



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

CONTECH RESEARCH INC.
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MECHANICAL

Valid to: May 31, 2024

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:

<u>Test:</u>	<u>Test Method(s) ¹:</u>
Force Parameters (.250 to 950) lbs.	
Insertion Force, Withdrawal Force*	EIA 364 TP 37; MIL-STD-1344, Method 2014 ² ; IEC 60512-13-1; SAE/USCAR-2
Crimp Tensile*	EIA 364 TP 08; MIL-STD-1344, Method 2003 ² ; IEC 60512-16-4; SAE/USCAR-21; SAE J2030
Mating and Unmating Force*	EIA 364 TP13; MIL-STD-1344, Method 2013 ² ; IEC 60512-13-2; USB 2.0, 3.0; SAE/USCAR-2; SAE/USCAR-30; SAE J2030
Contact Strength (Bend)*	EIA 364 TP 15; IEC 60512-16-3; SAE/USCAR-2
Retention*	EIA 364 TP 29; MIL-STD-1344, Method 2007 ² ; IEC 60512-15-1; SAE J2030
Term. Conn. Engage/Disengage*	SAE/USCAR-2

<u>Test:</u>	<u>Test Method(s) ¹:</u>
Terminal Strength*	EIA 364 TP 62; IEC 60512-16-6; MIL-STD-883, Method 2025.4; SAE J2030
Actuating Mechanism*	EIA 364 TP 68
Cable Pullout*	EIA 364 TP 38; MIL-STD-1344, Method 2009 ² ; IEC 60512-17-3; USB 2.0, 3.0; SAE J2030
Mis-Alignment Mating	SAE J2030
Contact Insertion and Removal Force*	EIA 364, TP 05; MIL-STD-1344, Method 2012 ² ; IEC 60512-15-4
Insert Retention*	EIA 364, TP 35; MIL-STD-1344, Method 2010 ² ; IEC 60512-15-2
External Bending Moment*	EIA 364, TP 43
Vibration Parameters <i>5 Hz to 3 KHz; Sine: Up to 60 G's</i> <i>Random: 50 Grms</i> <i>Vibration Under Temp. (-75 to 200) °C</i>	
Vibration: Sine* Up to 60 G's Vibration Under Temp. (-75 to 200) °C	EIA 364 TP 28; MIL-STD-1344, Method 2005 ² ; MIL-STD-202, Methods 201, 204; IEC 60068-2-6; SAE J2030
Vibration: Random* 5 Hz to 3 KHz Vibration Under Temp. (-75 to 200) °C	EIA 364 TP 28; SAE/USCAR-2; MIL-STD-1344, Method 2005 ² ; MIL-STD-202, Method 214; IEC 60512-6-5; IEC 60068-2-64; USB 2.0, 3.0; SAE/USCAR-30
Mixed Mode Vibration*	MIL-STD-810, Method 514
Gunfire Vibration (Shock Test)*	MIL-STD-810, Method 519

<u>Test:</u>	<u>Test Method(s) ¹:</u>
Mechanical Shock Parameters <i>Half sine, Sawtooth, Trapezoid</i> <i>Up to 1000 G's</i>	
Mechanical Shock* <i>Up to 1000 G's</i>	EIA 364 TP 27; MIL-STD-1344, Method 2004 ² ; MIL-STD-202, Method 213; IEC 60512-6-3; IEC 60068-2-27; USB 2.0, 3.0; SAE/USCAR-2; SAE/USCAR-30; SAE J2030
Temp / Humidity Parameters <i>(-150 to 300) °C, (40 to 98) %RH</i> <i>25 °C @ 20% RH; 85 °C @ 95 %RH</i>	
Cyclic Humidity*	EIA 364 TP 31; MIL-STD-1344, Method 1002 ² ; MIL-STD-202, Method 106; IEC 60512-11-12; USB 2.0, 3.0; SAE/USCAR-2; SAE/USCAR-30; SAE J2030
Humidity Steady State*	EIA 364 TP 31; MIL-STD-202, Method 103; IEC 60512-11-3
Thermal Shock* <i>(-150 to 300) °C</i>	EIA 364 TP 32; MIL-STD-1344, Method 1003 ² ; MIL-STD-202, Method 107; IEC 60512-11-4; USB 2.0, 3.0; SAE/USCAR-2; SAE/USCAR-30; MIL-STD-883, Method 1011.9; SAE J2030
Thermal Cycling*	EIA 364 TP 110
Temperature Tests <i>(-150 to 300) °C</i>	
Temperature Life*	EIA 364 TP 17; MIL-STD-1344, Method 1005 ² ; MIL-STD-202, Method 108; USB 2.0; SAE/USCAR-2; SAE/USCAR-30; SAE J2030
Salt Spray* <i>(4 to 6) % Salt</i>	EIA 364 TP 26; MIL-STD-1344, Method 1001 ² ; MIL-STD-202, Method 101; IEC 60512-11-6; SAE J2030

