

S Series

S Series

Digital Uninterruptible Power System Model 603

6,000 VA / 4800Watts

For Non-Life-Support Medical Applications



When All Others Fail

Turn to Clary's 60 years of technical expertise, and our unmatched experience in providing high performance and reliable UPS systems for applications ranging from extreme temperature environments to offshore drilling rigs, military shipboard, 911 emergency systems or hospital grade medical systems. Clary starts where the competition stops.

Reliability

Clary units supply reliable Continuous Digital Power during brownouts, dirty unstable electrical power and loss of input power. Unlike most other UPSs, the S Series will run continuously from batteries or auxiliary generator systems as long as power is available.

True On-Line Technology

Clary specializes exclusively in True On-Line Double Conversion systems. This technology provides ultimate protection from all power anomalies, keeping mission-critical applications out of harm's way. Our systems provide a digitally controlled precision regenerated output sinewave, unlike common standby or line interactive designs.

Uncompromising Performance

The Clary S Series Scientific grade UPS systems offers UL 1778 listing for maximum safety and are intended for non-life-support medical applica-

tion. Clary's S Series systems are typically found in patient care areas, medical laboratories, nurse stations and medical or dental offices. This reliable power system is built to the highest quality standards similar to Clary's M1145 FDA registered UPS system used for Ventilator applications.

Communications

Connectivity features include remote control, configuration and monitoring of the UPS. Clary products are compatible with all major network operating systems.

Off-the-shelf and Custom Solutions

In 1977, Clary Corporation pioneered double-conversion on-line UPS technology and in 1996 introduced digital control into continuous power UPS systems for mission critical applications. Today, Clary manufactures a variety of superior power products here in the USA, and can customize specs to meet your application requirements. What's more, our in-house field service department consistently sets the industry standard. Clary systems are found in hospitals, police and fire emergency systems, oil fields, rugged industrial applications, traffic signals, computer networks, military aerospace systems and numerous other applications.

MODEL	RATING	WATTS
S603	6,000 VA	4,800

POWER DISTRIBUTION UNIT

Many options are available with different combinations of output voltage and current.



Features & Benefits

- True On-line Double Conversion
- Supports Redundant Parallel Architecture (RPA)
- Symmetrical or N+1 Capability
- Protects all connected equipment
- Superior Battery Management
- No interrupted procedures
- Enhanced patient security
- No invalid test result
- No revenue disruption
- Manual maintenance bypass switch

Where POWER is a way of life

Scientific Grade Digital Uninterruptible Power System

CLARY
The Continuous Power Company™

Science



Features List

Features

**Redundant Parallel Architecture (RPA),
Optional (including bypass circuit)**

Benefits

Makes it possible to connect the output of up to four units in parallel. This provides maximum reliability because of redundancy of the system. Not only are the inverters redundant but so is the by-pass logic control and the battery systems. RPA protects your investment because parallelism supports future upgradeability allowing for investment only when you need it.

Superior Battery Management Features:

The S Series Superior Battery Management (SBM) provides enhanced battery lifetime which increases the economical life cycle of your investment.

**1. Monthly Automatic Battery and
Calibration Testing**

You will know before loss of data that the batteries need to be replaced. Batteries wear out! This feature provides an exact update of the actual battery capacity, which enables accurate runtime prediction.

2. Boost Charging

Boost charging enables fast recharging of the batteries. In this way the S Series can also backup the next blackout in a shorter period of time.

**3. Temperature Compensated Battery
Charger**

This feature provide for the most optimal charging of the batteries which improves battery life.

**4. Load Dependent End-of-Discharge
Voltage**

This feature provide for maximum battery capacity without over charging. Repeated over-charging will result in failure to recover normal battery capacity and reduces battery life

5. No Load Shutdown

Improves battery life by preventing needless battery discharge in cases where there is no load or no utility power.

