



1 AMP CURRENT SOURCE



CS-2000

USER MANUAL

**BC BIOMEDICAL
CS-2000
TABLE OF CONTENTS**

WARNINGS	2
DESCRIPTION.....	3
OVERVIEW.....	4
OPERATION.....	5
TESTING.....	7
MANUAL REVISIONS.....	8
WARRANTY.....	8
SPECIFICATIONS	9
NOTES.....	10

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WARNING

All connections to patients must be removed before connecting the Device Under Test (DUT). A serious hazard may occur if the patient is connected when testing.

CAUTION

The Current Source is not a continuous duty device. Do not leave the device under test (DUT) connected to this unit for extended periods. It is intended for short duration testing within the current limits and duty cycles specified.

CONTACT INFORMATION

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<p style="text-align: center;">BC GROUP CS-2000 1 AMP CURRENT SOURCE</p>

The Model CS-2000 is a 1 amp current source for testing the ground continuity in equipment. This device facilitates testing to IEC601 requirements, where a 1 amp source current is required. This device interfaces directly with BC Biomedical SA series of Safety Analyzers as well as the Dale 544D, 544D Lite and 601/601E Safety Analyzers.

GENERAL

- FACILITATES TESTING TO IEC601 REQUIREMENTS
- INTERFACES DIRECTLY TO BC BIOMEDICAL SA-2000 SERIES OF SAFETY ANALYZERS
- INTERFACES TO DALE 544D, 544D LITE, 601 AND 601E SAFETY ANALYZERS
- UNIVERSAL POWER SUPPLY (85 – 265 VAC, 50/60 Hz)
- 1 AMP CURRENT SOURCE FOR RESISTANCE MEASUREMENTS
- NO PROTRUDING PUSH BUTTONS
- LIGHT TOUCH KEY USED TO OPERATE
- SMALL SIZE
- CS-2000U FOR USA MARKET
- CS-2000E FOR EUROPE (SCHUKO) MARKET

ACCESSORIES

BC20 - 30106 BC BIOMEDICAL MEDIUM SOFT SIDED CARRYING CASE

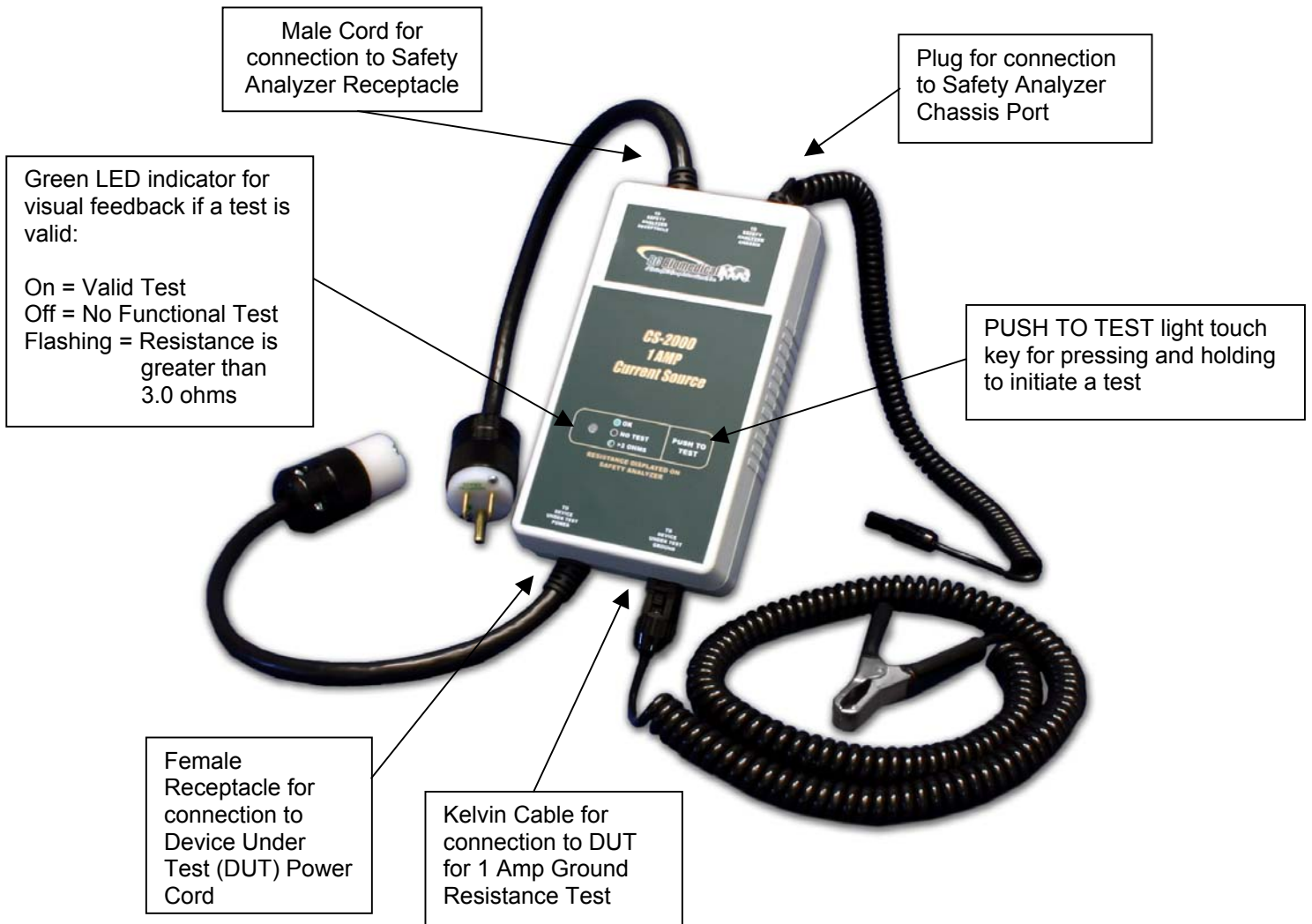
AVAILABLE MODELS

There are two models:

