DEUTSCHE BÖRSE
CASH MARKET

T7 Release 7.0

Xetra Instrument Reference Data Guide

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Abstract

This document provides an overview about the instrument reference data for Xetra customers on T7.

Keywords

Xetra, T7, Reference Data Interface, Reference Data File, Common Report Engine, Static Files

Table of Contents

1 List of Abbreviations, Acronyms and Definitions

Please find a list of all the abbreviations used in the document.

CRE	Common Report Engine
CSV	Comma-separated-values
ETC	Exchange Traded Commodities
ETF	Exchange Traded Funds
ETN	Exchange Traded Notes
MIC	Market Identifier Code
RDF	Reference Data File
RDI	Reference Data Interface
T7	Trading System developed by Deutsche Börse Group
TES	T7 Entry Service

2 Introduction

T7 for Cash Market offers instrument reference data on four different sources:

- **Common Report Engine:** On the Common Report Engine the Reference Data File (T7 RDF) is available containing all tradable instruments for the current business day. It is generated one time per day and its creation is on each Start-Of-Day. For more information, please refer to *T7 Market & Reference Data Interfaces* on the path

  Xetra.com / Technology / T7 trading architecture / System documentation / Release 7.0 / Market and Reference Data Interfaces

  Please find more details about the Common Report Engine on the document *Common Report Engine User Guide* in the following path

  Xetra.com / Technology / T7 trading architecture / System documentation / Release 7.0 / Reports / Common Report Engine User Guide

- **Reference Data Interface (T7 RDI)**: This interface provides products' and instruments' reference data which are available for trading on T7. For more information, please refer to *T7 Market & Reference Data Interfaces* on the path

  Xetra.com / Technology / T7 trading architecture / System documentation / Release 7.0 / Market and Reference Data Interfaces

- **Cash Market Member Section**: In the Cash Market member section the instrument Reference Data File (T7 RDF) will be *available on the following path:*

  Xetra.com / Member Section / Cash Market Member Section / Cash Market Resources / Instruments

  For more information regarding the instrument reference data file, please refer to *T7 Market & Reference Data Interfaces* on the path:

  Xetra.com / Technology / T7 trading architecture / System documentation / Release 7.0 / Market and Reference Data Interfaces

- **Instrument reference data on public website:** Instrument reference data (asci file) will be available on public website xetra.com on the following path:

  Instruments > All tradable instruments

Besides instrument reference data, csv-files will be generated which contains static information for each instrument. These will only be changed 1-2 times a year, for example order profiles and trading schedules. Major changes of the static files will be communicated in advance with sufficient lead-time.

3 Change Log

Date	Version	Description
28.09.2018	1.0	Changes with T7 Rel. 7.0: Changes and additions in instrument reference data file on public website: • Field VDO Minimum Executable Volume renamed to "Pre-Trade LIS Value" • New field "Tick Size Band" • New bond and warrant specific fields: o Security Sub Type o Issuer Mnemonic o Issue Date o Underlying o Maturity Date o Flat Indicator o Coupon Rate o Previous Coupon Payment Date o Next Coupon Payment Date o Pool Factor o Indexation Coefficient o Accrued Interest Calculation Method o Country Of Issue o Minimum Tradable Unit o In-Subscription o Strike Price • New valid value in column "Trading Model Type": ContinuousAuctionIssuer • New valid values in column "Instrument Type": o BOND = Bond o WAR = Warrant Changes and additions in static instrument reference data file. • New Order Profiles: o Intraday Auction Market Order o Intraday Auction Limit Order o Issuer Model Market Order o Issuer Model Limit Order • New attribute in Order Profile: o Intraday Auction Only • New static file for T7 Entry Service: o YYYYMMDD_TESProfiles.csv

	• New static file for Security Sub Types: o YYYYMMDD_securitySubType.csv

4 Further reading

The following documents provide additional information to complement this manual:

- T7 Market Model for the Trading Venue Xetra
- T7 Functional and Interface Overview
- T7 Functional Reference
- T7 Market Data & Reference Data Interfaces – Manual
- Common Report Engine User Guide
- T7 Cash Markets – Participant and User Maintenance Manual

5 Public website

5.1 Formatting of the file

The file is created in accordance with the following specifications:

File extension	CSV
Fields delimiter	; (semicolon)
Decimal symbol	. (point)
Digit grouping symbols (thousands separator)	, (comma)

The file name is "T7 (XETR) All tradable instruments" and will follow the pattern "t7-xetr-allTradableInstruments.csv".

