INTERNATIONAL STANDARD

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AMENDMENT 1
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Road vehicles — Interchange of digital information — Controller area network (CAN) for high-speed communication

AMENDMENT 1

Véhicules routiers — Échange d'information numérique — Gestionnaire de réseau de communication à vitesse élevée (CAN)

AMENDEMENT 1

Reference number
ISO 11898:1993/Amd.1:1995(E)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Amendment 1 to International Standard ISO 11898:1993 was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 3, *Electrical and electronic equipment*.

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Road vehicles — Interchange of digital information — Controller area network (CAN) for high-speed communication

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Page iv

Insert new page v and the following Introduction.

Introduction

The acceptance and introduction of serial data communication to more and more applications has led to requirements that the assignment of message identifiers to communication functions be standardized for certain applications. These applications can be realized with CAN more comfortably, if the address range that has been defined in ISO 11898 by 11 identifiers bits is enlarged.

Therefore a second message format ("extended format") is introduced that provides a larger address range defined by 29 bits. This will relieve the system designer from compromises with respect to defining well-structured naming schemes. Users of CAN who do not need the identifier range offered by the extended format can rely on the conventional 11 bit identifier range ("standard format") further on.

In order to distinguish standard and extended format, the first reserved bit of the CAN message format, as defined in ISO 11898, is used. This is done in such a way that the message format in ISO 11898 is equivalent to the standard format and therefore is still valid. Furthermore, the extended format has been defined so that messages in standard format and extended format can coexist within the same network.

Amendment 1 to ISO 11898 details the necessary changes to the 1993 Standard to include both formats.

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Replace the wording below item b) of 6.1.1 by the following.

According to the two different LLC services there are two types of frames from or to the user:

— LLC Data Frame,

— LLC Remote Frame.

There are two formats for both Data Frames and Remote Frames which differ in the length of the identifier (see 6.1.2): Frames with an 11 bit IDENTIFIER are denoted STANDARD LLC Frames, and Frames containing a 29 bit IDENTIFIER are denoted Extended LLC Frames.

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Replace table 3 in 6.1.2 by the following.

Table 3 — List of LLC service primitive parameters

LLC Service Primitive Parameters	
IDE	identifies the IDENTIFIER's length
IDENTIFIER	identifies the data and its priority
DLC	Data Length Code
DATA	data the user wants to transmit
TRANSFER_STATUS	confirmation parameter

Replace item b) of 6.1.2.1 by the following.

b) Semantics of the L_DATA.request primitive

The primitive shall provide parameters as follows.

```
L_DATA.request (
                IDE
                IDENTIFIER
                DLC
                DATA
                )
```

The parameter DATA is insignificant if the associated LLC Data Frame is of data length zero.

Replace item b) of 6.1.2.2 by the following.

b) Semantics of the L_DATA.indication primitive

The primitive shall provide parameters as follows.

```
L_DATA.indication (
                    IDE
                    IDENTIFIER
                    DLC
                    DATA
                    )
```

The parameter DATA is insignificant if the associated LLC data frame is of data length zero.

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Replace item b) of 6.1.2.3 by the following.

b) Semantics of the L_DATA.confirm primitive

The primitive shall provide parameters as follows.

```
L_DATA.confirm (
                IDE
                IDENTIFIER
                TRANSFER_STATUS
                )
```

The TRANSFER_STATUS is used to indicate the completion of the transaction initiated by the previous L_DATA.request primitive.

```
TRANSFER_STATUS:[COMPLETE,NOT_COMPLETE]
```