, IEC EN 62040-3 | | | |
| | Marking | CE, UKCA | | | |

* Depending on the load ** Battery weight and configuration depends on the required uptime *** To be verified according to the battery parameters

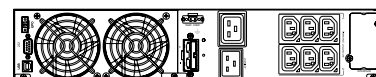
ARES PRO 1000 RT



ARES PRO 2000 RT



ARES PRO 3000 RT



SINGLE-PHASE ONLINE UPS

ODIN - ODIN HARSH

- Online double conversion technology (VFI) from 1000 VA to 3000 VA with a power factor of 0.9.
- Versatile: the display panel can be turned to transform the rack into a tower.
- Easy to install.
- Low running costs: the high efficiency VFI and ECO features minimise energy consumption.
- High uptime expandability.
- User-friendly monitoring software can be downloaded free and is compatible with the principle operating systems, for: monitoring functions, diagnostics, controlled shutdown of loads in the event of blackouts.
- High overload handling capacity.
- Constant voltage constant frequency (CVCF) output mode for maximum protection of particularly sensitive loads.
- Wide input voltage and frequency ranges reduce battery switching, thereby increasing battery life and

efficiency.

- Option to set the percentage residual battery charge from 3% to 100% of the available capacity.
- The accurately calculated residual operating time is shown on the display.
- Two sets of IEC sockets that can be programmed separately.
- Cold start option without mains power.
- The firmware can be upgraded easily to implement new features.
- EPO or On/Off, with remote option.
- RS232 and USB ports, slots for optional communication cards.

Specifically for ODIN HARSH

- Built to guarantee efficiency and performance from -10°C to 55°C.
- Batteries designed for extreme temperatures.

ODIN - ODIN HARSH 1000-3000 VA

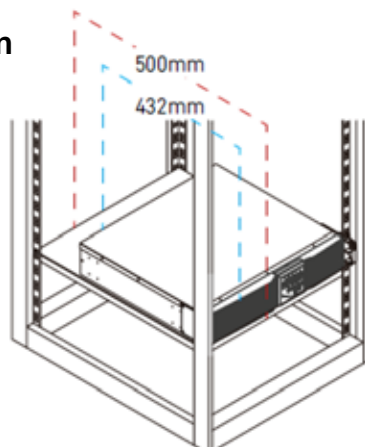
When you need to prevent a service outage and ensure safety and continuity in extreme conditions, you need a robust, highly reliable UPS.



Applications

- All applications in harsh climate areas
- Industrial applications
- IT and telecoms (transmitting-and-receiving stations)
- Underground transport
- Traffic control
- Wind farms
- Electromedical equipment

Suitable for 600mm cabinets.



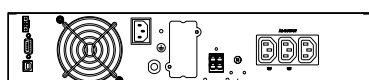
ODIN HARSH SINGLE-PHASE 1000-3000VA

ODIN - ODIN HARSH TECHNICAL DATA SHEET

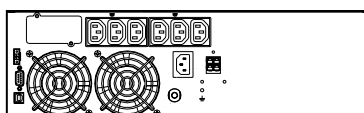
| MODEL | | ODIN 1000RT | ODIN 2000RT | ODIN 3000RT | |
|--|---|---|--|----------------------------|----|
| POWER | VA | 1000 | 2000 | 3000 | |
| | W | 900 | 1800 | 2700 | |
| INPUT | Rated voltage | Standard | 110/150/180-300 VAC (@-10°C~40°C Based on load percentage 0 ~ 60% / 0 ~ 75% / 0 ~ 100%) | | |
| | | Harsh | "110/150/180-300 VAC (@-10°C~40°C Based on load percentage 0 ~ 60% / 0 ~ 75% / 0 ~ 100%) (@40°C~55°C 180-300 VAC Based on load percentage 0-60%)" | | |
| | Frequency | 44 – 66 Hz | | | |
| | Power factor | >0.99 | | | |
| OUTPUT | Rated voltage | Standard | 200/208/220/230/240 Vac | | |
| | | Harsh | 230 V, adjustable to 200/208/220/230/240(@-10°C~40°C) 230 V, adjustable to 220/230/240(@40°C~55°C) | | |
| | Voltage distortion | <3% with linear load, <6% with distorting load | | | |
| | Voltage stability | ±1% | | | |
| | Frequency | 50/60 Hz (selectable) | | | |
| | Frequency stability | ±1 Hz or ±3 Hz (selectable) | | | |
| | Power factor | Standard | 0.9 | | |
| | | Harsh | -10 /+ 40 °C PF = 0.9 , +40/+55 °C PF = 0.6 | | |
| | Crest factor | 3:1 | | | |
| | Waveform | Pure sine wave | | | |
| | Output sockets | 3 x IEC C13 | 6 x IEC C13 | 6 x IEC C13 1 x IEC C19 | |
| | EFFICIENCY | VFI mode | up to 92% | | |
| | | ECO mode | up to 97% | | |
| GENERAL | Dimensions (WxDxH) mm | 440x405x88 (2U) | 440x432x132 (3U) | 440x432x176 (4U) | |
| | Weight (kg) *** | 11.7 | 23 | 25 | |
| | Alarms | Audible and visual alarm alerts for: power failure, low battery, bypass transfer, and UPS fault. | | | |
| | Protection | Overload, overheating, short circuit, deep discharge, battery overcharging. | | | |
| | Operating mode | Multi-mode: VFI, ECO, Constant voltage constant frequency (CVCF) output. | | | |
| | Cold start from the battery without mains power | Included | | | |
| BATTERY | Battery type | Sealed maintenance free lead acid 12Vdc | | | |
| | Number per string | 3 | 6 | | |
| | Uptime with internal battery in minutes | 50% Load | 14 | 15 | 12 |
| | | 100% Load | 5 | 5 | 4 |
| | Charging time (90%) | 4 – 6 hours | | | |
| Battery expansion module dimensions (WxDxH) mm | 440x430x88(2U) | 440x430x176 (4U) | | | |
| ENVIRONMENTAL PARAMETERS | Operating temperature | 0 – 40°C | | | |
| | Relative humidity | 0% – 90% (non-condensing) | | | |
| | Altitude (a.s.l.) | <1000 m with no power derating, >1000 m with 1% derating for every 100 m. | | | |
| | Audible noise at 1 m. | ≤50dB | | | |
| CONNECTIVITY | Built-in communication ports | USB, RS232, EPO and additional slots for optional cards | | | |
| | User interface | LED, LCD and function keys (parameters: voltage, frequency, percentage load, battery voltage, output voltage, estimated uptime, UPS temperature). | | | |
| | Optional accessories | Cards: SNMP, RS485 ModBus and dry relay contacts | | | |
| | Compatible software platforms | Microsoft Windows, Linux, Mac OS, VMware | | | |
| REGULATIONS | Standards | IEC EN 62040-1, IEC EN 62040-2, IEC EN 62040-3 | | | |
| | Marking | CE | | | |

* Battery weight and configuration depends on the required uptime **To be verified according to the battery parameters

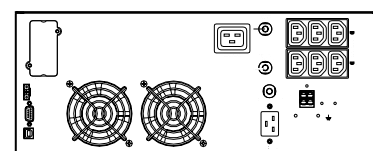
ODIN 1000RT



ODIN 2000RT



ODIN 3000RT



MARS - MARS RT

- Maximum power availability: kVA=kW.
- Up to 4 units in parallel, 3 + 1 redundancy possible with parallel kit.
- Low running costs: the high efficiency VFI and ECO features minimise energy consumption.
- User-friendly monitoring software can be downloaded free and is compatible with the principle operating systems, for: monitoring functions, diagnostics, controlled shutdown of loads in the event of faults.
- Cold start option without mains power.
- Wide input voltage and frequency ranges reduce battery switching, thereby increasing battery life and efficiency.
- Flexible battery configuration to suit your uptime requirements.
- Accurate calculated remaining uptime is shown on the display.
- Hot-swappable batteries: the batteries can be replaced while the UPS is running.
- Firmware can be upgraded easily to implement new features.
- EPO or On/Off, with remote option.
- 6-step operation test that can be activated manually.
- RS232 and USB ports, slots for optional communication cards.

Key options

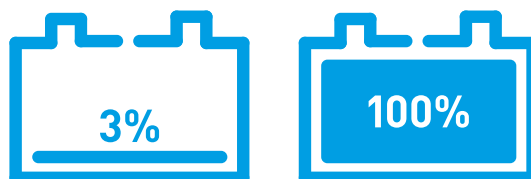
- Cards: RS485, RS232, SNMP/web and relay card with dry contacts to send the UPS status to various systems, such as BMS, PLC, SCADA and AS400.
- Parallel kit.
- External battery cabinets.
- External manual bypass with additional sockets.
- Rack mounting rail kit for RT models.

Longer battery life

- Set the battery discharge level (3-100%) with the free software.

Battery reserve management

- The UPS turns off when it reaches the set residual battery charge level.
- The UPS can be switched on again manually even without mains power.



The MARS 6000–10000 VA UPS offers the maximum available power (kVA=kW), and can be connected in parallel for power or redundancy and are suitable for applications that require greater uptime.

MARS 6000-10000 VA



MARS RT 6000-10000 VA



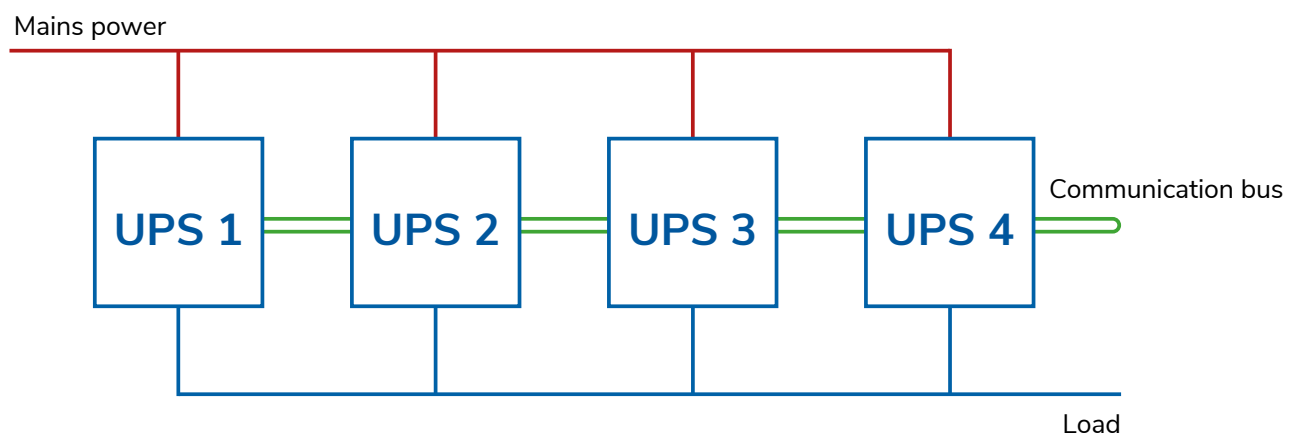
Applications

- Critical IT applications
- Server rooms and micro data centres
- Network, VOIP and telecommunications equipment
- Video surveillance, security and IoT devices
- Electromedical equipment
- Industrial applications

Parallel operation

Purchasing the parallel kit enables this feature, allowing the load to be shared by more than one UPS.

- Up to 4 units can be connected in parallel for a total power of 40 kVA.
- Load always protected thanks to the option of 3+1 redundancy (up to 30 kVA); in the event of a faulty UPS, it is replaced by the fourth module.
- No single point of failure thanks to the communication bus loop connection.

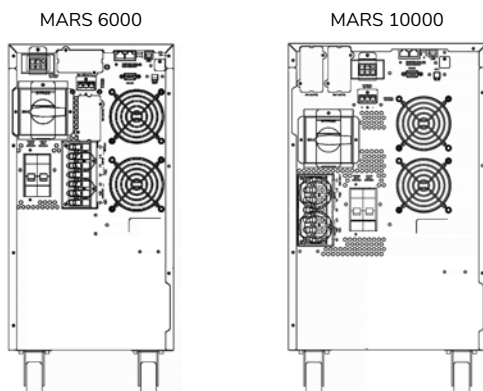


MARS - MARS RT

MARS TECHNICAL DATA SHEET

| MODEL | | MARS 6000 | MARS 10000 | |
|---|---|--|-------------|----|
| POWER | VA | 6000 | 10000 | |
| | W | 6000 | 10000 | |
| INPUT | Rated voltage* | 110 – 280 Vac | | |
| | Frequency | 45 – 70 Hz | | |
| | Power factor | >0.99 | | |
| OUTPUT | Rated voltage | 200/208/220/230/240 Vac selectable | | |
| | Voltage distortion | ≤2% with linear load, ≤7% with distorting load | | |
| | Voltage stability | ±1% | | |
| | Frequency | 50/60 Hz (selectable) | | |
| | Frequency stability | ≤0.2% (free running) | | |
| | Power factor | 1 | | |
| | Crest factor | 3:1 | | |
| | Waveform | Pure sine wave | | |
| | Output connection | Terminal blocks | | |
| EFFICIENCY | VFI mode | Up to 94% | | |
| | ECO mode | Up to 98% | | |
| GENERAL | Dimensions (WxDxH) mm | 240x700x513 | 288x700x513 | |
| | Weight (kg) | 59 | 78 | |
| | Alarms | Audible and visual alarm alerts for: power failure, low battery, bypass transfer, and UPS fault. | | |
| | Protection | Overload, overheating, short circuit, deep discharge, battery overcharging. | | |
| | Operating mode | Multi-mode: VFI, ECO, frequency converter (CVCF) | | |
| | Cold start from the battery without mains power | Included | | |
| | Parallel connection | Up to 4 units for 3+1 redundancy | | |
| BATTERY | Battery type | 12V VRLA, AGM (maintenance-free lead) | | |
| | Uptime with internal battery in minutes | 50% load | 12 | 11 |
| | | 100% load | 4 | 4 |
| | Charging time (90%) | 4 – 6 hours | | |
| Battery expansion module dimensions (WxDxH) mm ** | 288x663x661 | | | |
| ENVIRONMENTAL PARAMETERS | Operating temperature*** | 0 – 40°C | | |
| | Relative humidity | 0% – 90% (without condensing) | | |
| | Altitude (a.s.l.) | <1000 m with no power derating, >1000 m with 1% derating for every 100 m. | | |
| | Audible noise at 1 m. | ≤60 dBA | | |
| CONNECTIVITY | Built-in communication ports | USB, RS232, EPO, remote On/Off contact, and additional slots for optional cards | | |
| | User interface | LCD and function keys (parameters: voltage, frequency, percentage load, battery voltage, output voltage, estimated uptime, UPS temperature). | | |
| | Optional accessories | Cards: SNMP, RS485 ModBus, dry relay contacts | | |
| | Compatible software platforms | Microsoft Windows, Linux, Mac OS, VMware | | |
| REGULATIONS | Standards | IEC EN 62040-1, IEC EN 62040-2, IEC EN 62040-3 | | |
| | Marking | CE, UKCA | | |

* Depending on the load ** Battery weight and configuration depends on the required uptime *** To be verified according to the battery parameters

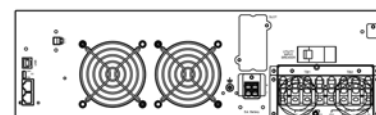
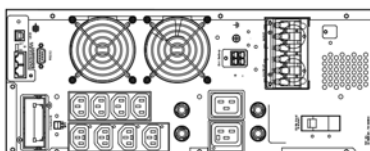


