OneChronos FIX Specification

Table of Contents

OneChronos

Version Control

Version	Description	Publication date
v1.0	Initial version of FIX v4.2 specification	14-03-25
v1.1	Updated locked market trading conditions behaviour	15-03-25
v1.2	Updated supported Symbology	14-05-25
v1.3	Updated Tag 207 = mic code of listing market of the ISIN	26-06-25
v1.4	Updated Tags 15,22,48,207 = Req'd for 35=D,G,F,8,UCC messages.	09-07-25
v1.5	Updated Tag 453 (NoPartyIDs) dependencies and clarified definitions for Tags 447, 452, and 2376.	09-10-25
v1.6	Updated Tag 44 = Req'd, Tag 20007 CancelReason modified = 2 Good for Auction (GFA), modified C = Price Collar Deviation, S = Suspended, Risk Management & Order Controls Default = Yes	23-10-25
v1.7	Clarified Tag 2362 (SelfMatchPreventionID) behaviour to reference OnBehalfOfCompID/SenderCompID	18-11-25
v1.8	Port settings updated.(1) Cancel on halt default set to true. (2) Short Selling removed. (3) Allow test symbols removed. Drop copy connection handling settings removed & drop copy trade break reporting port setting removed. Added OrdRejReasons to tag 103. Defined TradeLiquidityIndicator in tag 9730.	04-12-25
v1.9	Standardized Tag 373 (SessionRejectReason) enums to official FIX nomenclature; no protocol impact. ExecutionReports now populate Tag 375 (ContraBroker) with CCP Added "SELF" to Tag 375 for self-match clearing suppression and clarified population on trade ExecutionReports only; added port override.	15-12-25
v1.10	Removed ExecRefID (19) from ExecutionReport (35=8); remains required for TradeCancelCorrect (35=UCC). Clarified support for nanosecond timestamp precision; updated Timestamp Accuracy and time-field descriptions (e.g. SendingTime (52), TransactTime (60), OrigTime (42)) Corrected Tag 8015 (OrderAttributeTypes) requirement to reflect conditional usage.	30-12-25
v1.11	Removed LCHS from Tag 375 (ContraBroker) valid values. Replaced with LCHL. Clarified open orders treatment at market close (Subscribers will receive an execution report with ExecType(150) = C (Expired)).	29-01-26

Version	Description	Publication date
v1.12	Introduced optional venue-enabled session (port) setting allowing self-match executions to be submitted to CCP clearing; when enabled, Tag 375 will reflect the subscriber's CCP instead of SELF. Removed support for Tag 2362 = 1 (OnBehalfOfCompID self-match prevention). Orders containing 2362 = 1 will be rejected.	13-02-2026
v1.13	Update for Tab 9730=F rather than =P in previous version	14-04-2026
v.1.14	Updated Tag 211 (PegDifference) for pegged orders from a signed price amount to a signed tick count. Changed type from float to integer and clarified that the effective pegged price is calculated by applying the signed tick count to the applicable tick size.	25-04-2026

Overview

This document outlines the FIX interface for OCXL (OneChronos UK MTF) and OCXE (OneChronos EU MTF), collectively referred to as the "OneChronos MTF," covering both order entry and drop-copy functionality. OneChronos FIX is a modern adaptation of the FIX 4.2 protocol. However, not all messages, fields, or field values from FIX 4.2 are supported. If a message is referenced in FIX 4.2 but not included in this document, it is not supported.

If you are not familiar with the FIX protocol, please request our **FIX Primer Document** before proceeding.

Supporting Documentation

This document should be read in conjunction with the latest **OneChronos MTF User Manual**

OneChronos FIX

OneChronos FIX Compliance:

OneChronos is strictly FIX 4.2 compliant with three exceptions:

1. We do not support sending messages with tag #97 (PossResend) set to 'Y'.
2. We expose (optional) custom message types for Expressive Bidding. (for future use)
3. We Optionally report trade breaks to Subscribers via the custom message type TradeCancelCorrect=UCC

Best Practices:

- **The replay of application-level FIX messages (e.g., orders) as part of an application recovery plan is strongly discouraged.**
- Applications should handle order cancellations and retransmissions explicitly.
- Our logon/logout procedures follow FIX protocol recommendations, in addition to the minimum session protocol requirements. See **FIX Primer Document.**

Required & Optional Fields:

Any field required by FIX 4.2 is required by OneChronos but not every field required by OneChronos is required by (or included in) FIX 4.2.

- Required (Y): Always required for the referenced message type (e.g., ClOrdID tag #11 is required for NewOrderSingle).
- Optional (N): Not always required, but may be necessary in specific contexts (e.g., Price tag #44 for limit orders).

Please see message field and message wide validations to determine when a field is conditionally required or needs to take a fixed value.

Connectivity

To discuss market connectivity, contact ops_europe@onechronos.com.

- Certification Environment: Available via WireGuard or IPsec VPN.
- UAT and Production Connections: Made via private cross-connect in our data centers.
- All FIX connections use TCP/IP.

Market Hours

- Monday–Friday, 09:00 – 17:30 CET (Central European Time)
- Excluding market holidays (see OneChronos website for details)
- Orders submitted outside trading hours are rejected
- No support for Good-Til-Cancel (GTC) orders – all open orders are cancelled at market close, on the same day. Subscribers receive an execution report for every open order with ExecType(150) = C (Expired).
- OneChronos follows continuous trading and does not facilitate opening, closing, or other scheduled (or unscheduled) auction periods.

