



Consejo de Armonización de Normas Electrotécnicas de las Naciones en las Américas  
Council for Harmonization of Electrotechnical Standards of the Nations in the Americas

**Address given by Sr. Rafael Nava, CANENA Ambassador-at-Large  
COPANT General Assembly Meeting, April 15-20, 2018 – Montego Bay, Jamaica**

On behalf of the members of CANENA, thank you for your invitation to take part in the COPANT General Assembly Meeting. I welcome the opportunity for the next few minutes to update you on our most recent activities. The 2018 CANENA Annual Meeting (AGM) highlighted the U.S. electrotechnical standardization system and the role it plays regional, and international level. This year's program focused on Underwriters Laboratories, Inc. (UL), an accredited American National Standards Developer (SDO), and on product certification, electrical installation code, and conformity assessment in the U.S.

**Key Takeaways:**

- 1. Need for Rapid Standards Development.** A noted trend in conformity assessment is the need to rapidly develop standards for emerging technologies; one example is self-balancing scooters/hoverboards. These devices were recalled in the U.S. over concerns with overheating, posing a fire and explosion risk. To assist regulators when no product standard for electrical safety exists, national standards developers were called upon to quickly develop an outline of investigation that could serve as the basis for the issuance of certification and then develop as time permits into a formal standard. This particular outline of investigation developed requirements for the design and construction of the lithium-ion battery packs and associated electrical charger using in-house expertise having competency in related battery and charging standards applying risk base principles, that when applied in the evaluation and verification of compliance can result in the issuance of a certification. As we found out, outlines of investigations may not be accepted by all U.S. jurisdictions increasing the urgency to turn an outline of investigation into a national standard for safety.
- 2. Internet of Things (ITO):** Internet of things (IOT) is driving significant investment in infrastructure replacement. Connected devices associated with Smart City, Smart Grid and Smart Appliances is growing at 33% per year, or around 5 million devices per year. And given that by 2050 there will be 2.5 Billion new urban residents (or a new Chicago every month for 30 years), the growth of interconnected devices will challenge market dynamics associated with power generation, transmission and distribution. As more of these interconnected devices are used in the electrical infrastructure, users will be at the forefront of using these advanced product designs to unlock new opportunities. However, this evolution can also expose design and construction vulnerabilities. To ensure the safe application and installation of these devices there needs to be a

renewed focus on the development and harmonization of standards, installation codes and installation enforcement.

3. **Rapid Pace of Urbanization:** Speaker Ken Boyce (UL) reported on the urbanization, i.e., the mass movement of people to cities, poses challenges to urban planners and will impact existing market dynamics associated with a wide range of industries. By 2050, the degree of urbanization is expected to reach as high as 80%, necessitating the construction of a string of new megacities, especially in south and east Asia. Predicting the transportation, sanitation and determining infrastructure requirements will taxed urban developers and require creative solutions. Coinciding with urbanization is the phenomena of population shrinkage and need to modernize the infrastructure of cities with roads and buildings there were already in place before the electrical system was developed. These urban areas will need to be design for sustainable growth and readily incorporation of new technology in an appropriate, energy-efficient and environmentally sustainable fashion. In conclusion, new technologies and products will need to be created to address the unprecedented rate and scale of urbanization across the developing world.
4. **Smart City:** The focus of the Smart City concept is on livability, workability and sustainability as well as safety and security. The challenge is to use the new technology in a smart way. This will require establishing good metrics to ensure smart devices are producing a return on investment. A Smart City initiative in Dubai looked at different payment system for transportation. Germany is undergoing an energy transformation by replacing its nuclear power by 2022 with renewables. In order to meet fluctuations in energy demand and maintain grid balancing, Germany will rely on virtual power plants and on the use of distributed energy resource. These new opportunities present new challenges, such as the hacking of the Ukraine power grid or standardizing the operation of new technology so that its performance is understood over its lifetime. Regarding the latter, the existing cycle of standards development is sharply focused on a regional audience and it then moved into the international arena and then adopted as a national standard once it is made consistent with national installation requirement. One example is UL 5500, Standard for Safety for Remote Software Updates. The standard concerns the remote updating of software via the manufacturer's recommended process of software elements having an influence on safety and on compliance with the particular end product safety standard. It is being proposed as a new work item in IEC.
5. **Standards Spotlight:** CANENA is a volunteer based organization focused on electrotechnical standards harmonization activities within the Americas, helping to facilitate trade. As of December 31, 2017, there were forty-three (43) electrotechnical standards harmonization committees operating under CANENA. Those committees have published fifty-seven (57) harmonized standards jointly by ANCE, CSA and UL; and an additional twenty-six (26) published jointly by CSA and UL. Regarding the publication of harmonized standards that used an IEC standard as the base document, there was a total of nine (9) harmonized standards published jointly by ANCE, CSA and UL; and an additional six (6) standards published jointly by CSA and UL. The publication of these standards

