PROCEDURE FOR TESTING

P122

THREE PHASE OVERCURRENT & EARTH FAULT PROTECTION RELAY

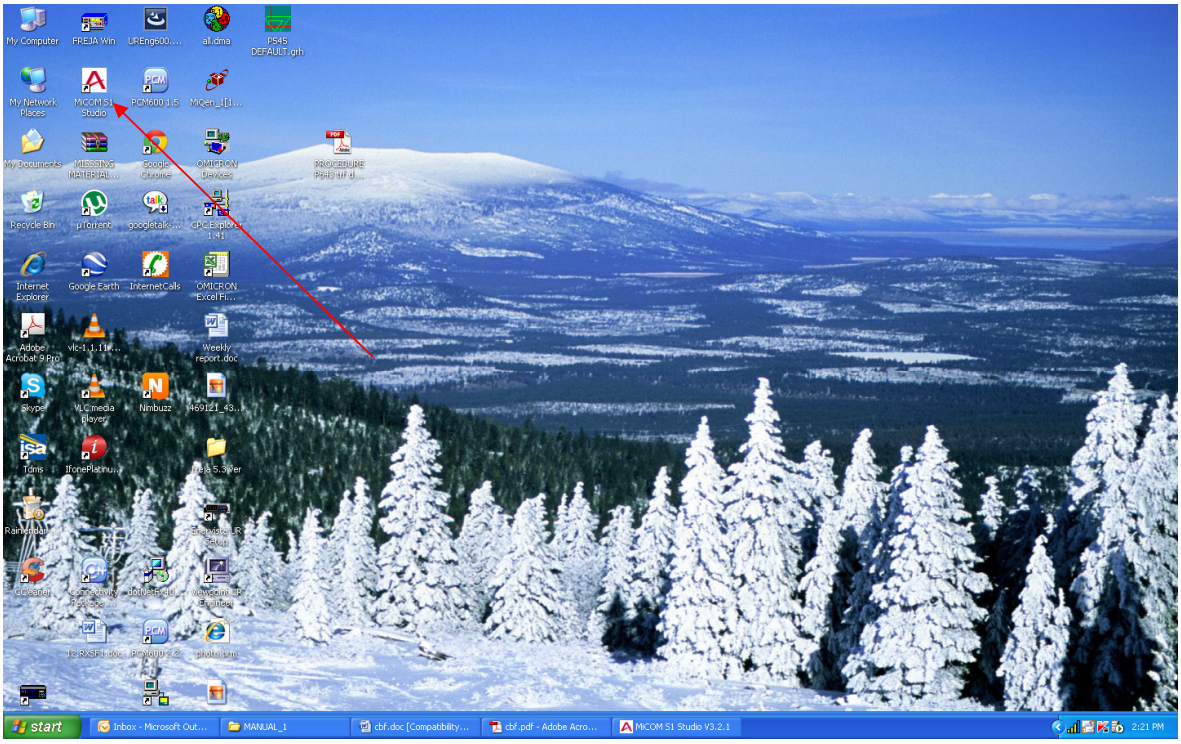
SEP
SYSTEM HOUSE FACTORY FOR ELECTRIC PANELS
TOMORROW'S SOLUTIONS TODAY

S.E.P – TRAINING CENTRE

INDEX

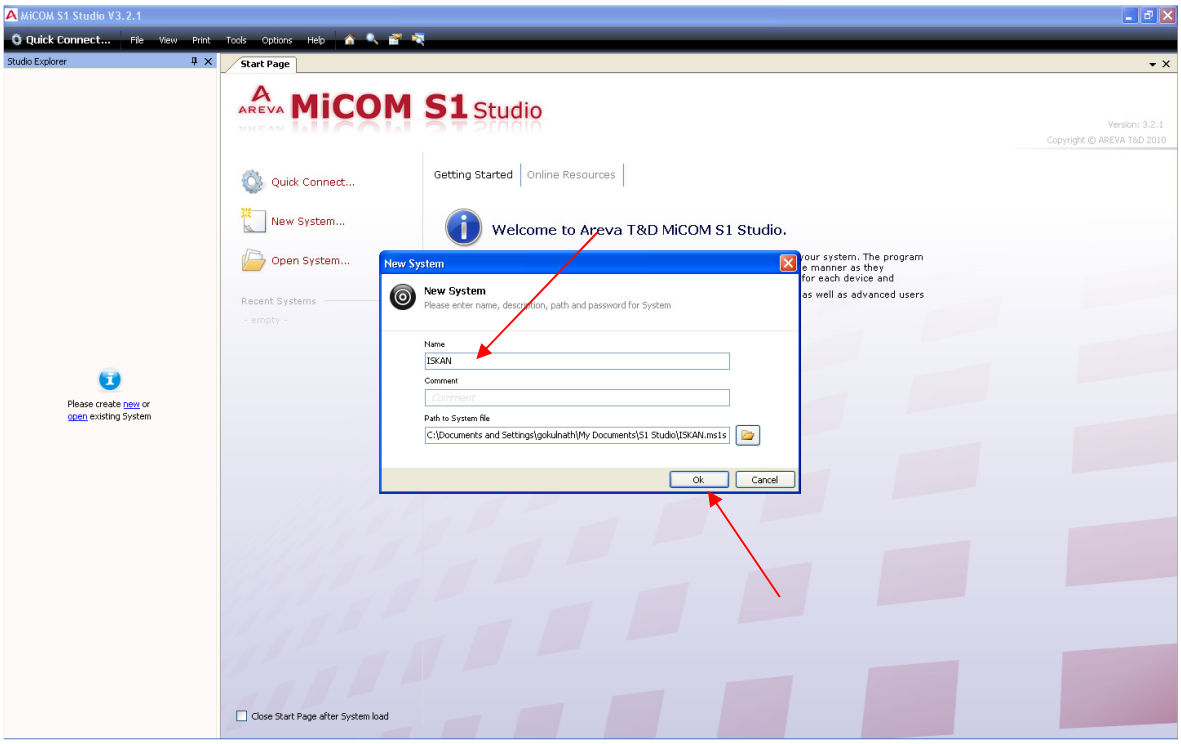
CHAPTER 1
INTERFACING PC WITH RELAY

