

ICS 53.020.20

English Version

Public transport - Reference data model - Part 9: Informative documentation

Öffentlicher Verkehr - Datenreferenzmodell -
Informative Dokumentation

This Technical Report was approved by CEN on 3 April 2016. It has been drawn up by the Technical Committee CEN/TC 278.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

Dit document mag slechts op een stand-alone PC worden geïnstalleerd. Gebruik op een netwerk is alleen toestaan als een aanvullende licentieovereenkomst voor netwerkgebruik met NEN is afgesloten. This document may only be used on a stand-alone PC. Use in a network is only permitted when a supplementary license agreement for us in a network with NEN has been concluded.

Preview



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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

	Page
European foreword.....	12
1 Scope.....	13
2 Complete Data Dictionary.....	14
2.1 General.....	14
2.2 Transmodel 6 Attributes Tables Documentation.....	14
ACCESS.....	14
ACCESS END.....	14
ACCESS MODE.....	15
ACCESS SPACE.....	16
ACCESS ZONE.....	16
ACCESSIBILITY ASSESSMENT.....	17
ACCESSIBILITY LIMITATION.....	18
ACCOMMODATION.....	18
ACTIVATED EQUIPMENT.....	19
ACTIVATION ASSIGNMENT.....	20
ACTIVATION LINK.....	20
ACTIVATION POINT.....	21
ACTUAL VEHICLE EQUIPMENT.....	22
ADDRESS.....	23
ADDRESSABLE PLACE.....	23
ADMINISTRATIVE ZONE.....	25
ALLOWED LINE DIRECTION.....	26
ALTERNATIVE NAME.....	26
ASSISTANCE SERVICE.....	27
AUTHORITY.....	27
AVAILABILITY CONDITION.....	28
BEACON POINT.....	29
BLOCK.....	30
BLOCK PART.....	31
BOARDING POSITION.....	32
BOOKING ARRANGEMENTS.....	33
CATERING SERVICE.....	34
CHECK CONSTRAINT.....	34
CHECK CONSTRAINT DELAY.....	36
CHECK CONSTRAINT THROUGHPUT.....	36
CLASS IN FRAME.....	37
CLASS IN REPOSITORY.....	38
CLASS OF USE.....	38
COMMON SECTION.....	39
COMMUNICATION SERVICE.....	40
COMPLAINTS SERVICE.....	40
COMPLEX FEATURE.....	41
COMPLEX FEATURE PROJECTION.....	42
COMPOSITE FRAME.....	42
COMPOUND BLOCK.....	44
COMPOUND TRAIN.....	44
CONNECTION.....	45

CONNECTION END	46
CONTACT DETAILS.....	46
CONTROL CENTRE.....	47
COUNTRY.....	47
COUPLED JOURNEY.....	48
COURSE OF JOURNEYS.....	49
CREW BASE.....	49
CROSSING EQUIPMENT.....	50
CUSTOMER SERVICE.....	51
CYCLE STORAGE EQUIPMENT	52
DATA SOURCE.....	52
DATED BLOCK.....	53
DATED PASSING TIME	53
DATED VEHICLE JOURNEY	54
DAY OF WEEK	55
DAY TYPE	55
DAY TYPE ASSIGNMENT.....	57
DEAD RUN	57
DEAD RUN PATTERN.....	58
DEFAULT CONNECTION.....	58
DEFAULT CONNECTION END	59
DEFAULT DEAD RUN RUN TIME.....	60
DEFAULT INTERCHANGE.....	61
DEFAULT SERVICE JOURNEY RUN TIME.....	61
DELIVERY VARIANT	62
DELTA	62
DEPARTMENT.....	63
DESTINATION DISPLAY.....	63
DESTINATION DISPLAY VARIANT	64
DIRECTION.....	65
DISPLAY ASSIGNMENT	66
DYNAMIC STOP ASSIGNMENT.....	67
ENCUMBRANCE NEED	67
ENTITY	68
ENTITY IN VERSION.....	69
ENTRANCE	70
ENTRANCE EQUIPMENT.....	71
EQUIPMENT.....	72
EQUIPMENT PLACE.....	73
EQUIPMENT POSITION.....	74
ESCALATOR EQUIPMENT.....	74
FACILITY.....	75
FACILITY REQUIREMENT.....	75
FACILITY SET	76
FLEXIBLE AREA	77
FLEXIBLE LINE.....	77
FLEXIBLE LINK PROPERTIES.....	79
FLEXIBLE POINT PROPERTIES	79
FLEXIBLE QUAY.....	80
FLEXIBLE ROUTE.....	80
FLEXIBLE SERVICE PROPERTIES	81
FLEXIBLE STOP ASSIGNMENT	82
FLEXIBLE STOP PLACE	82

