CERTIFICATE OF ACCREDITATION

The ANSI National Accreditation Board

Hereby attests that

Keystone Compliance
131 N. Columbus Inner Belt
New Castle, PA 16101
(and satellite locations as listed on the scope)

Fulfills the requirements of

ISO/IEC 17025:2017

and

U.S. Federal Communication Commission (FCC) EMC and Telecommunications (EC&T) Testing Designation Program

In the field of

TESTING

This certificate is valid only when accompanied by a current scope of accreditation document.
The current scope of accreditation can be verified at www.anab.org.

R. Douglas Leonard Jr., VP, PILR SBU

Expiry Date: 24 October 2024
Certificate Number: AT-3142

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

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

U.S. Federal Communication Commission (FCC) EMC

and

Telecommunications (EC&T) Testing Designation Program [1]

Keystone Compliance, LLC

131 N. Columbus Inner Belt
New Castle, PA 16101

Joey Sullivan
joey@keystonecompliance.com

TESTING

Valid to: **October 24, 2024** Certificate Number: **AT-3142**

Testing performed in support of FCC approval procedures for certification [1] Columbus Inner Belt, New Castle, PA

Type of Device Examples	Scope of Accreditation	Supporting FCC Guidance	Comments/Maximum Frequency Tested
Unintentional Radiators (FCC Part 15, Subpart B)	ANSI C63.4-2014	-	40 000 MHz
Industrial, Scientific, and Medical Equipment (FCC Part 18) Consumer ISM equipment	FCC MP-5, (February 1986)	-	40 000 MHz

Electromagnetic Compatibility Columbus Inner Belt, New Castle, PA

Test Method	Test Specification(s)	Range	Comments
Radiated and Conducted Emissions	CNS 13438	up to 6 GHz	-

Electromagnetic Compatibility Columbus Inner Belt, New Castle, PA

Test Method	Test Specification(s)	Range	Comments
Radiated and Conducted Emissions	ANSI C63.4, CISPR 11, CISPR 32 EN 55011, EN 55022, EN 55032 FCC CFR 47 Part 15B (using ANSI C63.4:2014) FCC CFR 47 Part 18 (using MP-5:1986) ICES-001, ICES-003 IEC/EN 61000-6-4 KN 35, KS C 9835 Part 15C, TCVN 7189 VCCI-CISPR 32	-	-
Radiated and Conducted Emissions	MIL-STD-461D (Methods RE101, RE102, CE101, CE102) MIL-STD-461E (Methods RE101, RE102, CE101, CE102) MIL-STD-461F (Methods RE101, RE102, CE101, CE102) MIL-STD-461G (Methods RE101, RE102, CE101, CE102)	-	-
Current Harmonics	IEC/KN/EN 61000-3-2 KS C 9610-3-2	-	-
Voltage Fluctuations & Flicker	IEC/KN/EN 61000-3-3 KS C 9610-3-3	-	-
Conducted Emissions	RTCA/DO-160F Section 21 RTCA/DO-160G Section 21	-	-
Radiated Emissions	RTCA/DO-160F Section 21 RTCA/DO-160G Section 21	-	-
Generic or Product Specific Standards	ETSI EN 301 489-1 V2.1.1	-	-
ESD	IEC/EN/KN 61000-4-2 KS C 9610-4-2	-	-
Radiated, Radiofrequency, Electromagnetic Field Immunity Test	IEC/EN/KN 61000-4-3 KS C 9610-4-3	-	-
Electrical Fast Transient/Burst Immunity Test	IEC/EN/KN 61000-4-4 KS C 9610-4-4	-	-
Surge Immunity Test	IEC/EN/KN 61000-4-5 KS C 9610-4-5	-	-
Immunity to Conducted Disturbances, Induced by Radio-Frequency Fields	IEC/EN/KN 61000-4-6 KS C 9610-4-6	-	-