brings the total number of harmonized standards jointly published to ninety-eight (98). The following are the most recent standards being pursued for harmonization under CANENA:

1. Binational: [Canada and U.S.]: EVSE DC Fast Charging Standards (CSA 22.2 No.107.1 IEC 61851 -1 and -23 UL 2202)
2. Binational: [Canada and U.S.]: Low-voltage AC and DC power circuit breakers (CSA 22.2 No. 268-16, UL 1066)
3. Binational: [Canada and U.S.]: Power Supplies (Adoption of IEC 62040-1 and 62477-1)
4. Binational: [Canada and U.S.]: LV Circuit Breakers (CSA 22.2 No. 268-16, UL 1066)

The publication of these documents reflects the continuing SDO commitment to the CANENA harmonization efforts, see [Annex 2](#) for a complete listing.

### Goals and Strategic Objectives for the Coming Year

1. **Future Direction of CANENA Looking Bright:** CANENA is approaching its first quarter century with ninety-eight (98) harmonized, electrotechnical standards in its portfolio. Regional harmonization of electrotechnical safety standards, undertaken in support of the North American Free Trade Agreement has now been accomplished. Manufacturer, product standard developer, certification and testing organization and end-users alike are realizing long-term economic benefits to harmonized standards, and now wish to advance CANENA as a premier player in the highly competitive standards arena. Therefore, our challenge ahead is to sustain progress. In 2017, the CANENA Board of Directors empowered a task force to formulate a new vision and a new mission for CANENA. Moving toward international harmonization is now a CANENA goal, see [Annex 1, Update of the CANENA Strategic Plan](#).

### Issues, Barriers, Concerns or Opportunities

1. **27<sup>th</sup> CANENA Annual Meeting:** In preparation for the 2019 Annual Meeting, CANENA's Planning Committee will survey members for ideas on theme and content. The committee will consist of Maria Jimenez (Chair), Michael Wilson, Donald Harris, Valara Davis, Juan Rosales, Louis Ivan Hernandez and Joel Solis.

Once again next year we welcome COPANT to participate at the 27th CANENA Annual Meeting, to be held February 27-28, 2019 in Mexico City. The reasoning for selecting Mexico City as the 2019 meeting venue is the anticipation of an updated North American Free Trade Agreement and to meet with political appointees of Mexico's Dirección General de Normas (DGN). We greatly value the close relationship our Council enjoys with COPANT, and are always open to exploring greater areas of cooperation.

CANENA is not an accredited standards development organization in any country. It is an industry-driven process dedicated to enhancing free trade through the harmonization of standards, installation codes and other technical requirements in the countries of our members. Membership in CANENA is individual, by company or industry association and not by country. CANENA Technical Harmonization Committees have defined scopes, and the documents they produce are taken into the separate national approval processes by the participating accredited SDOs. Through separate agreements and procedures established between the participating SDOs, harmonized national standards are then published. CANENA's published Cooperation and Communication Strategy ensures transparency of the process, and is our commitment towards acting in a complementary manner with each official national, regional and international standardization entity. To obtain more information about CANENA, go to [www.CANENA.org](http://www.CANENA.org)

Thank you once again for inviting CANENA to participate in the COPANT 2018 General Assembly.

