

Digital Data Streets TomTom

In-depth digitized street network

Release R2018_V1.0

Contents

1	Introduction	3
1.1	General information about the Digital Data Streets TomTom database.....	3
1.2	Changes in the releases	6
1.3	Structure of the file names	6
1.4	Connections in the data set	7
1.5	Description of data types	8
2	Data set description	9
2.1	Streets folder	9
2.1.1	Streets\Net.....	9
2.1.2	Streets\index (street directory).....	12
2.1.3	Streets\Restrictions (turning regulations/restrictions) (only ROUTE!).....	15
2.1.4	Streets\Nodes (only ROUTE!).....	16
2.1.5	Routing nodes for international routing (only ROUTE!)..	16
2.1.6	Information about routing/street network.....	17
2.1.7	Places folder.....	18
2.2	Topo folder	19
2.3	POI folder	21
	Appendix: Changes in the releases	24

1 Introduction

1.1 General information about the Digital Data Streets TomTom database

The Digital Data Streets TomTom database is ideal for all specialized digital geography applications. It is based on navigation databases from TomTom (formerly Tele Atlas), which are used in leading vehicle navigation systems. Through the collaboration between TomTom, PTV and DDS, these highly accurate databases have also been optimized for applications beyond pure navigation.

The databases comply with strict ISO 9000 quality specifications that require accuracy and completeness of 97% compared to reality. They are based on maps at scales ranging from 1:2,000 to 1:25,000 and completed with extensive field surveys. This achieves a positioning accuracy of 5 m in urban areas and up to about 25 m in interurban areas.

The Digital Data Streets TomTom database is available in the two specifications ROUTE and GIS. The ROUTE specification is suitable for routing, navigation and fleet management while GIS was developed specifically for use in geographical information systems and graphical displays. House number ranges (HNB) are available for major cities in many countries. One update per year is currently provided.

GIS specification

Detailed network:

Street network with the attribute's street name, street category, sign style and pedestrian zones

Street directory

Location points

Topographical layers: populated areas, railway lines, airports, car parks, industrial areas, bodies of water, green areas, public facilities, etc.

Points of interest (POIs): railway stations, hotels, shopping centers, petrol stations, restaurants, etc.

Interurban network:

Street network (subset from the detailed network) with the attribute's street name, street category and sign style

Location points

Topographical layers: populated areas, railway lines, airports, car parks, industrial areas, bodies of water, green areas, public facilities, etc.

Points of interest (POIs): railway stations, hotels, shopping centers, petrol stations, restaurants, etc.

ROUTE specification**Detailed network:**

Street network with the attribute's street name, street category, sign style, pedestrian zones, street type (driving speed), street nodes and street length, one-way streets and turning restrictions

Street directory

Location points

Topographical layer: populated areas and railway lines

Points of interest and other layers: with surcharge

Interurban network:

Street network (subset from the detailed network) with the attribute's street name, street category, sign style, street type (driving speed), street nodes and street length, one-way streets and turning restrictions

Location points

Topographical layer: populated areas and railway lines

Points of interest and other layers: with surcharge

Available formats: MapInfo (TAB), ESRI shapefiles, MIF/MID

Available coordinate systems: Geographic coordinates (WGS 84 or DHDN)

Other formats and projections are available upon request.

Digitization levels of the Digital Data Streets

A total of four digitization levels are available in Digital Data Streets:

Interurban network

Detailed network

Detailed network with routing attributes

Detailed network with routing attributes and house number ranges.

The digitization levels indicate the following:

Interurban network

The interurban network is the first stage of digitization. Here, the federal highways, national main roads as well as regional roads and state roads, outside and inside towns (cross-town roads) are recorded and marked with street names and routing attributes (e.g. one-way streets, turning restrictions).

Detailed network

The detailed network contains the interurban network as well as the street geometry of all passable streets and roads. However, in contrast to the interurban network included, the detailed network is not yet provided with street names and routing attributes.

Detailed network with routing attributes

The detailed network with routing attributes contains the street geometry of all passable streets and roads. All included streets are marked with street names and routing attributes (e.g. one-way streets, turning restrictions).

Detailed network with routing attributes and house number ranges

The detailed network with routing attributes and house number ranges is the highest level of digitization and contains the entire street geometry of all passable streets and roads. The streets are marked with street names and routing attributes (e.g. one-way streets, turning restrictions) and house number ranges.

Available countries and updates

Digital Data Streets TomTom is available for a large number of countries. The individual countries have different levels of digitization. As the Digital Data Streets TomTom are continuously being updated, we are happy to inform you about the respective digitization status for a country upon request. Despite the high quality, errors cannot be excluded in individual cases.

1.2 Changes in the releases

The changes in the releases of the last two years are described in the appendix.