MARS RT TECHNICAL DATA SHEET

| MODEL | | MARS 6000RT | MARS 6000RTC | MARS 10000RT | |
|--|---|---|--|--------------|--|
| POWER | VA | 6000 | 6000 | 10000 | |
| | W | 6000 | 6000 | 10000 | |
| INPUT | Rated voltage* | 110 – 280 Vac | | | |
| | Rated frequency | 45 – 70 Hz | | | |
| | Power factor | >0.99 | | | |
| OUTPUT | Rated voltage | 200/208/220/230/240 Vac selectable | | | |
| | Voltage distortion | ≤2% with linear load, ≤7% with distorting load | | | |
| | Voltage stability | ±1% | | | |
| | Frequency | 50/60 Hz (selectable) | | | |
| | Frequency stability | ≤0.2% (free running) | | | |
| | Power factor | 1 | | | |
| | Crest factor | 3:1 | | | |
| | Waveform | Pure sine wave | | | |
| EFFICIENCY | VFI mode | Up to 94% | | | |
| | ECO mode | Up to 98% | | | |
| GENERAL | Dimensions (WxDxH) mm | 440x680x88 | 440x680x176 | 440x680x132 | |
| | Weight (kg) | 18.5 | 60 | 21.5 | |
| | Alarms | Audible and visual alarm alerts for: power failure, low battery, bypass transfer, and UPS fault. | | | |
| | Protection | Overload, overheating, short circuit, deep discharge, battery overcharging. | | | |
| | Operating mode | Multi-mode: VFI, ECO, frequency converter (CVCF) | | | |
| | Cold start from the battery without mains power | Included | | | |
| | Parallel connection | Up to 4 units for 3+1 redundancy | | | |
| BATTERY | Battery type | 12V VRLA, AGM (maintenance-free lead) | | | |
| | Uptime with battery in minutes | 50% load | Depends on the external battery cabinets | 7 | Depends on the external battery cabinets |
| | | 100% load | Depends on the external battery cabinets | 3 | Depends on the external battery cabinets |
| | Charging time (90%) | 4 hours | | | |
| Battery expansion module dimensions (WxDxH) mm** | 440x685x132 (3U) | 440x685x88 (2U) | 440x685x132 (3U) | | |
| ENVIRONMENTAL PARAMETERS | Operating temperature*** | 0 – 40°C | | | |
| | Relative humidity | 0% – 90% (without condensing) | | | |
| | Altitude (a.s.l.) | <1000 m with no power derating, >1000 m with 1% derating for every 100 m. | | | |
| | Audible noise at 1 m. | ≤60 dBA | | | |
| CONNECTIVITY | Built-in communication ports | USB, EPO, remote On/Off contact, and additional slots for optional cards | | | |
| | User interface | LCD and function keys (parameters: voltage, frequency, percentage load, battery voltage, output voltage, estimated uptime, UPS temperature) | | | |
| | Optional accessories | Cards: SNMP, RS232, RS485 ModBus, dry relay contacts | | | |
| | Compatible software platforms | Microsoft Windows, Linux, Mac OS, VMware | | | |
| REGULATIONS | Standards | IEC EN 62040-1, IEC EN 62040-2, IEC EN 62040-3 | | | |
| | Marking | CE, UKCA | | | |

* Depending on the load ** Battery weight and configuration depends on the required uptime *** To be verified according to the battery parameters

MARS 6000RTC



Control and management software

UPS monitoring and management

The main features of the PowerMaster software, which is available free of charge at www.ablerex.eu/download, are:

- installation and configuration via USB or RS232 serial port;
- orderly, automatic closure of the applications and operating system, even if the user is not there;
- UPS monitoring and power supply event reporting;
- transmission of alarms for the most common power supply problems and notification of system shutdown by email and text message;
- automatic testing of UPS and battery;
- available for Microsoft, MAC and Linux (full list available at www.ablerex.eu/download).

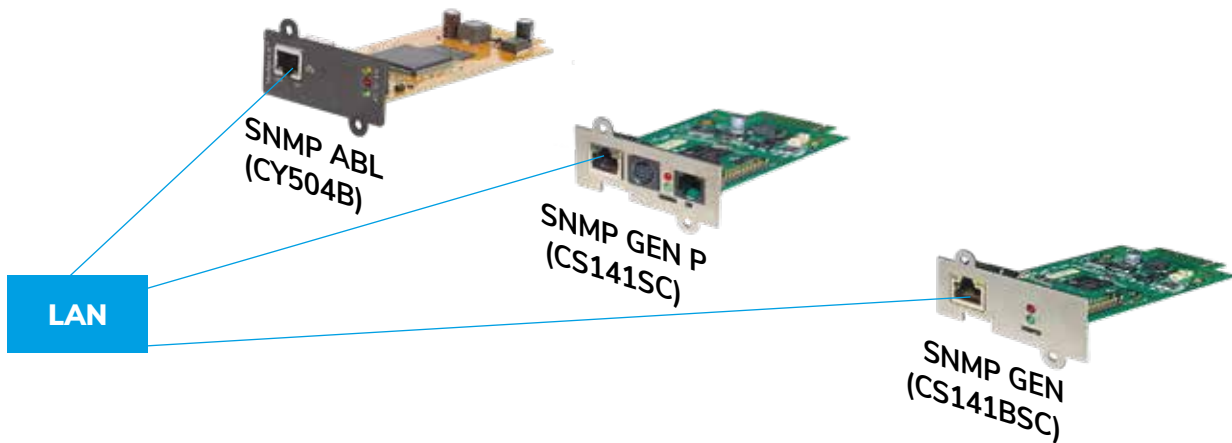
Communication cards and software

Ablerex single-phase online UPS units offer maximum control thanks to optional communication cards:

- the SNMP network card enables you to monitor the status of the UPS from any PC or server connected to the LAN without having to install any specific software, thanks to the Web Server function, or remotely by means of a VPN connection. You can also manage automatic shutdowns of the devices connected to the UPS;
- the relay card with potential-free contacts transmits alarms remotely;
- the RS485 Modbus card effectively communicates the status of the UPS with the most widely used BMS systems.

SNMP control and management

Manage the shutdown of all devices connected to the network with IP by means of remote control software (Generex RCCMD for the SNMP GEN and SNP GEN P cards and Ablere ClientMate for SNMP ABL) compatible with Microsoft Windows (for desktops and servers), Linux, Apple MAC OS, VMware and others.



Seamless integration with other network programs and SNMP management systems

SNMP ABL • SNMP GEN • SNMP GEN P

HTTP/HTTPS interface • MIB • SNMP trap • Email notifications • Log file recording • ModBus via IP

SNMP GEN • SNMP GEN P

Updating of SFTP configuration • BACnet

SNMP GEN P

Notification by SMS • ModBus/Profibus on RS232/485

Accessories

Single-phase online UPS

COMMUNICATION CARDS for sending the CPSS status to a control computer

| | |
|--|--|
| | DCE-C: Programmable card with dry contacts client software is included suitable for Ares Pro, Odin and Mars. |
| | SNMP ABL: Network card CY504B for sending data, controlling UPS and receiving alarms via email with SNMP protocol. Suitable for Ares Pro, Odin and Mars. Client software is included. |
| | SNMP ABL E: External network card for sending data (DY522), UPS control and reception of alarms via email with SNMP protocol, suitable for Ares Pro, Odin and Mars. Client software is included. |
| | SNMP GEN P: 3-port Genex card (CS141SC) for controlling UPS and receiving alarms via SMS or/ and email. Includes network interface for sending data with SNMP protocol, port for environmental monitoring sensor connection or RS232 adapter (ModBus or GPRS/GSM modem), and port connecting alarm contacts. Suitable for Ares Pro, Odin and Mars. One RCCMD client software is included. |
| | SNMP GEN: Network card (CS141BSC) for UPS control, sending data, and reception of alarms via email, via SNMP protocol. Suitable for Ares Pro, Odin and Mars. One RCCMD client software license is included. |
| | RS485 card: Card for data exchange via RS-485 via ModBus protocol, suitable for Ares Pro and Odin. |

PDU to ensure an energy supply to several devices

| | |
|--|---|
| | ESB-216: External socket box with switch (2 x 16A IEC and 8 x 10A IEC) suitable for Mars 6000 kVA. |
| | ESB-217: External socket box with switch (9 x 10A IEC) suitable for Mars and Odin. |
| | ESB-218: External socket box with switch (4 x 16A IEC) suitable for Mars and Odin. |
| | ESB-219: External socket box with switch (9 x 10A IEC and 5 x 16A IEC) for Mars. |

EXTERNAL BYPASS to ensure power continuity during service operations and simplified and safe maintenance

| | |
|--|--|
| | Rack_PDU-216G: External manual bypass with additional sockets (6 x 10A IEC and 2 x 16A IEC) suitable for Ares Pro, Odin RT. Dim. 440 x 77 x 87 mm. Weight 2,7 kg. |
| | Rack-BP_PDU-50: External manual bypass with additional 50A socket (4 x 16A IEC and 8 x 10A IEC) suitable for Mars. Dim. 440 x 120 x 175 mm. Weight 5 kg. |
| | MTBS-60: 60A maintenance bypass panel, suitable for Mars, max 2 x 6 kVA o 1 x 10 kVA. Dim 440 x 176 x 124 mm. Weight 5 kg. |
| | MTBS-120: 120A maintenance bypass panel, suitable for Mars, max 3 x 6 kVA o 2 x 10 kVA. Dim 440 x 176 x 124 mm. Weight 5 kg. |
| | MTBS-200: 200A maintenance bypass panel, suitable for Mars, max 4 x 6 kVA o 3 x 10 kVA. Dim 440 x 176 x 124 mm. Weight 5 kg. |

PARALLEL KIT to share the load among more than one UPS to increase capacity and redundancy

| | |
|--|---|
| | Parallel kit 6k: to connect two 6 kVA 2 UPS units with the included RJ cable, suitable for Mars. |
| | Parallel kit 10k: to connect two 10 kVA 2 UPS units with the included RJ cable, suitable for Mars. |

ISOLATION TRANSFORMERS

for protection against electric shocks and ensure power availability to sensitive equipment

| | |
|--|--|
| | TRAFO06: Isolation transformer for 6 kVA, suitable for Mars tower. |
| | TRAFO10: Isolation transformer for 10 kVA, suitable for Mars tower. |

THREE-PHASE UPS



**Versatile high-power
technology for critical applications**



Kronos Plus
10-40 kVA



Kronos Plus XL
10-40 kVA



Taurus
10-80 kVA



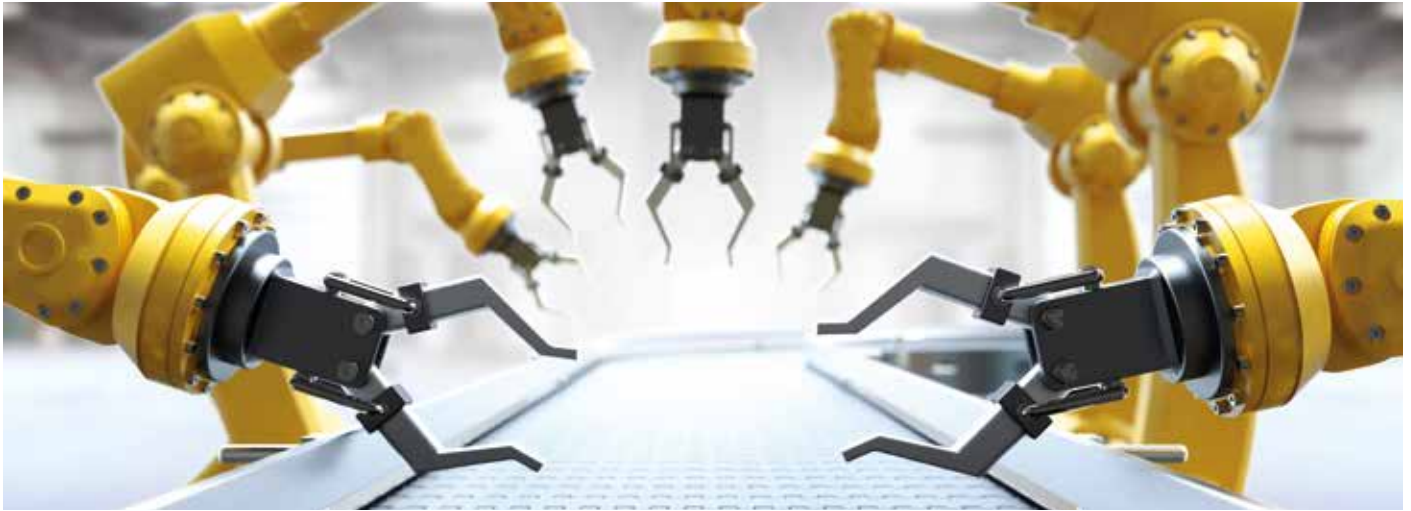
Titan
100-500 kVA



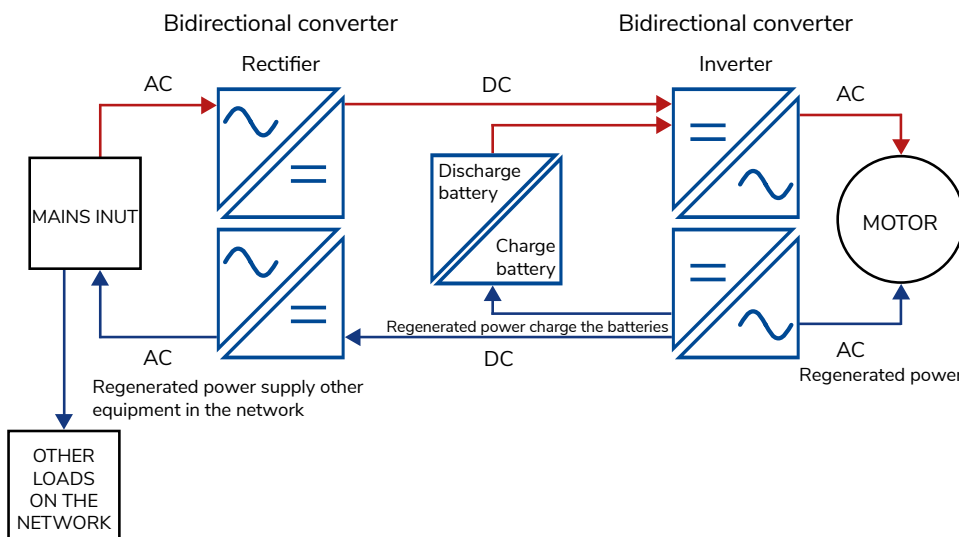
Titan GT
100-800 kVA

Continuous power supply in the presence of regenerative loads

Traditional UPS systems often fail when faced with energy returning from the load. The Kronos UPS, however, ensures a continuous power supply to the protected load even in the presence of regenerative energy.



The problem: many industrial machines, including elevators, are powered by electric motors that frequently start and stop. During deceleration, these motors produce regenerative energy. If unmanaged, this regenerative load can cause over-voltage, damaging critical equipment and reducing the efficiency of industrial operations. Specifically, regenerative energy causes the dc bus to over-voltage in conventional UPS systems, leading them to cease operation.



- **Complete solution for regenerative energy management (glm)**
Patented solution, easily activated via software, this solution provides comprehensive management of regenerative energy.
- **Robust hardware**
The bidirectional design of the Kronos UPS converters ensures hardware durability.

- **Eco-friendly**
Reuse up to 90% of the energy produced by regenerative loads.
- **No oversizing needed**
No need to oversize UPS power or battery capacity. The battery voltage remains controlled, and the load stays protected.

