## BS EN 62541-9:2015



## **BSI Standards Publication**

# **OPC** unified architecture

Part 9: Alarms and conditions



BS EN 62541-9:2015 BRITISH STANDARD

This is a preview of "BS EN 62541-9:2015". Click here to purchase the full version from the ANSI store.

This British Standard is the UK implementation of EN 62541-9:2015. It is identical to IEC 62541-9:2015. It supersedes BS EN 62541-9:2012 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee AMT/7, Industrial communications: process measurement and control, including fieldbus.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2015. Published by BSI Standards Limited 2015

ISBN 978 0 580 83008 2 ICS 25.040.40; 25.100.01

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 May 2015.

Amendments/corrigenda issued since publication

Date Text affected

#### EN 62511 0

This is a preview of "BS EN 62541-9:2015". Click here to purchase the full version from the ANSI store.

### **EUROPÄISCHE NORM**

May 2015

ICS 25.040.40; 35.100

Supersedes EN 62541-9:2012

#### **English Version**

# OPC unified architecture - Part 9: Alarms and conditions (IEC 62541-9:2015)

Architecture unifiée OPC - Partie 9: Alarmes et conditions (IEC 62541-9:2015)

OPC Unified Architecture - Teil 9: Alarme und Zustände (IEC 62541-9:2015)

This European Standard was approved by CENELEC on 2015-04-29. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.



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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

### **Foreword**

The text of document 65E/382/CDV, future edition 2 of IEC 62541-9, 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 62541-9:2015.

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
- latest date by which the national standards conflicting with (dow) 2018-04-29 the document have to be withdrawn

This document supersedes EN 62541-9:2012.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

### **Endorsement notice**

The text of the International Standard IEC 62541-9:2015 was approved by CENELEC as a European Standard without any modification.

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

IEC 62541-7 NOTE Harmonized as EN 62541-7.

IEC 62541-11 NOTE Harmonized as EN 62541-11.

(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: <a href="www.cenelec.eu">www.cenelec.eu</a>.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	EN/HD	<u>Year</u>
IEC/TR 62541-1	-	OPC unified architecture - Part 1: Overview and concepts	CLC/TR 62541-1	-
IEC 62541-3	-	OPC unified architecture - Part 3: Address Space Model	EN 62541-3	-
IEC 62541-4	-	OPC Unified Architecture - Part 4: Services	EN 62541-4	-
IEC 62541-5	-	OPC unified architecture - Part 5: Information Model	EN 62541-5	-
IEC 62541-6	-	OPC unified architecture - Part 6: Mappings	EN 62541-6	-
IEC 62541-8	-	OPC Unified Architecture - Part 8: Data Access	EN 62541-8	-
EEMUA 191		Alarm systems - A guide to design, management and procurement	-	-

### CONTENTS

Г	JKEWU	RU	
1	Scop	e	10
2	Norm	native references	10
3		is, definitions, and abbreviations	
•	3.1	Terms and definitions	
	3.2	Abbreviations and symbols	
	3.3	Used data types	
4		cepts	
	4.1	General	
	4.2	Conditions	
	4.3	Acknowledgeable Conditions	
	4.4	Previous states of Conditions	
	4.5	Condition state synchronization	
	4.6	Severity, Quality, and Comment	
	4.7	Dialogs	
	4.8	Alarms	
	4.9		
	4.10	Condition Instances in the Address Space	
	4.11	Alarm and Condition Auditing	19
5	Mode	el	19
	5.1	General	19
	5.2	Two-State State Machines	
	5.3	Condition Variables	21
	5.4	Substate Reference Types	22
	5.4.1	General	22
	5.4.2	HasTrueSubState ReferenceType	22
	5.4.3	HasFalseSubState ReferenceType	23
	5.5	Condition Model	23
	5.5.1	General	23
	5.5.2	ConditionType	24
	5.5.3	Condition and Branch Instances	27
	5.5.4	Disable Method	27
	5.5.5	Enable Method	28
	5.5.6	AddComment Method	28
	5.5.7		
	5.6	Dialog Model	
	5.6.1		
	5.6.2	3	
	5.6.3	•	
ţ	5.7	Acknowledgeable Condition Model	
	5.7.1		
	5.7.2	31	
	5.7.3	S .	
	5.7.4		
	5.8	Alarm Model	
	5.8.1	General	36