



UL 810B

STANDARD FOR SAFETY

DC Power Capacitors

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UL Standard for Safety for DC Power Capacitors, UL 810B

Second Edition, Dated June 10, 2021

Summary of Topics

This second edition of ANSI/UL 810B dated June 10, 2021 includes the following changes in requirements:

- Clarified the scope in [1.3](#) and deleted the Internal Fuse Operation Test.***
- Added references for wiring standards in [9.1](#).***
- Added a means to evaluate polymeric material property in [6.3.4](#).***
- Clarified the thermal rating of insulating materials in the capacitor in [8.2](#).***
- Made miscellaneous revisions throughout the Standard.***

The new and revised requirements are substantially in accordance with Proposal(s) on this subject dated April 2, 2021.

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JUNE 10, 2021



ANSI/UL 810B-2021

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UL 810B

Standard for DC Power Capacitors

First Edition – May 2016

Second Edition

June 10, 2021

This ANSI/UL Standard for Safety consists of the Second Edition.

The most recent designation of ANSI/UL 810B as an American National Standard (ANSI) occurred on June 10, 2021. ANSI approval for a standard does not include the Cover Page, Transmittal Pages, and Title Page.

Comments or proposals for revisions on any part of the Standard may be submitted to UL at any time. Proposals should be submitted via a Proposal Request in UL's On-Line Collaborative Standards Development System (CSDS) at <https://csds.ul.com>.

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INTRODUCTION

1 Scope

1.1 The requirements of this Standard apply to dc power capacitors with or without integral protection intended to reduce the risk of rupture and venting of the capacitor enclosure under internal fault conditions. These requirements apply to capacitors that are intended for use in dc power electronic applications such as switching circuits, dc filtering, and renewable energy systems.

1.2 Other types of capacitors may be investigated to establish compliance with these requirements and with such additional test criteria as may be found necessary.

1.3 This standard does not include requirements for electrochemical capacitors, which are covered under the Standard for Electrochemical Capacitors, UL 810A, and AC motor capacitors or power factor correction capacitors, which are covered under the Standard for Capacitors, UL 810.

2 Components

2.1 A component of a product covered by this Standard shall:

- a) Comply with the requirements for that component as specified in this Standard;
- b) Be used in accordance with its rating(s) established for the intended conditions of use; and
- c) Be used within its established use limitations or conditions of acceptability.

2.2 A component of a product covered by this Standard is not required to comply with a specific component requirement that:

- a) Involves a feature or characteristic not required in the application of the component in the product;
- b) Is superseded by a requirement in this Standard; or
- c) Is separately investigated when forming part of another component, provided the component is used within its established ratings and limitations.

2.3 Specific components are incomplete in construction features or restricted in performance capabilities. Such components are intended for use only under limited conditions, such as certain temperatures not exceeding specified limits, and shall be used only under those specific conditions.

2.4 A component that is also intended to perform other functions such as overcurrent protection, ground-fault circuit-interruption, surge suppression, any other similar functions, or any combination thereof, shall comply additionally with the requirements of the applicable UL standard(s) that cover devices that provide those functions.

3 Units of Measurement

3.1 Values stated without parentheses are the requirement. Values in parentheses are explanatory or approximate information.

4 Referenced Publications

4.1 Any undated reference to a code or standard appearing in the requirements of this Standard shall be interpreted as referring to the latest edition of that code or standard.