Humidity and Temperature Generator Model : HCAL 1104U

- 7" True colour TFT display with Touch screen
- Control range from 5 to 60 °C / 3 to 95 % RH*
- Optional Temp. range 0 to 80 °C
- Optional Dew point : -25 to 40 °C
- Semi Portable, Rugged & Onsite transportable
- High Resolution 0.01 °C / %RH
- Stability better than ± 0.05°C / 0.2 % RH **
- Better uniformity ± 0.2°C / 0.3 % RH **
- Fast raising & quick settling

Tachometer Calibrators Model : RPMC 1700 series

- CE Quality certified
- True colour TFT display with Touch screen
- Range Contact / Non – contact :
  - RPMC 1700 – 2A → 6000 / 90,000 rpm
  - RPMC 1700 / 3A → 8000 / 1,20,000 rpm
- Low noise
- Quick settling time
- Any odd value is settable for both contact & Non - contact RPM
- Resolution up to 0.001 rpm
- Ultra stable motor with high precision encoder and drive
- Direct drive shaft (there is no gear)
- Compact size

Precision Ultra Low Temperature Dry Block Calibrators with Automatic Calibration Software
Model : TCAL 1503 series

- 4.3" True colour TFT display with Touch screen
- Wide Models & Ranges TCAL 1503 / -100 (-100 to 40 °C), TCAL 1503/-45 (-45 to 130 °C), TCAL 1503/-35 (-35 to 130 °C)
- Portable & Rugged
- Improved Axial & Radial Uniformity
- High Resolutions 0.01 °C
- Multi point Lookup table for Calibration
- UUC measure option provided
- Stabilization time & status indication provided
- Inter changeable insert to suit different diameter sensor
- Optional PC Interface with automatic calibration software

Precision Dry Block Temperature Calibrators with Automatic Calibration Software

Model : TCAL 1501 series

- 4.3" True colour TFT display with Touch screen
- Wide Models & Ranges TCAL 1501 / 300(Amb. + 5 to 300 °C), TCAL 1501 / 600(Amb. + 5 to 600 °C), TCAL 1501 / 1200(500 to 1200°C).
- Portable & Rugged
- Improved Axial & Radial Uniformity
- High Resolutions from 0.01 to 0.1 °C**
- Multi point Lookup table for Calibration
- UUC measure option provided
- Inter changeable insert to suit different diameter sensor
- Optional PC Interface with automatic calibration software

Economy Dry Block Temperature Calibrators

Model : TCAL 1401 series

- High Bright 4 + 4 digit 7 seg LCD Display with 4 keys
- Wide Models & Ranges TCAL 1401 / -30 (-30 to 100 °C), TCAL 1401 / 300 (Amb. + 5 to 300 °C), TCAL 1401 / 600 (Amb. + 5 to 600 °C), TCAL 1401 / 1200 (500 to 1200°C).
- Portable & Rugged
- Range from -30* to 1200°C *
- No Liquids, Safe dry Calibration
- Micro Controller Based Linearized High Accuracy
- Better Stability & uniformity
- Inter changeable insert to suit different diameter sensor - up to 22, 30 & 39 mm

Miniature Dry Block Temperature Calibrator

Model : TCAL 1402 series

- High Bright 4 + 4 digit 7 seg LCD Display with 4 keys
- Wide Ranges TCAL 1402 / -20 (-15 to 120 °C), TCAL 1402 / -30 (-30 to 120 °C), TCAL 1402 / 300 (Amb. + 5 to 300 °C), TCAL 1402 / 500 (Amb. + 5 to 500 °C)
- Portable & Rugged
- Range from -15 to 500°C *
- No Liquids, Safe dry Calibration
- Micro Controller Based Linearized High Accuracy
- Better Stability & uniformity
- Inter changeable insert to suit different diameter sensor - up to 20 mm

See the actual size (Comparison with pencil)

