



# SIRIUS series

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## online UPS

10 ÷ 20 kVA single/single-phase and three/single-phase  
10 ÷ 120 kVA three/three-phase

- LOCAL AREA NETWORKS (LAN)
- SERVERS
- DATA CENTERS

- INTERNET CENTERS (ISP/ASP/POP)
- TELECOMMUNICATION DEVICES
- E-BUSINESS (SERVERS FARMS, ISP/ASP/POP)

- INDUSTRIAL PLCS
- ELECTRO-MEDICAL DEVICES
- EMERGENCY DEVICES (LIGHTS /ALARMS)

# SIRIUS series

**Sirius is ideal for the protection of critical information and telecommunications networks which can not run the risk of being powered from a poor quality electrical supply.**

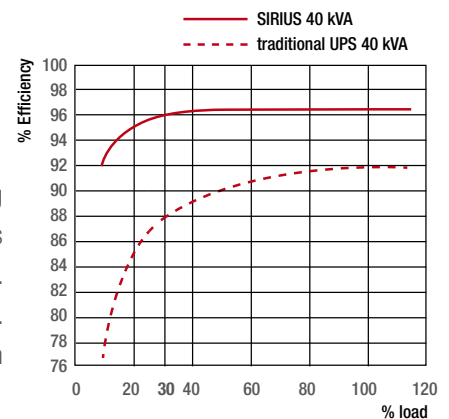
The Sirius Series is available in 10÷20 kVA three-phase or single-phase input and single-phase output models, and 10÷120 kVA three-phase input and output models, with double conversion on-line technology according to the VFI-SS-111 classification, as defined by the IEC EN 62040-3 standard. The system's advanced True On-Line, with digital signal processor (DSP) controlled IGBT rectifier and inverter, with filters for disturbances suppression. The high level of flexibility at the design stage means that there is full compatibility both with three-phase power and with single-phase sources, thus eliminating any critical factors in the connection between UPS and system.

Main characteristics:

- **Cost saving in efficiency**
- **Higher reliability**
- **Flexibility**
- **Zero impact source**
- **Intelligent battery management**

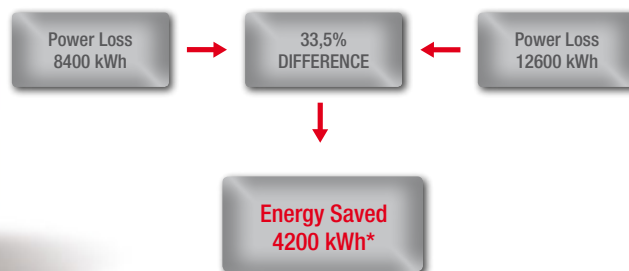
## COST SAVING IN EFFICIENCY

Sirius is the first class in cost saving due to efficiency up to 96.5% providing a 50% saving in energy usage per annum compared to traditional UPS products (92% standard). This exceptional performance can lead to a full initial investment recovery within three years. High operation efficiency up to 96,5% in normal mode, up to 99% in eco mode operation. Using state-of-the-art technologies three-level NPC inverters have been designed which ensure a high output of up to 96.5%.



**SIRIUS 40 kVA**

Efficiency at 75% rated load 96%



\* for standard utility contract at 0,15 €/kWh that means 630 € saved per year.



**STANDARD UPS 40 kVA**

Efficiency at 75% rated load 88%

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## HIGHER RELIABILITY

Transformerless, fully digital control with microprocessor, no break static and manual transferring.

The high frequency PWM (Power with modulation) for rectifier and inverter allows very low audible noise.

The technology and the choice of highest specification components, allows exceptional performance in an extremely compact solution.

The input PFC (Power Factor Correction) stage assures power factor close to 1 and current distortion less than 3%, without additional filters.

The output threephase models have output power factor 0,9, it means up to 15% of more active power available, guaranteeing a greater margin in UPS sizing for potential load increases.

## ZERO IMPACT SOURCE

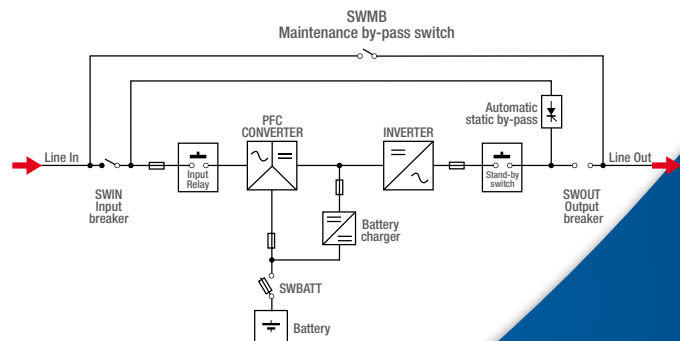
The superior technology of a Sirius allows it be used where the site mains power supply is limited in capacity, or has an on-site generator and/or loads that generate current harmonic problems. Sirius is designed to have a zero-impact on its upstream power supply (mains or generator).

