Irish Standard
I.S. EN 61987-14:2016

Industrial-process measurement and control - Data structures and elements in process equipment catalogues - Part 14: Lists of properties (LOP) for temperature measuring equipment for electronic data exchange

I.S. EN 61987-14:2016

Incorporating amendments/corrigenda/National Annexes issued since publication:

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National Foreword

I.S. EN 61987-14:2016 is the adopted Irish version of the European Document EN 61987-14:2016, Industrial-process measurement and control - Data structures and elements in process equipment catalogues - Part 14: Lists of properties (LOP) for temperature measuring equipment for electronic data exchange

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 61987-14

July 2016

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English Version

Industrial-process measurement and control - Data structures and elements in process equipment catalogues - Part 14: Lists of properties (LOP) for temperature measuring equipment for electronic data exchange (IEC 61987-14:2016)

Mesure et commande dans les processus industriels - Structures de données et éléments dans les catalogues d'équipement de processus - Partie 14: Liste de propriétés (LOP) des équipements de mesure de température pour l'échange électronique de données (IEC 61987-14:2016)

Industrielle Leittechnik - Datenstrukturen und -elemente in Katalogen der Prozessleittechnik - Teil 14: Merkmalleisten (ML) für Temperaturmessgeräte für den elektronischen Datenaustausch (IEC 61987-14:2016)

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Comité Européen de Normalisation Electrotechnique
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European foreword

The text of document 65E/458/CDV, future edition 1 of IEC 61987-14, 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 61987-14:2016.

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) 2017-02-28
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In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60079-0:2011	NOTE	Harmonized as EN 60079-0:2012 (modified).
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 61360-5	NOTE	Harmonized as EN 61360-5.
IEC 61784-1:2014	NOTE	Harmonized as EN 61784-1:2014 (not modified).
IEC 61987-1	NOTE	Harmonized as EN 61987-1.
IEC 61987-92	NOTE	Harmonized as prEN 61987-92 [1)].

1) At draft stage.

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 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.

Publication	Year	Title	EN/HD	Year
IEC 61360	series	Standard data element types with associated classification scheme for electric components	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
IEC 61987-11	2012	Industrial-process measurement and control - Data structures and elements in process equipment catalogues - Part 11: List of Properties (LOP) of measuring equipment for electronic data exchange - Generic structures	EN 61987-11	2012

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IEC 61987-14

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INTERNATIONAL STANDARD

NORME INTERNATIONALE

Industrial-process measurement and control – Data structures and elements in process equipment catalogues – Part 14: Lists of properties (LOP) for temperature measuring equipment for electronic data exchange

Mesure et commande dans les processus industriels – Structures de données et éléments dans les catalogues d'équipement de processus – Partie 14: Liste de propriétés (LOP) des équipements de mesure de température pour l'échange électronique de données

IEC 61987-14:2016-04(en-fr)

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INTERNATIONAL STANDARD

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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CONTENTS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

Part 14: Lists of properties (LOP) for temperature measuring equipment for electronic data exchange

FOREWORD

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International Standard IEC 61987-14 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 standard is based on the following documents:

CDV	Report on voting
65E/458/CDV	65E/489/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.

A list of all parts in the IEC 61987 series, 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 publication will remain unchanged until the stability date indicated on the IEC website 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.

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 61987-14 concerns temperature measuring equipment. It provides two operating LOPs for contact and non-contact temperature transmitters or temperature gauges which can be used, for example, as requests for various sorts of quotation. The DLOPs for the various temperature transmitter and gauge types provided in this part of IEC 61987 can be used in very different ways in the computer systems of equipment manufacturers and suppliers, in CAE and similar systems of EPC contractors and other engineering companies and especially in different plant maintenance systems of the plant owners. The OLOP and the DLOPs provided correspond to the guidelines specified in in IEC 61987-10 and IEC 61987-11.

The List of Properties (LOPs) given in this standard are published in the Common Data Dictionary of IEC as stated in the appendices A to C. In the event that the LOPs are not yet available in the CDD, they may be found temporarily in the CDD maintenance area (http://std.iec.ch/cdd/iec61987/cdddev.nsf/TreeFrameset?OpenFrameSet).

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

Part 14: Lists of properties (LOP) for temperature measuring equipment for electronic data exchange

1 Scope

This part of IEC 61987 provides

– an operating list of properties (OLOP) for the description of the operating parameters and the collection of requirements for temperature measuring equipment and

– device lists of properties (DLOP) for the description of a range of contact and non-contact temperature measuring equipment types

The structures of the OLOP and the DLOPs correspond to the general structures defined in IEC 61987-11 and agree with the fundamentals for the construction of LOPs defined in IEC 61987-10.

Aspects other than the OLOP, needed in different electronic data exchange processes described in IEC 61987-10, will be published in IEC 61987-92[1].

The locations of the libraries of properties and of blocks used in the LOPs concerned are listed in the Annexes C and D.

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 61360 (all parts), *Standard data element types with associated classification scheme for electric items*

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*

IEC 61987-11:2012, *Industrial-process measurement and control – Data structures and elements in process equipment catalogues – Part 11: Lists of Properties (LOP) of measuring equipment for electronic data exchange – Generic structures*

3 Terms and definitions

For the purpose of this document, the terms and definitions in Clause 3 of IEC 61987-10:2009 and Clause 3 of IEC 61987-11:2012 also apply.

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1 Under consideration.