A. COMMUNICATION WITH RELAY.
CLICK MICOM S1 AS MENTIONED IN BELOW PICTURE.

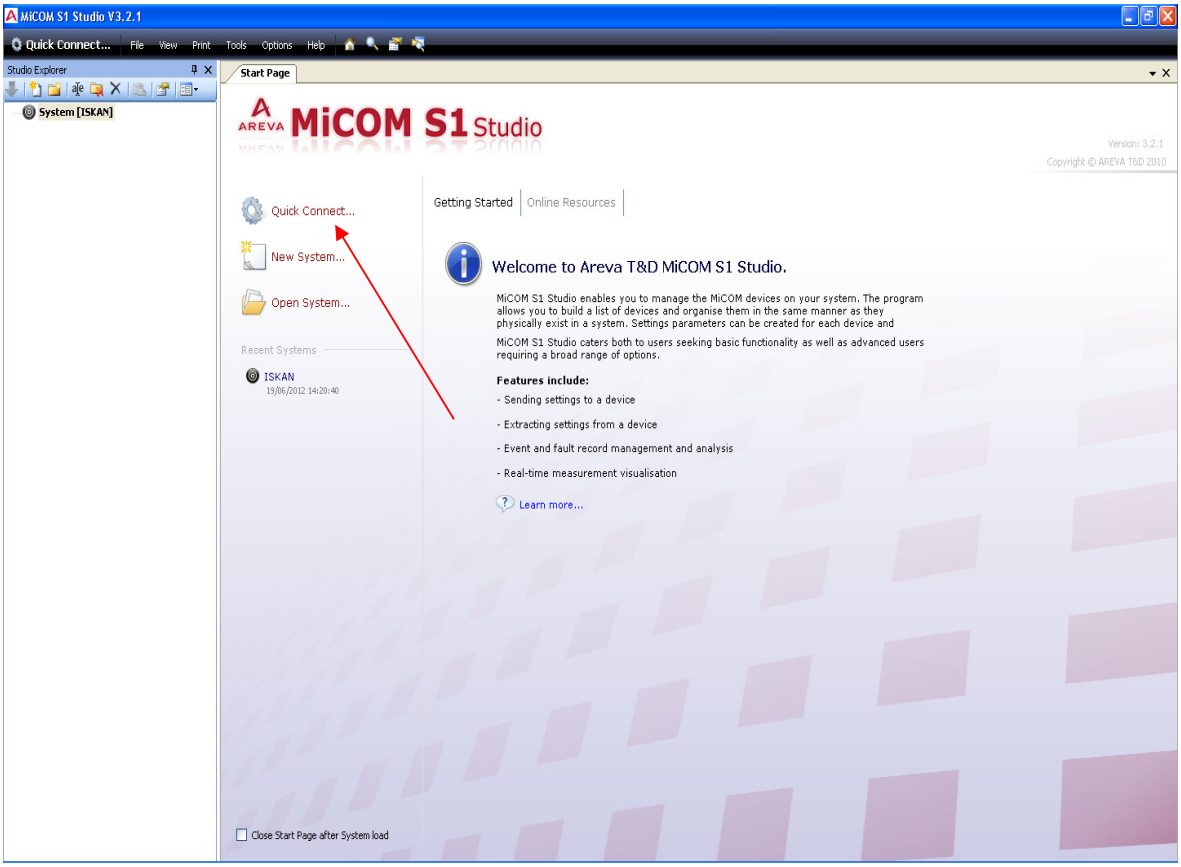


1.NOW WE HAVE TO CREATE NEW SYSTEM HENCE CLICK NEW SYSTEM AS MENTIONED IN BELOW PICTURE.

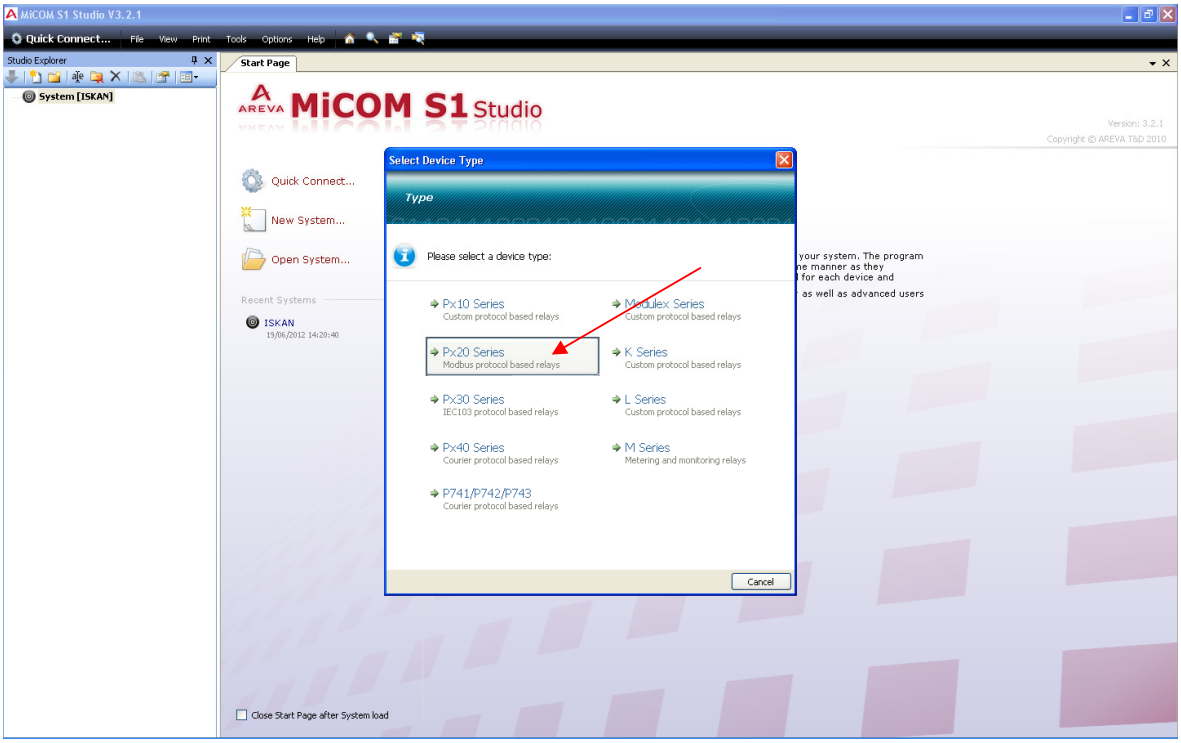
2. ASSIGN NAME FOR NEW SYSTEM AND CLICK OK