KRONOS PLUS - KRONOS PLUS XL

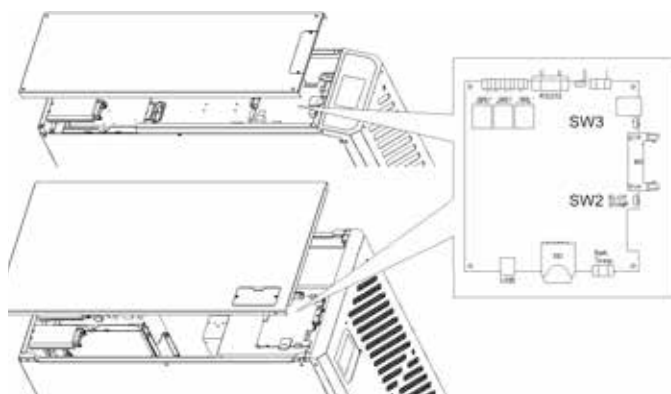
- PF 1 ensures maximum power availability: kVA=KW for KRONOS Plus 10-15-20-30-40 TTS.
- The patented GLM® function enables efficient management and reuse of energy produced by regenerative loads (e.g., elevators, electric motors, CNC machines, etc.).
- Compatible with lithium-ion batteries or other technologies.
- THDi <3% for low impact on the mains supply.
- The internal backfeed contactor integration eliminates the need for an external contactor.
- All models make it possible to maximize the energy available for loads with frequencies other than those of the power grid without loss of performance.
- Cold start function included.
- Designed to minimise impact on generators and avoid the need for oversizing them.
- Up to 95% efficiency in online mode.
- Internal manual bypass and 4-pole switches.
- Vertical internal layout ensures easy maintenance.
- Fail-safe: the UPS indicates when the phase rotation is connected incorrectly without interrupting the supply from the inverter to the loads, while keeping the batteries charged.
- High overload capacity for up to 1 minute at 150% load.
- Built-in high performance charger (10 kVA with standard charger for up to 10 A)
- Variable battery configuration: 26 to 40 individual 12V blocks settable from the touch display.
- Up to 6 units can be connected in parallel for power or redundancy, settable from the touch display
- Separate or common batteries that can be configured for parallel systems.
- 4.3" colour LCD touch screen display for user-friendly interface (14 selectable languages).
- Wide range of communication options included: two ports as standard, 1xRS232 and 1xUSB, programmable dry contacts plus two additional slots for optional cards.
- Log file for up to 800 events, and UPS information and settings can be easily downloaded to an SD card.

Key options

- SNMP, RS485, ModBus card.
- Parallel kit.
- Removable internal battery compartments for easy battery maintenance.
- External temperature sensor for a battery cabinet.
- Movable touch panel 7" with 3 programmable dry contacts for remotely monitoring up to 64 units.
- Internal backfeed contactor.



UPS event logs and settings can be easily exported to an SD-Card



Instant disconnected battery warning



KRONOS PLUS - KRONOS PLUS XL

Lithium ready technology, maximum efficiency and versatility with the smallest footprint in its class.

KRONOS PLUS 10-40 kVA UPS with PF1 (kVA=kW) provides the highest efficiency with the smallest footprint

The smallest footprint in its class (0.22 m² for 20 kVA with 40x9 Ah internal batteries) and its vertical internal layout ensure a low TCO.

Two interchangeable versions, 3:3 or 3:1-3, can easily be selected on-site (for 10, 15 and 20 kVA) for maximum installation flexibility.

Internal battery up to 40 x 9 Ah (for 10, 15 and 20 kVA).

KRONOS PLUS XL 10-40 kVA Compact and versatile UPS with easily configurable single- or three-phase output

Flexible and compact design suitable for various configurations.

Long autonomy time thanks to the high number of integrated batteries.

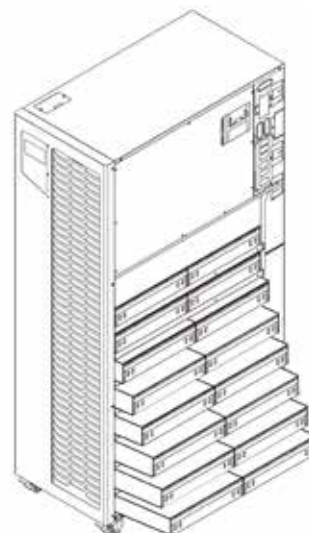
Thanks to the vertical internal layout of the components, maintenance, board replacement and scheduled battery change activities are simplified.

Kronos Plus XL range allows for the installation of an internal isolation transformer for input and output.



Applications

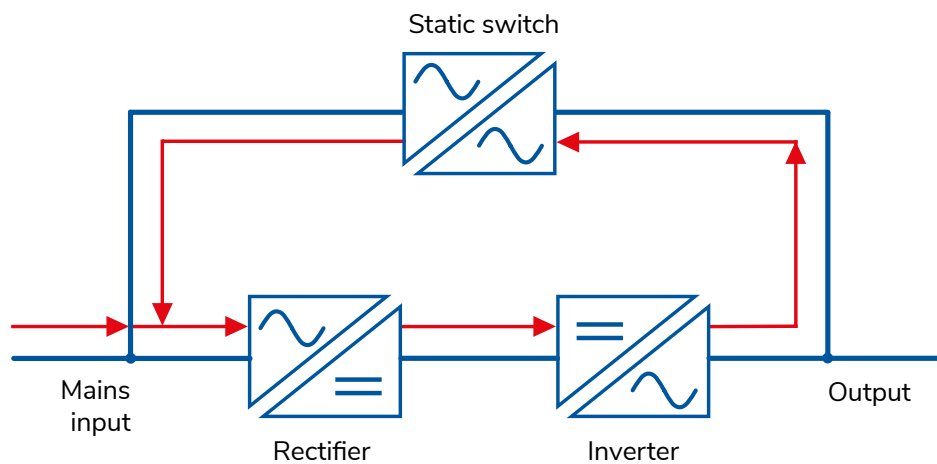
- Server rooms
- Micro and mini data centres
- Telecommunications equipment
- Electromedical equipment
- Industrial applications
- Ideal for generators



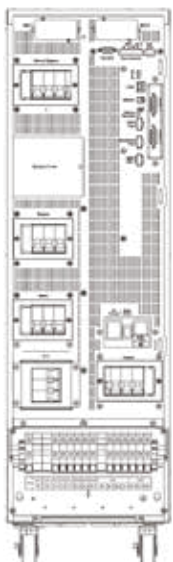
High internal battery density

Easy and efficient commissioning and maintenance thanks to the Smart ageing self-test function

- The test function is able to monitor performance over time to identify potential deterioration in the various UPS components.
- More than 90% energy saving thanks to the possibility of performing verification tests without a real load.
- Possible to set up automatic on-site testing at any time: before commissioning or during UPS maintenance.
- Components can be tested by simulating different load conditions without a real load.



KRONOS
10/15/20 kVA 3/1



KRONOS PLUS
10/15/20 kVA



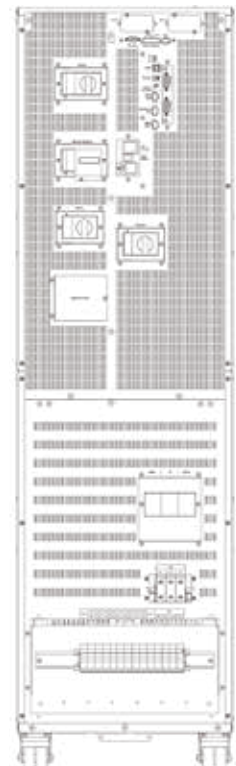
KRONOS PLUS
30/40 kVA



KRONOS PLUS XL
10/15/20 kVA



KRONOS PLUS XL
30/40 kVA



KRONOS PLUS - KRONOS PLUS XL

KRONOS PLUS - KRONOS PLUS XL TECHNICAL DATA SHEET

| MODEL* | | KR10D 3/1 | KR15D 3/1 | KR20D 3/1 | KR10S Plus | KR15S Plus | KR20S Plus | KR30S Plus | KR40S Plus | |
|--------------------------|---|---|------------------------------------|--------------|-----------------------------------|--------------------------|---------------|--------------------------|---------------|-----|
| POWER | KVA | 10 | 15 | 20 | 10 | 15 | 20 | 30 | 40 | |
| | KW | 9 | 13,5 | 18 | 10 | 15 | 20 | 30 | 40 | |
| INPUT | Rated voltage | 400V three-phase+neutral | | | | | | | | |
| | Voltage tolerance | ±20% @100% load, -40/+20% @50% load | | | | | | | | |
| | Rated frequency | 40 - 70 Hz | | | | | | | | |
| | Power factor | ≥ 0,99 | | | | | | | | |
| | Current distortion (THDi) | 3/1 | ≤ 5% at full load | | ≤ 3% at full load | | | | | |
| | | 3/3 | ≤ 3% at full load | | | | | | | |
| OUTPUT | Rated voltage | 3/1 | 220/230/240 V single-phase+neutral | | 380/400/415 V three-phase+neutral | | | | | |
| | | 3/3 | 380/400/415 V three-phase+neutral | | | | | | | |
| | Voltage stability | ±1% (static load) | | | | | | | | |
| | Frequency | 50/60 Hz | | | | | | | | |
| | Frequency stability | ±0,01% (free running) | | | | | | | | |
| | Power factor | 0.9 | | | | 1 | | | | |
| | Crest factor | 3:1 | | | | | | | | |
| | Voltage distortion | ≤2% with linear load, ≤5% with distorting load | | | | | | | | |
| | Overload | 110% for 60 minutes, 125% for 10 minutes, 150% for 1 minute | | | | | | | | |
| BATTERY | Number per string (batt 12V) | 26-40 config. | 32-40 configurable | | 26-40 config. | 32-40 configurable | | | | |
| | Max charging current** | 10 A | 15 A | 21 A | 10 A | 15 A | 21 A | 30 A | 39 A | |
| | Common battery for parallel configuration | Supported | | | | | | | | |
| | Max internal battery quantity | Standard | 40 batteries 12V/7-9 Ah | | | | | N.A. | | |
| | XL | | | | | 160 batteries 12V/7-9 Ah | | 120 batteries 12V/7-9 Ah | | |
| EFFICIENCY | VFI mode | Up to 95% | | | | | | | | |
| | ECO mode | Up to 98% | | | | | | | | |
| | In battery | Up to 94% | | | | | | | | |
| BYPASS | Rated voltage | 3/1 | 220/230/240 V single-phase+neutral | | 380/400/415 V three-phase+neutral | | | | | |
| | | 3/3 | 380/400/415 V three-phase+neutral | | | | | | | |
| | Voltage tolerance | Basic window ±10% (programmable ±5% - ±15%) Critical window ±25% (programmable ±16% - ±30%) | | | | | | | | |
| | Frequency | 50/60 Hz | | | | | | | | |
| | Frequency tolerance | ±1 Hz / ±3 Hz (selectable) | | | | | | | | |
| GENERAL | Parallel connection | Up to 6 units | | | | | | | | |
| | Dimensions (WxDxH) mm | Standard | 260x850x890 | | | | | | | |
| | | XL | 440x850x1570 | | | | | | | |
| | Weight (kg) | Standard | 74 | 76 | 76 | 74 | 76 | 76 | 85 | 88 |
| | | XL | | | | | 142 | 144 | 144 | 145 |
| | Protection class | IP 20 | | | | | | | | |
| CONNECTIVITY | User interface | 4.3" colour LCD touch screen display with removable SD card | | | | | | | | |
| | Built-in communication ports | USB, RS232, EPO, 1 in/3 out dry contact relays (programmable) and additional slots for optional cards | | | | | | | | |
| | Optional accessories | Cards: SNMP, RS-485 ModBus, 6 in/6 out dry contact relays, touch panel for remote monitoring | | | | | | | | |
| ENVIRONMENTAL PARAMETERS | Operating temperature*** | 0-40°C | | | | | | | | |
| | Relative humidity | 0-95% (non-condensing) | | | | | | | | |
| | Altitude (a.s.l.) | <1000 m with no power derating, >1000 m with 1% derating for every 100 m. | | | | | | | | |
| | Audible noise at 1 m. | <52 dBA | | | | | | <55 dBA | | |
| REGULATIONS | Standards | IEC EN 62040-1, IEC EN 62040-2, IEC EN62040-3 | | | | | | | | |
| | Marking | CE, UKCA | | | | | | | | |

*Models KRD: dual inputs (3/3 or 3/1); Models KRS: single input (3/3) ** Subject to conditions *** To be verified according to the battery parameters

TAURUS

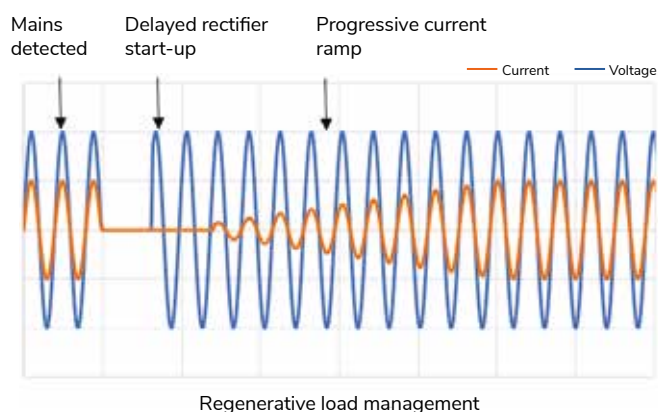
- The patented GLM function can reuse energy regenerated by the loads, ensuring maximum efficiency when managing regenerative loads.
- Optimised footprint for maximum installation versatility.
- Designed to minimise impact on generators and avoid the need for overdimensioning them.
- Power factor of 1 (kW = kVA): maximum active power available for your system at all times.
- Fail-safe: the UPS indicates when the phase sequence is connected incorrectly without interrupting the supply from the inverter to the loads, while keeping the batteries charged.
- Up to 6 units can be connected in parallel for power or redundancy.
- The “Energy Saver” function dramatically reduce the facility power and cooling costs..
- Dual input and internal manual bypass.
- High overload capacity for up to 3 seconds at 300% load.
- High-performance battery charger for fast, efficient battery charging.
- Variable battery configuration can be set from the LCD.
- Compatible with lithium-ion batteries or other technologies.
- Smart battery discharge test without the need for external loads.
- Real-time battery disconnection alarm.
- Cold start (up to 20 kVA standard, up to 80 kVA optional).
- Separate or common batteries that can be configured for parallel systems.
- Wide range of communication options included: two ports as standard (RS232 and USB), programmable dry contacts plus two additional slots for optional cards.
- 4.3” colour LCD touch screen display for user-friendly interface (14 selectable languages).
- UPS information, settings and log files can be downloaded to a removable SD card.

Key options

- SNMP, RS485, ModBus card.
- Parallel kit.
- Removable internal battery compartments for easy battery maintenance.
- External temperature sensor for a battery cabinet.
- Movable touch panel 7” with 3 programmable dry contacts for remotely monitoring up to 64 units.
- Internal backfeed contactor.



Ideal for generators



TAURUS

TAURUS 10-80 kVA

State-of-the-art technology for a high performance three-phase UPS

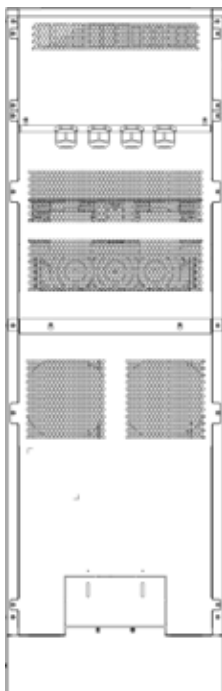
Its power factor of 1 (kW = kVA) and easy maintenance reduce system TCO, making Taurus the best choice for data centres.



