SLOVENSKI STANDARD
SIST EN IEC 61158-6-23:2019

01-november-2019

Nadomešča:

SIST EN 61158-6-23:2015

Industrijska komunikacijska omrežja - Specifikacije za procesna vodila - 6-23. del: Specifikacija protokola na aplikacijski ravni - Elementi tipa 23 (IEC 61158-6-23:2019)

Industrial communication networks - Fieldbus specifications - Part 6-23: Application layer protocol specification - Type 23 elements (IEC 61158-6-23:2019)

iTeh STANDARD PREVIEW
(standards.iteh.ai)

Industrielle Kommunikationsnetze - Feldbusse - Teil 6-23: Protokollspezifikation des Application Layer (Anwendungsschicht) - Typ 23-Elemente (IEC 61158-6-23:2019)

SIST EN IEC 61158-6-23:2019
https://standards.iteh.ai/catalog/standards/sist/48609c98-2974-4501-bebe-9dcbc0505b4e/sist-en-iec-61158-6-23-2019

Réseaux de communication industriels - Spécifications des bus de terrain - Partie 6-23: Spécification du protocole de la couche application - Eléments de type 23 (IEC 61158-6-23:2019)

Ta slovenski standard je istoveten z: **EN IEC 61158-6-23:2019**

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 IEC 61158-6-23:2019 **en,fr,de**

2003-01.Slovenski inštitut za standardizacijo. Razmnoževanje celote ali delov tega standarda ni dovoljeno.

SIST EN IEC 61158-6-23:2019

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN IEC 61158-6-23:2019
https://standards.iteh.ai/catalog/standards/sist/48609c98-2974-4501-bebe-9debc656554e/sist-en-iec-61158-6-23-2019

SIST EN IEC 61158-6-23:2019

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 61158-6-23

August 2019

ICS 35.100.70; 35.110; 25.040.40

Supersedes EN 61158-6-23:2014 and all of its amendments and corrigenda (if any)

English Version

Industrial communication networks - Fieldbus specifications - Part 6-23: Application layer protocol specification - Type 23 elements (IEC 61158-6-23:2019)

Réseaux de communication industriels - Spécifications des bus de terrain - Partie 6-23: Spécification du protocole de la couche application - Eléments de type 23 (IEC 61158-6-23:2019)

Industrielle Kommunikationsnetze - Feldbusse - Teil 6-23: Protokollspezifikation des Application Layer (Anwendungsschicht) - Typ 23-Elemente (IEC 61158-6-23:2019)

This European Standard was approved by CENELEC on 2019-07-25. 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.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

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.

SIST EN IEC 61158-6-23:2019
https://standards.iteh.ai/catalog/standards/sist/48609c98-2974-4501-bebe-9debc656554e/sist-en-iec-61158-6-23-2019

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, 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: Rue de la Science 23, B-1040 Brussels

© 2019 CENELEC All rights of exploitation in any form and by any means reserved worldwide for CENELEC Members.

SIST EN IEC 61158-6-23:2019

European foreword

The text of document 65C/948/FDIS, future edition 2 of IEC 61158-6-23, 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 IEC 61158-6-23:2019.

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) 2020-04-25
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2022-07-25

This document supersedes EN 61158-6-23:2014 and all of its amendments and corrigenda (if any).

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

iTeh STANDARD PREVIEW
(standards.iteh.ai)

Endorsement notice

https://standards.iteh.ai/catalog/standards/sist/48609c98-2974-4501-bebe-9debc656554e/sist-en-iec-61158-6-23-2019

The text of the International Standard IEC 61158-6-23:2019 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 61784-1	NOTE	Harmonized as EN IEC 61784-1
IEC 61784-2	NOTE	Harmonized as EN IEC 61784-2

SIST EN IEC 61158-6-23:2019

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

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.

NOTE 1 Where 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.

Publication	Year	Title	EN/HD	Year
IEC 61158-1	2019	Industrial communication networks - Fieldbus specifications - Part 1: Overview and guidance for the IEC 61158 and IEC 61784 series	EN IEC 61158-1	2019
IEC 61158-5-23	-	Industrial communication networks - Fieldbus specifications - Part 5-23: Application layer service definition - Type 23 elements	EN IEC 61158-5-23	-
IEC 61158	series	Digital data communications for measurement and control - Fieldbus for use in industrial control systems - Part 6: Application layer protocol specification	-	-
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	-	-
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	-	-

iTeh STANDARD PREVIEW
(standards.iteh.ai)
SIST EN IEC 61158-6-23:2019
https://standards.iteh.ai/catalog/standards/sist/48609c98-2974-4501-bebe-9debc656e54e/sist-en-iec-61158-6-23-2019

