# UBS MTF FIX Interface
## *Rules of Engagement*

| | |
|---|---|
| Classification | Public |
| Date | 16 January 2017~~18 November 2016~~ |
| Version | 4.1~~0~~ |
| Status | Final |

**Table of Contents**

| Version | Date | Changes and remarks |
|---------|------|---------------------|
| 4.1 | January 2017 | Added specification for content of ExecId and ExecRefId (section 7.4.1, Execution Report) |
| 4.0 | November 2016 | Sweep order and Large in Scale execution support (sections 3.10 and 3.11) Introduce optional granularity of microseconds on message timestamps at 3.6 |
| 3.5 | August 2016 | Added information on session times and order expiry at end of day (section 3.5). Typographical correction at 3.4. |
| 3.4.1 | August 2016 | Updated UBS Ltd company address. |
| 3.4 | June 2016 | Return an execution report following attempted order modification/ cancellation where this is prevented by an execution immediately prior (3.8, Pending messages). |
| 3.3 | April 2016 | Added tag 15 – Currency in FIX Message details. Updated examples in Uniform Symbology to reflect recent changes by Reuters for XVTX instruments. |
| 3.2 | February 2016 | Added tag 1 – Account. |
| 3.1 | October 2015 | Clarifications on requirement to send tag 47, and reject reasons documented for tags 102 and 103. Corrected description of replace request handling for unacknowledged orders. |
| 3.0 | September 2015 | Major update for new connectivity model. Transact time now sent on all execution reports. |
| 2.5 | June 2015 | New layout.  Timestamp precision increased. |
| 2.4 | December 2014 | Updated to reflect new names of external organisations. |
| 2.3 | September 2013 | Clarified MinQty usage. |
| 2.2 | June 2012 | Tag 9004 – Internalization. |
| 2.1 | April 2012 | Minor clarifications. |
| 2.0 | September 2011 | Sent LastLiquidityInd on execution reports. |
| 1.9 | August 2011 | Refer to ESMA, rather than CESR. |
| 1.8 | August 2011 | Introduces Bid and Offer order books. |
| 1.7 | March 2011 | Minor clarifications for pegged orders. |
| 1.6 | November 2010 | Initial version at launch. |

# 1.    Introduction

This document defines UBS MTF's implementation of the FIX protocol.
The document is designed to facilitate the work required to establish trading connectivity and is intended to supplement the published FIX protocol specification [1] and the UBS MTF Rule Book [2].

# 2.    Background

The Markets in Financial Instruments Directive (MiFID) was a catalyst for change in the European execution market place, with the result that the importance of credible electronic trading technology and the ability to harness technology to source liquidity have become paramount for the broking community.
UBS MTF operates as a "dark order book" and continuous matching is performed at the mid, bid or offer price of the primary market.
Access to UBS MTF is restricted to its members and requires separate documentation to the standard trading terms and conditions that regulate other execution services provided by UBS. This documentation can be obtained via your usual relationship manager, on the web at http://ubs.com/mtf/, or by contacting UBS MTF directly at ubs_mtf@ubs.com .

# 3.    Functional Overview

### 3.1.    General

UBS MTF accepts and matches Pegged orders only, on a non-discretionary basis using a price/time priority at the Bid, Mid or Offer of the Primary market.  There is no minimum order size on UBS MTF. Members of UBS MTF may send either IOC or Day duration orders, and have the ability to set a Minimum Acceptable Quantity and Limit Price on all orders.  Open orders are automatically cancelled at the end of each trading day.

### 3.2.    Order Priority (effective January 2017)

Orders are matched according to waiver eligibility, price and time as specified in the UBS MTF Rulebook. If multiple orders are eligible to execute at the prevailing reference price, they are executed in the order in which they were received.

### 3.3.    Minimum Acceptable Quantity (MAQ)

Where a partial fill occurs on an order that had an MAQ, should the remaining quantity on that order be below the MAQ the Minimum Acceptable Quantity will fall to one share. Orders received by UBS MTF with an MAQ that is greater than the order quantity are rejected.

### 3.4. Internalization

By default, orders from a member may be self-crossed.

