IEC TS 62966-3

Edition 1.0 2021-01

TECHNICAL SPECIFICATION

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Mechanical structures for electrical and electronic equipment – Aisle containment for it cabinets – Part 3: Aspects of operational and personal safety

INTERNATIONAL ELECTROTECHNICAL COMMISSION

ICS 31.240

ISBN 978-2-8322-9318-8

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CONTENTS

FOREWORD 3
INTRODUCTION 5
1 Scope 6
2 Normative references 7
3 Terms and definitions 7
4 Safety requirements of an aisle containment 8
4.1 General safety requirements 8
4.2 Escape routes, emergency exits, escape doors, escape and evacuation plan 8
4.2.1 Recommended dimensions of escape routes and escape doors/emergency exits 8
4.2.2 Functional aspects of escape doors 11
4.2.3 Lighting and signposting of escape routes 11
4.2.4 Escape and evacuation plan 12
4.3 General – Fire protection in an aisle containment 12
4.3.1 Overview 12
4.3.2 Fire prevention 13
4.3.3 Fire and smoke detection 13
4.3.4 Fire fighting device 16
4.3.5 Arrangement of extinguishing nozzles 17
4.4 Lighting conditions 19
Bibliography 20

Figure 1 – Minimum width of escape routes in an aisle containment 10
Figure 2 – Minimum height of escape routes in an aisle containment 10
Figure 3 – Typical arrangement of an aisle containment representing a walk-in-equipment solution 13
Figure 4 – Cold and hot aisle containment (showing air flow and temperature areas) 14
Figure 5 – Arrangement of aspirating smoke detectors (ASDs) in a cold aisle containment with or without raised floor 15
Figure 6 – Arrangement of aspirating smoke detectors (ASDs) in a hot aisle containment 16
Figure 7 – Arrangement of extinguishing nozzles in a cold aisle containment with or without raised floor (showing flow-direction of extinguishing gas) 18

Table 1 – Minimum width of escape routes and maximum reduction of clearance 9

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MECHANICAL STRUCTURES FOR ELECTRICAL AND ELECTRONIC EQUIPMENT – AISLE CONTAINMENT FOR IT CABINETS –

Part 3: Aspects of operational and personal safety

FOREWORD

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Technical Specifications are subject to review within three years of publication to decide whether they can be transformed into International Standards.

IEC TS 62966-3, which is a Technical Specification, has been prepared by subcommittee 48D: Mechanical structures for electrical and electronic equipment, of IEC technical committee 48: Electrical connectors and mechanical structures for electrical and electronic equipment.

The text of this Technical Specification is based on the following documents:

DTS	Report on voting
48D/725/DTS	48D/731/RVDTS

Full information on the voting for the approval of this Technical Specification 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.

A list of all parts in the IEC 62966 series, published under the general title *Mechanical structures for electrical and electronic equipment – Aisle containment for IT cabinets*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "http://webstore.iec.ch" in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

INTRODUCTION

This Part 3 of IEC 62966 serves as a guide for a consideration from a safety viewpoint of the dimensional and air conditioning aspects of cold and hot aisle containments in data centres described in IEC 62966-1 and IEC 62966-2.

Where aspects of this Technical specification conflict with national regulations and laws of the member states concerned, the provisions of these national regulations shall apply.

Consideration is given to safety-related aspects, such as:

a) escape and evacuation plans;

b) escape routes;

c) emergency exits;

d) functional aspects of escape doors;

e) lighting conditions;

f) lighting and signposting of escape routes;

g) fire protection;

taking into account the existing stringent requirements placed on the protection of IT equipment and the availability of the data the equipment contains.

MECHANICAL STRUCTURES FOR ELECTRICAL AND ELECTRONIC EQUIPMENT – AISLE CONTAINMENT FOR IT CABINETS –

Part 3: Aspects of operational and personal safety

1 Scope

This part of IEC 62966 defines the requirements for operational and personal safety of aisle containments for IT cabinets.

The aim is to provide physical security for the IT equipment installed in the containment using the criteria “availability” and “safety”.

The requirements apply to all operational, working and maintenance procedures.

This document does not apply to ordinary persons, when using installations and equipment.

The requirements described herein are also intended to ensure that it is possible for authorized personnel to enter and remain in the containment (as accessible equipment) and to maintain or upgrade the systems installed in the containment without risk. It should also be possible to evacuate the containment quickly and safely at any time, especially in the event of a fire or any other hazardous situation, whilst reducing the health risk to personnel to a minimum.

Aspects relating to computing, data processing, data storage, building protection or the data centre itself do not fall within the scope of this document. Only those additional aspects arising from the integration of an aisle containment are considered.

The design and positioning of an aisle containment, which is integrated in the data centre, has influence on the following different aspects of operational safety:

a) escape and evacuation plans;

b) escape routes;

c) emergency exits;

d) functional aspects of escape doors;

e) lighting conditions

f) lighting and signposting of escape routes;

g) fire protection.

In this document, these operational safety requirements and recommendations are considered.

To achieve the highest effectiveness, all these requirements are considered as much as possible during the design of an aisle containment.

This document applies to normal operations, not to the initial installation of the containment.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60695-11-10, *Fire hazard testing – Part 11-10: Test flames – 50 W horizontal and vertical flame test methods*