## FLEXIBILITY

The Sirius settings permits several configuration:

- Normal mode or OnLine:
- Eco mode with efficiency performance up to 98%
- Smart active adapting the operation to the quality of the mains supply;
- Stand by off for increasing the components life;
- Frequency converter mode.

Configurable Energy Share sockets to ensure backup for the most critical loads or those programmed to operate only when mains power fails; Cold Start to switch on the UPS even when there is no mains power; Additional battery chargers to optimise charge time; Provide added backup capacity for extended runtimes; Optional dual inputs up to 80kVA, and standard for above sizes; Isolation transformers to vary neutral connectivity in the event of separate power sources or for galvanic isolation between input and output.



## INTELLIGENT BATTERY MANAGEMENT

Wider input voltage window and frequency tolerances help to minimize transfer to battery, reducing the number of charging and discharging cycles.

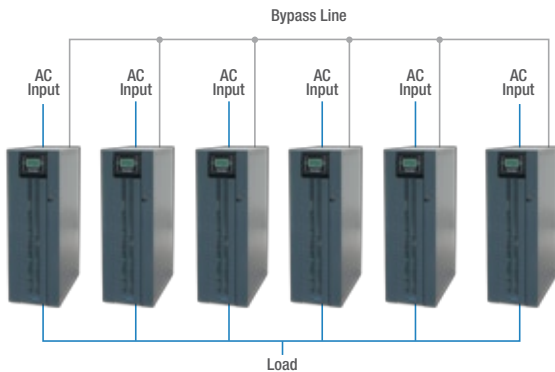
True on-line double conversion technology protects and conditions against the full range of power irregularities, requiring fewer transfers to battery.

In parallel redundant configuration is possible to connect a common battery string in order to have full battery capacity also in case of one UPS failure, without any additional accessory.

Thanks to a high frequency battery charger, reduces this value to negligible levels, prolonging battery life and maintaining high performance over a long period of time.

Suitable for use with sealed VRLA, AGM, GEL or wet type, Ni-Cd batteries.

## PARALLEL CONFIGURATION



Parallel redundant configurations allow for the failure of a single UPS module without requiring that the critical load be transferred to the utility source. A parallel redundant configuration consists of paralleling multiple, same size UPS modules onto a common output bus. Sirius can work in parallel up to 6 units. The UPS continues to operate in parallel even if one of the communication cables is disconnected.

## UPS FRONT PANEL



### Menu:

1. System ON
2. System Stand-By
3. Temperature
4. Command
5. History
6. Waveform
7. Diagnostic
8. Configuration

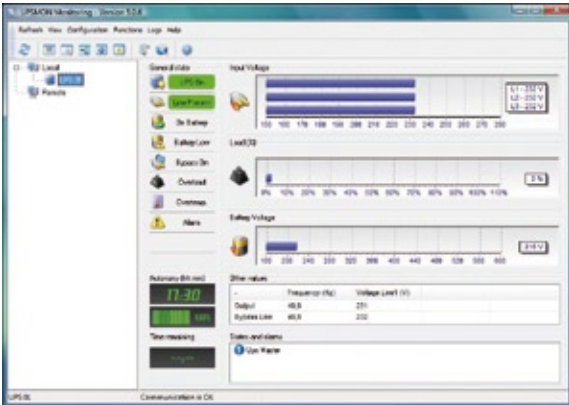
## TECHNICAL ASSISTANCE SERVICE

G-TEC Service, our technical assistance facility uses highly trained engineers to provide a reliable and competent technical support and after-sales service.

G-TEC Service can provide customers with:

