

BSI Standards Publication

Public transport — Reference data model

Part 4: Operations monitoring and control



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National foreword

This British Standard is the UK implementation of EN 12896-4:2026. It supersedes BS EN 12896-4:2019, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee EPL/278, Intelligent transport systems.

A list of organizations represented on this committee can be obtained on request to its committee manager.

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English Version

Public transport - Reference data model - Part 4: Operations monitoring and control

Transports publics - Modèle de données de référence -
Partie 4: Suivi et contrôle de l'exploitation

Öffentlicher Verkehr - Referenzdatenmodell - Teil 4:
Betriebsüberwachung und Steuerung

This European Standard was approved by CEN on 15 April 2026.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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European foreword

This document (EN 12896-4:2026) has been prepared by Technical Committee CEN/TC 278 “Intelligent transport systems”, 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of an identical text or by endorsement, at the latest by January 2027 and conflicting national standards shall be withdrawn at the latest by January 2027.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 12896-4:2019.

Annex D provides details of the significant technical changes between this document and EN 12896-4:2019.

This document is part of the European Standard series EN 12896, known as “Transmodel”. This is a series of documents that comprises the following parts:

- EN 12896-1, Public transport - Reference data model - Part 1: Common concepts
- EN 12896-2, Public transport - Reference data model - Part 2: Public transport network
- EN 12896-3, Public transport - Reference data model - Part 3: Timing information and vehicle scheduling
- EN 12896-4, Public transport - Reference data model - Part 4: Operations monitoring and control
- EN 12896-5, Public transport - Reference data model - Part 5: Fare management
- EN 12896-6, Public transport - Reference Data model - Part 6: Passenger information
- EN 12896-7, Public transport - Reference data model - Part 7: Driver management
- EN 12896-8, Public transport - Reference data model - Part 8: Management information and statistics
- EN 12896-10, Public transport – Reference data model – Part 10: Alternative modes

Together these documents create Transmodel version 6.2 and thus replace Transmodel V6.0.

In addition to the nine normative Parts of this European Standard, a Technical Report (Public Transport – Reference Data Model – Informative Documentation) was published in 2016 under the reference CEN/TR 12896-9. It provides additional information to help those implementing projects involving the use of Transmodel. It is intended that this Technical Report will be extended and republished as soon as all the normative parts are revised.

The split into several documents is intended to ease the task of users interested in particular functional domains. It corresponds to the modularisation of Transmodel into functionally related parts, each made up of distinct UML packages and subpackages that describe a particular aspect of public transport. The NeTeX UML model follows the same modularisation, allowing a direct mapping from the conceptual model to the implementation.

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For information on the conventions, methodology and notations for conceptual modelling, for a clear overview to help understand the core principles, structure and purpose of Transmodel, and for information on the Functional domains and Modes of operation, refer to EN 12896-1.

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

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

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1 Scope

This document incorporates the following main data packages:

- Dated Production Components;
- Call;
- Dated Call;
- Production Plan;
- Detecting & Monitoring;
- Situation;
- Messaging;
- Control Action;
- Operational Event & Incident;
- Facility Monitoring & Availability;
- Occupancy.

It is composed of the following parts:

- main document representing the data model for the concepts shared by the different domains covered by Transmodel (normative);
- Annex A containing the data dictionary and attribute tables, i.e. the list of all the concepts presented in the main document together with their definitions (normative);
- Annex B presenting the model evolution (informative);
- Annex C detailing the mapping to DATEX-II and SIRI (informative).
- Annex D, providing details of the significant technical changes between this document and EN 12896-4:2019 (informative).

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 12896-1, *Public transport - Reference data model - Part 1: Common concepts*