

# PowerTrade Drop Copy FIX API Specification

## Table of Contents

|  |    |
|--|----|
| 1. Introduction .....                          | 2  |
| 2. FIX Dictionary .....                        | 3  |
| 2.1. Downloads .....                           | 3  |
| 2.2. CFICode (ISO 10962) .....                 | 3  |
| 2.3. Get connected .....                       | 3  |
| 2.4. SETUP A TEST ACCOUNT .....                | 4  |
| 2.5. GENERATE API KEYS .....                   | 4  |
| 3. Session-Level Messages .....                | 4  |
| 3.1. Establishing a connection .....           | 4  |
| 3.2. When can sequence numbers be reset? ..... | 4  |
| 3.3. Ending a connection .....                 | 5  |
| 3.4. Standard Header .....                     | 5  |
| 3.5. Standard Trailer .....                    | 6  |
| 3.6. Logon <A> .....                           | 6  |
| 3.7. Heartbeat <0> .....                       | 7  |
| 3.8. Test Request <1> .....                    | 7  |
| 3.9. Resend Request <2> .....                  | 8  |
| 3.10. Reject <3> .....                         | 8  |
| 3.11. Sequence Reset <4> .....                 | 9  |
| 3.12. Logout <5> .....                         | 10 |
| 3.13. Business Message Reject <j> .....        | 10 |
| 4. Client-Bound Messages .....                 | 11 |
| 4.1. Execution Report <8> .....                | 11 |
| 5. Examples .....                              | 15 |
| 5.1. Logon .....                               | 15 |
| 5.1.1. Request .....                           | 15 |
| 5.1.2. Response .....                          | 16 |
| 5.2. NewOrderSingle: Limit .....               | 16 |
| 5.2.1. Response: Pending .....                 | 16 |
| 5.2.2. Response: New .....                     | 17 |
| 5.2.3. Response: Trade .....                   | 18 |
| 5.3. NewOrderSingle: Market .....              | 19 |
| 5.3.1. Response: Pending .....                 | 19 |
| 5.3.2. Response: New .....                     | 20 |

|  |    |
|--|----|
| 5.3.3. Response: Trade .....           | 21 |
| 5.4. NewOrderMultileg: RFQ Limit ..... | 22 |
| 5.4.1. Response: New .....             | 22 |
| 5.5. Cancel by ClOrdID .....           | 23 |
| 5.5.1. Response .....                  | 23 |
| 5.6. Cancel by OrderID .....           | 23 |
| 5.6.1. Response .....                  | 24 |
| 6. Revision History .....              | 25 |

VERSION 1.2 (see [Revision History](#))

# 1. Introduction

Institutions can use the **FIX Drop Copy** feed to receive confirmations of orders and corresponding updates on the PowerTrade exchange.

PowerTrade will report all orders and corresponding updates on the exchange using:

- [Execution Report <8>](#)

Listed above updates can occur via orders placed using:

- a [FIX API](#) session;
- a [WebSocket API](#) session;
- user logged in to the PowerTrade mobile application ([iOS](#), [Android](#));
- user logged in to the PowerTrade [web application](#);

**FIX Drop Copy** reports on orders from **all** of these sources and from **all** sub-accounts.

Please note that **Read-Only** API key **is required** as a password in [Logon <A>](#) of **FIX Drop Copy** sessions.

API keys can be generated in [PowerTrade Web App](#).

There are no client-originated messages supported on this channel except for the session-management ones.

## 2. FIX Dictionary

PowerTrade uses FIX 4.4 with the 20030618 errata. No custom tags are used.

### 2.1. Downloads

<https://raw.githubusercontent.com/quickfix/quickfix/master/spec/FIX44.xml>

### 2.2. CFICode (ISO 10962)

[https://en.wikipedia.org/wiki/ISO\\_10962](https://en.wikipedia.org/wiki/ISO_10962)

- **OCECCS** - European cash-settled currency option Call
- **OPECCS** - European cash-settled currency option Put
- **IFXXXP** - Spot
- **FFCCSX** - Cash-settled currency future, perpetual == **Connecting**

Steps to get connected to our FIX infrastructure:

### 2.3. Get connected

There are 2 options for production FIX connectivity to PowerTrade:

1. Over Internet with TLS encryption using server-side certificate;
2. Over Internet with mutual TLS: using signed certificates on client and server sides.

