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Standards

Irish Standard
I.S. EN 50131-6:2017&A1:2021

Alarm systems - Intrusion and hold-up systems - Part 6: Power supplies

I.S. EN 50131-6:2017&A1:2021

Incorporating amendments/corrigenda/National Annexes issued since publication:

EN 50131-6:2017/A1:2021

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National Foreword

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EUROPEAN STANDARD

EN 50131-6:2017/A1

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EUROPÄISCHE NORM

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English Version

Alarm systems - Intrusion and hold-up systems - Part 6: Power supplies

Systèmes d'alarme - Systèmes d'alarme contre l'intrusion et les hold-up - Partie 6: Alimentation

Alarmanlagen - Einbruch- und Überfallmeldeanlagen - Teil 6: Energieversorgungen

This amendment A1 modifies the European Standard EN 50131-6:2017; it was approved by CENELEC on 2021-05-25. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

This amendment exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.



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EN 50131-6:2017/A1:2021 (E)

| Contents | | Page |
|-------------------------------|---|-------------|
| European foreword..... | | 3 |
| 1 | Modifications to 4.3.3.2, “PS Type A and B” | 4 |
| 2 | Modification to 6, “Documentation” | 4 |
| 3 | Modification to 7.1, “General” | 4 |
| 4 | Modification to 7.2.4, “Load electrical characteristics” | 5 |
| 5 | Modification to 7.5.4.1, “Stimuli” | 5 |
| 6 | Modification to 7.5.4.2, “Measurement” | 5 |
| 7 | Modification to 7.5.7, “Pass/Fail criteria” | 6 |

European foreword

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to be implemented at national level by
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- latest date by which the national (dow) 2024-05-25
standards conflicting with this document
have to be withdrawn

This document amends EN 50131-6:2017.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC shall not be held responsible for identifying any or all such patent rights.

EN 50131-6:2017/A1:2021 (E)

1 Modifications to 4.3.3.2, “PS Type A and B”

Replace 3rd paragraph (An APS Fault signal or message shall be removed...) by:

“An APS Fault signal or message shall be removed according to Table 2 and within the maximum time periods defined in Table 4, when the energy in the SD rises above the low value specified by the PS manufacturer. Alternatively, for PS type A, when the EPS is re-applied following a loss of EPS and the SD is undergoing normal charging, any APS Fault signal or message generated due to a SD Low Residual Energy condition shall be removed within the maximum time periods defined in Table 4.”

Delete the final paragraph (For PS type A, when...)

2 Modification to 6, “Documentation”

Replace l) (the SD criteria...) by:

“l) the SD criteria at which the SD Low Residual Energy signal or message will be generated and removed”;

3 Modification to 7.1, “General”

Add below 1st paragraph (Where products are to be tested...):

“NOTE Where an optional requirement has been claimed by the manufacturer then the test for that requirement is mandatory.”

Replace Table 10 with:

“

Table 10 — Tests for PS according to Type

| Test | Title | Test No. | Type A | Type B | Type C |
|------|--|----------|--------|--------|--------|
| 1 | Reduced Functional Test | 7.3 | M | M | M |
| 2 | Monitoring: Loss of EPS | 7.4 | M | M | N/A |
| 3 | Monitoring: Storage Device Low Residual Energy | 7.5 | M | M | M |
| 4 | Monitoring: Storage Device Failure | 7.6 | M | M | N/A |
| 5 | Monitoring: Low Output Voltage | 7.7 | M | M | N/A |
| 6 | Monitoring: Power Unit Failure - Loss of PU Power Output | 7.8 | M | M | N/A |
| 7 | Monitoring: Power Unit Failure – Loss of SD Recharge | 7.9 | M | N/A | N/A |
| 8 | Test on Demand | 7.10 | M | M | N/A |
| 9 | APS Capability | 7.11 | M | M | N/A |
| 10 | Recharging for PS Type A | 7.12 | M | N/A | N/A |
| 11 | Over-voltage Protection | 7.13 | M | M | M |
| 12 | Short Circuit Protection | 7.14 | M | M | M |

