

## USES:

- IEC 60601-1 & IEC 60601-2-XX Testing
- Patient Monitor Testing
- Defibrillator Testing
- Electro-Surgical Device Testing
- Devices with Multiple Patient Connections
- Testing Mains Powered & Internally Powered Devices
- Testing Medical Devices with B, BF & CF Applied Parts

## TEST CAPABILITY:

- Ground Bond - 2 points
- AC Hipot up to 5kVac - multipoint
- Mains to AP Dielectric Withstand
- DC Hipot up to 6kVdc - multipoint
- Mains to AP Dielectric Withstand
- Patient Leakage - up to 16 points
- Earth Line Leakage - 1 point
- Enclosure Leakage - 4 points
- Patient Aux Leakage - up to 16 points
- F-Type Leakage (110% Mains on Applied Part) - up to 16 points
- 110% Mains on SIP/SOP's
- Programmable AC Source

## ATE HARDWARE:

- Guardian 6100Plus Safety Analyzer
- AC Source (2000VA, 1500VA or 800VA)
- Matrix 8000M Scanning System with:
  - (1) AC Line Module
  - (1) GBF-2 Module
  - Up to (4) General Modules
  - (1) Earth Module
  - (1) AC Line 2Module
- (2) G32 1000VA Isolation Transformers
- (1) G42 Barcode Scanner
- (3) RS-232 Cables
- (2) USB - RS-232 Adapters
- Cables and adapters for DUT connections

## SOFTWARE:

- CaptivATE

# Medical Systems - Sentinel III

## Introduction

The Sentinel III System provides complete Electrical Safety Testing to IEC60601-1 and IEC60601-2-49 (Multifunctional Patient Monitoring Equipment) in a fully automated fashion. Sentinel III saves time by scanning patient connections for leakage current without powering down the medical device. The Sentinel III System can accommodate Class I, Class II, Mains and Internally Powered medical devices with the following configurations:

- Mains Power input up to 1500VA, 0~300Vac @ 15~1kHz
- Up to 16 B, BF, or CF Patient Connections
- 4 Signal Inputs/Signal Outputs
- Other Custom Configurations Available

## Description

**CaptivATE Software:** Create test sequences, capture data, provide bar code scanning of device model and serial number, automatic recall of test setup based upon model number; save all data to a database.

CaptivATE software eliminates the need for the operator to make Pass/Fail judgment, record test results, make process deviation decisions, select the proper test, or interface with multiple types of test equipment

**No Changing Cables during the Test:** Perform F-Type leakage tests and Mains to Patient connection hipot testing without the need for operator interaction. The system can also be configured for multipoint hipot, ground bond, and leakage current measurements. The operator does not have to connect/disconnect cables at any other point during the test other than at the beginning and end.

**Need More Patient Connections:** Add 1, 2 or 3 General modules to the standard configuration for an additional 4, 8 or 12 points. The maximum number of patient (applied part) connections is 16 (4 General modules).

**Engage Medical Device Functions:** Use the Sentinel III System to create 'worst case' leakage current conditions before making measurements. Allows PC systems to power up prior to making the leakage current measurement.

**AC Source:** Automatically program and regulate mains voltage and frequency applied to the device under test.



*For more detailed information on specifications, pricing and special purchase, rent and lease options, contact us at:*

[www.quadtech.com](http://www.quadtech.com)

800-253-1230

Hipot Testers • LCR Meters • Cable Testers • AC/DC Programmable Power Sources  
• Megohmmeter • Milliohmmeters



## Sentinel III System

IEC 60601-1 & 60601-2-49 Testing with 1500VA AC Source and 4-16 Patient Connections

### Sentinel III-04

G6100 Plus  
 Captivate Software  
 61603 1500VA AC Source  
 Matrix 8000 Scanning System  
 (1) AC Line Module  
 (1) GBF-2 Module  
 (1) Earth Module  
 (1) AC Line 2 Module  
 (1) General Module  
 (3) Blank Modules  
 (2) G32 Isolation Transformers  
 (1) G42 Barcode Scanner  
 (3) RS-232 Cables  
 (2) USB - RS-232 Adapters  
 Cables, Adapters req'd for DUT

### Sentinel III-08

G6100 Plus  
 Captivate Software  
 61603 1500VA AC Source  
 Matrix 8000 Scanning System  
 (1) AC Line Module  
 (1) GBF-2 Module  
 (1) Earth Module  
 (1) AC Line 2 Module  
 (2) General Modules  
 (2) Blank Modules  
 (2) G32 Isolation Transformers  
 (1) G42 Barcode Scanner  
 (3) RS-232 Cables  
 (2) USB - RS-232 Adapters  
 Cables, Adapters req'd for DUT