SIST EN IEC 61158-6-23:2019

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN IEC 61158-6-23:2019
https://standards.iteh.ai/catalog/standards/sist/48609c98-2974-4501-bebe-9debc656554e/sist-en-iec-61158-6-23-2019

SIST EN IEC 61158-6-23:2019

IEC 61158-6-23

Edition 2.0 2019-06

INTERNATIONAL STANDARD

Industrial communication networks – Fieldbus specifications – Part 6-23: Application layer protocol specification – Type 23 elements

iTeh STANDARD PREVIEW
(standards.iteh.ai)
SIST EN IEC 61158-6-23:2019
https://standards.iteh.ai/catalog/standards/sist/48609c98-2974-4501-bebe-9debc656554e/sist-en-iec-61158-6-23-2019

INTERNATIONAL ELECTROTECHNICAL COMMISSION

ICS 25.040.40; 35.100.70; 35.110

ISBN 978-2-8322-7014-1

Warning! Make sure that you obtained this publication from an authorized distributor.

® Registered trademark of the International Electrotechnical Commission

SIST EN IEC 61158-6-23:2019

CONTENTS

FOREWORD 9
INTRODUCTION 11
1 Scope 13
1.1 General 13
1.2 Specifications 14
1.3 Conformance 14
2 Normative references 14
3 Terms, definitions, symbols, abbreviated terms and conventions 15
3.1 Referenced terms and definitions 15
3.1.1 ISO/IEC 7498-1 terms 15
3.1.2 ISO/IEC 8822 terms 15
3.1.3 ISO/IEC 9545 terms 15
3.1.4 ISO/IEC 8824-1 terms 15
3.1.5 IEC 61158-1 terms 16
3.2 Additional Type 23 terms and definitions 16
3.3 Symbols and abbreviated terms 18
3.4 Conventions 19
3.4.1 General concept 19
3.4.2 Convention for the encoding of reserved bits and octets 19
3.4.3 Conventions for abstract syntax description 19
3.4.4 Conventions for bit description in octets 20
3.4.5 Conventions for state machine descriptions 20
4 FAL syntax description 21
4.1 FALPDU type C abstract syntax 21
4.1.1 Basic abstract syntax 21
4.1.2 Connect-PDU 22
4.1.3 ConnectAck-PDU 22
4.1.4 Scan-PDU 22
4.1.5 Collect-PDU 23
4.1.6 Select-PDU 23
4.1.7 Launch-PDU 23
4.1.8 Token-PDU 23
4.1.9 MyStatus-PDU 24
4.1.10 Transient1-PDU 24
4.1.11 Dummy-PDU 25
4.1.12 Transient2-PDU 25
4.1.13 NTNTest-PDU 25
4.1.14 CyclicDataW-PDU 26
4.1.15 CyclicDataB-PDU 26
4.1.16 CyclicDataOut1-PDU 26
4.1.17 CyclicDataOut2-PDU 27
4.1.18 CyclicDataIn1-PDU 27
4.1.19 CyclicDataIn2-PDU 27
4.2 FALPDU type F abstract syntax 28
4.2.1 Basic abstract syntax 28
4.2.2 Persuasion-PDU 29
4.2.3 TestData-PDU 30

iTeh STANDARD PREVIEW
(standards.iteh.ai)
SIST EN IEC 61158-6-23:2019
https://standards.iteh.ai/catalog/standards/sist/48609c98-2974-4501-bebe-9debc656554e/sist-en-iec-61158-6-23-2019

