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PUBLIC TRANSPORT - ROAD VEHICLE SCHEDULING AND CONTROL SYSTEMS - PART 2: WORLDFIP CABLING SPECIFICATIONS

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Foreword

This document (EN 13149-2:2004) has been prepared by Technical Committee CEN/TC 278, "Road Transport and Traffic Telematics", the secretariat of which is held by NEN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by February 2005, and conflicting national standards shall be withdrawn at the latest by February 2005.

This document supersedes ENV 13149-2:2000

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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1 Scope

This document defines the cabling specifications for an onboard data transmission bus between the different parts of equipment for service operations and monitoring of the fleet.

This document is applicable to equipment installed onboard buses, trolley buses and tramways only as part of a bus fleet operation. This equipment include operations aid systems, automatic passenger information systems, fare collection systems, etc.

Equipment directly related to the functioning of the vehicle (e.g. driver dashboard, engine management, brake systems, door opening systems) are excluded from the scope of this document and are dealt with in other standardisation bodies.

This document is not applicable to tramways operated as part of a train, subway or metro operation.

Two alternative transmission buses will be accepted. This document refers to one of them (known as WORLFIP and specified in EN 50170). A second set of standards will be published for the other solution (so called CAN). The selected bus system, between the two standardised alternatives, shall be subject to an agreement between each transport operating organisation and its equipment providers.

This document covers the link between equipment inside a single vehicle. Although it could be applied to multiple vehicles, this application is not explicitly covered by this document.

This document is the second part of a set of standards related to the onboard transmission bus, which will define the following aspects for each allowed transmission bus:

— choice of the bus and general application's rules (EN 13149-1)

— cabling specifications (EN 13149-2, this document)

— message content specifications (prCEN TS 13149-3, under development)

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.

EN 50170	*General purpose field communication system*
EN 61158-2:1994	*Fieldbus standard for use in industrial control systems; part 2: physical layer specification and service definition (IEC 61158-2:1993)*

3 Cabling specifications

3.1 General remarks

The principles for the coupling of devices to the data transmission bus focus upon the longer term objectives which are to achieve the least necessary number of variants, rather than to allow for the profusion of interim and migratory solutions which may occur initially. This is especially important for public transport road vehicles, which are generally equipped in different non-correlated stages (for example, first the fare collection system, then the radio and automatic location system some months or years later, etc.)

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