



**SLOVENSKI STANDARD**  
**oSIST prEN IEC 60309-4:2019**

**01-november-2019**

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**Vtiči, fiksne ali prenosne vtičnice in vtičnice za industrijsko rabo - 4. del: Vtičnice in konektorji s stikalom in z zaklepom ali brez njega**

Plugs, fixed or portable socket- outlets and appliance inlets for industrial purposes - Part 4: Switched socket-outlets and connectors with or without interlock

Stecker, Steckdosen und Kupplungen für industrielle Anwendungen - Teil 4: Abschaltbare Steckdosen und Kupplungen mit oder ohne Verriegelung

Prises de courant pour usages industriels - Partie 4. Prises de courant et prises mobiles avec interrupteur, avec ou sans dispositif de verrouillage

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**Ta slovenski standard je istoveten z: prEN IEC 60309-4:2019**

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**ICS:**

29.120.30	Vtiči, vtičnice, spojke	Plugs, socket-outlets, couplers
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# 23H/458/CDV

## COMMITTEE DRAFT FOR VOTE (CDV)

PROJECT NUMBER:

**IEC 60309-4 ED2**

DATE OF CIRCULATION:

**2019-08-09**

CLOSING DATE FOR VOTING:

**2019-11-01**

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**23H/433/CD,23H/454/CC**

IEC SC 23H : PLUGS, SOCKET-OUTLETS AND COUPLERS FOR INDUSTRIAL AND SIMILAR APPLICATIONS, AND FOR ELECTRIC VEHICLES

SECRETARIAT:

France

SECRETARY:

Mr Bertrand Doignon

OF INTEREST TO THE FOLLOWING COMMITTEES:

PROPOSED HORIZONTAL STANDARD:

Other TC/SCs are requested to indicate their interest, if any, in this CDV to the secretary.

FUNCTIONS CONCERNED:

 EMC

 ENVIRONMENT

 QUALITY ASSURANCE

 SAFETY

 SUBMITTED FOR CENELEC PARALLEL VOTING

 NOT SUBMITTED FOR CENELEC PARALLEL VOTING

**Attention IEC-CENELEC parallel voting**

The attention of IEC National Committees, members of CENELEC, is drawn to the fact that this Committee Draft for Vote (CDV) is submitted for parallel voting.

The CENELEC members are invited to vote through the CENELEC online voting system.

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This document is still under study and subject to change. It should not be used for reference purposes.

Recipients of this document are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

TITLE:

**Plugs, fixed or portable socket-outlets and appliance inlets for industrial purposes - Part 4: Switched socket-outlets and connectors, with or without interlock**

PROPOSED STABILITY DATE: 2025

NOTE FROM TC/SC OFFICERS:

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## 1 CONTENTS

2	FOREWORD.....	3
3	INTRODUCTION.....	5
4	1 Scope.....	6
5	2 Normative references .....	6
6	3 Terms and definitions .....	7
7	4 General .....	8
8	5 Standard ratings .....	8
9	6 Classification.....	9
10	7 Marking .....	9
11	8 Dimensions .....	11
12	9 Protection against electric shock .....	11
13	10 Provision for earthing .....	12
14	11 Terminals .....	12
15	12 Interlocks .....	12
16	12 Interlocks, switches and their components .....	12
17	13 Resistance to ageing of rubber and thermoplastic material .....	18
18	14 General construction .....	18
19	15 Construction of fixed socket-outlets .....	18
20	16 Construction of plugs and portable socket-outlets .....	18
21	17 Construction of appliance inlets.....	18
22	18 Degrees of protection .....	18
23	19 Insulation resistance and dielectric strength .....	18
24	20 Breaking capacity .....	18
25	21 Normal operation.....	18
26	22 Temperature rise .....	19
27	23 Flexible cable and their connection.....	20
28	24 Mechanical strength .....	20
29	25 Screws, current-carrying parts and connections.....	21
30	26 Creepage distances, clearances and distances through sealing compound .....	22
31	27 Resistance to heat, to fire and to tracking.....	22
32	28 Corrosion and resistance to rusting .....	22
33	29 Conditional short-circuit current withstand test .....	22
34	30 Electromagnetic compatibility .....	22
35		
36	Figure 401 – Example of apparatus for checking the withdrawal force.....	15
37	Figure 402 – Actuator applied force $F$ .....	21
38		
39	Table 401 – Withdrawal force with respect to ratings .....	15
40	Table 402 – Actuator test force $F$ .....	21
41		
42		

## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**PLUGS, FIXED OR PORTABLE SOCKET-OUTLETS AND  
APPLIANCE INLETS FOR INDUSTRIAL PURPOSES –****Part 4: Switched socket-outlets  
with or without interlock**

## FOREWORD

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This new edition of IEC 60309-4 has been edited according to the current IEC/ISO Directives Part 2 and to be in-line with the latest version (2020) of IEC 60309-1 and IEC 60309-2. It bears the edition number 3.

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

FDIS	Report on voting
23H/---/FDIS	23H/---/RVD

International Standard IEC 60309-4 has been prepared by subcommittee 23H: Plugs and socket-outlets for industrial purposes, of IEC technical committee 23: Electrical accessories.