Trading Conditions

- OneChronos MTF commences trading once the relevant security has opened for trading in the primary listing market.
- Trading will commence only after the running of any opening auction for that primary listing, and throughout continuous trading.
- Trading ceases when the primary listing market enters its closing auction, or when trading is no longer possible on that market, as the book has transitioned into a non-trading state.
- OneChronos will not permit trading in securities subject to regulatory suspensions and where no European Best Bid Offer (EBBO) is available (see OneChronos MTF User Manual for EBBO definition used).
- OneChronos does not automatically halt trading when the primary market suspends trading. It will be evaluated on a case-by-case basis, respecting that OneChronos offers a price formation mechanism type and does not rely solely on primary reference price information to match buyers and sellers.
- OneChronos will stop trading in securities when there is an EBBO crossed market (bid > offer). However, in an EBBO locked market (bid = offer), OneChronos will continue to execute orders. Subscribers can request OneChronos to configure their port settings to opt out of executing in a locked market if they prefer not to match orders under those conditions.

Identifiers

When interfacing with OneChronos there are two types of identifier: OneChronos assigned, and Subscriber assigned. Subscriber assigned identifiers must comply with the standards below; messages containing invalid identifiers will be rejected.

Subscriber-Assigned Identifiers:

- ClOrdID (tag #11): Unique order ID provided by the subscriber.
- OrigClOrdID (tag #41): Previous order ID in a cancel/replace chain.
- Account (tag #1): Client-supplied account identifier.

- TestReqID (tag #112); Used for TestRequest and Heartbeat messages.
- OnBehalfOfCompID (tag #115); Overrides default SenderCompID if trading on behalf of another entity.

OneChronos-Assigned Identifiers:

- ExecID (tag #17): Unique execution report ID.
- OrderID (tag #37): Assigned by OneChronos for all NewOrderSingle orders. In contexts where an OrderID is required but not available, e.g., when sending an OrderCancelReject in response to an unknown order, OrderID will be populated with NONE.
- SenderCompId (tag #49): Assigned during onboarding; must be included in all messages sent to OneChronos.
- TargetCompID (tag #56): Mirror of SenderCompID; included in all messages from OneChronos.
- TestReqID (tag #112): Used for TestRequest and Heartbeat messages.

Permitted Identifier Characters

Type	Allowed Characters
Subscriber to OneChronos	Strings where 1 ≦ length ≦ 32 ASCII (0x21-0x7E) No commas, semicolons, or pipes Stated in terms of regular expression strings accepted by ^(?!.*[,;|])[\x21-\x7E]{1,32}$ are valid identifiers
OneChronos to Subscriber	Strings where 1 ≦ length ≦ 32 Upper and lowercase characters from the alphabet (ASCII 0x41-0x7a) Digits (ASCII 0x30-0x39) Symbol in the set {#, -, ., :, _} (ASCII 0x23, 0x2d, 0x2e, 0x3a, 0x5f) Identifiers sent by OneChronos will always be accepted by the regular expression ^[a-zA-Z0-9#\-\.:_]\{1,32\}$

ClOrdID Requirements

- ClOrdID (tag #11) and OrigClOrdID (tag #41) sent by Subscriber must be compliant with the character restrictions outlined in the permitted identifier characters section.
- Each ClOrdID should be unique within a trading day; however, OneChronos only enforces this for live orders.
- For best practice, ClOrdID sent by Subscriber should:
    - Be unique across FIX sessions and trading days.
    - Include a trade day and session identifier (e.g., 20160710S10000000001)

Order Types

OneChronos supports limit and pegged order types;

- OrdType (tag #40 = 2): Limit Order
- OrdType (tag #40 = P): Pegged Order

Only limit orders with ExpressiveBidURI field are eligible for Expressive Bidding (for future use).

Please ask your sales representative for more information on Expressive Bidding.

All Messages

General Notes

To ensure correctness and an easy interop OneChronos uses a FIX engine and order management system programmatically generated from a formal specification.

The specification is written in Imandra Protocol Language (IPL).

Excerpts of the model that pertain to field and message validation are included in this documentation.

Standard Header

The "Standard Header" is included at the beginning of every FIX message. The first three tags (BeginString, BodyLength, and Type) must appear in that exact order.

Tag	Name	Req'd	Description
8	BeginString	Yes	Type: String FIX 4.2. A delimiter identifying the start of a new FIX message and protocol version. Always the first field in every FIX message.
9	BodyLength	Yes	Type: integer Message length, in bytes, of all characters up to and including the delimiter preceding the CheckSum field. Always the second field in every FIX message.
35	MsgType	Yes	Type: String Defines message type. Always the third field in a message. 0 = Heartbeat A = Logon 1 = Test Request 2 = Resend Request 3 = Reject 4 = Sequence Reset 5 = Logout D = New Order Single G = Order Cancel / Replace Request

Tag	Name	Req'd	Description
			F = Order Cancel Request 8 = Execution Report 9 = Order Cancel Reject j = Business Message Reject UCC = Trade Cancel/Correction (optional, at the port level)
34	MsgSeqNum	Yes	Type: integer The message sequence number.
43	PossDupFlag	No	Type: Boolean A flag indicating whether a message is a possible session level retransmission, per the message delivery rules. Y = Message is a possible retransmission. N = Message is guaranteed to be an original transmission.
49	SenderCompID	Yes	Type: String OneChronos will assign this identifier as part of customer onboarding. Assigned value used to identify firm sending order,
52	SendingTime	Yes	Type: UTCTimestamp The time of message transmission (always in UTC). OneChronos supports UTC timestamps at nanosecond precision.
56	TargetCompID	Yes	Type: String The logical mirror of SenderCompID. Assigned value used to identify the receiving firm.
97	PossResend	No	Type: Boolean Indicates if a message is a potential business-level retransmission. Messages to OneChronos: Only 'N' is accepted; any other value triggers rejection. Messages from OneChronos: This field is never populated. Y = possible retransmission. N = original transmission.
115	OnBehalfOfCompID	No	Type: String Trading partner company ID used when sending messages via a third party.
122	OrigSendingTime	No	Type: String Required by the FIX spec for orders where PossDupFlag=Y.
128	DeliverToCompID	No	Type: String

Tag	Name	Req'd	Description
			When a Subscriber populates OnBehalfOfCompID any message sent in response by OneChronos will populate this field with the value of OnBehalfOfCompId specified by Subscriber.