SIST EN IEC 61158-6-23:2019

4.2.4 TestDataAck-PDU 30
4.2.5 Setup-PDU 31
4.2.6 SetupAck-PDU 31
4.2.7 F-Token-PDU 32
4.2.8 F-MyStatus-PDU 32
4.2.9 Measure-PDU 32
4.2.10 F-Offset-PDU 33
4.2.11 F-Update-PDU 33
4.2.12 F-CyclicData-PDU 33
4.2.13 Transient1-PDU 33
4.2.14 TransientAck-PDU 36
4.2.15 Transient2-PDU 37
4.2.16 ParamCheck-PDU 37
4.2.17 Parameter-PDU 38
4.2.18 Timer-PDU 39
4.3 Data type assignments for type C 39
4.4 Data type assignments for type F 40
5 FAL transfer syntax 41
5.1 Encoding rules 41
5.1.1 Unsigned encoding 41
5.1.2 Octet string encoding 41
5.1.3 SEQUENCE encoding 42
5.1.4 LOctetString encoding 42
5.2 FALPDU type C elements encoding 42
5.2.1 FALARHeader 42
5.2.2 Connect-PDU 44
5.2.3 ConnectAck-PDU 45
5.2.4 Scan-PDU 45
5.2.5 Collect-PDU 46
5.2.6 Select-PDU 48
5.2.7 Launch-PDU 49
5.2.8 Token-PDU 49
5.2.9 MyStatus-PDU 49
5.2.10 Transient1-PDU 51
5.2.11 Dummy-PDU 55
5.2.12 Transient2-PDU 56
5.2.13 NTNTest-PDU 67
5.2.14 CyclicDataW-PDU 67
5.2.15 CyclicDataB-PDU 68
5.2.16 CyclicDataOut1-PDU 69
5.2.17 CyclicDataOut2-PDU 69
5.2.18 CyclicDataIn1-PDU 70
5.2.19 CyclicDataIn2-PDU 71
5.3 FALPDU type F elements encoding 72
5.3.1 FALARHeader 72
5.3.2 Persuasion-PDU 76
5.3.3 TestData-PDU 77
5.3.4 TestDataAck-PDU 77
5.3.5 Setup-PDU 78

iTeh STANDARD PREVIEW
(standards.iteh.ai)
SIST EN IEC 61158-6-23:2019
https://standards.iteh.ai/catalog/standards/sist/48609e98-2974-4501-bebe-9debc656554e/sist-en-iec-61158-6-23-2019

SIST EN IEC 61158-6-23:2019

5.3.6 SetupAck-PDU 80
5.3.7 F-Token-PDU 82
5.3.8 F-Measure-PDU 83
5.3.9 F-Offset-PDU 83
5.3.10 F-Update-PDU 84
5.3.11 F-MyStatus-PDU 84
5.3.12 F-CyclicData-PDU 89
5.3.13 Transient1-PDU 90
5.3.14 TransientAck-PDU 94
5.3.15 Transient2-PDU 95
5.3.16 ParamCheck-PDU 98
5.3.17 Parameter-PDU 99
5.3.18 Timer-PDU 106
6 Structure of the FAL protocol state machine 106
7 FAL service protocol machine (FSPM) 107
7.1 Overview 107
7.2 FSPM type C 107
7.2.1 Overview 107
7.2.2 FSPM 108
7.3 FSPM type F 111
7.3.1 Overview 111
7.3.2 FSPM 113
8 Application relationship protocol machine (ARPM) 118
8.1 ARPM type C 118
8.1.1 Overview 118
8.1.2 Acyclic transmission 118
8.1.3 Cyclic transmission 120
8.1.4 Connection control 125
8.1.5 Common parameter dist 163
8.2 ARPM type F 168
8.2.1 Overview 168
8.2.2 Acyclic transmission 169
8.2.3 Cyclic transmission 171
8.2.4 Channel control 174
8.2.5 Parameter dist 212
8.2.6 Synchronous trigger 215
8.2.7 Timer 217
8.2.8 Measure transmission 218
9 DLL mapping protocol machine (DMPM) 222
9.1 DMPM type C 222
9.2 DMPM type F 223
Bibliography 225

Figure 1 – Bit description in octets 20
Figure 2 – Structure for memory access information retrieve response 59
Figure 3 – Attribute definitions 59
Figure 4 – Access code definitions 60
Figure 5 – Structure for RUN request 61

iTeh STANDARD PREVIEW
(standards.iteh.ai)
SIST EN IEC 61158-6-23:2019
https://standards.iteh.ai/catalog/standards/sist/48609c98-2974-4501-bebe-9debc656554e/sist-en-iec-61158-6-23-2019

SIST EN IEC 61158-6-23:2019

Figure 6 – Structure for RUN response 61
Figure 7 – Structure for STOP request 62
Figure 8 – Structure for STOP response 62
Figure 9 – Structure for batch memory read request 62
Figure 10 – Structure for batch memory read response 63
Figure 11 – Structure for random memory read request 63
Figure 12 – Structure for random memory read response 64
Figure 13 – Structure for batch memory write request 65
Figure 14 – Structure for batch memory write response 65
Figure 15 – Structure for random memory write request 66
Figure 16 – Structure for random memory write response 66
Figure 17 – Relationships between protocol machines 107
Figure 18 – Structure of FSPM C 108
Figure 19 – Structure of FSPM F 111
Figure 20 – Structure of ARPM C 118
Figure 21 – Structure of ARPM F 168
Figure 22 – Structure of type C DMPM 222
Figure 23 – Structure of type F DMPM 224

iTeh STANDARD PREVIEW
(standards.iteh.ai)

