



## SCR ELEKTRONIKS

Leading Manufacturer of Industrial Electronic Products since 1975

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### Test Panel For Full Range Accuracy Check Of Energy Meters



SCR ELEKTRONIKS Have Developed A System For Calibration Of Static Energy Meters. This Is A PC Based System Which Facilitates To Test Number Of Meters Say 5, 10, 15, 20, 40 Or 80 At A Time Resulting In Speedy Testing Of Meters.

#### The Test Panel Provides Facilities To Carryout Following Tests As Per IS : 13779 : 1999

1. Accuracy Check At UPF, 0.5 Lag P.F., 0.8 Lead P.F. At Different Current Values.
2. Starting Current Test ( At 0.4% Of Basic Current )
3. Creep Test ( At 70% & 120% Rated Voltage)
4. Repeat Accuracy Test.

#### The System Will Comprise Of -

1. Power Source
2. Error Display Units Depending On Number Of Stations.
3. Photo Electronic Sensors
4. Fabricated Panel For Connecting The Meters To The System
5. Computer System
6. Software
7. Reference Standard Meter

#### Description :

**1. Power Source :** It Comprises Of Voltage & Current Source With Following Specifications -

A. Input Supply - 3 Phase 50 Hz, 415 V +/- 10 %.

B. Outputs - I. Voltage Source II. Current Source

I. Voltage Source : Adjustable 0- 300 Volt / 1KVA With Static Phase Shifting Arrangement To Obtain 90 Deg Lead And 90 Deg Lag With Respect To Current Source. Facility To Switch To 70 % And 120 % Of Set Voltage Is Provided For Creep Test.

II. Current Source : 0 - 200 Amps Adjustable In Steps With Switch And Fine By Variac. Switching Arrangement Is Made To Get 100 %, 400 %, 500 %, 600 % And 800 % Of Basic Setting. Also Arrangement Is Made To Select 0.4 %, 5 %, 10 %, 20 %, And 100 % Of Setting.

C. Digital Ammeter 3 & 1/2 Digit Class 1 With CT Range Selector.

D. Digital Voltmeter 3 & 1/2 Digit 0 - 300 V Class 1.

E. Power Factor Meter To Read Phase Angle Between 90 Deg Lag-Unity-90 Deg Lead.

F. Line Frequency Indicator 40 Hz To 55 Hz.

G. Outputs Are Provided On Insulated Terminals Of Proper Sizes.

**2. Error Display Unit :** It Is Microcontroller Based 6 Digit Display Unit To Indicate +/- % Error (-100.00 To +100.00). It Takes Pulse Input From Standard Meter And LED Input From MUT & Provides Required Data To Computer. It Also Provides Indication Of PASS Or FAIL In Case The Error Is Within Or Out Of Limit Respectively.

**3. Photo Electronic Sensor :** For Each Station Sensing Head Is Provided To Detect The Blinking Of The LED On Meter.

**4. Fabricated Panel :** Aesthetically Fabricated Panel To House Display Units And Arrangement To Connect Meters Is Provided. The Arrangement For Connection Of The Meters Will Be Simple For Operation.

**5. Computer System :** It Can Be A Standard Computer System Having Minimum One ISA Slot On Its Motherboard. SCR Make ADDON Card Is Inserted In It For Communication With Display Units. Also One Printer, May Be Bar Code Printer Is Required For Printing Sr.No. Etc. On Meter.

**6. Software :** User Friendly Software Is Provided Which Enables Operator To Select Different Test Parameters And Carryout The Test. It Also Generates Different Reports. Also It Provides Facility To Print Bar Code.

**7. Reference Standard Meter :** Reference Standard Meter Such As Radian Make Type RM 10, RM 12 For Single Phase Meters & MTE Make Type SWS 1.3 For 3 Phase Meters Are Used To Obtain Pulses Which Are Proportional To The Energy Consumed. These Pulses Are Given To Error Display Unit For Error Calculation.

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