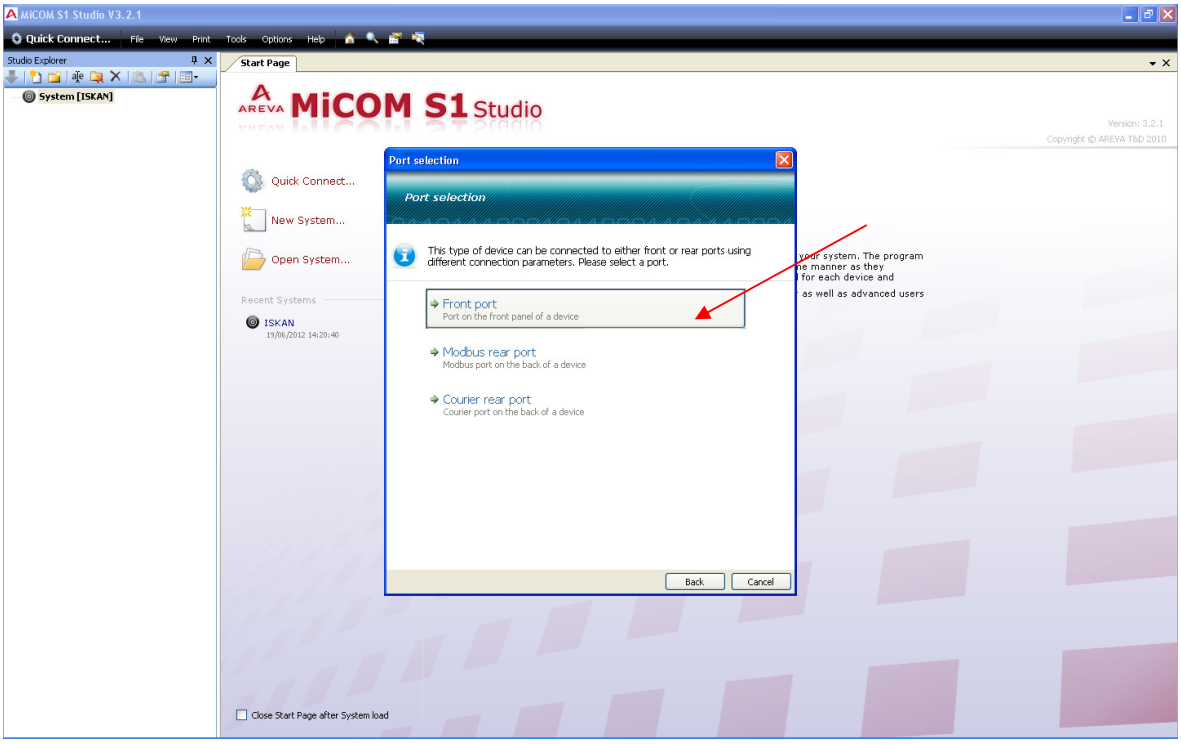
3.NOW SYSTEM IS CREATED AND THEN CLICK QUICK CONNECT AS SHOWN IN BELOW PICTURE



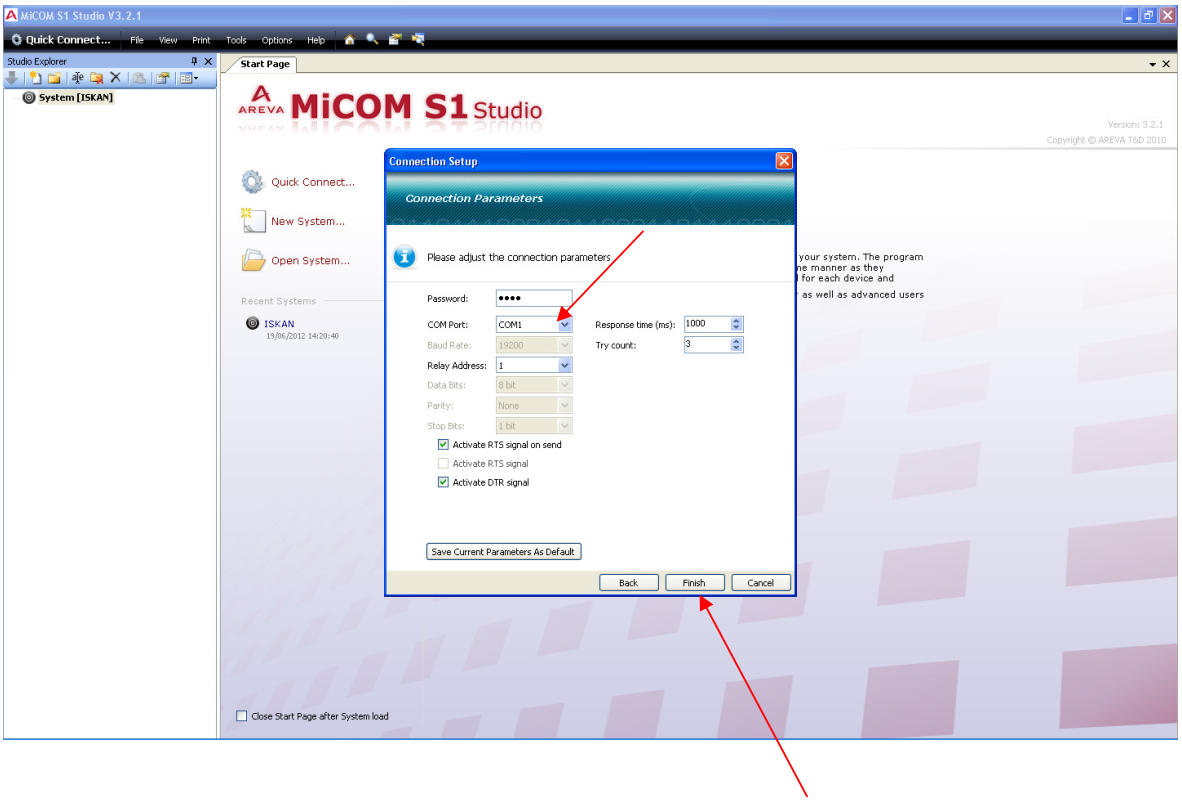
4. ENTERING QUICK CONNECT THE PAGE WILL OPENED AS SHOWN IN BELOW PICTURE.
5. NOW WE NEED TO ENTER THE DEVICE TYPE, AS PER OUR CONCERN OUR RELAY IS P122 HENCE IT FALLS IN PX20 SERIES. CLICK PX20 AND THEN OK



