# INTERNATIONAL STANDARD

# IEC 61499-4

First edition
2005-08

## Function blocks –

## Part 4: Rules for compliance profiles



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International Electrotechnical Commission
Международная Электротехническая Комиссия

PRICE CODE K

*For price, see current catalogue*

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## FOREWORD

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International Standard IEC 61499-4 has been prepared by IEC technical committee 65: Industrial-process measurement and control.

This standard cancels and replaces IEC/PAS 61499-4 published in 2002.

This first edition constitutes a technical revision.

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

| CDV | Report on voting |
|---|---|
| 65/349/CDV | 65/363/RVC |

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

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

IEC 61499 consists of the following parts, under the general title *Function blocks*:

Part 1: Architecture

Part 2: Software tool requirements

Part 3: Tutorial information

Part 4: Rules for compliance profiles

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

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual edition of this standard may be issued at a later date.

# 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.

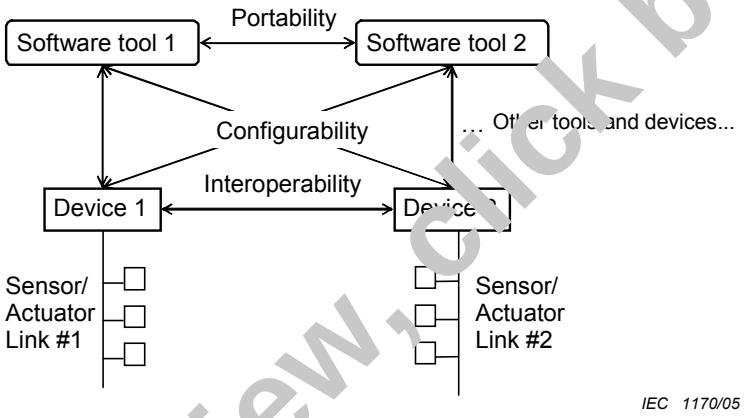


**Figure 1 – Topics addressed by compliance profiles**

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* should assure 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.

The specification of provisions for the facilitation of device *interchangeability* is beyond the scope of this standard.

## 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 61499-1, *Function blocks – Part 1: Architecture*

IEC 61499-2, *Function blocks – Part 2: Software tools requirements*

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