INTERNATIONAL STANDARD

ISO/IEC 10164-4

First edition
1992-12-15

AMENDMENT 1
1995-12-15

Information technology — Open Systems Interconnection — Systems Management: Alarm reporting function

AMENDMENT 1: Implementation conformance statement proformas

Technologies de l'information — Interconnexion de systèmes ouverts (OSI) — Gestion-systèmes: Fonction de rapport d'alarme

AMENDEMENT 1: Proformes de déclaration de conformité de mise en œuvre

Reference number
ISO/IEC 10164-4:1992/Amd.1:1995(E)

Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work.

In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

Amendment 1 to International Standard ISO/IEC 10164-4:1992 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 21, *Open systems interconnection, data management and open distributed processing,* in collaboration with ITU-T. The identical text is published as ITU-T Rec. X.733/Amd.1.

Introduction

This amendment includes tables, which document the mandatory and optional management information specific to the Alarm Reporting Function. This amendment will be used by Profile specifiers, for example those developing International Standardized Profiles (ISPs), to specify an explicit subset of capability, which will afford interoperability between implementations. The table also include a column for equipment vendors to state the capability of their products in terms of the Profiles or base specification. The table structures comply with the Guidelines for Implementation Conformance Statement Proformas specified in ITU-T Recommendation X.724 | ISO/IEC 10165-6.

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INTERNATIONAL STANDARD

ITU-T RECOMMENDATION

INFORMATION TECHNOLOGY – OPEN SYSTEMS INTERCONNECTION – SYSTEMS MANAGEMENT: ALARM REPORTING FUNCTION

AMENDMENT 1
(to ITU-T Rec. X.733 | ISO/IEC 10164-4)

Implementation conformance statement proformas

1) *Add the following footnote to the first list item in 2.1:*

"[1] As amended by ITU-T Rec. X.701/Cor.2 | ISO/IEC 10040/Cor.2".

2) *Add the following reference to 2.1:*

"– ITU-T Recommendation X.724 (1993) | ISO/IEC 10165-6:1994, *Information technology – Open Systems Interconnection – Structure of management information: Requirements and guidelines for implementation conformance statement proformas associated with OSI management.*"

3) *Add the following references to 2.2:*

"– CCITT Recommendation X.291 (1992), *OSI conformance testing methodology and framework for protocol Recommendations for CCITT applications – Abstract test suite specification.*

ISO/IEC 9646-2:1991, Information technology – *Open Systems Interconnection – Conformance testing methodology and framework – Part 2: Abstract test suite specification.*

– ITU-T Recommendation X.296[3], *OSI conformance testing methodology and framework for protocol Recommendations for ITU-T applications – Implementation conformance statements.*

ISO/IEC 9646-7[3], *Information technology – Open Systems Interconnection – Conformance testing methodology and framework – Part 7: Implementation conformance statements.*"

And then add the following footnote:

[3] Presently at the stage of draft.

4) *Apply the following changes to 3.4:*

Delete items c) and d).

Relabel item e) as c) and insert the following new items:

"e) managed object conformance statement (MOCS);

f) management information conformance statement (MICS);"

Relabel items h) through j) as j) through l) and insert the following new items:

"h) MICS proforma;

i) MOCS proforma;"

5) *Apply the following change to 3.6:*

Replace "system conformance statement" *with the following*:

"a) PICS proforma;

b) protocol implementation conformance statement;

c) system conformance statement."

6) *Renumber 3.7 as 3.8 and insert the following new subclause:*

3.7 "Implementation conformance statement proforma definitions

This Recommendation | International Standard makes use of the following terms defined in ITU-T Rec. X.724 | ISO/IEC 10165-6:

a) Managed Relationship Conformance Statement (MRCS);

b) Management Conformance Summary (MCS);

c) Management Information Definition Statement (MIDS) proforma;

d) MCS proforma;

e) MRCS proforma."

7) *Add the following abbreviations to clause 4:*

"ICS Implementation Conformance Statement

MCS Management Conformance Summary

MICS Management Information Conformance Statement

MIDS Management Information Definition Statement

MOCS Managed Object Conformance Statement

MRCS Managed Relationship Conformance Statement

PICS Protocol Implementation Conformance Statement"

8) *Replace clause 13 with the following:*

"13 Conformance

Implementations claiming to conform to this Recommendation | International Standard shall comply with the conformance requirements as defined in the following subclauses.

13.1 Static conformance

The implementation shall conform to the requirements of this Recommendation | International Standard in the manager role, the agent role, or both roles. A claim of conformance to at least one role shall be made in Table A.1.

If a claim of conformance is made for support in the manager role, the implementation shall support at least one of the notifications or at least one of the management operations specified in this Recommendation | International Standard. The conformance requirements in the manager role for those management operations and notifications are identified in Table A.3 and further tables referenced by Annex A.

If a claim of conformance is made for support in the agent role, the implementation shall support at least one of the notifications specified in this Recommendation | International Standard. The conformance requirements in the agent role are identified in Table A.4 and further tables referenced by Annex A.

The implementation shall support the transfer syntax derived from the encoding rules specified in CCITT Rec. X.209 | ISO/IEC 8825 named {joint-iso-ccitt asn1(1) basicEncoding(1)} for the abstract data types referenced by the definitions for which support is claimed.

NOTE – Prior to the publication of this amendment, this Recommendation | International Standard identified general and dependent conformance classes. A claim of conformance similar to general conformance class can be made by stating support in the manager role, the agent role, or both roles, for the alarm reporting functional unit in Table A.2. A claim of conformance similar to dependent conformance class can be made by stating support for at least one of the items in Tables A.3 or A.4.

13.2 Dynamic conformance

Implementations claiming to conform to this Recommendation | International Standard shall support the elements of procedure and definitions of semantics corresponding to the definitions for which support is claimed.

13.3 Management implementation conformance statement requirements

Any MCS proforma, MICS proforma, and MOCS proforma which conforms to this Recommendation | International Standard shall be technically identical to the proformas specified in Annexes A, B and C preserving table numbering and the index numbers of items, and differing only in pagination and page headers.

The supplier of an implementation which is claimed to conform to this Recommendation | International Standard shall complete a copy of the Management Conformance Summary (MCS) provided in Annex A as part of the conformance requirements together with any other ICS proformas referenced as applicable from that MCS. An ICS which conforms to this Recommendation | International Standard shall:

- describe an implementation which conforms to this Recommendation | International Standard;
- have been completed in accordance with the instructions for completion given in ITU-T Rec. X.724 | ISO/IEC 10165-6;
- include the information necessary to uniquely identify both the supplier and the implementation.