Electromagnetic Compatibility Columbus Inner Belt, New Castle, PA

Test Method	Test Specification(s)	Range	Comments
Power Frequency Magnetic Field Immunity Test	IEC/EN/KN 61000-4-8 KS C 9610-4-8	-	-
Pulse Magnetic Field Immunity Test	IEC/EN 61000-4-9	-	-
Damped Oscillatory Magnetic Field Immunity Test	IEC/EN 61000-4-10	-	-
Radiated Fields in Close Proximity Immunity Test	IEC/EN 61000-4-39	-	-
Voltage Dips, Short Interruptions and Voltage Variations Immunity Test	IEC/EN/KN 61000-4-11; KS C 9610-4-11; IEC/EN 61000-4-29	-	-
Ring Wave Immunity Test	IEC/EN/KN 61000-4-12	-	-
Harmonics and Inter-Harmonics Including Mains Signaling at A.C. Power Port, Low Frequency Immunity Tests	IEC/EN 61000-4-13	-	-
Test for Immunity to Conducted, Common Mode Disturbances	IEC/EN 61000-4-16	0 Hz to 150 kHz	-
Damped Oscillatory Wave Immunity Test	IEC 61000-4-18	-	-
Radiated Susceptibility	MIL-STD-461D (Methods RS101, RS103) MIL-STD-461E (Methods RS101, RS103) MIL-STD-461F (Methods RS101, RS103) MIL-STD-461G (Methods RS101, RS103)	-	-
Conducted Susceptibility	MIL-STD-461D (Methods CS101, CS106, CS114, CS115, CS116, CS104, CS105, CS109, CS117) MIL-STD-461E (Methods CS101, CS106, CS114, CS115, CS116, CS104, CS105, CS109, CS117) MIL-STD-461F (Methods CS101, CS106, CS114, CS115, CS116, CS104, CS105, CS109, CS117) MIL-STD-461G (Methods CS101, CS106, CS114, CS115, CS116, CS104, CS105, CS109, CS117)	-	-

Electromagnetic Compatibility Columbus Inner Belt, New Castle, PA

Test Method	Test Specification(s)	Range	Comments
Magnetic Effect	RTCA/DO-160F Section 15 RTCA/DO-160G Section 15	-	-
Power Input	RTCA/DO-160F Section 16 RTCA/DO-160G Section 16	-	-
1B Voltage Spike	RTCA/DO-160F Section 17 RTCA/DO-160G Section 17	-	-
2B ESD	MIL-STD-461G, Method CS118	-	-
3B Induced Susceptibility	RTCA/DO-160F Section 19 RTCA/DO-160G Section 19	-	-
4B RF Conducted Susceptibility	RTCA/DO-160F Section 20 RTCA/DO-160G Section 20	10 kHz to 400 MHz	-
5B RF Radiated Susceptibility	RTCA/DO-160F Section 20 RTCA/DO-160G Section 20	100 MHz to 18 GHz up to 200 V/m (rms)	-
6B Electrostatic Discharge (ESD)	RTCA/DO-160F Section 25 RTCA/DO-160G Section 25	15 kV	-
7B Lightning	RTCA/DO-160F Section 22 RTCA/DO-160G Section 22	-	-
Dielectric Strength	MPD-7011F 9 (Section 3.3.1)	-	-
Measuring relays and protection equipment	IEC 60255-27 (Section 10.5.3.1)	-	Part 27: Product safety requirements
Electromagnetic Compatibility Emissions & Immunity Generic or Product Specific Standards	EN 50270, IEC/EN 60601-1-2 KN 60601-1-2, KS C IEC 60601-1-2 IEC/EN 55024, KN 24 IEC/EN 50121-4, EN/KN 301-489-01 KS X 3124, EN/KN 301-489-17 KS X 3126, CISPR 12 EN 60945, ISO 14982 Section 6.3 US NRC Regulatory Guide 1.180 Rev 1 IEC/EN 61326-1, IEC/EN 61326-2-3	-	-

Mechanical Columbus Inner Belt, New Castle, PA

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Temperature (-70 to 265) ºC	AAR S9401 AECTP 300, Method 302 AECTP 300, Method 303 AREMA, Section 11.5.1 ASTM D6653, ASTM F1980	-	-
Temperature (-70 to 265) ºC	ATPD-2352, Section 3.3.1 ATPD-2352, Section 4.3.7 EN 50155, Section 2.1 IEC 60068-2-1, IEC 60068-2-14 IEC 60068-2-2, IEC 61215 ISO 16750-4, ISO 14708-1 Section 26 DEF STAN 00-035, Part 3 Tests CL1, CL2, CL4, CL5, CL6, CL7 DEF STAN 81-41, Part 3 Test C, G, N	-	-
Temperature (-70 to 265) ºC	MIL-STD-1344A, Section 1003, 1005 MIL-STD-202F,G, H Method 108 MIL-STD-810B,C, D, E, F, G, H Method 501 MIL-STD-810B, C, D, E, F, G, H Method 502 MIL-STD-883E,F, G, H, I, J, K, L Method 1010 MIL-STD-883E, F, G, H, I, J, K, L Method 1005 MIL-STD-883E, F, G, H, I, J, K, L Method 1006 MIL-STD-883E, F, G, H, I, J, K, L Method 1007 MIL-STD-883E, F, G, H, I, J, K, L Method 1008 MIL-STD-883E, F, G, H, I, J, K, L Method 1012	-	-

