GLOVE CONSTANT AREA & FORCE ELECTRODE

PCF-825B

User Manual

PROSTAT®

Table of Contents

PROSTAT® PCF-825B GLOVE CONSTANT AREA & FORCE ELECTRODE

Copyright © 2011 by Prostat® Corporation. All rights reserved. Printed in the United States of America. No part of this manual may be used or reproduced in any manner whatsoever without written permission. For information contact Prostat Corporation, 1072 Tower Lane, Bensenville, IL 60106 USA

Prostat is the registered trademark of Prostat® Corporation

Overview

Glove and Finger Cot evaluation and qualification testing is conducted under controlled conditions in accordance with ESD Association Standard Practice ANSI/ESD SP15.1 Standard Practice for In-Use Resistance Testing of Gloves and Finger Cots. While Prostat's PCF-825B CAFÉ Fixture Set is designed for evaluation and qualification testing in accordance with ANSI/ESD SP15.1, it can also be used for Audit measurements in plant, laundry or in various field configurations. All in-use testing should be performed at environmental conditions similar to those in which the gloves will be used.

The PCF-825B CAFÉ Fixture Set includes:

- PCF-825B CAFÉ Fixture
- PWS-611-PGC No Resistor Ground Cord
- PWS-620C Metal Adjustable Band
- PCF-825BLR 36 Inch Red Test Lead

There are several ways to perform resistance measurements with the CAFÉ Fixture Set:

A. Baseline resistance of operator to verify the system and establish minimum resistance of operator only.

B. Low voltage system resistance test (less than $1.0x10^6$ ohms). Test at >1.5 Volts to less than 10 Volts.

C. Low voltage system resistance test (Greater than $1.0x10^6$ ohms). Test at 10 Volts.

D. High voltage system resistance test (Greater than $1.0x10^7$ ohms). Test at 100 Volts.

The following recommends general procedures for using the PCF-825B fixture in practical Audit applications. For detailed evaluation procedures please refer to ANSI/ESD SP15.1.

II. Test Procedure Baseline Resistance of Operator

A. Equipment

1. PRS-801 Resistance System or PRS-812 Resistance Meter.

2. PWS-620C Wrist Strap with PWS-611-PGC ground cord without the one megohm resistor.

3. PCF-825B CAFÉ Fixture.

B. Procedure

1. Select the hand that will eventually wear the glove and select the finger or thumb to be tested.

2. Attach the wrist strap to the test hand and make sure the cuff makes good contact. Lotion may be used to assure good connection (Figure 1).

3. Attach the CAFÉ fixture to the PRS-801 or PRS-812 via the banana jack using the PCF-825BLR 36 inch Test Lead. Input the other end of the lead to the meter (Figure 2).

Figure 1: Attach Wrist Strap to test hand

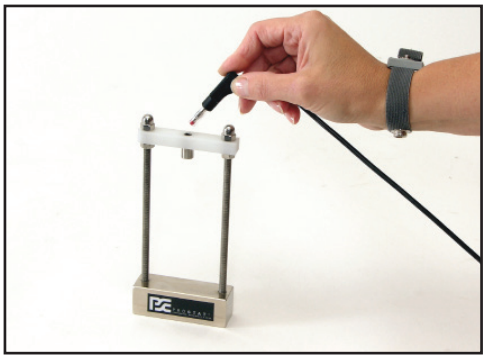

Figure 2: Attach the PCF-825BLR Test Lead

4. Attach the wrist strap cord to the meter (Figure 3).
5. Balance the CAFÉ fixture electrode on the fingerprint side of the finger or thumb chosen in step 1 above (Figure 4).

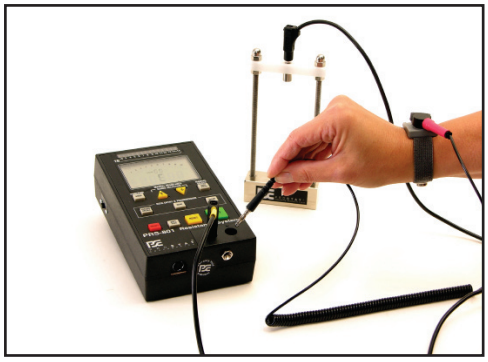

Figure 3: Attach Wirst Strap cord to meter

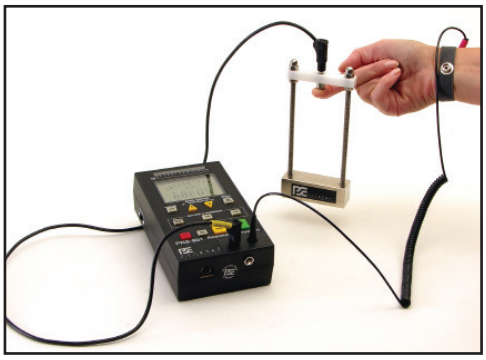

Figure 4: Balance fixture with your finger

6. Press the meter test button (Figure 5).
7. Record resistance measurement after 15 seconds of electrification.
8. Repeat Steps 1 through 7 on each finger selected for testing.
9. Clean the electrode with isopropyl alcohol prior to performing additional tests (Figure 6).

