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ISOLATION TEST SOFTSTARTERS V5 SERIES	<b>Date:</b> 12 February 2010

☐ Controlled Copy nº \_\_\_\_\_

REVISIONS RECORD		
Issue	Date	Reason of Change
0	03-06-2008	First issue
1	12-02-2010	Included pictures. Requested by LS

Made by:	Checked by:	Approved by:

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## POWER ELECTRONICS

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## 1.- Purpose

This document is intended to establish a guide to isolation test the soft-starters V5 manufactured by POWER ELECTRONICS.

Operating voltage (mains)	400 V
	690 V


## 2.- Scope

This procedure is applied to each Soft-starter V5 Series manufactured and commercialised by POWER ELECTRONICS to LS.

This procedure has been prepared according to the standard EN 60947-4-2:2000 Low-voltage switchgear and controlgear -- Part 4-2: Contactors and motor-starters - AC semiconductor motor controllers and starters.

### **3.- Definitions**

Not applicable.

#### **4.- Responsibilities**

Not applicable.

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## **5. - Development Test**

### **5.1 HIGH VOLTAGE TEST**

Procedure: The test should be done 1 minute by phase (in all the input and output bars)

Connection: One clamp in the tested phase and the other one in the Softstarter Earth



5.1.1. Detail connection

Time: Total time 6 minutes

Values:

#Test voltage: Introduced value: 2500V  
#Current Limit Setting: Introduced value: 2mA



5.1.2. Detail values in the test

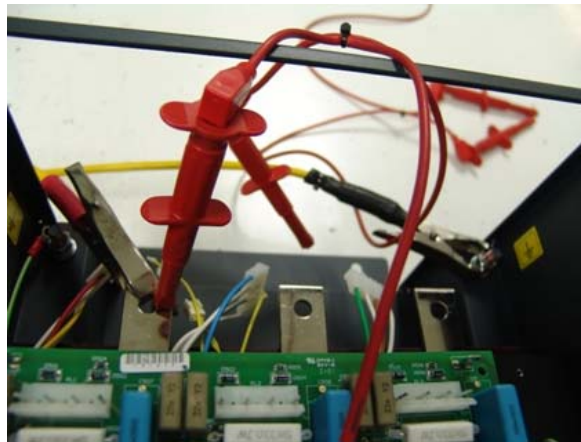
See picture 2 annexe A.

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## **5.2 ISOLATION TEST**

Procedure: The test should be done 10 seconds by phase (in all the input and output bars)

Connection: One clamp in the tested phase and the other one in the Softstarter Earth.



5.2.1. Detail connection the test

Time: Total time 1 minute

Values:

#Limit Setting: Introduced value: 50 M $\Omega$   
#Test voltage: Introduced value: 1000 V



5.2.2. Detail values in the test

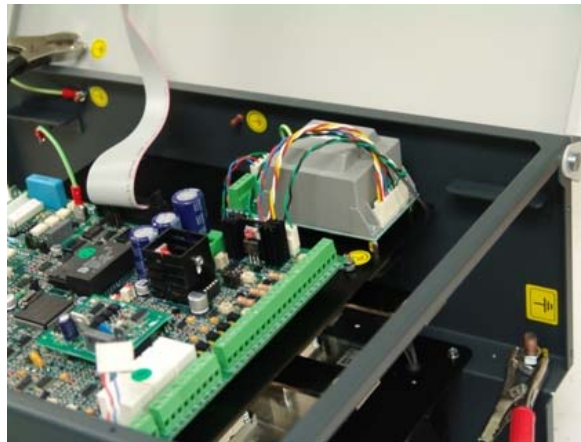
See picture 3 annexe A.

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### **5.3 PROTECTIVE CONDUCTOR TEST**

Procedure: the softstarter should be tested since the value will be 0  $\Omega$  .

Connexion: The test should be done between more remote two Earth points. One clamp in the Earth display and the other one in the Earth softstarter chassis.



5.3.1. Detail connection the test

Time: Total time 10 seconds

Values:

#Test output : Introduced value: 12V and 25A  
#Limit Setting: Introduced value: 0.2  $\Omega$



5.3.2. Detail values in the test

See picture 4 annexe A.

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#### **5.4 RESULT**

Note: All the test should be made with the electronic disconnected.

If the test is not compliance the red light will turn on, and the softstarter will not pass the test.

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#### **6.- Registers and Documentation**

Not encoded Checklist Softstarter.  
Included in IP03PC05I Annexe A

#### **7.- Annexe A**



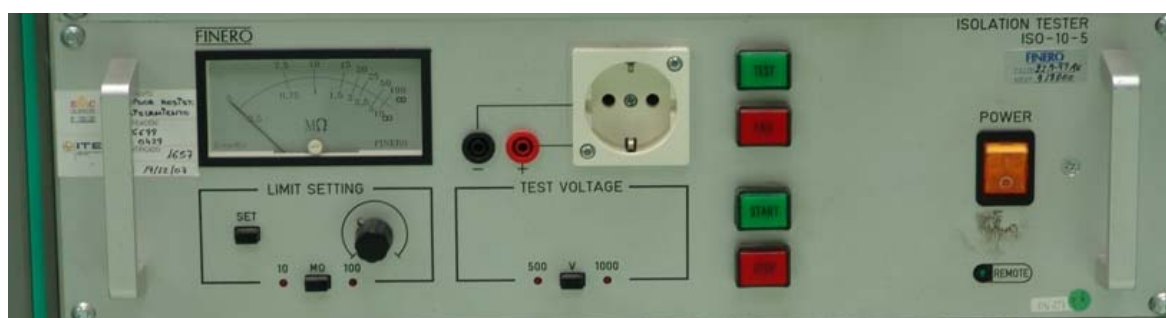
Picture 1.Finero Isolation modules



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Picture 2. Detail High voltage Tester HV-5000-1



Picture 3. Detail Isolation Tester ISO-10-5



Picture 4. Detail Protective Conductor Tester PCT-25