Please note, when importing the file into a tool like, e.g. Excel or MS-Access, you have to make sure that the decimal character is configured accordingly, either in the tool itself or in the operation system, e.g. the Regional Settings in Windows.

5.2 File Record Layout

All fields listed below are sorted in the same order as shown in the instrument file. All data is provided in string format (Alphanumeric) delimited by semicolon.

Line 1 provides the MIC of the market, e.g. Market: XETR

Line 2 provides the date of the last update of the file, e.g. Date Last Update: 03.12.2018.

Line 3 provides the column names listed below.

The instrument reference data starts with line 4:

Sequence Number	Field name	Description
1	Market Segment Status	This field indicates whether the instrument is already tradable in T7. Published = Instrument is not tradable on T7 Active = Instrument is tradable on T7
2	Instrument Status	Instrument Status Active = Instrument is tradable on T7 Pending deletion = Instrument will be deleted after a retention period
3	Instrument	Instrument description
4	ISIN	ISIN of the instrument

Sequence Number	Field name	Description
5	Product ID	System generated identifier unique per market. Products usually provide access to instruments within the market that share common attributes such as market model and schedules.
6	Instrument ID	System generated identifier unique per market. Note, that in case of product relation of 1:n (e.g. for ETPs) more than one Instrument ID may refer to the same Product ID.
7	WKN	Wertpapierkennnummer
8	Mnemonic	Instrument mnemonic
9	MIC Code	MIC Code of the market
10	CCP eligible Code	Indicator whether instrument is CCP eligible: Y = Instrument is CCP eligible N = Instrument is not CCP eligible
11	Trading Model Type	Trading Model Types: Continuous = Continuous Trading with Auctions ScheduledIntradayAuction = One Auction AnyAuction = Multiple Auction ContinuousAuctionIssuer = Continuous Auction with Market Maker
12	Product Assignment Group	Product Assignment Group, e.g. DAX1.
13	Product Assignment Group Description	Description of the Product Assignment Group.
14	Designated Sponsor Member ID	DS Member Member ID. For more than one DS, Member IDs are separated with "#", the Member ID of the delegated member is separated with "*" at the end of the field.
15	Designated Sponsor	DS Member long name. For more than one DS, members' long names are separated with "#", the members' long name of the delegated member is separated with "*" at the end of the field.
16	Price Range Value	Maximum allowable quote spread (absolute value). Conditionally provided if Price Range Percentage is absent.
17	Price Range Percentage	Maximum allowable quote spread (percentage value). Conditionally provided if Price Range Value is absent.
18	Minimum Quote Size	Market Making Parameter: Minimum Quote Size.
19	Instrument Type	Instrument type: CS = Common stock / Equity ETF = Exchange Traded Funds ETN = Exchange Traded Notes ETC = Exchange Traded Commodities

Sequence Number	Field name	Description
		OTHER = Other BOND = Bond WAR = Warrant
20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50, 52, 54, 56, 58	Tick Size (1-20)	A tick size represents a limit price/range step. Twenty different tick sizes are possible for an instrument.
21	Upper Price Limit Max	Maximum price for that instrument. Upper price limit max represents a limit range for which a tick size applies.
23, 25, 27, 29, 31, 33, 35, 37, 39, 41, 43, 45, 47, 49, 51, 53, 55, 57, 59	Upper Price Limit (2-20)	Upper Price Limit represents a limit range for which a tick size applies. There are a total of twenty possible for an instrument.
60	Number of Decimal Digits	Displayed decimals
61	Unit of Quotation	The unit in which an instrument is quoted/stated when buying or selling, e.g. shares (number of items).
62	Market Segment	This field indicates the type of Market Admission, e.g. Open Market, Regulated Market.
63	Market Segment Supplement	This field indicates the market segment supplement, e.g. XTF Exchange Traded Funds.
64	Clearing Location	Identifier for the location at which trades are cleared.
65	Primary Market MIC Code	Market Identifier Code (ISO 10383) of the "home market", where the first IPO took place.
66	Reporting Market	Market Identifier Code (ISO 10383) required for reporting to supervisory authority.
67	Settlement Period	This field indicates the number of business days from trade execution after which settlement is to be effected.
68	Settlement Currency	Currency used for settlement.
69	Closed Book Indicator	Indicates whether the Order book is closed during auction trading.
70	Market Imbalance Indicator	Controls if during auction call/volatility interruption/extended volatility interruption phase a surplus (side and volume) at the indicative price (if crossed order book) or the best bid/best ask limit and quantity (if uncrossed order book) is displayed to the market.

