



SLOVENSKI STANDARD

oSIST prEN 12896-5:2026

01-februar-2026

Javni prevoz - Referenčni podatkovni model - 5. del: Upravljanje voznin

Public transport - Reference data model - Part 5: Fare management

Öffentlicher Verkehr - Referenzdatenmodell - Teil 5: Fahrgeldmanagement

Transports publics - Modèle de données de référence - Partie 5 : gestion tarifaire

Ta slovenski standard je istoveten z: prEN 12896-5

ICS:

35.240.60 Uporabniške rešitve IT v prometu IT applications in transport
oSIST prEN 12896-5:2026
<https://standards.iteh.ai/> <https://standards.iteh.ai/standards/13d905-8/osit-pren-12896-5-2026>

oSIST prEN 12896-5:2026

en,fr,de

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

DRAFT
prEN 12896-5

November 2025

ICS 35.240.60

Will supersede EN 12896-5:2019

English Version

**Public transport - Reference data model - Part 5: Fare
management**

Transports publics - Modèle de données de référence -
Partie 5 : gestion tarifaire

Öffentlicher Verkehr - Referenzdatenmodell - Teil 5:
Fahrgeldmanagement

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 278.

If this draft becomes a European Standard, 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.

This draft European Standard was established by CEN 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.

CEN members are the national standards bodies of 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 United Kingdom.

Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

Warning : This document is not a European Standard. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a European Standard.



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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Contents

Page

European foreword.....	16
1 Scope	17
2 Normative references	18
3 Terms, definitions, Symbols and Abbreviations	18
3.1 Terms and definitions	18
3.2 Symbols and Abbreviations.....	24
4 General information.....	24
5 Public Transport Fare Management Domain.....	25
5.1 Scope & Overview.....	25
5.1.1 Functional Domains of a Fare Model.....	25
5.1.2 Variety and Complexity of Fare Systems	26
5.1.3 Impact of Control and Validation Technologies.....	27
5.1.4 Ticketing Paradigms: Account Based Ticketing & Media Centric Ticketing.....	27
5.1.5 Interoperability	28
5.1.6 Abstract Modelling.....	28
5.1.7 Modelling Approach - Access Rights	28
5.1.8 Possible Simplifications for Implementations	30
5.1.9 Further Evolution of Fare Systems.....	30
5.1.10 Use of Fare Data in Passenger Information services	31
5.2 Fundamental Concepts.....	31
5.2.1 Access Rights.....	31
5.2.2 Access Rights Specification	31
5.2.3 Fare Products.....	32
5.2.4 Sales Offer Packages.....	32
5.2.5 Overview on Access Rights Levels, Parameter Types and Associated Concepts	32
5.2.6 Customers and Contracts	34
5.2.7 Travel Documents, Customers, Contracts and Sales Offer Packages.....	34
5.2.8 Distribution and Fulfilment.....	35
5.2.9 Sales Transactions	36
5.2.10 Prices	37
5.2.11 Consumption Control.....	38
5.2.12 Sales and Validation Entries.....	39
5.2.13 Revenue protection measures.....	40
5.2.14 Roles.....	40
5.2.15 Specification, Sales and Validation data sets	41
5.3 Use Cases for the Fare Model	44
5.3.1 General.....	44
5.3.2 Business context.....	44
5.3.3 Actors and use case types.....	48
5.3.4 Use Cases	50
6 Conceptual Model for Fares.....	52
6.1 Organisation of the Conceptual Model	52
6.2 Extensions to the Network Model for fares	53
6.2.1 General.....	53
6.2.2 Fare Zone – Conceptual Model.....	53
6.3 Fare Structure.....	59