Standard Trailer

The "Standard Trailer" is included at the end of every FIX message. CheckSum must appear as the last field.

Tag	Name	Req'd	Description
10	CheckSum	Yes	Type: integer A message checksum. Always the last field in the message.

Administrative Messages

With the exception of the Reject message (MsgType 35=3), which is outbound-only, all other administrative messages can be both inbound and outbound.

Heartbeat (35=0)

The Heartbeat message helps monitor the communication link during inactivity. It can be sent by either the Subscriber or the MTF.

- The heartbeat interval (HeartBtInt) is set in the Logon (A) message.
- If HeartBtInt = 0, no automatic heartbeats are sent.
- Heartbeats should be sent when the agreed interval passes without other messages.

For more details, refer to the Heartbeats section of our **FIX Primer Document**.

Tag	Name	Req'd	Description
-	<Message Header>	Yes	
112	TestReqID	No	Type: String Must be present if sent in response to a TestRequest message.
-	<Message Trailer>	Yes	

TestRequest (35=1)

The Test request message ensures communication by forcing a Heartbeat (35=0) response from the counterparty.

Issuer: Can be either the Subscriber or OneChronos.

- Sent when the expected heartbeat interval (HeartBtInt + 1 sec) has passed without receiving a message.

- Verifies sequence numbers and checks the status of the connection.
- If no Heartbeat is received, the FIX session should be disconnected and re-established via logon and message recovery procedures.

Direction: Can be sent by either the Subscriber or OneChronos.

Tag	Name	Req'd	Description
-	<Message Header>	Yes	
112	TestReqID	Yes	Type: String An identifier for use with **TestRequest and Heartbeat** messages.
-	<Message Trailer>	Yes	

ResendRequest (35=2)

A ResendRequest message can be issued by either the Subscriber or OneChronos to request the retransmission of messages. This is used when:

- A gap in sequence numbers is detected.
- A message is lost by the receiving application.
- As part of the initialization process.

A ResendRequest follows the procedures outlined in the **FIX Message Recovery section** of the **FIX Primer document** and can be sent by either the Subscriber or OneChronos.

Tag	Name	Req'd	Description
-	<Message Header>	Yes	
7	BeginSeqNo	Yes	Type: integer Message sequence number of first message in range to be resent.
16	EndSeqNo	Yes	Type: integer Message sequence number of last message in range to be resent. If request is for a single message BeginSeqNo = EndSeqNo. If request is for all messages subsequent to a particular message, EndSeqNo = "0" (representing infinity).
-	<Message Trailer>	Yes	

Reject (35=3)

This Reject message can only be issued by OneChronos when a Subscriber's message violates session-level rules (e.g., incorrect message type, invalid CheckSum).

- Used by OneChronos to indicate session-level validation errors.
- Business-level rejections are handled separately via ExecutionReport-BusinessReject.

- Reject messages should not occur outside of FIX certification.
- Requires Investigation before resending messages to avoid repeated errors.

Tag	Name	Req'd	Description
-	<Message Header>	Yes	
45	RefSeqNum	Yes	Type: integer The sequence number of the message being referenced.
58	Text	No	Type: String Free form text. Subscribers can populate this field for internal use; OneChronos may populate this field to provide additional context to Subscriber when sending a rejection.
371	RefTagID	No	Type: integer Always present when the rejection was triggered by a specific tag. If multiple tags are invalid, RefTagID will be populated for the first invalid tag.
372	RefMsgType	No	Type: String Always present when type is parsable on the message being rejected.
373	SessionRejectReason	Yes	Type: integer An error code indicating why a message was rejected on the session level. 0 = Invalid tag number 1 = Required tag missing 2 = Undefined tag for this message type 3 = Undefined tag 4 = Tag specified without a value 5 = Value is incorrect 6 = Incorrect data format for value 9 = CompID problem 10 = SendingTime accuracy problem 11 = Invalid MsgType
-	<Message Trailer>	Yes	

SequenceReset (35=4)

This message can be sent by either the Subscriber or OneChronos to adjust the incoming sequence number. It operates in two modes based on the GapFillFlag:

- GapFill Mode (GapFillFlag = 'Y'): Used to fill gaps in sequence numbers without resending messages.

- Reset Mode (GapFillFlag = 'N' or absent): Resets the sequence number to a new value.

For more details, refer to the Sequence Reset section of our **FIX Primer Document**.

Tag	Name	Req'd	Description
-	<Message Header>	Yes	
36	NewSeqNo	Yes	Type: integer The next expected sequence number, per the rules governing message sequence numbers.
123	GapFillFlag	No	Type: Boolean Y = Gap fill message; MsgSeqNum field value Message is SequenceReset-Gap-Fill; this is the correct value to use for message recovery/non disaster situations. N = Sequence reset; ignore MsgSeqNum field Message is a SequenceReset-Reset; reset the counterparty's sequence expected incoming sequence number, without performing message recovery.
-	<Message Trailer>	Yes	

Logout (35=5)

The Logout message is used to initiate or confirm the termination of a FIX session by either the Subscriber or the OneChronos MTF. A proper logout exchange ensures an orderly disconnection, while an unexpected disconnection without this message indicates an abnormal condition.