EN 50131-6:2017/A1:2021 (E)

| Test | Title | Test No. | Type A | Type B | Type C |
|------|--|----------|--------|--------|--------|
| 13 | Overload Protection | 7.15 | M | M | M |
| 14 | Deep Discharge Protection | 7.16 | M | M | N/A |
| 15 | Tamper Protection | 7.17 | M | M | M |
| 16 | Tamper Detection – Access to inside of the housing | 7.18 | M | M | M |
| 17 | Tamper Detection – Removal from Mounting | 7.19 | M | M | M |
| 18 | Tamper Detection – Penetration of Housing | 7.20 | M | M | M |
| 19 | Environmental and EMC | 7.21 | M | M | M |
| 20 | PS Rating | 7.22 | M | M | M |
| 21 | Output Voltage Stability – Gradual Load variation | 7.23 | M | M | M |
| 22 | Output Voltage Stability – Switched Load variation | 7.24 | M | M | M |
| 23 | Marking and Documentation | 7.25 | M | M | M |

M = Test mandatory for PS Type
N/A = Not Applicable

4 Modification to 7.2.4, “Load electrical characteristics”

Add below 1st paragraph (The electrical characteristics of the load...):

“NOTE Parasitic (unintentional) reactive components in the load are considered to have negligible impact.”

5 Modification to 7.5.4.1, “Stimuli”

Add below 8th paragraph (For PS with capability to disable...):

“Increase the simulated SD energy level above the level at which the PS manufacturer has declared that an APS Fault signal or message will be removed.”

6 Modification to 7.5.4.2, “Measurement”

Replace 2nd paragraph (Measure the time between the re-connection...) by:

“Where the APS Fault signal or message is removed on re-application of the EPS:

- (i) measure the time between the re-connection of the EPS and the removal of the APS Fault signal or message

otherwise

- (ii) measure the time between the simulated SD energy level exceeding the SD Low Residual Energy value as specified by the PS manufacturer and the removal of the APS Fault signal or message.”

EN 50131-6:2017/A1:2021 (E)

7 Modification to 7.5.7, “Pass/Fail criteria”

Replace 3rd paragraph ((i) the APS fault signal or message...) by:

“

- (i) the APS Fault signal or message shall be removed within the maximum time periods defined in Table 4:
 - a. when the EPS is reconnected, provided that, where applicable, the simulated SD energy level is above the safe recharge threshold as declared by the PS manufacturer

Or

- b. when the simulated SD energy level rises above the low value as specified by the PS manufacturer.

”

EUROPEAN STANDARD

EN 50131-6

NORME EUROPÉENNE

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English Version

Alarm systems - Intrusion and hold-up systems - Part 6: Power supplies

Systèmes d'alarme - Systèmes d'alarme contre l'intrusion et les hold-up - Partie 6: Alimentation

Alarmanlagen - Einbruch- und Überfallmeldeanlagen - Teil 6: Energieversorgungen

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

EN 50131-6:2017 (E)

| Contents | | Page |
|--------------------------------|---|-----------|
| European foreword | | 4 |
| Introduction | | 5 |
| 1 | Scope | 6 |
| 2 | Normative references | 6 |
| 3 | Terms, definitions and abbreviations | 7 |
| 3.1 | Terms and definitions | 7 |
| 3.2 | Abbreviations | 9 |
| 4 | Functional requirements | 9 |
| 4.1 | PS configurations | 9 |
| 4.2 | General requirements | 10 |
| 4.3 | Monitoring of PS | 13 |
| 4.4 | APS capability | 17 |
| 4.5 | Recharging for PS Type A | 17 |
| 4.6 | Over-voltage protection | 18 |
| 4.7 | Short circuit protection | 18 |
| 4.8 | Overload protection | 18 |
| 4.9 | Deep discharge protection | 18 |
| 4.10 | Ripple | 18 |
| 4.11 | Tamper security | 18 |
| 4.12 | Environmental | 21 |
| 4.13 | Safety | 22 |
| 4.14 | EMC susceptibility | 22 |
| 4.15 | Electrical | 22 |
| 5 | Marking | 23 |
| 6 | Documentation | 23 |
| 7 | Tests | 24 |
| 7.1 | General | 24 |
| 7.2 | General test conditions | 25 |
| 7.3 | Reduced functional test | 26 |
| 7.4 | Monitoring: Loss of EPS | 26 |
| 7.5 | Monitoring: Storage Device Low Residual Energy | 27 |
| 7.6 | Monitoring: Storage Device Failure | 30 |
| 7.7 | Monitoring: Low Output Voltage | 30 |
| 7.8 | Monitoring: Power Unit Failure – Loss of PU Power Output | 31 |