Claims of conformance to the management information defined in this Recommendation | International Standard in managed object classes defined elsewhere shall include the requirements of the MIDS proforma in the MOCS for the managed object class."

9) *Relabel Annex A as Annex E and insert the following annexes:*

Annex A

MCS proforma[4)]

(This annex forms an integral part of this Recommendation | International Standard)

A.1 Introduction

A.1.1 Purpose and structure

The Management Conformance Summary (MCS) is a statement by a supplier that identifies an implementation and provides information on whether the implementation claims conformance to any of the listed set of documents that specify conformance requirements to OSI management.

The MCS proforma is a document in the form of a questionnaire that when completed by the supplier of an implementation becomes the MCS.

A.1.2 Instructions for completing the MCS proforma to produce a MCS

The supplier of the implementation shall enter an explicit statement in each of the boxes provided. Specific instruction is provided in the text which precedes each table.

A.1.3 Symbols, abbreviations and terms

For all annexes of this Recommendation | International Standard, the following common notations, defined in CCITT Rec. X.291 | ISO/IEC 9646-2 and ITU-T Rec. X.296 | ISO/IEC 9646-7, are used for the Status column:

m Mandatory;

o Optional;

c Conditional;

x Prohibited;

– Not applicable or out of scope.

NOTES

1 'c', 'm', and 'o' are prefixed by "c:" when nested under a conditional or optional item of the same table;

2 'o' may be suffixed by ".N" (where N is a unique number) for selectable options among a set of status values. Support of at least one of the choices (from the items with the same value of N) is required.

For all annexes of this Recommendation | International Standard, the following common notations, defined in CCITT Rec. X.291 | ISO/IEC 9646-2 and ITU-T Rec. X.296 | ISO/IEC 9646-7, are used for the Support column:

Y Implemented;

N Not implemented;

– No answer required;

Ig The item is ignored (i.e. processed syntactically but not semantically).

A.1.4 Table format

Some of the tables in this Recommendation | International Standard have been split because the information is too wide to fit on the page. Where this occurs, the index number of the first block of columns are the index numbers of the corresponding rows of the remaining blocks of columns. A complete table reconstructed from the constituent parts should have the following layout:

Index	First block of columns	Second block of columns	Etc.

4) Users of this Recommendation | International Standard may freely reproduce the MCS proforma in this annex so that it can be used for its intended purpose, and may further publish the completed MCS. Instructions for the MCS proforma are specified in ITU-T Rec. X.724 | ISO/IEC 10165-6.

In this Recommendation | International Standard the constituent parts of the table appear consecutively, starting with the first block of columns.

When a table with sub-rows is too wide to fit on a page, the continuation table(s) have been constructed with index numbers identical to the index numbers in the corresponding rows of the first table, and with sub-index numbers corresponding to the sub-rows within each indexed row. For example, if Table X.1 has 2 rows and the continuation of Table X.1 has 2 sub-rows for each row, the tables are presented as follows:

Table X.1 – Title

					Support		
Index	A	B	C	D	E	F	G
1	a	b	–				
2	a	b	–				

Table X.1 *(continued)* – Title

Index	Sub-index	H	I	J	K	L
1	1.1	h	i	j		
	1.2	h	i	j		
2	2.1	h	i	j		
	2.2	h	i	j		

A complete table reconstructed from the constituent parts should have the following layout:

					Support								
Index	A	B	C	D	E	F	G	Sub-index	H	I	J	K	L
1	a	b	–					1.1	h	i	j		
								1.2	h	i	j		
2	a	b	–					2.1	h	i	j		
								2.2	h	i	j		

References made to cells within tables shall be interpreted as references within reconstructed tables. In the examples, above, the reference X.1/1d corresponds to the blank cell in column G for row with Index 1, and X.1/1.2b corresponds to the blank cell in column L for row with Sub-index 1.2.

A.2 Identification of the implementation

A.2.1 Date of statement

The supplier of the implementation shall enter the date of this statement in the box below. Use the format DD-MM-YYYY.

Date of statement

A.2.2 Identification of the implementation

The supplier of the implementation shall enter information necessary to uniquely identify the implementation and the system(s) in which it may reside, in the box below.

A.2.3 Contact

The supplier of the implementation shall provide information on whom to contact if there are any queries concerning the content of the MCS or any referenced conformance statement, in the box below.

A.3 Identification of the Recommendations | International Standards in which the management information is defined

The supplier of the implementation shall enter the title, reference number and date of the publication of the Recommendations | International Standards which specify the management information to which conformance is claimed, in the box below.

Recommendations | International Standards to which conformance is claimed

A.3.1 Technical corrigenda implemented

The supplier of the implementation shall enter the reference numbers of implemented technical corrigenda which modify the identified Recommendations | International Standards, in the box below.

A.3.2 Amendments implemented

The supplier of the implementation shall state the titles and reference numbers of implemented amendments to the identified Recommendations | International Standards, in the box below.

A.4 Management conformance summary

The supplier of the implementation shall state the capabilities and features supported and provide a summary of conformance claims to Recommendations I International Standards using the tables in this annex.

The supplier of the implementation shall specify the roles that are supported, in Table A.1.

Table A.1 – Roles

Index	Roles supported	Status	Support	Additional information
1	Manager role support	o.1		
2	Agent role support	o.1		

The supplier of the implementation shall specify support for the systems management functional unit, in Table A.2.

Table A.2 – Systems management functional unit

		Manager		Agent		
Index	Systems management functional unit name	Status	Support	Status	Support	Additional information
1	alarm reporting functional unit	c1		c2		
c1: if A.1/1a then o else –. c2: if A.1/2a then o else –.						

The supplier of the implementation shall specify support for management information in the manager role, in Table A.3.

Table A.3 – Manager role minimum conformance requirement

Index	Item	Status	Support	Additional information
1	Communications alarm notification	c3		
2	Environmental alarm notification	c3		
3	Equipment alarm notification	c3		
4	Processing error alarm notification	c3		
5	Quality of service alarm notification	c3		
6	Operations on managed objects	c4		
c3: if A.2/1a then m else (if A.1/1a then o.2 else –). c4: if A.2/1a then o else (if A.1/1a then o.2 else –). NOTE – Manager role minimum conformance requires support for at least one of the items identified in this table. Support for the functional unit identified in Table A.2 mandates support for some of those items. Conditions c3 and c4 express both of these requirements.				

The supplier of the implementation shall specify support for management information in the agent role, in Table A.4.