1.3 Structure of the file names

The file names, such as *Streets_DE181w.**, provide the following information:

Streets	Specifies the content of the respective file; streets are included in this case.
_DE	The two letters after the underscore stand for the country, which is Germany in this example.
181	The first two digits represent the year of the data, and the third digit specifies the first or second update in the respective year. The file here contains the first update of the year 2018.
w	The last letter indicates the projection, where w stands for WGS 84 and b for Bessel (DHDN).
.*	The file extensions vary according to the respective format: MapInfo TAB: .DAT, .ID, .MAP, .TAB, .IND ESRI shapefiles: .SHP, .DBF, .SHX, .PRJ MIF/MID: .MIF, .MID

Hereinafter, shortened versions of the individual files are used, for example *Streets*, i.e. without the details *DE181w*.

1.4 Connections in the data set

There are many connections between the individual layers in the Digital Data Streets TomTom data set:

Column *ID* in the *Streets* layer corresponds to the:

Column *Segment_ID* in the street directory *Housenumber*

Column *VonLink* and *NachLink* in the file *Restrictions_*.sbt*

Columns *Von* and *Nach* in the *Streets* layer correspond to the:

Column *Via* in the *Restrictions_*.sbt* file

Column *ID* of the *Nodes* layer

Column *KN_Von* or column *KN_Nach* in the file *Routingnodes_EU*.txt*

Column *City_ID* in the street directories *Postcode*, *Housenumber* and *Street_Chain* corresponds to the:

Column *Stat_nr* of the *Places* layer

The combination *Country_ID*, *City_ID*, *Street_ID* and *Range_ID* can be used to link the two street directories *Postcode* and *Housenumber* with each other.

Important information on the connection of location names and street names

The combination of the columns *PLZ* and *Town_ID* in the layer *Ort* results in a unique key for each data set in this layer. This combination can be used to assign a street name to the corresponding location name in the *PLZ* street directory (columns *Postcode* and *Town_ID*). Some data sets in the *PLZ* street directory have *PLZ/Town_ID* combinations that do not exist in the location layer. These are streets that are geographically/administratively allocated to Town A, but belong to Town B in terms of postage. In these cases, the location name can be found using the *Town_ID* alone, or if the postcode location name is being searched for, using *PLZ*.

New from release R2014_V1.0: A connection has been implemented between the location points and the postcode street directory, via which a location can be uniquely assigned to each entry from the PLZ street directory – similar to what was possible in older product versions. The connection is possible via the new *ID* column, which has been appended to the locations and the PLZ street directory and is filled in each case with the combination of country code, PLZ and Town_ID. For street entries whose PLZ/Town_ID combination cannot be found in the location layer (as described above), a matching location is searched for in the preparation process using the Town_ID, which is then duplicated and assigned the street's postcode. These locations are identified by the *ID_Ref* column, which refers to the original location. It should be noted that this procedure makes a unique street-location assignment possible, however the location data is artificially extended for this purpose.

1.5 Description of data types

Char (50):	Text with the maximum number of characters, here for example, 50 letters
Integer:	Integer up to 4 bytes long
Short integer:	Integer up to 2 bytes long
Boolean:	Logical value Yes/No (T/F)
Decimal:	Decimal

2 Data set description

This data description includes both the GIS and ROUTE specifications as well as the house number ranges (HNB). Both specifications are identical to a large extent. Differences in the two specifications are pointed out in the text, e.g. (only ROUTE!).

The Digital Data Streets dataset is divided into 3 (ROUTE) or 4 (GIS) folders with the following contents:

Streets with the street network, street nodes, turning regulations and the street directory

Places contains the location directory

Topo with topographical information, e.g. populated areas or bodies of water

POI with the various points of interest (only GIS!)

2.1 Streets folder

The Streets folder contains the subfolders Index, Net, Nodes and Restrictions.

2.1.1 Streets\Net

The *Streets* layer contains the entire street network. The table shows which columns are provided with the specifications GIS and ROUTE as well as the house number ranges (HNB).

Specification	Column name	Contents	Description	Data type
GIS ROUTE and HNB	Prim_Name	Official street name	e.g. "Main Street"	Char (120) For large amounts of data, the character length is shortened to the maximum required length!
	Sek_Name	Alternative additional street name	e.g. "B31/E54"	Char (40) For large amounts of data, the character length is shortened to the maximum required length!

