

SLOVENSKI STANDARD

SIST EN 61158-6-3:2015

01-marec-2015

Nadomešča:

SIST EN 61158-6-3:2012

Industrijska komunikacijska omrežja - Specifikacije za procesna vodila - 6-3. del: Specifikacija protokola na aplikacijski ravni - Elementi tipa 3 (IEC 61158-6-3:2014)

Industrial communication networks - Fieldbus specifications - Part 6-3: Application layer protocol specification - Type 3 elements (IEC 61158-6-3:2014)

Industrielle Kommunikationsnetze - Feldbusse - Teil 6-3: Protokollspezifikation des Application Layer (Anwendungsschicht) - Typ 3-Elemente (IEC 61158-6-3:2014)

Réseaux de communication industriels - Spécifications des bus de terrain - Partie 6-3: Spécification du protocole de la couche application - Éléments de type 3 (CEI 61158-6-3:2014)

Ta slovenski standard je istoveten z: EN 61158-6-3:2014

ICS:

25.040.40	Merjenje in krmiljenje industrijskih postopkov	Industrial process measurement and control
35.100.70	Uporabniški sloj	Application layer
35.110	Omreževanje	Networking

SIST EN 61158-6-3:2015

en,fr,de

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 61158-6-3:2015](#)

<https://standards.iteh.ai/catalog/standards/sist/f2068a79-4803-4ff7-85ca-9674660ec84e/sist-en-61158-6-3-2015>

EUROPEAN STANDARD

EN 61158-6-3

NORME EUROPÉENNE

EUROPÄISCHE NORM

October 2014

ICS 25.040.40; 35.100.70; 35.110

Supersedes EN 61158-6-3:2012

English Version

**Industrial communication networks - Fieldbus specifications -
Part 6-3: Application layer protocol specification - Type 3
elements
(IEC 61158-6-3:2014)**

Réseaux de communication industriels - Spécifications des
bus de terrain - Partie 6-3: Spécification du protocole de la
couche application - Éléments de type 3
(CEI 61158-6-3:2014)

Industrielle Kommunikationsnetze - Feldbusse - Teil 6-3:
Protokollspezifikation des Application Layer
(Anwendungsschicht) - Typ 3-Elemente
(IEC 61158-6-3:2014)

This European Standard was approved by CENELEC on 2014-09-23. 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.

[https://standards.iteh.ai/catalog/standards/sist/f2068a79-4803-4ff7-85ca-](https://standards.iteh.ai/catalog/standards/sist/f2068a79-4803-4ff7-85ca-9674660ec84e/sist-en-61158-6-3-2015)

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 65C/764/FDIS, future edition 3 of IEC 61158-6-3, prepared by SC 65C "Industrial networks" of IEC/TC 65 "Industrial-process measurement, control and automation" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 61158-6-3:2014.

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) 2015-06-23
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2017-09-23

This document supersedes EN 61158-6-3:2012.

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.

<https://standards.iteh.ai/catalog/standards/sist/f2068a79-4803-4ff7-85ca-9674-111111111111>
Endorsement notice

The text of the International Standard IEC 61158-6-3:2014 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 61158-1:2014	NOTE	Harmonized as EN 61158-1:2014 (not modified).
IEC 61784-1	NOTE	Harmonized as EN 61784-1.
IEC 61784-2	NOTE	Harmonized as EN 61784-2.

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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61158-3-3	2014	Industrial communication networks - Fieldbus specifications - Part 3-3: Data-link layer service definition - Type 3 elements	EN 61158-3-3	2014
IEC 61158-4-3	2014	Industrial communication networks - Fieldbus specifications - Part 4-3: Data-link layer protocol specification - Type 3 elements	EN 61158-4-3	1)
IEC 61158-5-3	2014	Industrial communication networks - Fieldbus specifications - Part 5-3: Application layer service definition - Type 3 elements	EN 61158-5-3	2014
IEC 61158-5-10	2014	Industrial communication networks - Fieldbus specifications - Part 5-10: Application layer service definition - Type 10 elements	EN 61158-5-10	2014
IEC 61158-6-10	2014	Industrial communication networks - Fieldbus specifications - Part 6-10: Application layer protocol specification - Type 10 elements	EN 61158-6-10	2014
ISO/IEC 7498-1	-	Information technology - Open Systems Interconnection - Basic Reference Model: The Basic Model	-	-
ISO/IEC 8822	-	Information technology - Open Systems Interconnection - Presentation service definition	-	-
ISO/IEC 8824-1	-	Information technology - Abstract Syntax Notation One (ASN.1): Specification of basic notation	-	-