Mechanical Columbus Inner Belt, New Castle, PA

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Temperature (-70 to 265) ºC	RTCA/DO-160B, Section 4 RTCA/DO-160C, Section 4 RTCA/DO-160E, Section 4 RTCA/DO-160F, Section 4 RTCA/DO-160G, Section 4 RTCA/DO-160B, Section 5 RTCA/DO-160C, Section 5 RTCA/DO-160E, Section 5 RTCA/DO-160F, Section 5 RTCA/DO-160G, Section 5 SAE J2139, SAE J575, UL991	-	-
Thermal Shock (-70°C to 180) °C	AECTP 300, Method 304 ASTM D3103, ASTM F2825 ATPD-2352, Section 3.3.3 DEF STAN 00-035, Part 3, Test CL14 E50TF424-ACD IEC 60601-1-11, IEC 60950 IEC 61215, IEC 61730-2 IEC 62108, ISO 16750-4 MIL-STD-202, Method 107 MIL-STD-810, Method 503 MIL-STD-883, Method 1011 SAE J575, UL 1703	-	-
Humidity (Up to 100) %RH	AECTP 300, Method 306 AREMA 2010, Section 11.5.1 ATPD-2352, Section 3.3.2 EN 50155 IEC 60068-2-30, IEC 60068-2-38 IEC 60068-2-78, IEC 60601-1-11 IEC 61215, IEC 61730-2 IEC 62108, ISO 16750-4 RTCA/DO-160, Section 6.0 SAE J1455, SAE J2139 SAE J575, UL 1703, UL991	-	-

Mechanical Columbus Inner Belt, New Castle, PA

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Humidity (Up to 100) %RH	MIL-STD-1344, Section 1002 MIL-STD-202B, C, D, E, F, G, H Method 106 MIL-STD-202B, C, D, E, F, G, H Method 103 MIL-STD-810B, C, D, E, F, G, H Method 507 MIL-STD-883, Method 1013 MIL-STD-883, Method 1004	-	-
Altitude (Up to 70 000) ft	AECTP 300, Method 312 DEF STAN 00-035, Part 3, Test CL15 DEF STAN 00-035, Part 3, Test CL20 DEF STAN 00-035, Part 3, Test CL21 IEC 60068-2-13, IEC 60068-2-40 IEC 60601-1-11, ISO 14708-1 Section 25 MIL-STD-202F, G, H, Method 105 MIL-STD-810B, C, D, E, F, G, H Method 500 MIL-STD-883E, F, G, H, I, J, K, L Method 1001 RTCA/DO-160B, C, D, E, F, G Section 4 SAE J1455	-	-
Mechanical Shock (Up to 3 000) G	AAR S9401, ANSI C136.31 AREMA, Section 11.5.1 Boeing D6-81926 Sec. 3 DEF STAN 00-035, Part 3, Test M11 DEF STAN 00-035, Part 3, Test M12 DEF STAN 00-035, Part 3, Test M4 DEF STAN 00-035, Part 3, Test M6 DEF-STAN 81-41	-	-