If you use [QuickFIXgo](#), please specify

```
SocketUseSSL=Y
```

or if you use [QuickFIXn](#)

```
SocketUseSSL=Y
```

- TEST:
  - **DropCopy**: `api.wss.test.power.trade:2020`
  - **OrderEntry**: `api.wss.test.power.trade:2021`
- PROD:
  - **DropCopy**: `api.wss.prod.power.trade:2020`
  - **OrderEntry**: `api.wss.prod.power.trade:2021`

## 2.4. SETUP A TEST ACCOUNT

Create a Test account by going to:

<https://powertrade-web-test.web.app/>

## 2.5. GENERATE API KEYS

Generate API Keys at: <https://powertrade-web-test.web.app/api-keys>

# 3. Session-Level Messages

## 3.1. Establishing a connection

1. Client sends server → **Logon <A>** message
2. Is client **ResetSeqNumFlag <141>** to **Y**?
  - Yes, reset sequence numbers and proceed
    - server resets next expected client sequence number
    - server resets its own sequence number
    - server responds with ← **Logon <A>** message with reset sequence number
    - client sends server → **Heartbeat <0>**
  - No, disconnect
3. Success! Your FIX connection is established.

## 3.2. When can sequence numbers be reset?

PowerTrade runs the server side of the FIX connection ("*acceptor*"). PowerTrade never resets sequence numbers on the server side during the logon workflow unless the client explicitly requests it.

The client ("*initiator*") can reset sequence numbers during **Logon <A>** by setting **ResetSeqNumFlag <141>** to **Y**.

PowerTrade recommends that client consider configuring the FIX initiator to automatically reset sequence numbers under the following conditions:

- logon
- logout
- disconnect
- error

While synchronizing sequence numbers after a replay, the client may send a **Sequence Reset <4>** with **GapFillFlag <123>** = **Y** in lieu of a replay.

## 3.3. Ending a connection

If the session was initiated using an API Key with enabled `Cancel on Disconnect`, then when the client disconnects from the FIX Order Entry, for whatever reason, the exchange will cancel all the orders associated with that FIX session.

The client may send the server an optional `Logout <5>` message but the exchange will not interpret its absence as being an abnormal condition.

Under certain conditions, the server may send the client a `Logout <5>` message where the `Text <58>` field contains the reason, such as scheduled maintenance.

## 3.4. Standard Header

The **Standard Header** is required on every message.

Table 1. **Standard Header** fields:

| Tag | Name                      | Required | Description   | Valid Values  |
|-----|---------------------------|----------|---|---|
| 8   | <code>BeginString</code>  | Y        | Identifies beginning of new message and protocol version. Must be first field in message  | "FIX.4.4"   |
| 9   | <code>BodyLength</code>   | Y        | Message length, in bytes, forward to the CheckSum field. Must be second field in message  |   |
| 35  | <code>MsgType</code>      | Y        | Defines message type. Must be third field in message  |   |
| 34  | <code>MsgSeqNum</code>    | Y        | Integer message sequence number.  |   |
| 43  | <code>PossDupFlag</code>  | N        | Indicates possible retransmission of message with this sequence number. Required for retransmitted messages.                    | "Y" = Possible Duplicate<br>"N" = Original Transmission |
| 49  | <code>SenderCompID</code> | Y        | Assigned value used to identify firm sending message. If this message is sent to PowerTrade, then it should contain an API Key. |   |

| Tag | Name         | Required | Description   | Valid Values   |
|-----|--------------|----------|---|--|
| 56  | TargetCompID | Y        | Assigned value used to identify firm sending message. | <p>If this message is sent to PowerTrade, then it should contain PowerTrade Server Identifier:</p> <p>"PT-OE" = for Order Entry</p> <p>"PT-DC" = for Drop Copy</p> |
| 52  | SendingTime  | Y        | UTC Time of message transmission                      | YYYYMMDD-HH:mm:ss.nnnnnnnnnn   |

## 3.5. Standard Trailer

The **Standard Trailer** is required on every message. **Standard Trailer** fields:

| Tag | Name     | Required | Description  | Valid Values                               |
|-----|----------|----------|--|--|
| 10  | Checksum | Y        | Message Checksum, zero-padded 3 chars (e.g. "052"). Must be last field in the message. | Value calculated by the standard algorithm |

## 3.6. Logon <A>

FIX4.4 Standard

Table 2. **Logon** fields:

| Tag                   | Name            | Required | Description  | Valid Values                      |
|-----------------------|-----------------|----------|--|-----------------------------------|
| Header with MsgType=A |                 |          |  |                                   |
| 98                    | EncryptMethod   | N        | PowerTrade does not support encryption.  | "0" = None                        |
| 108                   | HeartBtInt      | Y        | Heartbeat interval in seconds.   | "30" = 30 seconds                 |
| 141                   | ResetSeqNumFlag | Y        | Indicates both sides of a FIX session should reset sequence numbers. Required in PowerTrade. | "Y" = Yes, reset sequence numbers |

| Tag     | Name     | Required | Description   | Valid Values  |
|---------|----------|----------|---|---|
| 554     | Password | Y        | Assigned value used to authenticate the firm sending the message. | <p>JWT of PowerTrade API key.</p> <p>API keys can be generated in <a href="#">PowerTrade Web App</a>.</p> <p>Procedure of JWT generation is documented in <a href="#">this article</a>.</p> <p>NOTE:</p> <p>FIX Drop Copy API requires Read-Only API keys, while FIX Order Entry API requires API keys with Trade permission enabled.</p> |
| Trailer |          |          |   |   |