Table A.4 – Agent role minimum conformance requirement

Index	Item	Status	Support	Table reference	Additional information
1	Communications alarm notification	c5			
2	Environmental alarm notification	c5			
3	Equipment alarm notification	c5			
4	Processing error alarm notification	c5			
5	Quality of service alarm notification	c5			
6	Alarm record managed object class	c6		–	

c5: if A.2/1b then m else (if A.1/2a then o.3 else –).

c6: if A.1/2a and A.5/1a then m else –.

NOTES

1 Condition c6 makes it mandatory, if logging is supported, to support the event log records associated with the notifications supported.

2 The Table reference column in this table is the notification reference of the MOCS supplied by the supplier of the managed object which claims to import the notification from this Recommendation | International Standard.

Table A.5 – Logging of event records

Index		Status	Support	Additional information
1	Does the implementation support logging of event records in agent role?	c7		

c7: if A.1/2a then o else –.

NOTE 1 – Conformance to this Recommendation | International Standard does not require conformance to CCITT Rec. X.735 | ISO/IEC 10164-6.

The supplier of the implementation shall provide information on claims of conformance to any of the Recommendations | International Standards summarized in Tables A.6 to A.9. For each Recommendation | International Standard that the supplier of the implementation claims conformance to, the corresponding conformance statement(s) shall be completed, or referenced by, the MCS. The supplier of the implementation shall complete the Support, Table numbers and Additional information columns.

In Tables A.6 to A.9, the Status column is used to indicate whether the supplier of the implementation is required to complete the referenced tables or referenced items. Conformance requirements are as specified in the referenced tables or referenced items and are not changed by the value of the MCS Status column. Similarly, the Support column is used by the supplier of the implementation to indicate completion of the referenced tables or referenced items.

Table A.6 – PICS support summary

Index	Identification of the document that includes the PICS proforma	Table numbers of PICS proforma	Description	Constraints and values	Status	Support	Table numbers of PICS	Additional information
1	CCITT Rec. X.730 | ISO/IEC 10164-1	Annex E all tables	SM application context	OBJECT IDENTIFIER	m			

NOTE 2 – Conformance to the MAPDUs defined in this Recommendation | International Standard can be claimed by completing the corresponding tables in the MICS and MOCS annexes of the referenced Recommendations | International Standards.

Table A.7 – MOCS support summary

Index	Identification of the document that includes the MOCS proforma	Table numbers of MOCS proforma	Description	Constraints and values	Status	Support	Table numbers of MOCS	Additional information
1	CCITT Rec. X.733 | ISO/IEC 10164-4	Annex C all tables	alarmRecord	–	c8			
c8: if A.4/6a then m else –.								

Table A.8 – MRCS support summary

Index	Identification of the document that includes the MRCS proforma	Table numbers of MRCS proforma	Description	Constraints and values	Status	Support	Table numbers of MRCS	Additional information
1	CCITT Rec. X.735 | ISO/IEC 10164-6	Item D.1/1	logRecord-log name binding	–	c9			
c9: if A.5/1a then o else –.								

Table A.9 – MICS support summary

Index	Identification of the document that includes the MICS proforma	Table numbers of MICS proforma	Description	Constraints and values	Status	Support	Table numbers of MICS	Additional information
1	CCITT Rec. X.733 | ISO/IEC 10164-4	Table B.1	notifications	–	c10			
2	CCITT Rec. X.733 | ISO/IEC 10164-4	Tables B.2 and B.3	management operations	–	c11			
c10: if A.3/1a or A.3/2a or A.3/3a or A.3/4a or A.3/5a then m else –. c11: if A.3/6a then m else –.								

Annex B

MICS proforma[5)]

(This annex forms an integral part of this Recommendation | International Standard)

B.1 Introduction

The purpose of this MICS proforma is to provide a mechanism for a supplier of an implementation which claims conformance, in the manager role, to management information specified in this Recommendation | International Standard, to provide conformance information in a standard form.

B.2 Instructions for completing the MICS proforma to produce a MICS

The MICS proforma contained in this annex is comprised of information in tabular form, in accordance with ITU-T Rec. X.724 | ISO/IEC 10165-6. In addition to the general guidance given in ITU-T Rec. X.724 | ISO/IEC 10165-6, the Additional information column shall be used to identify the object classes for which the management operations are supported. The supplier of the implementation shall state which items are supported in the tables below and if necessary, provide additional information.

B.3 Symbols, abbreviations and terms

The following abbreviations are used throughout the MICS proforma:

dmi-att joint-iso-ccitt ms(9) smi(3) part2(2) attribute(7)

dmi-not joint-iso-ccitt ms(9) smi(3) part2(2) notification(10)

The notations used for the Status and Support columns are specified in A.1.3.

B.4 Statement of conformance to the management information

B.4.1 Notifications

The specifier of a manager role implementation that claims to support the notifications specified in this Recommendation | International Standard shall import a copy of Table B.1 and complete it.

Table B.1 – Notification support

Index	Notification type template label	Value of object identifier for the notification type	Constraints and values	Status	Support: Confirmed	Support: Non-confirmed	Additional information
1	communicationsAlarm	{dmi-not 2}	–	c1			
2	environmentalAlarm	{dmi-not 3}	–	c2			
3	equipmentAlarm	{dmi-not 4}	–	c3			
4	processingErrorAlarm	{dmi-not 10}	–	c4			
5	qualityOfServiceAlarm	{dmi-not 11}	–	c5			

c1: if A.3/1a then m else –.

c2: if A.3/2a then m else –.

c3: if A.3/3a then m else –.

c4: if A.3/4a then m else –.

c5: if A.3/5a then m else –.

(continued)

5) Users of this Recommendation | International Standard may freely reproduce the MICS proforma in this annex so that it can be used for its intended purpose, and may further publish the completed MICS.

