



# TRANSMILLE PRODUCT GUIDE 2015/16

**PROVIDING SOLUTIONS IN CALIBRATION  
WORLDWIDE**

# PRODUCT MATRIX

| WORKLOAD                                       | Multiproduct Calibrators |       |       |       | Electrical Test Equipment Calibrator |
|--|--------------------------|-------|-------|-------|--------------------------------------|
|  | 1000                     | 3000A | 4000  | 9000A | 3200B                                |
| <b>DMMS</b>                                    |                          |       |       |       |                                      |
| Up to 4.5 Digits                               | T                        | T     | T     | T     |                                      |
| Up to 5.5                                      |                          | T     | T     | T     |                                      |
| Up to 6.5                                      |                          | T     | T     |       |                                      |
| Up to 7.5                                      |                          | T     | T     |       |                                      |
| <b>TEMPERATURE/PRESSURE</b>                    |                          |       |       |       |                                      |
| PRT/RTD Simulation                             | T                        | T + R | T + R | T + R |                                      |
| Thermocouple Simulation                        | T                        | T + R | T + R | T + R |                                      |
| Thermocouple Measure                           | T + R                    | T + R | T + R | T + R |                                      |
| Pressure Modules                               | T + R                    | T + R | T + R | T + R |                                      |
| <b>OSCILLOSCOPES</b>                           |                          |       |       |       |                                      |
| Up to 600 MHz                                  |                          | T + R |       | T + R |                                      |
| Up to 6 GHz                                    |                          |       | T + R |       |                                      |
| <b>SAFETY TESTERS</b>                          |                          |       |       |       |                                      |
| HiPot / Breakdown Tester                       |                          |       |       |       | T + R                                |
| Megohm Meters                                  | T + R                    | T + R | T + R | T + R | T                                    |
| Insulation Resistance                          | T + R                    | T + R | T + R | T + R | T                                    |
| Loop Impedance / Resistance                    |                          |       |       |       | T                                    |
| Continuity Resistance                          | T                        | T + R | T + R | T + R | T                                    |
| RCD / GFI Testers                              |                          |       |       |       | T                                    |
| Installation Testers                           |                          |       |       |       | T                                    |
| Portable Appliance Testers (PAT's)             |                          |       |       |       | T                                    |
| Earth Bond                                     |                          |       |       |       | T                                    |
| Flash Testers                                  |                          |       |       |       | T + R                                |
| Leakage Current                                |                          |       |       |       | T                                    |
| <b>POWER/ENERGY</b>                            |                          |       |       |       |                                      |
| Wattmeters                                     |                          | T + R | T + R | T + R |                                      |
| Power Meters                                   |                          | T + R | T + R | T + R |                                      |
| Harmonic Analysers                             |                          | T + R | T + R | T + R |                                      |
| Power Analyser                                 |                          | T + R | T + R | T + R |                                      |
| <b>OTHER</b>                                   |                          |       |       |       |                                      |
| Frequency Counters                             | T                        | T     | T     | T     |                                      |
| Process Control Meters (Measurement Functions) | T + R                    | T + R | T + R | T + R |                                      |
| Clamp Meters                                   | T + R                    | T + R | T + R | T + R |                                      |
| Optical Tachometers                            | T + R                    | T + R | T + R | T + R |                                      |
| Picoamp source                                 |                          | T + R | T + R | T + R |                                      |
| Pico Amp Meter                                 |                          | T + R | T + R | T + R |                                      |
| Torque Measurement                             |                          | T + R | T + R | T + R |                                      |
| Environmental Condition Measurement            |                          | T + R | T + R | T + R |                                      |
| High Current Shunts to 100A DC, 70A AC         |                          | T + R | T + R | T + R |                                      |
| Clamp Meters to 2000A DC & AC                  |                          | T + R | T + R | T + R |                                      |
| Power Supply (to 3A)                           |                          | T + R | T + R | T + R |                                      |
| High Voltage Probes                            |                          | T + R | T + R | T + R |                                      |
| LCR Meter (Inductance Functions)               |                          | T + R | T + R | T + R |                                      |

T = Function Included as Standard

T + R = Internal/External option available for Function

# MULTIPRODUCT CALIBRATORS

## 4010 ADVANCED MULTI PRODUCT CALIBRATOR



- 8PPM Basic Accuracy
- 7" High resolution touch screen
- ProCal Embedded enables automated calibration without a computer
- Save test reports to USB or print directly using the Front mounted USB port
- Variable resistance to 1 GOhm
- Full Range Variable Capacitance
- Oscilloscope options to 6 GHz

## A MODEL FOR EVERY REQUIREMENT

The 3000A series is available in three models from the industrial grade 3050A to the laboratory standard 3010A.

