

SLOVENSKI STANDARD oSIST prEN IEC 80601-2-30:2025

01-april-2025

Medicinska električna oprema - 2-30. del: Posebne zahteve za osnovno varnost in bistvene lastnosti avtomatiziranih neinvazivnih sfigmomanometrov

Medical electrical equipment - Part 2-30: Particular requirements for the basic safety and essential performance of automated non-invasive sphygmomanometers

Medizinische elektrische Geräte - Teil 2-30: Besondere Festlegungen für die Sicherheit einschließlich der wesentlichen Leistungsmerkmale von automatisierten nicht-invasiven Blutdruckmessgeräten

Appareils électromédicaux - Partie 2-30: Exigences particulières pour la sécurité de base et les performances essentielles des sphygmomanomètres non invasifs automatiques

Ta slovenski standard je istoveten z: prEN IEC 80601-2-30:2025

ICS:

11.040.55 Diagnostična oprema Diagnostic equipment

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62D/2201/CDV

COMMITTEE DRAFT FOR VOTE (CDV)

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IEC 80601-2-30 ED3	
DATE OF CIRCULATION:	CLOSING DATE FOR VOTING:
2025-02-07	2025-05-02
SUPERSEDES DOCUMENTS:	
62D/1946/RR	

IEC SC 62D: PARTICULAR MEDICAL EQUIPMENT, SOFTWARE, AND SYSTEMS		
SECRETARIAT:	SECRETARY:	
United States of America	Ms Ladan Bulookbashi	
OF INTEREST TO THE FOLLOWING COMMITTEES:	HORIZONTAL FUNCTION(S):	
ASPECTS CONCERNED:		
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.	dards.iteh.ai) t Preview	
The CENELEC members are invited to vote through the CENELEC online voting system.		

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

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Recipients of this document are invited to submit, with their comments, notification of any relevant "In Some Countries" clauses to be included should this proposal proceed. Recipients are reminded that the CDV stage is the final stage for submitting ISC clauses. (SEE <u>AC/22/2007</u> OR <u>NEW GUIDANCE DOC</u>).

TITLE:

Medical electrical equipment - Part 2-30: Particular requirements for the basic safety and essential performance of automated non-invasive sphygmomanometers

PROPOSED STABILITY DATE: 2030	

NOTE FROM TC/SC OFFICERS:

This edition includes the following significant technical changes with respect to the previous edition:

a) a clarified definition of neonate and infant and associated modes;

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- b) relabeling of some primary operating functions;
- c) additional requirements for monitoring equipment to avoid the misuse of misleading or "stale" data;
- d) updated normative references to the current versions where applicable.

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

MEDICAL ELECTRICAL EQUIPMENT -

Part 2-30: Particular requirements for the basic safety and essential performance of automated non-invasive sphygmomanometers

FOREWORD

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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.

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International standard IEC 80601-2-30 has been prepared by a Joint Working Group of subcommittee 62D: Electromedical equipment, of IEC technical committee 62: Electrical equipment in medical practice, and of subcommittee SC3: Lung ventilators and related

127 equipment, of ISO technical committee 121: Anaesthetic and respiratory equipment.

This third edition cancels and replaces the second edition published in 2018. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

62D/2201/CDV

- IEC 80601-2-30 ED3 © IEC 2024
- a) a clarified definition of neonate and infant and associated modes;
- b) relabeling of some primary operating functions;
- 134 c) additional requirements for monitoring equipment to avoid the misuse of misleading or 135 "stale" data;
- d) updated normative references to the current versions where applicable.
- 137 This publication is published as a double logo standard.
- 138 The text of this document is based on the following documents of IEC:

