



Important information regarding upcoming IEC / UL 62368-1 safety certifications

July 7, 2020

An important change is coming to safety certifications for certain products. Two previous certification standards—60065 (Audio/Video equipment) and 60950-1 (IT equipment)—are being withdrawn and replaced by the single standard IEC 62368-1 / UL 62368-1.

Because IEC and UL have coordinated their standards, manufacturers will benefit from one-step, worldwide safety certification.

Is this information relevant to my company?

IEC / UL 62368-1 covers consumer and professional AV equipment and certain electronic musical instruments and accessories, among other categories.

If your company uses Neutrik connectors and currently manufactures products certified to 60065 or 60950-1 or plans to certify products to 62368-1, then the information in this document is important.

If you do not certify products to one of these standards, then this document is likely not relevant; you can stop reading now.

Notes:

- **Cable assemblies** and **connector panels** are out of scope to these standards except in those cases where they are considered integral portions of specific pieces of active equipment.
- **Lighting (LED Video Panels are included in IEC/UL 62368-1), broadcast, and power distribution equipment** are also generally out of scope to these standards, with different required certifications.
- If in doubt, refer to Annex A of the 62368-1 standard to see if your devices are in scope of the new standard or contact your certification institute.



Timeline, including U.S. grandfathering and European requirements

December 20, 2020 is an important date. That is when the older standards 60065 and 60950-1 will be officially withdrawn and replaced by IEC / UL 62368-1. Any new products which would have been certified to 60065 or 60950-1 in the past must from that date forward be certified to 62368-1 instead. Thousands of products have already been 62368-1 certified.

The issue of continued sales of existing products is somewhat complicated.

- In the **United States**, any existing products that have already been certified to 60065 or 60950-1 can continue to be sold through their lifetimes. They are *grandfathered in*.
- In **Europe** and much of the **rest of the world**, the situation is very different. Even existing products must be re-certified to IEC / EN 62368-1. Products which do not have IEC / EN 62368-1 certification as of December 20, 2020 will be *banned* from sale in Europe until IEC / EN 62368-1 certification is attained.

Specific considerations for connectors

Please refer to the attached white paper. As detailed in section 2, the requirements for the materials and other specifications of connectors vary according to the particular power source circuits (PS1, PS2, or PS3) and fire barriers in which they are situated.

Neutrik connector revisions and additions

For some years, Neutrik has been preparing for this new safety standard. While all Neutrik connectors can potentially be affected by the 62368-1 standards depending on overall product design, the most critical Neutrik connector families for these new standards are **powerCON** and **speakON** since they typically carry high power.

Neutrik's position and actions in regard to IEC / UL 62368-1 requirements are briefly summarized in the following sections. For more detailed information on one or more of these connector lines, please contact your Neutrik representative.



Higher power connectors

AC power connectors powerCON TRUE1 TOP, powerCON 20 A, and powerCON 32 A

To be automatically accepted under 62368-1, AC power connectors must comply with an IEC standard. The most relevant of these standards is IEC 60320. Other standards such as IEC 60309, IEC 60906-1, etc. are also accepted.

powerCON TRUE1 and its successor **powerCON TRUE1 TOP** are IEC 60320 compliant and thus immediately accepted under IEC / UL 62368-1. Implementing powerCON TRUE1 TOP is your most straightforward path to certification compliance.

Neutrik has recently re-engineered **powerCON 20 A** ("blue and gray powerCON") for IEC 60320 compliance. The re-engineered connectors use UL 94 V-0 plastic and have breaking capacity under certain conditions. New part numbers include "XX" to indicate 62368-1 compliance (e.g. NAC3MPXXA-WOT). They have been agency certified and will be available for sampling soon.

The new, 62368-1 compliant powerCON 20 A connectors are forward and backward compatible with the legacy connectors. The legacy connectors will be phased out.

powerCON 32 A is a more challenging line. It cannot be certified to one of IEC 62368-1's acceptable standards without significant design changes. These connectors could therefore be subject to further evaluation as the overall device is tested.

speakON

Connectors carrying typical amplifier-to-speaker Wattages must generally be made of UL 94 V-0 or higher materials and comply with IEC 61984 (Europe) / UL 1977 (United States).

With the exception of the speakON cable connector **NL4FC**, all legacy speakON connectors are made from lower-flammability UL 94 HB materials. Therefore, the entire line other than **NL4FC** is being upgraded beginning in 2020.

Connectors generally (but not always) used for lower power

For connectors carrying fewer than 15 W, UL 94 HB material is allowed. However, if any potential ignition source (PIS)—like a power supply—is not partitioned away from those lower power connectors by a fire barrier, then even connectors carrying less than 15 W may be required to use V-2 or higher plastic materials.



etherCON

Generally, etherCON already fulfills IEC 62368-1 material requirements for all defined power circuits. etherCON connectors typically use UL 94 V-0 material.

A basic summary of etherCON 62368-1 compliance is as follows:

- **etherCON Cat 6_A** is fully compliant.
- **etherCON Cat 5** is fully compliant.
- **etherCON Cat 6**—which is generally deprecated in favor of etherCON Cat 6_A—is compliant only for signal transmission without PoE.

XLR connectors

Neutrik XLRs are already available in a wide range of UL 94 HB and V-0 materials. Depending on the overall device design and power handling, either HB or V-0 material may be required.

Jacks

Nearly all Neutrik jacks are comprised of UL 94 HB material. As discussed for XLRs above, overall device design and power handling may or may not require alternate materials or acceptability testing. Neutrik will release versions of some of our jacks with UL 94 V-0 material in the future.

Contact Neutrik for assistance and questions

If IEC / UL 62368-1 certification is relevant to your products, Neutrik invites you to reach out to us regarding your connector strategy. We are here to help, including with more specific details of 62368-1 compliance and timelines for Neutrik's introductions and revisions of specific connectors.

COVID-19 implications

As of this writing (July 2020), the safety certification bodies do not plan to delay the IEC / UL 62368-1 implementation. If this changes, Neutrik AG will issue an announcement accordingly.