Members can use a FIX instruction of '9004=4' on orders to prevent self-trading or intra-team trading (within the same member entity, see section 6 below).
Where a member operates under more than one member code, these may be configured by UBS MTF to act as a single family for the purpose of this instruction.

### 3.5. Session Times

UBS MTF operates during regular market hours in Europe, between 08:00 and 16:30 (UK time), and session times match those of the primary market where the underlying security is listed.
Matching is not performed outside the primary market's continuous trading phase.
There is no trading during auctions or halts. If trading on the primary market is suspended UBS MTF will suspend execution for each affected instrument until continuous trading is resumed. During these times orders may be entered, amended, and cancelled, but will not be executed.
Orders entered before market open, or after market close, will be rejected.

### 3.5.1. Order Expiry

Day orders remaining on the order book after market close will be cancelled at or shortly after 16:45. An unsolicited Execution Report (35=8) will be returned via FIX, with ExecType=Cancelled (150=4), OrdStatus=Cancelled (49=4).

### 3.6. Time Stamps

The *UTCTimestamp* fields (TransactTime, SendingTime, and OrigSendingTime) may be sent to UBS MTF in either whole seconds, milliseconds , or microseconds UTC, as specified in [3].
Members may elect to receive timestamps from UBS MTF at either microsecond- or millisecond-level precision.  This is configured on a per-session basis, and defaults to microseconds for new sessions.

### 3.7. Cancel on Disconnect

Order entry sessions are configured by default to automatically cancel all open orders in the event of disconnection.  Any outstanding execution reports will be returned during session recovery when connectivity is re-established.

### 3.8. Pending messages

UBS MTF allows cancellation when a new order has not yet been acknowledged, i.e. the order is in a 'Pending New' state.  Amends / Cancels will be rejected by UBS MTF if the order is already in a *'Pending Amend' or 'Pending Cancel' state.*

If an order Cancel or Cancel/Replace request is received by the FIX gateway, and is not accepted due to a fill occurring on the order immediately beforehand, a reject message will also be returned in a second Execution Report following the initial Execution Report notifying the member of the fill.

In summary:

| Current Order State | Request | Outcome |
|---|---|---|

| Current Order State | Request | Outcome |
|---|---|---|
| Pending New | Pending Cancel | **Allowed** |
| Pending New | Pending Amend | **Amend is Rejected** |
| Pending Amend / Pending Cancel | Pending Amend/ Pending Cancel | **Second Request is Rejected** |
| Working, Fill message in flight | Replace requested | **Fill is delivered Replace Request is rejected as order is fully filled** |
| Working, Partial Fill message in flight | Replace Requested | **Fill is delivered Replace Request is rejected if unsuccessful** |
| Working, Fill message in flight | Cancel requested | **Fill is Delivered Cancel request is rejected as order is fully filled** |
| Working, Partial Fill message in flight | Cancel requested | **Fill is Delivered Cancel request is accepted** |

### 3.9. Drop Copy

Members may request a drop copy feed for executions on their FIX sessions.   The format of the execution reports provided by this feed, and session-level messages, correspond to the details in section 7 below.

### 3.10. Sweep functionality (effective January 2017)

As an alternative to specifying a single peg price as an execution instruction, a participant may instruct that an order conduct either a half, or a full, sweep across peg types.

If a half sweep is instructed (FIX tag 18=h), UBS MTF will attempt to execute the order at the primary peg, and if no immediate execution is possible, the order will be eligible for execution at the mid-peg price.

If a full sweep is instructed (FIX tag 18=f), UBS MTF will attempt to execute the order at the primary peg, and if no immediate execution is possible, the order will be eligible for immediate execution at the mid-peg. If still not executed partially or fully at the mid, the order is lastly eligible for execution at the market peg.

If a day order is partially filled, the remaining quantity will be eligible for execution solely at the reference price at which the first execution occurred.

### 3.11. Large in Scale execution (effective January 2017)

Orders that are large in scale (LIS) compared to normal market size as defined in MiFID are eligible for execution on UBS under a MiFID pre-transparency waiver ("Large in Scale waiver"). Orders will only execute under the Large in Scale waiver if both the buy and sell orders meet the LIS criteria. If not fully filled against facing LIS orders, the remaining quantity of a resident LIS-eligible order may execute against either further Large in Scale orders, or against non-large in scale orders under the reference price waiver.