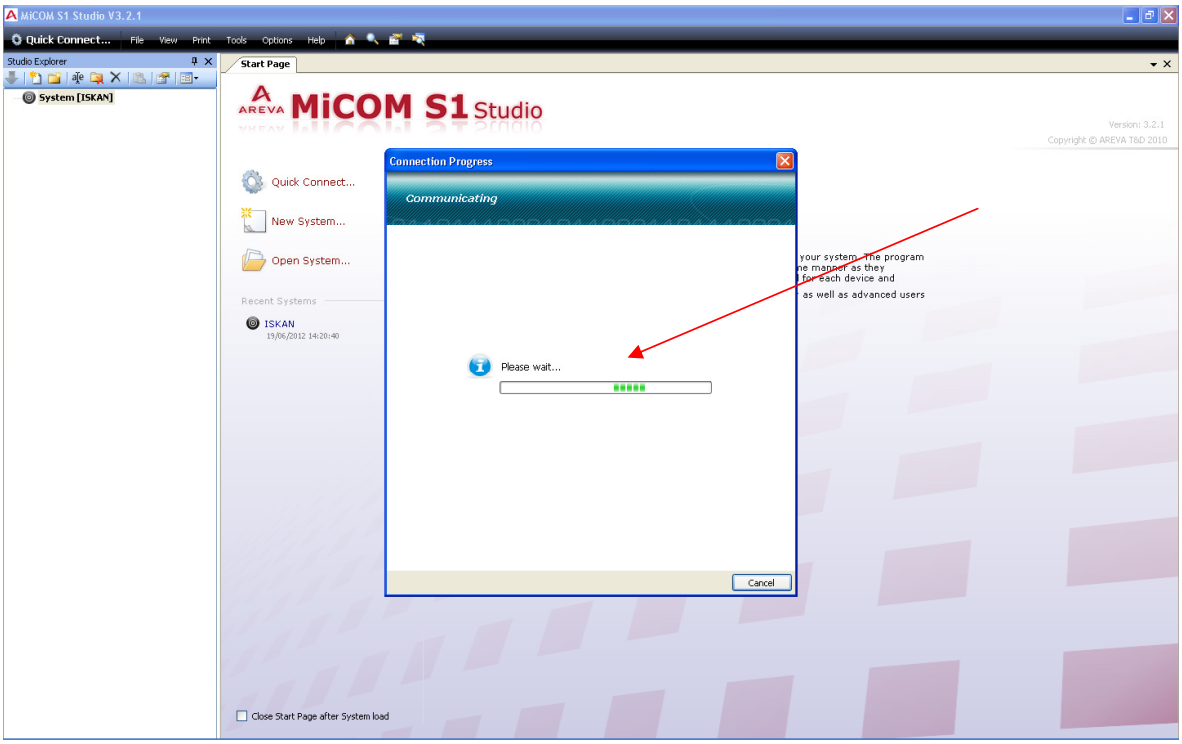
6. **NOW WE NEED TO ASSIGN OUR COMMUNICATION TYPE, HENCE CLICK BELOW OPTION AS PER OUR REQUIREMENT.**



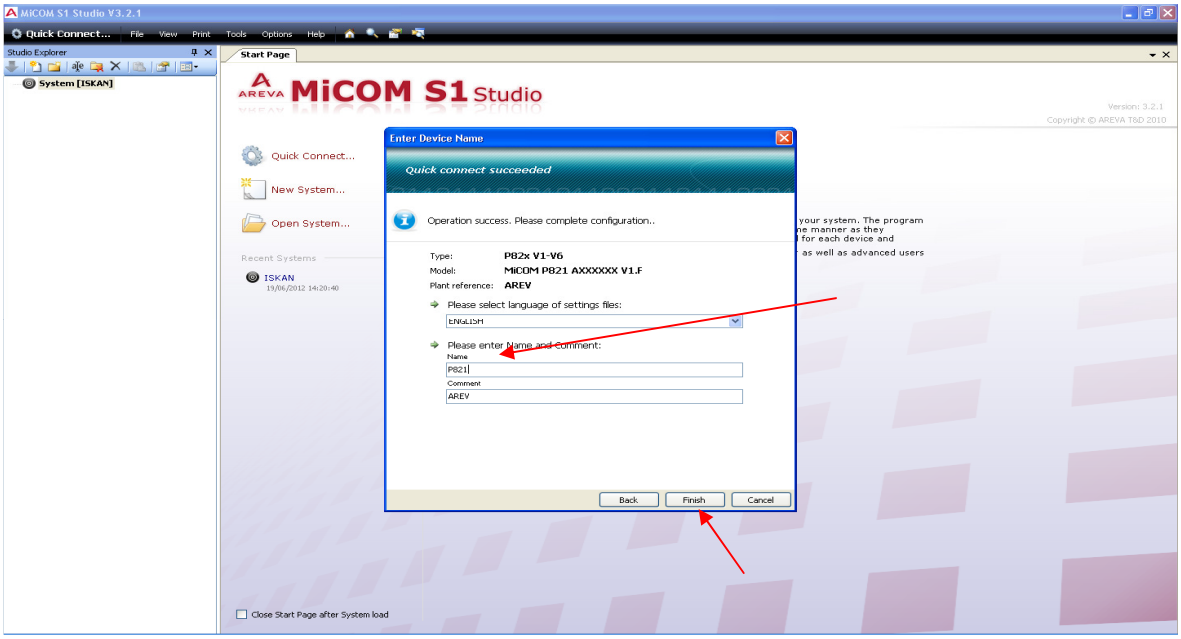
7. **WE NEED TO ENTER THE COMMUNICATION ADDRESS WHAT WE USED IN OUR PC, THERFORE ASSIGN AS PER OUR REQUIREMENT AND CLICK FINISH.**



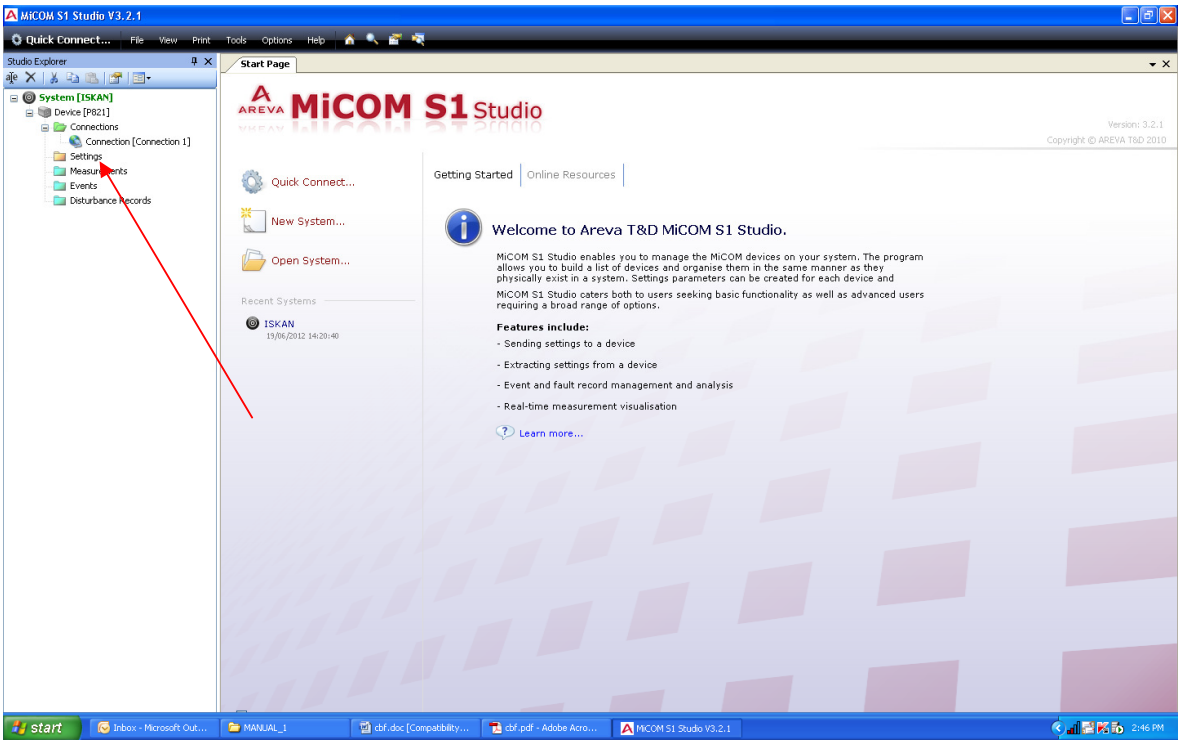
8.NOW THE COMMUNICATION PROCESS IS STARTED WHICH IS MENTIONED IN BELOW PICTURE.