Specification	Column name	Contents	Description	Data type
GIS ROUTE and HNB	Kat	<p>The category reflects the importance of the street. The smaller the number, the more important the street.</p> <p>The following subsets of categories result in a closed network:</p> <p>Kat 1-3 Kat 1-5 (interurban network) Kat 1-8 (overall network)</p> <p><i>See also column Level</i></p>	1 = Category 1 (most important) 2 = Category 2 3 = Category 3 4 = Category 4 5 = Category 5 6 = Category 6 7 = Category 7 8 = Category 8 (least important)	Short integer
Only ROUTE!	Von	Starting node		Integer
	Nach	Destination node		Integer
	Laenge	Length of the segment in meters. For ferry connections, estimated travel time in seconds!		Integer
	Richtung	Permitted direction of travel	0 Both directions 1 One way from > to 2 One way to > from 3 No direction / blocked	Short integer
	Restriktion	Turning restrictions	F No turning restrictions T Turning restrictions in place	Boolean
Only HNB!	FromLeft	House number left from	House number incl. addition, e.g. 12a	Char (7)
	ToLeft	House number left to		Char (7)
	FromRight	House number right from		Char (7)
	ToRight	House number right to		Char (7)

GIS ROUTE and HNB	ID	Unique identification number for the object	Corresponds to the column <i>Segment_ID</i> in the <i>Housenumber</i> street directory	Integer
GIS ROUTE and HNB	Stil	The sign style is used for cartographic representation. In addition to the type of road and the network category, for example, the type of street or the "Form of Way" (number of lanes, roundabouts, etc.) is taken into account.	0 = Not known 1 = Highway 2 = Multi-lane expressway 3 = Expressway 4 = Secondary road 5 = Inner-city street 6 = Other street 7 = Ferry 8 = Pedestrian zone 9 = Field / forest / service road 10 = Railroad loading in the country	Short integer
	Fussweg		0 = No footpath 1 = Footpath	Short integer
	Fuss_zone	Pedestrian areas, which are usually shopping areas located in the center of cities. Here, delivery traffic is only allowed at certain times. Cars are banned.	0 = No pedestrian area 1 = Pedestrian area	Short integer
Only HNB!	HN_Info	Additional information on the house number ranges (HNB)	0 = No HNB available 1 = An HNB left and/or right 2 = For this street segment there are two or more entries in the Hausnr street directory for the left and/or right side, e.g. if the street segment has several names 3 = Precise side is not known, L/R are filled randomly	Short integer
Only ROUTE!	SpurHin	Number of lanes in the direction of from-node to to-node	Exception: 0 = Information not available	Short integer
Only ROUTE!	SpurRueck	Number of lanes in the direction of to-node to from-node	Exception: 0 = Information not available	Short integer
Only ROUTE! Revision in R2016_V1.0!	TypHin	The type represents the driving speed that can be reached on the respective street in the direction of from-node to to-node, not the actual street type. There are 15 different characteristics under type.	0 No motorized through traffic 1 Highway fast 2 " average 3 " slow 4 National main road fast 5 " average 6 " slow	Short integer
Only ROUTE! Revision in R2016_V1.0!	TypRueck	The type represents the driving speed that can be reached on the respective street in the direction of to-node to from-node, not the actual street type.	7 Secondary road fast 8 " average 9 " slow 10 Inner-city street fast 11 " average	Short integer

		There are 15 different characteristics under type.	12 " slow 13 Ferry 14 Resident traffic and similar (streets that are not or only partially open to normal traffic) 15 Pedestrian zones, forest paths, private roads (streets that are not or only partially open to normal traffic)	
Only ROUTE!	km_hHin	Maximum permitted speed (in km/h) in the direction of from-node to to-node	Only explicit speed indications, e.g. those marked by a road sign. Implicit details, e.g. 50 km/h in built-up areas, are not specified.	Short integer
Only ROUTE!	km_hRueck	Maximum permitted speed (in km/h) in the direction of to-node to from-node	0 = Information not available The 998 and 999 details no longer exist (ramps/no speed limit).	Short integer
GIS ROUTE and HNB	Level	The level is used to divide the streets according to different ranges of scale (zoom level). It is possible that, for example, Level 3 is not specified, but all other levels occur. The level roughly corresponds to the previous categorization. This allows the streets to be subdivided according to the previous categories, alternatively to the column Kat.	0 = No specification possible 1 = Level 1 (show in all scales) 2 = Level 2 3 = Level 3 4 = Level 4 5 = Level 5 6 = Level 6 7 = Level 7 8 = Level 8 (show in largest scale)	Short integer

2.1.2 Streets\index (street directory)

The Index folder contains the three layers *Postcode*, *Housenumber* and *Street_Chain*, which supplement the street data with information such as postcodes or house numbers. When used together with the location file, the street directories are particularly well suited as reference data when geocoding.

Using *Town_ID* and *Postcode*, the main and district names from the location file can be attached to the *Postcode* layer (important: see "Connections in the data set" in chapter 1.4). Thus, when geocoding, an address consisting of postcode/town name(s)/street name/house number can be initially roughly located. If additional house number ranges have been specified for a street, the *Housenumber* layer can be used to refine the geocoding and assign the exact house number street segment.