Table B.1 *(continued)* – Notification support

Index	Sub-index	Notification field name label	Value of object identifier for the attribute type associated with the field	Constraints and values	Status	Support	Additional information
1	1.1	probableCause	{dmi-att 18}	–	m		
	1.1.1	globalValue	–	OBJECT IDENTIFIER	m		
	1.1.2	localValue	–	INTEGER	m		
	1.2	specificProblems	{dmi-att 27}	required for some objects	m		
	1.2.1	global	–	OBJECT IDENTIFIER	m		
	1.2.2	local	–	INTEGER	m		
	1.3	perceivedSeverity	{dmi-att 17}	ENUMERATED 0 to 5	m		
	1.4	backedUpStatus	{dmi-att 11}	required for some objects	m		
	1.5	backUpObject	{dmi-att 40}	for backUp relationships	m		
	1.5.1	distinguishedName	–	–	m		
	1.5.2	nonSpecificForm	–	–	m		
	1.5.3	localDistinguishedName	–	–	m		
	1.6	trendIndication	{dmi-att 30}	ENUMERATED 0 to 2	m		
	1.7	thresholdInfo	{dmi-att 29}	for threshold attributes	m		
	1.7.1	triggeredThreshold	–	–	m		
	1.7.2	observedValue	–	–	m		
	1.7.2.1	integer	–	–	m		
	1.7.2.2	real	–	required for some objects	m		
	1.7.3	thresholdLevel	–	–	m		
	1.7.3.1	up	–	–	m		
	1.7.3.1.1	high	–	–	m		
	1.7.3.1.1.1	integer	–	–	m		
	1.7.3.1.1.2	real	–	required for some objects	m		
	1.7.3.1.2	low	–	for guage thresholds	m		
	1.7.3.1.2.1	integer	–	–	m		
	1.7.3.1.2.2	real	–	required for some objects	m		
	1.7.3.2	down	–	–	m		
	1.7.3.2.1	high	–	–	m		
	1.7.3.2.1.1	integer	–	–	m		
	1.7.3.2.1.2	real	–	required for some objects	m		
	1.7.3.2.2	low	–	–	m		
	1.7.3.2.2.1	integer	–	–	m		
	1.7.3.2.2.2	real	–	required for some objects	m		
	1.7.4	armTime	–	–	m		
	1.8	notificationIdentifier	{dmi-att 16}	INTEGER	m		
	1.9	correlatedNotifications	{dmi-att 12}	–	m		
	1.9.1	correlatedNotifications	–	–	m		
	1.9.2	sourceObjectInst	–	–	m		
	1.9.2.1	distinguishedName	–	–	m		
	1.9.2.2	nonSpecificForm	–	–	m		
	1.9.2.3	localDistinguishedName	–	–	m		

(continued)

Table B.1 *(continued)* – Notification support

Index	Sub-index	Notification field name label	Value of object identifier for the attribute type associated with the field	Constraints and values	Status	Support	Additional information
1	1.10	stateChangeDefinition	{dmi-att 28}	required for some objects	m		
	1.10.1	attributeId	–	–	m		
	1.10.1.1	global	–	OBJECT IDENTIFIER	m		
	1.10.1.2	local	–	INTEGER	m		
	1.10.2	oldAttributeValue	–	–	m		
	1.10.3	newAttributeValue	–	–	m		
	1.11	monitoredAttributes	{dmi-att 15}	required for some objects	m		
	1.12	proposedRepairActions	{dmi-att 19}	required for some objects	m		
	1.12.1	global	–	OBJECT IDENTIFIER	m		
	1.12.2	local	–	INTEGER	m		
	1.13	additionalText	{dmi-att 7}	–	m		
	1.14	additionalInformation	{dmi-att 6}	required for some objects	m		
2	2.1	probableCause	{dmi-att 18}	–	m		
	2.1.1	globalValue	–	OBJECT IDENTIFIER	m		
	2.1.2	localValue	–	INTEGER	m		
	2.2	specificProblems	{dmi-att 27}	required for some objects	m		
	2.2.1	global	–	OBJECT IDENTIFIER	m		
	2.2.2	local	–	INTEGER	m		
	2.3	perceivedSeverity	{dmi-att 17}	ENUMERATED 0 to 5	m		
	2.4	backedUpStatus	{dmi-att 11}	required for some objects	m		
	2.5	backUpObject	{dmi-att 40}	for backUp relationships	m		
	2.5.1	distinguishedName	–	–	m		
	2.5.2	nonSpecificForm	–	–	m		
	2.5.3	localDistinguishedName	–	–	m		
	2.6	trendIndication	{dmi-att 30}	ENUMERATED 0 to 2	m		
	2.7	thresholdInfo	{dmi-att 29}	for threshold attributes	m		
	2.7.1	triggeredThreshold	–	–	m		
	2.7.2	observedValue	–	–	m		
	2.7.2.1	integer	–	–	m		
	2.7.2.2	real	–	required for some objects	m		
	2.7.3	thresholdLevel	–	–	m		
	2.7.3.1	up	–	–	m		
	2.7.3.1.1	high	–	–	m		
	2.7.3.1.1.1	integer	–	–	m		
	2.7.3.1.1.2	real	–	required for some objects	m		
	2.7.3.1.2	low	–	for guage thresholds	m		
	2.7.3.1.2.1	integer	–	–	m		
	2.7.3.1.2.2	real	–	required for some objects	m		
	2.7.3.2	down	–	–	m		
	2.7.3.2.1	high	–	–	m		
	2.7.3.2.1.1	integer	–	–	m		
	2.7.3.2.1.2	real	–	required for some objects	m		
	2.7.3.2.2	low	–	–	m		
	2.7.3.2.2.1	integer	–	–	m		
	2.7.3.2.2.2	real	–	required for some objects	m		

(continued)

Table B.1 (*continued*) – Notification support

Index	Sub-index	Notification field name label	Value of object identifier for the attribute type associated with the field	Constraints and values	Status	Support	Additional information
2	2.7.4	armTime	–	–	m		
	2.8	notificationIdentifier	{dmi-att 16}	INTEGER	m		
	2.9	correlatedNotifications	{dmi-att 12}	–	m		
	2.9.1	correlatedNotifications	–	–	m		
	2.9.2	sourceObjectInst	–	–	m		
	2.9.2.1	distinguishedName	–	–	m		
	2.9.2.2	nonSpecificForm	–	–	m		
	2.9.2.3	localDistinguishedName	–	–	m		
	2.10	stateChangeDefinition	{dmi-att 28}	required for some objects	m		
	2.10.1	attributeId	–	–	m		
	2.10.1.1	global	–	OBJECT IDENTIFIER	m		
	2.10.1.2	local	–	INTEGER	m		
	2.10.2	oldAttributeValue	–	–	m		
	2.10.3	newAttributeValue	–	–	m		
	2.11	monitoredAttributes	{dmi-att 15}	required for some objects	m		
	2.12	proposedRepairActions	{dmi-att 19}	required for some objects	m		
	2.12.1	global	–	OBJECT IDENTIFIER	m		
	2.12.2	local	–	INTEGER	m		
	2.13	additionalText	{dmi-att 7}	–	m		
	2.14	additionalInformation	{dmi-att 6}	required for some objects	m		
3	3.1	probableCause	{dmi-att 18}	–	m		
	3.1.1	globalValue	–	OBJECT IDENTIFIER	m		
	3.1.2	localValue	–	INTEGER	m		
	3.2	specificProblems	{dmi-att 27}	required for some objects	m		
	3.2.1	global	–	OBJECT IDENTIFIER	m		
	3.2.2	local	–	INTEGER	m		
	3.3	perceivedSeverity	{dmi-att 17}	ENUMERATED 0 to 5	m		
	3.4	backedUpStatus	{dmi-att 11}	required for some objects	m		
	3.5	backUpObject	{dmi-att 40}	for backUp relationships	m		
	3.5.1	distinguishedName	–	–	m		
	3.5.2	nonSpecificForm	–	–	m		
	3.5.3	localDistinguishedName	–	–	m		
	3.6	trendIndication	{dmi-att 30}	ENUMERATED 0 to 2	m		
	3.7	thresholdInfo	{dmi-att 29}	for threshold attributes	m		
	3.7.1	triggeredThreshold	–	–	m		
	3.7.2	observedValue	–	–	m		
	3.7.2.1	integer	–	–	m		
	3.7.2.2	real	–	required for some objects	m		
	3.7.3	thresholdLevel	–	–	m		
	3.7.3.1	up	–	–	m		
	3.7.3.1.1	high	–	–	m		
	3.7.3.1.1.1	integer	–	–	m		
	3.7.3.1.1.2	real	–	required for some objects	m		
	3.7.3.1.2	low	–	for guage thresholds	m		
	3.7.3.1.2.1	integer	–	–	m		
	3.7.3.1.2.2	real	–	required for some objects	m		

