



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

CONTECH RESEARCH INC.  
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MECHANICAL

Valid to: February 29, 2016

Certificate Number: 1478.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests on aerospace, aircraft, automotive, and computer components, cable assemblies, connectors and interconnect systems; commercial and military and consumer product safety testing;

<b>Test</b>	<b>Test Method(s)</b>
<b>Force Parameters (.250 to 950) lbs</b>	
Insertion Force, Withdrawal Force*	EIA 364 TP 37; MIL-STD-1344, Method 2014; IEC 512-13-1; IEC 60512-13-1; SAE/USCAR-2
Crimp Tensile*	EIA 364 TP 08; MIL-STD-1344, Method 2003; IEC 512-16-4; IEC 60512-16-4; SAE/USCAR-21
Mating and Unmating Force*	EIA 364 TP13; MIL-STD-1344, Method 2013; IEC 512-13-2; IEC 60512-13-2; USB 2.0, 3.0; SAE/USCAR-2; SAE/USCAR-30; IEEE 1394
Contact Strength (Bend) *	EIA 364 TP 15; IEC 512-16-3; IEC 60512-16-3; SAE/USCAR-2; MIL-STD-883, Method 2004.5

<u>Test</u>	<u>Test Method(s)</u>
<b>Force Parameters (cont.)</b> <i>(.250 to 950) lbs</i>	
Retention*	EIA 364 TP 29; MIL-STD-1344, Method 2007; IEC 512-15-1; IEC 60512-15-1
Term. Conn. Engage/Disengage*	SAE/USCAR-2
Terminal Strength*	EIA 364 TP 62; IEC 512-16-6; IEC 60512-16-6; MIL-STD-883, Method 2025.4
Actuating Mechanism*	EIA 364 TP 68; IEC 512-8-3
Cable Pullout*	EIA 364 TP 38; MIL-STD-1344, Method 2009; IEC 512-17-3; IEC 60512-17-3; USB 2.0, 3.0; IEEE 1394
<b>Vibration Parameters</b> <i>10 Hz to 3 KHz</i> <i>Sine 100 G's</i> <i>Random 50 Grms</i> <i>Vibration Under Temp. (-75 to 200) °C</i>	
Vibration: Sine*	EIA 364 TP 28; MIL-STD-1344, Method 2005; MIL-STD-202, Methods 201, 204; IEC 60512-6-4; IEC 60068-2-6; IEEE 1394
Vibration: Random*	EIA 364 TP 28; SAE/USCAR-2; MIL-STD-1344, Method 2005; MIL-STD-202, Method 214; IEC 512-6-5; IEC 60512-6-5; IEC 60068-2-64; USB 2.0, 3.0; SAE/USCAR-30

<b>Test</b>	<b>Test Method(s)</b>
<b>Vibration Parameters (cont.)</b> <i>10 Hz to 3 KHz</i> <i>Sine 100 G's</i> <i>Random 50 Grms</i> <i>Vibration under Temp. (-75 to 200) °C</i>	
Mixed Mode Vibration*	MIL-STD-810, Method 514
Gunfire Vibration*	MIL-STD-810, Method 519
<b>Mechanical Shock Parameters</b>	
<i>Halfsine, Sawtooth, Trapezoid</i> <i>Up to 500 Grms</i>	
Mechanical Shock*	EIA 364 TP 27; MIL-STD-1344, Method 2004; MIL-STD-202, Method 213; IEC 60512-6-3; IEC 60512-6-3; IEC 60068-2-27; USB 2.0, 3.0; SAE/USCAR-2; SAE/USCAR-30; IEEE 1394
<b>Temp / Humidity Parameters</b>	
<i>(-70 to 300) °C, (20 to 98) % RH</i>	
Thermal Shock *	EIA 364 TP 32; MIL-STD-1344, Method 1003; MIL-STD-202, Method 107; IEC 512-11-4; IEC 60512-11-4; USB 2.0, 3.0; SAE/USCAR-2; SAE/USCAR-30; IEEE 1394; MIL-STD-883, Method 1011.9
Thermal Cycling*	EIA 364 TP 110
Cyclic Humidity*	EIA 364 TP 31; MIL-STD-1344, Method 1002; MIL-STD-202, Method 106; IEC 512-11-12; IEC 60512-11-12; USB 2.0, 3.0; SAE/USCAR-2; SAE/USCAR-30