9.NOW WE NEED TO ENTER THE NAME AND THEN CLICK FINISH

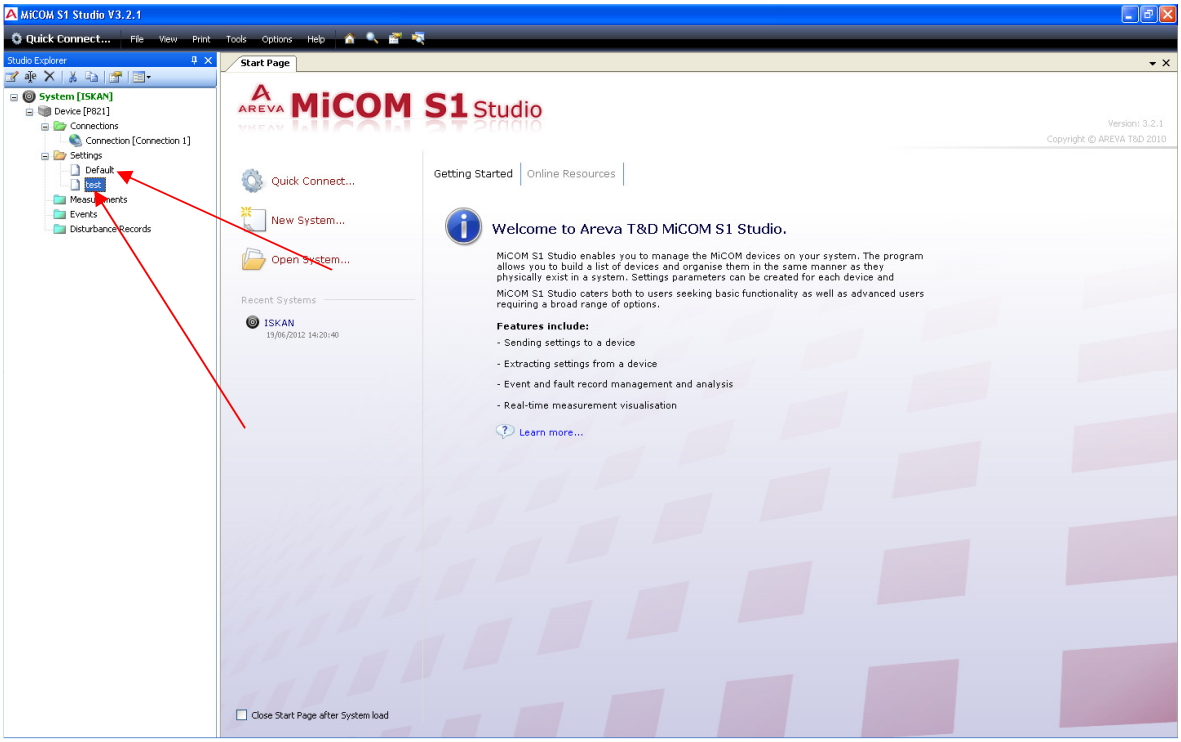


10.AFTER THIS NOW WE SUCCESSFULLY COMPLETED OUR COMMUNICATION AND NOW WE NEED TO EXTRACT THE SETTINGS FROM RELAY.
11.GO TO EXTRACT AND CLICK EXTRACT SETTINGS.

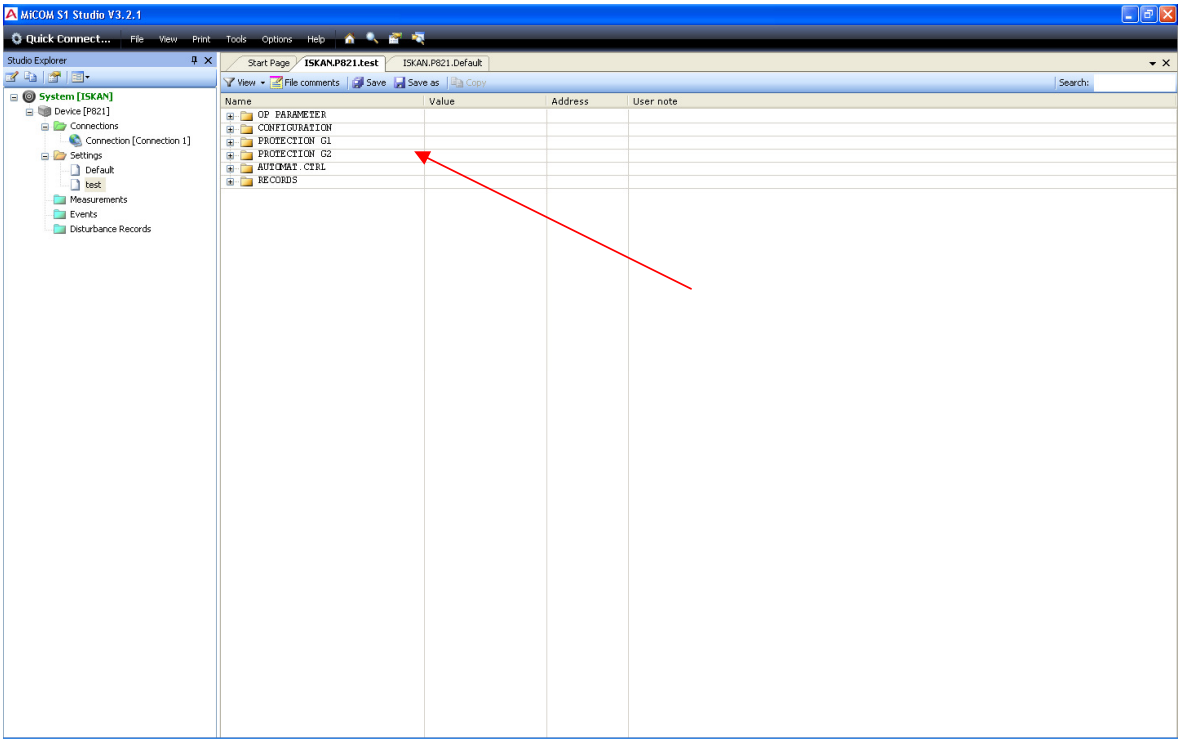


12.AFTER EXTRACTING SETTINGS IT WILL SHOW WITH NAME AS 000 AND HENCE WE NEED TO RENAME AS DEFAULT.