(continued)

Table B.1 *(continued)* — Notification support

Index	Sub-index	Notification field name label	Value of object identifier for the attribute type associated with the field	Constraints and values	Status	Support	Additional information
3	3.7.3.2	down	–	–	m		
	3.7.3.2.1	high	–	–	m		
	3.7.3.2.1.1	integer	–	–	m		
	3.7.3.2.1.2	real	–	required for some objects	m		
	3.7.3.2.2	low	–	–	m		
	3.7.3.2.2.1	integer	–	–	m		
	3.7.3.2.2.2	real	–	required for some objects	m		
	3.7.4	armTime	–	–	m		
	3.8	notificationIdentifier	{dmi-att 16}	INTEGER	m		
	3.9	correlatedNotifications	{dmi-att 12}	–	m		
	3.9.1	correlatedNotifications	–	–	m		
	3.9.2	sourceObjectInst	–	–	m		
	3.9.2.1	distinguishedName	–	–	m		
	3.9.2.2	nonSpecificForm	–	–	m		
	3.9.2.3	localDistinguishedName	–	–	m		
	3.10	stateChangeDefinition	{dmi-att 28}	required for some objects	m		
	3.10.1	attributeId	–	–	m		
	3.10.1.1	global	–	OBJECT IDENTIFIER	m		
	3.10.1.2	local	–	INTEGER	m		
	3.10.2	oldAttributeValue	–	–	m		
	3.10.3	newAttributeValue	–	–	m		
	3.11	monitoredAttributes	{dmi-att 15}	required for some objects	m		
	3.12	proposedRepairActions	{dmi-att 19}	required for some objects	m		
	3.12.1	global	–	OBJECT IDENTIFIER	m		
	3.12.2	local	–	INTEGER	m		
	3.13	additionalText	{dmi-att 7}	–	m		
	3.14	additionalInformation	{dmi-att 6}	required for some objects	m		
4	4.1	probableCause	{dmi-att 18}	–	m		
	4.1.1	globalValue	–	OBJECT IDENTIFIER	m		
	4.1.2	localValue	–	INTEGER	m		
	4.2	specificProblems	{dmi-att 27}	required for some objects	m		
	4.2.1	global	–	OBJECT IDENTIFIER	m		
	4.2.2	local	–	INTEGER	m		
	4.3	perceivedSeverity	{dmi-att 17}	ENUMERATED 0 to 5	m		
	4.4	backedUpStatus	{dmi-att 11}	required for some objects	m		
	4.5	backUpObject	{dmi-att 40}	for backUp relationships	m		
	4.5.1	distinguishedName	–	–	m		
	4.5.2	nonSpecificForm	–	–	m		
	4.5.3	localDistinguishedName	–	–	m		
	4.6	trendIndication	{dmi-att 30}	ENUMERATED 0 to 2	m		
	4.7	thresholdInfo	{dmi-att 29}	for threshold attributes	m		
	4.7.1	triggeredThreshold	–	–	m		
	4.7.2	observedValue	–	–	m		
	4.7.2.1	integer	–	–	m		
	4.7.2.2	real	–	required for some objects	m		

(continued)

Table B.1 *(continued)* – Notification support

Index	Sub-index	Notification field name label	Value of object identifier for the attribute type associated with the field	Constraints and values	Status	Support	Additional information
4	4.7.3	thresholdLevel	–	–	m		
	4.7.3.1	up	–	–	m		
	4.7.3.1.1	high	–	–	m		
	4.7.3.1.1.1	integer	–	–	m		
	4.7.3.1.1.2	real	–	required for some objects	m		
	4.7.3.1.2	low	–	for guage thresholds	m		
	4.7.3.1.2.1	integer		–	m		
	4.7.3.1.2.2	real	–	required for some objects	m		
	4.7.3.2	down	–	–	m		
	4.7.3.2.1	high	–	–	m		
	4.7.3.2.1.1	integer	–	–	m		
	4.7.3.2.1.2	real	–	required for some objects	m		
	4.7.3.2.2	low	–	–	m		
	4.7.3.2.2.1	integer	–	–	m		
	4.7.3.2.2.2	real	–	required for some objects	m		
	4.7.4	armTime	–	–	m		
	4.8	notificationIdentifier	{dmi-att 16}	INTEGER	m		
	4.9	correlatedNotifications	{dmi-att 12}		m		
	4.9.1	correlatedNotifications	–	–	m		
	4.9.2	sourceObjectInst	–	–	m		
	4.9.2.1	distinguishedName	–	–	m		
	4.9.2.2	nonSpecificForm	–	–	m		
	4.9.2.3	localDistinguishedName	–	–	m		
	4.10	stateChangeDefinition	{dmi-att 28}	required for some objects	m		
	4.10.1	attributeId	–	–	m		
	4.10.1.1	global	–	OBJECT IDENTIFIER	m		
	4.10.1.2	local	–	INTEGER	m		
	4.10.2	oldAttributeValue	–	–	m		
	4.10.3	newAttributeValue	–	–	m		
	4.11	monitoredAttributes	{dmi-att 15}	required for some objects	m		
	4.12	proposedRepairActions	{dmi-att 19}	required for some objects	m		
	4.12.1	global	–	OBJECT IDENTIFIER	m		
	4.12.2	local	–	INTEGER	m		
	4.13	additionalText	{dmi-att 7}	–	m		
	4.14	additionalInformation	{dmi-att 6}	required for some objects	m		
5	5.1	probableCause	{dmi-att 18}	–	m		
	5.1.1	globalValue	–	OBJECT IDENTIFIER	m		
	5.1.2	localValue	–	INTEGER	m		
	5.2	specificProblems	{dmi-att 27}	required for some objects	m		
	5.2.1	global	–	OBJECT IDENTIFIER	m		
	5.2.2	local	–	INTEGER	m		
	5.3	perceivedSeverity	{dmi-att 17}	ENUMERATED 0 to 5	m		
	5.4	backedUpStatus	{dmi-att 11}	required for some objects	m		
	5.5	backUpObject	{dmi-att 40}	for backUp relationships	m		
	5.5.1	distinguishedName	–	–	m		