Postcode street directory (1st street range layer)

The *Postcode* layer contains a breakdown of streets based on the postal system. For all in-depth digitized cities, there is one entry with the corresponding coordinate for all streets with street names for each postcode street section (e.g. two entries for “Bahnhofstraße” in the same city: once in postcode 10001 and once in postcode 10002). This coordinate is calculated and is not necessarily located exactly on a street section of the street network. The street ranges refer to the second layer with more precise (smaller) house number ranges and finer coordinates, if needed.

If the Digital Data Streets were purchased with house number ranges, in some cases there will be more than one entry in the Postcode street directory per postcode street segment. These additional entries are necessary for correctly assigning house numbers from the raw data.

Column name	Contents	Data type	Description
Country_ID	Country code	Char (3)	Identification of country
City_ID	Unique ID per administrative unit	Char (9)	Does NOT include official municipality code or similar anymore! The administrative unit associated with the entry is represented by this unique ID. <i>City_ID</i> corresponds to the <i>Stat_nr</i> column in the location file.
Street_ID	Street ID	Char (11)	Entries of streets that physically belong together and have the same names also have the same street ID
Range_ID	Range ID	Char (3)	ID to distinguish street ranges that belong together but are divided into several data sets by the postcode
Name	Street name	Char (80)	Street name
Postcode	Postcode	Char (9)	Postcode
Xcoord	Longitude * 100000	Integer	
Ycoord	Latitude * 100000	Integer	
HN_Flag	Flag for house number range	Short integer	This flag is set (=1) if there is at least one entry for this street range in the <i>Hausnr</i> street directory.
Town_ID	Location identification which is not unique	Integer	See “Connections in the data set” in chapter 1.4. This column corresponds to the <i>Town_ID</i> in the location file.
ID	Unique location identification	Char (25)	The unique ID results from the combination of <i>Country_ID</i> , <i>Postcode</i> and <i>Town_ID</i> . This column corresponds to <i>ID</i> in the location file (see “Connections in the data set” in chapter 1.4).

Housenumber street directory (2nd house number range layer)

The street segment classification with details of house number ranges includes the *Housenumber* layer which is only provided when purchasing the HNB. For all cities where house number ranges are available, one coordinate per street segment is included. In addition, this street directory contains a reference to the street network (Segment_ID) as well as corresponding information about the side of street of house numbers.

The house number range can only be assigned to the first level “street ranges” by combinations of Country_ID, City_ID, Steet_ID and Range_ID. Several identical combinations with different house number ranges can exist.

Column name	Contents	Data type	Description
Country_ID	Country code	Char (3)	Identification of country
City_ID	Unique ID per administrative unit	Char (9)	Does NOT include official municipality code or similar anymore! The administrative unit associated with the entry is represented by this unique ID. <i>City_ID</i> corresponds to the <i>Stat_nr</i> column in the location file.
Street_ID	Street ID	Char (11)	Entries of streets that physically belong together and have the same names also have the same street ID
Range_ID	Range ID	Char (3)	ID to distinguish street ranges that belong together but are divided into several data sets by the postcode
HN_From	House number from, incl. addition to house number (e.g. 12a)	Char (20)	House number or 0 = Start of street Addition to the house number (usually a letter) also in this column!
HN_To	House number to, incl. addition to house number (e.g. 16e)	Char (20)	House number or 9999 = End of street Addition to the house number (usually a letter) also in this column!
HN_Ranges	House number range ID New characteristic "I" from R2016_V1.0! Only when house number ranges are available.	Char (1)	U = uneven G = even F = continuous I = irregular Empty = unknown or ID not available
Xcoord	Longitude * 100000	Integer	
Ycoord	Latitude * 100000	Integer	
Segment_ID	Reference to the street network	Integer	Corresponds to <i>ID</i> in the street network
Side	Details of the side of the street of the house number range	Char (1)	L = Left R = Right U = Unknown
Direction	In the direction of or against the direction of segment	Char (1)	F = Direction from-node => to-node T = Direction to-node => from-node B = Both, direction unknown

Street_Chain street directory (3rd street course layer)

This layer is to be understood as a list of all streets and their segment IDs. This allows a street to be identified using the details of the corresponding segment IDs.

Only available on request!

Column name	Contents	Data type	Description
Country_ID	Country code	Char (3)	The same as international license plates
City_ID	Unique ID per administrative unit	Char (9)	Does NOT include official municipality code or similar anymore! The administrative unit associated with the entry is represented by this unique ID. <i>City_ID</i> corresponds to the <i>Stat_nr</i> column in the location file.
Street_ID	Street ID	Char (11)	Entries of streets that physically belong together and have the same names also have the same street ID
Segment_ID	Reference to the street network	Integer	Corresponds to <i>ID</i> in the street network

2.1.3 Streets\Restrictions (turning regulations/restrictions) (only ROUTE!)

The file with the turning restrictions (Restrictions_*.sbt) is part of the scope of supply of the ROUTE specification. The turning regulations are supplied in ASCII format. This text file with three columns is comma separated. The file contains all street segments that are marked with "T = Turning restrictions in place" in the *Restriktion* column in the Streets layer.