Sequence Number	Field name	Description
71	CUM/EX Indicator	CUM/EX Indicator: 'C' = Cum Capital Adjustment or Dividend: Last trading day before a Capital Adjustment or Dividend. Orders will be deleted for the next trading day. 'E' = Ex Capital Adjustment or Dividend: First trading day after Capital Adjustment or Dividend. Open orders have been deleted before start of day.
72	Minimum Iceberg Total Volume	Minimum Iceberg Total Volume
73	Minimum Iceberg Display Volume	Minimum Iceberg Display Volume (Peak)
74	EMDI Incremental A - Unnetted	Incremental address for EMDI Unnetted multicast stream A.
75	EMDI Incremental A – Unnetted Port	EMDI Port address A for EMDI Unnetted.
76	EMDI Incremental B – Unnetted	Incremental address for EMDI Unnetted multicast stream B.
77	EMDI Incremental B – Unnetted Port	Port address B for EMDI Unnetted.
78	EMDI Snapshot A – Unnetted	Snapshot address for EMDI Unnetted multicast stream A.
79	EMDI Snapshot A – Unnetted Port	EMDI Port address A for EMDI Unnetted.
80	EMDI Snapshot B – Unnetted	Snapshot address for EMDI Unnetted multicast stream B.
81	EMDI Snapshot B – Unnetted Port	EMDI Port address B for EMDI Unnetted.
82	EMDI Market Depth – Unnetted	Market depth for EMDI Unnetted.
83	EMDI Snapshot Recovery Time Interval - Unnetted	Recovery interval (duration of one cycle).
84	EMDI Address A - Netted	Incremental address for EMDI Netted multicast stream A.
85	EMDI Port A - Netted	Port address A for EMDI Netted.
86	EMDI Address B - Netted	Incremental address for EMDI Netted multicast stream B.
87	EMDI Port B - Netted	Port address B for EMDI Netted.
88	EMDI Market Depth – Netted	Market depth for EMDI Netted.
89	EMDI Market Depth Time Interval - Netted	Netting interval for low bandwidth feeds (0=no netting).
90	EMDI Recovery Time Interval - Netted	Recovery interval (duration of one cycle).

Sequence Number	Field name	Description
91	EOBI Incremental A	Address A for EOBI Incremental multicast stream (Order by Order).
92	EOBI Incremental Port A	Port address A for EOBI Incremental.
93	EOBI Incremental B	Address B for EOBI Incremental multicast stream.
94	EOBI Incremental Port B	Port address B for EOBI Incremental.
95	EOBI Snapshot A	Address A for EOBI Snapshot multicast stream.
96	EOBI Snapshot Port A	Port address A for EOBI Snapshot multicast stream.
97	EOBI Snapshot B	Address B for EOBI Snapshot multicast stream.
98	EOBI Snapshot Port B	Port address B for EOBI Snapshot multicast stream.
99	Market Maker Member ID	MemberID of the Xetra member admitted as a Market Maker according to MiFID II/MiFIR regulations. For more than one Market Maker, MemberIDs are separated with "#".
100	Market Maker	Long name of the Xetra member admitted as a Market Maker according to MiFID II/MiFIR regulations. For more than one Market Maker, members' long names are separated with "#".
101	Regulatory Liquid Instrument	Indicates shares and exchange traded funds for which there is a liquid market as classified by the regulator.
102	Pre-Trade LIS Value	This value is used as Minimum Execution Volume of the hidden part of a Volume Discovery Order. Furthermore, this value is the minimum trade volume of TES Type LIS.
103	BEST eligible	Defines whether instrument is eligible for BEST trade: Y = Instrument is eligible for BEST N = Instrument is not eligible for BEST
104	Partition ID	Partition ID of the product. The Partition ID does not change intraday.
105	Multi CCP-eligible	This field indicates whether instrument is available for multiple CCP. Y = Instrument is multiple CCP eligible N = Instrument is not multiple CCP eligible Please note, that intraday change of this indicator will be communicated via newsboard messages.
106	Tick Size Band	Tick Size Band information, e.g. in order to identify which ESMA tick size table apply for that instrument. Respective tick sizes are provided in the columns 20-59.
107	Security Sub Type	Id of the short name of the Bond and Warrant sub-classification. (Please refer to Chapter 6.8)
108	Issuer Mnemonic	Code of the bond issuer (4 digits).