6.3.1	General	59
6.3.2	Fare Structure Model & Sub-models	59
6.3.3	Common Fare Structure	61
6.3.4	Geographical Fare Structure	62
6.3.5	Time Fare Structure	66
6.3.6	Quality Fare Structure	67
6.3.7	Fare Structure Element	69
6.3.8	Validable & Controllable Elements Validable Element	76
6.4	Access Right Assignment	80
6.4.1	Principles	80
6.4.2	Fare Product	105
6.5	Fare Pricing	116
6.5.1	Principles	116
6.5.2	Fare Calculation Parameters	116
6.5.3	Fare Price	117
6.5.4	Price Derivation	120
6.5.5	Price Groups	121
6.5.6	Fare Table	122
6.6	Sales Description	126
6.6.1	Sales Offer Package	126
6.6.2	Sales Offer Entitlements	128
6.6.3	Fare Sales Distribution	129
6.6.4	Type of Travel Document	130
6.6.5	Medium Access Device and Medium Application Instance	132
6.6.6	Example - Sales Descriptions	133
6.7	Customers and Sales Transactions	136
6.7.1	General	136
6.7.2	Sales Transaction – Model & Sub-models	136
6.7.3	Fare Contracts	137
6.7.4	Retail Consortiums	142
6.7.5	Sale Transactions	144
6.7.6	Fare Contract Events	150
6.8	Fare Roles	163
6.8.1	Fare Management Roles	163
6.8.2	Fare Technology Roles	164
6.8.3	Fare Transport Customer Roles	165
6.8.4	Fare Product Roles specific to Fare Management	166
6.8.5	Service Organisation Roles that are relevant for Fare Management	167
6.8.6	Administrative organisation roles that are specific for Fare Management	168
6.8.7	Technology provider roles that are involved in Fare Management	169
6.8.8	Summary of Fare Roles	171
6.9	Control and Validation	173
6.9.1	Control Means	173
6.9.2	Elementary Controls	174
6.9.3	Validation	175
6.9.4	Validation and Control Events	180
6.9.5	Access Right Control Roles	186
6.9.6	Summary of Events & Entries	187
6.9.7	Other Output	189
6.10	Additional Topics	190
6.10.1	Fare Version	190
6.10.2	Information on Fares	190
6.10.3	Modularisation & Package dependencies	191
6.10.4	Explicit Frames	192

prEN 12896-5:2025 (E)

6.10.5 Fare Frame.....	192
6.10.6 Fare Price Frame	193
6.10.7 Sales Transaction Frame	194
Annex A (normative) Data dictionary.....	196
A.1 Introduction	196
A.2 Data Dictionary — Fare Management.....	196
A.2.1 ACCESS RIGHT IN PRODUCT	196
A.2.2 ACCESS RIGHT PARAMETER ASSIGNMENT	196
A.2.3 ACCESSED FARE STRUCTURE ELEMENT	196
A.2.4 ACCOUNT AUTO RENEWAL EVENT.....	197
A.2.5 ACCOUNT AUTO TOP UP EVENT	197
A.2.6 ACCOUNT AWARD REFUND EVENT	197
A.2.7 ACCOUNT PROVIDER ROLE.....	198
A.2.8 ACCOUNT SALES EVENT	198
A.2.9 ACCOUNT DETECT ELIGIBILITY CHANGE EVENT	198
A.2.10 ACCOUNT DETECT NO CHECK IN EVENT	198
A.2.11 ACCOUNT DETECT NO CHECK OUT EVENT	198
A.2.12 ACCOUNT DETECT REENTRY EVENT	199
A.2.13 ACCOUNT DETECT SUSPICIOUS BEHAVIOUR EVENT	199
A.2.14 ACCOUNT DETECT TRIP EVENT	199
A.2.15 ACCOUNT PROCESSING EVENT	199
A.2.16 ACCOUNT REVIVE ENTRY	200
A.2.17 ACCOUNT REVIVE EVENT.....	200
A.2.18 ACCOUNT SUSPEND ENTRY.....	200
A.2.19 ACCOUNT SUSPEND EVENT.....	200
A.2.20 ADJUST BALANCE ON CHECK IN ENTRY.....	201
A.2.21 ALLOW ACCOUNT ON SECURITY LIST EVENT.....	201
A.2.22 ALTERNATIVE MODE TRAVEL PREFERENCES.....	201
A.2.23 AMOUNT OF PRICE UNIT	201
A.2.24 BECOMES ELIGIBLE ENTRY	202
A.2.25 BOOKING DEBIT.....	202
A.2.26 BOOKING POLICY.....	202
A.2.27 BORDER POINT	202
A.2.28 CANCELLING	203
A.2.29 CAPPED DISCOUNT RIGHT	203
A.2.30 CAPPING RULE.....	203
A.2.31 CEASES TO BE ELIGIBLE ENTRY	204
A.2.32 CELL.....	204
A.2.33 CELL PRICE.....	204
A.2.34 CHARGING MOMENT	204
A.2.35 CHARGING POLICY	205
A.2.36 COMMERCIAL PROFILE.....	205
A.2.37 COMMERCIAL PROFILE ELIGIBILITY	205
A.2.38 COMPANION PROFILE.....	205
A.2.39 COMPANION ROLE.....	206
A.2.40 CONTROL ENTRY	206
A.2.41 CONTROL MEANS.....	206
A.2.42 CONTROL PARAMETER ASSIGNMENT.....	206
A.2.43 CONTROL PASSENGER TRIP ENTRY.....	206
A.2.44 CONTROL PASSENGER TRIP EVENT	207
A.2.45 CONTROL REVERT FARE EVENT.....	207
A.2.46 CONTROL RECORD	207
A.2.47 CONTROL TYPE	207
A.2.48 CONTROLLABLE ELEMENT.....	208