ECO Mode

By selecting the ECO-mode the S Series operates on bypass continuously. On ECO-mode the unit has a very high efficiency providing low energy usage. The less heat generated also saves on air conditioning energy costs. An excellent feature when applied to less critical loads, like emergency lighting.

On Board Event Logging

All events like mains failures, alarms etc. are logged into the memory of the S Series providing detailed diagnosis information.

True On-line Double Conversion

Provides for the maximum system protection possible. Protects your equipment from damage due to any disturbance from the commercial power.

**Protection against Overload, Short-circuit
and Over-temperature**

Over-load, short-circuit and over temperature protection reduces maintenance costs, and improves reliability.

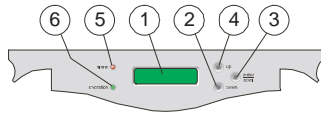
**RS232 / SNMP Compatible
Communication Interfaces**

Allows for monitoring and management of the UPS via the network, using the SNMP protocol set. RS232 is standard while the SNMP Interface is optional.

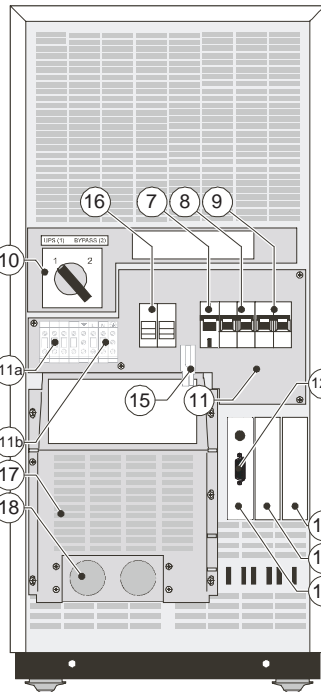
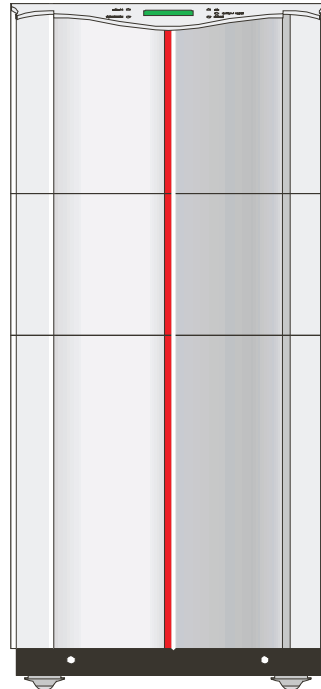
Emergency Power Off Feature (EPO)

Makes it possible to connect the S Series to a fire alarm system should safety reasons require UPS shutdown.

S Series



Front and Rear Panel Operational Indicators



- 1 LCD screen
2x16 characters, shows UPS system data, status messages, settings.
The language is selectable: English, German, French, Italian, Spanish.
Section 5.3.4 describes the selection procedure.
- 2-4 Push-buttons
With the button keypads 'down' (2) and 'up' (4) you can scroll through the several screens, with keypad 'reset/enter' (3) a selection is confirmed. Keypad activity is accompanied by a short beep. If there is no keypad activity during 20 seconds the LCD screen will return to the default screen (except for the service screens, see section 5.3.3).
- 5 LED 'operation' indicates normal operation.
- 6 LED 'alarm', indicates an alarm situation, accompanied by alarm message(s) on the display and a sounding buzzer.
See section 5.3.2 for more information.
- 7 Switch 'UPS on/off', turns on/off the complete UPS, including the automatic bypass!
- 8 Circuit breaker 'Utility on/off', protection fuse for utility input and battery charger.
- 9 Circuit breaker 'Bypass on/off', fuse to protect the system in case of severe overload or short circuit in the UPS load.
- 10 Manual Bypass Switch:
 - 1 = Load on UPS
 - 2 = Load on utility
 WARNING: In position 2, if the input line is energized, the output is also live regardless the position of the circuit breakers 'utility' and 'bypass'.
- 11 Cover plate, behind it:
 - 11a Output terminals
 - 11b Input terminals
- 12 RS232/Contact Interface Card, with:
 - RS232 Interface Port (see section 6.1)
 - Emergency shutdown (see 4.4.1 and 6.2)
 - Battery disconnected, pin 1-2 (can be used for external signaling).
- 13 Free option slot for plug-in cards:
 - Relay Card (see 6.3)
 - SNMP Card (see 6.4)
- 14 Option slot for RPA (Redundant Parallel Architecture) Card.
- 15 DC socket / connector.
- 16 Battery fuse holder
- 17 Conduit box
- 18 Cable inlet