Mechanical Columbus Inner Belt, New Castle, PA

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Mechanical Shock (Up to 3 000) G	EN 50155, EN-61373, Section 10.0 IEC 60068-2-27, IEC 60068-2-31 (Drop & Topple and Procedure 1) IEC 60601-1-11, ISO 16750-3 ISO 14708-1 Section 23.1 RTCA/DO-160B,C, D, E, F, G Section 7 UL991 MIL-STD-883E, F, G, H, I, J, K, L Method 2002.5, Conditions A & B MIL-STD-1344A, Section 2004 MIL-STD-202F, G, H Method 203 MIL-STD-202F, G, H Method 213 MIL-STD-810B, C, D, E, F, G, H Method 516 MIL-STD-810B, C, D, E, F, G, H Method 517	-	-
Vibration Frequency (1 to 3 000) Hz Displacement: (up to 3) in	AAR S9401, ANSI C136.31 AREMA, Section 11.5.1 ASTM D3580, ASTM D5112 ASTM D5416, ASTM D9999 Boeing D6-81926 Sec. 2 DEF STAN 00-035, Part 3, Test M1 DEF STAN 81-41, Part 3, Test K EN 50155, EN-61373, Section 8 EN-61373, Section 9 IEC 60068-2-6, IEC 60068-2-64 IEC 60255-21-1, IEC 60601-1-11 ISO 16750-3, ISO 14708-1 Section 23.2 ITOP 1-2-601 MIL-STD-1344A, Section 2005 MIL-STD-167-1A MIL-STD-202F, G, H, Method 201 MIL-STD-202F, G, H Method 204 MIL-STD-202F, G, H Method 214 MIL-STD-810B, C, D, E, F, G, H Method 514 MIL-STD-810B, C, D, E, F, G, H Method 519 MIL-STD-810B, C, D, E, F, G, H Method 524	-	-

Mechanical Columbus Inner Belt, New Castle, PA

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Vibration Frequency (1 to 3 000) Hz Displacement: (up to 3) in	MIL-STD-883E, F, G, H, I, J, K, L Method 2005 MIL-STD-883E, F, G, H, I, J, K, L Method 2007 RTCA/DO-160B, C, D, E, F, G Section 8.0 SAE J1455, SAE J57, UL991	-	-
Acceleration (Up to 125 000) G	Boeing D6-81926, Section 4 DEF STAN 00-035, Part 3, Test M13 MIL-STD-1344A, Method 2011 MIL-STD-202F, G, H Method 212 MIL-STD-810B, C, D, E, F, G, H Method 513 MIL-STD-883E, F, G, H, I, J, K, L Method 2001 RTCA/DO-160B, C, D, E, F, G Section 7	-	-
Mechanical Impact	IEC 62262 IEC 60068-2-75	-	-
Gravel Bombardment	SAE J400	-	-
Sulfur Dioxide	IEC 60068-2-42	-	-
Water/Rain	AECTP 300, Method 310 ASTM D5276 DEF STAN 00-035, Part 3, Test CL16 DEF STAN 00-035, Part 3, Test CL27 DEF STAN 00-035, Part 3, Test CL28 DEF STAN 81-41 IEC 60068-2-18 IEC 61730-2 IEC 62108 MIL-STD-108 MIL-STD-202F, F, G Method 106 MIL-STD-810B, C, D, E, F, G, H Method 506 MIL-STD-883E, F, G, H, I, J, K, L Method 1004 MIL-STD-883E, F, G, H, I, J, K, L Method 1013 RTCA/DO-160B, C, D, E, F, G Section 10.0 SAE J1455, UL 1703	-	-

Mechanical Columbus Inner Belt, New Castle, PA

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Immersion (Up to 15) Bar	AECTP 300, Method 307 DEF STAN 00-035, Part 3, Test CL29 DEF STAN 00-035, Part 3, Test CN5 IEC 60068-2-18, IEC 61215 IEC 61730-2, IEC 62108 ISO 16750-4, MIL-STD-108 MIL-STD-1344A, Method 1016 MIL-STD-810B, C, D, E, F, G, H Method 512 MIL-STD-883E, F, G, H, I, J, K, L Method 1002, SAE J2139 SAE J575, UL 1703	-	-
Chemical Contamination	AECTP 300, Method 314 AREMA 11.5.1 DEF STAN 00-035, Part 3, Test CN4 ISO 16750-5 MIL-STD-1344A, Method 1016 MIL-STD-202F, G, H Method 215 MIL-STD-810B, C, D, E, F, G, H Method 2015 RTCA/DO-160B, C, D, E, F, G Section 11.0 SAE J1455	-	-
Ingress Protection	IEC 60068-2-18, IEC 60529 IEC 60598, IEC 61730-2 IEC 62108, ISO 16750-4 ISO 20653, NEMA 250 SAE J1455, SAE J2139 SAE J575, UL 1703, UL991	-	-
Icing/Freezing Rain	AECTP 300, Method 311 AECTP 300, Method 315 ATPD-2352, Section 4.2.7 DEF STAN 00-035, Part 3, Test CL23 DEF STAN 00-035, Part 3, Test CL24 IEC 61730-2 IEEE C37.30.1, Section 8.5 UL 1703 MIL-STD-810B, C, D, E, F, G, H Method 521 MIL-STD-810B, C, D, E, F, G Method 524	-	-

