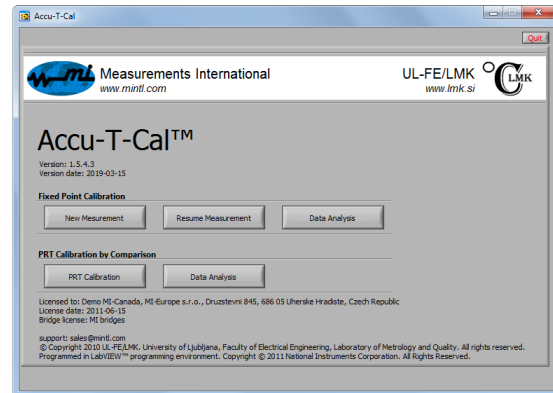




SOFTWARE FOR AUTOMATED RESISTANCE THERMOMETRY BRIDGE

- Compatible with All MIL Bridges
- Calibration at Fixed Point Cells
- Calibration by Comparison
- Automatic Self-Heating Correction
- Easy Measurement Setup
- Detailed Data Analysis

MODEL ACCU-T-CAL™



MODEL ACCU-T-CAL™

Measurements International's Accu-T-Cal™ SW is a software package for the automation of measurements and calibrations of platinum resistance thermometers at primary and secondary level. Accu-T-Cal™ SW is based on over 15 years of experience and research of metrologists from Laboratory of Metrology and Quality, Faculty of Electrical Engineering, University of Ljubljana (ULFE/LMK). UL-FE/LMK is the holder of the National Standard for Thermodynamic Temperature in Slovenia.

Platinum resistance thermometers (PRTs) are calibrated at the highest level in fixed points, as specified in the International temperature scale ITS90. In this method the PRT is calibrated by making measurements at the fixed temperature maintained by the fixed point cell. This method gives the best achievable calibration uncertainties, usually down to about 1 mK.

In order to reduce cost and time, platinum resistance thermometers can also be calibrated by comparison. In this method, the PRT is calibrated by comparing its reading with the reading of a reference thermometer, placed at the same temperature inside the temperature controlled calibration medium. The reference thermometer and the UUT are measured with the same resistance bridge. The resistance bridge uses a switching matrix (scanner) to switch between both thermometers and alternately take resistance readings. The measurement method allows appropriate handling of readings from both thermometers to minimize possible sources of errors resulting from short term stability of the calibration medium temperature and measurement speed of the bridge. In the temperature range from -50 °C to 300 °C it is possible to achieve uncertainties down to 5 mK, which is 3 to 5 times larger compared to calibration in fixed points.