Orders that are not large in scale (LIS) compared to normal market size may only be executed on UBS MTF under the reference price waiver (RPW)

All orders on UBS MTF execute using the prevailing reference price of the instrument, i.e. the bid, mid or offer prices from the most relevant market for the instrument.

At each point in time where crossing may occur, if an order may be executed against either a large in scale order or a non-large in scale order, the former will take priority. Where multiple large in scale orders are eligible to execute against, price and time priority will then apply.

UBS MTF offers a choice to its members, and when submitting a LIS order a member may instruct UBS MTF that orders must match against other orders exclusively under the LIS waiver, by using the order attribute RequestedCrossingWaiverType, defined below.

For all instruments available for trading on UBS MTF, the minimum order value which qualifies as large in scale is determined using the Average Daily Turnover published by ESMA, considered in conjunction with the Large in Scale table as specified under MiFID[1]. For instruments that are not priced in Euros, UBS MTF applies a currency conversion using the foreign exchange reference rates published the previous working day by the European Central Bank.

Orders that do not meet the criteria to be Large in Scale compared with normal market size under MiFID may only execute on UBS MTF under Reference Price Waiver according to the conditions set out in MAR 5.7.1(2)a, and will therefore be rejected if instructed as LIS only. If not instructed as LIS only they will be eligible for execution under reference price waiver only.

# 4. Connectivity

UBS MTF is vendor neutral, although there is existing connectivity with the following providers: Radianz, TNS and Fixnetix. It is also possible for members to cross-connect if they have presence in the Equinix LD4 Data Centre in Slough, or in Interxion London.

A restricting factor on the number of FIX sessions a member can have is the overall bandwidth of the member's line. The suggested bandwidth for a managed service is a 1MB line and 1G or 10G for a direct cross-connect.

Each member is allocated a TCP/IP port per connection – this port is unique to the member and a single connection is allowed per port.

In UAT, the use of an Internet session is recommended, as this allows members to begin testing and certification whilst awaiting the establishment of production connectivity. A UAT session via the member's chosen transport vendor is also possible, but certification would be delayed until this connectivity is in place.

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[1] FCA Handbook, MAR 5.7 Pre-trade transparency requirements for shares, https://www.handbook.fca.org.uk/handbook/MAR/5/7.html, retrieved

# 5. Symbology

UBS MTF lists a subset of stocks in the ESMA list of approved securities for regulated markets, as well as Swiss listed stocks.

## 5.1. Uniform Symbology

In all cases the Symbol[55] value must be the Uniform Symbology (UMTF) code. This code has been adopted by a number of European execution venues to uniformly identify securities traded across Europe. The following details on how this code is generated have been extracted from the Wikipedia article - Uniform Symbology [4].

The Uniform Symbology Algorithm is designed to be human readable, fit into 6 characters, have no symbol clashes and where possible, be derivable from another, freely available code.

It will consist of a stock code followed by a single, lower case letter designating the primary listing exchange. The stock code will be derived from the "local code" published by the primary exchange. These will be truncated where necessary.

If the local code contains a single letter class designator of A through Z (eg. "STE A") then the single letter class designator shall be retained and the code will be truncated to a maximum of 4 characters, plus the single letter class (A through Z) designator. For some Nordic stocks the share designator will be prefixed with "SDB" (eg. "SDBA"). In this case the "SDB" should be removed and the single letter class (A through Z) designator will be retained.

Any codes containing spaces, periods, underscores or second words (other than the single letter class (A through Z) described above) will be truncated at the space, period, etc. All remaining non-alphanumeric characters should be removed.