GARAGE.....	83
GARAGE POINT.....	84
GENERAL FRAME.....	85
GENERAL SIGN.....	86
GROUP OF ENTITIES.....	86
GROUP OF LINES.....	87
GROUP OF LINK SEQUENCES.....	87
GROUP OF LINKS.....	88
GROUP OF OPERATORS.....	89
GROUP OF POINTS.....	89
GROUP OF SERVICES.....	90
GROUP OF TIMEBANDS.....	91
GROUP OF TIMING LINKS.....	92
HAIL AND RIDE AREA.....	92
HEADING SIGN.....	93
HEADWAY INTERVAL.....	94
HEADWAY JOURNEY GROUP.....	94
HIRE SERVICE.....	96
IMPOSSIBLE MANOEUVRE.....	96
INFRASTRUCTURE FRAME.....	97
INFRASTRUCTURE LINK.....	99
INFRASTRUCTURE POINT.....	100
INSTALLED EQUIPMENT.....	101
INTERCHANGE.....	102
INTERCHANGE RULE.....	104
INTERCHANGE RULE PARAMETER.....	104
INTERCHANGE RULE TIMING.....	105
JOURNEY.....	106
JOURNEY ACCOUNTING.....	107
JOURNEY FREQUENCY GROUP.....	108
JOURNEY HEADWAY.....	109
JOURNEY LAYOVER.....	110
JOURNEY MEETING.....	111
JOURNEY PART.....	111
JOURNEY PART COUPLE.....	113
JOURNEY PATTERN.....	113
JOURNEY PATTERN HEADWAY.....	116
JOURNEY PATTERN LAYOVER.....	116
JOURNEY PATTERN RUN TIME.....	117
JOURNEY PATTERN WAIT TIME.....	118
JOURNEY RUN TIME.....	118
JOURNEY TIMING.....	119
JOURNEY WAIT TIME.....	120
LAYER.....	121
LEFT LUGGAGE SERVICE.....	123
LEVEL.....	124
LIFT EQUIPMENT.....	125
LINE.....	126
LINE NETWORK.....	128
LINE SECTION.....	129
LINE SHAPE.....	130
LINK.....	130
LINK IN LINK SEQUENCE.....	133

LINK PROJECTION	133
LINK SEQUENCE	134
LOCAL SERVICE	136
LOCATING SYSTEM	137
LOCATION	137
LOGICAL DISPLAY.....	138
LOST PROPERTY SERVICE.....	138
LUGGAGE SERVICE	139
LUGGAGE LOCKER EQUIPMENT	139
MANAGEMENT AGENT	140
MANOEUVRING REQUIREMENT	140
MEDICAL NEED.....	141
MEETING POINT SERVICE.....	141
MEETING RESTRICTION	143
MOBILITY NEED	143
MODE	144
MONEY SERVICE.....	144
NAVIGATION PATH.....	145
NAVIGATION PATH ASSIGNMENT	146
NETWORK.....	147
NORMAL DATED BLOCK.....	148
NORMAL DATED VEHICLE JOURNEY.....	148
NOTICE	149
NOTICE ASSIGNMENT.....	149
ONBOARD STAY	150
OPERATING DAY.....	151
OPERATING DEPARTMENT.....	152
OPERATING PERIOD	152
OPERATIONAL CONTEXT.....	153
OPERATOR.....	154
ORGANISATION	155
ORGANISATION DAY TYPE.....	157
ORGANISATION PART.....	157
ORGANISATIONAL UNIT	158
OTHER ORGANISATION.....	160
OVERTAKING POSSIBILITY.....	160
PARKING.....	161
PARKING ENTRANCE FOR VEHICLES.....	162
PARKING AREA.....	163
PARKING BAY	164
PARKING CAPACITY	164
PARKING COMPONENT.....	165
PARKING PASSENGER ENTRANCE	165
PARKING POINT.....	166
PARKING PROPERTIES	167
PASSENGER ACCESSIBILITY NEED.....	167
PASSENGER CARRYING REQUIREMENT	168
PASSENGER EQUIPMENT	168
PASSENGER INFORMATION EQUIPMENT	170
PASSENGER SAFETY EQUIPMENT.....	171
PASSENGER STOP ASSIGNMENT	171
PASSING TIME.....	172
PATH JUNCTION.....	173