### Sentinel III-12

G6100 Plus  
 Captivate Software  
 61603 1500VA AC Source  
 Matrix 8000 Scanning System  
 (1) AC Line Module  
 (1) GBF-2 Module  
 (1) Earth Module  
 (1) AC Line 2 Module  
 (3) General Modules  
 (1) Blank Module  
 (2) G32 Isolation Transformers  
 (1) G42 Barcode Scanner  
 (3) RS-232 Cables  
 (2) USB - RS-232 Adapters  
 Cables, Adapters req'd for DUT

### Sentinel III-16

G6100 Plus  
 Captivate Software  
 61603 1500VA AC Source  
 Matrix 8000 Scanning System  
 (1) AC Line Module  
 (1) GBF-2 Module  
 (1) Earth Module  
 (1) AC Line 2 Module  
 (4) General Modules  
 (0) Blank Modules  
 (2) G32 Isolation Transformers  
 (1) G42 Barcode Scanner  
 (3) RS-232 Cables  
 (2) USB - RS-232 Adapters  
 Cables, Adapters req'd for DUT

## Sentinel IIIa System

IEC 60601-1 & 60601-2-49 Testing with 800VA AC Source and 4-16 Patient Connections

### Sentinel IIIa-04

G6100 Plus  
 Captivate Software  
 6408-1 800VA AC Source  
 Matrix 8000 Scanning System  
 (1) AC Line Module  
 (1) GBF-2 Module  
 (1) Earth Module  
 (1) AC Line 2 Module  
 (1) General Module  
 (3) Blank Modules  
 (2) G32 Isolation Transformers  
 (1) G42 Barcode Scanner  
 (3) RS-232 Cables  
 (2) USB - RS-232 Adapters  
 Cables, Adapters req'd for DUT

### Sentinel IIIa-08

G6100 Plus  
 Captivate Software  
 6408-1 800VA AC Source  
 Matrix 8000 Scanning System  
 (1) AC Line Module  
 (1) GBF-2 Module  
 (1) Earth Module  
 (1) AC Line 2 Module  
 (2) General Modules  
 (2) Blank Modules  
 (2) G32 Isolation Transformers  
 (1) G42 Barcode Scanner  
 (3) RS-232 Cables  
 (2) USB - RS-232 Adapters  
 Cables, Adapters req'd for DUT

### Sentinel IIIa-12

G6100 Plus  
 Captivate Software  
 6408-1 800VA AC Source  
 Matrix 8000 Scanning System  
 (1) AC Line Module  
 (1) GBF-2 Module  
 (1) Earth Module  
 (1) AC Line 2 Module  
 (3) General Modules  
 (1) Blank Modules  
 (2) G32 Isolation Transformers  
 (1) G42 Barcode Scanner  
 (3) RS-232 Cables  
 (2) USB - RS-232 Adapters  
 Cables, Adapters req'd for DUT

### Sentinel IIIa-16

G6100 Plus  
 Captivate Software  
 6408-1 800VA AC Source  
 Matrix 8000 Scanning System  
 (1) AC Line Module  
 (1) GBF-2 Module  
 (1) Earth Module  
 (1) AC Line 2 Module  
 (4) General Modules  
 (0) Blank Modules  
 (2) G32 Isolation Transformers  
 (1) G42 Barcode Scanner  
 (3) RS-232 Cables  
 (2) USB - RS-232 Adapters  
 Cables, Adapters req'd for DUT

## Ordering Information

Sentinel III System Medical Device Electrical Safety Test System	
Sentinel III System with 1500VA programmable AC Source	
Sentinel III-04	4 Patient Connections
Sentinel III-08	8 Patient Connections
Sentinel III-12	12 Patient Connections
Sentinel III-16	16 Patient Connections
Sentinel IIIa System with 800VA programmable AC Source	
Sentinel IIIa-04	4 Patient Connections
Sentinel IIIa-08	8 Patient Connections
Sentinel IIIa-12	12 Patient Connections
Sentinel IIIa-16	16 Patient Connections
Options:	
21U 19" Rack Mount Enclosure PC, Monitor & Keyboard	



For more detailed information on specifications, pricing and special purchase, rent and lease options, contact us at:

**[www.quadtech.com](http://www.quadtech.com) or 800-253-1230**

