IEC 62541-9

Edition 3.0 2020-06
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OPC unified architecture –
Part 9: Alarms and Conditions

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CONTENTS

iTeh Standards
(https://standards.iteh.ai)
Document Preview
IEC 62541-9:2020
https://standards.iteh.ai/catalog/standards/iec/89737e60-7e58-4dda-a7eb-f75d92e97068/iec-62541-9-2020

iTeh Standards
(https://standards.iteh.ai)
Document Preview
https://standards.iteh.ai/catalog/standards/iec/...iec-62541-9-2020

iTeh Standards
(https://standards.iteh.ai)
Document Preview
IEC 62541-9:2020
https://standards.iteh.ai/catalog/standards/iec/8973f6b0-7c58-4dda-a7eb-f75d92c97068/iec-62541-9-2020

iTeh Standards
(https://standards.iteh.ai)
Document Preview
IEC 62541-9:2020
https://standards.iteh.ai/catalog/standards/iec/8973e6b0-7c58-4dda-a7eb-f75d92c97068/iec-62541-9-2020

iTeh Standards
(https://standards.iteh.ai)
Document Preview
IEC 62541-9:2020

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IEC 62541-9:2020
https://standards.iteh.ai/catalog/standards/iec/...-62541-9-2020

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(https://standards.iteh.ai)
Document Preview
IEC 62541-9:2020
https://standards.iteh.ai/catalog/standards/iec/f0737e60-7c58-4dda-a7eb-f75d92c97068/iec-62541-9-2020

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(https://standards.iteh.ai)
Document Preview

IEC 62541-9:2020
https://standards.iteh.ai/catalog/standards/iec/89737e60-7c58-4dda-a7eb-f75d92c97068/iec-62541-9-2020

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OPC UNIFIED ARCHITECTURE –

Part 9: Alarms and Conditions

FOREWORD

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This redline version of the official IEC Standard allows the user to identify the changes made to the previous edition. A vertical bar appears in the margin wherever a change has been made. Additions are in green text, deletions are in strikethrough red text.

International standard IEC 62541-9 has been prepared by subcommittee 65E: Devices and integration in enterprise systems, of IEC technical committee 65: Industrial-process measurement, control and automation.

This third edition cancels and replaces the second edition published in 2015. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) added optional engineering units to the definition of RateOfChange alarms;
b) to fulfill the IEC 62682 model, the following elements have been added:
   - AlarmConditionType States: Suppression, Silence, OutOfService, Latched;
   - AlarmConditionType Properties: OnDelay, OffDelay, FirstInGroup, ReAlarmTime;
   - New alarm types: DiscrepancyAlarm, DeviationAlarm, InstrumentDiagnosticAlarm, SystemDiagnosticAlarm.
c) added Annex that specifies how the concepts of this OPC UA part maps to IEC 62682 and ISA 18.2;
d) added new ConditionClasses: Safety, HighlyManaged, Statistical, Testing, Training;
e) added CertificateExpiration AlarmType;
f) added Alarm Metrics model.

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

FDIS	Report on voting
65E/709/FDIS	65E/727/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.

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Italics are used to denote a defined term or definition that appears in the "Terms and definition" clause in one of the parts of the IEC 62541 series.

Italics are also used to denote the name of a service input or output parameter or the name of a structure or element of a structure that are usually defined in tables.

The *italicized terms and names* are, with a few exceptions, written in camel-case (the practice of writing compound words or phrases in which the elements are joined without spaces, with each element's initial letter capitalized within the compound). For example the defined term is *AddressSpace* instead of Address Space. This makes it easier to understand that there is a single definition for *AddressSpace*, not separate definitions for Address and Space.

A list of all parts of the IEC 62541 series, published under the general title *OPC Unified Architecture*, 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
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IEC 62541-9:2020
https://standards.iteh.ai/catalog/standards/iec/89737e60-7c58-4dda-a7eb-f75d92c97068/iec-62541-9-2020