High Temperature Dry Block Calibrator

Model : TCAL 1500 / 1500

- 4.3" True colour TFT display with Touch screen
- Temperature Range from 500°C to 1500°C
- Resolution 0.1°C
- Stability ± 0.2°C
- Interchangeable Multi hole thermo wells
- Silicon carbide Heating element
- Power requirement 230VAC / 50Hz / 3500VA
- Semi portable
- ISO / IEC 17025 Accredited calibration certificate

(P.T.O)

Liquid Temperature Bath

Model : TCAL 1501 / 250

- ✍ 4.3" True colour TFT display with Touch screen
- ✍ Range from 50 to 250°C
- ✍ Heating Medium Silicon oil
- ✍ Portable, Rugged & on site carryable
- ✍ Better Stability & uniformity
- ✍ High Resolutions from 0.01 °C
- ✍ Multi point Lookup table for Calibration
- ✍ UUC measure option provided
- ✍ Multi hole provision for different type of thermometers, sensors, sensor with indicators etc.,
- ✍ Large volume testing area 60mm Dia x 120mm Depth
- ✍ Magnetized stirring
- ✍ Optional PC Interface with automatic calibration software

Ultra Low Temperature Liquid Bath

Model : TCAL 1501 /-40 / -80

- ✍ 4.3" True colour TFT display with Touch screen
- ✍ Wide Models & Ranges TCAL 1501 / -40 (-40 to Amb.) , TCAL 1501 / -80 (-80 to -40°C).
- ✍ Semi Portable & Rugged
- ✍ Range from -80* to Amb. *
- ✍ Heating / Cooling Medium Silicon oil / IPA
- ✍ Better Stability & uniformity
- ✍ Multi hole provision for different type of thermometers, sensors, sensor with indicators etc.,

Semi Standard Platinum Resistance & Master Thermocouples

Model : SSPRT / MTC

- ✍ Temperature Ranges from -200 °C upto 1500 °C
- ✍ Wide Models & Ranges SSPRT (-200 TO 660 °C), MTC (500 TO 1500 °C)
- ✍ Standard 6mm OD & available on different dimensions on request
- ✍ Outer Sheath SS 316 / Inconel / High Alumina tube
- ✍ High Accuracy & Stability
- ✍ Manufactured & Tested under strict quality control standards
- ✍ Cycled to Stability
- ✍ Fast response
- ✍ Low drift

Portable Master Temperature Indicator

Model : PTM 201

- ✍ Large 2.8" TFT display with Touch screen
- ✍ Master Universal input 6 digit indicator
- ✍ More resolution for RTD 0.001 DegC / for thermocouple 0.01 DegC
- ✍ RTD, Thermocouple, mAmps, Ohms, Voltage, mvolt input
- ✍ Inbuilt rechargeable polymer Li-ion battery
- ✍ Alarm facility
- ✍ Comfortable and anti-slip grip
- ✍ Portable & Rugged with carrying case
- ✍ ISO/IEC 17025 Accredited Calibration certificate

Infra Red Black Body Source

Model : BCAL 40 / 502 / 1202

- Portable & Rugged
- Range from 0* to 1200°C*
- Wide Ranges

    BCAL 40 → 0 to 100 °C / 32 to 212 °F
    BCAL 502 → 50 to 500 °C
    BCAL 1202 → 500 to 1200 °C
- High Resolutions from 0.01 to 0.1 °C**
- Better Stability & uniformity
- 0.95 Emissivity
- Large Aperture area
- Optional master pyrometer with stand in different temperature ranges available on request

High Temperature Infra Red Black Body Source

Model : BCAL 1502

- 4.3" True colour TFT display with Touch screen
- Portable & Rugged
- Range from 500 to 1500°C
- High Resolutions 0.1 °C
- Better Stability & uniformity
- 0.95 Emissivity
- Large Aperture area
- Optional master pyrometer with stand in different temperature ranges available on request