Mechanical Columbus Inner Belt, New Castle, PA

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Icing/Freezing Rain	RTCA/DO-160B, C, D, E, F, G Section 24.0	-	-
Salt Fog/Salt Spray	AECTP 300, Method 309 AECTP 300, Method 319 ASTM B117, ASTM D1654, ASTM D610 DEF STAN 00-035, Part 3, Test CN2 EN 50155, IEC 60068-2-11 IEC 60068-2-52, ISO 16750-4 ISO 9227, Section 5.2 MIL-STD-1344A, Section 1001 MIL-STD-202F, G, H Method 101 MIL-STD-810B, C, D, E, F, G, H Method 509 MIL-STD-810B, C, D, E, F, G, H Method 518 MIL-STD-883E, F, G, H, I, J, K, L Method 1009 RTCA/DO-160B, C, D, E, F, G Section 14.0 SAE J1455, SAE J2139, SAE J575	-	-
Solar Radiation Heating effects	AECTP 300, Method 305 IEC 61730-2 IEC 62108 MIL-STD-810B, C, D, E, F, G, H Method 505 UL 1703	-	-
Fungus	AECTP 300, Method 308 ASTM G21 DEF STAN 00-035, Part 3, Test CN1 MIL-STD-810B, C, D, E, F, G, H Method 507 RTCA/DO-160B, C, D, E, F, G Section 13.0	-	-
Flammability	MIL-STD-202, Method 111 RTCA/DO-160B, C, D, E, F, G Section 26 RTCA/DO-160C, D, E, F, G Section 26	-	-

Services performed at satellite laboratory
Keystone Compliance, LLC

203 Commerce Ave.
New Castle, PA 16101

Joey Sullivan
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TESTING

Mechanical Commerce Ave., New Castle, PA

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Package Transit Testing	ISTA 1A, ISTA 1B, ISTA 1C, ISTA 1D ISTA 1E, ISTA 1G, ISTA 1H, ISTA 2A ISTA 2B, ISTA 2C, ISTA 3A, ISTA 3B ISTA 3E, ISTA 3K, ISTA 4AB ISTA 6 AMAZON.com SIOC ISTA 6 AMAZON.com Overbox ISTA 6-FedEx A, ISTA 6-FedEx B ISTA 6-SamsClub ASTM D4169, ASTM D7386 NMFT Item 180, MNFT Item 181 ISO 11607-1, IEC 60601-1-11	-	-
Package Drop/Shock/Impact Testing	ASTM D880, ASTM D3332 ASTM D4168, ASTM D5487 ASTM D5276, ASTM D6537	-	-
Package Vibration Testing	ASTM D999, ASTM D4728 ISO 13355, ISO 2247	-	-
Mechanical/Rough Handling of Unitized Loads	ASTM D6055, ASTM D6179 ASTM D6344	-	-
Package Temperature / Humidity Testing	ASTM D4332, ASTM F2825 TAPPI T453, TAPPI T402 TAPPI T544, ASTM F1980 ISO 2233, ISO 11607-1	-	-
Package Insulation Testing	ASTM D3103 ISTA 7D, ISTA 7E	-	-
Altitude Testing	ASTM D6653	-	-

Mechanical Commerce Ave., New Castle, PA

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Seal Strength	ASTM F88/F88M, ISO 11607-1	-	-
Bubble Leak	ASTM F2096, ISO 11607-1	-	-
Dye Penetration	ASTM F1929, ASTM F3039 ISO 11607-1	-	-
Compressive Resistance of Shipping Containers	ASTM D642, ASTM D4577 ASTM D7030 ISO 2234, ISO 12048, TAPPI T804	-	-
Linear Dimensional Measurement	ASTM F2203	-	-
Visual Inspection	ASTM F1886, ISO 11607-1	-	-

Services performed at satellite laboratory
Keystone Compliance, LLC

2320 Presidential Drive, Suite 101
Durham, NC 27703

Joey Sullivan
joey@keystonecompliance.com

TESTING

Testing performed in support of FCC approval procedures for certification [1] Durham, NC

