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INTERNATIONAL STANDARD



**Electrical resistance trace heating systems for industrial and commercial applications –
Part 1: General and testing requirements**

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Part 1: General and testing requirements**

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ELECTRICAL RESISTANCE TRACE HEATING SYSTEMS FOR INDUSTRIAL AND COMMERCIAL APPLICATIONS –

Part 1: General and testing requirements

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This document is published as an IEC/IEEE Dual Logo standard.

This first edition cancels and replaces the second edition published in 2013. This edition constitutes a technical revision.

This edition includes the following significant technical changes, apart from general revisions of IEC 62395-1 and harmonization with IEEE 515 [1]¹ and IEEE 515.1 [2], with respect to the previous edition:

- a) Added control and monitoring requirements for fire sprinkler systems and safety showers.
- b) Provided a supplemental ice bath method for verification of rated output.
- c) Provided constructional and type test requirements for glands used to terminate heating devices to an exposed enclosure.

The text of this International Standard is based on the following IEC documents:

Draft	Report on voting
27/1182A/FDIS	27/1186/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

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¹ Numbers in square brackets refer to the Bibliography.

INTRODUCTION

IEC/IEEE 62395-1 provides the essential requirements and testing appropriate to electrical resistance trace heating equipment used in industrial and commercial applications. While some of this work already exists in national or international standards, this document has collated much of this existing work and added considerably to it.

IEC/IEEE 62395-2 provides detailed recommendations for the system design, installation and maintenance of electric trace heating systems in industrial and commercial applications.

It is the objective of the IEC/IEEE 62395 series that, when in normal use, electrical trace heating systems operate safely under their defined conditions of use, by

- a) employing heaters of the appropriate construction and meeting the test criteria detailed in IEC/IEEE 62395-1. The construction includes a metallic sheath, braid, screen or equivalent electrically conductive covering;
- b) operating at safe temperatures when designed, installed, and maintained in accordance with IEC/IEEE 62395-2.
- c) having at least the minimum levels of overcurrent and earth-fault protection required in IEC/IEEE 62395-1 and IEC/IEEE 62395-2.