BS EN IEC 63129:2020

BSI Standards Publication

Determination of inrush current characteristics of lighting products

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National foreword

This British Standard is the UK implementation of EN IEC 63129:2020. It is identical to IEC 63129:2020.

The UK participation in its preparation was entrusted to Technical Committee CPL/34, Lamps and Related Equipment.

A list of organizations represented on this committee can be obtained on request to its secretary.

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English Version

Determination of inrush current characteristics of lighting products (IEC 63129:2020)

Détermination des caractéristiques du courant d'appel des produits d'éclairage (IEC 63129:2020)

Bestimmung der Eigenschaften des Einschaltstroms von Beleuchtungsprodukten (IEC 63129:2020)

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European foreword

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IEC 60669-1	NOTE	Harmonized as EN 60669-1

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

DETERMINATION OF INRUSH CURRENT CHARACTERISTICS OF LIGHTING PRODUCTS

FOREWORD

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CDV	Report on voting
34/636/CDV	34/679/RVC

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

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INTRODUCTION

Inrush current is the transient current drawn by an electrical device after it is switched on via an independent mains switch, the maximum amplitude of which is often much higher than in steady state during normal operation. Inrush current occurs because of charging capacitances during power up of a device.

Quantities such as peak inrush current and inrush current pulse duration are key parameters to characterize the inrush current, which are important to consider when selecting the switchgear of a lighting installation. This information is indispensable for electric installation planners, lighting designers and installers to be able to guarantee compatibility of a lighting system with other installation components like switches and overcurrent protection devices.

Careful selection of overcurrent protection devices, like circuit breakers, is important when dealing with high inrush currents. The overcurrent protection should react quickly to overload or short circuit but should not interrupt the circuit when an inrush current flows (i.e. false tripping). Another unwanted adverse effect that could occur when inrush current is not considered is welding of contacts of mechanical or electromechanical switches (manual or automatic).

The aim of this document is to determine the peak inrush current and the inrush current pulse duration of one or multiple lighting products of the same type.

This can serve as valuable information for installers in making the correct selection of components like switches and overcurrent protection devices in an installation or conversely for determination of the maximum number of lighting products of the same type that can be applied in an installation with switches and overcurrent protection devices (see Annex A).

The resulting functional compatibility between switchgear and lighting products in an installation is the main rationale for this document.

The rated voltage of lighting products which can be tested with this document is limited to 230 V AC only. Future inclusion of other voltages (for example 100 V AC, 120 V AC, 200 V AC, 277 V AC, 347 V AC) is not excluded.

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