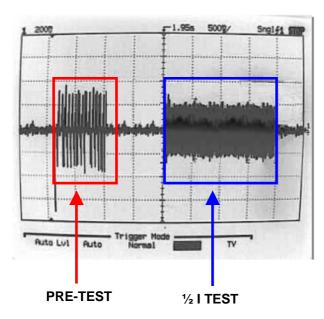


Application Note

1/2 I RCD Trip Measurements

Introduction

Some testers produce a pre-test signal which can be the same size as the current being tested on the $\frac{1}{2}$ I setting of a tester.



This pre-test will cause the 3200 to trigger and begin its reading cycle which will now be analysing the 'pre-test' section of the waveform. This will give incorrect measurements because of this.

Setting the Pre-Test Delay



NOTE: This requires a 3200 with firmware version 7.21 or above

The 3200 starts making measurements from a preset percentage of the selected RCD current.

Using an additional pre-test delay command, the 3200 measurement cycle can be delayed until the pre-test period has finished and the actual $\frac{1}{2}$ I test has begun – for example the MEGGER CM500 needs a 2500ms delay when testing the $\frac{1}{2}$ I function.

To overcome this problem, extra commands can be set in the Procal procedure. Open the test procedure with ProEdit, select the instruments tab and add the pre-test command shown below. This will set the pre-test delay to 2500ms



Pre-Test delay changed to 2500ms (S2500)

Where:

@04: The 3200 calibrator (traceable instrument

4)

A: Aborts current test

F89: Set 3200 to RCD pre-test delay set mode

\$2500: Sets delay time to 2500ms (must be in milli seconds)

F21: Restarts current test

The pre-test delay should be set back to ZERO at the end of the test as shown below.



Pre-Test changed back to 0ms (S0)



Please note the pre-test delay *cannot* be set from the 3200 front panel.

Notes on RCD Current testing

Almost all tester specifications for RCD current $\frac{1}{2}$ I tests are in the format, for example, -6% +0%. This means that the current drawn will not be less than the RCD trip current, therefore the nominal value will be higher than the trip current. For example a tester set on the 100mA range and $\frac{1}{2}$ I setting with the spec. -6% +0% will have a nominal trip current of 48.5mA.