FDIS	Report on voting
62D/1548/FDIS	62D/1560/RVD

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- Full information on the voting for the approval of this document can be found in the report on voting indicated in the above table. In ISO, the standard has been approved by 14 P members
- out of 15 having cast a vote.
- 143 This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.
- 144 In this document, the following print types are used:
- 145 requirements and definitions: roman type;
- 146 test specifications: italic type; en Standards
- 147 informative material appearing outside of tables, such as notes, examples and references: in smaller type.
 148 Normative text of tables is also in a smaller type;
- 149 TERMS DEFINED IN CLAUSE 3 OF THE GENERAL STANDARD, IN THIS PARTICULAR STANDARD OR AS NOTED: SMALL CAPITALS.
- 151 In referring to the structure of this document, the term
- 152 "clause" means one of the seventeen numbered divisions within the table of contents, 2-30-2025 153 inclusive of all subdivisions (e.g. Clause 7 includes subclauses 7.1, 7.2, etc.);
- 154 "subclause" means a numbered subdivision of a clause (e.g. 7.1, 7.2 and 7.2.1 are all subclauses of Clause 7).
- 156 References to clauses within this document are preceded by the term "Clause" followed by
- 157 the clause number. References to subclauses within this particular standard are by number
- 158 only.
- 159 In this document, the conjunctive "or" is used as an "inclusive or" so a statement is true if any
- 160 combination of the conditions is true.
- The verbal forms used in this document conform to usage described in Clause 7 of the ISO/IEC Directives, Part 2. For the purposes of this document, the auxiliary verb:
- 163 "shall" means that compliance with a requirement or a test is mandatory for compliance
 164 with this document;
- 165 "should" means that compliance with a requirement or a test is recommended but is not
 166 mandatory for compliance with this document;
- 167 "may" is used to describe a permissible way to achieve compliance with a requirement or
 168 test.

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169	P	An asterisk (*) as the first character of a title or at the beginning of a
170		paragraph or table title indicates that there is guidance or rationale
171		related to that item in Annex D
172		(informative)
173		Application Programming Interface Framework
174		Application Programming Interface Framework
175	D.1	General guidance
176	This a	annex provides a minimal informative framework for Electronic Automated Blood Pressure device digital
177	conne	ectivity. It is common for health monitoring devices that are being used at all levels of patient acuity to be
178	"conn	ected" for the purpose of direct transmission of device data to a distant dashboard, electronic medical
179	record	d and even from the patient's home to their health provider. In this annex, the term Application Programming
180	Interfa	ace (API) is used in its most generic sense, representing the flow of data and commands to and from a
181	device	e that provides connectivity and has NIBP determination capability. A conceptual API is presented without
182	specif	ics of data structures or communication protocols. The annex is intended to serve as a starting point for
183	discus	ssion about the design of an API for an NIBP device. It is by no means a comprehensive or required
184	frame	work but a starting point, listing basic functionality that an NIBP API should consider. There is no intention to
185	provid	le a comprehensive model for an API that meets all the needs of all server/client interactions. Nor is there
186	any in	stention to imply that the implementation of this API framework will provide any level of market acceptance or
187	intero	perability of NIBP devices.
188		
189	The c	ommittee presents the following minimum set of API functionality for your consideration in the development
190	of cor	nnected NIBP devices:
191	API sl	hall include
192 https://sta	- Start	t BP reading oSIST prEN IEC 80601-2-30:2025 teh.ai/catalog/standards/sist/aaf1e30b-556c-47d2-8f9a-056598f3305a/osist-pren-iec-80601-2-3
193	- Stop	BP reading
194	- Aboı	rt an NIBP cycle
195	- Get	NIBP results - sys, dia, HR ,MAP, Error code
196	- Set I	BP mode to Neonate
197	- Set I	BP mode to Pediatric (if applicable)
198	- Set I	BP mode to Adult
199	- Set I	BP mode to special.
200	- Rese	et the API
201	- Set	API Parameters (protocol, Baud)
202	- Cont	trol Pump
203	- Cont	trol valve
204	- Calib	prate or cal-check pressure transducers
205		ability to support testing of single-fault failsafe components and controls
206	Anne	ex AA.
207 208		of all parts of the 80601 International standard, published under the general title <i>Medical</i> rical equipment, can be found on the IEC website.

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- The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC website under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be
- 212 reconfirmed,
- 213 withdrawn,
- replaced by a revised edition, or
- 215 amended.

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NOTE The attention of users of this document is drawn to the fact that equipment manufacturers and testing organizations may need a transitional period following publication of a new, amended or revised IEC publication in which to make products in accordance with the new requirements and to equip themselves for conducting new or revised tests. It is the recommendation of the committees that the content of this publication be adopted for implementation nationally not earlier than 3 years from the date of publication.