Sequence Number	Field name	Description
109	Issue Date	The date on which a security was issued.
110	Underlying	The code of the underlying of a warrant or a bond instrument.
111	Maturity Date	Maturity Date of the bond or warrant.
112	Flat Indicator	Indicator if accrued interest calculation and pool factor is taken into account, e.g. there is no accrued interest for flat bonds. Possible values are: • NO_FLAT: Accrued interest calculation and pool factoring enabled • FLAT: No accrued interest calculation, but pool factoring enabled • XFLAT: No accrued interest calculation and no pool factoring enabled
113	Coupon Rate	Coupon rate of the bond. Note, that intraday change of the Coupon rate will be published on the next Business Day.
114	Previous Coupon Payment Date	The date of the previous coupon payment.
115	Next Coupon Payment Date	The date for the next Coupon payment.
116	Pool Factor	Current Pool Factor value.
117	Indexation Coefficient	Coefficient factor of an inflation-linked bond.
118	Accrued Interest Calculation Method	This field indicates the accrued interest calculation method of a bond. Following values according to FIX convention: • 1 = 30/360 • 3 = 30/360M • 6 = Act/360 • 7 = Act/365 (Fixed) • 8 = Act/Act (AFB) • 9 = Act/Act (ICMA) • 11 = Act/Act (ISDA) • 14 = Act/365L
119	Country Of Issue	ISO Country code. The calculated accrued interest rate is rounded to the 12th decimal, except for the following country codes: • FR 9th decimal • IT 7th decimal • PL 7th decimal • HU 7th decimal
120	Minimum Tradable Unit	This field indicates the Minimum Tradable Unit for a given instrument.
121	In-Subscription	Indicator for subscription trading (primary market). “Y” = instrument in subscription trading.
122	Strike Price	Strike Price of the warrant.

6 Static Files

In order to reduce the data sent via RDI and the size of the files on the CRE and the Xetra website xetra.com, reference data that rarely change like order profiles or trading schedules will only be provided via static csv-files on the CRE, Cash Market Member Section and the Xetra website xetra.com. Members have to process both files. Major changes of the static files will be communicated in advance with sufficient lead-time. Beside of major changes, the files need to be processed whenever a new instrument is added to Xetra on T7.

The files contain order profiles (e.g. Limit Order allowed) and trading schedules assigned to each Xetra instrument traded on the T7 platform as well as files for the descriptions of the Market Segment Supplements an instrument is assigned.

Static files for Xetra will be available on the Xetra and Cash Market Website under the following path:

xetra.com or *deutsche-boerse-cash-market.com* / *Instruments* /
All tradable instruments

The name of the zip-file will follow the pattern T7 (XETR) Static Instrument Reference Data <BusinessDay>.