## ANNEX 1, UPDATE OF THE CANENA STRATEGIC PLAN

<b>CANENA 2017</b>	
<p><b>VISION:</b> To be the premier facilitator for efficient development and maintenance of harmonized product standards in the Electrotechnical field for the Americas, to reduce the inherent complexity of designing products intended for multiple markets.</p> <p><b>MISSION:</b> The Mission of CANENA as the premier facilitator is to efficiently develop, maintain and promote harmonized standards in the Electrotechnical field through a collaborative, transparent, inclusive and consensus process that engages all stakeholders i.e.: industry, national, regional and international standards development organizations and conformity assessment bodies.</p> <p><b>Principles:</b></p> <ul style="list-style-type: none"> <li>• Openness and transparency</li> <li>• Efficient and inclusive processes</li> <li>• Professional and effective membership</li> <li>• Consensus based collaboration</li> </ul>	
<b>OBJECTIVES</b>	
<b>Objective 1)</b> Harmonize regional standards meeting stakeholders' needs	
<b>Strategic element(s) supporting this objective:</b> Promote CANENA	
<b>Underlying Action Plans:</b>	<b>Update</b>
<ul style="list-style-type: none"> <li>❖ Assure communication is in align with Mission &amp; Vision</li> <li>❖ Overhaul AGM Program               <ul style="list-style-type: none"> <li>➤ Speakers &amp; Content address Vision &amp; Mission</li> <li>➤ Fundamental Format</li> </ul> </li> <li>❖ Review Annual Report Content &amp; Audience</li> <li>❖ Additional Marketing Opportunities</li> <li>❖ Re-evaluate CANENA Website</li> </ul>	<p>What has been done in 2017</p> <p>CANENA's Communications and Marketing Committee has taken the responsibility to develop, review and approve all communications.</p> <p>Assigned an ad-hoc group to establish a 'survey monkey' to inquire about the participants perception of the 2018 AGM format/set-up.</p> <p>Moved towards a more interactive AGM in 2018 by incorporating round table discussion.</p> <p>Annual report replaced by CANENA Connects, a quarterly publication the aim is to provide members with timely information.</p> <p>In 2017 and 2018, EFC has announced the AGM is its weekly newsletter. Will reach out to CANAME to do the same for the 2019 AGM.</p> <p>A complete revamp of the membership</p>

	<p>page was accomplished December 2017.</p> <p>Next step (2018):</p> <p>Focus on deepening report (expanding value of participating through showcase work in 'other' ThSC) and developing metrics.</p> <p>Continue enhancing website.</p> <p>Theme for 2019 AGM and moving forward</p>
<p>Action Plan Assigned to: Communications and Marketing</p> <p>Action Plan Target Completion Date: Expect to finalize plan at 2018 AGM</p> <p>Accomplishments in 2017: Annual report content and audience.</p> <p>Anticipated Accomplishments for 2018: Enhance website. Communications on a regular basis. Theme for 2019 AGM and moving forward.</p> <p>Responsible Committee: ExCo</p>	
<b>Objective 2)</b> Expand understanding of each country's standards and systems.	
<b>Strategic element(s) supporting this objective:</b> Promote CANENA	
<b>Underlying Action Plans:</b>	<b>Update</b>
❖ Operations Committee	<p>What has been done in 2017</p> <p>Nothing to report.</p> <p>Next step (2018):</p> <p>To be revisited that action plan at the next ExCo F2F meeting.</p>
<p>Action Plan Assigned to: Operations Committee</p> <p>Action Plan Target Completion Date:</p> <p>Accomplishments in 2017:</p> <p>Anticipated Accomplishments for 2018:</p> <p>Responsible Committee: ExCo</p>	
<b>Objective 3)</b> Promote standards harmonization using international standards as seed documents where ever possible.	
<b>Strategic element(s) supporting this objective:</b> Promote CANENA	
<b>Underlying Action Plans:</b>	<b>Update</b>
❖	<p>What has been done in 2017</p> <p>Nothing really on the 'promote' aspect</p> <p>2018 plan:</p> <p>- brought forward from the 2017 AGM, lead on the IEC-CANENA agreement review and amend as needed ?</p>

