

Industrial-process measurement and control - Data structures and elements in process equipment catalogues - Part 92: Lists of properties (LOP) of measuring equipment for electronic data exchange - Aspect LOPs

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN IEC 61987-92:2018 sisaldab Euroopa standardi EN IEC 61987-92:2018 ingliskeelset teksti.	This Estonian standard EVS-EN IEC 61987-92:2018 consists of the English text of the European standard EN IEC 61987-92:2018.
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ICS 25.040.40, 35.040.50

English Version

Industrial-process measurement and control - Data structures
and elements in process equipment catalogues - Part 92: Lists of
properties (LOP) of measuring equipment for electronic data
exchange - Aspect LOPs
(IEC 61987-92:2018)

Mesure et commande dans les processus industriels -
Structures de données et éléments dans les catalogues
d'équipements de processus - Partie 92: Listes de
propriétés (LOP) des équipements de mesure pour
l'échange électronique de données - LOP d'aspect
(IEC 61987-92:2018)

Industrielle Leittechnik - Datenstrukturen und -elemente in
Katalogen der Prozessleittechnik - Teil 92: Merkmalleisten
(ML) für Messeinrichtungen für den elektronischen
Datenaustausch - Merkmalleisten für bestimmte Aspekte
(IEC 61987-92:2018)

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

European foreword

The text of document 65E/587/FDIS, future edition 1 of IEC 61987-92, prepared by SC 65E "Devices and integration in enterprise systems" of IEC/TC 65 "Industrial-process measurement, control and automation" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 61987-92:2018.

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) 2019-04-10
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2021-07-10

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

IEC 60947-5-6:1999	NOTE Harmonized as EN 60947-5-6:2000 (not modified)
IEC 61298-1:2008	NOTE Harmonized as EN 61298-1:2008 (not modified)
IEC 61298-2:2008	NOTE Harmonized as EN 61298-2:2008 (not modified)
IEC 61298-3:2008	NOTE Harmonized as EN 61298-3:2008 (not modified)
IEC 61360-1	NOTE Harmonized as EN 61360-1
IEC 61360-2	NOTE Harmonized as EN 61360-2
IEC 61784-1	NOTE Harmonized as EN 61784-1
IEC 61784-2	NOTE Harmonized as EN 61784-2
IEC 61804-2	NOTE Harmonized as EN IEC 61804-2
IEC 61987 series	NOTE Harmonized as EN 61987 series
IEC 61987-1	NOTE Harmonized as EN 61987-1
IEC 61987-16	NOTE Harmonized as EN 61987-16
IEC 62264-1:2013	NOTE Harmonized as EN 62264-1:2013 (not modified)
IEC 62424:2016	NOTE Harmonized as EN 62424:2016 (not modified)
IEC 62569-1:2017	NOTE Harmonized as EN 62569-1:2017 (not modified)
ISO 5167-2:2003	NOTE Harmonized as EN ISO 5167-2:2003 (not modified)

Annex ZA

(normative)

Normative references to international publications with their corresponding European publications

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61355-1	2008	Classification and designation of documents for plants, systems and equipment -- Part 1: Rules and classification tables	EN 61355-1	2008
IEC 61360	series	Standard data element types associated classification scheme	EN 61360	series
IEC 61987-10	2009	Industrial-process measurement and control - Data structures and elements in process equipment catalogues - Part 10: Lists of Properties (LOPs) for Industrial-Process Measurement and Control for Electronic Data Exchange - Fundamentals	EN 61987-10	2009
-	-		+ AC	2011
IEC 61987-11	2016	Industrial-process measurement and control - Data structures and elements in process equipment catalogues - Part 11: List of properties (LOPs) of measuring equipment for electronic data exchange - Generic structures	EN 61987-11	2017

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

INDUSTRIAL-PROCESS MEASUREMENT AND CONTROL – DATA STRUCTURES AND ELEMENTS IN PROCESS EQUIPMENT CATALOGUES –

Part 92: Lists of properties (LOP) of measuring equipment for electronic data exchange – Aspect LOPs

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 61987-92 has been prepared by subcommittee 65E: Devices and integration in enterprise systems, of IEC technical committee 65: Industrial-process measurement, control and automation.

The text of this International Standard is based on the following documents:

FDIS	Report on voting
65E/587/FDIS	65E/596/RVD

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

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

A list of all parts in the IEC 61987, published under the general title *Industrial-process measurement and control – Data structures and elements in process equipment catalogues*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

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

INTRODUCTION

The exchange of product data between companies, business systems, engineering tools, data systems within companies and, in the future, control systems (electrical, measuring and control technology) can run smoothly only when both the information to be exchanged and the use of this information has been clearly defined.

Prior to this standard, requirements on process control devices and systems were specified by customers in various ways when suppliers or manufacturers were asked to quote for suitable equipment. The suppliers in their turn described the devices according to their own documentation schemes, often using different terms, structures and media (paper, databases, CDs, e-catalogues, etc.). The situation was similar in the planning and development process, with device information frequently being duplicated in a number of different information technology (IT) systems.

Any method that is capable of recording all existing information only once during the planning and ordering process and making it available for further processing gives all parties involved an opportunity to concentrate on the essentials. A precondition for this is the standardization of both the descriptions of the objects and the exchange of information.

This standard series proposes a method for standardization which will help both suppliers and users of measuring equipment to optimize workflows both within their own companies and in their exchanges with other companies. Depending on their role in the process, engineering firms may be considered here to be either users or suppliers.

The method specifies measuring equipment by means of blocks of properties. These blocks are compiled into lists of properties (LOPs), each of which describes a specific equipment (device) type. This standard series covers both properties that may be used in an inquiry or a proposal and detailed properties required for integration of the equipment in computer systems for other tasks.

IEC 61987-10 defines structure elements for constructing lists of properties for electrical and process control equipment in order to facilitate automatic data exchange between any two computer systems in any possible workflow, for example engineering, maintenance or purchasing workflow and to allow both the customers and the suppliers of the equipment to optimize their processes and workflows. IEC 61987-10 also provides the data model for assembling the LOPs.

IEC 61987-11 specifies the generic structure for operating and device lists of properties (OLOPs and DLOPs). It lays down the framework for further parts of IEC 61987 in which complete LOPs for device types measuring a given physical variable and using a particular measuring principle will be specified. The generic structure may also serve as a basis for the specification of LOPs for other industrial-process control instrument types such as control valves and signal processing equipment.

IEC 61987-12 to IEC 61987-16 specify the OLOPs and DLOPs for measuring equipment for flow, pressure, temperature, level and density measurement respectively. Whereas a DLOP describes a device itself, an OLOP describes the most important aspect of a device, namely the conditions and infrastructure to be found at the point of installation. Thus, it contains the ambient conditions and the technical requirements that the device must fulfil during operation.

IEC 61987-92 contains additional aspects that are common to all devices, for example, "Packaging and transportation", "Calibration and test results" and "Device documents supplied". The associated LOPs can accompany any DLOP as described in IEC 61987-11.