Market codes by market centre (including examples)

| Market Centre | MIC | Market Code | Sample Local Code | Sample UMTF Code | Sample Company Name | RIC Suffix |
|---|---|---|---|---|---|---|
| Copenhagen Stock Exchange | XCSE | c | DANSK | DANSKc | Danske Bank Ord | CO |
| Deutsche Borse/Germany | XETR | d | EXS1 | EXS1d | iShares DAX ETF | DE |
| Euronext Amsterdam | XAMS | a | HEIA | HEIAa | Heineken | AS |
| Euronext Brussels | XBRU | b | INB | INBb | INBEV | BR |
| Euronext Paris | XPAR | p | RNO | RNOp | Renault | PA |
| Euronext Lisbon/Portugal | XLIS | u | ALTR | ALTRu | ALTRI SGPS | LS |
| Helsinki Stock Exchange | XHEL | h | NOK1V | NOK1Vh | Nokia | HE |

| Irish Stock Exchange | XDUB | i | GNC | GNCi | Greencore Group plc | I |
| Prague Stock Exchange | XPRA | k | BOREY | BOREY | Borealis Exploration | PR |
| London Stock Exchange | XLON | l | VOD | VODI | Vodafone Group Ord | L |
| Madrid/Spain (Espana) | XMCE | e | COL | COLe | INMOB Colonial | MC |
| Borsa Italiana/Milan | XMIL | m | SPM | SPMm | Saipem | MI |
| Oslo Stock Exchange | XOSL | o | NHY | NHYo | Norsk Hydro | OL |
| Stockholm Stock Exchange | XSTO | s | VOLB | VOLBs | Volvo B Ord | ST |
| Budapest Stock Exchange | XBUD | t | OTP | OTPt | OTP Bank PLC | BU |
| Vienna Stock Exchange | XWBO | v | VIG | VIGv | Vienna Insurance Group | VI |
| Swiss Exchange/Zurich (blue chip) | XVTX | z | UBSG | UBSGz | UBS Group AG | S |
| Swiss Exchange/Zurich (non-blue chip) | XSWX | z | ACIN | ACINz | Acino Holding AG | S |

### 5.2. Exchange Codes

UBS MTF sends its assigned ISO 10383 MIC Code in the LastMkt<30> field on execution reports.
The MIC code for UBS MTF is **XUBS**.
On the incoming order, there is no need to specify an exchange and hence ExDestination<100> is not required. Any value sent in this field will be ignored.

# 6.    UBS MTF-Specific FIX Fields

The following FIX fields are specific to UBS MTF:

| MsgType | Tag | Field Name | Notes | Required |
|---|---|---|---|---|
| D | 9004 | Internalization | Provides crossing restrictions **4** (Do not execute against own orders). See section 3.4 above. | N |
| D | 20060 | RequestedCrossingWaiverType | Specifies whether an order may be executed under **1** Either Reference Price Waiver (RPW) or Large In Scale (LIS) Waiver, or **2** Only under LIS Waiver | N |

| 8 | 20061 | WaiverType[2] | Indicates the pre-trade transparency waiver under which the trade was conducted.<br>**R** Reference Price Waiver (RPW)<br>**L** Large In Scale (LIS) | Populated if 150=1 or 2 |
|---|---|---|---|---|

# 7. FIX Message details

## 7.1. Components

### 7.1.1. Standard Header

| Tag | Name | Notes | Required |
|---|---|---|---|
| 8 | BeginString | FIX.4.2 | Y |
|   |   | Must be the first field in the message. |   |
| 9 | BodyLength | Must be the second field in the message. | Y |
| 35 | MsgType | Must be the third field in the message. | Y |
| 43 | PossDupFlag | Always required for retransmitted messages, whether prompted by the sending system or as the result of a resend request. | N |
| 52 | SendingTime |  | Y |
| 49 | SenderCompID | As specified by UBS MTF | Y |
| 56 | TargetCompID | As specified by UBS MTF | Y |
| 34 | MsgSeqNum |  | Y |
| 50 | SenderSubID | May be used to provide the identity of the trader who entered the order. | N |
| 97 | PossResend | Required when message may be duplicate of another message sent under a different sequence number. | N |
| 122 | OrigSendingTime | Required for message resent as a result of a ResendRequest. If data is not available set to same value as SendingTime | N |

### 7.1.2. Standard Trailer

| Tag | Name | Required | Required |
|---|---|---|---|
| 10 | Checksum | Three byte, simple checksum (see [1] Volume 2: "Checksum Calculation" for description). | Y |

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[2] This field is currently being considered for standardisation by the FIX Trading Community. If a standard tag is defined in FIX for WaiverType, UBS MTF intends to adopt the standard definition in a future platform update.