With:

BusinessDay: format ‘DD.MM.YYY’

Furthermore, the static file will be available on the Common Report Engine as a zip file. The file name will follow the pattern

<MIC_EnvironmentNr>_<Name>_<ReportID>_<MemberID>_<BusinessDay>_<MIC>.zip

With:

MIC_Environtment number, i.e. 51 for production and 52 for simulation

Name: always FIL

ReportID: always RDF02

MemberID: always PUBLI

BusinessDay: format ‘YYYYMMDD’

MIC: MIC Code of the market, e.g. XETR

Example:

51FILRDF02PUBLI20180328XETR.zip

6.1 Formatting of the files

Each csv-file will follow basic format rules. Every data record will be in one line; fields separated by a delimiter – “;”.

1. If a field is empty because it is optional and has no value, only the delimiter will be written into the csv-file.

2. The first row in the csv-file contains the column headers.

The file names will follow the pattern <YYYYMMDD>_<name>.csv.

6.2 Order Profile

T7 for Xetra categorizes orders according to Order Profiles. The exchange defines these order profiles and enables or disables them for individual products.

An additional table is provided that gives the assignment of order profiles, per product and instrument type (Order Profile Assignment Table).

The file name will have the pattern <YYYYMMDD>_orderProfiles.csv.

Example:
20181203_orderProfiles.csv

For additional information, please see the Order Profiles chapter of the Functional Reference document.

The order profile table includes the following attributes:

Field	Description
OrderProfileId	Id of the Order Profile.
Full Name	Name of the Order Profile, e.g. Limit.
Regular	Indicator, which defines whether the order type is a Regular Order (Limit + Market Order).
Stop	Indicator whether Stop Orders are allowed.
TSO	Indicates whether Trailing Stop Order is allowed.
OCO	Indicator whether One-Cancels-the-Other Order is allowed.
Iceberg	Indicator whether Iceberg order is allowed.
Limit	Indicates whether a limit order can be entered for the order profile.
Market	Indicates whether market order can be entered for the order profile.
OAO	Trading of the order is restricted to Opening Auction only.
AOO	Trading of the order is restricted to Auction only.
CAO	Trading of the order is restricted to Closing Auction only.
BOC	Execution restriction Book-or-cancel is allowed.
IAO	Trading of the order is restricted to Intraday Auction only.
IOC	Execution restriction Immediate-or-cancel is allowed.

Field	Description
FOK	Execution restriction Fill-or-kill is allowed.
GFD	Validity of the order is Good-For-Day.
GTD/GTC	Validity of the order is Good-Till-Date.
VDO	Indicates whether Volume Discovery Order is allowed.

The layout of the order profile will be as follows (example values):

OrderProfileId	Full Name	Regular	Stop	TSO	OCO	Iceberg	Limit	Market	OAO	AOO	CAO	BCC	IAO	IOC	FOK	GFD	GTD/GTC	VDO
10	Limit	Y	N	N	N	N	Y	N	N	N	Y	N	Y	Y	Y	Y	Y	Y
11	Market	Y	N	N	N	N	N	Y	N	N	N	Y	N	Y	Y	Y	Y	N
12	..	...	..	..														
13	..	..	..	..														

6.3 Order Profile Assignment

The following table lists the order profiles assigned to each instrument.

For additional information, please refer to the document "T7 Functional Reference"[1].
The file name will have the pattern <YYYYMMDD>_orderProfileAssignment.csv.

The order profile assignments table includes the following fields:

Field	Description
Mnemonic	Mnemonic of the instrument.
ISIN	ISIN of the instrument.
InstrumentId	InstrumentId of the instrument.
OrderProfileId	Id of the Order Profile.

[1] Please refer to the Xetra website xetra.com under the following path: Technology / T7 trading architecture / T7 System documentation / Overview and Functionality.

The layout of the order profile is as following (example values):

Mnemonic	ISIN	InstrumentId	OrderProfileId
BMW	DE000519003	35245	10
BMW	DE000519003	35245	11
…..			
SIE	DE0007236101	45258	10
SIE	DE0007236101	45258	11
…..			

6.4 Trading Schedules

This file lists the trading schedules defined for all Xetra instruments. The reference to the instruments is possible via the identifier “standardSchedule”.

The file name will be <YYYYMMDD>_tradingSchedule.csv.

The trading schedule file includes following fields:

Field	Description
standardSchedule	Name of the trading schedule.
event	Name of the event, e.g. Start Of Day.
time	Time of the event.