- Wide workload coverage with internal/external adapters
- Full output protection through I-Guard system
- Fully automated calibration with ProCal Software suite via USB interface (GPIB and RS232 Options)
- Available as a transportable system as the 9000A series

## 3000A SERIES MULTIPRODUCT CALIBRATOR



### 3 MODELS

| MODEL      | 3010A  | 3041A  | 3050A  |
|------------|--------|--------|--------|
| ACCURACY   | 8PPM   | 25PPM  | 50PPM  |
| VOLTAGE    | 1025V  | 1025V  | 1025V  |
| CURRENT    | 30A    | 30A    | 22A    |
| RESISTANCE | 1 GΩ   | 1 GΩ   | 100 MΩ |
| FREQUENCY  | 10 MHz | 10 MHz | 10 MHz |

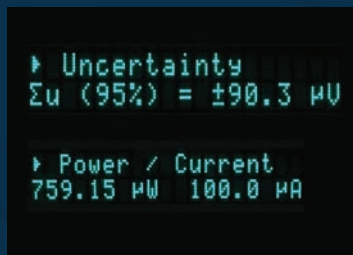
# PRECISION MULTIMETERS & REFERENCES

## 8000 SERIES PRECISION DIGITAL MULTIMETER



- 4/9 ppm 8.5 and 7.5 digital multimeters
- AC/DC voltage 0-1000V
- AC/DC Current 0-30A
- Resistance measurement to 1 TOhm (8081)
- Programmable Front/Rear terminals included as standard for 8081 models enables ratio measurements to be performed

- Uncertainty display for fast indication of measurement accuracy
- PRT measurement with support for ITS-90 and CVD co-efficients
- Thermocouple measurement with read back in °C, °F, K and mV for over 10 thermocouple types, with automated cold function measurement (option)
- Dedicated electrometer function of the 8081 enables low noise low current and high resistance measurements.



## 8500 LOW THERMAL SCANNER



- Ultra low thermal 4mm binding posts providing less than 150nV of thermal EMF
- 10 independent isolated 4 wire channel connections

## PROGRAPH MEASUREMENT ANALYSIS SOFTWARE

- Software based digital graphing for automated measurements
- Pro graph turns the 8000 series into a 10 channel measurement system when used in conjunction with the 8500 Low Thermal Scanner

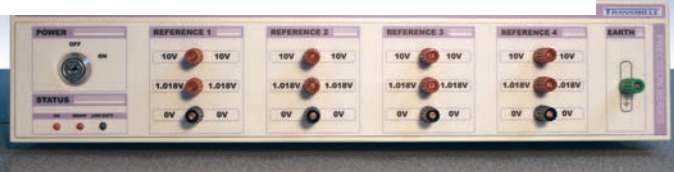


- GPS Disciplined Frequency Source/Measurement Unit
- Outputs from 1Hz to 1GHz
- Measurement from 1Hz to 1GHz disciplined to GPS with variable trigger level
- Phase relative A-B output for calibration of phase meters
- Options for 1pps output and additional Buffered 10mHz outputs on rear.

## 8600 FREQUENCY SOURCE/ MEASUREMENT GPS STANDARD



## 3000ZR PRECISION ZENER REFERENCE



- 4 10V/1.018V outputs Stability better than 2ppm/year
- Battery backup for easy shipping
- Solid state Zener reference

- Values from 1Ω to 10 MΩ
- Ultra stable, low Temperature Co-efficient resistors remove requirement for oil/air baths
- Ideal working standards for laboratory use

## 3000RS PRECISION RESISTANCE STANDARD



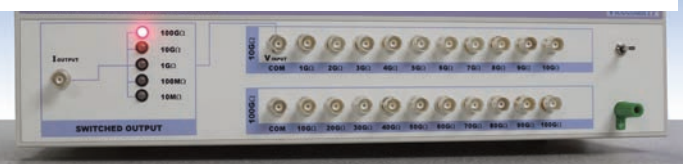
- DC Current shunt array from 10 mA to 10A
- Excellent self heating properties removes requirements for active cooling
- Add additional current ranges to DMM's

## 3000CS PRECISION CURRENT SHUNT



- High resistance buildup box to 100 GOhm
- Traceable to 1 GOhm standard
- Ideal for calibration of high resistance/low current meters

## 3000HR PRECISION RESISTANCE STANDARD



- Digitally generated AC Voltage source with errors as low as 10ppm
- Traceable to DC Voltage using a DMM

## 3000AC AC VOLTAGE REFERENCE



- Range of AC/DC current shunts from 1mA to 100A
- Frequency range from DC to 30kHz and above
- AC/DC difference as low as 1ppm
- Ideal for calibration of high precision calibrators and DMMs