PATH LINK	173
PATH LINK END	175
PATH LINK IN SEQUENCE	176
PLACE	177
PLACE ACCESS EQUIPMENT	178
PLACE EQUIPMENT	179
PLACE IN SEQUENCE	180
PLACE LIGHTING	181
PLACE SIGN	181
POINT	182
POINT IN JOURNEY PATTERN	184
POINT IN LINK SEQUENCE	185
POINT OF INTEREST	186
POINT OF INTEREST CLASSIFICATION	187
POINT OF INTEREST CLASSIFICATION HIERARCHY	188
POINT OF INTEREST CLASSIFICATION MEMBERSHIP	189
POINT OF INTEREST COMPONENT	189
POINT OF INTEREST ENTRANCE	190
POINT OF INTEREST SPACE	190
POINT OF INTEREST VEHICLE ENTRANCE	191
POINT ON LINK	192
POINT ON ROUTE	192
POINT PROJECTION	193
POSTAL ADDRESS	194
PROPERTY OF DAY	195
PSYCHOSENSORY NEED	196
PURPOSE OF EQUIPMENT PROFILE	196
PURPOSE OF GROUPING	197
PURPOSE OF JOURNEY PARTITION	198
QUAY	198
QUEUING EQUIPMENT	199
RAILWAY ELEMENT	200
RAILWAY JUNCTION	200
RAMP EQUIPMENT	201
RELIEF OPPORTUNITY	201
RELIEF POINT	202
RESOURCE FRAME	203
RESPONSIBILITY ROLE	205
RESPONSIBILITY ROLE ASSIGNMENT	205
RESPONSIBILITY SET	206
RETAIL SERVICE	207
RHYTHMICAL JOURNEY GROUP	208
ROAD ADDRESS	208
ROAD ELEMENT	209
ROAD JUNCTION	209
ROUGH SURFACE	210
ROUTE	210
ROUTE LINK	211
ROUTE POINT	212
ROUTING CONSTRAINT ZONE	213
RUBBISH DISPOSAL	214
SANITARY EQUIPMENT	215
SCHEDULED STOP POINT	216