13.FOR OUR TESTING PURPOSE WE SHOULD NOT DISTURB THE DEFAULT VALUES AND HENCE DO THIS PROCESS ONCE MORE AND NAME IT AS TEST.



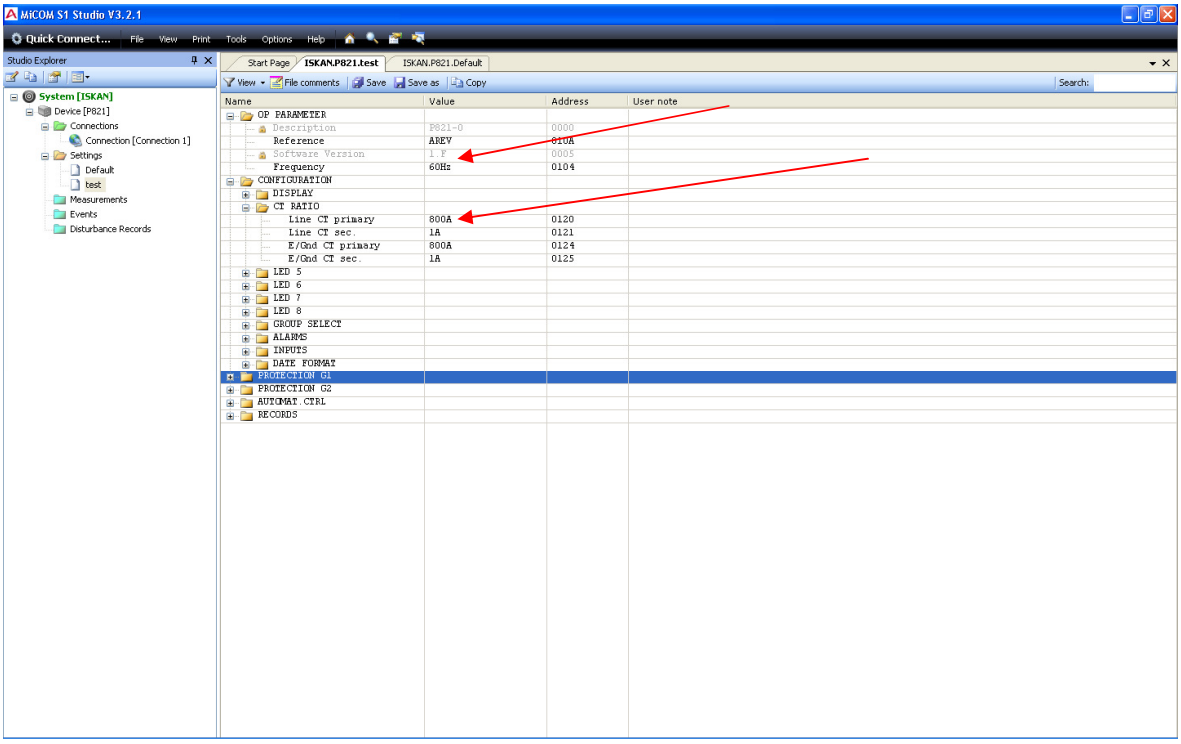
14. NOW CLICK TEST AND NEW WINDOW WILL BE OPENED WITH ALL THE DEFAULT CONFIGURATION AND SETTING VALUES.



THIS CHAPTER DEALS WITH HOW TO COMMUNICATE WITH RELAY AND HOW TO EXTRACT THE DEFAULT VALUES.

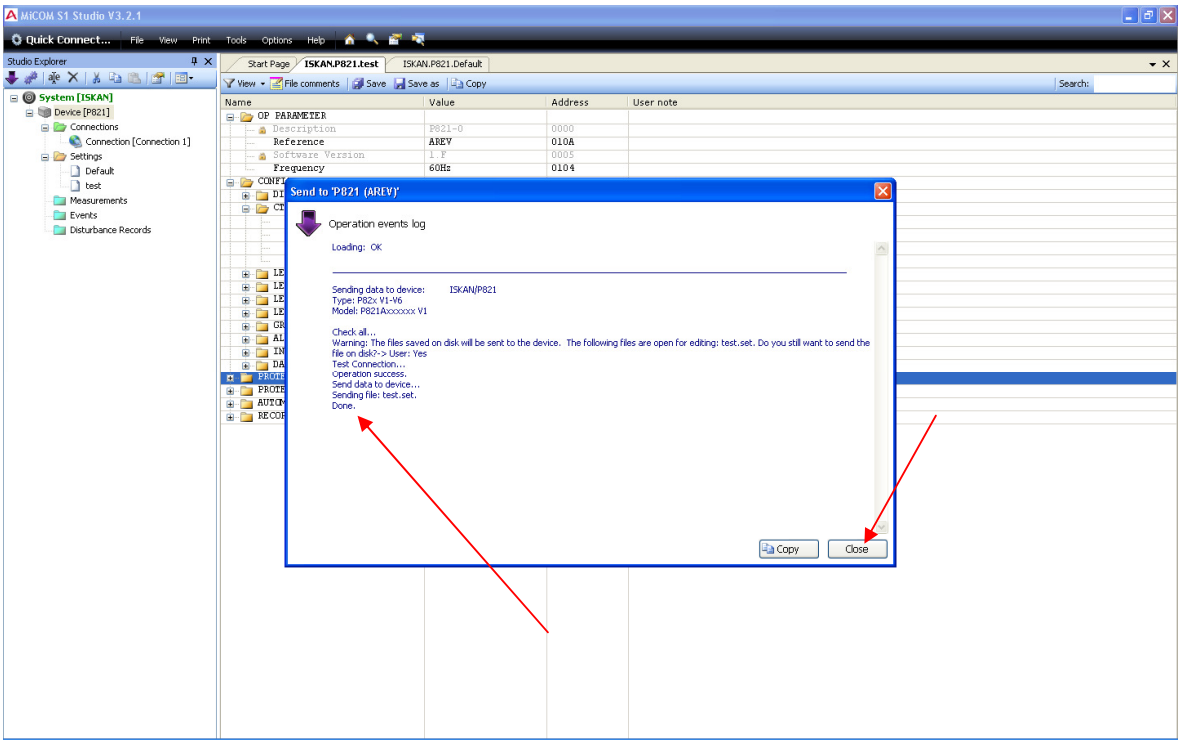
CHAPTER 2

1.WE NEED TO CHANGE THE SYSTEM VALUES AS PER OUR REQUIREMENT AND OUR SCHEMES



2.ACCORDING TO OUR SCHEMES WE NEED TO CHANGE THE SYSTEM DATA AND CT RATIO AS MENTIONED IN ABOVE PICTURE.