## 7.2. Session-Level Messages

The following messages are supported in both directions:

| MsgType | Description |
|---------|-------------|
| A | Logon |
| 0 | Heartbeat |
| 1 | Test Request |
| 2 | Resend Request |
| 3 | Reject |
| 4 | Sequence Reset |
| 5 | Logout |

### 7.2.1. Login

| Tag | Field Name | Comments | Required |
|-----|-----------|----------|----------|
| | *Standard Header* | MsgType = A | Y |
| 98 | EncryptMethod | 0 (*Always unencrypted*) | N |
| 108 | HeartBtInt | Note same value used by both sides | Y |
| 141 | ResetSeqNumFlag | Indicates both sides of a FIX session should reset sequence numbers | N |
| | *Standard Trailer* | | Y |

### 7.2.2. Heartbeat

| Tag | Field Name | Comments | Required |
|-----|-----------|----------|----------|
| | *Standard Header* | MsgType = 0 | Y |
| 112 | TestReqID | Required when the heartbeat is the result of a Test Request message. | N |
| | *Standard Trailer* | | Y |

### 7.2.3. Test Request

| Tag | Field Name | Comments | Required |
|-----|-----------|----------|----------|
| | *Standard Header* | MsgType = 1 | Y |
| 112 | TestReqID | | Y |
| | *Standard Trailer* | | Y |

### 7.2.4. Resend Request

| Tag | Field Name | Comments | Required |
|-----|-----------|----------|----------|
| | *Standard Header* | MsgType = 2 | Y |
| 7 | BeginSeqNo | | Y |
| 16 | EndSeqNo | | Y |
| | *Standard Trailer* | | Y |

### 7.2.5. Reject

| Tag | Field Name | Comments | Required |
|---|---|---|---|
| | *Standard Header* | MsgType = 3 | Y |
| 45 | RefSeqNum | MsgSeqNum of rejected message | Y |
| 371 | RefTagID | The tag number of the FIX field being referenced. | N |
| 372 | RefMsgType | The MsgType of the FIX message being referenced. | N |
| 373 | SessionRejectReason | Code to identify reason for a session-level Reject message. | N |
| 58 | Text | Where possible, message to explain reason for rejection | N |
| | *Standard Trailer* | | Y |

### 7.2.6. Sequence Reset

| Tag | Field Name | Comments | Required |
|---|---|---|---|
| | *Standard Header* | MsgType = 4 | Y |
| 123 | GapFillFlag | | N |
| 36 | NewSeqNo | | Y |
| | *Standard Trailer* | | Y |

### 7.2.7. Logout

| Tag | Field Name | Comments | Required |
|---|---|---|---|
| | *Standard Header* | MsgType = 5 | Y |
| 58 | Text | | N |
| | *Standard Trailer* | | Y |

### 7.3. Messages from Member to UBS MTF

The following messages may be sent by a Member to UBS MTF:

| MsgType | Description |
|---|---|
| D | New Order - Single |
| F | Order Cancel Request |
| G | Order Cancel/Replace Request |
| Q | Don't know trade |

### 7.3.1. New Order Single

| Tag | Name | Comments | Required | Possible Values |
|---|---|---|---|---|
| | *Standard Header* | MsgType =D | Y | |
| 109 | ClientID | The member ID. If not set will use default configured per session. We will validate set of members per | N | As assigned by UBS MTF |