	<p>- might show the actual agreement, dates and such.</p> <p>ACTION: Add a discussion topic to the ExCo agenda (strategic plan review and task assignment). Assigned to: G. Benjamin</p> <p>Next step (2018):</p> <p>Focus on deepening report (expanding value of participating through showcase work in 'other' ThSC) and developing metrics.</p> <p>Continue enhancing website.</p> <p>Theme for 2019 AGM and moving forward</p>
<p>Action Plan Assigned to: SDOs  Action Plan Target Completion Date:  Accomplishments in 2017:  Anticipated Accomplishments for 2018:  Responsible Committee: ExCo</p>	
<p><b>Objective 4)</b> Commit to international relevance.</p>	
<p><b>Strategic element(s) supporting this objective:</b> Promote CANENA</p>	
<p><b>Underlying Action Plans:</b></p>	<p><b>Update</b></p>
<p>None.</p>	<p>What has been done in 2017:</p> <ul style="list-style-type: none"> <li>- S. Rood presented at the IEC AGM and USNC</li> <li>- Luis Ivan: presented a report at IEC AGM</li> <li>- Raphael COPANT meeting</li> </ul> <p>2018: to be discussed at ExCo meeting</p> <ul style="list-style-type: none"> <li>- establish a formal liaisons ??? what are the implications?</li> <li>- would the current 'informal/flexible' structure suffice for now?</li> <li>- Should the presented report be made available to members?</li> <li>- ExCo expectations for presenters'</li> </ul> <ul style="list-style-type: none"> <li>- presentation at the IEC AGM and USNC</li> <li>- presentation a report at IEC AGM</li> <li>- presentation COPANT meeting</li> </ul>
<p>Action Plan Assigned to: SDOs and Country Vice Presidents  Action Plan Target Completion Date:  Accomplishments in 2017:  Anticipated Accomplishments for 2018:</p>	

Responsible Committee: ExCo	
<b>Objective 5)</b> Promote international coordination via participation in international standardization committees.	
<b>Strategic element(s) supporting this objective:</b> Promote CANENA	
<b>Underlying Action Plans:</b>	<b>Update</b>
❖ Evaluate creating liaisons with other associations (FINCA, COPANT, IEC, etc.) – Utilization of Ambassadors, Members-at-Large, & Country VPs	What has been done in 2017?  reports provided in Nov 1st (MX F2F meeting)  2018: keep the pace
Action Plan Assigned to: SDOs and Country Vice Presidents Action Plan Target Completion Date: Accomplishments in 2017: Anticipated Accomplishments for 2018: Responsible Committee: ExCo	
<b>Objective 6</b> , Provide a regional platform for discussion of international standardization matters.	
<b>Strategic element(s) supporting this objective:</b> Promotion of CANENA-developed standards	
<b>Underlying Action Plans:</b>	<b>Update</b>
<ul style="list-style-type: none"> <li>❖ Proactive promotion of CANENA-developed standards throughout Americas <ul style="list-style-type: none"> <li>➤ Specific message to COPANT, FINCA</li> </ul> </li> <li>❖ Ask THCs to identify potential standards to submit to COPANT <ul style="list-style-type: none"> <li>➤ Ask COPANT if there are areas of interest that CANENA can assist with</li> </ul> </li> <li>❖ Develop marketing material that highlights that CANENA is not just a North-American body</li> <li>❖ Contact National Standards Bodies in central/south America</li> <li>❖ Develop messaging and leverage existing contacts in central/south America to carry the message forward</li> <li>❖ Mentoring: Identify one country to serve as partner. Develop program for mentoring that country.</li> </ul>	2017 accomplishment Lean process starting the clarification phase  By-laws completed Procedure in progress  2018: Complete lean process and training tools. Establish the Communication of the new lean process and training.
Action Plan Assigned to: Country Vice Presidents. Action Plan Target Completion Date: Following the completion of the 2019 AGM. Accomplishments in 2017: Pursuant of the Costa Rica Initiative on the consortium of the	