1) To be published.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
ISO/IEC 9545	-	Information technology - Open Systems Interconnection - Application layer structure	-	-
ISO/IEC 10731	-	Information technology - Open Systems Interconnection - Basic Reference Model - Conventions for the definition of OSI services	-	-
IEEE 754	-	IEEE Standard for Floating-Point Arithmetic	-	-

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN 61158-6-3:2015](https://standards.iteh.ai/catalog/standards/sist/f2068a79-4803-4ff7-85ca-9674660ec84e/sist-en-61158-6-3-2015)

<https://standards.iteh.ai/catalog/standards/sist/f2068a79-4803-4ff7-85ca-9674660ec84e/sist-en-61158-6-3-2015>



IEC 61158-6-3

Edition 3.0 2014-08

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Industrial communication networks – Fieldbus specifications –
Part 6-3: Application layer protocol specification – Type 3 elements**

**Réseaux de communication industriels – Spécifications des bus de terrain –
Partie 6-3: Spécification du protocole de la couche application – Éléments
de type 3**

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
ELECTROTECHNIQUE
INTERNATIONALE

PRICE CODE
CODE PRIX

XH

ICS 25.040.40; 35.100.70; 35.110

ISBN 978-2-8322-1757-3

**Warning! Make sure that you obtained this publication from an authorized distributor.
Attention! Veuillez vous assurer que vous avez obtenu cette publication via un distributeur agréé.**

CONTENTS

FOREWORD.....	8
INTRODUCTION.....	10
1 Scope.....	11
1.1 General.....	11
1.2 Specifications.....	12
1.3 Conformance.....	12
2 Normative references.....	12
3 Terms, definitions, abbreviations, symbols and conventions.....	13
3.1 Referenced terms and definitions.....	13
3.2 Additional definitions.....	14
3.3 Abbreviations and symbols.....	17
3.4 Conventions.....	18
3.5 Conventions used in state machines.....	20
4 FAL syntax description.....	23
4.1 APDU abstract syntax.....	23
4.2 Data types.....	27
5 Transfer syntax.....	28
5.1 Coding of basic data types.....	28
5.2 Coding section related to data exchange PDUs.....	30
5.3 Coding section related to slave diagnosis PDUs.....	30
5.4 Coding section related to parameterization PDU.....	41
5.5 Coding section related to configuration PDUs.....	49
5.6 Coding section related to global control PDUs.....	51
5.7 Coding section related to clock-value-PDUs.....	53
5.8 Coding section related to function identification and errors.....	54
5.9 Coding section related to master diagnosis PDU.....	57
5.10 Coding section related to upload/download/act para PDUs.....	60
5.11 Coding section related to the bus parameter set.....	62
5.12 Coding section related to the slave parameter set.....	64
5.13 Coding section related to statistic counters.....	68
5.14 Coding section related to set slave address PDU.....	68
5.15 Coding section related to initiate/abort PDUs.....	68
5.16 Coding section related to read/write/data transport PDUs.....	72
5.17 Coding section related to load region and function invocation PDUs.....	72
5.18 Examples of diagnosis-RES-PDUs.....	76
5.19 Example of Chk_Cfg-REQ-PDU.....	78
5.20 Examples of Chk_Cfg-REQ-PDUs with DPV1 data types.....	78
5.21 Example structure of the Data_Unit for Data_Exchange.....	80
6 FAL protocol state machines.....	81
6.1 Overall structure.....	81
6.2 Assignment of state machines to devices.....	83
6.3 Overview DP-slave.....	84
6.4 Overview DP-master (class 1).....	86
6.5 Overview DP-master (class 2).....	87
6.6 Cyclic communication between DP-master (class 1) and DP-slave.....	88