| | | |
|-------------|---|-----------|
| 7.9 | Monitoring: Power Unit Failure – Loss of SD Recharge | 32 |
| 7.10 | Test on demand | 32 |
| 7.11 | APS Capability | 33 |
| 7.12 | Recharging for PS Type A | 34 |
| 7.13 | Over voltage protection | 35 |
| 7.14 | Short Circuit Protection | 36 |
| 7.15 | Overload Protection | 37 |
| 7.16 | Deep Discharge Protection | 38 |
| 7.17 | Tamper security - Protection | 39 |
| 7.18 | Tamper Detection – Access to inside of the housing | 39 |
| 7.19 | Tamper detection – Removal from mounting | 40 |
| 7.20 | Tamper detection – Penetration of the housing | 41 |
| 7.21 | Environmental and EMC | 42 |
| 7.22 | PS Rating | 42 |
| 7.23 | Output voltage stability - Gradual load variation | 45 |
| 7.24 | Output Voltage Stability – Switched Load Variation | 46 |
| 7.25 | Marking and Documentation | 47 |
| | Annex A (informative) Determination of Storage Device failure | 48 |
| | Annex B (normative) Measurement of ripple voltage | 49 |
| B.1 | General | 49 |
| B.2 | Principle | 49 |
| B.3 | Test conditions | 49 |
| B.4 | Measurement | 49 |
| B.5 | Pass/Fail Criteria | 49 |
| | Annex C (normative) Measurement of transients | 50 |
| C.1 | General | 50 |
| C.2 | Principle | 50 |
| C.3 | Test conditions | 50 |
| C.4 | Measurement | 50 |
| C.5 | Pass/Fail Criteria | 50 |
| | Annex D (informative) Test on Demand signal or message timing and usage protocol | 51 |
| | Annex E (informative) Cross-reference between requirements and corresponding tests | 52 |

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- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2020-09-18

This document supersedes EN 50131-6:2008.

The revision is to make the document less technology specific and more inclusive of the different types of power supplies found in I&HAS and the different types of technologies that are, and can be, employed within a power supply. It will make the document easier to use and more clearly applicable to the range of PSU configurations to be found in I&HAS.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC shall not be held responsible for identifying any or all such patent rights.

Introduction

This European Standard deals with power supplies (PS) of intrusion and hold-up alarm systems (I&HAS) installed in buildings. It includes devices that are installed inside or outside of the supervised premises and mounted in indoor or outdoor environments.

The PS may be fully contained in its own housing or it may be integrated with other components within an I&HAS, e.g. the control and indicating equipment (CIE).

An I&HAS may use one or more PS.

EN 50131-6:2017 (E)

1 Scope

This European Standard specifies the requirements, performance criteria and testing procedures for PS to be used as part of Intrusion and Hold up Alarm Systems. The PS will either be an integral part of an I&HAS component or stand-alone. The control functions of the PS may be incorporated as part of the PS device, or may be provided by another I&HAS component, e.g. a CIE.

This European Standard is not applicable when the PS requirements for I&HAS components are included within the relevant product standard.

The requirements correspond to each of the four security grades given in the European Standard EN 50131-1, *Alarm Systems – Intrusion and Hold-Up Systems – Part 1: System requirements*. Requirements are also given for four environmental classes covering applications in indoor and outdoor locations.

This standard covers:

- a) mandatory functions which will be provided on all PS; and
- b) optional functions which may be provided.

This European Standard does not deal with requirements for compliance with EC regulatory Directives, such as the EMC Directive, Low Voltage Directive, etc. except that it specifies the equipment operating conditions and reduced functional test for EMC susceptibility testing as required by EN 50130-4.

Other functions associated with I&HAS not specified in this standard may be provided. Such functions will not affect the requirements of any mandatory or optional functions.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 50130-4, *Alarm systems - Part 4: Electromagnetic compatibility - Product family standard: Immunity requirements for components of fire, intruder, hold up, CCTV, access control and social alarm systems*

EN 50130-5, *Alarm systems - Part 5: Environmental test methods*

EN 50131-1, *Alarm systems - Intrusion and hold-up systems - Part 1: System requirements*

EN 60068-2-14:2009, *Environmental testing - Part 2-14: Tests - Test N: Change of temperature (IEC 60068-2-14:2009)*

EN 60529, *Degrees of protection provided by enclosures (IP Code) (IEC 60529)*

EN 62262, *Degrees of protection provided by enclosures for electrical equipment against external mechanical impacts (IK code) (IEC 62262)*

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