The file (Restrictions_*.sbt) has the following structure:

Column name	Contents	Data type	Description
VonLink	From link ID, e.g. 110489401	Integer	This column refers to the <i>ID</i> column in the <i>Streets</i> street network
ViaKnoten	Via node number, e.g. 697572	Integer	This column refers to the <i>ID</i> column in the <i>Nodes</i> file
NachLink	To link ID, e.g. 110105291	Integer	This column refers to the <i>ID</i> column in the <i>Streets</i> street network
Typ	Turn type	Short integer	The column states whether it is a turning rule or restriction. Currently, the column is filled with 1 throughout (= always restrictions).

In this example, turning from link ID 110489401 via node number 697572 to link ID 110105291 is prohibited.

2.1.4 Streets\Nodes (only ROUTE!)

The Nodes file is supplied for the ROUTE specification.

Column name	Contents	Data type	Description
ID	Node identification number	Integer	
Typ	Node type	Short integer	0 = Location node 1 = Network node 2 = Stop-off point node
Xcoord	Longitude	Integer	
Ycoord	Latitude	Integer	
Country_ID	Country code	Char (3)	The same as international license plates

2.1.5 Routing nodes for international routing (only ROUTE!)

International routing is possible by means of a conversion table. This table contains all road border crossings and international ferry connections to allow routing from one country to another. In the description below, the countries are called “start country” and “destination country” or the nodes “start node” and “destination node”. National ferry connections are additionally listed in this table, although they are already saved in the street network.

The table is supplied in text format and is named “Routingnodes_EU*.txt” (for Europe).

Column name	Contents	Data type	Description
LK_Von	Country code from (start)	Char (3)	Country code of the start country from which a route can be determined to the destination country.
KN_Von	Nodes from (start)	Integer	Start node number of the border node in the start country. Using this node, a connection to the corresponding border node (KN_Nach) in the destination country is possible.
LK_Nach	Country code to (destination)	Char (3)	Country code of the destination country to which a route is determined.
KN_Nach	Node to (destination)	Integer	Destination node number of the border node in the destination country. A connection to the corresponding border node (KN_Von) in the start country is possible via these nodes.
Dauer	Travel time in seconds, only for ferries	Integer	Only for ferries
Entfernung	Distance in meters, only for ferries	Integer	Only for ferries
Fahrzeug	Vehicle motorized/non-motorized	Short integer	1 = Motorized traffic 0 = Non-motorized traffic

Example:

```
LK_Von,KN_Von,LK_Nach,KN_Nach,Dauer,Entfernung,Fahrzeug
FL,2000000335,A,2000000219,0,0,1
FL,2000000333,A,2000000247,0,0,1
FL,2000000334,A,2000000242,0,0,1
A,2000000219,FL,2000000335,0,0,1
A,2000000247,FL,2000000333,0,0,1
A,2000000242,FL,2000000334,0,0,1
```

Assuming a route from Liechtenstein (FL) to Austria (A) leads to the start node 2000000335 (KN_Von), then the corresponding destination node has the number 2000000219 (KN_To). The same information can be found in the opposite direction from Austria (A) to Liechtenstein (FL).

2.1.6 Information about routing/street network

A wide range of attributes are available in the ROUTE specification to enable routing on the street network. Fundamentally, the street network topology is represented by the *Von* and *Nach* nodes of the street network. While the *Von* and *Nach* columns define the digitization direction, the actually permitted direction of travel is only resolved by the *Richtung* column. This can be used to exclude closed streets for routing and to identify one-way streets and two-way streets.

Important: The turning restrictions, which are available in a separate file, must also be taken into account. They supplement the street network topology with important information, e.g. when streets with two-way traffic meet whose topology allows turning via the *Von/Nach/Richtung* columns, but this is prevented in reality by a turning restriction.

The node points can be found in the *Nodes* layer. In principle, it is not necessary for routing, but it can be used for the cartographic representation of the nodes or for reading out their coordinates. **Attention: It can occur that several nodes geometrically lie precisely on top of each other!** For this reason, routing should not be carried out as a purely geometric assignment of nodes to the road network. Instead, the node IDs specified in the *Von* and *Nach* columns must always be considered in order to correctly map a street situation for routing.