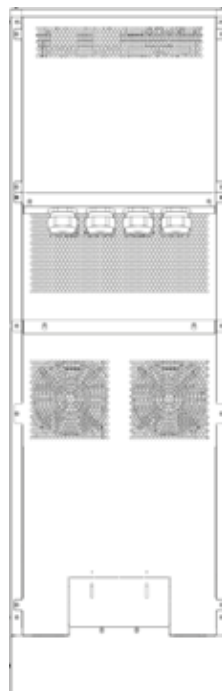
Applications

- Data centres
- Electromedical equipment
- Industrial applications
- Regenerative loads (lifts, cranes, numerically controlled machines, etc.)

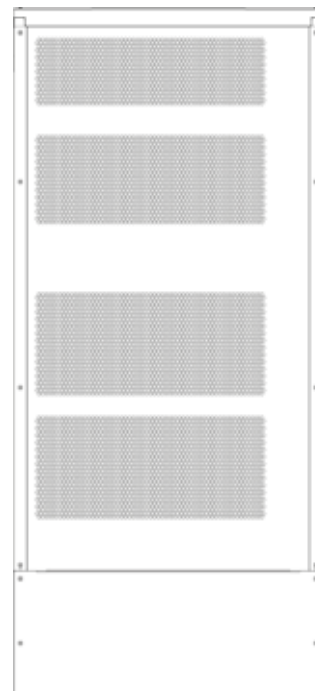
TAURUS
10/20 kVA



TAURUS
30/40 kVA



TAURUS
60/80 kVA



TAURUS TECHNICAL DATA SHEET

| MODEL | | TAURUS 10kVA | TAURUS 20kVA | TAURUS 30kVA | TAURUS 40kVA | TAURUS 60kVA | TAURUS 80kVA |
|--------------------------|---|---|----------------------|--------------|--------------|--------------|--------------|
| POWER | KVA | 10 | 20 | 30 | 40 | 60 | 80 |
| | KW | 10 | 20 | 30 | 40 | 60 | 80 |
| INPUT | Rated voltage | 380/400/415 Vac three-phase with neutral | | | | | |
| | Voltage tolerance | ±20% | | | | | |
| | Rated frequency | 40 – 70 Hz | | | | | |
| | Power factor | ≥0.99 | | | | | |
| | Current distortion (THDi) | <3% | | | | | |
| OUTPUT | Rated voltage | 380/400/415 V three-phase with neutral | | | | | |
| | Voltage stability | ±1% (static load) | | | | | |
| | Frequency | 50/60 Hz | | | | | |
| | Frequency stability | ±0.01% (free running) | | | | | |
| | Power factor | 1 | | | | | |
| | Crest factor | 3:1 | | | | | |
| | Voltage distortion | <1% with linear load, <3% with distorting load | | | | | |
| BATTERY | Permissible overload | 110% for 60 minutes, 125% for 10 minutes, 150% for 1 minute, >150% and <300 for 3 seconds | | | | | |
| | Number per string (batt 12V) | 26 – 40 conf. | 32 – 40 configurable | | | | |
| | Max charging current * | 10 A | 21 A | 30 A | 39 A | 60 A | 78 A |
| | Common battery for parallel configuration | Supported | | | | | |
| | Internal battery (optional) | Up to 80 12 V 7/9 Ah battery blocks | | | | | N.A. |
| EFFICIENCY | VFI mode | Up to 96% | | | | | |
| | ECO mode | Up to 98% | | | | | |
| BYPASS | Rated voltage | 380/400/415 V three-phase + neutral | | | | | |
| | Voltage tolerance | ±5% – ±25% (programmable alarm) | | | | | |
| | Frequency | 50/60 Hz | | | | | |
| | Frequency tolerance | ±1 Hz/±3 Hz (selectable) | | | | | |
| GENERAL | Dimensions (WxDxH) mm | 440x860x1390 | | | | 600x827x1300 | |
| | Weight (kg) | 84 | 86 | 130 | 132 | 200 | 210 |
| | Protection class | IP20 | | | | | |
| | Cold start from the battery without mains power | Included | | | Optional | | |
| | Parallel connection | Up to 6 units | | | | | |
| CONNECTIVITY | User interface | 4.3 " colour LCD touch screen display with removable SD card | | | | | |
| | Built-in communication ports | USB, RS232, EPO, 1 in/3 out dry relay contacts (programmable) and additional slots for optional cards | | | | | |
| | Optional accessories | Cards: SNMP, RS485, ModBus, 6 in/6 out dry relay contacts (programmable), touch panel for remote monitoring of up to 64 units | | | | | |
| ENVIRONMENTAL PARAMETERS | Operating temperature** | 0 – 40°C | | | | | |
| | Relative humidity | 0 – 95% (without condensing) | | | | | |
| | Altitude (a.s.l.) | <1000 m with no power derating, >1000 m with 0.5% derating for every 100 m. | | | | | |
| | Audible noise at 1 m. | <52 dBA | | <55 dBA | | <60 dBA | |
| REGULATIONS | Standards | IEC EN 62040-1, IEC EN 62040-2, IEC EN 62040-3 | | | | | |
| | Marking | CE, UKCA | | | | | |

* Subject to conditions ** To be verified according to the battery parameters

TITAN - TITAN GT

- Power factor of 1 (kW = kVA) and up to 96% efficiency in VFI mode (up to 99% ECO mode).
- THDi <3% to minimise impact on the mains supply.
- Designed to minimise impact on generators and avoiding the overdimension.
- Power capacitive and inductive loads with no derating.
- Front access for very easy maintenance.
- Ideal for applications that require long back-up uptime. Battery charge current regulation via firmware.
- Neutral disconnecter for safe maintenance.
- Dual input and internal manual bypass.
- Up to 6 units can be connected in parallel for power or redundancy.
- Separate or common batteries for parallel systems.
- Battery Care system increases battery life by regulating the charge according to the manufacturer's instructions and minimising the ripple current.
- Wide range of communication options included: two ports as standard (RS232 and USB) and two additional slots for optional cards.
- Wide LCD display 100 kVA to 500 kVA.

Key options

TITAN

- Programmable dry contacts.
- Common batteries for parallel systems.
- SNMP, RS485, ModBus cards and temperature probe.
- Colour touch screen display for power from 100 to 160 kVA.
- Remote monitoring panel.
- External manual bypass for maintenance
- Parallel kit

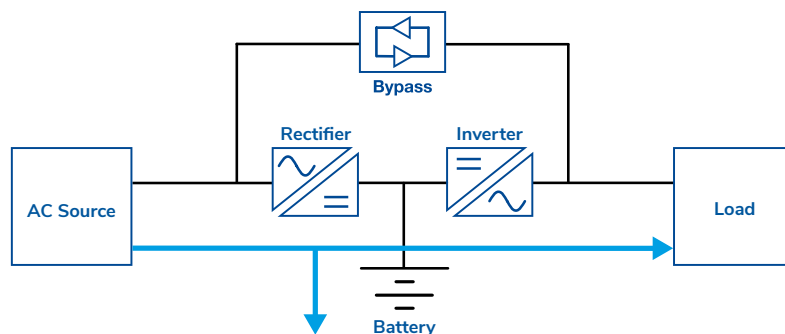
TITAN GT

- Isolation transformer and autotransformer for bypass and/or input line.
- Battery charging voltage compensation based on the temperature.
- Redundant loop parallel communication.
- Load-sync for single or parallel UPS.
- External manual bypass for maintenance
- Parallel kit

Dynamic charging mode function

Thanks to this function, all available power not absorbed by the load can be used to quickly charge batteries, including those sized for long autonomies.

The function, which can be activated by the firmware, allows the charging current of the batteries to be adjusted.



TITAN 100-500 kVA

Titan offers maximum protection and efficiency in a compact design, while ensuring absolute power continuity in all critical applications



TITAN GT 100-800 kVA

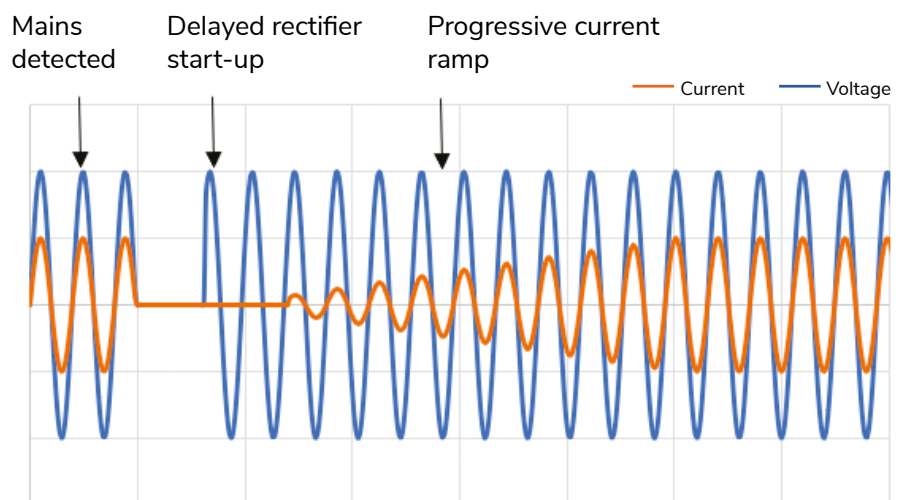
With its built-in transformer with galvanic isolation, Titan GT offers maximum protection and efficiency with the lowest running cost



Applications

- Data centres
- Electromedical equipment
- Industrial applications

Ideal for generators



Regenerative load management

TITAN TECHNICAL DATA SHEET

| MODEL | | TITAN 100kVA | TITAN 125kVA | TITAN 160kVA | TITAN 200kVA | TITAN 250kVA | TITAN 300kVA | TITAN 400kVA | TITAN 500kVA | |
|--------------------------|---|---|--------------|--------------|---|--------------|--------------|---------------|--------------|--|
| POWER | KVA | 100 | 125 | 160 | 200 | 250 | 300 | 400 | 500 | |
| | KW | 100 | 125 | 160 | 200 | 250 | 300 | 400 | 500 | |
| INPUT | Rated voltage | 400 Vac three-phase with neutral | | | | | | | | |
| | Voltage tolerance | -20% to +15% | | | | | | | | |
| | Rated frequency | 45 to 65 Hz | | | | | | | | |
| | Power factor | >0.99 | | | | | | | | |
| | Current distortion (THDi) | <3% | | | | | | | | |
| OUTPUT | Rated voltage | 380/400/415 Vac three-phase with neutral | | | | | | | | |
| | Voltage stability | ±1% (static) | | | | | | | | |
| | Frequency | 50/60 Hz | | | | | | | | |
| | Frequency stability | ±0.001 (free running) | | | | | | | | |
| | Power factor | 1 | | | | | | | | |
| | Crest factor | 3:1 | | | | | | | | |
| | Voltage distortion | <1% with linear load, <5% with distorting load | | | | | | | | |
| | Permissible overload* | 125% for 10 minutes, 150% for 30 seconds | | | 125% for 5 minutes, 150% for 30 seconds | | | | | |
| BATTERY | Number per string (12V) | 60 – 62 configurable | | | | | | | | |
| | Max charging current | Up to 50 A | | | Up to 120 A | | | | | |
| | Common batteries for parallel configuration | Supported | | | | | | | | |
| EFFICIENCY | VFI mode | Up to 96% | | | | | | | | |
| | ECO mode | Up to 98% | | | | | | | | |
| BYPASS | Rated voltage | 380/400/415 Vac three-phase with neutral | | | | | | | | |
| | Voltage tolerance | ±10% (selectable) | | | | | | | | |
| | Frequency | 50/60 Hz (selectable) | | | | | | | | |
| | Frequency tolerance | ±10 Hz (selectable) | | | | | | | | |
| GENERAL | Parallel connection | Up to 6 units | | | | | | | | |
| | Dimensions (WxDxH) mm | 560x940x1800 | | | 880x970x1978 | | | 1430x970x1978 | | |
| | Weight (kg) | 320 | 360 | 380 | 720 | 850 | 930 | 1080 | 1250 | |
| | Protection class | IP20 | | | | | | | | |
| CONNECTIVITY | User interface | LCD display, LED synoptics and keyboard | | | Colour touch screen display | | | | | |
| | Built-in communication ports | USB, RS232, EPO, auxiliary contact for battery switch, auxiliary contact for external manual bypass, diesel mode contact and two additional slots for optional cards. | | | | | | | | |
| | Optional accessories | Cards: SNMP, RS485, ModBus, dry relay contacts, remote monitoring panel. | | | | | | | | |
| ENVIRONMENTAL PARAMETERS | Operating temperature** | 0 – 40°C | | | | | | | | |
| | Relative humidity | 0 – 95% (without condensing) | | | | | | | | |
| | Altitude (a.s.l.) | <1000 m with no power derating, >1000 m with 0.5% derating for every 100 m. | | | | | | | | |
| | Audible noise at 1 m. | <60 dBA | | | | | | | | |
| REGULATIONS | Standards | IEC EN 62040-1, IEC EN 62040-2, IEC EN 62040-3 | | | | | | | | |
| | Marking | CE, UKCA | | | | | | | | |

* Subject to conditions ** To be verified according to the battery parameters

TITAN GT TECHNICAL DATA SHEET

| MODEL | | TITAN GT 100-125-160 kVA | TITAN GT 200-250-300 kVA | TITAN GT 400kVA | TITAN GT 500kVA | TITAN GT 600kVA | TITAN GT 800kVA |
|-----------------------------|------------------------------|---|---|--------------------|--------------------|--------------------|--------------------|
| POWER | KVA | 100 / 125 / 160 | 200 / 250 / 300 | 400 | 500 | 600 | 800 |
| | KW | 90 / 112.5 / 144 | 180 / 225 / 270 | 360 | 450 | 540 | 720 |
| INPUT | Rated voltage | 400 Vac three-phase with neutral | | | | | |
| | Voltage tolerance | -20% to +15% | | | | | |
| | Rated frequency | 45 to 65 Hz | | | | | |
| | Power factor | 0.99 | | | | | |
| | Current distortion (THDi) | <3% | | | | | |
| OUTPUT | Rated voltage | 380/400/415 Vac three-phase with neutral | | | | | |
| | Voltage stability | ±1% (static) | | | | | |
| | Frequency | 50/60 Hz | | | | | |
| | Frequency stability | ±0.001 (free running) | | | | | |
| | Power factor | 0.9 | | | | | |
| | Crest factor | 3:1 | | | | | |
| | Voltage distortion | <1% with linear load, <5% with distorting load | | | | | |
| | Permissible overload | 125% for 10 minutes, 150% for 1 minute | | | | | |
| BATTERY | Number per string (12V) | 50/52 configurable | | | | | |
| | Max charging current * | Up to 100 A | | | | | Up to 200 A |
| EFFICIENCY | VFI mode | Up to 95% | | | | | |
| | ECO mode | Up to 98% | | | | | |
| BYPASS | Rated voltage | 380/400/415 Vac three-phase with neutral | | | | | |
| | Voltage tolerance | ±10% (selectable) | | | | | |
| | Rated frequency | 50/60 Hz (selectable) | | | | | |
| | Frequency tolerance | ±10 Hz (selectable) | | | | | |
| GENERAL | Parallel connection | Up to 6 units | | | | | |
| | Dimensions (WxDxH) mm | 815x825x1670 | 1200x860x1900 | 1990x990x1920 | 2430x990x2020 | 2440x990x2020 | 3640x990x1920 |
| | Weight (kg) | 100 kVA = 625 125 kVA = 660 160 kVA = 715 | 200 kVA = 970 250 kVA = 1090 300 kVA = 1170 | 1820 | 2220 | 2400 | 3600 |
| | Protection class | IP20 | | | | | |
| CONNECTIVITY | User interface | LCD display, LED synoptics and keyboard | | | | | |
| | Built-in communication ports | USB, RS232, EPO, auxiliary contact for battery switch, auxiliary contact for external manual bypass, diesel mode contact and two additional slots for optional cards. | | | | | |
| | Optional accessories | Cards: SNMP, RS485, ModBus, dry relay contacts, remote monitoring panel. | | | | | |
| ENVIRONMENTAL PARAMETERS | Operating temperature** | 0 – 40°C | | | | | |
| | Relative humidity | 0 – 95% (without condensing) | | | | | |
| | Altitude (a.s.l.) | <1000 m with no power derating, >1000 m with 0.5% derating for every 100 m. | | | | | |
| | Audible noise at 1 m. | <62 dBA | | | | | |
| REGULATIONS | Standards | IEC EN 62040-1, IEC EN 62040-2, IEC EN 62040-3 | | | | | |
| | Marking | CE, UKCA | | | | | |

