

## **Staatilised ülekandeseadmed. Osa 3: Toimivuse määratlemismeetod ja katsetusnõuded**

Static Transfer Systems -- Part 3: Method of specifying  
the performance and test requirements

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 62310-3:2008 sisaldab Euroopa standardi EN 62310-3:2008 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 20.10.2008 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 05.09.2008.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN 62310-3:2008 consists of the English text of the European standard EN 62310-3:2008.

This standard is ratified with the order of Estonian Centre for Standardisation dated 20.10.2008 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

Date of Availability of the European standard text 05.09.2008.

The standard is available from Estonian standardisation organisation.

ICS 29.200, 29.240.30

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**Static transfer systems (STS) -  
Part 3: Method for specifying performance and test requirements  
(IEC 62310-3:2008)**

Systèmes de transfert statique (STS) -  
Partie 3: Méthode de spécification des  
performances et exigences d'essai  
(CEI 62310-3:2008)

Statische Transfersysteme -  
Teil 3: Verfahren für die Festlegung des  
Betriebsverhaltens und Prüfanforderungen  
(IEC 62310-3:2008)

This European Standard was approved by CENELEC on 2008-07-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

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**CENELEC**

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

**Central Secretariat: rue de Stassart 35, B - 1050 Brussels**

## Foreword

The text of document 22H/105/FDIS, future edition 1 of IEC 62310-3, prepared by SC 22H, Uninterruptible power systems (UPS), of IEC TC 22, Power electronic systems and equipment, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 62310-3 on 2008-07-01.

The following dates were fixed:

- latest date by which the EN has to be implemented  
at national level by publication of an identical  
national standard or by endorsement (dop) 2009-04-01
- latest date by which the national standards conflicting  
with the EN have to be withdrawn (dow) 2011-07-01

Annex ZA has been added by CENELEC.

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## Endorsement notice

The text of the International Standard IEC 62310-3:2008 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60664-3	NOTE Harmonized as HD 625.3 S1:1997 (not modified). HD 625.3 S1 is superseded by EN 60664-3:2003 which is based on IEC 60664-3:2003.
IEC 60947-1	NOTE Harmonized as EN 60947-1:2007 (not modified).
IEC 60990	NOTE IEC 60990:1990 is superseded by IEC 60990:1999, which is harmonized as EN 60990:1999 (not modified).
IEC 61140	NOTE Harmonized as EN 61140:2002 (not modified).
IEC 61400-1	NOTE Harmonized as EN 61400-1:2005 (not modified).
IEC 62040-2	NOTE Harmonized as EN 62040-2:2006 (not modified).
IEC 62040-1-1	NOTE Harmonized as EN 62040-1-1:2003 (not modified).
IEC 62040-1-2	NOTE Harmonized as EN 62040-1-2:2003 (not modified).

## Annex ZA (normative)

### Normative references to international publications with their corresponding European publications

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.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60068	Series	Environmental testing	EN 60068	Series
IEC 60146-1-1	- <sup>1)</sup>	Semiconductor convertors - General requirements and line commutated convertors Part 1-1: Specification of basic requirements	EN 60146-1-1	1993 <sup>2)</sup>
IEC 60439-1	- <sup>1)</sup>	Low-voltage switchgear and controlgear assemblies - Part 1: Type-tested and partially type-tested assemblies	EN 60439-1	1999 <sup>2)</sup>
IEC 60529	- <sup>1)</sup>	Degrees of protection provided by enclosures (IP Code)	EN 60529 + corr. May	1991 <sup>2)</sup> 1993
IEC 60947-6-1	- <sup>1)</sup>	Low-voltage switchgear and controlgear - Part 6-1: Multiple function equipment - Transfer switching equipment	EN 60947-6-1	2005 <sup>2)</sup>
IEC 60950-1 (mod)	- <sup>1)</sup>	Information technology equipment - Safety - Part 1: General requirements	EN 60950-1	2006 <sup>2)</sup>
IEC 61000-2-2	- <sup>1)</sup>	Electromagnetic compatibility (EMC) - Part 2-2: Environment - Compatibility levels for low-frequency conducted disturbances and signalling in public low-voltage power supply systems	EN 61000-2-2	2002 <sup>2)</sup>
IEC 62040-3 (mod)	- <sup>1)</sup>	Uninterruptible power systems (UPS) - Part 3: Method of specifying the performance and test requirements	EN 62040-3	2001 <sup>2)</sup>
IEC 62310-1	- <sup>1)</sup>	Static transfer systems (STS) - Part 1: General and safety requirements	EN 62310-1	2005 <sup>2)</sup>
IEC 62310-2 (mod)	- <sup>1)</sup>	Static transfer systems (STS) - Part 2: Electromagnetic compatibility (EMC) requirements	EN 62310-2	2007 <sup>2)</sup>
ISO 7779	- <sup>1)</sup>	Acoustics - Measurement of airborne noise emitted by information technology and telecommunications equipment	EN ISO 7779	2001 <sup>2)</sup>

