

## Instruments Calibration Brochure

SANSEL have a scope to calibrate Thermal, Mechanical, Electro-Technical & Dimension Discipline Instruments as per  
ISO/IEC 17025:2017 Standard

### Electro-Technical discipline scope details in different groups



| Calibration Instruments                                                                                                                                                                                                                                                                                             | Parameter           | Range                         |                                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-------------------------------|----------------------------------|
| <b>Measure Type</b><br>Multimeter (upto 6.5 digit)<br>Clamp meter<br>Earth Resistances tester<br>Digital/Analog Insulation Tester<br>LCR Meter<br>Power meter<br>Frequency meter<br>Capacitances meter<br>Oscilloscope<br>Temperature controller<br>Data logger<br>Ammeter/Voltmeter/ohm meter<br>Process indicator |                     | <b>Source Range</b>           | <b>Measure Range</b>             |
|                                                                                                                                                                                                                                                                                                                     | DC Voltage          | 0.1mV to 1000V                | 0.1mV to 30kV                    |
|                                                                                                                                                                                                                                                                                                                     | AC Voltage          | 1mV to 1000V                  | 1mV to 25kV                      |
|                                                                                                                                                                                                                                                                                                                     | DC Current          | 1 $\mu$ A to 1000A            | 1 $\mu$ A to 100A                |
|                                                                                                                                                                                                                                                                                                                     | AC Current          | 30 $\mu$ A to 1000A           | 10 $\mu$ A to 10A                |
|                                                                                                                                                                                                                                                                                                                     | DC Resistance       | 0.001 $\Omega$ to 1T $\Omega$ | 0.005 $\Omega$ to 1000M $\Omega$ |
|                                                                                                                                                                                                                                                                                                                     | AC Resistance (1Hz) | 1 $\Omega$ to 10 k $\Omega$   | 1 $\Omega$ to 10 k $\Omega$      |
|                                                                                                                                                                                                                                                                                                                     | Capacitances (1Hz)  | 100 pF to 100 $\mu$ F         | 100 pF to 100 $\mu$ F            |
|                                                                                                                                                                                                                                                                                                                     | Inductance (1Hz)    | 100 $\mu$ F to 10 H           | 100 $\mu$ F to 10 H              |
|                                                                                                                                                                                                                                                                                                                     | Frequency           | 1Hz to 200MHz                 | 3Hz to 1000KHz                   |
|                                                                                                                                                                                                                                                                                                                     | RTD                 | -200°C to 800°C               | -200°C to 850°C                  |
|                                                                                                                                                                                                                                                                                                                     |                     |                               |                                  |
| <b>Measure &amp; Source Type</b><br>Temperature calibrator<br>Multi function Calibrator<br>mA/mV Calibrator / Loop Calibrator<br>RTD/Thermocouple Calibrator                                                                                                                                                        | <b>THERMOCOUPLE</b> |                               |                                  |
|                                                                                                                                                                                                                                                                                                                     | E-Type              | -200°C to 1000°C              | -200°C to 1000°C                 |
|                                                                                                                                                                                                                                                                                                                     | B-Type              | 600°C to 1800°C               | 450°C to 1800°C                  |
|                                                                                                                                                                                                                                                                                                                     | J-Type              | -200°C to 1200°C              | -200°C to 1200°C                 |
|                                                                                                                                                                                                                                                                                                                     | K-Type              | -200°C to 1340°C              | -200°C to 1350°C                 |
|                                                                                                                                                                                                                                                                                                                     | N-Type              | -200°C to 1300°C              | -200°C to 1300°C                 |
|                                                                                                                                                                                                                                                                                                                     | S / R-Type          | 0°C to 1750°C                 | 0°C to 1750°C                    |
|                                                                                                                                                                                                                                                                                                                     | T-Type              | -200°C to 400°C               | -200°C to 400°C                  |
| <b>Source Type</b><br>Voltage/Current source<br>Multi product calibrator<br>High Voltage/Current source<br>AC/DC Resistance box<br>Inductance / Capacitances box<br>Frequency generator<br>RTD/Thermocouple Source<br>mA/mV source<br>Timer/Stop Watch                                                              | DC POWER            | 0.1W to 20kW                  | Timer<br>1s to 86400s            |
|                                                                                                                                                                                                                                                                                                                     | AC POWER            | 4W to 6kW                     |                                  |
|                                                                                                                                                                                                                                                                                                                     | POWER FACTOR        | 0.2PF (Lead/Lag) to UF        |                                  |
|                                                                                                                                                                                                                                                                                                                     | <b>Oscilloscope</b> |                               |                                  |
|                                                                                                                                                                                                                                                                                                                     | AC/DC Voltage       | 1mV to 120V                   |                                  |
|                                                                                                                                                                                                                                                                                                                     | Bandwidth           | 50 kHz to 1.1 GHz             |                                  |
|                                                                                                                                                                                                                                                                                                                     | Time Base           | 1 ns to 5s                    |                                  |

For Detailed Scope, Refer Here : <https://nablwp.qci.org.in/CertificateScopenew?x=IWBXQSSnA7RyH/1nCg8Vzw==>

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SANSEL NABL  
Scope QR link

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