SDOs. Anticipated Accomplishments for 2018: Active participation. Responsible Committee: ExCo	
<b>Objective 7)</b> Commit to the streamlining of processes to reduce the inherent complexity of designing products intended for multiple markets.	
<b>Strategic element(s) supporting this objective:</b> Faster Development/Project Initiation.	
<b>Underlying Action Plans:</b>	<b>Update</b>
<ul style="list-style-type: none"> <li>❖ LEAN Process</li> <li>❖ Update Procedures &amp; By-laws.</li> <li>❖ Use of Tools/Training</li> </ul>	<p>2017 accomplishment Lean process starting the clarification phase</p> <p>By-laws completed Procedure in progress</p> <p>2018: Complete lean process and training tools. Establish the Communication of the new lean process and training.</p>
<b>Objective 8)</b> Seek new harmonization opportunities.	
<b>Strategic element(s) supporting this objective:</b> Membership Recruitment	
<b>Underlying Action Plans:</b>	<b>Update</b>
<ul style="list-style-type: none"> <li>❖ Determine current THCs/THSCs/WGs and membership on each. <ul style="list-style-type: none"> <li>➤ Ask Chairs/Secretaries for data related to participation <ul style="list-style-type: none"> <li>▪ Who are current members? Companies represented?</li> </ul> </li> </ul> </li> <li>❖ Develop succession plan for THCs, especially including THC/THSC officers</li> <li>❖ Identify companies who are not participating – encourage THCs to include topic on each agenda</li> <li>❖ Identify other interested bodies (AHJs, consumers...) to participate</li> </ul>	<p>2017: current membership study</p> <p>To take this one on at the next ExCo.</p>
<b>Objective 9)</b> Ensure the sustainability of CANENA.	
<b>Strategic element(s) supporting this objective:</b> Funding (Dues, Sponsorship, AGM Registration, Tradeshow)	
<b>Underlying Action Plans:</b>	<b>Update</b>
<ul style="list-style-type: none"> <li>❖ Corporate Dues <ul style="list-style-type: none"> <li>➤ Review impact of corporate revenue stream</li> <li>➤ Recruitment</li> </ul> </li> <li>❖ Individual Dues <ul style="list-style-type: none"> <li>➤ Enforcement <ul style="list-style-type: none"> <li>▪ Develop a tool and process</li> </ul> </li> </ul> </li> </ul>	<p>2017:</p> <p>To take this one on at the next ExCo.</p>

<ul style="list-style-type: none"> <li>▪ Ease of tracking</li> <li>❖ Recruitment</li> <li>❖ Membership Fees <ul style="list-style-type: none"> <li>➤ Assess membership fees to determine if a change is warranted</li> </ul> </li> </ul>	
<b>Objective 10)</b> Engage young professionals in product standardization.	
<b>Strategic element(s) supporting this objective:</b> Membership Recruitment	
<b>Underlying Action Plans:</b>	<b>Update</b>
<ul style="list-style-type: none"> <li>❖ Develop mentoring program within each THC.</li> <li>❖ Prepare letter from CANENA president to leaders of industry organizations/companies in CAN/MEX/US</li> <li>❖ Develop job descriptions of each position on CANENA EXCO (VP, Member-at-large...)</li> <li>❖ Expand membership to other industries</li> </ul>	<p>2017:</p> <p>To take this one on at the next ExCo.</p>
<p>Action Plan Assigned to: President and Executive Secretary  Action Plan Target Completion Date: At end of the 2018 AGM theme cycle.  Accomplishments in 2017: Report on the basis to develop a strategy at the 2017 AGM.  Anticipated Accomplishments for 2018: TBD as we will be changing the President in 2017.  Responsible Committee: President and Council.</p>	

