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PUBLIC TRANSPORT - ROAD VEHICLE SCHEDULING AND CONTROL SYSTEMS - PART 4: GENERAL APPLICATION RULES FOR CANOPEN TRANSMISSION BUSSES

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Public transport - Road vehicle scheduling and control systems - Part 4: General application rules for CANopen transmission busses

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Foreword

This document (ENV 13149-4:2002) has been prepared by Technical Committee CEN/TC 278 “Road transport and traffic telematics", the secretariat of which is held by NEN.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to announce this European Prestandard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Introduction

This European Prestandard is part 4 of prEN 13149, which gives rules for on-board data transmission systems.

This part 4 together with part 5 and part 6 describes a complete solution independent from part 1, part 2 and part 3.

1 Scope

This European Prestandard specifies the choice and the general application's rules of an onboard data transmission bus between the different equipment for service operations and monitoring of the fleet. This applies to equipment installed onboard buses, trolleybuses and tramways only as part of a bus fleet operation. It excludes tramways when they are operated as part of a train, subway or metro operation. This equipment includes operation aid systems, automatic passenger information systems, fare collection systems, etc.

The equipment directly related to the safety-related functioning of the vehicle (propulsion management, brake systems, door opening systems, etc.) are excluded from the scope of the present standard and are dealt with in other standardisation bodies.

For the described application two bus systems are standardised. Part 1 to part 3 describe the WORLDFIP bus system and part 4 to part 6 describe the CANopen bus system. There is no ranking between the two bus systems.

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

Part 4 of this European Prestandard specifies the CANopen-based network. This specification describes the general architecture in terms of hierarchical layers according to the ISO reference model for Open Systems Interconnection (OSI) specified in ISO 7498.

Part 5 of this European Prestandard specifies in detail the connectors and the connector pin assignment and the cabling.

Part 6 of this European Prestandard specifies in detail the application profiles for the virtual devices in public transport.

2 Normative references

This European Prestandard incorporates by dated or undated references, provisions from other publications. These normative references are cited at the appropriate place in the text, and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Prestandard only when incorporated in it by amendment or revision (including amendments).

EN 50325-1: Industrial communications subsystem based on ISO 11898 (CAN) for controller-device interfaces - Part 1: General requirements.