In order to use special speed or vehicle profiles for routing, the attributes *TypHin*, *TypRueck* or *km_hHin* and *km_hRueck* can be used. Furthermore, the columns *Kat* or *Level* can be used to specify the importance of streets and *Laenge* can be used to determine the distance traveled. Depending on requirements, for example, the number of lanes (*SpurHin*, *SpurRueck*) and pedestrian segments (*Fussweg* and *Fuss_zone*) can be useful for routing.

With *km_hHin* und *km_hRueck*, the so-called explicit maximum speeds are indicated. This information is derived, for example, from a street sign. In addition, there are the so-called implicit maximum speeds, which are not included in Digital Data Streets. Implicit maximum speeds apply in principle, for example, 50 km/h in built-up areas or 100 km/h on secondary roads. It should be noted that, for example, 30 km/h speed zones do not have to be declared as such, but can pass as normal town roads with a speed of 50 km/h.

International routing is described in the previous chapter.

A special feature is to be noted for the street network: In order to avoid there being more than one connection between two neighboring nodes, some special data sets are included in the street network. These are fully integrated into the street network with their attributes, but have the **geometric object length 0** and are therefore not visible on a map. However, for these data sets, the *Laenge* column is not filled with 0, but mostly with 1.

2.1.7 Places folder

The *Places* location file extends the street network.

Column name	Contents	Data type	Description																														
Country	Country code	Char (3)																															
Name1	Official postal name	Char (50)																															
Name2	Additional location name	Char (50)	This can be, for example, a suburb, a district, a part of a city or an archive name. However, it can also be the municipality name if this is not the same as the official postal name (= Name 1).																														
Postcode	Postcode	Char (9)	Not available for every country and every location. In Germany, the 5-digit postcode is entered. Postcodes, such as 81*** are representative postcodes for a location and thus representative location points.																														
Stat_nr	Administrative number Not available for every country and every location. In Germany, the 8-digit municipality code is entered.	Char (9)	Does NOT include official municipality code or similar anymore! The administrative unit associated with the entry is represented by this unique ID. <i>Stat_nr</i> corresponds to the <i>City_ID</i> column in the street directories.																														
Ortsgr_kl	Location size class The location size class does not refer to the actual number of inhabitants, but to the relative importance of a location or city. Important: Each district has its own size class. However, it often happens that all or many postcode districts have the same classes.	Short integer	<table> <tr><td>0</td><td>Not known</td></tr> <tr><td>1</td><td>x < 100</td></tr> <tr><td>2</td><td>100 <= x < 200</td></tr> <tr><td>3</td><td>200 <= x < 500</td></tr> <tr><td>4</td><td>500 <= x < 1.000</td></tr> <tr><td>5</td><td>1.000 <= x < 2.000</td></tr> <tr><td>6</td><td>2.000 <= x < 3.000</td></tr> <tr><td>7</td><td>3.000 <= x < 5.000</td></tr> <tr><td>8</td><td>5.000 <= x < 10.000</td></tr> <tr><td>9</td><td>10.000 <= x < 20.000</td></tr> <tr><td>10</td><td>20.000 <= x < 50.000</td></tr> <tr><td>11</td><td>50.000 <= x < 100.000</td></tr> <tr><td>12</td><td>100.000 <= x < 250.000</td></tr> <tr><td>13</td><td>250.000 <= x < 500.000</td></tr> <tr><td>14</td><td>x >= 500.000</td></tr> </table>	0	Not known	1	x < 100	2	100 <= x < 200	3	200 <= x < 500	4	500 <= x < 1.000	5	1.000 <= x < 2.000	6	2.000 <= x < 3.000	7	3.000 <= x < 5.000	8	5.000 <= x < 10.000	9	10.000 <= x < 20.000	10	20.000 <= x < 50.000	11	50.000 <= x < 100.000	12	100.000 <= x < 250.000	13	250.000 <= x < 500.000	14	x >= 500.000
0	Not known																																
1	x < 100																																
2	100 <= x < 200																																
3	200 <= x < 500																																
4	500 <= x < 1.000																																
5	1.000 <= x < 2.000																																
6	2.000 <= x < 3.000																																
7	3.000 <= x < 5.000																																
8	5.000 <= x < 10.000																																
9	10.000 <= x < 20.000																																
10	20.000 <= x < 50.000																																
11	50.000 <= x < 100.000																																
12	100.000 <= x < 250.000																																
13	250.000 <= x < 500.000																																
14	x >= 500.000																																