A.2.49	CONTROLLABLE ELEMENT IN SEQUENCE	208
A.2.50	CONTROLLABLE ELEMENT PRICE	208
A.2.51	CONTROLLED ACCESS.....	209
A.2.52	CONVENTIONAL MODE TRAVEL PREFERENCES.....	209
A.2.53	CORPORATE PURCHASER ROLE.....	209
A.2.54	CUSTOMER ACCOUNT	209
A.2.55	CUSTOMER ACCOUNT ENTRY	210
A.2.56	CUSTOMER ACCOUNT EVENT	210
A.2.57	CUSTOMER ACCOUNT SECURITY LISTING.....	210
A.2.58	CUSTOMER COLLECT EVENT	210
A.2.59	CUSTOMER DEREGISTER EVENT	211
A.2.60	CUSTOMER DEREGISTRATION ENTRY	211
A.2.61	CUSTOMER ELIGIBILITY	211
A.2.62	CUSTOMER EXCHANGE EVENT	211
A.2.63	CUSTOMER FULFILMENT EVENT	212
A.2.64	CUSTOMER MEDIA APPLICATION RESTORE EVENT.....	212
A.2.65	CUSTOMER MEDIA INSTALL EVENT	212
A.2.66	CUSTOMER MEDIA RESTORE EVENT.....	212
A.2.67	CUSTOMER MEDIA REGISTRATION ENTRY	213
A.2.68	CUSTOMER MODIFY PROFILE EVENT	213
A.2.69	CUSTOMER PAYMENT MEANS	213
A.2.70	CUSTOMER PRODUCT ACTIVATION EVENT.....	213
A.2.71	CUSTOMER PRODUCT PURCHASE ENTRY	214
A.2.72	CUSTOMER PRODUCT PURCHASE EVENT	214
A.2.73	CUSTOMER PROFILE MODIFICATION ENTRY	214
A.2.74	CUSTOMER PURCHASE PACKAGE.....	214
A.2.75	CUSTOMER PURCHASE PACKAGE ELEMENT	214
A.2.76	CUSTOMER PURCHASE PACKAGE PRICE.....	215
A.2.77	CUSTOMER PURCHASE PARAMETER ASSIGNMENT.....	215
A.2.78	CUSTOMER PURCHASE STATUS.....	215
A.2.79	CUSTOMER REFUND EVENT	216
A.2.80	CUSTOMER REGISTER EVENT	216
A.2.81	CUSTOMER REGISTER MEDIA EVENT	216
A.2.82	CUSTOMER REGISTRATION ENTRY	216
A.2.83	CUSTOMER RESERVATION CREATION ENTRY.....	217
A.2.84	CUSTOMER RESERVATION CANCELLATION ENTRY.....	217
A.2.85	CUSTOMER RESERVATION CREATION EVENT	217
A.2.86	CUSTOMER RESERVATION ENTRY	217
A.2.87	CUSTOMER REVOKE FULFILMENT EVENT	218
A.2.88	CUSTOMER SALES EVENT	218
A.2.89	CUSTOMER SECURITY LISTING	218
A.2.90	CUSTOMER SPOT AVAILABILITY EVENT	218
A.2.91	CYCLING TRAVEL PREFERENCES	219
A.2.92	DENY ACCOUNT ON SECURITY LIST EVENT	219
A.2.93	DEVICE PARAMETER ASSIGNMENT	219
A.2.94	DEVICE RELATED CONTROL MEANS	219
A.2.95	DISCOUNTING RULE	220
A.2.96	DISTANCE MATRIX ELEMENT	220
A.2.97	DISTANCE MATRIX ELEMENT PRICE.....	220
A.2.98	DISTRIBUTION ASSIGNMENT	220
A.2.99	DISTRIBUTION CHANNEL.....	221
A.2.100	 DISTRIBUTION VALIDITY PARAMETERS	221