(continued)

Table B.1 *(concluded)* – Notification support

Index	Sub-index	Notification field name label	Value of object identifier for the attribute type associated with the field	Constraints and values	Status	Support	Additional information
5	5.5.2	nonSpecificForm	–	–	m		
	5.5.3	localDistinguishedName	–	–	m		
	5.6	trendIndication	{dmi-att 30}	ENUMERATED 0 to 2	m		
	5.7	thresholdInfo	{dmi-att 29}	for threshold attributes	m		
	5.7.1	triggeredThreshold	–	–	m		
	5.7.2	observedValue	–	–	m		
	5.7.2.1	integer	–	–	m		
	5.7.2.2	real	–	required for some objects	m		
	5.7.3	thresholdLevel	–	–	m		
	5.7.3.1	up	–	–	m		
	5.7.3.1.1	high	–	–	m		
	5.7.3.1.1.1	integer	–	–	m		
	5.7.3.1.1.2	real	–	required for some objects	m		
	5.7.3.1.2	low	–	for guage thresholds	m		
	5.7.3.1.2.1	integer	–	–	m		
	5.7.3.1.2.2	real	–	required for some objects	m		
	5.7.3.2	down	–	–	m		
	5.7.3.2.1	high	–	–	m		
	5.7.3.2.1.1	integer	–	–	m		
	5.7.3.2.1.2	real	–	required for some objects	m		
	5.7.3.2.2	low	–	–	m		
	5.7.3.2.2.1	integer	–	–	m		
	5.7.3.2.2.2	real	–	required for some objects	m		
	5.7.4	armTime		–	m		
	5.8	notificationIdentifier	{dmi-att 16}	INTEGER	m		
	5.9	correlatedNotifications	{dmi-att 12}	–	m		
	5.9.1	correlatedNotifications	–	–	m		
	5.9.2	sourceObjectInst	–	–	m		
	5.9.2.1	distinguishedName	–	–	m		
	5.9.2.2	nonSpecificForm	–	–	m		
	5.9.2.3	localDistinguishedName	–	–	m		
	5.10	stateChangeDefinition	{dmi-att 28}	required for some objects	m		
	5.10.1	attributeId	–	–	m		
	5.10.1.1	global	–	OBJECT IDENTIFIER	m		
	5.10.1.2	local	–	INTEGER	m		
	5.10.2	oldAttributeValue	–	–	m		
	5.10.3	newAttributeValue	–	–	m		
	5.11	monitoredAttributes	{dmi-att 15}	required for some objects	m		
	5.12	proposedRepairActions	{dmi-att 19}	required for some objects	m		
	5.12.1	global	–	OBJECT IDENTIFIER	m		
	5.12.2	local	–	INTEGER	m		
	5.13	additionalText	{dmi-att 7}	–	m		
	5.14	additionalInformation	{dmi-att 6}	required for some objects	m		

B.4.2 Attributes

The specifier of a manager role implementation that claims to support management operations on the attributes specified in this Recommendation | International Standard shall import a copy of Table B.2 and complete it.

Table B.2 – Attribute support

Index	Attribute template label	Value of object identifier for the attribute	Constraints and values	Set by create		Get	
				Status	Support	Status	Support
1	objectClass	{dmi-att 65}	–	–		o.4	
2	nameBinding	{dmi-att 63}	–	–		o.4	
3	packages	{dmi-att 66}	–	–		o.4	
4	allomorphs	{dmi-att 50}	–	–		o.4	
5	logRecordId	{dmi-att 3}	–	–		o.4	
6	loggingTime	{dmi-att 59}	–	–		o.4	
7	managedObjectClass	{dmi-att 60}	–	–		o.4	
8	managedObjectInstance	{dmi-att 61}	–	–		o.4	
9	eventType	{dmi-att 14}	–	–		o.4	
10	eventTime	{dmi-att 13}	–	–		o.4	
11	notificationIdentifier	{dmi-att 16}	–	–		o.4	
12	correlatedNotifications	{dmi-att 12}	–	–		o.4	
13	additionalText	{dmi-att 7}	–	–		o.4	
14	additionalInformation	{dmi-att 6}	–	–		o.4	
15	probableCause	{dmi-att 18}	–	–		o.4	
16	perceivedSeverity	{dmi-att 17}	–	–		o.4	
17	specificProblems	{dmi-att 27}	–	–		o.4	
18	backedUpStatus	{dmi-att 11}	–	–		o.4	
19	backUpObject	{dmi-att 40}	–	–		o.4	
20	trendIndication	{dmi-att 30 }	–	–		o.4	
21	thresholdInformation	{dmi-att 29 }	–	–		o.4	
22	stateChangeDefinition	{dmi-att 28 }	–	–		o.4	
23	monitoredAttributes	{dmi-att 15 }	–	–		o.4	
24	proposedRepairActions	{dmi-att 19 }	–	–		o.4	

(continued)

Table B.2 *(concluded)* – Attribute support

	Replace		Add		Remove		Set to default		
Index	Status	Support	Status	Support	Status	Support	Status	Support	Additional information
1	–		–		–		–		
2	–		–		–		–		
3	–		–		–		–		
4	–		–		–		–		
5	–		–		–		–		
6	–		–		–		–		
7	–		–		–		–		
8	–		–		–		–		
9	–		–		–		–		
10	–		–		–		–		
11	–		–		–		–		
12	–		–		–		–		
13	–		–		–		–		
14	–		–		–		–		
15	–		–		–		–		
16	–		–		–		–		
17	–		–		–		–		
18	–		–		–		–		
19	–		–		–		–		
20	–		–		–		–		
21	–		–		–		–		
22	–		–		–		–		
23	–		–		–		–		
24	–		–		–		–		

B.4.3 Create and delete management operations

The specifier of a manager role implementation that claims to support the create or delete management operations on the managed objects specified in this Recommendation | International Standard shall import a copy of Table B.3 and complete it.