SCHEMATIC MAP	218
SEATING EQUIPMENT	219
SERVICE CALENDAR	220
SERVICE CALENDAR FRAME	221
SERVICE EXCLUSION.....	222
SERVICE FACILITY SET	223
SERVICE FRAME	224
SERVICE JOURNEY	227
SERVICE JOURNEY INTERCHANGE.....	228
SERVICE JOURNEY PATTERN.....	229
SERVICE JOURNEY PATTERN INTERCHANGE	229
SERVICE LINK.....	230
SERVICE PATTERN	231
SERVICE RESTRICTION.....	232
SERVICE SITE	233
SERVICED ORGANISATION	233
SHELTER EQUIPMENT.....	234
SIGN EQUIPMENT.....	234
SIMPLE FEATURE	235
SITE	236
SITE COMPONENT	237
SITE CONNECTION.....	238
SITE CONNECTION END.....	239
SITE ELEMENT	240
SITE EQUIPMENT.....	242
SITE FACILITY SET	243
SITE FRAME.....	244
SPECIAL SERVICE.....	245
STAIR EQUIPMENT	246
STAIRCASE EQUIPMENT	247
STOP AREA.....	248
STOP ASSIGNMENT	248
STOP PLACE.....	250
STOP PLACE COMPONENT.....	252
STOP PLACE ENTRANCE.....	252
STOP PLACE SPACE.....	253
STOP PLACE VEHICLE ENTRANCE	254
STOP POINT IN JOURNEY PATTERN	254
SUBMODE.....	255
SUITABILITY	256
TARGET PASSING TIME.....	257
TARIFF ZONE.....	257
TEMPLATE SERVICE JOURNEY	258
TEMPLATE VEHICLE JOURNEY	259
TICKET SCOPE	259
TICKET VALIDATOR EQUIPMENT.....	260
TICKETING EQUIPMENT	260
TICKETING SERVICE	262
TIME BAND	262
TIME DEMAND TYPE	263
TIME DEMAND TYPE ASSIGNMENT.....	265
TIMETABLE FRAME	266
TIMETABLED PASSING TIME.....	268

TIMING LINK.....	268
TIMING LINK IN JOURNEY PATTERN	270
TIMING PATTERN.....	270
TIMING POINT	271
TIMING POINT IN JOURNEY PATTERN	272
TOPOGRAPHIC PLACE.....	273
TRACE	275
TRAFFIC CONTROL POINT.....	275
TRAIN	276
TRAIN COMPONENT.....	277
TRAIN COMPONENT LABEL ASSIGNMENT	277
TRAIN ELEMENT	278
TRAIN IN COMPOUND TRAIN	278
TRAIN NUMBER.....	279
TRAIN STOP ASSIGNMENT	280
TRANSFER.....	281
TRANSFER END.....	282
TRANSFER RESTRICTION	282
TRAVEL AGENT.....	283
TRAVELATOR EQUIPMENT.....	284
TROLLEY STAND EQUIPMENT	284
TURN STATION.....	285
TURNAROUND TIME LIMIT	285
TYPE OF ACCESS FEATURE.....	286
TYPE OF ACCESSIBILITY LIMITATION.....	286
TYPE OF ACCESSIBILITY TOOLS.....	287
TYPE OF ACTIVATION.....	287
TYPE OF ASSISTANCE SERVICE.....	288
TYPE OF BOARDING POSITION.....	288
TYPE OF CATERING SERVICE.....	288
TYPE OF CHECK CONSTRAINT.....	289
TYPE OF COMMUNICATION SERVICE.....	289
TYPE OF CONGESTION	289
TYPE OF COUPLING.....	290
TYPE OF CYCLE STORAGE EQUIPMENT	290
TYPE OF DELIVERY VARIANT.....	290
TYPE OF DIRECTION OF USE.....	291
TYPE OF EMERGENCY SERVICE.....	291
TYPE OF ENTITY	292
TYPE OF EQUIPMENT	292
TYPE OF FACILITY	293
TYPE OF FARE CLASS.....	293
TYPE OF FLEXIBLE SERVICE	294
TYPE OF FRAME	294
TYPE OF GENDER LIMITATION.....	296
TYPE OF HANDRAIL.....	296
TYPE OF HIRE SERVICE.....	297
TYPE OF JOURNEY PATTERN.....	297
TYPE OF LINE	298
TYPE OF LINK.....	298
TYPE OF LINK SEQUENCE.....	299
TYPE OF LOCAL SERVICE.....	299
TYPE OF LUGGAGE LOCKER	300