* Subject to conditions ** To be verified according to the battery parameters

Control and management software

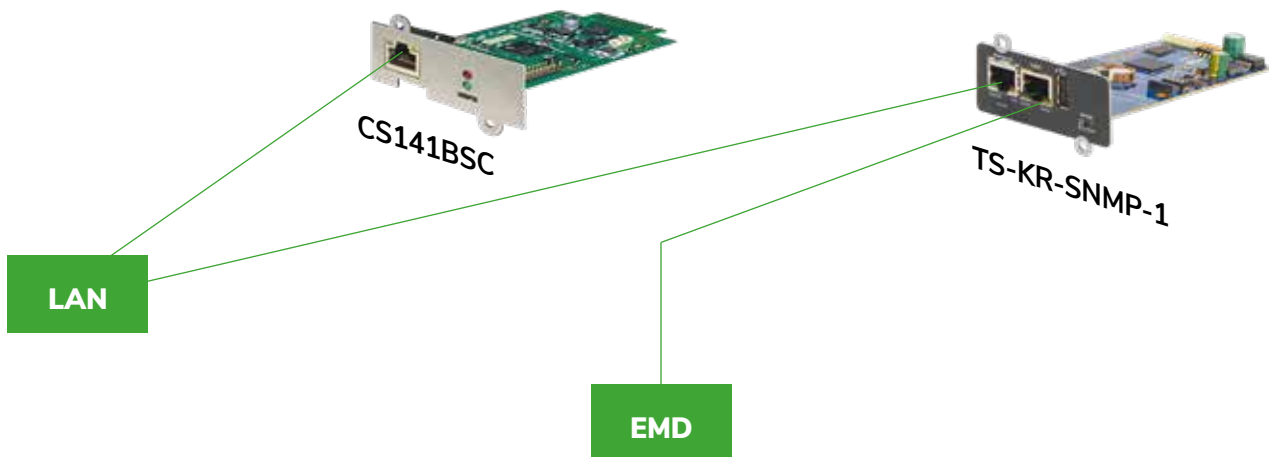
Communication cards and software

Ablerex three-phase online UPS units offer maximum control thanks to optional communication cards:

- the SNMP network card enables you to monitor the status of the UPS from any PC or server connected to the LAN without having to install any specific software, thanks to the Web Server function, or remotely by means of a VPN connection. You can also manage automatic shutdowns of the devices connected to the UPS;
- the relay card with potential-free contacts transmits alarms remotely;
- the RS485 Modbus card effectively communicates the status of the UPS with the most widely used BMS systems.

SNMP control and management

Manage the shutdown of all devices connected to the network with IP by means of remote control software (Generex RCCMD for SNMP GEN card and Ablerex ClientMate for the TS-KR-SNMP-1 card), compatible with Microsoft Windows (for desktops and servers), Linux, Apple MAC OS and VMware.



Seamless integration with other network programmes and SNMP management systems

TS-KR-SNMP-1 • SNMP GEN

- HTTP interface • Network message • SNMP trap
- Email notifications • Log file recording
- Notification by text message • Modbus over IP

CS141BSC • CS141MINI

- BACnet
- SFTP configuration update

Power communication function extensions (COM2)

- SensorManager temperature and humidity monitoring
- Selectable alarm thresholds
- Data transmission from the SM_T_COM temperature sensor
- Data transmission from the SM_T_H_COM humidity sensor

Accessories

Three-phase monolithic UPS

COMMUNICATION CARDS for sending the UPS status to a control computer

| |
|--|
| TS-KR-SNMP-1: Communication card with SNMP protocol with client software included. |
| SNMP GEN: Communication card (CS141BSC) with SNMP protocol with client software included. |
| TS-KR-EMD: Environmental monitoring sensor for SNMP card (temperature and humidity). |
| TS-KR-485: Card for data exchange via RS-485 with ModBus protocol |
| TS-KR-DEC: 6 in 6 out programmable relay card with dry contact signal. |

ACCESSORIES FOR MONITORING INTERNAL BATTERY TRAYS to increase uptimes

| |
|---|
| TRAY 32-40: Tray for battery blocks (each tray can contain up to 40 blocks), for TAURUS from 10 to 40 kVA. |
|---|

COLD START KIT to allow the UPS to start from batteries without mains power

| |
|---|
| CS30kVA: Contactor and cables, kit suitable for 30 kVA Taurus. |
| CS40kVA: Contactor and cables, kit suitable for 40 kVA Taurus. |
| CS60kVA: Contactor and cables, kit suitable for 60 kVA Taurus. |
| CS80kVA: Contactor and cables, kit suitable for 80 kVA Taurus. |

EXTERNAL BY-PASS

it enables the UPS system to be electrically isolated – taken it out of the critical power circuit – for safe UPS maintenance or unit replacement.

| |
|---|
| BYPASS 10 3/1: By-pass box x 10 kVA 3/1. |
| BYPASS 20 3/1: By-pass box x 20 kVA 3/1. |
| BYPASS 20 3/3: By-pass box x 20 kVA 3/3. |
| BYPASS 40 3/3: By-pass box x 40 kVA 3/3. |
| BYPASS 60 3/3: By-pass box x 60 kVA 3/3. |
| BYPASS 80 3/3: By-pass box x 80 kVA 3/3. |
| BYPASS 250 3/3: By-pass box x 250 kVA 3/3. |
| BYPASS 400 3/3: By-pass box x 400 kVA 3/3. |

BACKFEED PROTECTION to ensure protection against a possible power backfeed from the mains.

| |
|--|
| BF10kVA: Internal backfeed contactor for 10 kVA Taurus. |
| BF20kVA: Internal backfeed contactor for 20 kVA Taurus. |
| BF30kVA: Internal backfeed contactor for 30 kVA Taurus. |
| BF40kVA: Internal backfeed contactor for 40 kVA Taurus. |
| BF60kVA: Internal backfeed contactor for 60 kVA Taurus. |
| BF80kVA: Internal backfeed contactor for 80 kVA Taurus. |

ISOLATION TRANSFORMERS

| |
|---|
| TRAFO10: Transformer for 10 kVA Taurus and Kronos. |
| TRAFO20: Transformer for 20 kVA Taurus and Kronos. |
| TRAFO30: Transformer for 30 kVA Taurus and Kronos. |
| TRAFO40: Transformer for Taurus and Kronos 40 kVA. |
| TRAFO60: Transformer for 60 kVA Taurus. |
| TRAFO80: Transformer for Taurus 80 kVA. |

PARALLEL KIT AND CABLES to share the load among more than one UPS to increase capacity and redundancy

| |
|---|
| PARKIT TS: Parallel kit composed of card and 1.5 m cable for Taurus. |
| PARKIT KR: Parallel kit composed of card and 1.5 m cable for Kronos. |
| PARCAB30: 3 m parallel cable for Kronos and Taurus. |
| PARCAB80: 8 m parallel cable for Kronos and Taurus. |

DUST FILTER

| |
|--|
| FILTERTS10-40: Dust filter for 10 to 40 kVA Taurus. |
|--|

THREE-PHASE UPS

High-performance
three-phase UPS for absolute
continuity in all critical applications





THOR

- The high-density design with full hot-swap technology for both power and bypass modules ensures continuity and protects your load at all times.
- Power factor of 1 (kW = kVA): maximum active power available at all times.
- Very high efficiency (up to 99.3% in ECO Smart mode) for maximum energy saving: bypass and inverter work together to provide combined energy to the load and ensure zero transfer time in the event of a blackout.
- Up to 4 units can be connected in parallel (up to 3.6 MW) for power or redundancy.
- Long component life for a lower TCO (Total Cost of Ownership): the Energy Saver function automatically makes the power modules work in rotation to ensure greater efficiency and duration.
- Designed to minimise impact on generators and avoid overdimensioning them.
- Optimised footprint for maximum installation versatility to make installation possible in any type of environment.
- Easy installation thanks to the central bypass that ensures better load balance and lower risk of system overload.
- Variable battery string configuration can be set from the LCD for maximum installation flexibility.
- Minimum battery voltage can be set according to the discharge current, so the batteries can always be used in the best way to maximise their expected or lifespan life.
- High quality long-life capacitors (up to 10 years under favourable operating conditions).
- Cold start function included.
- Compatible with lithium-ion batteries or other technologies.
- Dual input for main power supply and bypass.
- Internal manual bypass.
- User-friendly LCD touch display with multi-language graphical user interface to have everything under control at all times.
- Event log can be downloaded directly from the LCD via USB port.
- Communication slots for optional card.
- RS485-ModBus, relay card with dry contact and USB port built-in.

Key options

- Input, output and bypass breaker.
- Communication cards: Web SNMP.
- Isolation transformer.
- Additional battery charger for long uptimes.

Contact our offices for a complete list of accessories

60 kVA Combo solution

- Up to 4 internal strings of 40 x 9 Ah batteries.
- Fuses to protect each string.

THOR 15-900 kVA

High-performance three-phase modular UPS for absolute continuity in all critical applications

Fully scalable and high efficiency (99.6% in ECO mode), the Thor series based on 15, 25 and 75 kVA/kW modules guarantees energy saving and minimum TCO (Total Cost of Ownership).

Applications

- Data centres: from micro to large
- Network Operations Centres (NOC)
- Security operations centres
- Telecommunications systems
- Broadcast and video streaming infrastructure
- Industrial automation control systems
- Remote teaching infrastructure
- Healthcare facilities

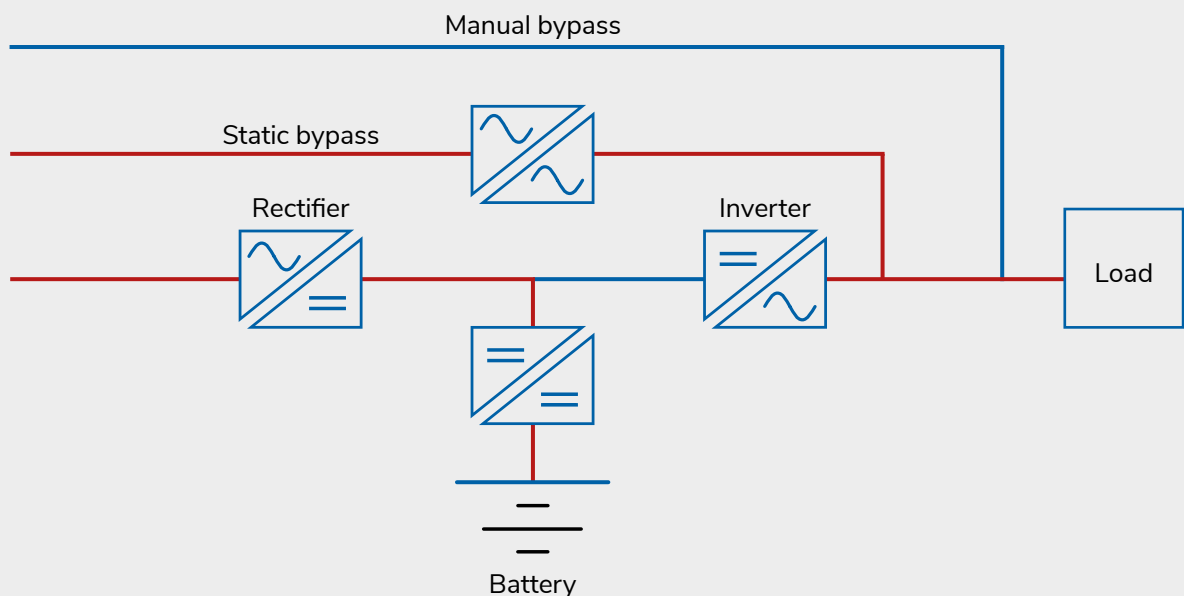
Energy Saver: higher efficiency and lower TCO (Total Cost of Ownership)

The Energy Saver function ensures the modules last a long time by automatically making them work in rotation to balance component wear and increase their life.

ECO Smart mode: higher energy savings and maximum availability of connected systems

In ECO Smart Mode (iECO), the bypass and inverter work together to provide combined energy.

This can achieve greater efficiency (up to 99.3) and ensure a transfer time of 0.



THOR TECHNICAL DATA SHEET

| MODEL | | THOR 15-900 | | | | | | | | | |
|--------------------------|-------------------------------------|---|--------------------|-------------|----------------|---------------|--|-----------------|----------------|----------------|--|
| POWER | KVA | 15 | | | 25 | | | 75 | | | |
| | KW | 15 | | | 25 | | | 75 | | | |
| INPUT | Rated voltage | 400 Vac three-phase with neutral | | | | | | | | | |
| | Voltage tolerance | 20% @100% load, -40% ~-20% @50% load | | | | | | | | | |
| | Rated frequency | 40 – 70 Hz | | | | | | | | | |
| | Power factor | ≥0.99 | | | | | | | | | |
| | Current distortion (THDi) | <3% | | | | | | | | | |
| OUTPUT | Rated voltage | 380/400/415 Vac three-phase with neutral | | | | | | | | | |
| | Voltage stability | ±1% (static load) | | | | | | | | | |
| | Frequency | 50/60 Hz | | | | | | | | | |
| | Frequency stability | ±0.01% (free running) | | | | | | | | | |
| | Power factor | 1 | | | | | | | | | |
| | Crest factor | 3:1 | | | | | | | | | |
| | Voltage distortion | ≤3% with linear load, ≤6% with distorting load | | | | | | | | | |
| | Permissible overload | 110% for 60 minutes, 125% for 10 minutes, 150% for 1 second | | | | | | | | | |
| BATTERY | Battery cabinet | modular | classic | | | | | | | | |
| | Battery architecture | modular, 4 strings | separate cabinet | | | | | | | | |
| | Number per string (12V) | 40 | 32–44 configurable | | | | 32–44 configurable | | | | |
| | Max charging current | 3 A per module | | | 5 A per module | | | 15 A per module | | | |
| EFFICIENCY | VFI mode | up to 95.3% | | | up to 95.6% | | | up to 96% | | | |
| | ECO Smart mode | 99.3% | | | | | | | | | |
| | Battery mode | up to 95.2% | | | up to 95.5% | | | up to 95.7% | | | |
| BYPASS | Rated voltage | 380/400/415 V three-phase + neutral | | | | | | | | | |
| | Voltage tolerance* | -40% to +20% (selectable) | | | | | | | | | |
| | Frequency | 50/60 Hz | | | | | | | | | |
| | Frequency tolerance | 50/60 Hz±4% | | | | | | 50/60 Hz±6% | | | |
| GENERAL | Cabinet Model | TH COM-BO60-00 cabinet | TH R30-00 | TH R60-00 | TH R120-00 | TH R150-00 | TH R250-00 | TH R450-00 | TH R600-00 | TH R900-00 | |
| | Module power (kVA) | 15 | | | 25 | | | 75 | | | |
| | Power modules that can be installed | up to 4 | up to 2 | up to 4 | up to 8 | up to 6 | up to 10 | up to 6 | up to 8 | up to 12 | |
| | Parallel connection | up to 4 | | | | | | | | | |
| | Cabinet dimensions (WxDxH) mm | 600x1100x2000 | 442x800x662 | 442x800x840 | 442x800x1195 | 600x1000x1600 | 600x1000x2000 | 900x1000x2000 | 1200x1000x2000 | 1800x1000x2000 | |
| | Weight (Kg) ** | 444 | 120 | 164 | 263 | 284 | 410 | 650 | 800 | 1200 | |
| | Protection class | IP20 | | | | | | | | | |
| CONNECTIVITY | User interface | 7" colour LCD touch screen | | | | | | | | | |
| | Built-in communication ports | USB, 1 additional slot, EPO, RS485-ModBus, RS232 GEN, BCB, 4 in/8 out relay with dry contacts | | | | | USB, 1 additional slot, EPO, BFP, RS485-ModBus, RS232 GEN, BCB, 4 in/8 out relay with dry contacts | | | | |
| | Optional accessories | Cards: SNMP, battery temperature sensor | | | | | | | | | |
| ENVIRONMENTAL PARAMETERS | Operating temperature*** | 0 – 40°C | | | | | | | | | |
| | Altitude (a.s.l.) | <1000 m with no power derating, >1000 m with 1% derating for every 100 m. | | | | | | | | | |
| | Relative humidity | 0 – 95% (without condensing) | | | | | | | | | |
| | Audible noise at 1 m. | <70 dBA | | | | | | | | | |
| REGULATIONS | Standards | IEC EN 62040-1, IEC EN 62040-2, IEC EN 62040-3 | | | | | | | | | |
| | Marking | CE, UKCA | | | | | | | | | |

