



## MTS FlexTest® Calibration

### Benefits

- » Traceability
- » Data integrity
- » Speed of calibration
- » ISO/IEC 17025 accredited calibration available

To help ensure the quality of your test data and to make sure your MTS FlexTest Controller is operating in optimal condition, it is important to calibrate the controller electronics at least once a year. These partitioned calibrations are especially relevant in large structural test setups where it is not feasible to conduct an end-to-end calibration, but where data integrity is extremely important.

With the new, automated MTS FlexTest calibration process, the time to calibrate is half of what it used to be with a manual process. This significant time savings means testing can resume sooner with more confidence in the test data. Malfunctioning boards can negatively impact test data accuracy, and slow down your test program. With frequent calibrations, you maintain both your test schedule and data traceability.

Receiving a calibration is easy. An MTS Field Service Engineer arrives onsite to provide the calibration and leave a report. With the controller calibration, you will receive information on whether the boards are in or out of tolerance. When the calibration is out of tolerance the Field Service Engineer will consult with you to determine whether the board should be designated for limited use or replaced.

Your test data is only as good as the measurement accuracy of the equipment you use to collect it. Call MTS today to schedule an onsite FlexTest calibration to help make sure your controller is providing the best performance possible, and your test data is accurate.

be certain.

Eligible Controllers

- » FlexTest 200
- » FlexTest 100
- » FlexTest 60
- » FlexTest 40

MTS FlexTest Calibration Options

- » Input A/D
- » Output D/A
- » Signal Conditioners
  - DC Mode Only
  - DC and AC Mode

Customer is responsible for disconnecting and reconnecting cables to the test system.

ISO/IEC accredited calibration is offered through North American Field Service and MTS Factory Metrology Laboratory.

**METROLOGY LABORATORY**  
MTS Systems Corporation  
14000 Technology Drive, Eden Prairie, MN 55344

**CERTIFICATE OF CALIBRATION**

**MANUFACTURER:** MTS Systems Corporation  
**MODEL NUMBER:** 494.26 (DC Mode)  
**SERIAL NUMBER:** 7048256  
**DESCRIPTION:** Signal Conditioner

**CUSTOMER NAME:** MTS Metrology Lab  
**CUSTOMER ID NUMBER:** 12345678  
**MTS SITE:** 123456

This document applies only to the calibration of the item described above (UUT) at MTS Metrology Laboratory. If shown below, the calibration interval has been requested declaring an in-tolerance or out-of-tolerance condition, the MTS Metrology Laboratory decision rule. The stability of the UUT over time depends upon many factors outside of those using the UUT to quantify their measurement uncertainty and evaluate the ensure that measurement traceability is credibly maintained.

MTS Metrology Laboratory measurement standards, calibration processes and result of Units (SI) through the National Institute of Standards and Technology (NIST), IT by the American Association for Laboratory Accreditation (A2LA Certificate 1044), with the international standard for calibration laboratories ISO/IEC 17025 and ANSI.

\*When a parameter is reported to be within specified tolerance, the measured value the uncertainty of the measurement shall be reported and provided to the customer.

**Conditions At Time Of Calibration:**  
 At Forward: In-Tolerance  
 At Left: In-Tolerance  
 Environmental: 73°F / 27% RH

Calibration I Software Pro

Standards Used For Calibration:			
MTS Asset	Manufacturer	Model	Tempera
23655	Fuke	971	Dig
21644	Keithley	2010	DA
21643	Yokogawa	GS111	

**Additional Notes / Remarks:**

**Certified By:** Kevin Runt  
Metrologist

This certificate and associated report is valid only for the item listed above and shall not be used for other items.  
 MTS Metrology Calibration Form: 494.26 DDC DC (Rev: 05-Feb-2015) TM Approved (RTR, 05-Feb-2015)

