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Interested committees:

Title: BS EN IEC 61298-3 Process measurement and control devices - General methods and procedures for evaluating performance

Part 3: Tests for the effects of influence quantities

Please notify the secretary if you are aware of any keywords that might assist in classifying or identifying the standard or if the content of this standard

- i) has any issues related to 3rd party IPR, patent or copyright
- ii) affects other national standard(s)
- iii) requires additional national guidance or information

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This draft is issued to allow comments from interested parties; all comments will be given consideration prior to publication. No acknowledgement will normally be sent. **See overleaf for information on the submission of comments.**

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Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

For national standards, comments will be reviewed by the relevant UK national committee and the resulting standards published as a British Standard.

UK Vote

Please indicate whether you consider the UK should submit a negative (with supporting technical reasons) or positive vote on this draft. Please indicate if you are aware of any reason why this draft standard should not be published as a British Standard.

Submission of Comments

- **Annotated drafts are not acceptable and will be rejected.**
- All comments should be submitted online at <https://standardsdevelopment.bsigroup.com/>. You will need to register in order to comment.

Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx
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1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex (e.g. 3.1)	Paragraph/Figure/ Table/Note	Type of comment	Commend (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	



PROJECT NUMBER: IEC 61298-3 ED3	
DATE OF CIRCULATION: 2023-08-11	CLOSING DATE FOR COMMENTS: 2023-11-03
SUPERSEDES DOCUMENTS: 65B/1243/RR	

IEC SC 65B : MEASUREMENT AND CONTROL DEVICES	
SECRETARIAT: United States of America	SECRETARY: Mr Wallie Zoller
OF INTEREST TO THE FOLLOWING COMMITTEES:	PROPOSED HORIZONTAL STANDARD: ☐ Other TC/SCs are requested to indicate their interest, if any, in this CD to the secretary.
FUNCTIONS CONCERNED: ☐ EMC ☐ ENVIRONMENT ☒ QUALITY ASSURANCE ☐ SAFETY	

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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.

Recipients of this document are invited to submit, with their comments, notification of any local regulations or technical reasons that may exist and should be considered should this proposal proceed, recognizing that failure to address such requirements could result in the need for new or existing "In Some Countries" clauses. (SEE [AC/22/2007](#) OR [NEW GUIDANCE DOC](#)).

TITLE: Process measurement and control devices - General methods and procedures for evaluating performance - Part 3: Tests for the effects of influence quantities
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NOTE FROM TC/SC OFFICERS:

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

PROCESS MEASUREMENT AND CONTROL DEVICES – GENERAL METHODS AND PROCEDURES FOR EVALUATING PERFORMANCE –

Part 3: Tests for the effects of influence quantities

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.
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- 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 61298-3 has been prepared by sub-committee 65B: Devices and process analysis, of IEC technical committee 65: Industrial-process measurement, control and automation.

This second edition cancels and replaces the first edition published in 1998. This second edition constitutes a technical revision.

This edition is a general revision with respect to the previous edition and does not include any significant changes (see Introduction).

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

FDIS	Report on voting
65B/687/FDIS	65B/695/RVD

127
128 Full information on the voting for the approval of this standard can be found in the report on
129 voting indicated in the above table.

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

131 A list of all parts of the IEC 61298 series, under the general title *Process measurement and*
132 *control devices – General methods and procedures for evaluating performance*, can be found
133 on the IEC website.

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

- 137 • reconfirmed,
138 • withdrawn,
139 • replaced by a revised edition, or
140 • amended.

141

142

143

INTRODUCTION

144 This standard is not intended as a substitute for existing standards, but is rather intended as a
145 reference document for any future standard developed within the IEC, or other standards
146 organizations, concerning the evaluation of process instrumentation, except the Process
147 Measurement Transmitters (PMT) which are standardized by IEC series 62828. ...

148 This common standardized basis should be utilized for the preparation of future relevant
149 standards, as follows:

- 150 – any test method or procedure, already treated in this standard, should be specified and
151 described in the new standard by referring to the corresponding clause of this standard.
152 Consequently new editions of this standard are revised without any change in numbering
153 and scope of each clause;
- 154 – any particular method or procedure, not covered by this standard, should be developed
155 and specified in the new standard in accordance with the criteria, as far as they are
156 applicable, stated in this standard;
- 157 – any conceptual or significant deviation from the content of this standard should be clearly
158 identified and justified if introduced in a new standard.