This standard is to be read in conjunction with IEC 60309-1 (2020) and IEC 60309-2 (2020).

97 Part 1 comprises clauses of a general character and the subsequent parts of the series deal  
98 with particular types.

99 The clauses of the subsequent parts supplement or modify the corresponding clauses in Part 1.  
100 Where the text of subsequent parts indicates an "addition" to or a "replacement" of the relevant  
101 requirement, test specification or explanation of Part 1, these changes are made to the relevant  
102 text of Part 1, which then becomes part of the standard. Where no change is necessary, the  
103 words "This clause of Part 1 is applicable" are used.

104 Clauses, subclauses, figures, tables and notes which are additional to those in Part 1 are  
105 numbered starting from 401.

106 The IEC 60309 series, under the general title *Plugs, fixed or portable socket-outlets and*  
107 *appliance inlets for industrial purposes* comprises the following parts:

108 Part 1: General requirements

109 Part 2: Dimensional compatibility requirements for pin and contact-tube accessories

110 Part 4: Switched socket-outlets with or without interlock

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

- 115 • reconfirmed,
- 116 • withdrawn,
- 117 • replaced by a revised edition, or
- 118 • amended.

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120  
121

## INTRODUCTION

122 A list of all the parts in the IEC 60309 series, under the general title *Plugs, fixed or portable*  
123 *socket-outlets, and appliance inlets*, can be found on the IEC website.

124 Subsequent parts of IEC 60309 deal with the requirements of particular types of accessories.  
125 The clauses of these particular requirements supplement or modify the corresponding clauses  
126 in the preceding Parts.

127 In this standard, the following print types are used:

- 128 • requirements proper: in roman type;
- 129 • *test specifications: in italic type;*
- 130 • notes: in smaller roman type.

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133 **PLUGS, FIXED OR PORTABLE SOCKET-OUTLETS AND**  
 134 **APPLIANCE INLETS FOR INDUSTRIAL PURPOSES –**

135  
 136 **Part 4: Switched socket-outlets,**  
 137 **with or without interlock**  
 138  
 139

140 **1 Scope**

141 Clause 1 of IEC 60309-1:2020 or IEC 60309-2:2020 applies as follows:

142 *Replacement of the first paragraph by the following text:*

143 This part of IEC 60309 applies to self-contained products primarily intended for industrial use,  
 144 either indoors or outdoors that combine the following items within a single enclosure:

- 145 - a fixed or portable socket-outlet according to IEC 60309-1 or IEC 60309-2 with a rated  
 146 operating voltage not exceeding 1 000 V DC or 1000 V AC not exceeding 500 Hz and  
 147 a rated current not exceeding 800 A,
- 148 - a switching device,

149 These products may incorporate an interlock and/or protective devices.

150 These accessories are intended to be installed by instructed persons (IEV 195-04-02) or  
 151 skilled persons (IEV 195-04-01) only.

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152 **2 Normative references**

153 Clause 2 of IEC 60309-1:2020 applies except as follows:

154 *Additional normative references:*

155 IEC 60073, *Basic and safety principles for man-machine interface, marking and identification -*  
 156 *Coding principles for indicators and actuators*

157 IEC 60417-DB<sup>1</sup>, *Graphical symbols for use on equipment*

158 IEC 60617-DB<sup>2</sup>, *Graphical Symbols for diagrams*

159 IEC 60947-1, *Low-voltage switchgear and controlgear – Part 1: General rules*

160 IEC 60947-4-1, *Low-voltage switchgear and controlgear – Part 4-1: Contactors and motor-*  
 161 *starters – Electromechanical contactors and motor-starters*

162 IEC 60947-5-1, *Low-voltage switchgear and controlgear – Part 5-1: Control circuit devices*  
 163 *and switching elements – Electromechanical control circuit devices*

164 IEC 61032, *Protection of persons and equipment by enclosures – Probes for verification*

165 IEC 61058-1, *Switches for appliances – Part 1: General requirements*

<sup>1</sup> "DB" refers to the IEC on-line database.

<sup>2</sup> "DB" refers to the IEC on-line database.



**166 3 Terms and definitions**

167 Clause 3 of IEC 60309-1:2020 or IEC 60309-2:2020 applies except as follows:

168 *Terms and definitions 3.6 to 3.9 do not apply.*

169 *Addition of the following terms and definitions:*

**170 3.401****171 switched socket-outlet**

172 product containing in a single enclosure a switching device and a fixed or portable socket-  
173 outlet, intended to be used in combination. It can be either interlocked or non-interlocked

**174 3.402****175 interlocked socket-outlet**

176 fixed or portable socket-outlet associated with an interlock

**177 3.403****178 switching device**

179 device designated to make or break the current in one or more electric circuits

180 [SOURCE IEC 441-14-01]

**181 3.403.1****182 mechanical switching device**

183 switching device designed to close and open one or more electric circuits by means of  
184 separable contacts

185 [SOURCE IEC 441-14-02]

**186 3.403.1.1****187 switch (mechanical)**

188 mechanical switching device capable of making, carrying and breaking currents under normal  
189 circuit conditions, which may include specified operating overload conditions and also  
190 carrying, for a specified time, currents under specified abnormal circuit conditions such as  
191 those of short-circuit

192 [SOURCE IEC 441-14-10]

193 NOTE 1 to entry A switch may be capable of making, but not breaking short-circuit currents.

**194 3.403.1.1.1****195 switch-disconnector**

196 switch, which in the open position complies with the requirements specified for the isolating  
197 function

198 [SOURCE IEC 441-14-12 modified: This definition differs from IEC 441-14-05 by referring to  
199 isolating function instead of the requirements specified for a disconnector.”]