Table 1 – State machine description elements 20
Table 2 – Description of state machine elements 20
Table 3 – Conventions used in state machines 21
Table 4 – afFType 42
Table 5 – priority 43
Table 6 – portChoice 44
Table 7 – portCheckResult 45
Table 8 – dstPortInfo 45
Table 9 – scanState 45
Table 10 – nodeType 46
Table 11 – loopState 47
Table 12 – Cyclic status 47
Table 13 – Parameter setting mode 47
Table 14 – opState 50
Table 15 – errorState 50
Table 16 – Data type 52
Table 17 – CPW 52
Table 18 – CPWC 53
Table 19 – CPWCR 53
Table 20 – cmParam 53
Table 21 – Details of param area 54
Table 22 – Details of application parameters 54
Table 23 – Details of LB/LW CM area and LB/LW CM additional area 55
Table 24 – Details of LX/LY CM 1 area and LX/LY CM 2 area 55

SIST EN IEC 61158-6-23:2019
https://standards.iteh.ai/catalog/standards/sist/48609c98-2974-4501-bebe-9debe656554e/sist-en-iec-61158-6-23-2019

SIST EN IEC 61158-6-23:2019

Table 25 – Destination module flag 57
Table 26 – Command types 58
Table 27 – Access codes of network module memory 60
Table 28 – Access codes of controller memory 60
Table 29 – byteValidity 67
Table 30 – afFType 72
Table 31 – dataType 73
Table 32 – varField 74
Table 33 – nodeType 74
Table 34 – ProtocolVerType 75
Table 35 – Link status 78
Table 36 – Port enable/disable specification 79
Table 37 – Cyclic transmission parameter hold status 86
Table 38 – Detailed application operation status 86
Table 39 – Error detection status 86
Table 40 – Slave-specific event reception status 88
Table 41 – dataSupType of dataType (0x07) 91
Table 42 – FieldSpecificTransient opHeader 91
Table 43 – command (dataType: 0x07, dataSubType: 0x0002) 92
Table 44 – subCommand type for each command type 92
Table 45 – Structure of Deliver node information 92
Table 46 – Structure of Deliver node information – message 93
Table 47 – Structure of Get statistical information response 93
Table 48 – Structure of Acquisition of node details response 94
Table 49 – Execution module specification 96
Table 50 – Command type 97
Table 51 – Cyclic data state table 109
Table 52 – Acyclic data state table 109
Table 53 – Management state table 111
Table 54 – Cyclic data state table 114
Table 55 – Acyclic data state table 114
Table 56 – Management state table 117
Table 57 – Synchronization state table 117
Table 58 – Measurement state table 117
Table 59 – Acyclic transmission state table 119
Table 60 – Acyclic transmission functions 120
Table 61 – Cyclic transmission state table 120
Table 62 – Cyclic transmission functions 125
Table 63 – Connection control state machine – Initial 126
Table 64 – Connection control state machine – Connect 126
Table 65 – Connection control state machine – Scan 128
Table 66 – Connection control state machine – ScanWait 131
Table 67 – Connection control state machine – Collect 134

iTeh STANDARD PREVIEW
(standards.iteh.ai)
SIST EN IEC 61158-6-23:2019
https://standards.iteh.ai/catalog/standards/sist/48609c98-2974-4501-bebe-4dc6b8b5546f/sist-en-iec-61158-6-23-2019

