Function blocks - Part 4: Rules for compliance profiles (IEC 61499-4:2013)

EESTI STANDARDIKESKUS
ESTONIAN CENTRE FOR STANDARDISATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 61499-4:2013 sisaldab Euroopa standardi EN 61499-4:2013 ingliskeelset teksti.	This Estonian standard EVS-EN 61499-4:2013 consists of the English text of the European standard EN 61499-4:2013.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 03.05.2013.	Date of Availability of the European standard is 03.05.2013.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 25.040.40

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 61499-4

May 2013

ICS 25.040.40

Supersedes EN 61499-4:2006

English version

Function blocks - Part 4: Rules for compliance profiles

(IEC 61499-4:2013)

Blocs fonctionnels - Partie 4: Règles pour les profils de conformité (CEI 61499-4:2013)

Verteilte Funktionsbausteine für die Automatisierungstechnik - Teil 4: Regeln für normgerechte Profile (IEC 61499-4:2013)

This European Standard was approved by CENELEC on 2013-03-06. 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.

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 European Standard 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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

CENELEC

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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Ref. No. EN 61499-4:2013 E

Foreword

The text of document 65B/854/FDIS, future edition 2 of IEC 61499-4, prepared by SC 65B, "Measurement and control devices", of IEC TC 65, "Industrial-process measurement, control and automation" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 61499-4:2013.

The following dates are fixed:

• latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2013-12-06
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2016-03-06

This document supersedes EN 61499-4:2006.

EN 61499-4:2013 includes the following significant technical change with respect to EN 61499-4:2006:

Table B.1 has been updated for consistency with Table 8 of EN 61499-1:2013.

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

Endorsement notice

The text of the International Standard IEC 61499-4:2013 was approved by CENELEC as a European Standard without any modification.

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

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.

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

Publication	Year	Title	EN/HD	Year
IEC 61499-1	2012	Function blocks - Part 1: Architecture	EN 61499-1	2013
IEC 61499-2	2012	Function blocks - Part 2: Software requirements	EN 61499-2	2013
ISO/IEC Directives Part 2	2011	Rules for the structure and drafting of International Standards	-	-

CONTENTS

FUNCTION BLOCKS –

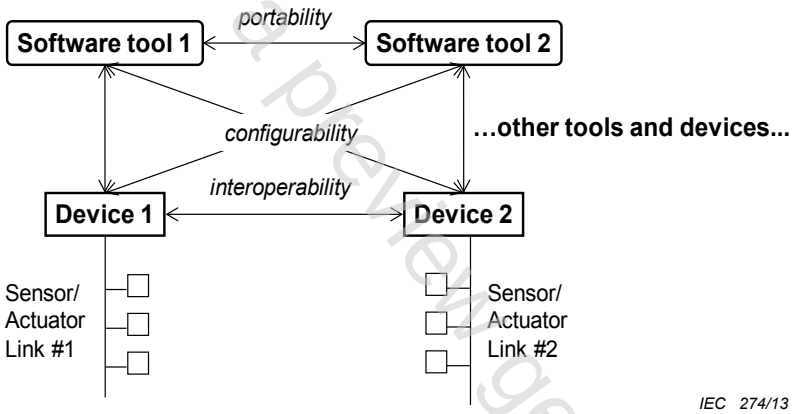
Part 4: Rules for compliance profiles

1 Scope

This part of IEC 61499 defines rules for the development of *compliance profiles,* which specify the features of IEC 61499-1 and 61499-2 to be implemented in order to promote the following *attributes* of IEC 61499-based *systems, devices* and *software tools*:

- *interoperability* of *devices* from multiple suppliers;
- *portability* of *software* between *software tools* of multiple suppliers; and
- *configurability* of devices from multiple vendors by software tools of multiple suppliers.

These attributes are illustrated in Figure 1.



NOTE 1 The sensor/actuator links designated #1 and #2 in Figure 1 may be non-interoperable. However, it is intended that systems complying with a particular profile may show the transfer of *events* and *data* from sensors on one link to actuators on another link using appropriately configured and interconnected *service interface function blocks*.

NOTE 2 Compliance profiles may extend their scope beyond that shown in Figure 1 to include interoperability of sensors and actuators.

NOTE 3 Suppliers of *software tools* ensure that their products conform to the requirements of IEC 61499-2 as well as any specific requirements defined in compliance profiles applicable to their particular software tools.

Figure 1 – Topics addressed by compliance profiles

The specification of provisions for the facilitation of device *interchangeability* is beyond the scope of this part of IEC 61499.

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.

IEC 61499-1,— *Function blocks – Part 1: Architecture*[1]

IEC 61499-2,— *Function blocks – Part 2: Software tool requirements*[1]

ISO/IEC Directives, Part 2:2011, *Rules for the structure and drafting of International Standards*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 61499-1 and IEC 61499-2, as well as the following, apply.

NOTE 1 Terms defined in this clause are *italicized* where they appear.

NOTE 2 See also the ISO/AFNOR *Dictionary of computer science*[2] and the *International Electrotechnical Vocabulary*[3] for terms not defined or referenced in this part of IEC 61499.

3.1
comply
comply with a specification
meet all the requirements (of the specification)

3.2
compliance profile
specification *complying* with the rules given in this part of IEC 61499

3.3
configurability
ability (of a functional unit) to be *configured*

EXAMPLE The *configurability* of a *device* can be expressed by the extent to which it *conforms* to the configurability requirements of a *compliance profile*.

3.4
conform
conform to a specification
satisfy some, but not necessarily all, of the requirements (of the specification)

EXAMPLE A *software tool* or a device developed to meet some but not necessarily all of the requirements of a compliance profile is said to "conform to" or to be "conformant with" that compliance profile.

3.5
interoperable
able to operate together to perform a specified set of *functions*

EXAMPLE Two *devices* may be considered *interoperable* if they are able to operate together to perform the *functions* specified in a *system configuration*.

3.6
interchangeable
interchangeable with a *functional unit*
able to be substituted (for the functional unit)

---

1 To be published. Expected publication date: 2013.

2 See Bibliography.

3 See Bibliography.