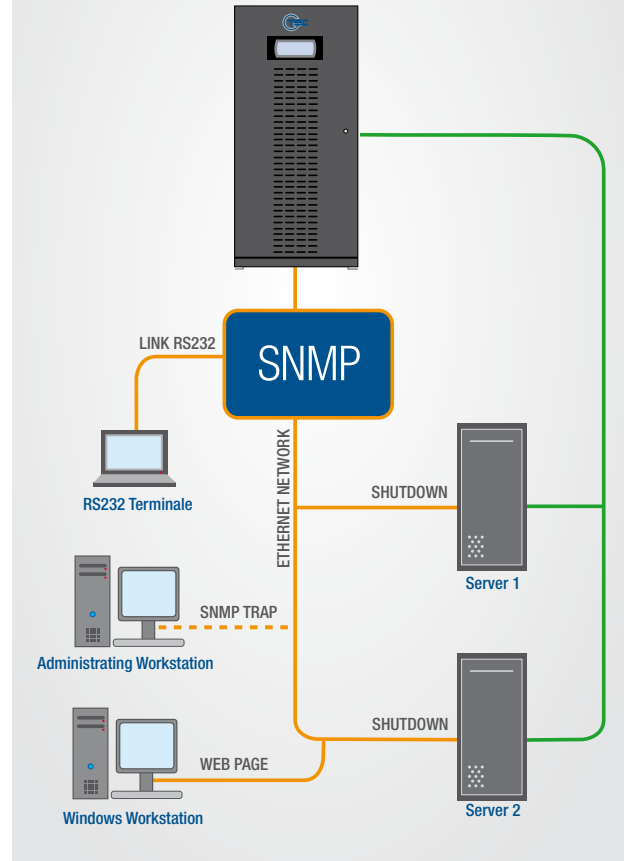
- A dedicated CALL CENTER for connection to the G-TEC Service organisation. G-TEC Service personnel are always available and ready to provide advice and assistance regarding UPS installation, maintenance, fault finding and repair.
- FAST& READY A fast repair on site is guaranteed through the use of state-of-the-art UPS technology and the professionalism of the G-TEC Service personnel and Authorised Assistance Centres. G-TEC Service guarantees that failed parts are replaced with original ones, tested and updated in order to maintain the safety, reliability and operating characteristics of the UPS.
- COMMISSIONING AND START-UP G-TEC Service can provide assistance during commissioning and startup of the UPS equipment on-site with additional training during handover to site personnel. G-TEC Service engineers can also verify site suitability, analyse and advise on potential problems, and disconnect and relocate equipment. G-TEC Service recommend that all hardwired installations are commissioned by G-TEC Service engineers.
- MAINTENANCE CONTRACTS can be provided by G-TEC Service to minimise response times and repair costs. Contracts range from periodic inspections to comprehensive cover including labour and materials.
- G-TEC Service organises regular TECHNICAL TRAINING COURSES for UPS operators and installers.

## COMMUNICATIONS



**PowerShield<sup>3</sup>** provides user-friendly UPS management. The software displays real time information in the form of bar charts and values for critical data such as mains voltage, UPS load and battery charge. It allows remote interrogation of UPS logs and operating parameters to help diagnose alarms and potential fault conditions. When instructed the software performs an automated safe power down of the protected PCs and file sever

## Direct Connection with Ethernet Network



## OPERATING SYSTEMS SUPPORTED

Windows 95-OSR2, 98, Me, NT 4.0, 2000, XP, 2003; Linux; Novell Netware 3.x, 4.x, 5.x, 6; Mac OS X, 9.x; IBM OS/2 Warp and Server; HP OPEN VMS; The most widely used UNIX operating systems such as: IBM AIX, HP UNIX, SUN Solaris INTEL and SPARC, SCO Unix and UnixWare, Silicon Graphic IRIX, Compaq Tru64 UNIX and DEC UNIX, BSD UNIX and FreeBSD UNIX, NCR UNIX.

### Advanced Communication

- Sirius is equipped with a graphic display that provides information, measures, states and alarms regarding the UPS in 5 different languages
- RS232 or USB serial port
- 3 slots for the installation of optional communication accessories such as network adapters and volt-free contacts
- REPO (Remote Emergency Power Off) with which to power down the UPS through a remote emergency pushbutton
- Input for connection of the auxiliary contact of an external manual bypass
- Input for synchronisation from an external source
- Graphic mimic panel display for remote connection

The SNMP agent allows UPS management across a LAN using any of the main network communication protocols - TCP/IP, HTTP and network interface via SNMP



