



Automated Thermometry Bridge

- Best Accuracy +/- 0.015 ppm From 1 Ω to 10 k Ω
- NEW Quick Measure Mode under 20 Seconds to First Reading
- NEW Current Reversal Rate of 2 Seconds
- Measurement Rates as Fast as 0.1 seconds
- New ADCC Technology
- Proprietary Comparator Design
- 0.1 Ω to 100 k Ω range
- Linearity < 0.005 ppm
- IEEE488 and Manual Operation
- Accu-T-Cal™ Application Software for Calibrating PRTs Designed by NMI
- 6 Channel Front Panel With Keep Warm Currents!
- Keep Warm Current 1 mA
- New Smaller Design for Improved Quality and Performance

AccuBridge® MODEL 6020T



Two Models Available Based on Your Needs and Requirements!

Model AccuBridge® 6020T Thermometry Bridge

The NEW **AccuBridge®** 6020T Thermometry Bridge (Furthermore 6020T) is the Metrologist's choice for primary lab level thermometry measurements. With its innovative technology, the 6020T's speed, measurement accuracy, and data handling capabilities make it the preferred primary thermometry measurement system in National Measurement Institutes (NMIs) and other primary labs worldwide. The 6020T was designed for flexibility and ease of use. The 6020T features increased ampere-turn (AT) sensitivity with more turns on both the master and slave windings and a new voltage feedback circuit to improve on the linearity error of the nano-volt amplifier. Also improved is the ratio from previous 1.5:1 ratios to the NEW Ratio range covering from 0.1 up to a maximum ratio of 5 allowing customers to meet all of their requirements. MI customers now have unmatched features and functionality to support its world-class measurement uncertainty capability.

Quick Measure Mode Provides Customers with the ability to have the first reading within 20 seconds from pressing Start; Current Reversal Rates improved to 2 seconds with measurement sample times as low as 0.1 seconds!

Only MI offers a DC Bridge with these improvements that can meet specification!

NEW Features

For years customers have been asked for MI to extend the measurement features of the DC Comparator Bridge to replace existing AC Technology. MI has finally not only answered these requests with the release of the 6020T but taken them to the next level.



Model AccuBridge® 6020T Thermometry Bridge

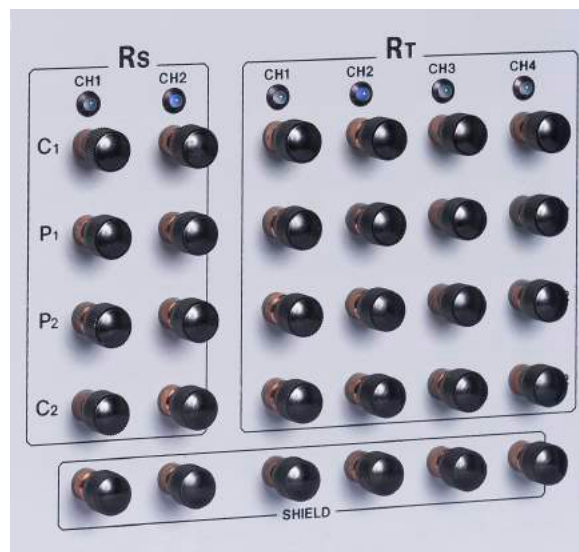
The 6020T features a new QUICK MEASURE mode which allows the bridge to balance faster thus improving the first measurement reading are displayed within less than 20 seconds from pressing START!

Next, we focused on current reversal time. Customers have been requesting that a DC Comparator Bridge meets that again of AC Bridges. We accomplished this with the improved reversal rate function of 2 seconds! MI is the only DC Comparator Bridge that has improved with these features and still meets stated specification!



We at MI understand budget limitations for customers and take that into account when designing new products. That is why the 6020T-Standard and 6020T-Premium models both equipped with a six-channel front panel design which incorporates a 1mA keep warm current. No other DCC Bridge manufacturer offers both bridge and scanner in one unit!

If more than 6 connections are required 10—, 16—or 20—channel scanners are available to connect up to 40 test resistors or PRT's. Please see the model 4210T and 4220T for options. The 4210T, 4220T series of scanners from MI come standard with the “keep warm” current option.





Model AccuBridge® 6020T Thermometry Bridge

Ratio Range and Accuracy

The **AccuBridge**® Direct Current Comparator (DCC) with its binary wound current comparator technology balances current with an effective resolution of 25 bits. It provides ratio measurements with an accuracy to better than 15 ppb (Premium Model) It covers a ratio range of 0.1 to a maximum ratio of 5, with a linearity of better than 5 ppb.

The 6020T is perfectly suited for front panel operation (via touch screen) enabling USB single measurement logging. Otherwise, you can team it with MI's Accu-T-Cal™ Application Software for fully automated measurements, history logging, graphing, and regression analysis. Stand-alone operation with the touch sensitive display panel provides full bridge capabilities to the operator. Multiple measurements over time can be numerically displayed or graphically displayed to fit your needs best.

Overview

The 6020T designed in two separate models for user's specification requirements or budget. The 6020T is available in two models Standard and Premium. The standard version is upgradable at any time to Premium!

The operation of the 6020T bridges is simple and easy to use. You select functions using the menu on the large touch screen display. For absolute measurements enter the value and related uncertainty of the standard resistor using the display's keypad. You enter the measurement functions such as current through the unknown resistor, settle time, the number of measurements, and the number of statistics the same way. The 6020T's low-noise, touch screen display is interactive with the measurements. When a reading is complete, the average value and uncertainty (based on the number of statistics) are displayed. All uncertainty calculations are 2 σ level. **At MI, it's not only about the equipment and science; it's about what you can do and the ease with which you can do it.**

MI New 6020T Series offers customers a Simple to Use, Cost Effective solution that offers the Very Best Measurement Uncertainties!