**METROLOGY LABORATORY**  
**CALIBRATION REPORT**

**MODEL NUMBER:** 494.26 (CHB, DC Mode)  
**SERIAL NUMBER:** 3048506  
**DESCRIPTION:** Signal Conditioner  
**SLOT LOCATION:** 54-72A/B

**CUSTOMER NAME:** MTS Metrology Lab  
**CUSTOMER ID NUMBER:** 12345678  
**MTS SITE NUMBER:** 123456  
**CALIBRATION DATE:** 06-Feb-2015

**EXCITATION VERIFICATION**

Excitation (VDC)	Measured (VDC)	Deviation (% Rdg)
5.000	4.9984	-0.032
10.000	9.9968	-0.032
15.000	14.9950	-0.033
20.000	19.9947	-0.026

**CHB Excitation Verification Summary**

**ZERO OFFSET VERIFICATION**

Total Gain	*Zero Offset	Tolerance (± mV)
1.0	-1.5	15.7
2.0	-3.1	31.4
5.0	-7.7	41.3
10.0	-15.3	68.3
20.0	-22.2	28.3
50.0	-3.1	40.9
100.0	-2.0	70.6
200.0	-0.1	53.5
500.0	1.7	118.8
1000.0	5.5	222.6
2000.0	13.4	363.5

**GAIN VERIFICATION**

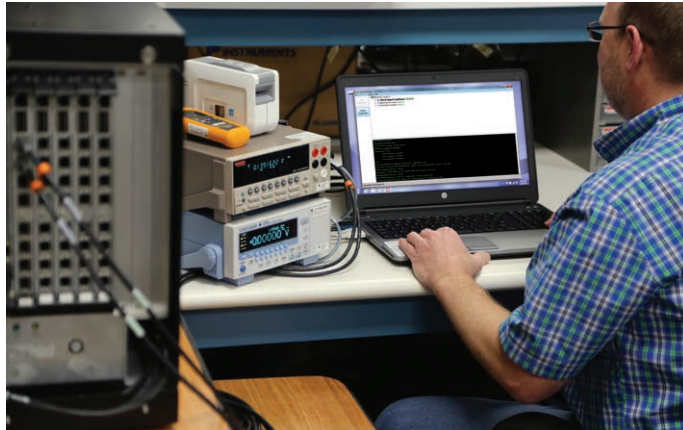
Input	Nominal	Measured Input	Measured Output	Deviation
(VDC)	(+ Ref)	(- Ref)	(+ VDC)	(% Rdg)
10.0	10.0000	-4.9999	10.0014	-10.0025
5.0	5.00002	-4.99997	5.0007	-10.0007
2.0	2.00002	-1.99998	2.0007	-10.0001
1.0	0.99999	-0.99999	1.00023	-9.9999
0.50	0.50000	-0.49999	0.50010	-10.0003
0.20	0.20000	-0.20000	0.20009	-10.0002
100.0	98.997	-99.997	100.001	-9.9995
50.0	49.998	-49.998	50.001	-10.0005
20.0	19.9994	-19.9992	20.0013	-10.0005
10.0	9.9998	-10.0000	10.0011	-10.0006
5.0	4.99989	-4.99993	5.0006	-10.0002

**CHB Gain Verification Summary**

**NOTES / REMARKS:**  
 1) DC Conditioner Accuracy Specifications: Excitation = 0.1% of Setting + 0.001V, Gain = 0.1% of Reading + 0.001% of Range  
 2) \*Zero offset measurement performed with a short applied to conditioner input.  
 3) Any out-of-tolerance condition is indicated by associated cell highlighted in Yellow.  
 4) Calibration uncertainty does not exceed 0.025% of Reading (±1, 95%).

MTS Metrology Calibration Form: 494.26 DDC DC (Rev: 05-Feb-2015) TM Approved (RTR, 05-Feb-2015) Page 3 of 3

Example of a calibration certificate and report



An MTS engineer calibrates an MTS FlexTest controller



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