**200 3.403.1.2****201 contactor**

202 mechanical switching device having only one position of rest, operated otherwise than by  
203 hand, capable of making, carrying and breaking currents under normal circuit conditions,  
204 including operating overload conditions

205 [SOURCE IEC 441-14-33]

**206 3.403.2****207 associated switching device**

208 separate switching device which can be replaced independently

209 **3.403.3**  
 210 **integral switching device**  
 211 switching device constructed as a part of a fixed or portable socket-outlet covered by this  
 212 standard, where neither the switching device nor the socket-outlet can be replaced  
 213 independently

214 **3.404**  
 215 **isolation (isolating function)**  
 216 function intended to cut off the supply from all or a discrete section of the installation, by  
 217 separating the installation or section from every source of electrical energy for reasons of  
 218 safety (see IEC 60947-1 and IEC 61140<sup>3</sup>)

219 **3.405**  
 220 **utilization category**  
 221 <switching device> combination of specified requirements related to the conditions in which the  
 222 switching device fulfils its purpose, selected to represent a characteristic group of practical  
 223 applications

224 NOTE The specified requirements may concern e.g. the values of making capacities (if applicable), breaking  
 225 capacities and other characteristics, the associated circuits under the relevant conditions of use and behaviour.

226 [SOURCE IEC 441-17-19, modified: deletion of “or the fuse”]

227 **3.406**  
 228 **control circuit device**  
 229 electrical device intended for the controlling, signalling, interlocking, etc. of switchgear and  
 230 controlgear (see IEC 60947-1, 2.1.1)

231 **3.407**  
 232 **latching device**  
 233 part of the interlock mechanism provided to hold a plug or appliance-inlet in the socket-outlet

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## 234 **4 General**

235 Clause 4 of IEC 60309-1:2020 or IEC 60309-2:2020 applies except as follows:

236 *Additional subclauses :*

237 **4.401** Components incorporated or integrated in products (e.g. flexible cable, current cut-  
 238 outs, thermal cut-outs, safety transformers, switches, fuses, residual current devices, lamp  
 239 holders and connecting devices) shall comply with the relevant standards as far as they  
 240 reasonably apply.

## 241 **5 Standard ratings**

242 Clause 5 of IEC 60309-1:2020 applies for products incorporating socket-outlets according to  
 243 IEC 60309-1

244 Clause 5 IEC 60309-2:2020 applies with the following addition for products incorporating  
 245 socket-outlets according to IEC 60309-2:

246 *Add at the end of clause 5.201 the following:*

247 For switched socket-outlet with or without interlock according to 6.1.401, the whole unit can  
 248 have a different degree of protection but not lower than IP44 (see also 8.1).

<sup>3</sup> IEC 61140, *Protection against electric shock – Common aspects for installation and equipment*

## 249 **6 Classification**

250 Clause 6 of IEC 60309-1:2020 or IEC 60309-2:2020 applies except as follows:

### 251 **6.1.1 Replacement:**

252 According to purpose: fixed socket-outlets, portable socket-outlets

### 253 **6.1.5 Not applicable**

254 *Additional subclauses:*

255 **6.1.401** According to switching devices and interlock facilities:

256 – products with a switching device and without an interlock;

257 – products with a switching device and with an interlock.

258 **6.1.402** According to the operation of the interlock/switching device

259 – manually;

260 – automatically (electrically and/or electronically);

261 – combination of the above.

262 NOTE 1 Inserting the plug is not considered a manual operation of the interlock/switching device.

263 **6.1.403** According to the mechanical switching device

264 – switch;

265 – switch-disconnector;

266 – contactor;

267 – other devices with suitable switch rating.

268 **6.1.404** According to suitability for isolation of the switching device

269 – suitable for isolation;

270 – not suitable for isolation.

271 **6.1.405** According to whether the interlock system has a latching device

272 – with latching device (mechanical interlock);

273 – without latching device (electrical interlock).

274 **6.1.406** According to the presence of a protective device

275 – with protective device;

276 – without protective device.

## 277 **7 Marking**

278 Clause 7 of IEC 60309-1:2020 or IEC 60309-2:2020 applies except as follows:

### 279 **7.1 Addition:**

280 – indication of the open and closed position of the switching device for products with  
281 isolating function according to 6.1.404;

282 – indication of the type of switching device.

### 283 **7.2 Addition:**