Automated Temperature Operation

Measurements International's Accu-T-Cal™ 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 the Laboratory of Metrology and Quality at the Faculty of Electrical Engineering of the University of Ljubljana (ULFE/LMK).





Model AccuBridge® 6020T Thermometry Bridge

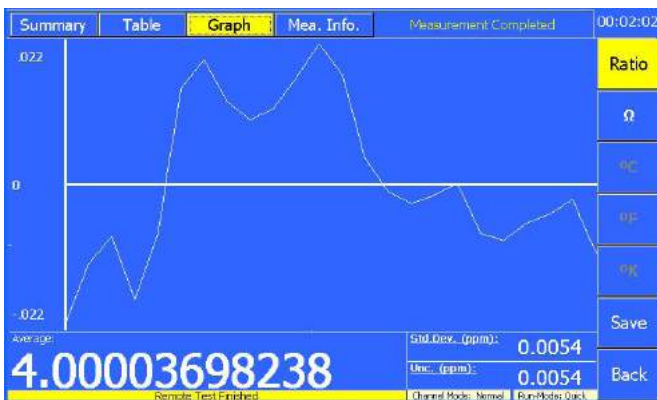
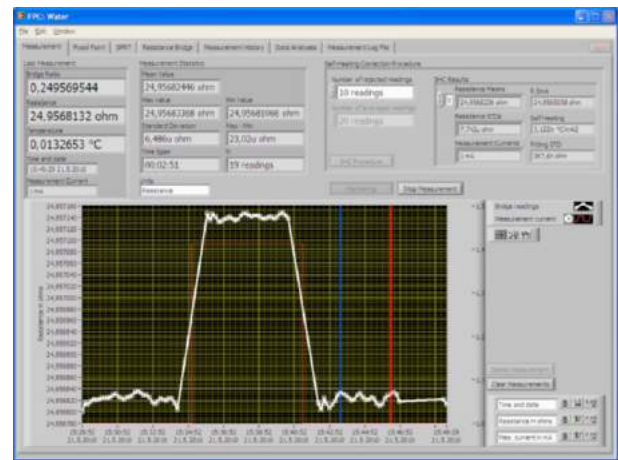
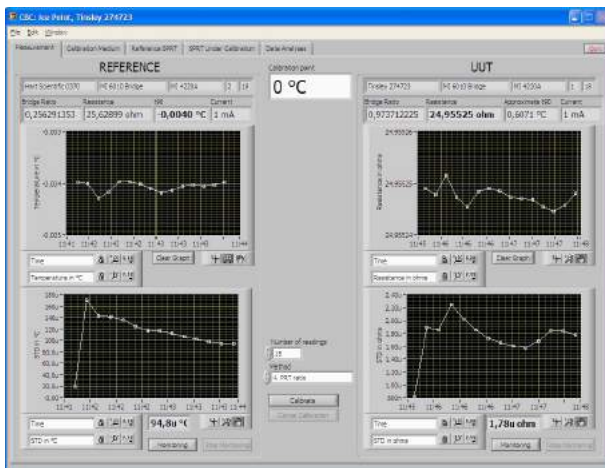
UL-FE/LMK is the holder of the National Standard for Thermodynamic Temperature in Slovenia.

Accu-T-Cal™ SW has built-in 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.

An intuitive user interface allows to configure the hardware, standard PRT's as well as DUT's. The entered parameters are stored for future use or later measurement data analysis.

SW includes a list of the ITS90 fixed point cells parameters for use when configuring new measurements. Accu-T-Cal™ SW has built in.

For More Information, Please Visit www.mintl.com and access the Accu-T-Cal™ SW data sheet.





Model AccuBridge® 6020T Thermometry Bridge

Specifications: Rev 1

Model	6020T- Premium		
Current Reversal minimum (s)	2		
Sample Rate Minimum (s)	0.1		
R _s value (Ω)	Accuracy of Ratio* (× 10 ⁻⁶)		
	1:1	5:1	1:5
0.1 to < 1	0.015	0.015	0.02
1 to < 10	0.015	0.015	0.02
10 to < 100	0.015	0.015	0.02
1 k to < 10 k	0.015	0.015	0.02
10 k to < 100 k	0.1	0.1	0.2

Model	6020T- Base		
Current Reversal minimum (s)	2		
Sample Rate Minimum (s)	0.1		
R _s value (Ω)	Accuracy of Ratio* (× 10 ⁻⁶)		
	1:1	14:1	1:14
0.1 to < 1	0.07	0.07	0.07
1 to < 10	0.07	0.07	0.07
10 to < 100	0.07	0.07	0.07
1 k to < 10 k	0.07	0.07	0.07
10 k to < 100 k	0.15	0.15	0.2

*Ratio define as (R_{PRT} / R_s)

Measurement Mode	4-Wire
Linearity	<0.005 ppm of full scale
Operating Conditions	10 °C to 35 °C, 10% to 90% RH non-condensing
Test Current Range	1 µA to 200 mA
Test Current resolution	18-bit
Interface	IEEE488.2
Display	Touch Screen Display (No external keyboard), Resolution 0.001 ppm

Dimensions (W x D x H):
438 x 565 x 178 mm

Weight:
19 kg

Shipping Weight:
23 kg

Main Power:
100 V, 120 V, 220 V, 240 VAC – 50/60Hz
200 VA Max.

Warranty:
2 Years

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-
Toll Free: 1-866-684-6393

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

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

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

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



www.mintl.com