<u>Test</u>	<u>Test Method(s)</u>
<b>Temp / Humidity Parameters (cont.)</b> <i>(-70 to 300) °C, (20 to 98) % RH</i>	
Humidity Steady State*	EIA 364 TP 31; MIL-STD-202, Method 103; IEC 60512-11-3; IEC 60512-11-3; IEEE 1394
Temperature Life*	EIA 364 TP 17; MIL-STD-1344, Method 1005; MIL-STD-202, Method 108; IEC 512-9-2; USB 2.0; SAE/USCAR-2; SAE/USCAR-30; IEEE 1394
Salt Spray* <i>(1 to 5) % Salt</i>	EIA 364 TP 26; MIL-STD-1344, Method 1001; MIL-STD-202, Method 101; IEC 512-11-6; IEC 60512-11-6
Normal Force* <i>(.002 to 2) inches, (2 to 1,000) grams</i>	EIA 364 TP 04
Dust <i>Benign, Portland Cement, Arizona Road Dust, Talc, Silica Flour</i>	EIA 364 TP 91
Durability	EIA 364 TP 09; MIL-STD-1344, Method 2016; IEC 512-9-1; IEC 60512-9-1; USB 2.0; SAE/USCAR-30; IEEE 1394
Axial Concentricity	EIA 364 TP 7; MIL-STD-1344, Method 2001; IEC 512-16-7; IEC 60512-116-7
Cable Flex	EIA 364 TP 41; MIL-STD-1344, Method 2017; USB 2.0; SAE/USCAR-30; IEEE 1394
Corrosivity, Plastics	EIA 364 TP 82

<b>Test</b>	<b>Test Method(s)</b>
Altitude Immersion	EIA 364 TP 03; SAE AS1344; MIL-STD-1344, Method 1004; IEC 512-14-5; IEC 60512-14-5
Porosity Nitric	EIA 364 TP 53, 60; MIL-STD-1344, Method 1017
Gas Tight	EIA 364 TP 36
Air Leakage	EIA 364 TP 02; MIL-STD-1344, Method 1008; IEC 512-14-4; IEC 60512-14-4
Solderability	EIA 364 TP 52; MIL-STD-202, Method 208; IEC 512-12-1; IEC 60512-12-1; USB 2.0, 3.0; US CAR PF-1; MIL-STD-883, Method 2003.8
Resistance to Solder Heat	EIA 364 TP 56; MIL-STD-202, Method 210, Methods A, B; IEC 512-12-4; IEC 60512-12-4
Resistance to Solvents	EIA 364 TP 11; MIL-STD-202, Method 215
Fluid Immersion	EIA 364 TP 10; MIL-STD-1344, Method 1016; MIL-STD-202, Method 104; IEC 512-19-3; IEC 60512-19-3
Fluid Resistance	SAE/USCAR-2
Pressure/Vacuum Leak	SAE/USCAR-2
Soap Shower	IEC 529; DIN 40050
Mixed Flowing Gas	ASTM B845-97; EIA 364 TP 65; IEC 60512-11-7; IEC 60512-11-7; IEC 68-2-60; GR-63-CORE; GR-1217-CORE; USB 2.0, 3.0; IEEE 1394
Maintenance Aging	EIA 364 TP 24; IEC 512-9-4
Flammability	EIA 364 TP 104; MIL-STD-1344, Method 1012

<b>Test</b>	<b>Test Method(s)</b>
Cross Section	EIA 364 TP 96; SAE/USCAR-21

\*Customer specific test methods utilizing any combination of test equipment parameters listed above.



American Association for Laboratory Accreditation

# *Accredited Laboratory*

A2LA has accredited

## **CONTECH RESEARCH INC.**

*Attleboro, MA*

for technical competence in the field of

### **Mechanical Testing**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 *General requirements for the competence of testing and calibration laboratories*. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (*refer to joint ISO-ILAC-IAF Communiqué dated 8 January 2009*).

Presented this 27<sup>th</sup> day of March 2014.



  
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President & CEO

For the Accreditation Council  
Certificate Number 1478.01  
Valid to February 29, 2016

*For the tests or types of tests to which this accreditation applies, please refer to the laboratory's Mechanical Scope of Accreditation.*