

## Title: Calibration Of Biccotest 40KV D.C. Test Set

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### Scope

Work Instruction for the internal calibration of Biccotest 40KV D.C. Test Sets. To be used in the absence of a manufacturers calibration instruction

### Preparation

Calibration must be carried out using Category A Master instruments as required.

Equipment required;

- 1.1 Digital kV meter S/N 505 (15kV, 30kV, 60kV as required)
- 1.2 Digital multimeter model 3020B S/N 70622219 (20mA range)

### Method

- 2.1 All calibration results must be entered on the results sheets (see appendix A)
- 2.2 Note the lab. temperature / R.H. and enter onto the results sheet.
- 2.3 Carry out test 1.
- 2.4 Carry out tests 2 to 4 using the equipment listed in 1.1 set on 15kV range.
- 2.5 Carry out tests 5 to 9 using equipment list in 1.1 set on 60 kV range.
- 2.6 Carry out test 10.
- 2.7 Carry out tests 11 to 14 using equipment list in 1.1 set on 30kV range.
- 2.8 Carry out tests 15 to 24 using equipment listed on 1.2.
- 2.9 Carry out test 25.
- 2.10 Complete the results sheet header and enter Pass / Fail.

- All records must be kept for audit purposes

### References

Appendix A Calibration Results for Biccotest 40KV D.C. Test Set

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### Appendix A

#### Calibration Results for Biccotest 40KV D.C. Test Set

Model ..... Serial No .....

Date ..... Result .....

Lab Temp / RH ..... Operator .....

User Location ..... Certificate No .....

Accuracies quoted are from manufacturer's specifications or relevant British Standard.

**Test 1** Are all three instrument pointers on zero? Pass / Fail

#### Voltmeter Calibration (UUT Accuracy $\pm 2\%$ )

| Test No | Biccotest kV Meter | Actual kV | Allowed Limits | Results     |
|---------|--------------------|-----------|----------------|-------------|
| 2       | 5                  |           | 4.2 to 5.8     | Pass / Fail |
| 3       | 10                 |           | 9.2 to 10.8    | Pass / Fail |
| 4       | 15                 |           | 14.2 to 15.8   | Pass / Fail |
| 5       | 20                 |           | 19.2 to 20.8   | Pass / Fail |
| 6       | 25                 |           | 24.2 to 25.8   | Pass / Fail |
| 7       | 30                 |           | 29.2 to 30.8   | Pass / Fail |
| 8       | 35                 |           | 34.2 to 35.8   | Pass / Fail |
| 9       | 40                 |           | 39.2 to 40.8   | Pass / Fail |

**Test 10** Did pointer move freely during tests 2 – 9? Pass / fail

#### Voltage Output – Negative (UUT Accuracy $\pm 2\%$ )

| Test No | Biccotest kV Meter | Actual kV | Allowed Limits | Results     |
|---------|--------------------|-----------|----------------|-------------|
| 11      | 20                 |           | 9.2 to 10.8    | Pass / Fail |
| 12      | 40                 |           | 19.2 to 20.8   | Pass / Fail |

#### Voltage Output – Positive (UUT Accuracy $\pm 2\%$ )

| Test No | Biccotest kV Meter | Actual kV | Allowed Limits | Results     |
|---------|--------------------|-----------|----------------|-------------|
| 13      | 20                 |           | 9.2 to 10.8    | Pass / Fail |
| 14      | 40                 |           | 19.2 to 20.8   | Pass / Fail |

#### Current Calibration – Positive (UUT Accuracy $\pm 2\%$ )

| Test No | Biccotest Current mA | Allowed Limits               | Allowed Limits | Results     |
|---------|----------------------|------------------------------|----------------|-------------|
| 15      | 2                    |                              | 1.8 to 2.2     | Pass / Fail |
| 16      | 4                    |                              | 3.8 to 4.2     | Pass / Fail |
| 17      | 6                    |                              | 5.8 to 6.2     | Pass / Fail |
| 18      | 8                    |                              | 7.8 to 8.2     | Pass / Fail |
| 19      | 10                   | Current overload should trip |                | Pass / Fail |