- Subscribers can log out at any time.
- OneChronos initiates logout only as part of the daily sequence number reset.

For more details, please request our **FIX Primer document**

Tag	Name	Req'd	Description
-	<Message Header>	Yes	
58	Text	No	Type: String Free form text. Subscribers can populate this field for internal use; OneChronos may populate this field to provide additional context to Subscriber when sending a rejection.
-	<Message Trailer>	Yes	

Logon (A)

Subscribers initiate a logon request by sending a Logon message immediately after establishing a TCP connection. This must be done before sending any other messages.

If the Logon request is valid, OneChronos responds with a reciprocal Logon and waits one second before processing additional messages to prevent in-flight ResendRequest issues. Subscribers should not send business messages during this waiting period.

After synchronization, OneChronos sends a Heartbeat to signal that normal messaging can resume.

For further details, see the **FIX Primer document.**

Tag	Name	Req'd	Description
-	<Message Header>	Yes	
98	EncryptMethod	Yes	Type: integer An enum value representing the type of Layer 6 encryption that should be used for the FIX dialogue. Required by the FIX standard, but not used by OneChronos. 0 = None (Do not use encryption) Validation: it == EncryptMethod.NONE
108	HeartBtInt	Yes	Type: integer The desired interval, in seconds, between heartbeats. See Heartbeats for additional details. Validation: it >= 5 && it <= 180
-	<Message Trailer>	Yes	

BusinessMessageReject (35=j)

Business Message reject messages are sent in response to unsupported message types or when a FIX message fails field validation (e.g., incorrect field length).

Tag	Name	Req'd	Description
-	<Message Header>	Yes	
45	RefSeqNum	No	Type: integer The sequence number of the message being referenced.
58	Text	No	Type: String Free form text. Subscribers can populate this field for internal use; OneChronos may populate this field to provide additional context to Subscriber when sending a rejection.
372	RfMsgType	Yes	Type: String Always present when type is parsable on the message being rejected.

Tag	Name	Req'd	Description
380	BusinessRejectReason	Yes	Type: integer An error code indicating why a message was rejected by a BusinessMessageReject. 0 = Order violates one or more aspects of the venue order entry field specification 4 = Application not available In production and UAT environments, this status code indicates that the FIX gateway is temporarily unavailable and not accepting business messages. In certification, this status code and Tag 58 indicate what FIX business logic validations failed. 99 = Throttle limit exceeded
-	<Message Trailer>	Yes	

From Subscriber

NewOrderSingle (35=D)

NewOrderSingle messages are sent by Subscriber to OneChronos to initiate a new order. OneChronos supports OrdType=LIMIT and OrdType=PEGGED orders.

Tag	Name	Req'd	Description
-	<Message Header>	Yes	
1	Account	No	Type: String Account Identifier When Account is present stringLength(Account)<=32
11	ClOrdID	Yes	Type: String Client order ID. Max length is 32 characters stringLength(ClOrdID)>0 And stringLength(ClOrdID)<=32
15	Currency	Yes	Type: String Trading currency of the instrument, i.e. GBX for pence listed instruments and GBP for pound listed instruments.
18	ExecInst	No	Type: MultipleValueChar Execution instruction for order handling; required for Pegged orders (40=P), not allowed on limit orders (40=2)

Tag	Name	Req'd	Description
			M = Mid-price peg. Execute at a price equal to or more favorable than the midpoint of the EBBO R = Near Touch peg. Execute at a price equal to or more favorable than the EBB in the case of a buy order or the EBO in the case of a sell order. P = Far Touch peg. Execute at a price equal to or more favorable than the EBO in the case of a buy order or the EBB in the case of a sell order. whenExecInst is present subset(ExecInst[MidPricePeg NearTouchPeg FarTouchPeg])
22	IDSource	Yes	Type: String Values supported by OneChronos; 4 = ISIN Number
21	HandlInst	Yes	Type: Char 1 = Automated execution no intervention HandlInst is required by FIX, but not used by OneChronos.
38	OrderQty	Yes	Type: float Total Order Qty >0.0
40	OrdType	Yes	Type: Char 2 = Limit P = Pegged
44	Price	Yes	Type: float Instrument price per unit of quantity. When Price is present Price >0.0
48	SecurityID	Yes	Type: String Instrument ID (ISIN)
54	Side	Yes	Type: Char 1 = Buy 2 = Sell
55	Symbol	No	Type: String Symbol must be state.Symbol
59	TimeInForce	Yes	Type: Char 0 = Day Order will remain active throughout the regular trading session

Tag	Name	Req'd	Description
			3 = Good For Auction (GFA) Order will be canceled after participating in one auction 6 = Good Till Time (GTT) Order will remain active only during the same trading day, until the time specified by ExpireTime.
60	TransactTime	Yes	Type: UTCTimestamp A UTC timestamp indicating when a transaction occurred. OneChronos logs events at nanosecond precision.
110	MinQty	No	Type: float MinQty accepted with all TimeInForce values. Minimum quantity to be executed. When MinQty is present MinQty >0.0.
126	ExpireTime	No	Type: UTCTimestamp When TimeInForce=6 Good Till Time, ExpireTime must be populated with the desired expiry time.
207	SecurityExchange	Yes	Type: String Market Identification Code. MIC code for the listing market for the ISIN
211	PegDifference	No	Type: integer Number of ticks, signed positive or negative, applied to the reference price for a pegged order.
528	OrderCapacity	Yes	Type: String A = Agency (Maps to "AOTC") P = Principal (Maps to "DEAL") R = Riskless Principal (Maps to "MTCH")
1724	OrderOrigination	Yes	Type: integer DEA Flag indicator. It should contain one of the following values: 0 = NonDEA (Default) 5 = DEA Other values are unsupported and will be rejected.