SIST EN IEC 61158-6-23:2019

Table 68 – Connection control state machine – CollectWait 137
Table 69 – Connection control state machine – Select 140
Table 70 – Connection control state machine – TokenStartWait 143
Table 71 – Connection control state machine – LaunchWait 146
Table 72 – Connection control state machine – TokenReleaseWait 149
Table 73 – Connection control state machine – TokenReleased 152
Table 74 – Connection control state machine – TokenWait 157
Table 75 – Connection control state machine – NTNTestMaster 162
Table 76 – Connection control state machine – NTNTestSlave 162
Table 77 – Function list of connection control 163
Table 78 – Common parameter dist state table 163
Table 79 – Function list of connection control 167
Table 80 – Mapping of internal service and acyclic transmission service 168
Table 81 – Acyclic transmission states 169
Table 82 – Acyclic transmission state table 169
Table 83 – Acyclic transmission functions 171
Table 84 – Acyclic transmission variables 171
Table 85 – Cyclic transmission states 172
Table 86 – Cyclic transmission state table 172
Table 87 – Cyclic transmission functions 174
Table 88 – Cyclic transmission variables 174
Table 89 – Master station channel control states 174
Table 90 – Slave station channel control states 175
Table 91 – Master station state table – MasterDown 175
Table 92 – Master station state table – Listen 175
Table 93 – Master station state table – MasterArbitration 177
Table 94 – Master station state table – PrimaryMasterScatterTD 178
Table 95 – Master station state table – PrimaryMasterSettingUp 180
Table 96 – Master station state table – PrimaryMasterHoldToken 183
Table 97 – Master station state table – PrimaryMasterSolicitToken 186
Table 98 – Master station state table – PrimaryMasterInviting 188
Table 99 – Master station state table – MasterWaitTD 190
Table 100 – Master station state table – MasterWaitSetup 192
Table 101 – Master station state table – MasterSolictToken (without Transmission path delay measurement) 193
Table 102 – Master station state table – MasterSolictToken (with Transmission path delay measurement) 195
Table 103 – Master station state table – MasterHoldToken 197
Table 104 – Master station state table – MasterMeasurement (without Transmission path delay measurement function) 200
Table 105 – Master station state table – MasterMeasurement (with Transmission path delay measurement function) 200
Table 106 – Slave station state table – SlaveDown 200
Table 107 – Slave station state table – SlaveWaitTD 201

iTeh STANDARD PREVIEW
(standards.iteh.ai)
SIST EN IEC 61158-6-23:2019
https://standards.iteh.ai/catalog/standards/sist/48609c98-2974-4501-bebe-4dcbe5b05e4e/sist-en-iec-61158-6-23-2019

SIST EN IEC 61158-6-23:2019

Table 108 – Slave station state table – SlaveWaitSetup 202
Table 109 – Slave station state table – SlaveSolicitToken (without Transmission path delay measurement) 203
Table 110 – Slave station state table – SlaveSolicitToken (with Transmission path delay measurement) 204
Table 111 – Slave station state table – SlaveHoldToken 206
Table 112 – Master station channel control functions 209
Table 113 – Slave station channel control functions 210
Table 114 – Master station channel control variables 211
Table 115 – Slave station channel control variables 211
Table 116 – Master station channel control timers 212
Table 117 – Slave station channel control timers 212
Table 118 – Master station parameter dist states 212
Table 119 – Slave station parameter dist states 212
Table 120 – Master station parameter dist state table 213
Table 121 – Slave station parameter dist state table 214
Table 122 – Master station parameter dist functions 215
Table 123 – Slave station parameter dist functions 215
Table 124 – Master station synchronous trigger states 216
Table 125 – Slave station synchronous trigger states 216
Table 126 – Master station synchronous trigger state table 216
Table 127 – Slave station synchronous trigger state table 216
Table 128 – Synchronous trigger functions 216
Table 129 – Timer states – Best effort type 217
Table 130 – Timer states – Fixed cycle type 217
Table 131 – Timer state table – Best effort type 217
Table 132 – Timer state table – Fixed cycle type 217
Table 133 – Timer variables 217
Table 134 – Fixed cycle timer 218
Table 135 – Master station measure transmission states 218
Table 136 – Slave station measure transmission states 218
Table 137 – Master station measure transmission state table 219
Table 138 – Slave station measure transmission state table 220
Table 139 – Master station measure transmission functions 221
Table 140 – Slave station measure transmission functions 221
Table 141 – Master station measure transmission variables 222
Table 142 – Mapping of type C DMPM service and DL service 223
Table 143 – Destination address for each type C PDU 223
Table 144 – Mapping of type F DMPM service and DL service 224

iTeh STANDARD PREVIEW
(standards.iteh.ai)
SIST EN IEC 61158-6-23:2019
https://standards.iteh.ai/catalog/standards/sist/48609c98-2974-4501-bebe-9debe6565546/sist-en-iec-61158-6-23-2019

SIST EN IEC 61158-6-23:2019

INTERNATIONAL ELECTROTECHNICAL COMMISSION

_____

INDUSTRIAL COMMUNICATION NETWORKS – FIELDBUS SPECIFICATIONS –

Part 6-23: Application layer protocol specification – Type 23 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.
9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

iTeh STANDARD PREVIEW
(standards.iteh.ai)
SIST EN IEC 61158-6-23:2019
https://standards.iteh.ai/catalog/standards/sist/49a9b6a8-2e2e-4ab1-aa1e-9debc656534e/sist-en-iec-61158-6-23-2019

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 61158-6-23 has been prepared by subcommittee 65C: Industrial networks, of IEC technical committee 65: Industrial-process measurement, control and automation.