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Second edition
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Road vehicles — Tachograph systems — Part 6: Diagnostics

*Véhicules routiers — Systèmes tachygraphes —
Partie 6: Diagnostic*



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Contents

	Page
Foreword	v
Introduction	vi
1 Scope	1
2 Normative reference	1
3 Terms and definitions	1
4 Abbreviated terms	2
5 Overview and conventions	2
5.1 Service description conventions.....	2
5.2 Addresses.....	2
5.2.1 General.....	2
5.2.2 Functional addresses.....	2
5.2.3 Physical addresses.....	2
5.3 Parameters.....	2
6 Diagnostic services implementation	2
6.1 General and overview.....	2
6.2 Diagnostic and communication management functional unit.....	4
6.2.1 DiagnosticSessionControl service.....	4
6.2.2 ECUReset service.....	4
6.2.3 SecurityAccess service.....	5
6.2.4 CommunicationControl service.....	5
6.2.5 SecuredDataTransmission service.....	5
6.2.6 ResponseOnEvent service.....	5
6.2.7 LinkControl service.....	6
6.3 Data transmission functional unit.....	7
6.3.1 ReadDataByIdentifier service.....	7
6.3.2 ReadDataByPeriodicIdentifier service.....	7
6.3.3 DynamicallyDefineDataIdentifier service.....	7
6.3.4 WriteDataByIdentifier service.....	7
6.4 Stored data transmission functional unit.....	8
6.4.1 ClearDiagnosticInformation service.....	8
6.4.2 ReadDTCInformation service.....	8
6.5 Input/Output control functional unit.....	9
6.5.1 InputOutputControlByIdentifier service.....	9
6.6 Remote activation of routine functional unit.....	9
6.6.1 RoutineControl service.....	9
7 Application layer requirements	10
7.1 General.....	10
7.2 Application layer protocol.....	10
7.2.1 General.....	10
7.2.2 Application layer timing.....	10
8 Presentation layer requirements	10
9 Session layer requirements	10

This is a preview of "ISO 16844-6:2015". [Click here to purchase the full version from the ANSI store.](#)

10	CAN protocol layers	11
10.1	General.....	11
10.2	Transport layer.....	11
10.3	Network layer (CAN only).....	11
	10.3.1 General.....	11
	10.3.2 Communication parameters.....	11
10.4	CAN data link layer.....	11
	10.4.1 General.....	11
	10.4.2 Protocol.....	11
	10.4.3 Address coding method.....	11
10.5	CAN physical layer.....	11
11	K-Line protocol layers	11
11.1	General.....	11
11.2	K-line data link layer.....	12
	11.2.1 General.....	12
	11.2.2 Protocol specific key bytes.....	12
	11.2.3 Initialisation.....	12
	11.2.4 Timing.....	12
11.3	K-line physical layer.....	12
	11.3.1 General.....	12
	11.3.2 Configuration.....	12
	Bibliography	13

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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT), see the following URL: [Foreword — Supplementary information](#).

This second edition cancels and replaces the first edition (ISO 16844-6:2004), which has been technically revised.

The committee responsible for this document is ISO/TC 22, *Road vehicles*, Subcommittee SC 3, *Electrical and electronic equipment*.

ISO 16844 consists of the following parts, under the general title *Road vehicles — Tachograph systems*:

- *Part 1: Electrical connectors*
- *Part 2: Electrical interface with recording unit*
- *Part 3: Motion sensor interface*
- *Part 4: CAN interface*
- *Part 5: Secured CAN interface*
- *Part 6: Diagnostics*
- *Part 7: Parameters*