* Subject to conditions ** Includes empty battery modules for Thor Combo *** To be verified according to the battery parameters

Accessories

Three-phase modular UPS

DUMMY LOADS FOR GLM FUNCTION

| |
|---|
| DUMMY 10: dummy load for lift function 3 kW for TAURUS 10kVA. |
| DUMMY 20: dummy load for lift function 6 kW for TAURUS 20kVA. |
| DUMMY 30: dummy load for lift function 9 kW for TAURUS 30kVA. |
| DUMMY 40: dummy load for lift function 12 kW for TAURUS 40kVA. |
| DUMMY 60: dummy load for lift function 18 kW for TAURUS 60kVA. |
| DUMMY 80: dummy load for lift function 24 kW for TAURUS 80kVA. |

REMOTE PANEL for Kronos, Taurus and all single phase double conversion, Monitor up to 64 UPS

COMMUNICATION CARDS

| |
|---|
| MD-SNMP: SNMP Card for THOR |
| SNMP GEN Mini: SNMP Generex CS141 mini |
| TEMPEXT-TH: External Battery Temperature Probe |

INPUT BARS

| |
|---|
| DUAL-TH-R30: single source 30kVA |
| DUAL-TH-R60: single source 60kVA |
| DUAL-TH-R120: single source 120kVA |
| DUAL-TH-R450: single source 450kVA |
| DUAL-TH-R600: single source 600kVA |
| DUAL-TH-R900: single source 900kVA |

PARALLEL KIT

| |
|--|
| PARKIT2-TH: Parallel Kit for 2 pcs UPS parallel |
| PARKIT3-TH: Parallel Kit for 3 pcs UPS parallel |
| PARKIT4-TH: Parallel Kit for 4 pcs UPS parallel |

DISCONNECTORS

| |
|---|
| BR-TH-R30: Input/ bypass/output braeker for TH-R30. Dim. 442x800x662 |
| BR-TH-R60: Input/ bypass/output braeker for TH-R60. Dim. 442x800x840 |
| BR-THCOMBO-R30: Input/ bypass/output braeker for combo 30KVA. Dim. 442x800x662 |
| BR-THCOMBO-R60: Input/ bypass/output braeker for combo 60KVA. Dim. 442x800x840 |
| BR-TH-R150: Input/ bypass/output braeker for 150KVA. Dim. 600x1000x1600 |
| BR-TH-R250: Input/ bypass/output braeker for 250KVA. Dim. 600x1000x2000 |
| BR-TH-R450: Input/ bypass/output braeker for 450KVA. Dim. 1200x1000x2000 |
| BR-TH-R600: Input/ bypass/output braeker for 600KVA. Dim. 1200x1000x2000 |
| BR-TH-R900: Input/ bypass/output braeker for 900KVA. Dim. 1800x1000x2000 |

SINGLE AND THREE-PHASE CPSS

Central Power Supply System,
fully EN 50171 compliant
certified by third party



CPSS Zen 1/1
4000-10000 VA



CPSS Zen 3/3
10-40 kVA

CPSS ZEN

- **Fully EN 50171 compliant with third party test certificate**, the ZEN CPSS is a real Central Power Supply System that meets all legal requirements for the protection of emergency and safety systems.
- Easy to install: smallest footprint among EN 50171 compliant products.
- Wide variety of audible and visual alarms including: battery polarity reversal, CPSS and battery charger short circuit, power failure, low battery, bypass transfer, CPSS fault.
- Cold start from the battery without mains power.
- Maximum efficiency (up to 98%) and flexibility thanks to the 4 operating modes.
- The single-phase version includes mixed, online and SE modes with separate outputs, while the three-phase version requires optional accessories.
- Dual input and internal manual bypass for simple, completely safe maintenance.
- High overload capacity: delivers up to 120% of the rated power indefinitely.
- Easy and fast connection guaranteed by the terminals, which have been enlarged in the single-phase version.
- Option of internal battery with housing for 40 9Ah batteries for three-phase 10 and 20 kVA models (with optional tray kit only), giving a compact solution for small-load applications.
- Protection against load-side short circuits and battery polarity reversal, without the risk blowing fuses during commissioning, even in the event of reversal.
- Shorter charging time and longer battery life thanks to high charge current with temperature compensation.
- Accurate calculated remaining uptime is shown on the display.
- Hot-swappable batteries: the batteries can be replaced while the CPSS is running.
- Greater flexibility offered by the internal charger that is easy to set from the display.
- Battery life of 10 years.
- Heat and fire resistant IP20 casing that is EN 60598-1 compliant.
- Easily upgradeable firmware.
- RS232, USB and EPO ports built-in, and slots for optional communication cards. Remote on/off available in the single-phase version.



Fully EN 50171 compliant with third party test certificate

Key options

- Cards: SNMP, RS485 ModBus and relay card with dry contacts
- EN 50272-2 compliant battery cabinet

CPSS ZEN single-phase

- Additional battery charger for long runtimes

CPSS ZEN three-phase

- Parallel kit
- Mixed mode kit

EN 50171 compliant CPSS designed to ensure the highest degree of protection in the critical environments of all emergency system installations.

For everyone's peace of mind: designers, retailers, installers and end users.

CPSS ZEN single-phase 4000-10000 VA

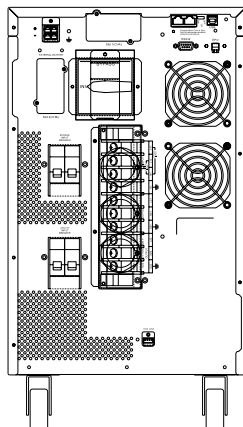
CPSS ZEN three-phase 10-40 kVA



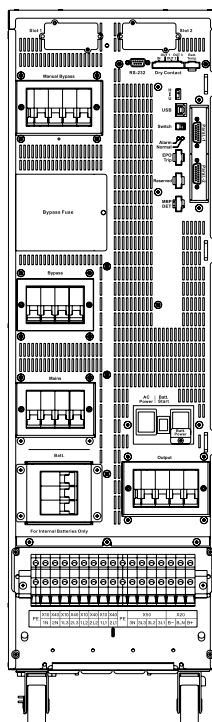
Applications

- Emergency lighting
- Fire alarm systems
- Smoke extraction systems
- Gas and smoke detection systems
- Security alarm systems
- PAV Voice Systems
- Lone Worker Systems

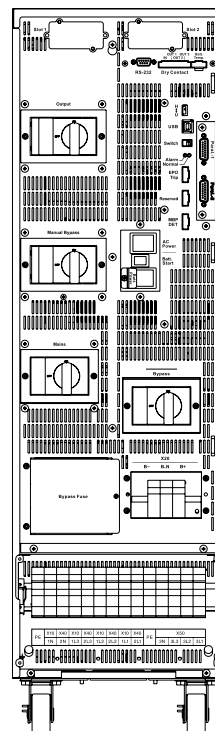
Single-phase
CPSS ZEN 4-6 VA
CPSS ZEN 8-10 VA



Three-phase
CPSS ZEN 10-20 kVA



Three-phase
CPSS ZEN 30-40 kVA



CPSS ZEN

Accessories

CPSS ZEN single-phase

COMMUNICATION CARDS for sending the CPSS status to a control computer

| |
|---|
| DCE-C: Programmable card with dry contacts with dry contacts with client software included. |
| SNMP ABL: Network card CY504B for sending data, controlling CPSS and receiving alarms via email with SNMP protocol. Client software is included. |
| SNMP GEN P: 3-port Genex card (CS141SC) for controlling CPSS, and receiving alarms via SMS or/and email. Includes network interface for sending data with SNMP protocol, port for environmental monitoring sensor connection or RS232 adapter (ModBus or GPRS/GSM modem), and port connecting alarm contacts. One RCCMD client software is included. |
| SNMP GEN: Network card (CS141BSC) for CPSS control, sending data, and reception of alarms via email, via SNMP protocol. One RCCMD client software license is included. |
| RS485 CARD: Internal for data exchange via the R485 protocol. |

EXTERNAL BYPASS to ensure power continuity to the load during maintenance

| |
|--|
| MTBS-60: 60A bypass panel. |
| MTBS-120: 120A bypass panel. |
| MTBS-200: 200A bypass panel. |
| Rack-BP_PDU-50: External manual bypass with additional 50A sockets (4 x 16A IEC and 8 x 10A IEC) or powered by CPSS. |

ISOLATION TRANSFORMERS for protection against electric shocks and ensure power availability to sensitive equipment

| |
|---|
| TRAFO06: Transformer for 6 kVA. |
| TRAFO10: Transformer for 10 kVA. |

CPSS ZEN three-phase

COMMUNICATION CARDS for sending the CPSS status to a control computer

| |
|--|
| SNMP GEN: Genex network card (CS141BSC) for sending data with SNMP protocol for UPS control and reception of alarms via email. One RCCMD client software license included. |
| TS-KR-SNMP-1: Network card for sending data with SMNP protocol for controlling the UPS and reception of alarms via sms or/and email and, with port to measure temperature and humidity. Client software included. |
| TS-KR-EMD: Environmental monitoring sensor for SNMP card with temperature and humidity monitoring. |
| TS-KR-485: Card for data exchange via the RS-485 protocol. |
| TS-KR-DEC: 6 in 6 out programmable relay card with dry contacts for sending data to PLC, SCADA or AS400. |

ISOLATION TRANSFORMERS for protection against electric shocks and ensure power availability to sensitive equipment

| |
|---|
| TRAFO10: Transformer for 10 kVA. |
| TRAFO20: Transformer for 20 kVA. |
| TRAFO30: Transformer for 30 kVA. |
| TRAFO40: Transformer for 40 kVA. |

PARALLEL KIT to share the load among more than one CPSS to increase capacity and redundancy

| |
|--|
| PARRIT KR: Parallel kit composed of card and 1.5 m cable. |
| PARCAB30: 3 m parallel connection cable. |
| PARCAB80: 8 m parallel connection cable. |

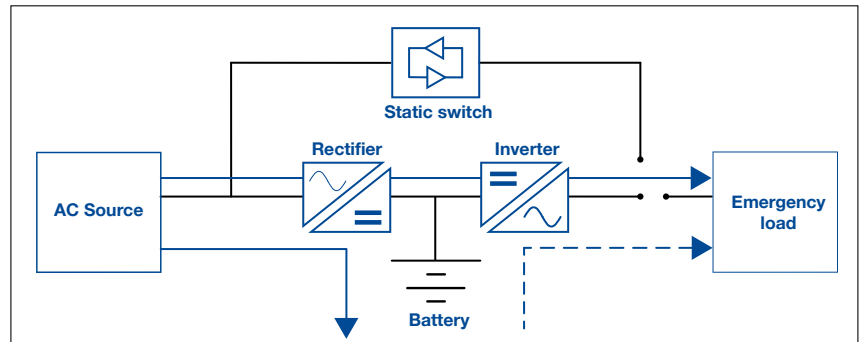
MIXED MODE KIT: to have SA and SE with separate outputs MIXED.

| |
|---|
| OP4ZEN: wall-mounted kit with contactor for mixed mode 40 kW (150A). |
|---|

Operating mode

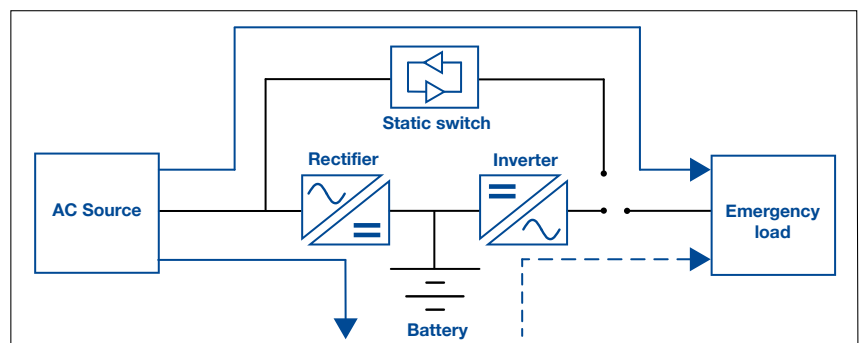
Online mode (VFI)

The load is always powered (SA) by the inverter.



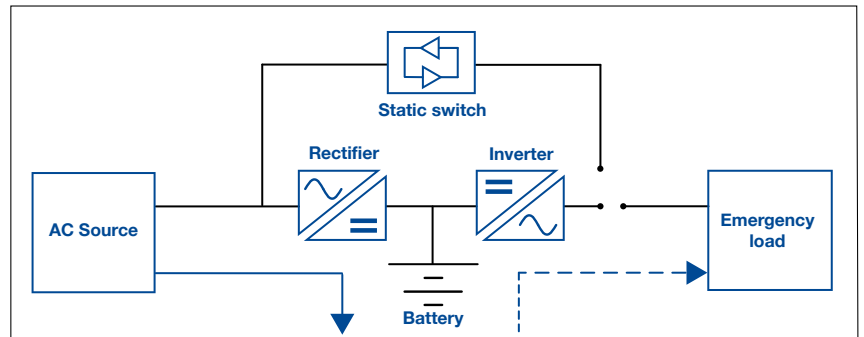
ECO mode

The load is powered by the bypass during normal operation and by the inverter when there is no mains or it is out of tolerance.



Emergency mode (SE)

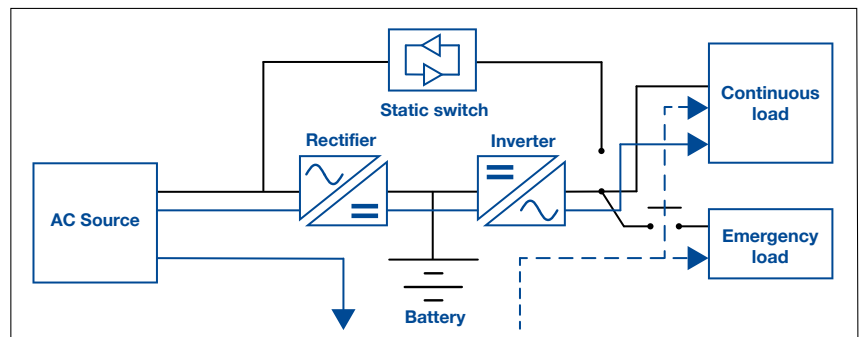
The load is only powered by the inverter when there is no mains or it is out of tolerance.