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Technical Specification				
Model	SR010M	SR012M	SR015M	SR020M
<b>INPUT</b>				
Rated voltage	380-400-415 Vac three-phase with Neutral / 220-230-240 single-phase			
Voltage range	320-480V @ 100% load; 240-480V @ 50% load (3ph) 184-276V @ 100% load; 140-276V @ 50% load (1ph)			
Rated frequency	50/60 Hz			
Frequency range	40 ÷ 72 Hz			
Power factor at full load	0.99			
Current distortion	THDI ≤ 3%			
<b>BY PASS</b>				
Rated Voltage	220-230-240 Vac single phase with neutral			
Voltage tolerance	180 ÷ 264 V (selectable)			
Rated frequency	50/60 Hz (selectable)			
Frequency tolerance	±5 (selectable)			
<b>OUTPUT</b>				
Rated power (kVA)	10	12	15	20
Active power (kW)	8	9.6	12	16
Output power factor	0.8			
Rated voltage (V)	220-230-240 Vac (selectable) single phase with neutral			
Static variation	± 1%			
Dynamic variation	± 3%			
Crest factor (I <sub>peak</sub> /I <sub>rms</sub> )	3: 1			
Voltage distortion	≤ 1% with linear load / ≤ 3% with non-linear load			
Frequency	50/60 Hz			
Frequency stability on battery mode	0.01%			
Overload at pF 0.8	110% for 10 minutes, 133% for 1 minute, 150% for 5 seconds			
<b>BATTERIES</b>				
Number of VRLA batteries	40 batt. 12V (internal up to 2 strings 9 Ah)			
Type	VRLA AGM/GEL; Ni-Cd; WET TYPE			
Recharge time	6 h			
<b>ENVIRONMENTAL</b>				
Weight with internal batteries (Kg)	180	182	190	195
Dimensions (HxWxD) (mm)	1320x440x850			
Communication	DOUBLE RS232/C - SNMP Agent - MODBUS - PROFIBUS			
Operating temperature	0°C / +40°C			
Relative humidity	90% non condensing			
Colour	Dark Grey RAL 7016			
Noise	< 52 dBA at 1 m			
Protection rating	IP20			
Efficiency Normal Mode	≥ 93,5%		≥ 94%	
Compliance	<ul style="list-style-type: none"> <li>• European Directives: L V 2006/95/CE Low voltage directive; EMC 2004/108/EC Electromagnetic compatibility directive</li> <li>• Standards: Safety IEC EN 62040-1; EMC IEC EN 62040-2 C2</li> <li>• Classification according to IEC 62040-3 (Voltage Frequency Independent) VFI - SS - 111</li> </ul>			

**Note:** product specifications are subject to change without further notice

# SIRIUS series

Technical Specification											
Model	SR010T	SR012T	SR015T	SR020T	SR030T	SR040T	SR060T	SR080T	SR100T	SR120T	
<b>INPUT</b>											
Rated voltage	380-400-415 Vac, three-phase with Neutral										
Voltage range	320-480V@100% of the load 240-480 V@50% of the load										
Rated Frequency	50/60 Hz										
Frequency range	40 ÷ 72 Hz										
Power factor at full load	0.99										
Current distortion	THDI ≤ 3%										
<b>BY PASS</b>											
Rated voltage	380-400-415 Vac, three-phase with Neutral										
Voltage tolerance	180 ÷ 264 V (selectable)										
Rated frequency	50/60 Hz (selectable)										
Frequency tolerance	±5 (selectable)										
<b>OUTPUT</b>											
Rated power (kVA)	10	12	15	20	30	40	60	80	100	120	
Active power (kW)	9	10.8	13.5	18	27	36	54	72	90	108	
Output power factor	0.9										
Rated voltage (V)	380-400-415 Vac (selectable), three phase with neutral										
Static variation	± 1%										
Dynamic variation	± 3%										
Crest factor (I <sub>peak</sub> /I <sub>rms</sub> )	3: 1										
Voltage distortion	≤ 1% with linear load / ≤ 3% with non-linear load										
Frequency	50/60 Hz										
Frequency stability on battery mode	0.01%										
Overload at pF 0.8	115% unlimited, 125% for 10 minutes, 150% for 1 minute, 168% for 5 seconds										
<b>BATTERIES</b>											
Number of VRLA batteries	40 batt. 12V (internal up to 2 strings 9 Ah)						40 batt. 12V				
Type	VRLA AGM/GEL; Ni-Cd; WET TYPE										
Recharge time	6 h										
<b>ENVIRONMENTAL</b>											
Weight with internal batteries (Kg)	180	182	190	195	340	345	190	200	370	380	
Dimensions (HxWxD) (mm)	1320x440x850						1600x500x850			1900x 750x 855	
Communication	DOUBLE RS232/C - SNMP Agent - MODBUS - PROFIBUS										
Operating temperature	0°C / +40°C										
Relative humidity	90% non condensing										
Colour	Dark Grey RAL 7016										
Noise at 1 mt	< 48 dBA	< 52 dBA	< 48 dBA	< 56 dBA	< 70 dBA						
Protection rating	IP20										
Efficiency Normal Mode	≥ 93,5%	up to 94%	up to 96%				≥ 93%				
Compliance	<ul style="list-style-type: none"> <li>• European Directives: L V 2006/95/CE Low voltage directive; EMC 2004/108/ EC Electromagnetic compatibility directive</li> <li>• Standards: Safety IEC EN 62040-1; EMC IEC EN 62040-2 C2</li> <li>• Classification according to IEC 62040-3 (Voltage Frequency Independent) VFI - SS - 111</li> </ul>										

**Note:** product specifications are subject to change without further notice

**G-Tec Companies** are also present worldwide with Business Partners in several countries.

**G-Tec Europe Srl** in Vicenza - Italy

**G-Tec Asia Pacific Pte Ltd** in Singapore



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