## ANNEX 2, PUBLISHED STANDARDS

UL Standard Number	CSA Standard Number	ANCE Standard Number	Standard Title	Harmonization Type
5A	62.1	N/A	Nonmetallic Surface Raceways and Fittings	Binational
6	45	534	Electrical Rigid Metal Conduit --Steel	Trinational
6A	22.2 No. 45.2-08	576	Electrical Rigid Metal Conduit -- Aluminum, Red Brass, and Stainless Steel	Trinational
20	111-10	N/A	General-Use Snap Switches	Binational
44	38	451	Thermoset-Insulated Wires and Cables	Trinational
50	94.1	235/1	Enclosures for Electrical Equipment, Non- Environmental Considerations	Trinational
50E	94.2	235/2	Enclosures for Electrical Equipment, Environmental Considerations	Trinational
62	49	436	Flexible Cord and Cables	Trinational
83	75	NMX-J-010	Thermoplastic-Insulated Wires and Cables	Trinational
98	4	162	Enclosed and Dead-Front Switches	Trinational
218	C22.2 No. 263	NMX-J-626-ANCE-2009	Fire Pump Controllers	Trinational
224	198.1	N/A	Extruded Insulating Tubing	Binational
248-1	N/A	009/248/1	Low-Voltage Fuses - Part 1: General Requirements	Trinational
248-10	248-10	009/248/10	Low-Voltage Fuses - Part 10: Class L Fuses	Trinational
248-11	248.11	009/248/11	Low-Voltage Fuses - Part 11: Plug Fuses	Trinational
248-12	248.12	009/248/12	Low-Voltage Fuses - Part 12: Class R Fuses	Trinational
248-13	248.13	009/248/13	UL 248-13 Low-Voltage Fuses - Part 13: Semiconductor Fuses	Trinational
248-14	248.14	009/248/14	Low-Voltage Fuses - Part 14: Supplemental Fuses	Trinational
248-15	248.15	009/248/15	Low-Voltage Fuses - Part 15: Class T Fuses	Trinational
248-16	248-16	009/248/16	Low-Voltage Fuses - Part 16: Test Limiters	Trinational
248-2	248.9	009/248/9	Low-Voltage Fuses - Part 9: Class K Fuses	Trinational
248-3	248.3	009/248/3	Low-Voltage Fuses - Part 2: Class C Fuses	Trinational

UL Standard Number	CSA Standard Number	ANCE Standard Number	Standard Title	Harmonization Type
248-4	248.4	009/248/4	Low-Voltage Fuses - Part 4: Class CC Fuses	Trinational
248-5	248.5	009/248/5	Low-Voltage Fuses - Part 5: Class G Fuses	Trinational
248-6	248.6	009/248/6	Low-Voltage Fuses - Part 6: Class H Non-Renewable Fuses	Trinational
248-7	248.7	009/248/7	Low-Voltage Fuses - Part 7: Class H Renewable Fuses	Trinational
248-8	248.8	009/248/8	Low-Voltage Fuses - Part 8: Class J Fuses	Trinational
248-9	248.9	009/248/9	Low-Voltage Fuses - Part 9: Class K Fuses	Trinational
310	153	N/A	Electrical Quick-Connect Terminals	Binational
347	253	564/106	Alternating Current Contactors and Contactor-Based Controllers Rated 150-1 to 7200 V	Trinational
467	41	590	Grounding and Bonding Equipment	Trinational
486	41	590	Grounding and Bonding Equipment	Binational
486A-486B	C22.2 No. 65	543	Wire Connectors	Trinational
486C	C22.2 No. 188	548	Splicing Wire Connectors	Trinational
486D	198.2	NMX-J-519	Sealed Wire Connector Systems	Trinational
486F	291	N/A	Bare and Covered Ferrules	Binational
489	5	NMX-J-266	Molded-Case Circuit Breakers, Molded-Case Switches and Circuit-Breaker Enclosures	Trinational
489B	305	NA	Molded-Case Circuit Breakers, Molded-Case Switches and Circuit-Breaker Enclosures for use with Photovoltaic (PV) Systems	Binational
496	43	N/A	Lampholders	Binational
514A	18.1	023/1	Metallic Outlet Boxes	Trinational
514B	18.3	NMX-J-017	Conduit, Tubing and Cable Fittings	Trinational
514D	42.1	N/A	Cover Plates for Flush-Mounted Wiring Devices	Binational
568	126.2	N/A	Nonmetallic Cable Tray Systems	Binational
674	145	652	Electric Motors and Generators for Use in Hazardous (Classified) Locations	Trinational
773A	284-16	NMX-J-715	Nonindustrial Photoelectric Switches for Lighting Control	Trinational