6.7	Acyclic communication between DP-master (class 2) and DP-master (class 1)	89
6.8	Acyclic communication between DP-master (class 1) and DP-slave	91
6.9	Application relationship monitoring	93
7	AP-context state machine	98
8	FAL service protocol machines (FSPMs)	99
8.1	FSPMS	99
8.2	FSPMM1	134
8.3	FSPMM2	169
9	Application relationship protocol machines (ARPMs)	186
9.1	MSCY1S	186
9.2	MSAC1S	216
9.3	SSCY1S	229
9.4	MSRM2S	232
9.5	MSAC2S	238
9.6	MSCS1S	254
9.7	MSCY1M	256
9.8	MSAL1M	274
9.9	MSAC1M	283
9.10	MMAC1	296
9.11	MSCS1M	303
9.12	MSAC2M	307
9.13	MMAC2	322
10	DLL mapping protocol machines (DMPMs)	329
10.1	DMPMS	329
10.2	DMPMM1	343
10.3	DMPMM2	358
11	Parameters for a DP-slave	366
	Bibliography	367
	Figure 1 – Common structure of specific fields	19
	Figure 2 – Example Modul_Status_Array	36
	Figure 3 – Example of Ext_Diag_Data in case of DPV1 diagnosis format with alarm and status PDU	76
	Figure 4 – Example of Ext_Diag_Data in case of the basic diagnosis format	78
	Figure 5 – Example of a special identifier format	78
	Figure 6 – Example of a special identifier format with data types	79
	Figure 7 – Example of a special identifier format with data types	79
	Figure 8 – Example of an empty slot with data types	80
	Figure 9 – Example for multi-variable device with AI and DO function blocks	80
	Figure 10 – Identifiers (ID)	81
	Figure 11 – Identifier list	81
	Figure 12 – Structure of the Data_Unit for the request- and response-DLPDU	81
	Figure 13 – Structuring of the protocol machines and adjacent layers in a DP-slave	85
	Figure 14 – Structuring of the protocol machines and adjacent layers in a DP-master (class 1)	86

Figure 15 – Structuring of the protocol machines and adjacent layers in a DP-master (class 2).....	87
Figure 16 – Sequence of the communication between DP-master and DP-slave	89
Figure 17 – Sequence of communication between DP-master (class 2) and DP-master (class 1).....	91
Figure 18 – Sequence of acyclic communication between DP-master (class 1) and DP-slave.....	93
Figure 19 – Example for connection establishment on MS2.....	96
Figure 20 – Idle at master-side on MS2.....	97
Figure 21 – Idle at slave-side on MS2	98
Figure 22 – Example for connection establishment on MS2(server-side).....	234
Figure 23 – Structure of RM entries in the RM_Registry.....	235
Table 1 – State machine description elements	20
Table 2 – Description of state machine elements	21
Table 3 – Conventions used in state machines	21
Table 4 – APDU syntax.....	23
Table 5 – Substitutions	25
Table 6 – Block_Length range	32
Table 7 – Selection range	33
Table 8 – Alarm_Type range.....	33
Table 9 – Status_Type value range.....	33
Table 10 – Alarm_Specifier.....	34
Table 11 – Range of Modul_Status_Entry (1-4).....	36
Table 12 – Input_Output_Selection	38
Table 13 – Error type	38
Table 14 – Channel_Type	38
Table 15 – Specification of the bits Lock_Req and Unlock_Req	42
Table 16 – Range of Length_of_Manufacturer_Specific_Data if used in Chk_Cfg-REQ-PDU.....	50
Table 17 – Range of Length_of_Manufacturer_Specific_Dat if used in Get_Cfg-RES-PDU	50
Table 18 – Data types	51
Table 19 – Specification of the bits for Un-/Freeze.....	52
Table 20 – Specification of the bits for Un-/Sync.....	52
Table 21 – Coding of the Function_Code/ Function_Num.....	54
Table 22 – Coding of the Error_Code / Function_Num	55
Table 23 – Values of Error_Decode	56
Table 24 – Coding of Error_Code_1 at DPV1.....	57
Table 25 – Values of MDiag_Identifier	58
Table 26 – Values for Area_Code_UpDownload.....	60
Table 27 – Values for Area_CodeActBrct.....	61
Table 28 – Values for Area_CodeAct	61
Table 29 – Values for Activate	61
Table 30 – Values for Data_rate	62