<u>Test:</u>	<u>Test Method(s) ¹:</u>
Normal Force* (.002 to 2) inches, (2 to 1,000) grams	EIA 364 TP 04
Dust <i>Benign, Portland Cement, Arizona Road Dust, Talc, Silica Flour</i>	EIA 364 TP 91; SAE J2030
Durability	EIA 364 TP 09; MIL-STD-1344, Method 2016 ² ; IEC 60512-9-1; USB 2.0; SAE/USCAR-30; SAE J2030
Axial Concentricity	EIA 364 TP 7; MIL-STD-1344, Method 2001 ² ; IEC 60512-16-7
Cable Flex	EIA 364 TP 41; MIL-STD-1344, Method 2017 ² ; USB 2.0; SAE/USCAR-30
Corrosivity, Plastics	EIA 364 TP 82
Altitude Immersion	EIA 364 TP 03; SAE AS1344; MIL-STD-1344, Method 1004 ² ; IEC 60512-14-5
Porosity Nitric	EIA 364 TP 53, 60; MIL-STD-1344, Method 1017 ²
Gas Tight	EIA 364 TP 36
Air Leakage	EIA 364 TP 02; MIL-STD-1344, Method 1008 ² ; IEC 60512-14-4; SAE J2030
Solderability	EIA 364 TP 52; MIL-STD-202, Method 208; IEC 60512-12-1; USB 2.0, 3.0; MIL-STD-883, Method 2003.8, Method 2003.13
Resistance to Solder Heat	EIA 364 TP 56; MIL-STD-202, Method 210, Methods A, B; IEC 60512-12-4
Resistance to Solvents	EIA 364 TP 11; MIL-STD-202, Method 215

<u>Test:</u>	<u>Test Method(s) ¹:</u>
Fluid Immersion	EIA 364 TP 10; MIL-STD-1344, Method 1016 ² ; MIL-STD-202, Method 104; IEC 60512-19-3; SAE J2030
Pressure/Vacuum Leak	SAE/USCAR-2
Mixed Flowing Gas	ASTM B845-97; EIA 364 TP 65; IEC 60512-11-7; IEC 60068-2-42; IEC 60068-2-43; IEC 60068-2-60; GR-63-CORE; GR-1217-CORE; USB 2.0, 3.0
Maintenance Aging	EIA 364 TP 24; IEC 60512-9-4; SAE J2030
Flammability	EIA 364 TP 104; MIL-STD-1344, Method 1012 ²
Drop Test	SAE J2030
Cross Section	EIA 364 TP 96; SAE/USCAR-21
Visual Inspection*	EIA 364, TP 18 IEC 60512-01-1
Resistance to Test Probe Damage*	EIA 364, TP 25; MIL-STD-1344, Method 2006 (Historical) ² ; IEC 60512-16-1
IP Testing (Dust and Probe Access)	IEC 60529 IP2X, IP3X, IP4X, IP5X, IP6X
IP Testing (Water Ingress)	IEC60529 IPX3, IPX4, IPX5, IPX6, IPX7, IPX8

*Also using customer specific test methods utilizing any combination of test equipment parameters listed above.

¹ When the date, edition, version, etc. is not identified in the scope of accreditation, laboratories may use the version that immediately precedes the current version for a period of one year from the date of publication of the standard measurement method, per part C., Section 1 of A2LA R101 - *General Requirements- Accreditation of ISO-IEC 17025 Laboratories*.

² NOTE: This laboratory's scope contains withdrawn or superseded methods. As a clarifier, this indicates that the applicable method itself has been withdrawn or is now considered "historical" and not that the laboratory's accreditation for the method has been withdrawn.



Accredited Laboratory

A2LA has accredited

CONTECH RESEARCH INC.

Rumford, RI

for technical competence in the field of

Mechanical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 *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 April 2017).



Presented this 10th day of January 2022.

A blue ink signature of the Vice President of Accreditation Services.

Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 1478.01
Valid to May 31, 2024
Revised February 9, 2024

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