<sup>1)</sup> Undated reference.

<sup>2)</sup> Valid edition at date of issue.

## CONTENTS

FOREWORD.....	4
1 Scope.....	6
2 Normative references .....	6
3 Terms and definitions .....	7
3.1 General definitions .....	7
3.2 Specified values .....	10
3.3 Input values.....	11
3.4 Output values .....	11
4 Performance requirements .....	12
4.1 Declared electrical characteristics .....	12
4.1.1 Performance classification.....	12
4.1.2 Main electrical characteristics.....	13
4.2 Normal service conditions .....	14
4.3 Transfer characteristics .....	14
4.3.1 Load voltage.....	14
4.3.2 Cross-current .....	15
4.4 Neutral management .....	15
4.4.1 Common neutral .....	15
4.4.2 Separately derived neutrals.....	15
4.4.3 Neutral current .....	15
4.4.4 Protective earth current .....	15
4.5 Performance requirements to be identified by the purchaser .....	16
5 STS tests .....	16
5.1 General.....	16
5.1.1 Type tests .....	16
5.1.2 Routine tests .....	16
5.1.3 Site tests .....	16
5.1.4 Testing schedule .....	16
5.2 Electrical tests.....	18
5.2.1 Insulation and dielectric.....	18
5.2.2 Light load and functional test.....	18
5.2.3 No load.....	19
5.2.4 Rated load.....	19
5.2.5 Transfer.....	19
5.2.6 Source tolerance .....	21
5.2.7 Overload and fault current .....	21
5.2.8 Operating losses .....	23
5.2.9 Backfeed .....	24
5.2.10 Abnormal operating conditions .....	25
5.3 Transportation and environment .....	26
5.3.1 General .....	26
5.3.2 Impact and shock .....	26
5.3.3 Free fall.....	26
5.3.4 Storage .....	27
5.3.5 Temperature and humidity .....	28
5.3.6 Acoustic noise .....	28

Annex A (normative) Reference load .....	29
Annex B (normative) STS voltage sensing tolerance .....	33
Annex C (informative) Neutral management in static transfer systems .....	35
Annex D (normative) Neutral switching in static transfer systems – Additional requirements .....	37
Annex E (informative) Purchaser specification guidelines .....	39
Annex F (informative) Output short circuit test procedure .....	43
Annex G (normative) Backfeed protection test .....	47
Annex H (normative) Minimum and maximum cross-sections of copper conductors suitable for connection .....	48
Bibliography .....	49
Figure 1 – Complying load current flow - Common grounding of a.c. input sources - common STS neutral .....	15
Figure 2 – Objectionable load current flow - Independent grounding of a.c. input sources - common STS neutral .....	16
Figure 3 – STS cross current test .....	20
Figure 4 – Typical circuit for measuring conduction losses .....	24
Figure B.1 – Source tolerance classification 1 .....	33
Figure B.2 – Source tolerance classification 2 .....	34
Figure B.3 – Source tolerance classification 3 .....	34
Figure B.4 – Source tolerance classification 4 .....	34
Figure C.1 – Continuous STS neutral with common grounding of a.c. input sources (complying load current flow) .....	35
Figure C.2 – Continuous STS neutral with independent grounding of a.c. input sources + isolation transformer (complying load current flow) .....	36
Figure C.3 – Switched STS with independent grounding of a.c. input sources (complying steady state load current flow) .....	36
Figure D.1 – Load voltage variation upon neutral switch failure .....	37
Figure D.2 – Overlapping switched STS neutral .....	38
Figure F.1 – Test circuit for STS output withstand current .....	45
Table 1 – Transfer interruption classification “T” .....	13
Table 2 – Tests for STS performance characteristics .....	17
Table 3 – Short time withstand current .....	22
Table 4 – Free fall testing .....	27
Table E.1 – STS technical data sheet .....	41
Table F.1 – Values of power-factors and time-constants corresponding to test currents and ratio $n$ between peak and r.m.s. values of current .....	44
Table H.1 – Minimum and maximum cross-sections of copper conductors suitable for connection (extract from IEC 60439-1) .....	48