| | | | | |
|---|---|---|---|---|
| | | session. | | |
| 11 | ClOrdID | Identifier of the order as assigned by the member. Must be unique per session, per day. | Y | |
| 18 | ExecInst | Instructions for order handling. Amendments to tag 18 are rejected. | Y | **M** if buying or selling at the mid |
| | | | | **P** if buying at offer or selling at bid (market peg) |
| | | | | **R** if buying at bid or selling at offer (primary peg) |
| | | | | **h** Half-sweep[3] |
| | | | | **f** Full sweep |
| 55 | Symbol | Ticker Symbol | Y | UMTF Code |
| 54 | Side | Side of order | Y | **1** Buy |
| | | | | **2** Sell |
| 38 | OrderQty | Number of shares ordered | Y | |
| 40 | OrdType | Order type | Y | **P** Pegged |
| 60 | TransactTime | Time the order was initiated | Y | |
| 47 | OrderCapacity | Designates the capacity of the firm placing the order | Y | **A** Agency (default) |
| | | | | **P** Principal |
| | | | | **R** Riskless Principal |
| 59 | TimeInForce | Day or IOC | Y | **0** Day |
| | | | | **3** IOC |
| 44 | Price | Optional price limit, specified in the currency of the instrument | N | |
| 15 | Currency | If specified, must match the instrument currency code as specified in UBS MTF symbology file. | N | ISO 4217 Currency code; with the addition of GBX for instruments traded in Pence sterling. |

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[3] Half and full sweep will be available from January 2017

| 110 | MinQty | Displaying the minimum quantity of an order to be executed acting as an MAQ within UBS MTF | N | The value placed in tag 110 must be either equal or less than the OrderQty (tag 38). If the remaining quantity of a partially filled order falls below the value given here, the effective MinQty becomes one (1)<br>**Default**: 1 |
|---|---|---|---|---|
| 9004 | Internalization | Self-execution prevention | N | **4** (Do not execute against own orders). See section 2.5.<br>**Default**: Can cross against own orders |
| 1 | Account | Returned on execution reports associated with this order | N | |
| 20060[4] | RequestedCrossing WaiverType | Specific whether an order may be executed under<br>(1) either Reference Price Waiver (RPW) or Large In Scale (LIS) Waiver, or<br>(2) only under LIS Waiver<br>See 3.11 above | N | **1** Either<br>**2** LIS only<br>**Default:** 1 (Either) |
| | | | | |
| | *Standard Trailer* | | Y | |

### 7.3.2. Order Cancel Request

| Tag | Name | Comments | Required |
|---|---|---|---|
| | *Standard Header* | MsgType =F | Y |
| 109 | ClientID | The member ID.<br>If not set will use default configured per session. We will validate set of members per session. | N |
| 11 | ClOrdID | Unique identifier of cancel request as assigned by participant | Y |
| 41 | OrigClOrdID | ClOrdID of the originating order | Y |
| 55 | Symbol | Must match original order | Y |
| 54 | Side | Must match original order | Y |
| 60 | TransactTime | Time the cancel request was initiated | Y |

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[4] effective from January 2017

| | | | | Y |
|---|---|---|---|---|
| | *Standard Trailer* | | | Y |

### 7.3.3. Order Cancel Replace Request

| Tag | Name | Comments | Required | Possible Values |
|---|---|---|---|---|
| | *Standard Header* | MsgType =G | Y | |
| 109 | ClientID | The member ID.<br>If not set will use default configured per session. We will validate set of members per session. | N | As assigned by UBS MTF |
| 11 | ClOrdID | Identifier of the order as assigned by the participant.<br>Must be unique per session, per day. | Y | |
| 41 | OrigClOrdID | ClOrdID of the order to be replaced. | Y | |
| 18 | ExecInst | Must match original order. | Y | |
| 55 | Symbol | Must match original order. | Y | UMTF Code |
| 54 | Side | Must match original order. | Y | |
| 38 | OrderQty | New order quantity | Y | |
| 40 | OrdType | Must match original order. | Y | **P** |
| 60 | TransactTime | Time the replace request was initiated | Y | |
| 47 | OrderCapacity | Designates the capacity of the firm placing the order.<br>Must match original order if set. | N | **A** Agency (default)<br>**P** Principal<br>**R** Riskless Principal |
| 59 | TimeInForce | Must match original order if set. | N | |
| 44 | Price | New limit price | N | Optional price limit |
| 15 | Currency | Must match original order if set. | N | ISO 4217 Currency code; with the addition of GBX for instruments traded in Pence sterling. |
| 110 | MinQty | Displaying the minimum quantity of an order to be executed acting as an MAQ within UBS MTF. | N | The value placed in tag 110 must be either equal or less than the OrderQty (tag 38). If the remaining quantity of a partially filled order falls below the value given |

| | | | | here, the effective MinQty becomes one (1) **Default**: 1 |
|---|---|---|---|---|
| 9004 | Internalization | Must match original order if set. | If received on original order | |
| 1 | Account | Returned on execution reports associated with this order<br>Must match original order if set.<br>Otherwise amend will be rejected. | If not set value from original order is preserved. | |
| | *Standard Trailer* | | Y | |

