

From: ychen@cyiplaw.com
To: [Sena, Patricia A.](#)
Cc: [Long, Brook](#)
Subject: RE: Potential Essential Patent Claim Regarding UL 1699
Date: Thursday, September 21, 2023 3:17:38 PM

Ms. Sena,

Thank you for your inquiry regarding US Pat. Nos. 10,886,724 and 11,258,245. This email reply is on behalf of Mr. Chengli Li, the patent holder.

Mr. Li is not a participant in any activities related to the development of the referenced UL standard and is not aware of any obligation to provide the requested statement to ULSE. As a courtesy to ULSE, Mr. Li provides the following reply: Mr. Li is unable to determine whether the two referenced U.S. Patents are essential to the implementation of UL 1699. As a result, Mr. Li is not prepared to make any statement at this time regarding licensing the two referenced patents.

Kind regards,

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From: Sena, Patricia A. <Patricia.A.Sena@ul.org>
Sent: Wednesday, August 23, 2023 8:55 AM
To: ychen@cyiplaw.com
Cc: Long, Brook <BROOK.LONG@ul.org>
Subject: Potential Essential Patent Claim Regarding UL 1699

Chengli Li,

I write from UL Standards & Engagement (ULSE). As you might be aware, UL has been publishing safety standards since 1903. We at ULSE develop and publish consensus standards that help guide the safety, performance, and sustainability of new and evolving products, technologies, and services that range from household appliances, smoke alarms, and batteries to building materials, cybersecurity, and autonomous vehicles.

It has come to our attention that a patent you (or an assignee) hold regarding a leakage current detection and interruption (LCDI) device for a power cord **may** be considered essential to the implementation of requirements in one of our standards, UL 1699, Arc-Fault Circuit-Interrupters.

In accordance with [ULSE's Patent Policy](#), when potential essential patent claims are

brought to the attention of ULSE, it is ULSE's duty to request a specific statement from the patent holder. Please use the attached form to provide us with your statement to confirm whether or not you hold any patent that is essential to the implementation of UL 1699, and if so, how you are willing to make a license available.

For reference, the patent numbers provided to us are as follows:

[US10886724B2](#)

[US11258245B2](#)

The requirements as to which the patents have been claimed to be essential are in clause SB6.1 and new sections SB6A and SB9A of the current UL 1699 standard:

SB6.1 An LCDI shall be provided with a supervisory circuit that will allow for periodic, convenient testing of the ability of the device to trip by way of leakage current introduced at the end length of the LCDI shielded cord to verify shield integrity. The current employed by the supervisory circuit shall be sufficient to cause tripping at 85 percent of rated voltage, provided that at rated voltage the current shall not exceed 9 mA. Compliance shall be determined by conducting the LCDI Supervisory Circuit Test of Section [SB9](#).

SB6A LCDI Shield Monitor Interrupter (SM/I)

SB6A.1 An LCDI employing a shielded power supply cord or shielded cord set shall monitor shield continuity. In the event the shield continuity does not exist when an attempt is made to start using the equipment, the device shall not energize current to its load terminals and shall interrupt the circuit under conditions where the shield is lost during operation. See LCDI Shield Monitor Interrupter (SM/I) Test, Section [SB9A](#).

SB9A LCDI Shield Monitor Interrupter (SM/I) Test

SB9A.1 To demonstrate that an LCDI meets the requirements of [SB6A.1](#), the tests described in [SB9A.2](#) and [SB9A.3](#) are to be conducted. At the conclusion of the tests, each representative LCDI shall:

- a) Interrupt the circuit within a period of 0.5 seconds;
- b) Not permit power to be applied to the circuit each time the reset is operated when reset is attempted; and
- c) Provide a positive visual and/or audible indication.

SB9A.2 A representative LCDI shall be correctly connected to the rated line voltage and allowed to stabilize. A closed switch is placed in series with the shield. The reset button shall be operated to allow the LCDI to be in the "ON" state. The switch is then opened to simulate an open shield condition during normal operation.

SB9A.3 The test in [SB9A.2](#) is repeated except the test button on a representative LCDI shall be operated to allow the LCDI to be in the "OFF" state. With the switch in the open state in series with the shield to simulate a damaged shield, the reset button on the LCDI is then pressed.

SB9A.4 For LCDI power supply cords employing a shield over each individual current carrying conductor, the two tests in [SB9A.2](#) and [SB9A.3](#) shall be conducted on each shield. Each shield shall meet the requirements of [SB9A.1](#).

We look forward to receiving your completed form, which we ask be returned to us within thirty (30) days. If there are other persons or entities who are the holders of the patents in question, please provide us within thirty (30) days with the names and contact information of such persons or entities, and we will contact them to request a statement. More generally, if you have any questions, please let me know.

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