Online pyrometer

- Wide Temperature ranges from -50 °C to 2200 °C, measuring spots up from 1.8 mm and exposure times up from 1 ms
- Very small sensing head of 14 mm diameter and 28 mm length fits everywhere and is usable up to 125 °C ambient temperature without cooling
- Miniaturized Infrared Thermometer with 1.0 µm respectively 1.6 µm wave length range for measurements of metals, of secondary metal processing, metal oxides and ceramic materials
- Short measuring wave length of 1.0 µm respectively 1.6 µm reduces error of temperature readings on surfaces with low or unknown emissivity

(P.T.O)

Pressure Calibrators with Calibration Software MODEL : PCAL 1300 SERIES

- Pressure Ranges from -0.9 up to 1000 bar
- Wide ranges 0 to 350mbar, 0 to 500 pa, -0.9 to 2 bar, -0.9 to 35 bar, 0 to 350 bar, 0 to 700 bar, 0 to 1000 bar
- Absolute , Differential & gauge type available on request
- Available in both Air, water & Oil medium
- Different variety of Pneumatic & Hydraulic pumps available based on Medium & range requirements
- 2.8" 128 x 64 Dots COG Graphic LCD Display
- High bright white LED backlight
- 6 digit selectable resolution
- Better stability & repeatability
- 3 function keys & 4 navigation keys for easy operation
- Optional PC interface with semi Automatic calibration software
- Easy one touch zero
- High resolution RTD-PT 100 & mAmps measure inputs
- Compact size & Rugged

Precision Portable Hygrometer (Temperature, Humidity & Dew point) Model : HTD 200

- Large 2.8" TFT display with Touch screen
- Ranges from -40 to 85 DegC / 0 to 100% RH / psychometric Converted Dew point
- More resolution 0.01 DegC / 0.01 % RH
- High Accuracy : ±0.2 DegC / ±0.8 % RH
- Inbuilt rechargeable polymer Li-ion battery
- Alarm facility
- Comfortable and anti-slip grip
- Portable & Rugged with carrying case
- ISO/IEC 17025 Accredited Calibration certificate
- Optional High temperature sensors available on request for temperature ranges -50 to 100 DegC & -100 to 200 DegC

Multichannel TFT Touch Screen Datalogger with Software

Model : DL 96 / 97

- Multi colour TFT display
- Easy touch screen to configure & copy the datas
- 8 , 16 , 24 , 32 Channel Inputs with fixed & Universal Inputs
- Analog Inputs like Thermocouple , RTD, mA, mV , V
- Internal Memory for Datas upto 25,000 records
- USB 2.0 for PEN drive data transfer
- Parallel port provided for direct printout the storage datas
- PC Interface through RS 485 or RS 232 or USB or Ethernet (TCP/IP)
- Common Alarm Output with H/L Settings for all channels
- Easy Mounting , Compact Size and rugged
- Supply 230V AC

(P.T.O)

4 , 5 & 5 ½ Digit Process Indicator Model : PI 541A, PI 590-1, PI 542A

- ✍ 4, 5 & 5 ½ Digit 7 Seg LED (or) LCD display with Programmable resolution
- ✍ 24 Bit ADC Resolution, Selectable Inputs mA, mV , Volt, Ω , RTD, TC
- ✍ PI 541A Range -199999 to 199999 counts
- ✍ PI 591 Range 20,000 to 40,000 counts
- ✍ PI 542A Range -1999 to 9999 counts
- ✍ 2 Alarm Output with Four Relay Status Selection
- ✍ Multi point Lookup table for Calibration
- ✍ Optional RS 485 MODBUS Protocol
- ✍ Optional Opto Isolated Re Transmission Output.
- ✍ 24V DC External Sensor Supply
- ✍ Universal Supply Voltage 90 to 270V AC / DC

