



**SLOVENSKI STANDARD**  
**oSIST prEN IEC 61298-3:2024**  
**01-november-2024**

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**Naprave za merjenje in nadzor procesa - Splošne metode in postopki za ocenjevanje lastnosti - 3. del: Preskus na učinke vplivnih veličin**

Process measurement and control devices - General methods and procedures for evaluating performance - Part 3: Tests for the effects of influence quantities

Prozessmess-, -steuer- und -regelgeräte - Allgemeine Methoden und Verfahren für die Bewertung des Betriebsverhaltens - Teil 3: Prüfungen der Auswirkungen von Einflussgrößen

Dispositifs de mesure et de commande de processus - Méthodes et procédures générales d'évaluation des performances - Partie 3: Essais pour la détermination des effets des grandeurs d'influence

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**ICS:**

25.040.40	Merjenje in krmiljenje industrijskih postopkov	Industrial process measurement and control
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# 65B/1271/CDV

## COMMITTEE DRAFT FOR VOTE (CDV)

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SECRETARIAT: United States of America	SECRETARY: Mr Wallie Zoller
OF INTEREST TO THE FOLLOWING COMMITTEES:	HORIZONTAL FUNCTION(S):
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TITLE:

**Process measurement and control devices - General methods and procedures for evaluating performance - Part 3: Tests for the effects of influence quantities**

PROPOSED STABILITY DATE: 2028

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## 71 INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

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**Part 3: Tests for the effects of influence quantities**

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**FOREWORD**

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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.

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

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

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

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

124

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

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

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

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

- 134 • reconfirmed,
- 135 • withdrawn,
- 136 • replaced by a revised edition, or
- 137 • amended.

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## INTRODUCTION

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

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

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

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157 **PROCESS MEASUREMENT AND CONTROL DEVICES –**  
158 **GENERAL METHODS AND PROCEDURES**  
159 **FOR EVALUATING PERFORMANCE –**

160  
161 **Part 3: Tests for the effects of influence quantities**  
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165 **1 Scope**

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

173 This standard covers tests for the effects of influence quantities.

174 **2 Normative references**

175 The following referenced documents are indispensable for the application of this document.  
176 For dated references, only the edition cited applies. For undated references, the latest edition  
177 of the referenced document (including any amendments) applies.

178 IEC 60050-300, *International Electrotechnical Vocabulary (IEV) – Electrical and electronic*  
179 *measurements and measuring instruments (composed of Part 311, 312, 313 and 314)*

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

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

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

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

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

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

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

191 IEC 60068-2-30, *Environmental testing – Part 2-30: Tests – Test Db: Damp heat, cyclic (12 +*  
192 *12 h cycle)*

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

195

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