TYPE OF MONEY SERVICE.....	300
TYPE OF NOTICE.....	300
TYPE OF OPERATION.....	301
TYPE OF ORGANISATION.....	301
TYPE OF PASSAGE.....	302
TYPE OF PASSENGER INFORMATION EQUIPMENT.....	302
TYPE OF PAYMENT METHOD.....	303
TYPE OF PLACE.....	303
TYPE OF POINT.....	304
TYPE OF POINT OF INTEREST SPACE.....	304
TYPE OF PRODUCT CATEGORY.....	305
TYPE OF PROJECTION.....	305
TYPE OF QUAY.....	306
TYPE OF RELATION TO VEHICLE.....	306
TYPE OF RESPONSIBILITY ROLE.....	306
TYPE OF RETAIL SERVICE.....	307
TYPE OF SANITARY FACILITY.....	307
TYPE OF SEATING EQUIPMENT.....	308
TYPE OF SERVICE.....	309
TYPE OF SERVICE NATURE.....	309
TYPE OF SHELTER.....	309
TYPE OF STAFFING.....	310
TYPE OF STOP PLACE.....	310
TYPE OF STOP POINT.....	311
TYPE OF SUITABILITY.....	311
TYPE OF SURFACE.....	311
TYPE OF TICKET.....	312
TYPE OF TICKETING.....	312
TYPE OF TRAFFIC CONTROL POINT.....	313
TYPE OF TRAIN ELEMENT.....	313
TYPE OF TRANSFER.....	314
TYPE OF USER NEED.....	314
TYPE OF VALIDITY.....	316
TYPE OF VERSION.....	316
TYPE OF WAITING ROOM.....	317
TYPE OF ZONE.....	317
USER NEED.....	317
VALIDITY CONDITION.....	318
VALIDITY RULE PARAMETER.....	320
VALIDITY TRIGGER.....	320
VEHICLE.....	321
VEHICLE ACCESS EQUIPMENT.....	322
VEHICLE CHARGING EQUIPMENT.....	322
VEHICLE ENTRANCE.....	323
VEHICLE EQUIPMENT PROFILE.....	324
VEHICLE JOURNEY.....	324
VEHICLE JOURNEY HEADWAY.....	327
VEHICLE JOURNEY LAYOVER.....	328
VEHICLE JOURNEY RUN TIME.....	329
VEHICLE JOURNEY WAIT TIME.....	329
VEHICLE MODE.....	330
VEHICLE MODEL.....	331
VEHICLE POSITION ALIGNMENT.....	332

VEHICLE QUAY ALIGNMENT	333
VEHICLE SCHEDULE FRAME.....	333
VEHICLE SERVICE	334
VEHICLE SERVICE PART	334
VEHICLE STOPPING PLACE.....	335
VEHICLE STOPPING POSITION.....	336
VEHICLE TYPE.....	337
VEHICLE TYPE AT POINT	340
VEHICLE TYPE PREFERENCE	341
VEHICLE TYPE STOP ASSIGNMENT	342
VERSION.....	342
VERSION FRAME	343
VIA	345
WAITING EQUIPMENT	346
WAITING ROOM EQUIPMENT.....	346
WHEELCHAIR VEHICLE EQUIPMENT	347
WIRE ELEMENT	348
WIRE JUNCTION	348
ZONE	349
ZONE PROJECTION	350
3 Overview of Transmodel.....	352
3.1 Transmodel Parts and Packages	352
3.2 Dependencies of Common Concepts packages.....	353
3.3 Versions, validity, responsibility and naming packages	354
3.3.1 General.....	354
3.3.2 Versions of data.....	354
3.3.3 Validity of data.....	355
3.3.4 Responsibility for data.....	355
3.3.5 Alternative names of data.....	355
3.3.6 Generic Framework and Reusable Components	355
3.3.7 Frames	356
3.4 Sub-models.....	356
3.4.1 Introduction.....	356
3.4.2 Use case: timetable.....	356
3.4.3 Conceptual description of timetable.....	356
3.4.4 Extraction of conceptual sub-model	357
3.5 Generation of an instance model.....	359
4 Frequently Asked Questions	361
4.1 General.....	361
4.2 Documentation	362
4.3 Users	362
4.4 Model structure	364
5 Outline of on-line Tutorial.....	366
5.1 Introduction.....	366
5.2 Model structure	366
5.3 Common Concepts	366
5.3.1 Versions.....	366
5.3.2 Validity Conditions.....	366
5.3.3 Responsibility	366
5.3.4 Generic Framework	366
5.3.5 Reusable Components.....	367
5.4 Public Transport Network Topology	368

5.5	Timing Information	368
5.6	Vehicle Scheduling	368
	Annex A Model Evolution	369

Forbiede
Preview

European foreword

This document (CEN/TR 12896-9:2016) has been prepared by Technical Committee CEN/TC 278 “Intelligent transport systems”, the secretariat of which is held by NEN.