S Series Specifications

Scientific Grade

ELECTRICAL

Input	
Voltage	208 - 240 VAC +10%, -20% Optional 120 VAC (Contact Sales)
Frequency	40 / 70 Hz
Output	
Voltage	120/208/220/230/240 VAC ±3%
Frequency	50/60 Hz Selectable on front panel
Crest Factor Ratio Handling	5:1 (Peak to RMS Current)
Total Harmonic Distortion (THD) 1	2% Max. (Linear)
Overload (Temp. Dependent)	120% for 20 min; 130% for 3.5 min
Efficiency @100% Load	90-92%

ENVIRONMENTAL

Operating Temp.	-10°C to +40°C(14°F to +104°F)
Humidity	0% to 95% Non-condensing
Altitude	Sea Level to 10,000 ft (some derating of temp. w/altitude > 7,000 ft)
Noise Level	40 to 50 dBA at 3 ft

MECHANICAL

Input	Hardwire to terminal block
Outputs	Hardwire to terminal block

AVAILABLE OPTIONS

Redundant Parallel Architecture Option
 Relay Card Option
 SNMP Adapter Card;
 Emergency Power Off Connection (EPO);
 Floor Bracket Kit;
 120VAC Input Voltage;
 L6-30P Input Line Cord, Models;
 Power Distribution Units (PDU);
 Mobile Hand Cart, Models;
 External / Extended Run-time Battery Cabinets;
 Contact Factory for Other Custom Options

DESIGN

Standard Features	Power Factor Corrected Input; Fully Regenerative; Low Distortion Sinewave Output; Inverter Powers Load Continuously; Designed for Non-linear Loads; Extended Brownout Protection; Automatic Bypass; RS232 Data Interface
Specifications	IEC 950; EN50091-01; EN 60950; IEEE 587/ANSI C62.41; EN 50091-2; CE; UL 1778; CUL
MTBF	In Excess of 100,000 hrs
Typical Recharge Time to 80% Capacity @ 100% Load	1.5 to 3hrs

CONTROLS AND INDICATORS

Single LED	Operation and Alarm
LCD Screen	2 x 16 Characters
Front Panel Controls	Power On; Cold Start; Alarm Silence; Test; Frequency Select; Voltage Select
Audible Alarms	Utility Interrupt; Inverter Failure; Overload; Low Battery; Self Test
RS232 Data Interface (DB-9)	Full Interactive Remote Computer Monitoring and Control of Most Features (requires optional monitoring software)
Relay Interface Card	Potential Free Relay Contacts
Optional SNMP Interface	Allows Full Control and Over Network Connection. Compatible with HP Openview™, Netview™, Systems Enhancement Corp. and Other Major Software.
Manual Bypass Switch	This System can be Bypassed Manually for Testing & Maintenance without Interruption of the Power supplied to the Load.

Specifications subject to change without prior notice.

Model	VA	Watts	Backup Time 100% / 50% Load	Unit Weight lbs	Dimensions H x W x D (in)
S603*	6,000	4,800	8 / 18	295	26.8 x 12.3 x 28.7

*Redundant Parallel Architecture configurations



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Made in the USA

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