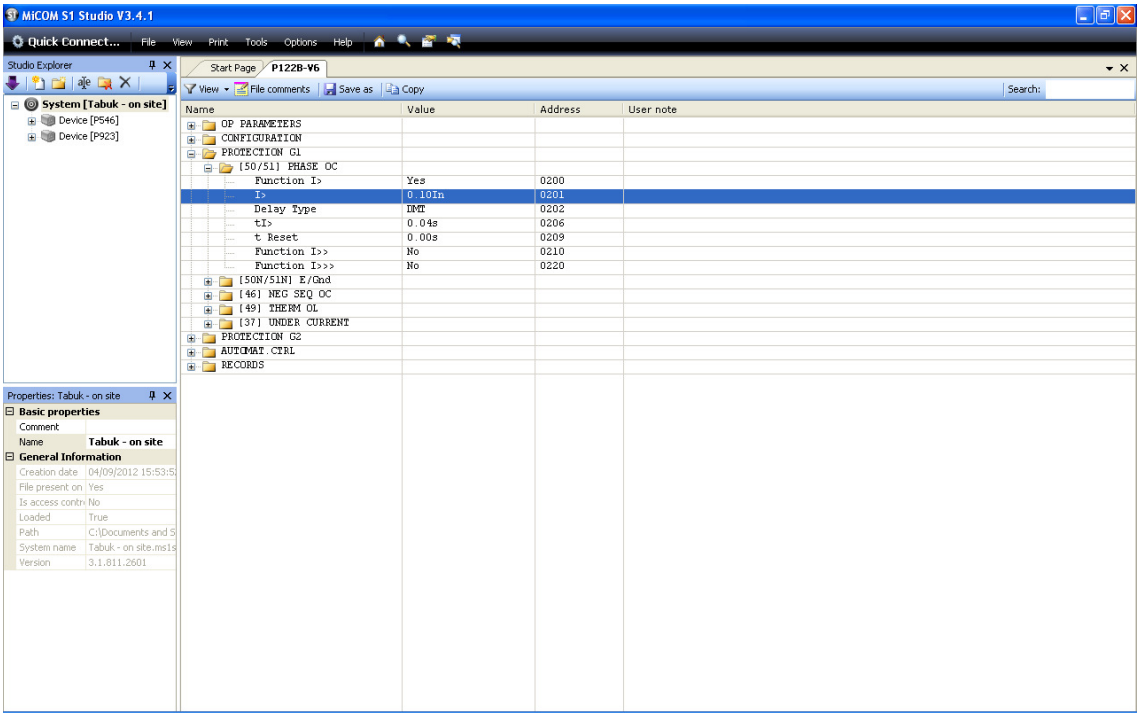
3.AFTER SENDING SAVED VALUES TO THE RELAY, IT STARTS LOADING PROCESS THEN AT LAST IT WILL SHOW AS MENTIONED IN BELOW PICTURE.



4.NOW WITH FREJA 300 EQUIPMENT INJECT THE SECONDARY CURRENT AND MEASURE THE PRIMARY CURRENT TO PERFORM THE METERING TEST.

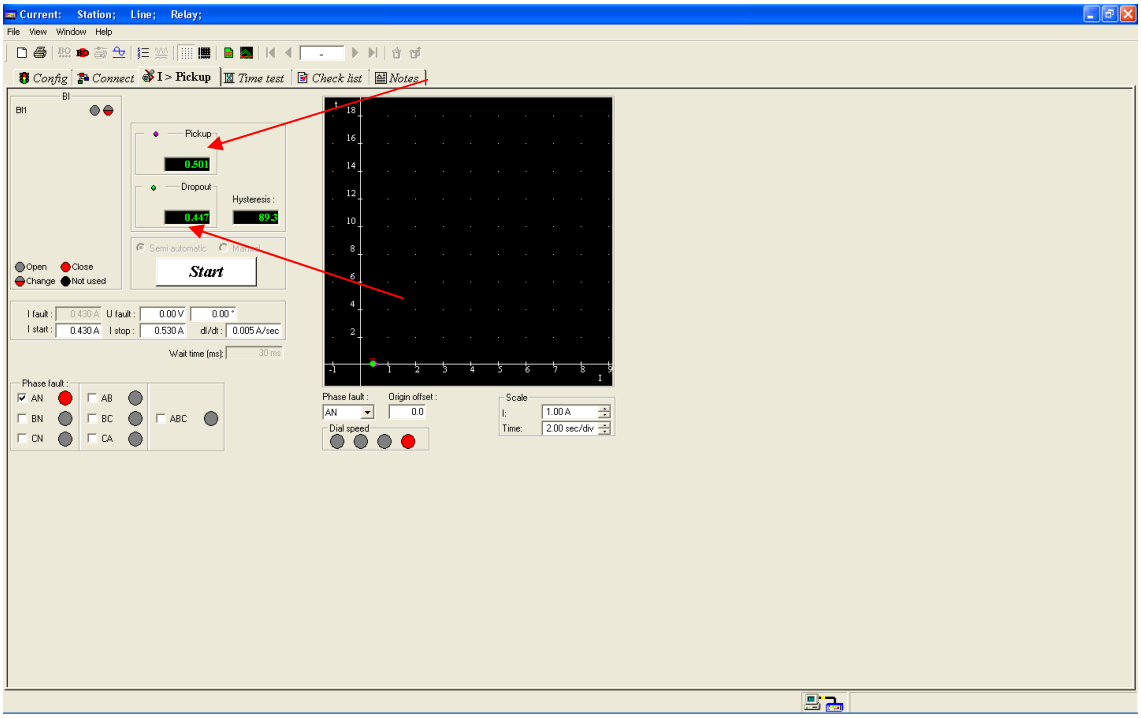
CHAPTER 3
THREE PHASE OVERCURRENT & EARTH FAULT PROTECTION

1.GO TO PROTECTION G1 AND MAKE PHASE OVERCURRENT ENABLE.
2.NOW SET THE VALUE 0.5 A AS THE SETTING VALUE THEN SAVE AND SEND TO THE RELAY.



3.AFTER THIS GO TO FREJA PAGE AND CLICK CURRENT OPTION FOR PERFORMING PICK UP AND DROP OUT TEST.