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

The Transmodel v6 series is composed of the following documents:

- Public Transport Reference Data Model - Part 1: Common Concepts
- Public Transport Reference Data Model - Part 2: Public Transport Network
- Public Transport Reference Data Model - Part 3: Timing Information and Vehicle Scheduling
- Public Transport Reference Data Model - Part 4: Operations Monitoring and Control*
- Public Transport Reference Data Model - Part 5: Fare Management*
- Public Transport Reference Data Model - Part 6: Passenger Information*
- Public Transport Reference Data Model - Part 7: Driver Management*
- Public Transport Reference Data Model - Part 8: Management Information and Statistics*

(* - these Parts are not yet published)

Together these eight Parts create version 6 of the European Standard EN 12896, known as “Transmodel” and thus replace Transmodel V5.1.

The split into eight Parts intends to ease the task of users interested in particular functional domains. Modularisation of Transmodel, undertaken within the NeTEx project, has contributed significantly to this new edition of Transmodel.

This informative document provides supplementary information to that contained in the formal European Standard to help those implementing the Standard.

1 Scope

This Technical Report documents further information related to parts 1, 2 and 3 of version 6 of the "Public Transport – Reference Data Model" (Transmodel) European Standard, EN 12896. This Technical Report will be extended and re-published with additional information when Parts 4, 5, 6, 7, and 8 of the Transmodel standard are published in due course.

The various sections of the document provide

- A Complete Data Dictionary (merging and extending the information contained in each separate Part of the Standard that has been published to date) [Clause 2];
- An overview of the whole of Transmodel to provide an understanding of how the model is structured and how each component model links with other components [Clause 3];
- A set of Frequently Asked Questions to help those new to Transmodel to understand the basics of the Reference Data Model [Clause 4];
- An outline of the main questions which are addressed in a separate web-based on-line tutorial (that itself will be updated from time to time in the light of feedback received from users of the Standard) [Clause 5];
- An Annex providing a table which shows the evolution of the terms used in Transmodel v6 from the previous Transmodel v5.1 and IFOP European Standards and from the NeTEx Technical Specification [Annex A].

Preview

Copyright

2 Complete Data Dictionary

2.1 General

The Data Types shown in the tables in this section are not mandatory.

2.2 Transmodel v6 Part 1 - Common Concepts (CC).CC Generic Framework MODEL.CC Generic Place MODEL.ACCESS

ACCESS

(Transmodel v6.Part 1 - Common Concepts (CC).CC Generic Framework MODEL.CC Generic Place MODEL.ACCESS)

The physical (spatial) possibility for a passenger to access or leave the public transport system. This link may be used during a trip for:- the walking movement of a passenger from a PLACE (origin of the trip) to a SCHEDULED STOP POINT (origin of the PT TRIP), or - the walking movement from a SCHEDULED STOP POINT (destination of the PT TRIP) to a PLACE (destination of the trip).

ACCESS - Relations

Source	Target
ACCESS Role: Cardinality: Relation type: Generalization	TRANSFER Role: Cardinality:
ACCESS END Role: end of Cardinality: 1 Relation type: Association	ACCESS Role: to Cardinality: 0..*
ACCESS END Role: start of Cardinality: 1 Relation type: Association	ACCESS Role: from Cardinality: 0..*
ACCESS Role: Cardinality: * Relation type: Aggregation	SITE FRAME Role: Cardinality:

ACCESS - Attributes

Classification	Name	Type	cardinality	Description
::>	::>	TRANSFER	::>	ACCESS inherits from TRANSFER
«UID»	Id	AccessIdType	1:1	Identifier of ACCESS link.