Xcoord	Longitude * 100000	Integer	
Ycoord	Latitude * 100000	Integer	
Level	Location level The smaller the level, the more significant the location. Sign style for displaying the locations. The level of a location does not depend on the number of inhabitants, but on its importance. The main town has a different level than its districts.	Short integer	Values from 1-16 are assigned. The levels do not have precise boundaries and are assigned at the discretion of the respective data collector. For example: 1 = Capital 16 = Farm / small district Values from 1-16 instead of previously 1-15
Town_ID	Location identification which is not unique	Integer	See "Connections in the data set" in chapter 1.4. This column corresponds to <i>Town_ID</i> in the <i>Postcode</i> street directory.
ID	Unique location identification	Char (25)	The unique ID is derived from the combination of <i>Land</i> , <i>Town_ID</i> and <i>PLZ</i> . This column corresponds to the <i>ID</i> in the <i>Postcode</i> street directory. See "Connections in the data set" in chapter 1.4.
ID_Ref	Addition to <i>ID</i> column	Char (25)	If <i>ID_Ref</i> is filled, the location has been artificially created. The <i>ID_Ref</i> refers to the original location that was duplicated for this purpose. See "Connections in the data set" in chapter 1.4.

2.2 Topo folder

The Topo folder contains several layers. Only layers that contain at least one data set are provided. For this reason, the number of layers delivered may vary per country. Layers are differentiated between area and line elements.

The area and line elements in the Topo folder are, on the one hand, only recorded by TomTom according to certain criteria and, on the other hand, **not** collected systematically. Therefore, no guarantee can be given for completeness.

Line elements

Layer	Type	Contents
Bound_Country	4	Country border
Bound_County	5	District boundary
Bound_Federal	7	Federal state border
Bridge	888	Bridge
Railway	1	Railway line
River	6	River
Shoreline	12	Coast/coastline
Tunnel	777	Tunnel

Column name	Data type	Description
Name	Char (80)	Name of the line element
ID	Integer	ID/internal number
Type	Short integer	Type/characteristic

Area element

Layer	Type	Contents
Address_Area	248	Areas with an official or common name, e.g. places such as "Market square"
Admin4	7	Municipality boundaries
Admin5	202	Districts in major cities
Airport	3 4	Larger airports Runway
Building	29 32 92 99 101	Tourist buildings/tourist information Commercial building Emergency room/emergency medical facility Government building Medical building/doctor's surgery
Builtup_Area	8	Built-up area
Environmental_Zone	129	Environmental zone
Green_Area	10 11 12	Cemetery Town park Golf course
Industry	14	Larger industrial plant/industrial complex
Island	90	Island area
Lake	15	Lake
Misc	22 28 34 57 102 89	Shopping mall Sports facility Office building/company headquarters Recreational facility Duty-free zone Military base
Nature	91 201 246	National park Moor Beach areas/sand areas by the sea, lakes, rivers
Ocean	17	Ocean, sea
Parking	19 36	Parking slot Car park

Public_Facility	31 44 45 46 49 87	University Police Town hall Courthouse Theme park Post office
Railway_Station	72	Railway station
Sights	40 41 66 86	Museum Theater Tourist attraction/excursion destination/sight seeing Church
Water_General	203 250	Bodies of water Periodic waters
Woodland	1	Forest area, nature reserve

Column name	Data type	Description
Name1	Char (50)	ID/internal name
Name2	Char (50)	Area element name
Type	Short integer	Type/characteristic

2.3 POI folder

The Points of Interest (POI) are, on the one hand, only recorded by TomTom according to certain criteria and, on the other hand, **not** collected systematically. Therefore, no guarantee can be given for the completeness and actuality of the POIs. Only layers that contain at least one data set are provided. For this reason, the number of layers delivered may vary in the individual countries.

Layer	Type	Contents
Airport_POI	24	Airport
	197	Helipad
	198	Gateway access
Bank	11	ATM
	12	Bank
	134	Additional ATMs
Beach	121	Beach
Border_Crossing	5	Border crossing
Business	13	Office building/company headquarters
	79	Commercial building
Camping	85	Camping

Car	1	Automobile Association office	
	2	Car dealers	
	3	Car repair shop	
	4	Car rental	
	New in R2017_V2.0!	200	Car wash
City_Center	50	City center	
Convention Center	98	Convention center	
Culture	32	Cinema	
	37	Museum	
	40	Theater	
	118	Cultural center	
Electric_Vehicle_Station	192	Electric vehicle station	
Ferry	27	Ferry dock	
Fire_Brigade	159	Fire brigade	
Guest_House	67	Guest house	
Health_Care	19	Hospital	
	62	Pharmacy	
	75	Emergency medical facility	
	124	Veterinarian	
	193	Health care	
	New in R2017_V2.0!	96	Doctor
New in R2017_V2.0!	97	Dentist	
Hotel	51	Hotel/motel	
Industry_POI	70	Industrial area	
Leisure	29	Amusement park	
	31	Casino	
	35	Ice rink	
	38	Recreation area	
	39	Night life	
	99	Leisure center	
	119	Swimming pool	
	169	Entertainment	
	New in R2017_V2.0!	196	Hiking trail
	Misc_POI	194	Media facility (previously in a separate layer "Media_Facility")
125		Energy supply facility	
145		Military base	
181		Prison	
199		Organization/association	
Mountain	92	Mountain top	
	116	Mountain pass	
Parking_POI	7	Parking slot	
	8	Parking garage/car park	