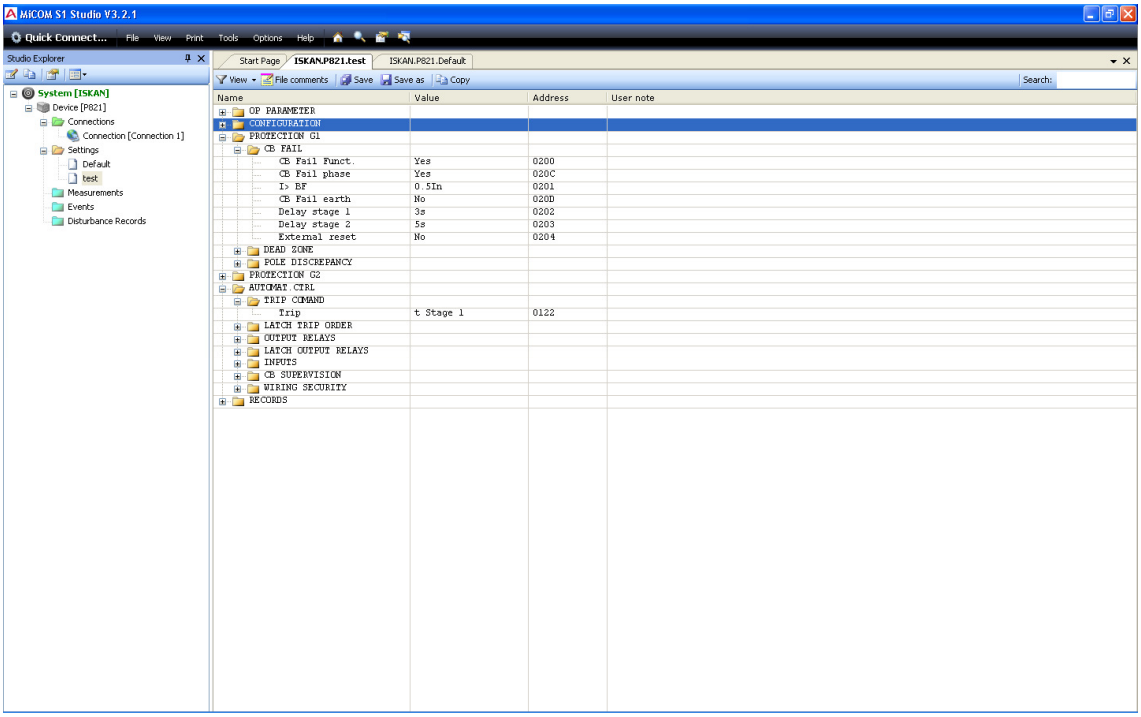
4.PERFORM PICK UP AND DROP OUT TEST AS SHOWN IN BELOW PICTURE.



5.HENCE FROM ABOVE PICTURE AS PER OUR SETTINGS PICK UP VALUE IS 0.501A AND DROP OUT VALUE IS 0.447A.

6.TO PERFORM TIMING TEST WE NEED TO DO FOR BOTH STAGE 1 AND STAGE 2.

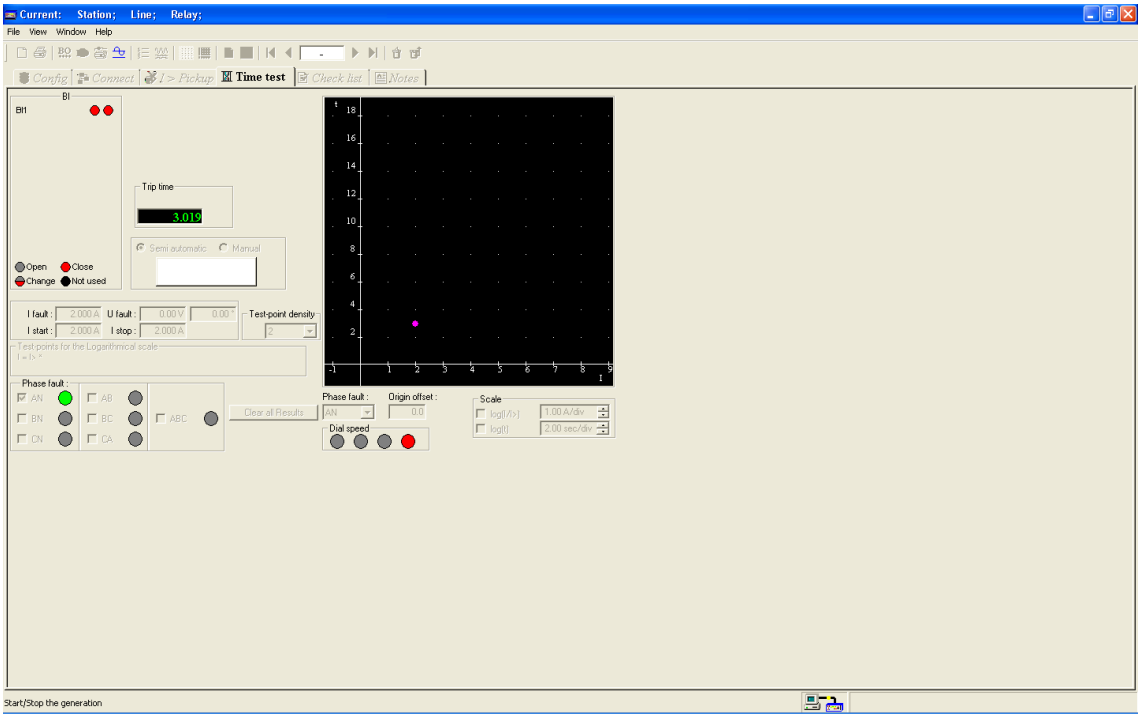
7.FIRST SET TIMING FOR STAGE 1 AND GO TO AUTOMAT.CONTROL AND ASSIGN TRIP COMMAND AS (tstage1) AS SHOWN IN BELOW PICTURE.



NOTE: WHEN EVER THE VALUES HAS BEEN CHANGED WE SHOULD SAVE AND SEND TO THE RELAY.

8.NOW GO TO FREJA PAGE AND PERFORM THE TIMING TEST FOR STAGE 1.

9.NOW PERFORM THE TIMING TEST AS SHOWN IN BELOW PICTURE.



10.TIMING TEST FOR STAGE 1 IS COMPLETED AND SAME FOR STAGE 2 , WE NEED TO CHANGE THE SETTING VALUES AND ASSIGN TRIP COMMAND AS (tstage2).

CONCLUSION:

THIS PROCEDURE CONTAINS HOW TO COMMUNICATE RELAY WITH PC AND HOW TO PERFORM PICK UP, DROP OUT AND TIMING TEST.