### 7.3.4. Don't Know Trade (DK)

| Tag | Field Name | Comments | Required | Possible Values |
|---|---|---|---|---|
| | *Standard Header* | MsgType = Q | Y | |
| 109 | ClientID | The member ID.<br>If not set will use default configured per session. We will validate set of members per session. | N | As assigned by UBS MTF |
| 37 | *OrderID* | Order ID as identified on problem execution | Y | |
| 17 | *ExecID* | Execution ID of problem execution | Y | |
| 127 | *DKReason* | | Y | **A** = Unknown Symbol<br>**B** = Wrong Side<br>**C** Quantity exceeds order<br>**D** No matching order<br>**E** Price exceeds limit<br>**Z** Other |
| 55 | *Symbol* | Must match original order | Y | |
| 54 | *Side* | Must match original order | Y | |
| 38 | *OrderQty* | Must match original order | N | |
| | *Standard Trailer* | | Y | |

## 7.4. Messages from UBS MTF to Member

UBS MTF may send the following messages to members:

### 7.4.1. Execution Report

| Tag | Name | Comments | Required | Possible Values |
|---|---|---|---|---|
| | *Standard Header* | MsgType =8 | Y | |
| 37 | OrderID | Identifier of the order as assigned by UBS MTF. Unique across all orders on a daily basis. | Y | |
| 11 | ClOrdID | Identifier of replacement order as assigned by participant. | Y | |
| 41 | OrigClOrdID | OrderID for which cancellation or replacement was requested | Y[5] | |
| 17 | ExecID | Identifier of the execution message. Unique on a daily basis. For new executions (ExecTransType=0), the ExecId is structured as follows: (1) One character side indicator: 'S' ➔ sell, 'B' ➔ buy, (2) Four character code 'xubs' (3) Two digit matching engine identifier (4) One dash character (ASCII hyphen) (5) Integer match identifier (unique per matching engine identifier per day and side) For cancelled trades (ExecTransType=1), the ExecId follows the same syntax, with the addition of a one-character prefix of the digit '1' | Y | New trades e.g: • Bxubs06-2906 • Sxubs07-1342237 Cancellation e.g: • 1Bxubs06-2906 |
| 150 | ExecType | Describes the type of execution report | Y | **0** New |
| | | | | **1** Partial Fill |
| | | | | **2** Fill |
| | | | | **4** Cancelled |
| | | | | **5** Replaced |
| | | | | **8** Rejected |
| 20 | ExecTransType | Identifies transaction type | Y | **0** New |
| | | | | **1** Cancel |

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[5] Required If if sent in response to Cancel or Cancel/Replace

| 19 | ExecRefID | Identifies cancelled execution. The value given will correspond to an ExecId from an earlier new Fill or Partial Fill. | Y[6] | ExecId of the cancelled execution, if ExecTransType= 1 |
|---|---|---|---|---|
| 18 | ExecInst | On ExecType=New, Cancelled, Replaced, Rejected - reflects value entered by member on corresponding prior message.<br>On ExecType=Fill or Partial Fill, reflects the Peg on which the trade occurred, i.e. one of always **M**, **P**, or **R**. See 3.10 above | Y | **M** if buying or selling at the mid |
| | | | | **P** if buying at offer or selling at bid |
| | | | | **R** if buying at bid or selling at offer |
| | | | | **h** Half-sweep |
| | | | | **f** Full sweep |
| 55 | Symbol | As sent on the originating order | Y | |
| 54 | Side | As sent on the originating order | Y | |
| 38 | OrderQty | As sent on the originating order | Y | |
| 39 | OrdStatus | Current status of the order | Y | **0** New |
| | | | | **1** Partially Filled |
| | | | | **2** Filled |
| | | | | **4** Cancelled |
| | | | | **5** Replaced |
| | | | | **6** Pending Cancel (i.e. result of Order Cancel Request) |
| | | | | **8** Rejected |
| | | | | **E** Pending Replace (i.e. result of Order Cancel/Replace Request) |
| 32 | LastShares | Quantity of shares bought/sold on this (last) fill | If 150=1 or 2 | Integer |
| 31 | LastPx | Price of this (last) fill | If 150=1 or 2 | |