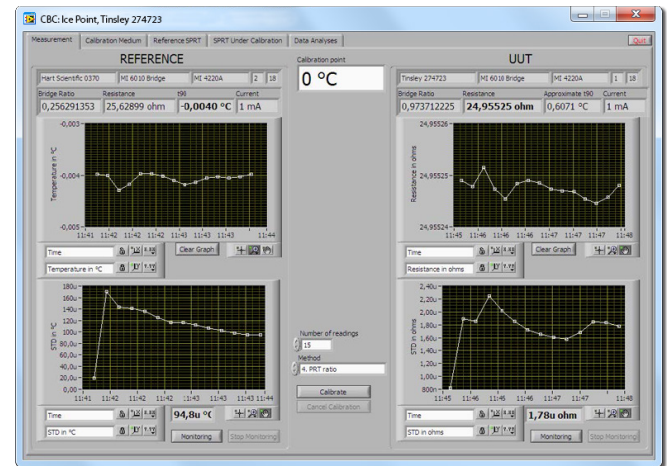
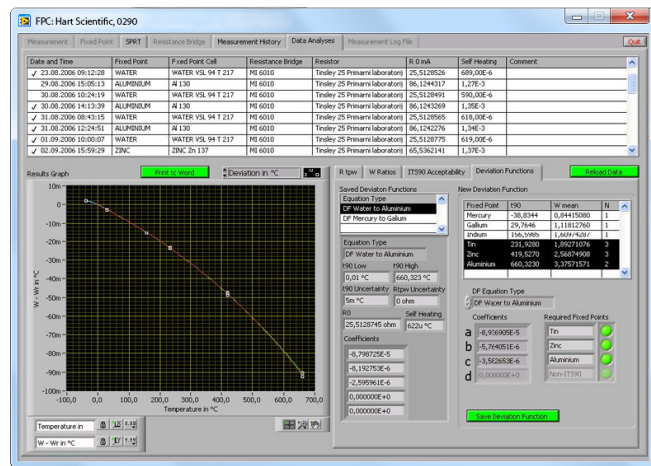
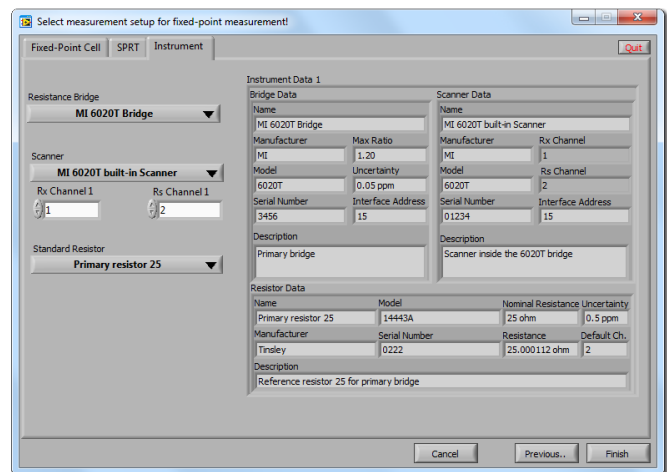
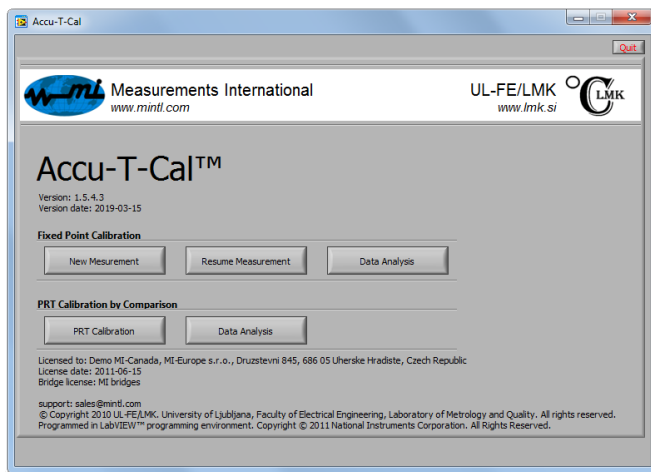
Accu-T-Cal™ SW has built drivers for all Measurements International Temperature and Resistance Bridges as well as the MIL scanners, allowing to configure multiple PRT's to be calibrated. Communication with all equipment uses the IEEE-488 bus that comes standard with all MIL equipment. Configuration of hardware, standard PRT's as well as DUT's is easily entered into the SW and is stored for future use or for later measurement data analysis.





MODEL ACCU-T-CAL™

SW includes a list of the ITS90 fixed point cells parameters for use when configuring new measurements. Accu-T-Cal™ SW has built in procedure for evaluation and correction of the PRT's self heating, with user selectable steps at the measurement current. All measured data are available as graphical and tabular format and are automatically saved for detailed analysis and calibration report generation. Users can select evaluation of deviation function as per the ITS90, or polynomial representation of the PRT's characteristics from the data obtained during calibration. Accu-T-Cal™ SW gives the user full freedom of selection or rejection of particular results from the analysis.



Corporate Headquarters
Measurements International
 PO Box 2359, 118 Commerce Drive
 Prescott, Ontario, Canada K0E 1T0
 Phone: 613-925-5934
 Fax: 613-925-1195
 Email: sales@mintl.com
 Toll Free: 1-800-324-4988

Worldwide Offices
MI-USA
 Phone: 407-706-0328
 Email: sales@mintl.com

MI-Europe
 Phone: +(420) 731 440 663
 Email: sales@mintl.com

MI-India
 Phone: +(91) 98 10 134 932
 Email: sales@MILLP.co.in

MI-China
 Phone: +(86) 10-64459890
 Email: sales@mintl.com

MI-Japan
 Phone: +(81) 72 39 64 660
 Email: kaz@mijpn.com



www.mintl.com