## AC/DC SHUNTS



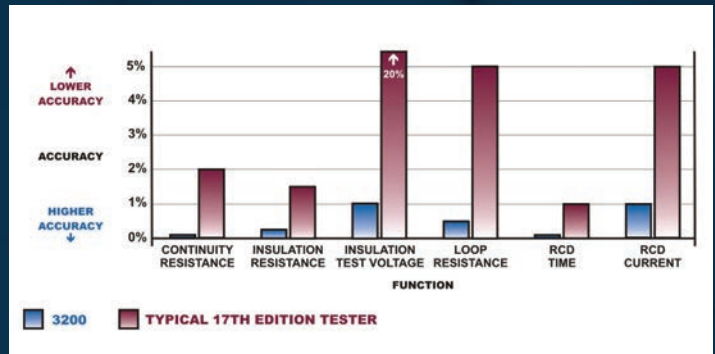
## 2090 PROGRAMMABLE RESISTANCE DECADE BOX



- 0.1Ω to 99.999kΩ
- Controlled via RS232 interface or Front Panel Controls
- Optional 0.01% Accuracy
- Ideal for automating ATE systems

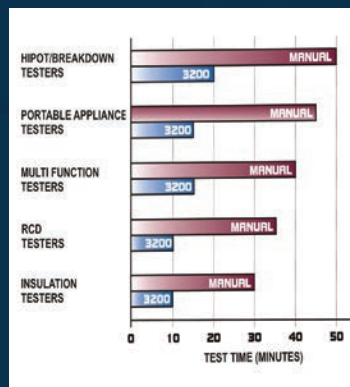
# ELECTRICAL TEST / MULTIFUNCTION CALIBRATORS

## 3200B ELECTRICAL TEST EQUIPMENT CALIBRATOR



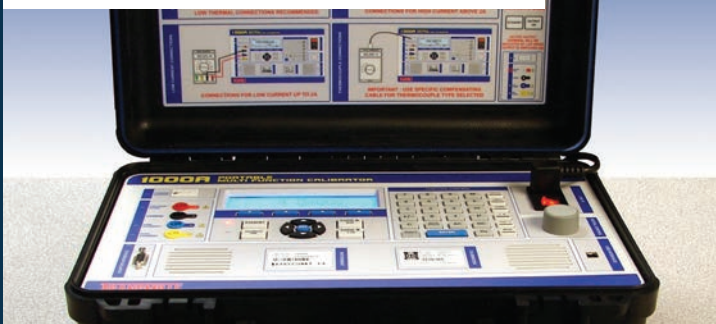
Superior accuracy offering test uncertainty ratios (TUR) in excess of 4:1 for confident calibrations

- Insulation Resistance from 1 MOhm to 2 GOhm (10 GOhm option)
- Insulation Test Voltage measurement to 1KV
- Variable Continuity Resistance from 20 mOhms to 10 kohms
- Continuity Current measurement to 320mA
- Unique 'Plug Socket' allows testers to plug straight in. No more adapters or risk of incorrect connections.



- Fast return on investment
- Calibration times down to 20 minutes or less
- Reduction in required test equipment

## 1000A PORTABLE MULTIPRODUCT CALIBRATOR



- The 1000 series multiproduct calibrators are available in either a transportable IP67 case with a weight of less than 10kg (ideal for onsite calibration) or as a benchtop version.
- The 1000 series comes fitted with a USB interface making automating calibrations using Transmille ProCal software fast and low cost.

- AC/DC Voltage to 1000v
- AC/DC Current to 10A
- 2 wire passive and variable resistance up to 100 MOhms Capacitance to 1uF
- The 1000 can be fitted with options to support calibration of Insulation Testers up to 1000V /1 GOhm

## 1000B BENCHTOP MULTIPRODUCT CALIBRATOR



# CALIBRATION SOFTWARE



PROCAL

- Transmille's ProCal software provides a cost effective and easy to use solution for automatic calibration.
- Supplied with drivers for many instruments including Transmille equipment, Fluke multiproduct calibrators and multimeter,
- Keysight/Agilent multimeters and more.
- Performs Electrical, Dimensional, Temperature, Pressure and many more types of calibration.

