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Road vehicles — Tachograph systems — Part 5: Secured CAN interface

*Véhicules routiers — Systèmes tachygraphes —
Partie 5: Interface CAN sauvegardée*



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Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Abbreviated terms	2
5 Physical layer	2
6 Data link layer	2
7 Network layer	2
8 Application layer	2
9 Security sub-layer	2
Bibliography	5

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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. 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.

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.

ISO 16844-5 was prepared by Technical Committee 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: Recording unit, electrical interface*
- *Part 3: Motion sensor interface*
- *Part 4: CAN interface*
- *Part 5: Secured CAN interface*
- *Part 6: Diagnostics*
- *Part 7: Parameters*

Introduction

ISO 16844 supports and facilitates the communication between electronic units and a tachograph; the tachograph being based upon Council Regulations (EEC) No. 3820/85^[1] and (EEC) No. 3821/85^[2] and their amendments Council Regulation (EEC) No. 2135/98^[3] and Commission Regulation (EC) No. 1360/2002 (see Clause 2).

Its purpose is to ensure the compatibility of tachographs from various tachograph manufacturers.

The basis of the digital tachograph concept is a recording unit (RU) that stores data related to the activities of the drivers of a vehicle on which it is installed. When the RU is in normal operational status, the data stored in its memory are made accessible to various entities such as drivers, authorities, workshops and transport companies in a variety of ways: they may be displayed on a screen, printed by a printing device or 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.

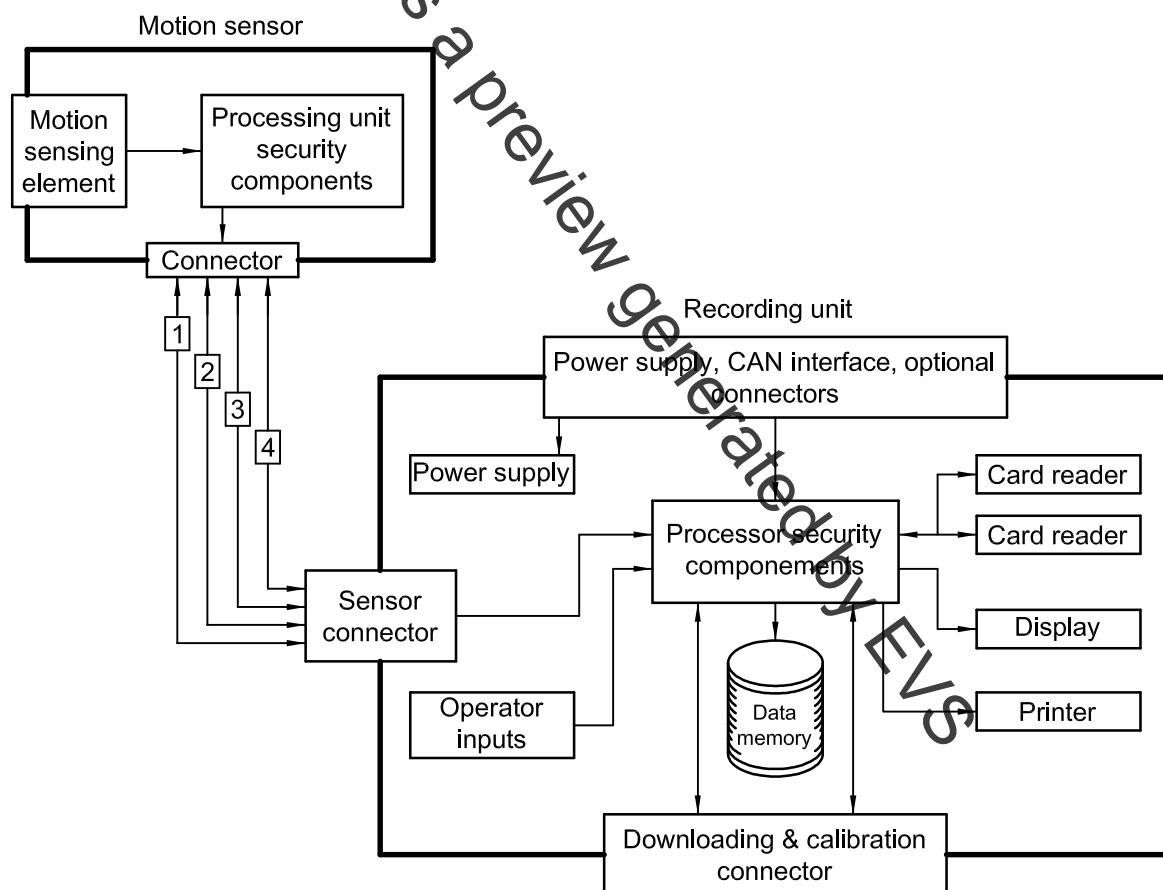


Figure 1 — Typical tachograph system

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Road vehicles — Tachograph systems —

Part 5: Secured CAN interface

1 Scope

This part of ISO 16844 specifies the secured interchange of digital information between a road vehicle's tachograph system and vehicle units, and within the tachograph system itself. This type of interchange will be used for CAN communication or diagnostic services on CAN (controller area network), where there is need to protect interchanged parameters against fraud.

2 Normative references

The following referenced documents are indispensable for the application 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.

ISO 14229-1, *Road vehicles — Unified diagnostic services (UDS) — Part 1: Specification and requirements* ¹⁾

ISO 15764, *Road vehicles — Extended data link security*

ISO 15765-2, *Road vehicles — Diagnostics on Controller Area Networks (CAN) — Part 2: Network layer services*

ISO 16844-4, *Road vehicles — Tachograph systems — Part 4: CAN interface* ¹⁾

ISO 16844-6:2004, *Road vehicles — Tachograph systems — Part 6: Diagnostics*

ISO 16844-7, *Road vehicles — Tachograph systems — Part 7: Parameters*

Commission Regulation (EC) No. 1360/2002 of 13 June 2002 adapting for the seventh time to technical progress Council Regulation (EEC) No. 3821/85 on recording equipment in road transport

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 15764 and the following apply.

3.1

recording unit

part of the tachograph system that acquires and stores data concerning the vehicle and its driver(s) and their activities

1) To be published.