UL Standard Number	CSA Standard Number	ANCE Standard Number	Standard Title	Harmonization Type
797	22.2 No.83.1	NMX-J-536	Electric Metallic Tubing -- Steel	Trinational
845	254	353	Motor Control Centers	Trinational
857	27	NMX-J-148	Busways	Trinational
891	244	118/2	Switchboards	Trinational
943	144.1	NMX-J-520-ANCE-2006	Ground-Fault Circuit-Interrupters	Trinational
1008	178.1	NMX-J-672	Transfer Switch Equipment	Trinational
1441	198.3	N/A	Coated Electrical Sleeving	Binational
1472	184.1	N/A	Solid-State Dimming Controls	Binational
1565	C22.2 18.5	N/A	Positioning Device	Binational
1598	250.0	307/1	Luminaires	Trinational
1653	227.1	N/A	Electrical Nonmetallic Tubing	Binational
1660	227.2.1	N/A	Liquid-Tight Flexible Nonmetallic Conduit	Binational
1682	182.1	N/A	Standard for Plugs, Receptacles, and Cable Connectors, of the Pin and Sleeve Type	Binational
1691	1691	N/A	Single Conductor Pin and Sleeve Devices Intended for Theater, Stage and Studio Applications	Binational
1696	227.3	N/A	Nonmetallic Mechanical Protection Tubing	Binational
1786	256	N/A	Direct Plug-In Nightlights	Binational
1993	1993	578	Self-Ballasted Lamps and Lamp Adapters	Trinational
1995	236	N/A	Heating and Cooling Equipment	Binational
2157	169-15	N/A	Electric Clothes Washing Machines and Extractors	Binational
2158	112-15	N/A	Electric Clothes Dryer	Binational
2231-1	281.1	NMX-J-668/1	Personal Protection Systems for Electric Vehicles (EV) Supply Circuits – Part 1: General Requirements	Trinational
2231-2	281.2	NMX-J-668/2	Personal Protection Systems for Electric Vehicles (EV) Supply Circuits – Part 2: Particular Requirements for Protection Devices for use in Charging	Trinational
2239	18.4	N/A	Hardware for the Support of Conduit, Tubing, and Cable	Binational
2251	282	NMX-J-678	Plugs Receptacles, and Couplers for Electric Vehicles	Trinational