Mixed mode

One load is always powered by the inverter, while the other load is only powered by the inverter when there is no mains or it is out of tolerance (SA and SE with separate outputs).

The three-phase version required the optional Mixed mode kit.



CPSS ZEN SINGLE-PHASE TECHNICAL DATA SHEET

| MODEL | | CPSS ZEN 4000 | CPSS ZEN 6000 | CPSS ZEN 8000 | CPSS ZEN 10000 |
|--------------------------------------|---|--|---------------------------------------|----------------|------------------|
| POWER | VA | 4000 | 6000 | 8000 | 10000 |
| | W | 3500 | 5250 | 7000 | 8500 |
| INPUT | Rated voltage* | 110 – 280 Vac | | | |
| | Frequency | 45 – 70 Hz | | | |
| | Power factor | >0.99 | | | |
| | Current distortion (THDi) | <5% | | | |
| OUTPUT | Rated voltage | 200/208/220/230/240 Vac selectable | | | |
| | Voltage distortion | <2% with linear load, <7% with distorting load | | | |
| | Voltage stability | ±1% | | | |
| | Frequency | 50/60 Hz (selectable) | | | |
| | Frequency regulation | ±1Hz, ±3Hz selectable | | | |
| | Frequency stability | ≤ 0.2% (free running) | | | |
| | Power factor | 0.875 | | | 0.85 |
| | Crest factor | 3:1 | | | |
| | Waveform | Pure sine wave | | | |
| | Output connection | Screw terminal block | | | |
| | Capacity @ 100 % load | 4000 VA/3500 W | 6000 VA/5250 W | 8000 VA/7000 W | 10000 VA/8500 W |
| | Overload @ 120% permanent load | 4200 VA/4200 W | 6300 VA/6300 W | 8400 VA/8400 W | 10200 VA/10200 W |
| | EFFICIENCY | VFI mode | Up to 93% | | |
| ECO mode | | Up to 97% | | | |
| In battery | | Up to 94% | | | |
| GENERAL | Dimensions (WxDxH) mm | 288x700x513 | | | |
| | Weight (kg) | 41 | | 42 | |
| | Alarms | Audible and visual alarm alerts for: incorrect battery polarity, short circuit, power failure, low battery, bypass transfer, and UPS fault, etc. | | | |
| | Protection | Battery polarity, short circuit, overload, overheating, deep discharge, overcharging. | | | |
| | Operating mode | Multimode: VFI, ECO, Emergency (SE), Mixed mode (SA and SE with separate outputs) | | | |
| | Cold start from the battery without mains power | Included | | | |
| | Protection class | IP20 | | | |
| | BATTERY - CHARGER | Battery type | 12V VRLA, AGM (maintenance-free lead) | | |
| Number of batteries | | 20 units (120 cells) | | | |
| Charging time | | 80% of the battery capacity within 12h | | | |
| Internal battery charger | | 4 A Standard (additional 4 A with optional kit) | | | |
| External battery cabinet connections | | Plug-in & Play | | | |
| ENVIRONMENTAL PARAMETERS | Operating temperature** | 0 – 40°C | | | |
| | Relative humidity | 0% – 90% (without condensing) | | | |
| | Altitude (a.s.l.) | <1000 m with no power derating, >1000 m with 1% derating for every 100 m | | | |
| | Audible noise at 1 m | ≤60 dBA | | | |
| CONNECTIVITY | Built-in communication ports | USB, RS232, EPO On/Off contact, and additional slots for optional cards | | | |
| | User interface | LCD and function keys (parameters: voltage, frequency, load percentage, battery voltage, output voltage, estimated uptime, UPS temperature). | | | |
| | Optional accessories | Cards: SNMP, RS485 ModBus, dry relay contacts | | | |
| | Compatible software platforms | Microsoft Windows, Linux, Mac OS, VMware | | | |
| REGULATIONS | Standards | EN 50171, IEC EN 62040-1, IEC EN 62040-2, IEC EN 62040-3 | | | |
| | Marking | CE, UKCA | | | |

* Subject to conditions ** To be verified according to the battery parameters

CPSS ZEN THREE-PHASE TECHNICAL DATA SHEET

| MODEL | | CPSS ZEN 3/3 10 KVA | CPSS ZEN 3/3 20 KVA | CPSS ZEN 3/3 30 KVA | CPSS ZEN 3/3 40 KVA |
|---|---|--|---------------------|---------------------|---------------------|
| POWER | kVA | 10 | 20 | 30 | 40 |
| | kW | 9 | 17 | 27 | 33 |
| INPUT | Rated voltage | 400 V three-phase with neutral | | | |
| | Voltage tolerance | ±20% | | | |
| | Rated frequency | 40 – 70 Hz | | | |
| | Power factor | ≥0.99 | | | |
| | Current distortion (THDi) | ≤ 4% at full load | ≤ 3% at full load | | |
| OUTPUT | Rated voltage | 380/400/415 V three-phase+neutral | | | |
| | Voltage stability | ±1% (static load) | | | |
| | Frequency | 50/60 Hz | | | |
| | Frequency stability | ±0.01% (free running) | | | |
| | Power factor | 0.9 | 0.85 | 0.9 | 0.825 |
| | Crest factor | 3:1 | | | |
| | Voltage distortion | ≤2% with linear load, ≤5% with distorting load | | | |
| | Permissible overload | 120% permanent load, 125% for 10 minutes, 150% for 1 minute | | | |
| EFFICIENCY | VFI mode | Up to 95% | | | |
| | ECO mode | Up to 98% | | | |
| | In battery | Up to 94% | | | |
| GENERAL | Parallel connection | Up to 6 units | | | |
| | Dimensions (WxDxH) mm | 260x850x890 (including wheels) | | | |
| | Weight (kg) | 74 | 76 | 85 | 88 |
| | Alarms | Audible and visual alarm alerts for: incorrect battery polarity, short circuit, power failure, low battery, bypass transfer, and UPS fault, etc. | | | |
| | Protection | Battery polarity, short circuit, overload, overheating, deep discharge, overcharging. | | | |
| | Operating mode | Multimode: VFI, ECO, Emergency (SE), Mixed mode (SA and SE with separate outputs) | | | |
| | Cold start from the battery without mains power | Included | | | |
| | Protection class | IP 20 | | | |
| | BATTERY | Number per string (12V) | 40 pcs | | |
| Common battery for parallel configuration | | Supported | | | |
| Internal battery (optional) | | Up to blocks 40 12 V 7/9 Ah batteries | | N.A. | |
| Max charging current* | | 12.9 A | 14.5 A | 24.7 A | 28 A |
| Cold start from the battery without mains power | | Included | | | |
| BYPASS | Rated voltage | 380/400/415 V three-phase+neutral | | | |
| | Voltage tolerance | Basic window ±10% (programmable ±5% – ±15%) | | | |
| | | Critical window ±25% (programmable ±16% – ±30%) | | | |
| | Frequency | 50/60 Hz | | | |
| | Frequency tolerance | ±1 Hz / ±3 Hz (selectable) | | | |
| Protection | Fuses | | | | |
| ENVIRONMENTAL PARAMETERS | Operating temperature** | 0 – 40°C | | | |
| | Altitude (a.s.l.) | <1000 m with no power derating, >1000 m with 1% derating for every 100 m. | | | |
| | Relative humidity | 0 – 95% (without condensing) | | | |
| | Audible noise at 1 m. | <52dB | | <55dB | |
| CONNECTIVITY | User interface | 4.3" colour LCD touch screen display with removable SD card | | | |
| | Built-in communication ports | USB, RS232, EPO, 3 out dry relay contacts (programmable) and two additional slots for optional cards | | | |
| | Optional accessories | Cards: SNMP, RS485, ModBus, 6 in/6 out dry relay contacts, touch panel for remote monitoring, Mixed mode kit | | | |
| REGULATIONS | Standards | EN50171, IEC EN 62040-1, IEC EN 62040-2, IEC EN62040-3 | | | |
| | Marking | CE, UKCA | | | |

* Subject to conditions ** To be verified according to the battery parameters

POWER QUALITY DEVICE

Innovative solutions
for maximum protection,
control and unparalleled
power quality



Enersine APF



Ermes



Enerbatt 3G

ENERSINE APF

- Enersine active wall-mount filters offer the most economical and effective solution, while the scalability of the modular ones protects your investment over time.
- The power modules of the modular version are easy to install and are hot swappable: they can be replaced while the filter is operating.
- Versatile thanks to the modularity, high nominal current and possibility of parallel connection up to 400 A for the wall version, and up to 2400 A for the modular version.
- Enersine is available in two versions, 4 or 6 modules for 60 A, 80 A or 100 A, which can also be used in a mixed configuration within the same system.
- Maximum performance with 3-level DSP technology.
- Their compact, high-power-density design optimises space.
- Multi-purpose: one model covers all three-phase systems (3-wire or 4-wire).
- Correction of all harmonics up to the 51st (up to the 25th for 30 A) with a response time of less than 1 ms.
- No overload effect.
- Selective mode to select the harmonics to be corrected.
- Phase balancing of three-phase loads.
- Open loop or closed loop installation.
- A single control module manages up to 8 power modules.
- All parameters are under control via the 7" colour (2.7" LCD for 30 A model) touch screen display that shows: voltage and current waveforms, frequency spectrum, parameters and events.
- Events and parameters can be downloaded to a removable SD card.
- Advanced communication: dry contacts (3 in and 1 out), USB, RS485 Modbus, RJ45 Ethernet, programmable email alarm.

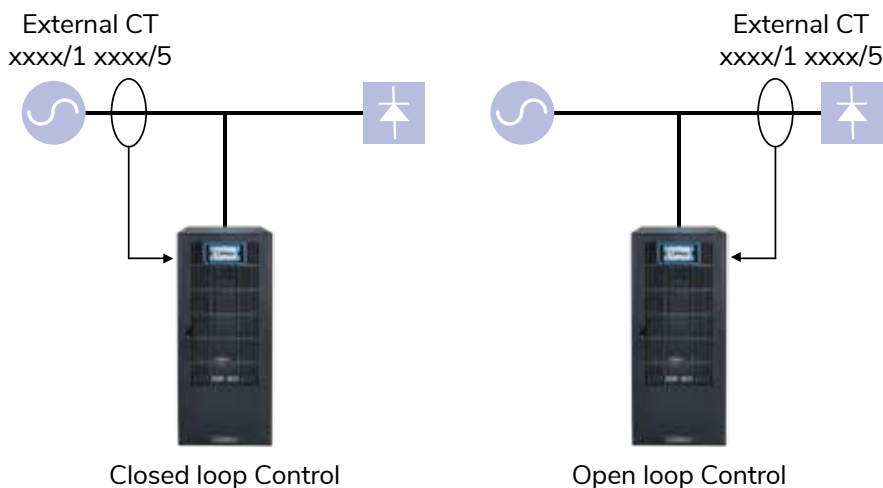
User-friendly user interface

The 7" colour touch screen display can be used to set all parameters, read the event log file and download data to a removable SD card (for 60 A, 80 A, 100 A wall-mounting model and all modular models).

It can also show the voltage and current waveforms, before and after enabling the Enersine, along with a frequency spectrum bar graph.



Open/closed loop control



AblereX Enersine active filters can correct any type of harmonic contamination to protect the system from faults (e.g. burnt-out transformers, damaged capacitors, etc.), while also improving the power factor.

ENERSINE APF wall-mounting 30-100 A

ENERSINE APF modular 60-2400 A

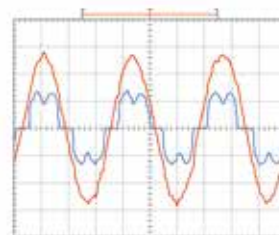


Applications

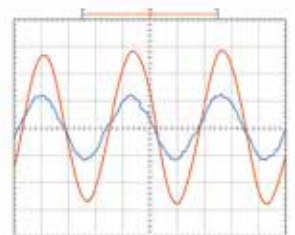
- Broadcasting
- Shopping centres
- Energy suppliers
- Transport infrastructure and control rooms
- Oil&Gas
- Healthcare sector



Generator



Without Enersine
TDHi%=30% • PF=0.81



With Enersine
TDHi%=4.3% • PF=1.0

Power Utility

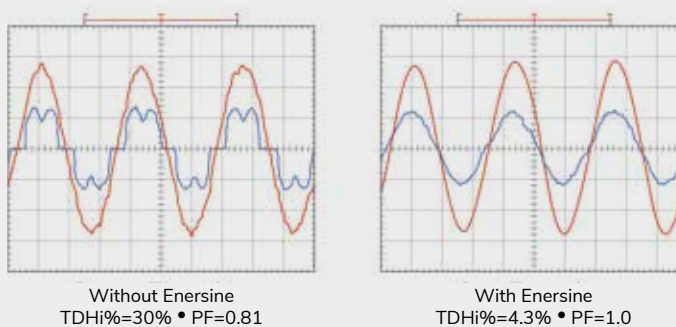


Non-Linear Load

ENERSINE APF

Harmonic and PF correction that can be verified on the display

Alerex Enersine not only actively corrects harmonic currents up to the 51st order, but also improves the inductive or capacitive power factor with a response time of less than 1 ms. The benefits can be seen easily on the display.



ENERSINE MONOLITHIC TECHNICAL DATA SHEET

| MODEL | | ENERSINE 30 | ENERSINE 60 | ENERSINE 80 | ENERSINE 100 |
|---------------------------|-------------------------------|---|---|-------------|--------------|
| SIZE (A) | | 30 | 60 | 80 | 100 |
| ELECTRICAL SPECIFICATIONS | Rated voltage | 400 V +15%, -20%; 480V +10%, -20% | | | |
| | Phases | Three-phase | | | |
| | Frequency | 50/60 ±3 Hz | | | |
| | Harmonic correction | From the 2nd to the 51st | | | |
| | Power factor correction | Capacitive and inductive (selectable) | | | |
| | Load balancing | Between two phases and between phase and neutral | | | |
| | Response time | 25 µs | | | |
| ENVIRONMENTAL PARAMETERS | Operating temperature | -10°C to +40°C with no derating * | | | |
| | Relative humidity | <95% | | | |
| | Altitude (a.s.l.) | <1000 m with no derating, >1000 m with 1% derating for every 100 m | | | |
| | Audible noise at 1 m. | <55 dBA | <63 dBA | | |
| GENERAL | Dimensions (WxDxH) mm | 348x164x598 | 500x286x775 | | |
| | Weight (kg) | 16 | 51 | 58 | 60 |
| | Protection class | IP30/IP31 | | | |
| | Connections | 4-wire/3-wire | | | |
| | Installation | Wall mounting | | | |
| | Type | Monolithic | | | |
| | Parallel connection up to (A) | 120 | 240 | 320 | 400 |
| | Max parallel modules | 4 | | | |
| | TA configuration | Source side TA: closed loop control - load side TA: open loop control | | | |
| CONNECTIVITY | Built-in communication ports | USB, RS-485 ModBus RTU, EPO and Dry contact board (1 input – 3 output) | USB, RS-485 ModBus RTU, EPO, Ethernet and Dry contact board (1 input – 3 out-put) | | |
| | User interface | Colour 2,7" LCD screen display | Colour 7" LCD touch screen display | | |
| | Software | Data monitoring and storage software | | | |
| REGULATIONS | Standards | EN61000-6-4, EN55011, CISPR 11, IEC 61000-3-12, IEC 61000-3-11 | | | |
| | | IEC 61000-6-2, IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4 | | | |
| | Marking | IEC 61000-4-5, IEC 61000-4-6, IEC 62477-1, EN 61000-4-8, EN61000-4-34 CE, UKCA | | | |

* Enersine 30 model: -10°C to +25°C without derating, above +25°C automatic derating to 20A