Jumbo Display Indicators for Temperature, Humidity, Pressure, Flow, Level

- ✍ Humd. /Temp./ Pres in large display for long distance viewing
- ✍ 2" , 4" , 8" Available in Different Segment Sizes
- ✍ Different type of Mounting Wall, Selling, Panel, "L" Clamping
- ✍ 4 / 6 Digit Seven Segment LED
- ✍ UNIVERSAL / RTD / TC / mAmps / Volt / mVolt
        (any One Factory Presetable)
- ✍ Wide Input & Display Ranges
- ✍ 2 Relay Outputs with Configurable H / L Setting
- ✍ Re Transmission Output (Optional)
- ✍ RS 485 serial interface with MODBUS RTU protocol (Optional)
- ✍ 24 V DC Sensor Supply

Jumbo Display Indicators for Timer, Counter, RPM, Frequency, Real time Clock

- ✍ Time/ Clock / Count in large display for long distance viewing
- ✍ 2" , 4" , 8" Available in Different Segment Sizes
- ✍ Different type of Mounting Wall, Selling, Panel, "L" Clamping
- ✍ 4 / 6 Digit Seven Segment LED
- ✍ Pulse Inputs
- ✍ Wide Input & Display Ranges
- ✍ Programmable Scale factor, Exponent (For RPM indicator)
- ✍ 2 Relay Outputs with Configurable H / L Setting(except Clock)
- ✍ Re Transmission Output (Optional)
- ✍ RS 485 serial interface with MODBUS RTU protocol (Optional)
- ✍ 24 V DC Sensor Supply

Jumbo Display Indicators RS 485 serial interface input

- ✍ RS 485 MODBUS RTU Master / Slave indicator
- ✍ 2" , 4" , 8" Available in Different Segment Sizes
- ✍ Different type of Mounting Wall, Selling, Panel, "L" Clamping
- ✍ 4 / 6 Digit Seven Segment LED
- ✍ Wide Input & Display Ranges
- ✍ 2 Relay Outputs with Configurable H / L Setting
- ✍ Re Transmission Output (Optional)
- ✍ RS 485 serial interface with MODBUS RTU protocol (Optional) (P.T.O)

Environmental Monitoring System (Humidity, Temperature & Pressure) Model : HTI 190,197, HTP196

- ✍ 4 Digit , 0.5" Seven Segment LED display
- ✍ Temperature range 0 to 60ºC (optional - 40 to 125ºC)
- ✍ Humidity range from 0 to 100% RH
- ✍ Barometric or Differential Pressure Range from 0 - 2000mbar / 0- 50Pa
- ✍ Resolution 0.01 or 0.1ºC / 0.1 % RH / 1 mbar
- ✍ Accuracy ±0.3ºC / ± 1.5 %RH / ± 0.25 % FS
- ✍ Easy Mounting ,Compact Size and rugged
- ✍ Supply 90 to 270 V AC

Water Quality Analyzer(pH & ORP) Model : PH / ORP 60 SERIES

- ✍ 4 + 4 Digit 7 segment LED display
- ✍ Wide Models & measuring ranges
     - pH 600 – 1 → -2 to 16.00 pH
     - ORP 601 – 1 → - 1999 to +1999 ORP
     - pH 600 – 4 → 0 to 14.00 pH
- ✍ Programmable Auto / Manual Temperature Compensation
- ✍ Galvanically Isolated 4 - 20mA Output
- ✍ RS 485 serial interface with MODBUS RTU protocol
- ✍ Automatic 2 Point Standard Buffer Calibration
- ✍ 2 Relay Outputs with 4 Relay Status Setting
- ✍ Universal Supply Voltage 90 to 270V AC / DC (loop powered 24V DC for selected model)

Water Quality Analyzer(TDS, Conductivity, Salinity) Model : TDS / CC / SAL 60 SERIES