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224	INTRODUCTION
225 226	The minimum safety requirements specified in this particular standard are considered to provide for a practical degree of safety in the operation of an AUTOMATED SPHYGMOMANOMETER
227	The requirements are followed by specifications for the relevant tests.
228 229 230 231 232 233 234	Following the decision taken by subcommittee 62D at the meeting in Washington DC in 1979, a "General guidance and rationale" section giving some explanatory notes, where appropriate, about the more important requirements is included in Annex AA. It is considered that knowledge of the reasons for these requirements will not only facilitate the proper application of the standard but will, in due course, expedite any revision necessitated by changes in clinical practice or because of developments in technology. However, the Annex AA does not form part of the requirements of this document.
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237	MEDICAL ELECTRICAL EQUIPMENT -
238 239	Part 2-30: Particular requirements for the basic safety and essential
240	performance of automated non-invasive sphygmomanometers
241	
242	
243	
244	201.1 Scope, object and related standards
245	Clause 1 of the general standard applies, except as follows:
246	201.1.1 Scope
247	Replacement:
248 249 250 251	This part of the 80601 International Standard applies to the BASIC SAFETY and ESSENTIAL PERFORMANCE of AUTOMATED SPHYGMOMANOMETERS, hereafter referred to as ME EQUIPMENT, which by means of an inflatable CUFF, are used for non-continuous indirect estimation of the BLOOD PRESSURE without arterial puncture.
252 253	NOTE 1 Equipment that performs indirect DETERMINATION of the BLOOD PRESSURE without arterial puncture does not directly measure the BLOOD PRESSURE. It only estimates the BLOOD PRESSURE.
254 255 256	This document specifies requirements for the BASIC SAFETY and ESSENTIAL PERFORMANCE for this ME EQUIPMENT and its ACCESSORIES, including the requirements for the accuracy of BLOOD PRESSURE DETERMINATION.
257 258 259	This document covers automatic electrically-powered ME EQUIPMENT used for the intermittent, indirect estimation of the BLOOD PRESSURE without arterial puncture, including BLOOD PRESSURE monitors for the HOME HEALTHCARE ENVIRONMENT.
260 261 262 263	Requirements for indirect estimation of the BLOOD PRESSURE without arterial puncture ME EQUIPMENT with an electrically-powered PRESSURE TRANSDUCER and/or displays used in conjunction with a stethoscope or other manual methods for determining BLOOD PRESSURE (NON-AUTOMATED SPHYGMOMANOMETERS) are specified in document ISO 81060-1 [2].
264 265 266	If a clause or subclause is specifically intended to be applicable to ME EQUIPMENT only, or to ME SYSTEMS only, the title and content of that clause or subclause will say so. If that is not the case, the clause or subclause applies both to ME EQUIPMENT and to ME SYSTEMS, as relevant.
267 268 269	HAZARDS inherent in the intended physiological function of ME EQUIPMENT or ME SYSTEMS within the scope of this document are not covered by specific requirements in this document except in 201.11 and 201.105.3.3, as well as 7.2.13 and 8.4.1 of IEC 60601-1:2022.
270	201.1.2 Object
271	Replacement:
272 273	The object of this particular standard is to establish particular BASIC SAFETY and ESSENTIAL PERFORMANCE requirements for an AUTOMATED SPHYGMOMANOMETER as defined in 201.3.201.
274	201.1.3 Collateral standards
275	Addition:
276	This particular standard refers to those applicable collateral standards that are listed in

Clause 2 of the general standard and Clause 201.2 of this particular standard.

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- 278 IEC 60601-1-2, IEC 60601-1-6, IEC 60601-1-10, IEC 60601-1-11 and IEC 60601-1-12 apply
- 279 as modified in Clauses 202, 206, 210, 211 and 212 respectively. IEC 60601-1-3 [3] does not
- 280 apply. All other published collateral standards in the IEC 60601-1 series apply as
- 281 published [1] [4].