159

PROCESS MEASUREMENT AND CONTROL DEVICES – GENERAL METHODS AND PROCEDURES FOR EVALUATING PERFORMANCE –

Part 3: Tests for the effects of influence quantities

1 Scope

This part of IEC 61298 specifies general methods and procedures for conducting tests and reporting on the functional and performance characteristics of process instrumentation except Process Measurement Transmitters (PMT) which are standardized by IEC series 62828. The tests are applicable to any such devices characterized by their own specific input and output variables, and by the specific relationship (transfer function) between the inputs and outputs, and include analogue and digital devices. For devices that require special tests, this standard should be used, together with any product-specific standard specifying special tests.

This standard covers tests for the effects of influence quantities.

2 Normative references

The following referenced documents are indispensable for the application 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 60050-300, *International Electrotechnical Vocabulary (IEV) – Electrical and electronic measurements and measuring instruments (composed of Part 311, 312, 313 and 314)*

IEC 60050-351, *International Electrotechnical Vocabulary (IEV) – Part 351 : Control technology*

IEC 61298-1, *Process measurement and control devices – General methods and procedures for evaluating performance – Part 1: General considerations*

IEC 61298-2, *Process measurement and control devices – General methods and procedures for evaluating performance – Part 2: Tests under reference conditions*

IEC 61298-4, *Process measurement and control devices – General methods and procedures for evaluating performance – Part 4: Evaluation report content*

IEC 60068-2-1, *Environmental testing – Part 2-1: Tests – Test A: Cold*

IEC 60068-2-2, *Environmental testing – Part 2-2: Tests – Test B: Dry heat*

IEC 60068-2-6, *Environmental testing – Part 2-6: Tests – Test Fc: Vibration (sinusoidal)*

IEC 60068-2-30, *Environmental testing – Part 2-30: Tests – Test Db: Damp heat, cyclic (12 + 12 h cycle)*

IEC 60068-2-31, *Environmental testing – Part 2-31: Tests – Test Ec: Drop and topple, primarily for equipment-type specimens*

- 199 *IEC 60079 (all parts), Explosive atmospheres*
- 200 *IEC 60654-1, Operating conditions for industrial-process measurement and control equipment*
 201 *– Part 1: Climatic conditions*
- 202 *IEC 60654-2, Operating conditions for industrial-process measurement and control equipment*
 203 *– Part 2: Power*
- 204 *IEC 60654-3, Operating conditions for industrial-process measurement and control equipment*
 205 *– Part 3: Mechanical influences*
- 206 *IEC 60654-4, Operating conditions for industrial-process measurement and control equipment*
 207 *– Part 4: Corrosive and erosive influences*
- 208 *IEC 61010-1, Safety requirements for electrical equipment for measurement, control, and*
 209 *laboratory use - Part 1: General requirement*
- 210 *IEC 61326-1, Electrical equipment for measurement, control and laboratory use – EMC*
 211 *Requirements – Part 1: General requirements*
- 212 *IEC 61000-4-2, Electromagnetic compatibility (EMC) – Part 4-2: Testing and measurement*
 213 *techniques – Electrostatic discharge immunity test. Basic EMC publication*
- 214 *IEC 61000-4-3, Electromagnetic compatibility (EMC) – Part 4-3: Testing and measurement*
 215 *techniques – Radiated, radio-frequency, electromagnetic field immunity test. Basic EMC*
 216 *publication*
- 217 *IEC 61000-4-4, Electromagnetic compatibility (EMC) – Part 4-4: Testing and measurement*
 218 *techniques – Electrical fast transient/burst immunity test. Basic EMC publication*
- 219 *IEC 61000-4-5, Electromagnetic compatibility (EMC) – Part 4-5: Testing and measurement*
 220 *techniques – Surge immunity test. Basic EMC publication*
- 221 *IEC 61000-4-6, Electromagnetic compatibility (EMC) – Part 4-6: Testing and measurement*
 222 *techniques – Immunity to conducted disturbances, induced by radio-frequency fields*
- 223 *IEC 61000-4-8, Electromagnetic compatibility (EMC) – Part 4-8: Testing and measurement*
 224 *techniques – Power frequency magnetic field immunity test. Basic EMC publication*
- 225 *IEC 61000-4-11, Electromagnetic compatibility (EMC) – Part 4-11: Testing and measurement*
 226 *techniques – Voltage dips, short interruptions and voltage variations immunity tests . Basic*
 227 *EMC publication*
- 228 *IEC 61508 (part1/7), Functional safety of electrical/electronic/programmable electronic safety-*
 229 *related systems*
- 230 *IEC 61511(part 1/3), Functional safety - Safety instrumented systems for the process industry*
 231 *sector*
- 232 *IEC 62061, Safety of machinery - Functional safety of safety-related electrical, electronic and*
 233 *programmable electronic control systems*
- 234 *IEC 62262, Degrees of protection provided by enclosures for electrical equipment against*
 235 *external mechanical impacts (IK code)*