ACCESS END

(Transmodel v6.Part 1 - Common Concepts (CC).CC Generic Framework MODEL.CC Generic Place MODEL.ACCESS END)

Origin or destination end of an ACCESS link. May indicate a POINT and/or PLACE.

ACCESS END - Relations

Source	Target
ACCESS END Role: a view of Cardinality: 0..* Relation type: Association	PLACE Role: viewed as Cardinality: 0..1
ACCESS END Role: end of Cardinality: 1 Relation type: Association	ACCESS Role: to Cardinality: 0..*
ACCESS END Role: a view of Cardinality: 0..* Relation type: Association	POINT Role: viewed as Cardinality: 0..1
ACCESS END Role: start of Cardinality: 1 Relation type: Association	ACCESS Role: from Cardinality: 0..*

ACCESS END - Attributes

Classification	Name	Type	cardinality	Description
-	-	-	-	-

ACCESS MODE

(Transmodel v6.Part 1 - Common Concepts (CC).CC Reusable Components MODEL.CC Transport Mode MODEL.ACCESS MODE)

A characterisation of the passenger movement according to the means of transport different from public transport (e.g. walk, bicycle, etc)

ACCESS MODE - Relations

Source	Target
ACCESS MODE Role: Cardinality: Relation type: Generalization	MODE Role: Cardinality:
NAVIGATION PATH Role: accessed by Cardinality: 0..* Relation type: Association	ACCESS MODE Role: for Cardinality: 0..*
SITE ELEMENT Role: accessed by Cardinality: 0..* Relation type: Association	ACCESS MODE Role: for Cardinality: 0..*

ACCESS MODE - Attributes

Classification	Name	Type	cardinality	Description
::>	::>	MODE	::>	ACCESS MODE inherits from MODE
«UID»	Id		1:1	Identifier of ACCESS MODE.

Bestelformulier

Stuur naar:

NEN Standards Products & Services
t.a.v. afdeling Klantenservice
Antwoordnummer 10214
2600 WB Delft



NEN Standards Products & Services

Postbus 5059
2600 GB Delft

Vlinderweg 6
2623 AX Delft

T (015) 2 690 390
F (015) 2 690 271

www.nen.nl/normshop

Ja, ik bestel

__ ex. CEN/TR 12896-9:2016 en Public transport - Reference data model - Part 9: Informative documentation € 73.00

Wilt u deze norm in PDF-formaat? Deze bestelt u eenvoudig via www.nen.nl/normshop

Gratis e-mailnieuwsbrieven

Wilt u op de hoogte blijven van de laatste ontwikkelingen op het gebied van normen, normalisatie en regelgeving? Neem dan een gratis abonnement op een van onze e-mailnieuwsbrieven. www.nen.nl/nieuwsbrieven

Gegevens

Bedrijf / Instelling

T.a.v. O M O V

E-mail

Klantnummer NEN

Uw ordernummer BTW nummer

Postbus / Adres

Postcode Plaats

Telefoon Fax

Factuuradres (indien dit afwijkt van bovenstaand adres)

Postbus / Adres

Postcode Plaats

Datum Handtekening

Retourneren

Fax: 015 2 690 271

E-mail: klantenservice@nen.nl

Post: NEN Standards Products & Services,

t.a.v. afdeling Klantenservice
Antwoordnummer 10214,
2600 WB Delft

(geen postzegel nodig).

Voorwaarden

- De prijzen zijn geldig tot 31 december 2018, tenzij anders aangegeven.
- Alle prijzen zijn excl. btw, verzend- en handelingskosten en onder voorbehoud bij o.m. ISO- en IEC-normen.
- Bestelt u via de normshop een pdf, dan betaalt u geen handeling en verzendkosten.
- Meer informatie: telefoon 015 2 690 391, dagelijks van 8.30 tot 17.00 uur.
- Wijzigingen en typfouten in teksten en prijsinformatie voorbehouden.
- U kunt onze algemene voorwaarden terugvinden op: www.nen.nl/leveringsvoorwaarden.