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[6] If ExecTransType=1 (Trade cancel)

| 15 | Currency | Populated if specified on New Order – Single message (35=D) | If sent on 35=D | ISO 4217 Currency code; with the addition of GBX for instruments traded in Pence sterling. |
|----|----------|-------------------------------------------------------------|-----------------|-------------------------------------------------------------------------------------------|
| 30 | LastMkt | Venue of execution of this (last) fill | If 150=1 or 2 | **XUBS** |
| 29 | LastCapacity | Capacity on order execution.  This reflects the order capacity. | If 150=1 or 2 | **1** Agent<br>**3** Riskless Principal<br>**4** Principal |
| 151 | LeavesQty | Amount of shares open for further execution | Y | |
| 14 | CumQty | Amount of executed shares on the order | Y | |
| 6 | AvgPx | Average price of all fills on the order | Y | |
| 60 | TransactTime | Time the transaction represented by this Execution Report occurred | Y | |
| 851 | LastLiquidityInd | Applicable only on ExecTransType(150) of Partial or Filled. | | **1** Added Liquidity<br>**2** Removed Liquidity |
| 58 | Text | Additional information if ExecType=8(Rejected) | N | |
| 103 | OrdRejReason | Additional information if ExecType=8(Rejected) | | **0** Broker Option<br>**1** Unknown Symbol<br>**2** Exchange Closed<br>**6** Duplicate Order |
| 1 | Account | | If received on original order | |
| 20061 | WaiverType[7] | Indicates the pre-trade transparency waiver under which the trade was conducted | If 150=1 or 2 | **R = RPW**<br>**L = LIS** |
| | *Standard Trailer* | | Y | |

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[7] This will be returned in production beginning January 2017

### 7.4.2. Order Cancel Reject

| Tag | Name | Comments | Required | Possible Values |
|-----|------|----------|----------|-----------------|
| | *Standard Header* | MsgType =9 | Y | |
| 37 | OrderID | Identifier of the order as assigned by UBS MTF. | Y | |
| 39 | OrdStatus | Current status of the order | Y | **0** New<br>**1** Partially Filled<br>**2** Filled<br>**4** Cancelled<br>**5** Replaced<br>**6** Pending **C**ancel (i.e. result of Order Cancel Request)<br>**8** Rejected<br>**E** Pending Replace (i.e. result of Order Cancel/Replace Request) |
| 11 | ClOrdID | ClOrdID as assigned by the order cancel or replace request | Y | |
| 41 | OrigClOrdID | As sent on the originating order | Y | |
| 58 | Text | | N | |
| 102 | | CxlRejReason | Y | **0** Too late to cancel |
| | | | | **1** Unknown order |
| | | | | **2** Exchange option |
| | | | | **3** Order already in Pending Cancel or Pending Replace status |
| | | | | |
| 434 | | CxlRejResponseTo | N | **1** Order cancel request |
| | | | | **2** Order cancel/replace request |
| | *Standard Trailer* | | Y | |

### 7.5. Order Rejection Codes

The following Rejection Codes may be sent back to Members in the event of an order reject; these are in addition to the reason code in tag 103. This is not a comprehensive list, and other messages may also

appear in tag 58.  Additional values for tags 102 and tag 103 are reserved for future use.

| Code (Tag 58) | Description |
|---|---|
| XE001 | System is not enabled |
| XE002 | Market is not open |
| XE003 | Order is not eligible for trading |
| XE004 | Order is not eligible for crossing |
| XE006 | Instrument is not open |
| XE007 | Market manually disabled |
| XE008 | Instrument manually disabled |
| XE010 | Account disabled |
| XE011 | Instrument suspended |

# 8.   References

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