IEC 60309-5

Edition 1.0 2017-01

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Single user licence
EESC TF on Harbour Crafts
No reproduction or circulation
October 2022

Plugs, socket-outlets and couplers for industrial purposes – Part 5: Dimensional compatibility and interchangeability requirements for plugs, socket-outlets, ship connectors and ship inlets for low-voltage shore connection systems (LVSC)

Prises de courant pour usages industriels – Partie 5: Exigences dimensionnelles de compatibilité et d'interchangeabilité pour les prises de courant et connecteurs de navire pour les systèmes basse tension de raccordement des navires à quai

Documents
Document Sharing Hub

IEC 60309-5:2017-01(en-fr)

Full document details: IEC 60309 5 WG 2017

THIS PUBLICATION IS COPYRIGHT PROTECTED
Copyright © 2017 IEC, Geneva, Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either IEC or IEC's member National Committee in the country of the requester. If you have any questions about IEC copyright or have an enquiry about obtaining additional rights to this publication, please contact the address below or your local IEC member National Committee for further information.

Droits de reproduction réservés. Sauf indication contraire, aucune partie de cette publication ne peut être reproduite ni utilisée sous quelque forme que ce soit et par aucun procédé, électronique ou mécanique, y compris la photocopie et les microfilms, sans l'accord écrit de l'IEC ou du Comité national de l'IEC du pays du demandeur. Si vous avez des questions sur le copyright de l'IEC ou si vous désirez obtenir des droits supplémentaires sur cette publication, utilisez les coordonnées ci-après ou contactez le Comité national de l'IEC de votre pays de résidence.

IEC Central Office
3, rue de Varembé
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
Fax: +41 22 919 03 00
info@iec.ch
www.iec.ch

About the IEC
The International Electrotechnical Commission (IEC) is the leading global organization that prepares and publishes International Standards for all electrical, electronic and related technologies.

About IEC publications
The technical content of IEC publications is kept under constant review by the IEC. Please make sure that you have the latest edition, a corrigenda or an amendment might have been published.

IEC Catalogue - webstore.iec.ch/catalogue
The stand-alone application for consulting the entire bibliographical information on IEC International Standards, Technical Specifications, Technical Reports and other documents. Available for PC, Mac OS, Android Tablets and iPad.

IEC publications search - www.iec.ch/searchpub
The advanced search enables to find IEC publications by a variety of criteria (reference number, text, technical committee,…). It also gives information on projects, replaced and withdrawn publications.

IEC Just Published - webstore.iec.ch/justpublished
Stay up to date on all new IEC publications. Just Published details all new publications released. Available online and also once a month by email.

Electropedia - www.electropedia.org
The world's leading online dictionary of electronic and electrical terms containing 20 000 terms and definitions in English and French, with equivalent terms in 16 additional languages. Also known as the International Electrotechnical Vocabulary (IEV) online.

IEC Glossary - std.iec.ch/glossary
65 000 electrotechnical terminology entries in English and French extracted from the Terms and Definitions clause of IEC publications issued since 2002. Some entries have been collected from earlier publications of IEC TC 37, 77, 86 and CISPR.

IEC Customer Service Centre - webstore.iec.ch/csc
If you wish to give us your feedback on this publication or need further assistance, please contact the Customer Service Centre: csc@iec.ch.

A propos de l'IEC
La Commission Electrotechnique Internationale (IEC) est la première organisation mondiale qui élabore et publie des Normes internationales pour tout ce qui a trait à l'électricité, à l'électronique et aux technologies apparentées.

A propos des publications IEC
Le contenu technique des publications IEC est constamment revu. Veuillez vous assurer que vous possédez l'édition la plus récente, un corrigendum ou amendement peut avoir été publié.

Catalogue IEC - webstore.iec.ch/catalogue
Application autonome pour consulter tous les renseignements bibliographiques sur les Normes internationales, Spécifications techniques, Rapports techniques et autres documents de l'IEC. Disponible pour PC, Mac OS, tablettes Android et iPad.

Recherche de publications IEC - www.iec.ch/searchpub
La recherche avancée permet de trouver des publications IEC en utilisant différents critères (numéro de référence, texte, comité d'études,…). Elle donne aussi des informations sur les projets et les publications remplacées ou retirées.

IEC Just Published - webstore.iec.ch/justpublished
Restez informé sur les nouvelles publications IEC. Just Published détaille les nouvelles publications parues. Disponible en ligne et aussi une fois par mois par email.

Electropedia - www.electropedia.org
Le premier dictionnaire en ligne de termes électroniques et électriques. Il contient 20 000 termes et définitions en anglais et en français, ainsi que les termes équivalents dans 16 langues additionnelles. Egalement appelé Vocabulaire Electrotechnique International (IEV) en ligne.

Glossaire IEC - std.iec.ch/glossary
65 000 entrées terminologiques électrotechniques, en anglais et en français, extraites des articles Termes et Définitions des publications IEC parues depuis 2002. Plus certaines entrées antérieures extraites des publications des CE 37, 77, 86 et CISPR de l'IEC.