Type of Device Examples	Scope of Accreditation	Supporting FCC Guidance	Comments/Maximum Frequency Tested
Unintentional Radiators (FCC Part 15, Subpart B)	ANSI C63.4-2014	-	40 000 MHz
Industrial, Scientific, and Medical Equipment (FCC Part 18) Consumer ISM equipment	FCC MP-5, (February 1986)	-	40 000 MHz

Electromagnetic Compatibility Durham, NC

Test Method	Test Specification(s)	Range	Comments
Radiated and Conducted Emissions	ANSI C63.4, CISPR 32, CNS 13438 EN 55011, EN 55022, EN 55032 FCC CFR 47 Part 15B (using ANSI C63.4:2014) FCC CFR 47 Part 18 (using MP-5:1986) ICES-001, ICES-003 IEC/EN 61000-6-4 KN 35, KS C 9835 Part 15 C TCVN 7189, VCCI-CISPR 32	-	-
Current Harmonics	IEC/EN/KN 61000-3-2, KS C 9610-3-2 Customer Procedures	-	-
Voltage Fluctuations & Flicker	IEC/EN/KN 61000-3-3 KS C 9610-3-3	-	-
ESD	IEC/EN/KN 61000-4-2 KS C 9610-4-2	-	-
Radiated, Radio Frequency, Electromagnetic Field Immunity Test	IEC/EN/KN 61000-4-3 KS C 9610-4-3	-	-

Electromagnetic Compatibility Durham, NC

Test Method	Test Specification(s)	Range	Comments
Electrical Fast Transient/Burst Immunity Test	IEC/EN/KN 61000-4-4 KS C 9610-4-4	-	-
Surge Immunity Test	IEC/EN/KN 61000-4-5 KS C 9610-4-5	-	-
Immunity to Conducted Disturbances, Induced by Radio-Frequency Fields	IEC/EN/KN 61000-4-6 KS C 9610-4-6	-	-
Power Frequency Magnetic Field Immunity Test	IEC/EN/KN 61000-4-8 KS C 9610-4-8	-	-
Voltage Dips, Short Interruptions and Voltage Variations Immunity Test	IEC/EN/KN 61000-4-11 KS C 9610-4-11 IEC/EN 61000-4-29	-	-
Electromagnetic Compatibility Emissions & Immunity Generic or Product Specific Standards	ETSI EN 301 489-1 V2.1.1 EN 50270, IEC/EN 60601-1-2 KN 60601-1-2, KS C IEC 60601-1-2 IEC/EN 61326-1, IEC/EN 61326-2-3, IEC/EN 55024, KN 24, IEC/EN 50121-4 EN/KN 301-489-01, KS X 3124 EN/KN 301-489-17, KS X 3126 EN 60945	-	-
Dielectric Strength	MPD-7011F 9 Section 3.3.1		
Measuring relays and protection equipment Part 27: Product Safety Requirements	IEC 60255-27 Section 10.5.3.1		

Mechanical Durham, NC

Test Method	Test Specification(s)	Range	Comments
Temperature	ASTM F1980, IEC 60068-2-1 IEC 60068-2-14, IEC 60068-2-2 ISO 16750-4, ISTA 7D, ISTA 7E MIL-STD-810 Method 501 MIL-STD-810 Method 502 MIL-STD-883 Method 1010 RTCA/DO-160 Section 4 RTCA/DO-160 Section 5 SAE J1455	-	-

Mechanical Durham, NC

Test Method	Test Specification(s)	Range	Comments
Humidity	IEC 60068-2, IEC 60068-2-78 ISO 16750-4 MIL-STD 810 Method 507 RTCA/DO-160 Section 6 SAE J1455	-	-
Thermal Shock	MIL-STD-202 Method 107 MIL-STD-810 Method 503 MIL-STD-883 Method 1011 SAE J1455	-	-

Note:

1. Meets the requirements of the FCC equipment authorization program as detailed in 47 CFR Part 2 Subpart J as defined in the ANAB SR 2412 U.S. Federal Communication Commission (FCC) EMC and Telecommunications (EC&T) Testing Designation Accreditation Program. Recognition by the FCC can be confirmed by visiting their website https://apps.fcc.gov/oetcf/eas/reports/TestFirmSearch.cfm
2. This scope is formatted as part of a single document including Certificate of Accreditation No. AT-3142.

R. Douglas Leonard Jr., VP, PILR SBU