Tag	Name	Req'd	Description
2362	SelfMatchPreventionID	No	Type: integer 0 = When set to 0 the order containing this field will not match against another order from the same Subscriber. 2 = When set to 2 the order will not match against an order from the same SenderCompID. When set to any value in the interval [3,65535] the order will not match against an order with the same value for SelfMatchPreventionID. Value 1 is not supported. Orders containing SelfMatchPreventionID = 1 will be rejected. When SelfMatchPreventionID is present SelfMatchPreventionID >=0 and SelfMatchPreventionID != 1 and SelfMatchPreventionID <=65535 Order-level SMP always overrides the port-level SMP setting. If Tag 2362 is present on an order, its value takes precedence over any SMP mode configured at the session/port.
8015	OrderAttributeTypes	No	Type: MultipleValueInt The presence of a supported value indicates that condition applies to the order. 2 = Liquidity Provision Activity (for future use) 4 = Algorithmic order
453	NoPartyIDs	No	Type: integer If populated with a value greater than 0, all party group entries must include tags 448, 447, 452, and 2376. A maximum of 3 party group entries is supported per message.
Start of Repeating Group NewOrderPtyRpt-Grp			
448	PartyID	Yes	Type: String The short code representing the client or decision maker represented by this block. The value depends on 452 (PartyRole). Applicable to PartyRole 3 (ClientID): 0 = NONE – No Client for this order 1 = AGGR – An aggregation of multiple client orders 2 = PNAL – Clients are pending allocation Applicable to PartyRole 12 (Executing Trader)

Tag	Name	Req'd	Description
			3 = NORE – Execution decision taken by the client of the Subscriber
447	PartyIDSource	Yes	Type: Char Defines the source or type of the PartyID. P = Short Code Identifier
452	PartyRole	Yes	Type: integer Specifies the role of the party identified by tag #448 (PartyID). 3 = ClientId 12 = ExecutingTrader 122 = InvestorId
2376	PartyRoleQualifier	Yes	Type: integer Further qualifies the PartyRole (tag #452). 0 = No Qualifier 22 = Algorithm 23 = LEI 24 = Natural Person
End of Repeating Group NewOrderPtyRpt-Grp			
20001	AnalyticsTags	No	Type: String An optional Subscriber supplied comma separated list of identifiers. Tags are echoed back on fills and used as filter/query parameters in analytics reports. If specified, the rules outlined in the section on Identifiers apply. When Analytics Tags is present String Length(AnalyticsTags) <=32
20004	ExpressiveBidURI	No	Type: String The Expressive Bid URI (for future use).
20009	ExpressiveBidArgument1	No	Type: String Expressive Bid argument 1 (for future use).
20010	ExpressiveBidArgument2	No	Type: String Expressive Bid argument 2 (for future use).
20011	ExpressiveBidArgument3	No	Type: String Expressive Bid argument 3 (for future use).

Tag	Name	Req'd	Description
20012	ExpressiveBidArgument4	No	Type: String Expressive Bid argument 4 (for future use).
20028	LegID	No	Type: integer The ID associated with a multi-symbol expressive bid (for future use). When LegID is present LegID <255
20029	BasketID	No	Type: String The ID associated with a multi-symbol expressive bid. (for future use). When BasketID is present stringLength(BasketID) <=32
-	<Message Trailer>	Yes	

MiFID II Short Code Identifier Ranges

The Parties component is composed of the fields: NoPartyIDs, PartyID, PartyIDSource, PartyRole and PartyRoleQualifier. These fields when grouped together with the combinations represented below are used to populate the fields required for MiFID II: Combinations outside validations below will be rejected.

Party Identifier	PartyID (448)	PartyIDSource (447)	PartyRole (452)	PartyRoleQualifier (2376)	OrderCapacity (528)
Client - Legal Entity (LEI)	Shortcode	P	3	23	Allow all
Client - Natural Person	Shortcode	P	3	24	Allow all
No Client on order (NONE)	0	P	3	-	DEAL (P)
Aggregation of multiple client orders (AGGR)	1	P	3	-	Allow all
Client pending allocation (PNAL)	2	P	3	-	Allow all
Investment Decision Maker - Natural Person	Shortcode	P	122	24	Allow all

Party Identifier	PartyID (448)	PartyIDSource (447)	PartyRole (452)	PartyRoleQualifier (2376)	OrderCapacity (528)
Investment Decision maker - Algorithm	Shortcode	P	122	22	Allow all
No Investment Decision Maker (NONE)	0	P	122	-	MTCH(R) or AOTC(A)
Executing Trader - Natural Person	Shortcode	P	12	24	Allow all
Executing Trader - Algorithm	Shortcode	P	12	22	Allow all
Executing Trader on behalf of client (NORE)	3	P	12	-	Allow all

OrderCancelRequest (35=F)

An OrderCancelRequest is used to request the cancellation of the remaining quantity of an existing order.

- Sent by the Subscriber to cancel an order previously submitted via NewOrderSingle.
- If accepted, OneChronos confirms the cancellation with an ExecutionReport message.
- If rejected, an OrderCancelReject message is returned.

