# IEC/IEEE 62395-1

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# INTERNATIONAL STANDARD

colour inside

## Electrical resistance trace heating systems for industrial and commercial applications –
## 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.

This document was drafted in accordance with the rules given in the ISO/IEC Directives, Part 2, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications/.

A list of all parts in the IEC 62395 series, published under the general title *Electrical resistance trace heating systems for industrial and commercial applications*, can be found on the IEC website.

The IEC Technical Committee and IEEE Technical Committee have decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

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[1] Numbers in square brackets refer to the Bibliography.

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# 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.

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