Service Clients - webstore.iec.ch/csc
Si vous désirez nous donner des commentaires sur cette publication ou si vous avez des questions contactez-nous: csc@iec.ch.

Single user licence
EESC TF on Harbour Crafts
No reproduction or circulation
October 2022

Documents
Document Sharing Hub

Full document details: IEC 60309 5 WG 2017

IEC 60309-5

Edition 1.0 2017-01

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Single User licence
EESO - From Harbour Crafts
No reproduction or circulation
October 2022

Plugs, socket-outlets and couplers for industrial purposes – Part 5: Dimensional compatibility and interchangeability requirements for plugs, socket-outlets, ship connectors and ship inlets for low-voltage shore connection systems (LVSC)

Prises de courant pour usages industriels – Partie 5: Exigences dimensionnelles de compatibilité et d'interchangeabilité pour les prises de courant et connecteurs de navire pour les systèmes basse tension de raccordement des navires à quai

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
ELECTROTECHNIQUE
INTERNATIONALE

ICS 29.120.30

ISBN 978-2-8322-3844-8

Warning! Make sure that you obtained this publication from an authorized distributor.
Attention! Veuillez vous assurer que vous avez obtenu cette publication via un distributeur agréé.

® Registered trademark of the International Electrotechnical Commission
Marque déposée de la Commission Electrotechnique Internationale

AVA Documents
Document Sharing Hub

Full document details: IEC 60309 5 WG 2017

CONTENTS

FOREWORD 3
INTRODUCTION 5
1 Scope 6
2 Normative references 6
3 Terms and definitions 7
4 General 8
5 Standard ratings 8
6 Classification 9
7 Marking 9
8 Dimensions 10
9 Protection against electric shock 10
10 Provision for earthing 10
11 Terminals and terminations 10
12 Interlocks 10
13 Resistance to ageing of rubber and thermoplastic material 10
14 General construction 10
15 Construction of socket-outlets 10
16 Construction of plugs and connectors 10
17 Construction of appliance inlets 11
18 Degrees of protection 11
19 Insulation resistance and dielectric strength 11
20 Breaking capacity 11
21 Normal operation 11
22 Temperature rise 11
23 Flexible cables and their connection 11
24 Mechanical strength 11
25 Screws, current-carrying parts and connections 11
26 Creepage distances, clearances and distances through sealing compound 11
27 Resistance to heat, to fire and to tracking 11
28 Corrosion and resistance to rusting 11
29 Conditional short-circuit current withstand test 12
30 Electromagnetic compatibility 12
STANDARD SHEETS 13
STANDARD SHEET 5-I SOCKET-OUTLET 13
STANDARD SHEET 5-II PLUG TOP 14
STANDARD SHEET 5-III SHIP CONNECTOR TOP 15
STANDARD SHEET 5-IV SHIP INLET 16

Figure 501 – Diagram showing the use of accessories 8

Single user licence
EESC TF on Harbour Crafts
No reproduction or circulation
October 2022

Documents
Document Sharing Hub
Full document details: IEC 60309 5 WG 2017

INTERNATIONAL ELECTROTECHNICAL COMMISSION

PLUGS, SOCKET-OUTLETS AND COUPLERS FOR INDUSTRIAL PURPOSES –

Part 5: Dimensional compatibility and interchangeability requirements for plugs, socket-outlets, ship connectors and ship inlets for low-voltage shore connection systems (LVSC)

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
6) All users should ensure that they have the latest edition of this publication.
7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 60309-5 has been prepared by subcommittee 23H: Plugs, socket-outlets and couplers for industrial and similar applications, and for electric vehicles, of IEC technical committee 23: Electrical accessories.

The text of this standard is based on the following documents:

FDIS	Report on voting
23H/368/FDIS	23H/371/RVD

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

Single user license
IESC TF on Harbour Crafts
No reproduction or circulation
October 2022

Documents
Document Sharing Hub

Full document details: IEC 60309 5 WG 2017

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

A list of all the parts in the IEC 60309 series, under the general title *Plugs, socket-outlets and couplers for industrial purposes* can be found on the IEC website.

This part of IEC 60309 is to be read in conjunction with IEC 60309-1. The clauses of the particular requirements of this document supplement or modify the corresponding clauses of IEC 60309-1. Where the text indicates an "addition" to or a "replacement" of the relevant requirement, test specification or explanation of IEC 60309-1, these changes are made to the relevant text of IEC 60309-1, which then becomes part of the standard. Where no change is necessary, the words "Clause X of IEC 60309-1:1999 + A1:2005 + A2:2012 applies" are used.

Subclauses, figures, tables or notes which are additional to those in IEC 60309-1 are numbered starting from 501.

In this standard, the following print types are used:

- requirements proper: in roman type;
- *test specifications: in italic type*;
- notes: in smaller roman type.

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

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

Single user licence
EESC TF on Harbour Crafts
No reproduction or circulation
October 2022

Documents
Document Sharing Hub

Full document details: IEC 60309 5 WG 2017