Table 31 – Values for Slave_Type	65
Table 32 – Values for Alarm_Mode	66
Table 33 – Values for Subnet.....	71
Table 34 – Values of reason code if instance is DLL	71
Table 35 – Values of reason code if instance is MS2	71
Table 36 – Values of Extended_Function_Num	72
Table 37 – Values of FI_Index	74
Table 38 – Values of FI_State.....	74
Table 39 – IMData_Execution_Argument	75
Table 40 – IMData_Result_Argument.....	75
Table 41 – Assignment of state machines	84
Table 42 – Primitives issued by AP-Context to FSPMS	99
Table 43 – Primitives issued by FSPMS to AP-Context	101
Table 44 – FSPMS state table	108
Table 45 – Functions used by the FSPMS.....	132
Table 46 – Primitives issued by AP-Context to FSPMM1.....	134
Table 47 – Primitives issued by FSPMM1 to AP-Context.....	136
Table 48 – FSPMM1 state table.....	143
Table 49 – Functions used by the FSPMM1	168
Table 50 – Primitives issued by AP-Context to FSPMM2	169
Table 51 – Primitives issued by FSPMM2 to AP-Context.....	171
Table 52 – FSPMM2 state table	174
Table 53 – Functions used by the FSPMM2	185
Table 54 – Primitives issued by FSPMS to MSCY1S	186
Table 55 – Primitives issued by MSCY1S to FSPMS	186
Table 56 – Rules for DPV1_Status_1, DPV1_Status_2 and DPV1_Status_3 check	188
Table 57 – MSCY1S state table	193
Table 58 – Functions used by the MSCY1S	214
Table 59 – Primitives issued by FSPMS to MSAC1S	216
Table 60 – Primitives issued by MSAC1S to FSPMS	217
Table 61 – Primitives issued by MSCY1S to MSAC1S.....	217
Table 62 – Primitives issued by MSAC1S to MSCY1S.....	217
Table 63 – Parameter used with primitives exchanged between MSAC1S and MSCY1S	217
Table 64 – MSAC1S state table	219
Table 65 – Functions used by the MSAC1S	228
Table 66 – Primitives issued by FSPMS to SSCY1S	229
Table 67 – Primitives issued by SSCY1S to FSPMS	229
Table 68 – SSCY1S state table.....	230
Table 69 – Functions used by the SSCY1S.....	232
Table 70 – Primitives issued by FSPMS to MSRM2S	232
Table 71 – Primitives issued by MSRM2S to FSPMS	232
Table 72 – MSRM2S state table.....	236
Table 73 – Primitives issued by FSPMS to MSAC2S	238

Table 74 – Primitives issued by MSAC2S to FSPMS	239
Table 75 – Primitives issued by MSRM2S to MSAC2S	240
Table 76 – Primitives issued by MSAC2S to MSRM2S	240
Table 77 – Parameter used with primitives exchanged with MSAC2S.....	240
Table 78 – MSAC2S state table	243
Table 79 – Primitives issued by MSCS1S to FSPMS	254
Table 80 – MSCS1S state table	255
Table 81 – Primitives issued by FSPMM1 to MSCY1M	256
Table 82 – Primitives issued by MSCY1M to FSPMM1	256
Table 83 – Parameters used with primitives exchanged between FSPMM1 and MSCY1M	257
Table 84 – MSCY1M state table.....	260
Table 85 – Primitives issued by FSPMM1 to MSAL1M	275
Table 86 – Primitives issued by MSAL1M to FSPMM1	275
Table 87 – Primitives issued by MSCY1M to MSAL1M	275
Table 88 – Primitives issued by MSAL1M to MSCY1M	275
Table 89 – Parameter used with primitives exchanged between MSAL1M and MSCY1M.....	276
Table 90 – Possible values in the Alarm_State_Table	277
Table 91 – MSAL1M state table	279
Table 92 – Primitives issued by FSPMM1 to MSAC1M	284
Table 93 – Primitives issued by MSAC1M to FSPMM1	284
Table 94 – Primitives issued by MSAL1M to MSAC1M	285
Table 95 – Primitives issued by MSAC1M to MSAL1M	285
Table 96 – Parameter used with primitives exchanged between MSAL1M and MSCY1M.....	285
Table 97 – MSAC1M state table.....	291
Table 98 – Primitives issued by FSPMM1 to MMAC1	297
Table 99 – Primitives issued by MMAC1 to FSPMM1	297
Table 100 – MMAC1 state table	298
Table 101 – Primitives issued by FSPMM1 to MSCS1M	303
Table 102 – Primitives issued by MSCS1M to FSPMM1	304
Table 103 – MSCS1M state table.....	305
Table 104 – Primitives issued by FSPMM2 to MSAC2M	308
Table 105 – Primitives issued by MSAC2M to FSPMM2	308
Table 106 – Parameters used with primitives exchanged with MSAC2M	309
Table 107 – MSAC2M state table.....	313
Table 108 – Primitives issued by FSPMM2 to MMAC2	323
Table 109 – Primitives issued by MMAC2 to FSPMM2	323
Table 110 – Parameters used with primitives exchanged with MMAC2.....	324
Table 111 – MMAC2 state table	325
Table 112 – Primitives issued by FSPMS to DMPMS	330
Table 113 – Primitives issued by DMPMS to FSPMS	330
Table 114 – Primitives issued by MSCY1S to DMPMS	330
Table 115 – Primitives issued by DMPMS to MSCY1S	331