Table B.3 – Create and delete support

Index	Operation	Constraints and values	Status	Support	Additional information
1	Create support	–	x		
1.1	Create with reference object	–	–		
2	Delete support	alarmRecord managed object	o.4		

Annex C

MOCS proforma[6)]

(This annex forms an integral part of this Recommendation | International Standard)

C.1 Introduction

The purpose of this MOCS proforma is to provide a mechanism for a supplier of an implementation which claims conformance to a managed object class, to provide conformance information in a standard form.

C.2 Instructions for completing the MOCS proforma to produce a MOCS

The MOCS proforma contained in this annex is comprised of information in tabular form, in accordance with ITU-T Rec. X.724 | ISO/IEC 10165-6. The supplier of the implementation shall state which items are supported in the tables below and if necessary, provide additional information.

C.3 Symbols, abbreviations and terms

The following abbreviations are used throughout the MOCS proforma:

dmi-att	joint-iso-ccitt ms(9) smi(3) part2(2) attribute(7)
dmi-moc	joint-iso-ccitt ms(9) smi(3) part2(2) managedObjectClass(3)
dmi-nb	joint-iso-ccitt ms(9) smi(3) part2(2) nameBinding(6)
dmi-not	joint-iso-ccitt ms(9) smi(3) part2(2) notification(10)
dmi-pkg	joint-iso-ccitt ms(9) smi(3) part2(2) package(4)

The notations used for the Status and Support columns are specified in A.1.3.

The following conditional expression is commonly used throughout this MOCS proforma:

c1: if C.3/3a or C.3/6a or C.3/7a or C.3/8a or C.3/9a or C.3/10a or C.3/12a or C.3/13a or C.3/14a or C.3/15a or C.3/16a or C.3/17a or C.3/18a or C.3/19a then m else –.

C.4 Alarm record managed object class

C.4.1 Statement of conformance to the managed object class

The supplier of the implementation shall state whether or not all mandatory features of the alarm record managed object class are supported, and if the actual class supported is the same as the managed object class to which conformance is claimed, in Table C.1.

Table C.1 – Managed object class support

Index	Managed object class template label	Value of object identifier for the managed object class	Does the implementation support all mandatory features? (Y/N)	Is the actual class the same as the managed object class to which conformance is claimed? (Y/N)
1	alarmRecord	{dmi-moc 1}		

6) Users of this Recommendation | International Standard may freely reproduce the MOCS proforma in this annex so that it can be used for its intended purpose, and may further publish the completed MOCS. Instructions for completing the MOCS proforma are specified in ITU-T Rec. X.724 | ISO/IEC 10165-6.

If the answer to the actual class question in the managed object class support table is "N", the supplier of the implementation shall supply the actual class support details, in Table C.2.

Table C.2 – Actual class support

Index	Actual managed object class template label	Value of object identifier for the managed object class	Additional information
1			

C.4.2 Packages

See Table C.3.

Table C.3 – Package support

Index	Package template label	Value of object identifier for the package	Constraints and values	Status	Support	Additional information
1	topPackage	–	–	m		
2	packagesPackage	{dmi-pkg 16}	–	c1		
3	allomorphicPackage	{dmi-pkg 17}	–	c2		
4	logRecordPackage	–	–	m		
5	eventLogRecordPackage	–	–	m		
6	eventTimePackage	{dmi-pkg 11}	–	o		
7	notificationIdentifierPackage	{dmi-pkg 24}	–	o		
8	correlatedNotificationsPackage	{dmi-pkg 23}	–	o		
9	additionalTextPackage	{dmi-pkg 19}	–	o		
10	additionalInformationPackage	{dmi-pkg 18}	–	o		
11	alarmRecordPackage	–	–	m		
12	specificProblemsPackage	{dmi-pkg 1}	–	o		
13	backedUpStatusPackage	{dmi-pkg 2}	–	o		
14	backUpObjectStatusPackage	{dmi-pkg 3}	–	o		
15	trendIndocationPackage	{dmi-pkg 4}	–	o		
16	thresholdInformationPackage	{dmi-pkg 5}	–	o		
17	stateChangeDefinitionPackage	{dmi-pkg 6}	–	o		
18	monitoredAttributesPackage	{dmi-pkg 7}	–	o		
19	proposedRepairActionsPackage	{dmi-pkg 8}	–	o		
c2: if C.1/1b then – else m.						

C.4.3 Attributes

See Table C.4.

Table C.4 – Attribute support

Index	Attribute template label	Value of object identifier for the attribute	Constraints and values	Set by create		Get	
				Status	Support	Status	Support
1	objectClass	{dmi-att 65}	–	x		m	
2	nameBinding	{dmi-att 63}	–	x		m	
3	packages	{dmi-att 66}	–	x		c1	
4	allomorphs	{dmi-att 50}	–	x		c3	
5	logRecordId	{dmi-att 3}	–	x		m	
6	loggingTime	{dmi-att 59}	–	x		m	
7	managedObjectClass	{dmi-att 60}	–	x		m	
8	managedObjectInstance	{dmi-att 61}	–	x		m	
9	eventType	{dmi-att 14}	–	x		m	
10	eventTime	{dmi-att 13}	–	x		c4	
11	notificationIdentifier	{dmi-att 16}	–	x		c5	
12	correlatedNotifications	{dmi-att 12}	–	x		c6	
13	additionalText	{dmi-att 7}	–	x		c7	
14	additionalInformation	{dmi-att 6}	–	x		c8	
15	probableCause	{dmi-att 18}	–	x		m	
16	perceivedSeverity	{dmi-att 17}	–	x		m	
17	specificProblems	{dmi-att 27}	–	x		c9	
18	backedUpStatus	{dmi-att 11}	–	x		c10	
19	backUpObject	{dmi-att 40}	–	x		c11	
20	trendIndication	{dmi-att 30 }	–	x		c12	
21	thresholdInformation	{dmi-att 29 }	–	x		c13	
22	stateChangeDefinition	{dmi-att 28 }	–	x		c14	
23	monitoredAttributes	{dmi-att 15 }	–	x		c15	
24	proposedRepairActions	{dmi-att 19 }	–	x		c16	

c3: if C.3/3a then m else –.
c4: if C.3/6a then m else –.
c5: if C.3/7a then m else –.
c6: if C.3/8a then m else –.
c7: if C.3/9a then m else –.
c8: if C.3/10a then m else –.
c9: if C.3/12a then m else –.
c10: if C.3/13a then m else –.
c11: if C.3/14a then m else –.
c12: if C.3/15a then m else –.
c13: if C.3/16a then m else –.
c14: if C.3/17a then m else –.
c15: if C.3/18a then m else –.
c16: if C.3/19a then m else –.

