

INTERNATIONAL STANDARD

NORME INTERNATIONALE

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

**Réseaux de communication industriels – Spécifications des bus de terrain –
Partie 6-23: Spécification du protocole de la couche application – Eléments
de type 23**



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Type 23 elements**

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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.

This second edition cancels and replaces the first edition published in 2014. This edition constitutes a technical revision. This edition includes the following significant technical changes with respect to the previous edition:

- addition of the transmission extended mode and related attribute (Clauses 3.2.28, 4.1.9, 4.4, 5.2.9.2, and 5.3);
- update of Table 4, Table 5, Table 16 and Table 48.

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

FDIS	Report on voting
65C/948/FDIS	65C/956/RVD

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INTRODUCTION

This document is one of a series produced to facilitate the interconnection of automation system components. It is related to other standards in the set as defined by the “three-layer” fieldbus reference model described in IEC 61158-1.

The application protocol provides the application service by making use of the services available from the data-link or other immediately lower layer. The primary aim of this document is to provide a set of rules for communication expressed in terms of the procedures to be carried out by peer application entities (AEs) at the time of communication. These rules for communication are intended to provide a sound basis for development in order to serve a variety of purposes:

- as a guide for implementers and designers;
- for use in the testing and procurement of equipment;
- as part of an agreement for the admittance of systems into the open systems environment;
- as a refinement to the understanding of time-critical communications within OSI.

This document is concerned, in particular, with the communication and interworking of sensors, effectors and other automation devices. By using this document together with other standards positioned within the OSI or fieldbus reference models, otherwise incompatible systems may work together in any combination.

The International Electrotechnical Commission (IEC) draws attention to the fact that it is claimed that compliance with this document may involve the use of a patent concerning Type 23 elements and possibly other types given in 8.1 and 8.2 as follows:

JP 05106658 US 9350626 DE 112006003943.1 KR 10-1029201 TWI 427974	[MEC]	Communication management device, communication node, communication system, and data communication method
JP 4503678 DE 112006003895T5 KR 10-1024472 CN 102325071 TW I333356	[MEC]	Communication management device, communication device, and communication method
JP 4995294 US 8687647 DE 112006004225.4 KR 10-1024482 CN10182037 TWI 427974	[MEC]	Communication node, and token issuing method and token-ring communication method in ring communication system
JP 05127977	[MEC]	Synchronization system, time master nodes, time slave nodes and synchronization method
JP 05106658 US 9350626 DE 112008004265.9 KR 10-1277368 CN 102594592 TWI 483586B	[MEC]	Communication management device, communication node, communication system, and data communication method
JP 5220165 US 9270483 DE 112008004268 KR 10-1256767 CN 102710480 TWI 455524	[MEC]	Communication management device, communication device, and communication method

JP 05084916 US 8908566 DE112008004245 KR 10-1253931 CN 102265561 TWI 405436	[MEC]	Communication management device, communication device, and communication method
JP 5172015 US 8842521 DE 112009004913 KR 10-1307092 CN 102461085 TWI 422190	[MEC]	Communication managing apparatus, communication nodes, and data communication method
JP 5449566 US 9270554 KR 10-1479883 CN 103109491	[MEC]	Network performance estimating apparatus, network performance estimating method, network structure recognizing method, communication managing apparatus, and data communication method

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