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Intelligent device management – Part 2: Requirements and recommendations

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TITLE:

Intelligent device management – Part 2: Requirements and recommendations

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

INTELLIGENT DEVICE MANAGEMENT –

Part 2: Requirements and recommendations

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IEC 63082-2 has been prepared by subcommittee 65E: Devices and integration in enterprise systems, of IEC Technical Committee 65: Industrial-process measurement, control and automation. It is an International Standard.

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

Draft	Report on voting
65E/XX/FDIS	65E/XX/RVD

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

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

A list of all parts in the IEC 63082 series, published under the general title *Intelligent device management*, 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 webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

INTRODUCTION

The purpose of the IEC 63082 series is to define an environment that enables the effective use of intelligent devices. The IEC 63082 series defines common concepts, terminology, and management activities.

Intelligent device management (IDM) represents activities for managing intelligent devices through the facility life cycle and does not imply a particular asset management tool or set of those tools. Hardware and software tools are necessary to support work processes and procedures, but specification of the tools is not a part of the IEC 63082 series. IDM is one of many enterprise programs. IDM activities optimize the value from intelligent devices and supports integration of data from the production level with business systems. IDM is consistent with smart manufacturing initiatives.

Several stakeholders are responsible for delivering successful intelligent device management, including engineering, procurement, and construction (EPC) business providers, system integrators, suppliers, service providers and consultants.

The IEC 63082 series is not intended to replace or contradict other standards, for example IEC 61511 series for safety instrumented systems and IEC 62443 series for cybersecurity.

IEC TR 63082-1 describes intelligent device management concepts and terminology necessary for in-depth understanding and effective communication. It gives the basic concepts of how intelligent devices can be managed and an overview of how this device management works throughout the facility life cycle. IEC TR 63082-1 provides basic knowledge to understand the concepts of intelligent device management necessary to implement an IDM program.

This document provides provisions (requirements and recommendations). Additional information on why a requirement is given are provided in informative Annex A. The information provided in IEC TR 63082-1 is intended to be useful as background material for better understanding of provisions in this document.

INTELLIGENT DEVICE MANAGEMENT –

Part 2: Requirements and recommendations

1 Scope

This part of IEC 63082 specifies requirements and recommendations for establishing and maintaining intelligent device management (IDM) as outlined in IEC TR 63082-1 in an enterprise having one or more facilities.

The following topics are included in the scope of this document:

- optimizing functionality and performance of intelligent devices for their use;
- managing information related to IDM;
- integrating intelligent devices into industrial automation and control systems (IACS) in facilities;
- exchanging information between stakeholders that achieve and sustain IDM;
- coordinating multiple asynchronous IDM life cycles.

The following topics are outside the scope of this document:

- defining and determining the function and performance of intelligent devices;
- defining and specifying technologies and tools that provide, preserve and manage information related to IDM such as FDT, FDI, portable on-line and off-line tools, configuration tools, historians, and maintenance planning tools;
- defining and specifying technologies and tools that are used to design intelligent devices;
- defining and specifying communication network architecture, communication technologies, cybersecurity requirements, and network management requirements.

2 Normative references

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.

IEC 62381, *Automation systems in the process industry – Factory acceptance test (FAT), site acceptance test (SAT), and site integration test (SIT)*

IEC 62382, *Control systems in the process industry – Electrical and instrumentation loop check*

IEC 62443 (all parts), *Industrial communication networks – Network and system security*

IEC TR 63082-1:2020, *Intelligent device management – Part 1: Concepts and terminology*