CS-2000U with USA power - plug configuration
CS-2000E with Europe (Schuko) power - plug configuration

OVERVIEW

This section looks at the layout of the CS-2000 and gives descriptions of the elements that are present.



OPERATION

The CS-2000 1 amp current source is not a stand-alone device. It is designed to work with a BC Biomedical SA-2000 Series of Safety Analyzers and the DALE 544D lite, 544D and 601/601E Safety Analyzers.

Push To Test Key

Pressing and holding this key, initiates a test.

This applies the 1 amp current source to the Device Under Test (DUT).

LED Indicator

This LED gives the operator visual feedback on the test status, according to the following meanings:

LED OFF – The test is not functional.

LED ON – The test is valid.

LED BLINKING – The resistance being measured is greater than 3.0 ohms.

Connections

The line plug on the CS-2000 plugs into the safety analyzer receptacle.

The cable at the top of the unit plugs into the chassis port on the safety analyzer.

The receptacle of the CS-2000 is used to connect the device under test.

The detachable cable at the bottom of the unit is connected to the chassis of the device under test.

Below is a typical example for wiring configuration of the safety analyzer, the CS-2000 current source and the device under test.



TESTING

WARNING

All connections to patients must be removed before connecting the Device Under Test (DUT) to the Current Source or Analyzer. A serious hazard may occur if the patient is connected when testing with the Analyzer. Do not connect any leads from the patient directly to the Analyzer or DUT.

1. Connect the CS-2000 to the Safety Analyzer and the Device Under Test as indicated in the Connections portion of the Overview Section.
2. Set the Safety Analyzer to read earth resistance. The safety analyzer display will read approximately 0.67 ohms.

NOTE: When the CS-2000 is connected to the Safety Analyzer and the Push to Test button is not depressed, bias voltages cause a reading to be displayed on the Safety Analyzer. This reading is approximately 0.67 ohms. This is not a true reading of the DUT.

Valid tests are indicated by a continuously lit LED; readings on the Safety Analyzer in all other situations should be ignored.

3. Set the Safety Analyzer for Forward Polarity with Hot and Neutral Closed.
4. On the CS-2000, press and hold the Push to Test key.
5. Verify the validity of the test by checking the LED on the CS-2000.

NOTE: A continuously lit LED indicates a valid test.

6. Read the resistance on the Safety Analyzer.

MANUAL REVISIONS

<u>Revision #</u>	<u>Engineering #</u>	<u>Revisions Made</u>
Rev 01	DT7332X	Origination
Rev 02	DT7332X	Updated Pictures

LIMITED WARRANTY

WARRANTY: BC GROUP INTERNATIONAL, INC. WARRANTS ITS NEW PRODUCTS TO BE FREE FROM DEFECTS IN MATERIALS AND WORKMANSHIP UNDER THE SERVICE FOR WHICH THEY ARE INTENDED. THIS WARRANTY IS EFFECTIVE FOR TWELVE MONTHS FROM THE DATE OF SHIPMENT.

EXCLUSIONS: THIS WARRANTY IS **IN LIEU OF** ANY OTHER WARRANTY EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF **MERCHANTABILITY** OR FITNESS FOR A PARTICULAR PURPOSE.

BC GROUP INTERNATIONAL, INC. IS NOT LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES.

NO PERSON OTHER THAN AN OFFICER IS AUTHORIZED TO GIVE ANY OTHER WARRANTY OR ASSUME ANY LIABILITY.

REMEDIES: THE PURCHASER'S SOLE AND EXCLUSIVE REMEDY SHALL BE: (1) THE REPAIR OR REPLACEMENT OF DEFECTIVE PARTS OR PRODUCTS, WITHOUT CHARGE. (2) AT THE OPTION OF **BC GROUP INTERNATIONAL, INC.**, THE REFUND OF THE PURCHASE PRICE.

SPECIFICATIONS

CURRENT SOURCE	1 Amp DC
ACCURACY	1.00 to 1.02 Amps
VOLTAGE	85-265 VAC, 50/60 Hz
OPERATING RANGE	0 to 50 Degrees C
STORAGE RANGE	-40 to 60 Degrees C
CONSTRUCTION	Enclosure – ABS Plastic. Face – Lexan, Back Printed
SIZE	7.09 x 3.94 x 1.56 inches 180 x 100 x 40 mm (HxWxD)
WEIGHT	≤ 1 lbs. (0.45 kg)
CONNECTIONS	3 Pin Locking Plug for Safety Analyzer Chassis Port Male Power Plug Female Power Receptacle Detachable Kelvin Cable for Device Under Test Grounding
POWER CONSUMPTION	100 mA
LOAD CURRENT	15 Amps @ 120 VAC 10 Amps @ 240 VAC

NOTES