Table 116 – Primitives issued by DMPMS to SSCY1S.....	331
Table 117 – Primitives issued by MSAC1S, MSRM2S, MSAC2S to DMPMS.....	332
Table 118 – Primitives issued by DMPMS to MSAC1S, MSRM2S, MSAC2S.....	332
Table 119 – Primitives issued by DMPMS to MSCS1S	332
Table 120 – Primitives issued by DMPMS to DL.....	333
Table 121 – Primitives issued by DL to DMPMS.....	333
Table 122 – Parameters used with primitives exchanged with DMPMS	334
Table 123 – DMPMS state table.....	336
Table 124 – Functions used by the DMPMS.....	342
Table 125 – Primitives issued by FSPMM1 to DMPMM1	343
Table 126 – Primitives issued by DMPMM1 to FSPMM1	343
Table 127 – Primitives issued by MSCY1M to DMPMM1	344
Table 128 – Primitives issued by DMPMM1 to MSCY1M	344
Table 129 – Primitives issued by MSAL1M, MSAC1M to DMPMM1	345
Table 130 – Primitives issued by DMPMM1 to MSAL1M, MSAC1M	345
Table 131 – Primitives issued by MMAC1 to DMPMM1	345
Table 132 – Primitives issued by DMPMM1 to MMAC1	345
Table 133 – Primitives issued by MSCS1M to DMPMM1	346
Table 134 – Primitives issued by DMPMM1 to MSCS1M	346
Table 135 – Primitives issued by DMPMM2 to DL.....	346
Table 136 – Primitives issued by DL to DMPMM1	347
Table 137 – Parameters used with primitives exchanged with DMPMM1.....	348
Table 138 – Possible values of status.....	349
Table 139 – DMPMM1 state table	350
Table 140 – Functions used by the DMPMM1	357
Table 141 – Primitives issued by FSPMM2 to DMPMM2	358
Table 142 – Primitives issued by DMPMM2 to FSPMM2	358
Table 143 – Primitives issued by MSAC2M to DMPMM2	359
Table 144 – Primitives issued by DMPMM2 to MSAC2M	359
Table 145 – Primitives issued by MMAC2 to DMPMM2	359
Table 146 – Primitives issued by DMPMM2 to MMAC2	360
Table 147 – Primitives issued by DMPMM2 to DL	360
Table 148 – Primitives issued by DL to DMPMM2	360
Table 149 – Parameters used with primitives exchanged with DMPMM2.....	361
Table 150 – DMPMM2 state Table	362
Table 151 – Functions used by DMPMM2	365
Table 152 – Bus parameter/reaction times for a DP-slave.....	366

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**INDUSTRIAL COMMUNICATION NETWORKS –
FIELD BUS SPECIFICATIONS –**

**Part 6-3: Application layer protocol specification –
Type 3 elements**

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.

Attention is drawn to the fact that the use of the associated protocol type is restricted by its intellectual-property-right holders. In all cases, the commitment to limited release of intellectual-property-rights made by the holders of those rights permits a layer protocol type to be used with other layer protocols of the same type, or in other type combinations explicitly authorized by its intellectual-property-right holders.

NOTE Combinations of protocol types are specified in IEC 61784-1 and IEC 61784-2.

International Standard IEC 61158-6-3 has been prepared by subcommittee 65C: Industrial networks, of IEC technical committee 65: Industrial-process measurement, control and automation.

This third edition cancels and replaces the second edition published in 2010. This edition constitutes a technical revision.

The main changes with respect to the previous edition are listed below:

- corrections, in Table 4, Table 5, Table 6, and Table 7;

- added references for data types;
- corrected state machine in Table 91 and Table 97;
- updated macro START_MSAL1M,
- spelling and grammar.

The text of this standard is based on the following documents:

FDIS	Report on voting
65C/764/FDIS	65C/774/RVD

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 of the IEC 61158 series, published under the general title *Industrial communication networks – Fieldbus specifications*, can be found on the IEC web site.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site 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.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 61158-6-3:2015](https://standards.iteh.ai/catalog/standards/sist/f2068a79-4803-4ff7-85ca-9674660ec84e/sist-en-61158-6-3-2015)

<https://standards.iteh.ai/catalog/standards/sist/f2068a79-4803-4ff7-85ca-9674660ec84e/sist-en-61158-6-3-2015>