Tag	Name	Req'd	Descriptions
-	<Message Header>	Yes	
11	ClOrdID	Yes	Type: String Client order ID. Max length is 32 characters. stringLength(ClOrdID) >0 and stringLength(ClOrdID) <=32
15	Currency	Yes	Type: String
22	IDSource	Yes	Type: String Values supported by OneChronos; 4 = ISIN Number
37	OrderID	No	Type: String whenOrderIDis present stringLength(OrderID) >0 and

Tag	Name	Req'd	Descriptions
			stringLength(OrderID) <=32
41	OrigClOrdID	No	Type: String Previous value for ClOrdId. whenOrigClOrdIDis present stringLength(OrigClOrdID) >0 and stringLength(OrigClOrdID) <=32
38	OrderQty	No	Type: float Total Order Qty >0.0
48	SecurityID	Yes	Type: String Instrument ID (ISIN)
54	Side	Yes	Type: Char 1 = Buy 2 = Sell
55	Symbol	No	Type: String Symbol must be state.Symbol
60	TransactTime	Yes	Type: UTCTimestamp A UTC timestamp indicating when a transaction occurred.
207	SecurityExchange	Yes	Type: Exchange Market Identification Code. MIC code for the listing market for the ISIN
20001	AnalyticsTags	No	Type: String An optional Subscriber supplied comma separated list of identifiers. When Analytics Tags is present String Length(AnalyticsTags) <=32
-	<Message Trailer>	Yes	

OrderCancelReplaceRequest (35=G)

The OrderCancelReplaceRequest allows subscribers to modify certain attributes of an open order.

- Only orders submitted via NewOrderSingle can be modified.
- Changes are confirmed with an ExecutionReport or rejected with an OrderCancelReject.
- Only specific fields can be modified—refer to the field validations below for details.

Tag	Name	Req'd	Description
-	<Message Header>	Yes	
1	Account	No	Type: String When Account is present stringLength(Account)<=32
11	ClOrdID	Yes	Type: String Client order ID. Max length is 32 characters stringLength(ClOrdID)>0 And stringLength(ClOrdID)<=32
15	Currency	Yes	Type: Currency
18	ExecInst	No	Type: MultipleValueChar ExecInstmust bestate.ExecInst
21	HandlInst	Yes	Type: Char
22	IDSource	Yes	Type: IDSource
38	OrderQty	No	Type: float isLegalModifyQty (OrderQty)
40	OrdType	Yes	Type: Char OrdType must be state.OrdType
44	Price	Yes	Type: float
48	SecurityID	Yes	Type: String
54	Side	Yes	Type: Char Side must be state.Side
55	Symbol	No	Type: String Symbol must be state.Symbol
59	TimeInForce	Yes	Type: Char TimeInForce must be state.TimeInForce
60	TransactTime	Yes	Type: Char
110	MinQty	No	Type: float When MinQty is present MinQty >0.0
41	OrigClOrdID	Yes	Type: String

Tag	Name	Req'd	Description
			stringLength(OrigClOrdID >0 and stringLength(OrigClOrdID)<=32
126	ExpireTime	No	Type: UTCTimestamp ExpireTime must be state.ExpireTime
211	PegDifference	No	Type: integer
207	SecurityExchange	Yes	Type: Exchange
20001	AnalyticsTags	No	Type: String When AnalyticsTags is present AnalyticsTags must be state.AnalyticsTags
20004	ExpressiveBidURI	No	Type: String (For future use)
20009	ExpressiveBidArgument1	No	Type: String (For future use)
20010	ExpressiveBidArgument2	No	Type: String (For future use)
20011	ExpressiveBidArgument3	No	Type: String (For future use)
20012	ExpressiveBidArgument4	No	Type: String (For future use)
20028	LegID	No	Type: integer (For future use) When LegID is present LegID must be state.LegID
20029	BasketID	No	Type: String (For future use) When BasketID is present BasketID must be state.BasketID
-	<Message Trailer>	Yes	

To Subscriber

ExecutionReport (35=8)

Execution reports provide real-time updates on order status and execution details. Sent by OneChronos to Subscribers, they serve the following purposes:

- Acknowledge order entry and cancellations
- Confirm modifications (e.g., cancel/replace requests)
- Communicate order status updates
- Report partial and complete fills
- Reject invalid orders
- Provide post-trade fee details

All execution reports share common fields, with additional fields included based on the order state. Certain fields (e.g. CCP attribution via Tag 375) are populated only on Execution Reports representing actual trades and are not included on acknowledgements, cancels, replaces, or other non-trade execution events.

Tag	Name	Req'd	Type: Validations
-	<Message Header>	Yes	
1	Account	No	Type: String Echoed from order. Account must be state.Account
6	AvgPx	Yes	Type: float Calculated average price on all fills on order.
11	ClOrdID	Yes	Type: String Echoed from order. ClOrdID must be state.ClOrdID
14	CumQty	Yes	Type: float Total quantity filled on order. CumQty >=0.0
15	Currency	Yes	Type: Currency Echoed from order.
17	ExecID	Yes	Type: String A unique ID for each execution report sent from OneChronos to Subscriber.
18	ExecInst	No	Type: MultipleValueChar Echoed from order. ExecInst must be state.ExecInst
20	ExecTransType	Yes	Type: Char 0 = New 1 = Cancel 2 = Correct 3 = Status ExecTransType must be New.
22	IDSource	Yes	Type: String
37	OrderID	Yes	Type: String Order identifier supplied by OneChronos. OrderID must be state.OrderID

Tag	Name	Req'd	Type: Validations
38	OrderQty	Yes	Type: float Echoed from order. OrderQty must be state.OrderQty
103	OrdRejReason	No	Type: integer 1 = UnknownSymbol 2 = ExchangeClosed 3 = OrderExceedsLimit 6 = DuplicateOrder 0 = BrokerOption 9 = InvalidExpressiveBidURI (for future use)
39	OrdStatus	Yes	Type: Char A = PendingNew 0 = New 1 = Partially Filled 2 = Filled E = Pending Replace 5 = Replaced 6 = Pending Cancel 4 = Canceled C = Expired 8 = Rejected
40	OrdType	Yes	Type: Char Echoed from order. OrdType must be state.OrdType
44	Price	Yes	Type: float Echoed from order. Price must be state.Price
48	SecurityID	Yes	Type: String
54	Side	Yes	Type: Char Echoed from order. Side must be state.Side
55	Symbol	No	Type: String Echoed from order. Symbol must be state.Symbol
58	Text	No	Type: String