UL Standard Number	CSA Standard Number	ANCE Standard Number	Standard Title	Harmonization Type
2420	2420	N/A	Belowground Reinforced Thermosetting Resin Conduit (RTRC) and Fittings	Binational
2459	2459	N/A	Insulated Multi-pole Splicing Wire Connectors	Binational
2515	2515	N/A	Aboveground Reinforced Thermosetting Resin Conduit (RTRC) and Fittings	Binational
2556	2556	556	Wire and Cable Test Methods	Trinational
2594	280	NMX-J-677	Electric Vehicle Supply Equipment	Trinational
4248-1	4248.1	009-4248/1	Fuseholders - Part 1: General Requirements	Trinational
4248-11	4248.11	009/4248/11	Fuseholders - Part 11: Type C (Edison Base) and Type S Plug Fuse	Trinational
4248-12	4248.12	009/4248/12	Fuseholders - Part 12: Class R	Trinational
4248-15	4248.15	009/4248/15	Fuseholders - Part 15: Class T	Trinational
4248-4	4248.4	009-4248/4	Fuseholders - Part 4: Class CC	Trinational
4248-5	4248-5	009-4248/5	Fuseholders - Part 5: Class G	Trinational
4248-6	4248.6	009/4248/6	Fuseholders - Part 6: Class H	Trinational
4248-8	4248.8	009/4248/8	Fuseholders - Part 8: Class J	Trinational
4248-9	4248.9	009/4248/9	Fuseholders - Part 9: Class K	Trinational
60320-1	60320-1	60320-1	Appliance Couplers for Household and Similar General Purposes – Part 1: General Requirements	Trinat-IEC
60335-1	60335-1	521	Household and Similar Electrical Appliances, Part 1: General Requirements	Trinat-IEC
60335-2-24	60335-2-24	521-2-24	Household and Similar Electrical Appliances, Part 2: Particular Requirements for Refrigerating Appliances, Ice-Cream Appliances, and Ice-Makers	Trinat-IEC
60335-2-34	60335-2-34	60335-2-34	Household and Similar Electrical Appliances, Part 2: Particular Requirements for Motor-Compressors	Trinat-IEC
60335-2-40	60335-2-40	60335-2-40	Household and Similar Electrical Appliances - Safety - Part 2-40: Particular requirements for electrical heat pumps, air-conditioners and dehumidifiers	Trinat-IEC
60335-2-89	60335-2-89	60335-2-89	Household and Similar Electrical Appliances – Safety – Part 2-89: Particular requirements for Commercial Refrigerating Appliances with an	Trinat-IEC

UL Standard Number	CSA Standard Number	ANCE Standard Number	Standard Title	Harmonization Type
			Incorporated or Remote Refrigerant Unit or Compressor	
60947-1	60947-1	TBD	Low-Voltage Switchgear and Controlgear - Part 1: General rules	Trinat-IEC
60947-4-1	60947-4-1	290	Low-Voltage Switchgear and Controlgear - Part 4-1: Contactors and motor-starters - Electromechanical contactors and motor-starters	Trinat-IEC
60947-4-2	60947-4-2	N/A	Low-Voltage Switchgear and Controlgear - Part 4-2: Contactors and motor-starters – AC Semiconductor Motor Controllers and Starters	Binat-IEC
60947-5-1	60947-5-1	N/A	Low-Voltage Switchgear and Controlgear - Part 5-1: Control Circuit Devices and Switching Elements – Electromechanical Control Circuit Devices	Binat-IEC
60947-5-2	60947-5-2	N/A	Low-Voltage Switchgear and Controlgear - Part 5-2: Control Circuit Devices and Switching Elements – Proximity Switches	Binat-IEC
60947-7-1	60947-7-1		Low-Voltage Switchgear And Controlgear - Part 7-1: Ancillary Equipment - Terminal Blocks for Copper Conductors	Binat-IEC
60947-7-2	60947-7-2	N/A	Low-Voltage Switchgear and Controlgear - Part 7-2: Ancillary Equipment - Protective Conductor Terminal Blocks for Copper Conductors	Binat-IEC
60947-7-3	60947-7-3	N/A	Low-Voltage Switchgear and Controlgear - Part 7-3: Ancillary Equipment - Safety Requirements for Fuse Terminal Blocks	Binat-IEC
62275	18.5	623	Cable management systems - Cable ties for electrical installations	Trinat-IEC