282 201.1.4 Particular standards

- 283 Replacement:
- 284 In the IEC 60601 series, particular standards may modify, replace or delete requirements
- 285 contained in the general standard and collateral standards as appropriate for the particular
- 286 ME EQUIPMENT under consideration, and may add other BASIC SAFETY and ESSENTIAL
- 287 PERFORMANCE requirements.
- 288 A requirement of a particular standard takes priority over the general standard.
- 289 For brevity, IEC 60601-1:2005 and IEC 60601-1:2005/AMD1:2012 are referred to in this
- 290 particular standard as the general standard. Collateral standards are referred to by their
- 291 document number.
- The numbering of clauses and subclauses of this particular standard correspond to that of the
- 293 general standard with the prefix "201" (e.g. 201.1 in this document addresses the content of
- 294 Clause 1 of the general standard) or applicable collateral standard with the prefix "20x",
- 295 where x is the final digit(s) of the collateral standard document number (e.g. 202.4 in this
- 296 particular standard addresses the content of Clause 4 of the IEC 60601-1-2 collateral
- 297 standard, 203.4 in this particular standard addresses the content of Clause 4 of the
- 298 IEC 60601-1-3 collateral standard, etc.). The changes to the text of the general standard are
- 299 specified by the use of the following words:
- 300 "Replacement" means that the clause or subclause of the general standard or applicable
- 301 collateral standard is replaced completely by the text of this particular standard.
- oSIST prEN IEC 80601-2-30:2025
- 302 "Addition" means that the text of this particular standard is additional to the requirements of
- 303 the general standard or applicable collateral standard.
- 304 "Amendment" means that the clause or subclause of the general standard or applicable
- 305 collateral standard is amended as indicated by the text of this particular standard.
- 306 Subclauses, figures or tables which are additional to those of the general standard are
- 307 numbered starting from 201.101. However, due to the fact that definitions in the general
- 308 standard are numbered 3.1 through 3.147, additional definitions in this document are
- 309 numbered beginning from 201.3.201. Additional annexes are lettered AA, BB, etc., and
- additional items aa), bb), etc.
- 311 Subclauses, figures or tables which are additional to those of a collateral standard are
- 312 numbered starting from 20x, where "x" is the number of the collateral standard, e.g. 202 for
- 313 IEC 60601-1-2, 203 for IEC 60601-1-3, etc.
- 314 The term "this document" is used to make reference to the general standard, any applicable
- 315 collateral standards and this particular standard taken together.
- 316 Where there is no corresponding clause or subclause in this particular standard, the clause or
- 317 subclause of the general standard or applicable collateral standard, although possibly not
- 318 relevant, applies without modification; where it is intended that any part of the general
- 319 standard or applicable collateral standard, although possibly relevant, is not to be applied, a
- 320 statement to that effect is given in this particular standard.

- 322 NOTE Informative references are listed in the bibliography beginning on page 56.
- 323 Clause 2 of the general standard applies, except as follows:
- 324 Replacement:

321

- 325 IEC 60601-1-2:2014, Medical electrical equipment – Part 1-2: General requirements for basic
- 326 safety and essential performance - Collateral Standard: Electromagnetic disturbances -
- 327 Requirements and tests
- 328 IEC 60601-1-2:2014/AMD 1:2020
- 329 IEC 60601-1-6:2010, Medical electrical equipment – Part 1-6: General requirements for basic
- 330 safety and essential performance - Collateral standard: Usability
- IEC 60601-1-6:2010/AMD 1:2013 331
- 332 IEC 60601-1-6:2010/AMD 2:2020
- 333 Addition:
- 334 IEC 60068-2-27:2008, Environmental testing – Part 2-27: Tests – Test Ea and guidance:
- 335
- IEC 60068-2-64:2008+AMD1:2019, Environmental testing Part 2-64: Tests Test Fh: 336
- Vibration, broad-band random and guidance 337
- IEC 60601-1:2005, Medical electrical equipment Part 1: General requirements for basic 338
- 339 safety and essential performance
- IEC 60601-1:2005/AMD 1:2012 CUMENT Preview 340
- IEC 60601-1-10:2007, Medical electrical equipment Part 1-10: General requirements for 341
- 342 basic safety and essential performance - Collateral Standard: Requirements for the sist-pren-iec-80601-2-30-2025
- 343 development of physiologic closed-loop controllers
- IEC 60601-1-10:2007/AMD1:2013 344
- 345 IEC 60601-1-10:2007/AMD2:2020
- 346 IEC 60601-1-11:2015, Medical electrical equipment - Part 1-11: General requirements for
- basic safety and essential performance Collateral Standard: Requirements for medical 347
- 348 electrical equipment and medical electrical systems used in the home healthcare environment
- IEC 60601-1-11:2015/AMD1:2020 349
- IEC 60601-1-12:2014, Medical electrical equipment Part 1-12: General requirements for 350
- basic safety and essential performance Collateral Standard: Requirements for medical 351
- 352 electrical equipment and medical electrical systems intended for use in the emergency
- medical services environment 353
- IEC 60601-1-12:2014/AMD1:2020 354
- 355 IEC 60601-2-2:2017, Medical electrical equipment - Part 2-2: Particular requirements for the
- 356 basic safety and essential performance of high frequency surgical equipment and high
- 357 frequency surgical accessories
- 358 IEC 60601-2-2:2017/AMD1:2023
- IEC 62366-1:2015, Medical devices Part 1: Application of usability engineering to medical 359
- 360 devices
- 361 IEC 62366-1:2015/AMD1:2020
- 362 IEC 80369-5:2016, Small-bore connectors for liquids and gases in healthcare applications -
- Part 5: Connectors for limb cuff inflation applications 363