Tag	Name	Req'd	Type: Validations
			Subscribers can populate this field for internal use; OneChronos may populate this field to provide additional context to Subscriber when sending a rejection.
59	TimeInForce	Yes	Type: Char Echoed from order. TimeInForce must be state.TimeInForce
60	TransactTime	Yes	Type: UTCTimestamp
110	MinQty	No	Type: float Echoed from order. MinQty must be state.MinQty
126	ExpireTime	No	Type: UTCTimestamp Echoed from order. ExpireTime must be state.ExpireTime
150	ExecType	Yes	Type: Char 0 = New 1 = PartialFill 2 = Fill E = Pending Replace 5 = Replaced 6 = Pending Cancel 4 = Canceled C = Expired 8 = Rejected
151	LeavesQty	Yes	Type: float Remaining quantity open for further execution. LeavesQty must be 0.0 or LeavesQty must be leavesQty()
207	SecurityExchange	Yes	Type: Exchange Echoed from order.
30	LastMkt	No	Type: Exchange The market of the last fill. When LastMkt is present LastMkt must be one of [OCXE OCXL]
31	LastPx	No	Type: float Price of last execution.
32	LastShares	No	Type: float

Tag	Name	Req'd	Type: Validations
			Quantity of last execution.
382	NoContraBrokers	No	Type: integer The number of ContraBroker msgFields contained in the message.
375	ContraBroker	No	Type: String Identifies the CCP of the subscriber for the trade; currently XCLR, ECCX, LCHL. Value SELF indicates a self-match where clearing is suppressed (default behavior). Optionally, clients can request to override the suppression of clearing on self-match executions with a venue-enabled session (port) setting. In these instances, the field will be populated with the CCP of the subscriber for the trade and the execution is sent to the CCP.
211	PegDifference	No	Type:integer Number of ticks, signed positive or negative, applied to the reference price for a pegged order. PegDifference must be state.PegDifference.
1724	OrderOrigination	Yes	Type: integer Echoed from order.
2362	SelfMatchPreventionID	No	Type: integer Echoed from order.
8015	OrderAttributeTypes	No	Type: MultipleValueInt Echoed from order.
20001	AnalyticsTags	No	Type: String Echoed from order. AnalyticsTags must be state.AnalyticsTags
20005	AuctionID	No	Type: integer Order identifier supplied by OneChronos.
20006	AuctionSubID	No	Type: integer Order identifier supplied by OneChronos.
1003	TradeID	No	Type: String

Tag	Name	Req'd	Type: Validations
			This is a value that is unique, consistent and persistent per ISO10383 segment MIC and per trading day. TradeID is the same across all fills, ensuring compliance with TVTIC reporting. It identifies the entire transaction, unique per trade.
41	OrigClOrdID	No	Type: String Echoed from order.
20007	CancelReason	No	Type: String 0 = Unspecified 1 = User Initiated 2 = Good For Auction (GFA) 4 = TimeInForce 5 = Halt 6 = Order Entry Disconnect 7 = Drop Copy Disconnect C = Price Collar Deviation S = Suspended
9730	TradeLiquidityIndicator	No	Type: String Indicates the trade classification associated with the execution. This field currently takes the value: ● F = Execution on the OneChronos periodic auction mechanism This field is only populated on Execution Reports corresponding to partial or full fills
453	NoPartyIDs	No	Type: integer Tag 453 (NoPartyIDs) is optional. However, if it is populated with a value greater than 0, each party group entry must include tags 448 (PartyID), 447 (PartyIDSource), 452 (PartyRole), and 2376 (PartyRoleQualifier). A maximum of 3 party group entries is supported per message.
Start of Repeating Group NewOrderPtyRpt-Grp			
448	PartyID	Yes	Echoed from order.
447	PartyIDSource	Yes	Echoed from order.
452	PartyRole	Yes	Echoed from order.
2376	PartyRoleQualifier	Yes	Echoed from order.

Tag	Name	Req'd	Type: Validations
End of Repeating Group NewOrderPtyRpt-Grp			
-	<Message Trailer>	Yes	

OrderCancelReject (35=9)

The OrderCancelReject message is sent when a cancel or replace request cannot be processed.

- It is issued when an OrderCancelRequest is invalid or when the order is in a non-cancellable state.
- Sent from OneChronos to the Subscriber to indicate the rejection of the request.

Tag	Name	Req'd	Description
-	<Message Header>	Yes	
1	Account	No	Type: String Echoed from order. Account must be state.Account
11	ClOrdID	Yes	Type: String Echoed from cancel or cancel / replace request. ClOrdID must be state.ClOrdID
37	OrderID	Yes	Type: String An identifier assigned by OneChronos to all orders entered via NewOrderSingle. In contexts where an OrderID is required but not available, e.g., when sending an OrderCancelReject in response to an unknown order, OrderID will be populated with NONE. Order identifier supplied by OneChronos
39	OrdStatus	Yes	Type: Char A = PendingNew 0 = New 1 = Partially Filled 2 = Filled E = Pending Replace 5 = Replaced 6 = Pending Cancel 4 = Canceled C = Expired 8 = Rejected OrdStatus must be state.OrdStatus
41	OrigClOrdID	No	Type: String

Tag	Name	Req'd	Description
			Echoed from cancel or cancel / replace request.
58	Text	No	Type: String Subscribers can populate this field for internal use; OneChronos may populate this field to provide additional context to Subscriber when sending a rejection.
102	CxlRejReason	Yes	Type: integer 0 = Too Late To Cancel 1 = Unknown Order 3 = Order Already In Pending Status 2 = Broker Option 4 = Invalid Expressive Bid URI (for future)
434	CxlRejResponseTo	Yes	Type: Char 1 = Order Cancel Request 2 = Order Cancel Replace Request
-	<Message Trailer>	Yes	

TradeCancelCorrect (35=UCC)

TradeBust messages are sent to Subscriber to report trade breaks. Only full breaks (cancellations) ExecTransType=CANCEL are supported.