Petrol_Station	9	Petrol station
Public_Building	15 16 17 18 20 22 60 68 87 189	Community center Courthouse School Technical college/university Library Police Embassy Post office Seat of government Community facility
Public_Transport_Stop	89	Public transport stop
Residential_Accommodation New in R2018_V1.0!	202	Residential accommodation such as retirement home, nursing home
Restaurant	49 91	Restaurant Restaurant area
Rest_Area	10	Rest area
Shopping New in R2017_V2.0!	41 42 65 140 58	Grocery store Shopping mall Camping Department store Company, business
Sport New in R2017_V2.0!	33 45 90 122 123 44 36	Golf course Sports facility Stadium Tennis court Water sport Sports center Marina
Toll_Booth	73	Tollbooth
Tourism	46 47 120	Tourist office Tourist attraction Panoramic view
Traffic_Service_Center	195	Traffic service center
Train_Station	28	Railway station
Truck New layer in R2017_V2.0!	102 112	Truck rest area Truck weighing station
Winery	48	Winery
Worship	69	Religious site
Zoo	115	Zoo

Column name	Data type	Description
Name	Char (80)	Name of POI
PLZ	Char (9)	Postcode, if available
Ort	Char (50)	Name of town, if available
Strasse	Char (100)	Street with house number, if available
Kennung	Integer	Internal ID
Typ	Short integer	Type of respective POI

Appendix: Changes in the releases

Changes in release R2018_V1.0

- The POI layer “Residential_Accommodation” with type 202 is new. It includes residential accommodation such as retirement homes, nursing homes, etc.

Changes in release R2017_V2.0

- In section 2.1.6 under information for routing, a special feature in the street network is highlighted: There are street segments with a geometric object length of 0.
- Helipads (type 197) and gateway accesses (type 198) have been added to the “Airport_POI” POI layer.
- Additional ATMs (type 134) have been added to the “Bank” POI layer.
- The POI layer “Car” now also includes car washes (type 200).
- The POI layer “Health_Care” now also includes doctors (type 96) and dentists (type 97).
- Hiking trails (type 196) have been added to the “Leisure” POI layer.
- The POI layer “Media_Facility” has been dissolved and its content (media facilities, type 194) has been included in a new POI layer called “Misc_POI”. It also includes four new POIs: energy supply facilities (type 125), military bases (type 145), prisons (181) and organizations/associations (type 199).
- The “Shopping” POI layer includes additional companies/businesses (type 58).
- The POI layer “Sport” has been extended with marinas (type 36)
- The POI layer “Truck” is new and includes truck rest areas (type 102) and truck weighing stations (type 112).

Changes in release R2016_V1.0

- In the street network, speed type 15 was divided into two types: Resident traffic and similar roads are now marked with type 14 (type 14 was previously not assigned). Streets such as pedestrian zones, forest paths, private roads etc. continue to have type 15.
- Section 2.1.6 summarizes general, important information about routing.
- The column "HN_Ranges" in the street directory "Housenumber" can now also have the characteristic "I" (previously "4"). "I" stands for irregular.
- The field length of the "Name" column in the POI layers has been increased from 50 to 80 characters.
- Sports centers have been added to the "Sport" POI layer (type 44).
- The POI layer "Traffic_Service_Center" is new. It includes traffic service centers (type 195, previously only available for Hungary).
- The topo layer "Water_General" was supplemented by the type 250 for periodic waters.
- Type 89 for military bases has been added to the "Misc" topo layer.
- The color scheme of the topo layers "Lake", "Ocean", "River" and "Water_General" has been standardized (affects data in MapInfo TAB and MIF/MID format).

Changes in release R2015_V1.0

- None. See changes in previous release R2014_V1.0.

Changes in release R2014_V1.0

- The TOPO and POI layer names and their content and types have been revised.
- In the street network, the "Level" column has been added. It is used to divide the streets according to different ranges of scale (zoom levels). The level is based on the former category allocation. Since this category continues to be used in some applications today, DDS has included it in the data set in the form of the Level as an alternative to the standard category ("Kat" column).
- For each entry from the PLZ street directory, a city or district can be uniquely assigned again – similar to how it was possible in older versions.
- For this purpose, the column "ID" was added to the street directory "PLZ" and to the "Location" layer.
- In addition, the "Location" layer contains the "ID_Ref" column, which was added as part of this data adjustment (see "Connections in the data set" in Chapter 1.4).