- ProCal's powerful automatic uncertainty system calculated uncertainties to the popular M3003/GUM system.
- A full printout of each individual contribution in the uncertainty can be accessed, enabling verification of uncertainties and clear auditing

M3003 Uncertainties Calculation Using 'DCV Source' Uncertainty Template

| Source of Uncertainty         | Limit Value | Probability Distribution | Div. | C <sub>k</sub> | σ <sub>Uj</sub> |
|-------------------------------|-------------|--------------------------|------|----------------|-----------------|
| Imported Uncertainty          | 1.4µV       | Normal                   | 2.0  | 1              | 71.2 Div/V      |
| Stability of Reference        | 3.5µV       | Rectangular              | √3   | 1              | 2.0µV           |
| Resolution                    | 1.0µV       | Rectangular              | √3   | 1              | 0.6µV           |
| Noise / Flicker               | 4.0µV       | Rectangular              | √3   | 1              | 2.3µV           |
| Connection / Lead Error       | 500 Div/V   | Rectangular              | √3   | 1.0            | 288.7 Div/V     |
| Combined Standard Uncertainty |             | Normal                   |      |                | 3.2µV           |
| Expanded Uncertainty          |             | Normal (k=2)             |      |                | 6.4µV           |



A wide range of report templates are included, and with Crystal Reports (R) support, full customisation is available  
ProCal offers full support for Translation for use in any language.

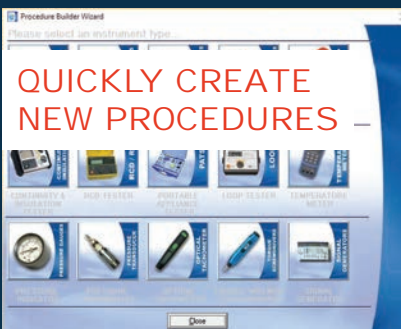
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CERTIFICATE OF CALIBRATION

UKAS Accredited Calibration Laboratory No. 9324

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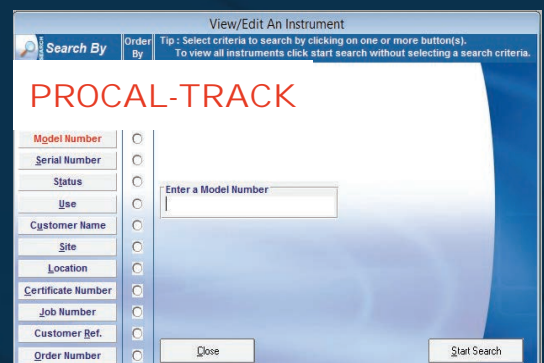
| Test Title  | Applied Value | Reading       | Uncertainty |
|-------------|---------------|---------------|-------------|
| DC Voltage  | 0.000mV       | 0.000 Div/V   | 1µV         |
| 100mV Range | 20.000mV      | 20.000 Div/V  | 1µV         |
| 100mV Range | 50.000mV      | 49.999 Div/V  | 1µV         |
| 100mV Range | 100.000mV     | 99.999 Div/V  | 1µV         |
| 100mV Range | -20.000mV     | -19.999 Div/V | 1µV         |
| 100mV Range | -50.000mV     | -49.997 Div/V | 1µV         |
| 100mV Range | -100.000mV    | -99.995 Div/V | 1µV         |
| 1V Range    | 0.200 Div/V   | 0.200 Div/V   | 1µV         |



QUICKLY CREATE NEW PROCEDURES

- ProCal uses a simple wizard to ensure fast and easy procedure creation
- Runs independently of ProCal to ensure no interruptions to workflow
- Custom prompts to aid technicians can include text, images or video
- Procedure library of over 300 Procedures for popular instruments included free of charge
- Full support for entry of custom RS232/USB/GPIB commands to UUT's for Closed Loop Calibration

- Automated asset management and tracking to assist running a busy laboratory
- Automates and standardises operating procedures for conformance to ISO quality standards
- Tracks full history of instruments and assets with ability to scan in documents and external certificates for safekeeping.
- Generates barcode readable labels.
- Creates Automated re-calibration reminders with optional email module.



# ABOUT US

We truly believe in offering Solutions in Calibration, offering bespoke solutions for calibration laboratories and manufacturers across the globe. Our mission statement is not just a phrase, it is our design and support philosophy, offering support and advice that cannot be found elsewhere with a friendly atmosphere.

Transmille was founded in 1995 as a commercial calibration service, and soon after begun to develop and manufacture a range of electrical calibration products and software to answer a growing requirement for solutions to common problems. Following this small beginning, Transmille has worked year on year to provide unique equipment and software to benefit calibration laboratories and manufacturers across the globe.

Ever since releasing the very first products Transmille have continued to innovate and develop new products for the metrology

community, from world first products such as the 2100 Electrical Test Equipment calibrator, through to the worlds lowest cost multi product calibrator the 1000 series.

Transmille now produce over 600+ calibration instruments per year, shipping instruments to customers ranging from National Standards Laboratories and manufacturers through to small calibration test houses around the world

An unrivalled commitment to quality and innovation drives Transmille forwards, with a dedicated design and support team in house with a combined experience of over 60 years in manufacture and design of electrical calibration products and software.

With local distributors across the globe, we can offer one to one personalised support, no matter how large or small the customer.



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eXpanding possibilities

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