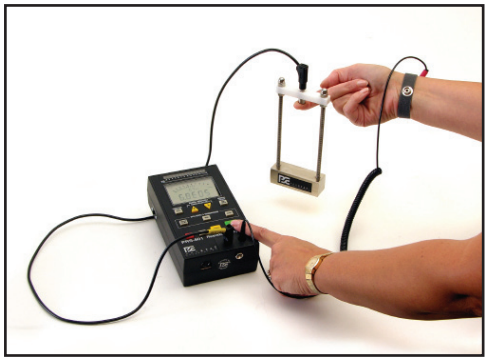

Figure 5: Press the Test button

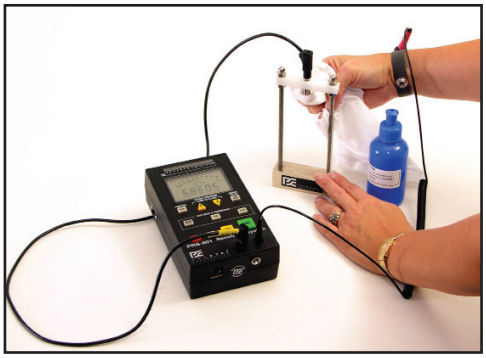

Figure 6: Clean electrode with alcohol

III. Test Procedure – Glove or Finger Cots

A. Equipment

1. PRS-801 Resistance System or PRS-812 Resistance Meter.
2. PWS-620C Wrist Strap with PWS-611-PGC ground cord without the one megohm resistor.
3. PCF-825B CAFÉ Fixture

B. Procedure

1. Attach the wrist strap to the test hand that will wear the glove. Make sure the cuff makes a good connection with the skin.
2. Attach the CAFÉ fixture to the meter via the banana jack using the PCF-825BLR Test Lead. Input the other end of the lead to the meter.
3. Attach the wrist strap cord to the meter.
4. Wear the glove in test and wait a minimum of 15 seconds to begin the electrical testing.
5. Balance the CAFÉ fixture electrode on the fingerprint side of the finger or thumb chosen of the hand wearing the glove.
6. Press the meter test button.
7. Record resistance measurement after 15 seconds of electrification. If the resistance measured in less than $1.0x10^6$ ohms, record the measurement. Repeat the test for all other digits.
8. If the resistance measured is greater than $1.0x10^6$ ohms, test at 10 Volts. If the resistance measured is greater than $1.0x10^7$ ohms, test at 100 Volts.
9. Clean the electrode with isopropyl alcohol prior to performing additional tests.

PCF-825B Glove Constant Area & Force Electrode Specifications

PCF-825B CAFÉ Fixture

Size:	3.0 x 6.0 x 1.0 inches
Electrode Material:	303 Stainless Steel
Cross Bar Material:	UHMW
Threaded Rod Material:	Stainless Steel
Bottom Weight Material:	1018 CRS Plated (Nickel or Zinc)
Weight:	1 lb

PWS-620C Metal Adjustable Wrist Strap

Construction:	Made from jewelry quality stainless steel, tested to MIL STD 202 Method 101.
Thickness:	3.5mm, average weight 33 grams. Manufactured to 130mm circumference with 5 10mm nylon expansion links.
Electrical Properties:	Outer band: insulative at 500V per unit mm, coating is polyurethane based polymer Inner band: Conductive - $<1.0x10^4$
Adjustable:	Easily adjustable to fit all personnel.
Elasticity:	Expansion ratio 1.5:1
Snap Size:	4mm post snap for ground cord, tested to MIL STD 202 Method 101
Color:	Black
Meets or Exceeds:	DOD-HDBK-263, DOD-STD-1686, EOS/ESD Std. No. 1-1987, EN10015/1

PWS-611-PGC No Resistor Grounding Cord

Snap:	4mm female snap
Coil:	Polished polyurethane coil insulation provides excellent coil memory. A swivel type banana jack with six (6) leaves increases coil life and prevents cord tangles.
Size/Length:	7-core tinsel wire has a nominal 2.5mm diameter. Length of 6 feet

NOTES

NOTES

NOTES

Specifications are subject to change without notice.
All Prostat trademarks and trade names are the property of Prostat Corporation.
All other trademarks and trade names are the property of their respective companies.

CARRIED BY
PROFESSIONALS

PROFESSIONAL STATIC CONTROL PRODUCTS

Prostat Corporation
Corporate Headquarters • 1072 Tower Lane • Bensenville, IL 60106 • 630-238-8883 • Fax: 630-238-9717 • 1-855-STATIC1 • www.prostatcorp.com