Introduction

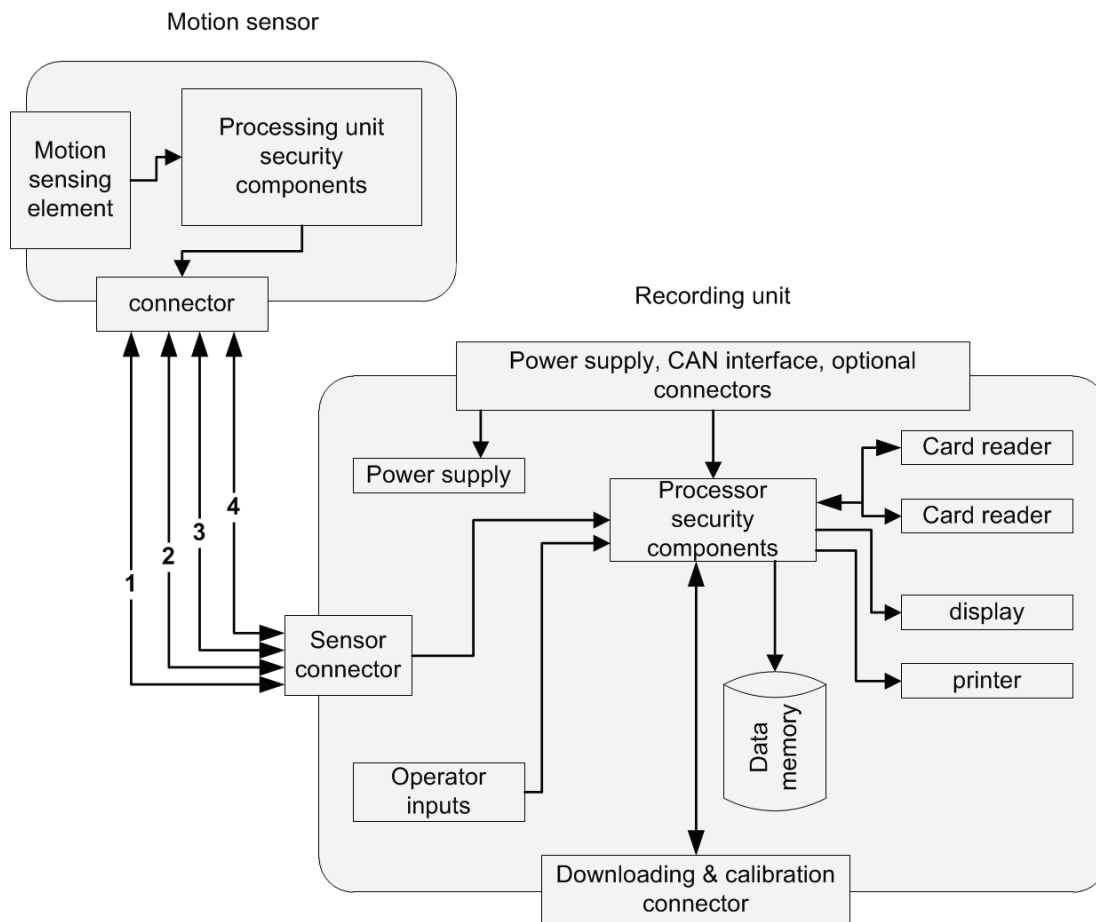
This International Standard supports and facilitates the communication between electronic control units and a tachograph. The tachograph is based upon the European Council Regulation (EC) No 561/2006[3] and (EEC) No 3821/85[4] as last amended.

The digital tachograph concept is based upon an RU storing data, related to the activities of the various drivers driving the vehicle, on which it is installed.

During the normal operational status of the RU, data stored in its memory are accessible to different entities (drivers, authorities, workshops, transport companies) in different ways (displayed on a screen, printed by a printing device, downloaded to an external device). Access to stored data is controlled by a smart card inserted in the tachograph.

In order to prevent manipulation of the tachograph system, the speed signal sender (motion sensor) is provided with an encrypted data link.

A typical tachograph system is shown in [Figure 1](#).



Key

- 1 positive supply
- 2 battery minus
- 3 speed signal, real time
- 4 data signal in/out

Figure 1 — Typical tachograph system

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This part of ISO 16844 has been established in order to enable the implementation of unified diagnostic services on CAN and on K-Line.

To achieve this, it is based on the Open Systems Interconnection (OSI) Basic Reference Model specified in ISO/IEC 7498-1^[1] and ISO/IEC 10731^[2] which structures communication systems into seven layers. When mapped on this model, the services specified by ISO 16844 are divided as given in [Table 1](#).

Table 1 — Diagnostics implementation reference applicable to the OSI layers

Applicability	OSI seven layer	Diagnostics according to this part of ISO 16844	
		On CAN	On K-Line
Seven layer according to ISO 7498-1 and ISO/IEC 10731	Application (layer 7)	ISO 14229-1/ISO 16844-6/ISO 16844-5	
		ISO 14229-3	ISO 14229-6
	Presentation (layer 6)	Vehicle manufacturer specific	
	Session (layer 5)	ISO 14229-2	
	Transport (layer 4)	ISO 15765-2	—
	Network (layer 3)		
	Data link (layer 2)	ISO 16844-4	ISO 14230-2/ ISO 14230-1
	Physical (layer 1)		