- ✍ 4 + 4 Digit 7 segment LED display
- ✍ Wide Models & measuring ranges
     - TDS 602 – 1 → 1 - 20ppm, 5 - 200ppm, 10 to 2000ppm, 1 to 20ppt, 5 to 200ppt
     - CC 603 – 1 → 1 - 20µS, 5 - 200µS, 10 to 2000µS, 1 to 20mS, 5 to 200mS
     - SAL 604 – 1 → 1 – 20 ppt / 5 – 200 ppt
- ✍ Programmable Auto / Manual Temperature Compensation
- ✍ Galvanically Isolated 4 - 20mA Output
- ✍ RS 485 serial interface with MODBUS RTU protocol
- ✍ Automatic 2 Point Standard Buffer Calibration
- ✍ 2 Relay Outputs with 4 Relay Status Setting
- ✍ Universal Supply Voltage 90 to 270V AC / DC (loop powered 24V DC for selected model)

(P.T.O)

SANSEL have rich experience of more than 23 years (since 2000) in the leading manufacturer of Process Control Instruments, Analytical/lab Instruments & Calibrators in south India. SANSEL's Products more than 15,00,000 instruments serving in industries in India and all over world. To meet need of customer requirement and to upgrade our manufacturing product, Calibration facility is established in accordance with the ISO/IEC 17025:2017. We are pleasure to inform you that our calibration lab has been Accredited by NATIONAL ACCREDITATION BOARD FOR TESTING AND CALIBRATION LABORATORIES (NABL) Department of science and technology, Government of India, New Delhi in the field of ELECTRO-TECHNICAL, THERMAL and MECHANICAL parameters provided with Best BMC and wide range of capabilities. Our calibration reports are acceptable to all ISO, ISI Certifying bodies, National and International organizations, Public and government sectors etc., We serve all industries including, pharmaceutical, Medical, chemical, Water system, Automobile, IT, Aeronautic and OEM Manufacturing.,

Accreditation scope for LAB & ON SITE

✓ **Thermal**
  - ➢ TEMPERATURE (CONTACT) → -80 °C to 1500 °C
  - ➢ TEMPERATURE (NON-CONTACT) → 0 °C to 1500 °C
  - ➢ HUMIDITY → 5 to 95 %RH / 5 to 60 °C
  - ➢ THERMAL MAPPING → -80 °C to 1200 °C
  - ➢ HUMIDITY / TEMPERATURE MAPPING → 10 to 95 %RH / 5 to 60 °C

✓ **Electro-Technical**
  - ➢ Voltage → 1 mV to 1000 V AC/DC
  - ➢ Resistance → 1 mΩ to 1 TΩ
  - ➢ Current → 10 µA to 1000 A AC/DC
  - ➢ Frequency → 1 Hz to 10 MHz
  - ➢ TC, RTD → PT-100,J,K,R,S,T,E,B,N
  - ➢ Capacitance → 10 nF to 1 µF
  - ➢ HIGH VOLTAGE → 1 kV to 30 kV
  - ➢ TIMER → 1s to 86400 s

✓ **Mechanical**
  - ➢ VERY LOW PRESSURE → ± 25 mbar
  - ➢ ABSOLUTE PRESSURE → 0.60 bar to 3 bar abs
  - ➢ VACUUM → - 0.1 bar to - 0.90 bar
  - ➢ PRESSURE → 1 to 1000 bar / 0.1 to 35 bar (hydraulic & pneumatic)
  - ➢ WEIGHTS → 1mg to 50kg
  - ➢ WEIGHING SCALE & BALANCE → 1mg to 300 kg
  - ➢ VOLUME → 1µl to 5l
  - ➢ ACOUSTIC PRESSURE → 94 & 114dB
  - ➢ CONTACT RPM/TACHOMETER → 6 RPM to 10000 RPM
  - ➢ NON CONTACT RPM/TACHOMETER → 6 RPM to 99,950 RPM
  - ➢ DIMENSION → BASIC INSTRUMENT, GAUGE, vernier caliper, external micrometer, height gauge, plunger dail gauge, depth gauge, snap gauge, etc,.

SANSEL INSTRUMENTS AND CONTROLS
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ISO/IEC 17025 Accredited Calibration Laboratory by NABL CC - 2879
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