## STATIC TRANSFER SYSTEMS (STS) –

### Part 3: Method for specifying performance and test requirements

#### 1 Scope

The IEC 62310 series of three standards applies to stand-alone operating a.c. static transfer systems (STS) intended to ensure the continuity of load supply through controlled transfer, with or without interruption of power, from two or more independent a.c. sources.

This series of standards includes information for the overall integration of the STS and its accessories into the a.c. power network and includes requirements for the switching elements, their control and protective elements, where applicable.

Part 1 of the series concerns general and safety requirements.

Part 2 of the series concerns electromagnetic compatibility (EMC) requirements.

This Part 3 of the series concerns methods for specifying performance and test requirements including applicable safety tests referenced in standard IEC 62310-1 for general and safety requirements.

This standard applies for single-phase, phase-phase and three-phase static transfers in a. c. systems up to 1 000 V. It takes precedence over all aspects of generic performance standards, and no additional performance testing is necessary.

The requirements have been selected so as to be consistent with compatibility levels for low-frequency conducted disturbances and signalling in public low-voltage power supply systems (see IEC 61000-2-2) as well as to ensure an adequate level of performance when the STS is applied in diverse critical load situations. The requirements take into account the differing test conditions necessary to encompass the range of physical sizes and power ratings of STS. This standard applies to STS as a stand-alone product, whether presented as a unit or an assembly of units. This standard does not apply to:

- devices for d.c. source switching;
- single source systems;
- transfer systems using only electromechanical switching devices with interruption of the supply to the load during transfer and intended to be used in emergency power systems or covered by IEC 60947-6-1;
- automatic switching devices integrated into UPS covered by the IEC 62040 series of UPS product standards.

NOTE Additional or different requirements may apply to STS intended for use on board of vehicles including ships and aircrafts, in emergency power systems subject to a particular regulation e.g. health care facilities, fire fighting or emergency rescue, in tropical countries or where elevations are greater than 1 000 m.

#### 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 60068 (all parts), *Environmental testing*



IEC 60146-1-1, *Semiconductor convertors – General requirements and line commutated convertors – Part 1-1: Specifications of basic requirements*

IEC 60439-1, *Low-voltage switchgear and controlgear assemblies – Part 1: Type-tested and partially type-tested assemblies*

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

IEC 60947-6-1, *Low-voltage switchgear and controlgear – Part 6-1: Multiple function equipment – Transfer switching equipment*

IEC 60950-1, *Information technology equipment – Safety – Part 1: General requirements*

IEC 61000-2-2, *Electromagnetic compatibility (EMC) – Part 2-2: Environment – Compatibility levels for low-frequency conducted disturbances and signalling in public low-voltage power supply systems*

IEC 62040-3, *Uninterruptible power systems (UPS) – Part 3: Method of specifying the performance and test requirements*

IEC 62310-1, *Static Transfer Systems (STS) – Part 1: General and safety requirements*

IEC 62310-2, *Static Transfer Systems (STS) – Part 2: Electromagnetic Compatibility (EMC) requirements*

ISO 7779, *Measurement of airborne noise emitted by information technology and telecommunications equipment*

### 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

#### 3.1 General definitions

##### 3.1.1

##### **static transfer system (STS)**

system that transfers a load, by static means, between a preferred source and an alternate source

NOTE 1 The transfer may be automatic and/or manual.

NOTE 2 The transfer may be with or without interruption.

##### 3.1.2

##### **power pole or electronic power switch**

in the context of this standard, an operative unit for electronic power switching comprising at least one controlled electronic valve device

[IEV 551-13-01, modified]

##### 3.1.3

##### **primary circuit**

internal circuit which is directly connected to the external supply source which supplies the electric power to the load. It includes the primary windings of transformers, motors, other loading devices and the means of connection to the supply source.