(continued)

Table C.4 *(concluded)* – Attribute support

	Replace		Add		Remove		Set to default		
Index	Status	Support	Status	Support	Status	Support	Status	Support	Additional information
1	x		–		–		–		
2	x		–		–		–		
3	x		x		x		–		
4	x		x		x		–		
5	x		–		–		–		
6	x		–		–		–		
7	x		–		–		–		
8	x		–		–		–		
9	x		–		–		–		
10	x		–		–		–		
11	x		–		–		–		
12	x		x		x		–		
13	x		–		–		–		
14	x		x		x		–		
15	x		–		–		–		
16	x		–		–		–		
17	x		–		–		–		
18	x		–		–		–		
19	x		–		–		–		
20	x		–		–		–		
21	x		–		–		–		
22	x		x		x		–		
23	x		x		x		–		
24	x		x		x		–		

Annex D

MIDS (notification) proforma[7)]

(This annex forms an integral part of this Recommendation | International Standard)

D.1 Symbols, abbreviations and terms

The following abbreviations are used throughout this MIDS proforma:

dmi-att joint-iso-ccitt ms(9) smi(3) part2(2) attribute(7)

dmi-not joint-iso-ccitt ms(9) smi(3) part2(2) notification(10)

The notations used for the Status and Support columns are specified in A.1.3.

D.2 Notifications

The specifier of a managed object class that claims to support the notifications specified by CCITT Rec. X.733 | ISO/IEC 10164-4 shall import a copy of this annex and complete it according to the instructions specified in ITU-T Rec. X.724 | ISO/IEC 10165-6.

Table D.1 – Notification support

Index	Notification type template label	Value of object identifier for the notification type	Constraints and values	Status	Support		Additional information
					Confirmed	Non-confirmed	
1	communicationsAlarm	{dmi-not 2}	–				
2	environmentalAlarm	{dmi-not 3}	–				
3	equipmentAlarm	{dmi-not 4}	–				
4	processingErrorAlarm	{dmi-not 10}	–				
5	qualityOfServiceAlarm	{dmi-not 11}	–				

Table D.1 *(continued)* – Notification support

Index	Sub-index	Notification field name label	Value of object identifier for the attribute type associated with the field	Constraints and values	Status	Support	Additional information
1	1.1	probableCause	{dmi-att 18}	–	m		
	1.1.1	globalValue	–	OBJECT IDENTIFIER	o.5		
	1.1.2	localValue	–	INTEGER	o.5		
	1.2	specificProblems	{dmi-att 27}	required for some objects	o		
	1.2.1	global	–	OBJECT IDENTIFIER	c:o.6		
	1.2.2	local	–	INTEGER	c:o.6		
	1.3	perceivedSeverity	{dmi-att 17}	ENUMERATED 0 to 5	m		
	1.4	backedUpStatus	{dmi-att 11}	required for some objects	o		

(continued)

7) Users of this Recommendation | International Standard may freely reproduce the MIDS proforma in this annex so that it can be used for its intended purpose, and may further publish the completed MIDS. Instructions for completing the MIDS proforma are specified in ITU-T Rec. X.724 | ISO/IEC 10165-6.

Table D.1 *(continued)* – Notification support

Index	Sub-index	Notification field name label	Value of object identifier for the attribute type associated with the field	Constraints and values	Status	Support	Additional information
1	1.5	backUpObject	{dmi-att 40}	for backUp relationships	o		
	1.5.1	distinguishedName	–	–	c:o.7		
	1.5.2	nonSpecificForm	–	–	c:o.7		
	1.5.3	localDistinguishedName	–	–	c:o.7		
	1.6	trendIndication	{dmi-att 30}	ENUMERATED 0 to 2	o		
	1.7	thresholdInfo	{dmi-att 29}	for threshold attributes	o		
	1.7.1	triggeredThreshold	–	–	c:m		
	1.7.2	observedValue	–	–	c:m		
	1.7.2.1	integer	–	–	c:o.8		
	1.7.2.2	real	–	required for some objects	c:o.8		
	1.7.3	thresholdLevel	–	–	c:o		
	1.7.3.1	up	–	–	c:o.9		
	1.7.3.1.1	high	–	–	c:m		
	1.7.3.1.1.1	integer	–	–	c:o.10		
	1.7.3.1.1.2	real	–	required for some objects	c:o.10		
	1.7.3.1.2	low	–	for guage thresholds	c:o		
	1.7.3.1.2.1	integer	–	–	c:o.11		
	1.7.3.1.2.2	real	–	required for some objects	c:o.11		
	1.7.3.2	down	–	–	c:o.9		
	1.7.3.2.1	high	–	–	c:m		
	1.7.3.2.1.1	integer	–	–	c:o.12		
	1.7.3.2.1.2	real	–	required for some objects	c:o.12		
	1.7.3.2.2	low	–	–	c:m		
	1.7.3.2.2.1	integer	–	–	c:o.13		
	1.7.3.2.2.2	real	–	required for some objects	c:o.13		
	1.7.4	armTime	–	–	c:o		
	1.8	notificationIdentifier	{dmi-att 16}	INTEGER	c1		
	1.9	correlatedNotifications	{dmi-att 12}	–	o		
	1.9.1	correlatedNotifications	–	–	c:m		
	1.9.2	sourceObjectInst	–	–	c:o		
	1.9.2.1	distinguishedName	–	–	c:o.14		
	1.9.2.2	nonSpecificForm	–	–	c:o.14		
	1.9.2.3	localDistinguishedName	–	–	c:o.14		
	1.10	stateChangeDefinition	{dmi-att 28}	required for some objects	o		
	1.10.1	attributeId	–	–	c:m		
	1.10.1.1	global	–	OBJECT IDENTIFIER	c:o.15		
	1.10.1.2	local	–	INTEGER	c:o.15		
	1.10.2	oldAttributeValue	–	–	c:o		
	1.10.3	newAttributeValue	–	–	c:m		
	1.11	monitoredAttributes	{dmi-att 15}	required for some objects	o		
	1.12	proposedRepairActions	{dmi-att 19}	required for some objects	o		
	1.12.1	global	–	OBJECT IDENTIFIER	c:o.16		
	1.12.2	local	–	INTEGER	c:o.16		
	1.13	additionalText	{dmi-att 7}	–	o		

c1: if D.1/1.9a then m else o.

(continued)