Tag	Name	Req'd	Description
-	<Message Header>	Yes	
11	ClOrdID	Yes	Type: String ClOrdID of the order whose trade is being canceled or corrected. ClOrdID must be state.ClOrdID
15	Currency	Yes	Type: Currency
17	ExecID	Yes	Type: String Day-unique ID of execution message sent from OneChronos to Subscriber.
19	ExecRefID	Yes	Type: String A reference to the original ExecID used for messages where ExecTransType=CANCEL or ExecTransType=CORRECT.

Tag	Name	Req'd	Description
20	ExecTransType	Yes	Type: Char Identifies the type of a transaction. ExecTransType must be one of [CancelCorrect]
22	IDSource	Yes	Type: String
30	LastMkt	Yes	Type: String Market Identifier Code.
31	LastPx	Yes	Type: float The price of the last fill.
32	LastShares	Yes	Type: float The quantity of the last fill.
37	OrderID	Yes	Type: String Order identifier supplied by OneChronos. OrderID must be state.OrderID
42	OrigTime	Yes	Type: UTCTimestamp The original sending time of an ExecutionReport
48	SecurityID	Yes	Type: String
54	Side	Yes	Type: Char Side must be state.Side
55	Symbol	No	Type: String Symbol must be state.Symbol
60	TransactTime	Yes	Type: UTCTimestamp
207	SecurityExchange	Yes	Type: Exchange
9730	TradeLiquidityIndicator	Yes	Type: String Indicates the trade classification associated with the execution. This field currently takes the value: ● F = Execution on the OneChronos periodic auction mechanism This field is only populated on Execution Reports corresponding to partial or full fills
-	<Message Trailer>	Yes	

Order State Transitions

OneChronos follows a subset of legal FIX order state transitions. When an order is in multiple states simultaneously (e.g., PENDING_CANCEL and PARTIALLY_FILLED), FIX rules of precedence determine which state is reported in the OrdStatus field of an ExecutionReport.

Order State Precedence

State	Priority
PENDING_CANCEL	12 (Highest)
PENDING_REPLACE	11
FILLED	8
CANCELED	5
PARTIALLY_FILLED	4
NEW	2
REJECTED	2
PENDING_NEW	2

Note: Values are non-consecutive to align with the FIX 4.2 specification.

Legal Order Transitions

The following transitions are supported by OneChronos when sending ExecutionReport messages. States labeled TERMINAL indicate no further transitions (except in case of trade breaks if configured).

Current State	Possible Transitions
NEW	PARTIALLY_FILLED< FILLED, EXPIRED, CANCELED, PENDING_CANCEL
PARTIALLY_FILLED	PARTIALLY_FILLED, FILLED, EXPIRED, CANCELED, PENDING_CANCEL
FILLED	TERMINAL
EXPIRED	TERMINAL
CANCELED	TERMINAL
PENDING_CANCEL	FILLED, CANCELED
REJECTED	TERMINAL
PENDING_NEW	NEW, REJECTED

Drop Copy

OneChronos provides two types of FIX drop copy:

- Order-by-Order: Forwards all business-level messages, including trade breaks (if enabled).
- Fills Only: Forwards only ExecutionReport-Fill and ExecutionReport-PartialFill messages.

Drop copy settings are configurable at the port/session level.

Port Settings

OneChronos allows customization of FIX session settings at the port level.

Order Entry Port Settings

Setting	Default	Description
Cancel On Disconnect	Yes	Orders in an active auction are canceled at first available opportunity, which may not be immediate.
Cancel on Halt	Yes	Cancels all orders for halted symbols, including all legs of combinatorial orders.

Drop Copy Port Settings

Setting	Default	Description
Drop Copy Type	FILLS_ONLY	Determines drop copy report type. Options: ORDER_BY_ORDER (all business messages) or FILLS_ONLY (only execution reports).

Risk Management & Order Controls

Setting	Default	Description
Fat Finger Percent Delta	Yes	Rejects orders exceeding a percentage deviation from EBBO. Default max deviation: 40%.
Maximum Notional Value	Yes	Limits the notional value of a single order (Default: USD 200M).
Maximum Order Shares	Yes	Limits shares per order (Default: 100M shares).

Self-Match Prevention

Prevents orders from matching within the same entity.

Mode	Description
SUBSCRIBER	Prevents matching within the same Subscriber.
ON_BEHALF_OF_COMP_ID	Prevents matching within the same OnBehalfOfCompID.
SENDER_COMP_ID	Prevents matching within the same FIX session.

Symbology

OneChronos accepts ISIN to identify a stock, the Subscriber:

- must set IDSource (22) = ISIN (4);
- must set SecurityID (48) = the ISIN;
- must set SecurityExchange (207) = Market Identification Code of the listing market for the ISIN;
- must set the Currency (15) = currency in which the stock is traded;
- may optionally set the Symbol (55)

Timestamp Accuracy

Defines the precision of timestamps sent in FIX messages

Type	Description
NANO	Nanosecond precision.

These settings provide flexibility for order management, risk controls, and session handling within the OneChronos FIX environments.

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