ENERSINE MODULAR TECHNICAL DATA SHEET

| MODEL | | ENERSINE 400 | ENERSINE 600 |
|---------------------------|---|--|--------------|
| SIZE (A) | | 400 | 600 |
| POWER MODULE (A) | | 60-80-100 | |
| ELECTRICAL SPECIFICATIONS | Rated voltage | 400 V +15%, -20%; 480V +10%, -20% | |
| | Phases | Three-phase | |
| | Frequency | 50/60 ±3 Hz | |
| | Harmonic correction | From the 2nd to the 51st | |
| | Power factor correction | Capacitive and inductive (selectable) | |
| | Load balancing | Between two phases and between phase and neutral | |
| | Response time | 25 µs | |
| ENVIRONMENTAL PARAMETERS | Operating temperature | -10°C to +40°C with no derating | |
| | Relative humidity | <95% | |
| | Altitude (a.s.l.) | <1000 m with no derating, >1000 m with 1% derating for every 100 m | |
| | Audible noise at 1 m. | <63 dBA | |
| GENERAL | Dimensions (WxDxH) mm | 600x900x1500 | 600x900x1950 |
| | Weight (kg)* | 150 | 196 |
| | Protection class | IP21 | |
| | Connections | 4-wire/3-wire | |
| | Installation | Floor standing | |
| | Type | Modular | |
| | Parallel connection up to (A) | 2400 | |
| | Max no. of modules per system (60 or 80 A in a mixed configuration) | Up to 4 | Up to 6 |
| | Max parallel systems | 6 | 4 |
| | TA configuration | Source side TA: closed loop control - load side TA: open loop control | |
| CONNECTIVITY | Built-in communication ports | USB, RS485, Modbus RTU, EPO Ethernet port and dry relay contacts (1 in/3 out) | |
| | User interface | 7" colour LCD touch screen display | |
| | Software | Data monitoring and storage software | |
| REGULATIONS | Standards | EN61000-3-4, IEEE 519-1992, EN60146, EN50178; UL508, EN61000-6-4, EN55011, CISPR 11, IEC 61000-3-12, IEC 61000-3-11, IEC 61000-6-2, IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 62477-1, IEC 61000-4-5, IEC 61000-4-6, EN 61000-4-8, EN61000-4-34 | |
| | Marking | CE, UKCA | |

* Weight without the control module and power modules

ERMES ATS

- Redundant power to single-input equipment by managing two separate, independent power sources.
- High automatic transfer speed between two sources (8 - 12 ms).
- The LCD display makes it easy to control.
- Takes up minimal space: 1U for 16 A and 2U for 32 A.
- EPO for greater safety.
- The ITS version with manual bypass and hot-swappable ATS guarantees 100% power continuity.
- Output sockets:
 - 16 A version: 8 x IEC C13 and 1 x IEC C19
 - 32 A version: 12 x IEC C13 and 2 x IEC C19 + terminals.
- USB and RS232 ports, relay card with dry contacts and slots for optional communication cards.

Key options

- SNMP/web and RS485 card for remote management

ERMES Automatic transfer systems

These guarantee redundant power to rack equipments with a single power supply.



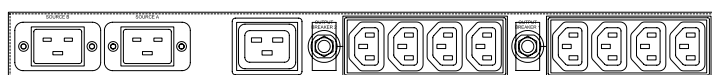
Applications

- Server rooms
- Data centres
- Networking equipment
- Video surveillance and security equipment

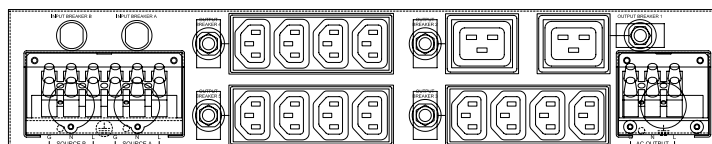
ATS TECHNICAL DATA SHEET

| MODEL | | ERMES 16A | ERMES 32A | ERMES 32A BP |
|--------------------------|------------------------------|--|---|--|
| SIZE (A) | | 16 | 32 | 32 |
| INPUT | Rated voltage | 200/208/220/230/240 Vac (±5%/10%/15%/20%) | | 200/208/220/230/240 Vac (±5%/10%/15%/20%) |
| | Frequency | 50/60 Hz (±5%/10%/15%/20%) | | |
| | Input sockets | 2 x IEC-C20 | 2 x 30 A terminal blocks | 2 x 30 A terminal blocks |
| OUTPUT | Rated voltage | 200/208/220/230/240 Vac | | 200/208/220/230/240 Vac |
| | Maximum output current | 16 | 32 | 32 |
| | Transfer time | 8–12 ms | | |
| | Output sockets | 8 x IEC-C13 1 x IEC-C19 | 12 x IEC C13, 2 x IEC C19 1 x 32 A terminal blocks | 12 x IEC C13, 2 x IEC C19 |
| CONNECTIVITY | Built-in communication ports | RS232, USB, EPO, relay card with dry contacts (5 out) | | |
| | User interface | LED (source A and/or B, fault status) LCD (parameters: alarms, faults) | | |
| | Optional accessories | RS485, SNMP/Web cards | | |
| GENERAL | Dimensions (WxDxH) mm | 440x275x44 | 440x275x88 | 440x346x88 |
| | Weight (kg) | 4 | 6 | 8 |
| | Protection | Downstream short circuit | | |
| ENVIRONMENTAL PARAMETERS | Operating temperature | -5°C to + 40°C (0%–90% non-condensing) | | |
| REGULATIONS | Standards | IEC EN 62368-1, IEC EN 62310-2 | | |
| | Marking | CE, UKCA | | |

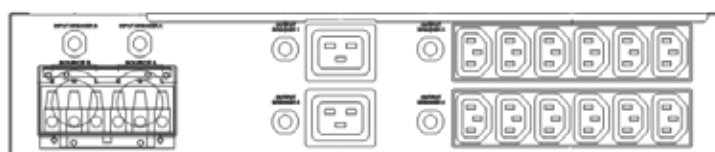
ERMES 16A



ERMES 32A



ERMES 32A BP



ENERBATT 3G

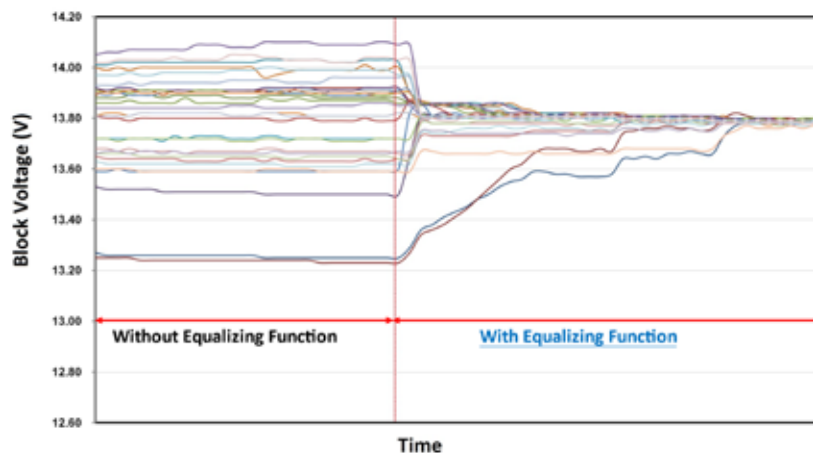
- Total flexibility with 2.4 GHz wireless communication technology that requires no preventative design and allows rack and cabinet configurations to be changed at any time.
- Everything easily under control: the most important parameters of each battery block are measured, including impedance, voltage, current and temperature.
- Very simple and fast installation ensures good savings.
- Each block has an equalization function to prevent spikes and maximise battery life and performance.
- Each ENERBATT system can monitor and protect up to 750 blocks.
- Automatically disables the measurement instrument if the end-of-discharge voltage is reached in order to safeguard the batteries.
- The measurement instruments are re-enabled automatically when the charging current is restored.
- Update frequency of 1 Hz ensures accurate measurements.
- Simultaneous management of batteries of different capacities and types (e.g. VRLA, AGM, NiCd, OPTS, OPZV, etc.) and mixed voltage configurations (e.g. 48 V and 240 V battery systems).
- Colour touch screen display to clearly see configurations and parameters, including diagrams and voltage trend plots.
- Programmable alarm level.
- Alarm alerts via email and dry contact.
- Removable SD card for event storage.
- RS485 port for communication between the receiver and control panel for monitoring large plants.
- Ethernet port and additional RS485 port for remote monitoring.

Key options

- Temperature sensor for each block.
- Sensor kit for use with Ni-Cd batteries.
- Additional antenna for each battery string meter (BMS-SMK) to extend the wireless range.
- Dedicated software for remote monitoring and data storage.

Battery voltage equalizer

Continually equalizes the end-of-charge voltage of the batteries to the optimal level in order to prevent overcharging and ensure the best performance and durability. With the equalization function active, the voltage of each battery block is continually kept at the ideal value.





ENERBATT 3G **Wireless battery analysis,** **monitoring and protection** **system**

The voltage equalization function between the individual blocks guarantee the lowest installation and operating cost, maximum performance and battery system life.

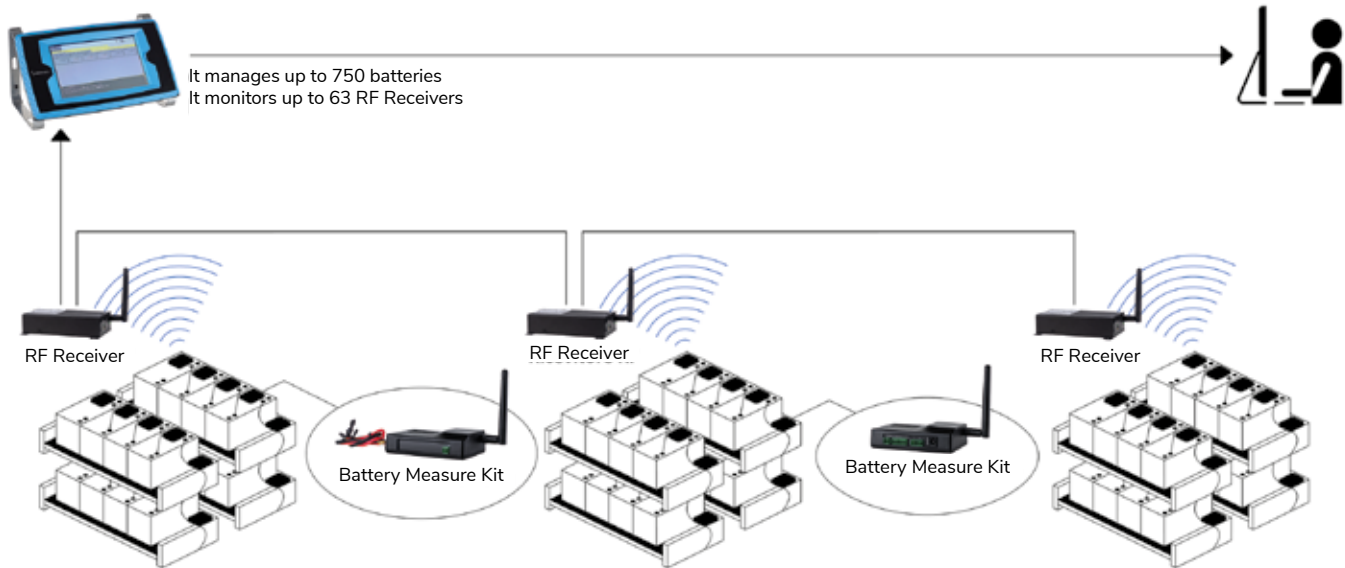
Applications

- Server rooms
- Data centres
- Telecommunications equipment
- Industrial automation systems
- TV broadcast equipment
- Video surveillance equipment
- Electrical panels and cabinets
- Electromedical equipment
- Energy storage systems

ENERBATT 3G

Wireless Battery Monitoring System

- **Easy**
The wireless design simplifies installation and makes maintenance cost effective.
- **Flexible**
No pre-design is needed, it can be adapted easily to any further configuration changes.
- **Intelligent**
Real-time monitoring via graphic LCD touch screen or web, programmable email alarms.
Guarantees savings in investment and operating expenses (CAPEX and OPEX).
- **Powerful**
One collector for up to 750 batteries of any type and 63 RF receivers. Battery protection is always active thanks to the equalisation functions.



ENERBATT 3G TECHNICAL DATA SHEET

| MODEL | | SPECIFICATIONS | | | | |
|---|--|---|------------|-----------|-----------------|-----------------|
| BMS-DC-LCDII (Central Unit) | User interface | 7" colour LCD touch screen display | | | | |
| | Supply voltage | 12 Vdc | | | | |
| | Power consumption | ≤ 9 W | | | | |
| | Communication ports | Ethernet, 2 RS485 Modbus RTU, dry relay contacts (1 in/3 out) | | | | |
| | RF receiver monitoring | Up to 63 RF receivers | | | | |
| | Wireless devices that can be connected | Up to 750 | | | | |
| | Storage capacity | SD memory card up to 16 gigabytes | | | | |
| | Dimensions (WxDxH) mm | 260x57x150 | | | | |
| | Weight (kg) | 0.85 | | | | |
| BMS-RFR (RF receivers) | Supply voltage | 12 Vdc | | | | |
| | Power consumption | ≤ 3 W | | | | |
| | Operating frequency | RF 2.4 GHz (wireless)* | | | | |
| | Wireless devices that can be connected | Up to 256 | | | | |
| | Dimensions (WxDxH) mm | 129x70x35.5 | | | | |
| | Weight | 0.4 | | | | |
| BMS-BMK (Battery meter) | Voltage | 1.2V (Ni-Cd) | 2 V | 6 V | 12 V | |
| | Measurement range | 0.95–2.00 V | 1.48–4.00V | 4.2–8.0V | 8.5–16.0V | |
| | Tolerance | ±5 mV | | | ±10 mV | |
| | Impedance measurement accuracy | 2 μΩ | | 10 μΩ | >65 Ah 15 μΩ | <65 Ah 25 μΩ |
| | Measurable temperature** | 0–100°C ±1°C | | | | |
| | Power consumption | ≤ 0.5 W | | | | |
| | Input impedance | ≥ 1 mΩ | | | | |
| | Dimensions (WxDxH) mm | 100x70x27 | | | | |
| | Weight (kg) | 0.1 | | | | |
| BMS-SMK (Battery Monitoring System) SMK (String meter) | Measurement range | 0–120 V | | 120–750 V | | |
| | Tolerance | ±0.2% | | | | |
| | Measurable temperature | 0–100°C ±1°C | | | | |
| | Measured current range*** | 0–3000 A | | | | |
| | Supply voltage | 12 Vdc | | | | |
| | Power consumption | ≤1.5 W | | | | |
| | Input impedance | ≥1 mΩ | | | | |
| | Dimensions (WxDxH) mm | 100x70x27 | | | | |
| | Weight (kg) | 0.09 | | | | |

* The maximum transmission distance is estimated to be 50 m if there are no obstacles. A distance of less than 20 m is recommended for optimal performance.

** The optional temperature sensor (TES) is required in order to measure the temperature.

*** The optional Hall-effect current transformer (HCT) is required in order to measure the battery current.



Rev.2025/01 - Our commitment to continuous innovation means that catalogue data may be subject to change without notice

AblereX Electronics Italy srl

Viale Milanofiori · Strada 6 · Palazzo N1
20089 Rozzano (MI)
info@ablerex.eu · Tel. +39 02 36696420
www.ablerex.eu

AblereX Electronics Ltd

19 The Circle Queen Elizabeth Street,
London, Greater London SE1 2JE - UK
info@ablerex.uk · Ph. +44 (0) 7920 058834
www.ablerex.uk