Only schedules for current business day (vs trading holiday) will be displayed.

The file for customers look like as follows (example values):

standardSchedule	Event	Time
SCHED_FFM_CT1_FULL	Pre Trading	07:00:00
SCHED_FFM_CT1_FULL	Opening Auction	08:50:00
SCHED_FFM_CT1_FULL	Intraday Auction	13:15:00
SCHED_FFM_CT1_FULL	Closing Auction	17:30:30
SCHED_FFM_CT2_FULL	Pre Trading	07:30:00
SCHED_FFM_CT2_FULL	Opening Auction	08:50:00
…..	…..	…..

6.5 Trading Schedule Assignment

The file Trading Schedule Assignment lists for all Xetra instruments the assigned trading schedule the instrument is following.

The file name has the pattern <YYYYMMDD>_tradingScheduleAssignment.csv.

The file includes the fields as below:

Field	Description
InstrumentId	InstrumentId of an instrument.
standardSchedule	Name of the trading schedule.

The standardSchedule denotes the schedule that is valid for the instrument's current Business day. The layout of the file is as follows:

InstrumentId	standardSchedule
35245	SCHED_FFM_CT1_FULL
45258	SCHED_FFM_CT1_FULL
….	
…..	

6.6 Market Segment and Market Segment Supplement

This file lists the Identifiers for the Market Segments and the Market Segment Supplements in order to provide the descriptions for them. The file contains all Market Segments and Market Segment Supplements of the market XETR.

The file name has the pattern <YYYYMMDD>_marketSegment.csv.

The file includes following fields:

Field	Description
Content type	Market Segment or Market Segment Supplement.
Identifier	Identifier of the Market Segment and Market Segment Supplement.
Description	Name of the Market Segment and Market Segment Supplement.

The layout of the file is as follows:

Content type	Identifier	Description
Market Segment	45	Regulated Market – Prime Standard
Market Segment	46	Regulated Market – General Standard
….	….	….
Market Segment Supplement	DEZ	Exchange Traded Commodities (ETC)
Market Segment Supplement	DX8	Exchange Traded Notes (ETN)
…..	….	….

6.7 TES Profiles

This file contain the assignments of each product to TES Types LIS and OTC.
The file name has the pattern <YYYYMMDD>_TESProfiles.csv.

The file includes the fields as below:

Field	Description
ProductSymbol	Symbol of the product. For products with 1:1 relation the ISIN and for products with 1:n relation (e.g. ETP product) the name of the product will be provided.
TESType	TES Types LIS and OTC: LIS = Large In Scale OTC = Over The Counter
BrokerAllowed	This flag defines whether TES Profile allows the entry, modification and deletion of TES trades by the user role TES Broker.[2]
MaxParticipants	This field provides information about the maximum number of participants/TES approving users of one TES trade.
PriceValidationRule	The rule used for price validation of TES trades.

The layout of the file is as follows:

[2] For more information about TES roles, please refer to T7 Release 7.0 – Participant and User Maintenance Manual.

ProductSymbol	TESType	BrokerAllowed	MaxParticipants	PriceValidationRule
DE0005810055	LIS	YES	2	CASH PRICE VAL
DE0005810055	OTC	YES	2	NO PRICE VAL
ABC_ETF	LIS	YES	2	CASH PRICE VAL
ABC_ETF	OTC	YES	2	NO PRICE VAL
.....	....	....		

6.8 Security Sub Types

This file contains the list of IDs used in the column “Security Sub Type” in the published csv file described in 5.2 with the corresponding descriptions.

The file name has the pattern <YYYYMMDD>_securitySubType.csv.

The file includes the fields as below:

Field	Description
SecurityType	Security Type (Instrument Type)
SecuritySubTypeId	Numeric identifier of the Bond and Warrant Type published in the column “Security Sub Type”.
Name	Short name of the Bond and Warrant sub-classification.
Description	Description of the Bond and Warrant sub-classification.

The layout of the file is as follows:

securityType	SecuritySubTypeId	Name	Description
BON	1	ANL	Anleihe, Standard Bond
BON	2	ZER	Zerobond
WAR	4	CER	CERTIFICATE
...		...	...