## 3.7. Heartbeat <0>

[FIX4.4 Standard](#)

Table 3. Heartbeat fields:

| Tag                   | Name      | Required | Description   | Valid Values |
|-----------------------|-----------|----------|---|--------------|
| Header with MsgType=0 |           |          |   |              |
| 112                   | TestReqID | C        | Required when the heartbeat is the result of a Test Request <1> message |              |
| Trailer               |           |          |   |              |

## 3.8. Test Request <1>

[FIX4.4 Standard](#)

Table 4. Resend Request fields:

| Tag                   | Name | Required | Description | Valid Values |
|-----------------------|------|----------|-------------|--------------|
| Header with MsgType=1 |      |          |             |              |

| Tag     | Name      | Required | Description   | Valid Values |
|---------|-----------|----------|---|--------------|
| 112     | TestReqID | C        | Required when the heartbeat is the result of a Test Request <1> message |              |
| Trailer |           |          |   |              |

## 3.9. Resend Request <2>

### FIX4.4 Standard

Table 5. Resend Request fields:

| Tag                   | Name       | Required | Description   | Valid Values |
|-----------------------|------------|----------|---|--------------|
| Header with MsgType=2 |            |          |   |              |
| 7                     | BeginSeqNo | Y        | Message sequence number of first message in range to be resent  |              |
| 16                    | EndSeqNo   | Y        | <p>Message sequence number of last message in range to be resent.</p> <p>If request is for a single message <b>BeginSeqNo &lt;7&gt; = EndSeqNo &lt;16&gt;</b>. If request is for all messages subsequent to a particular message, <b>EndSeqNo &lt;16&gt; = 0</b> (representing infinity).</p> |              |
| Trailer               |            |          |   |              |

## 3.10. Reject <3>

### FIX4.4 Standard

Table 6. Reject fields:

| Tag                   | Name | Required | Description | Valid Values |
|-----------------------|------|----------|-------------|--------------|
| Header with MsgType=3 |      |          |             |              |



| Tag     | Name                | Required | Description   | Valid Values   |
|---------|---------------------|----------|---|--|
| 45      | RefSeqNum           | Y        | MsgSeqNum <34> of the rejected message.                 | SeqNum   |
| 58      | Text                | N        | Human-readable explanation                              |  |
| 371     | RefTagID            | Y        | The tag number of the FIX field being referenced.       |  |
| 372     | RefMsgType          | Y        | The MsgType <35> of the rejected message.               |  |
| 373     | SessionRejectReason | Y        | Code to identify the reason for the Reject <3> message. | <p>"0" = Invalid tag number</p> <p>"1" = Required tag missing</p> <p>"2" = Tag not defined for this message type</p> <p>"3" = Undefined Tag</p> <p>"4" = Tag specified without a value</p> <p>"5" = Value is incorrect (out of range) for this tag</p> <p>"6" = Incorrect data format for value</p> <p>"10" = SendingTime &lt;52&gt; accuracy problem</p> <p>"11" = Invalid MsgType &lt;35&gt;</p> |
| Trailer |                     |          |   |  |

## 3.11. Sequence Reset <4>

### FIX4.4 Standard

Table 7. Resend Request fields:

| Tag                   | Name | Required | Description | Valid Values |
|-----------------------|------|----------|-------------|--------------|
| Header with MsgType=4 |      |          |             |              |

| Tag     | Name        | Required | Description  | Valid Values           |
|---------|-------------|----------|--|------------------------|
| 36      | NewSeqNo    | Y        | New sequence number. The receiver should expect this to be the sequence number of the following message. |                        |
| 123     | GapFillFlag | Y        | Indicates that the sender is skipping messages rather than resending them.                               | "Y" = Gap Fill message |
| Trailer |             |          |  |                        |

## 3.12. Logout <5>

FIX4.4 Standard

Table 8. Logout fields:

| Tag                   | Name | Required | Description                | Valid Values |
|-----------------------|------|----------|----------------------------|--------------|
| Header with MsgType=5 |      |          |                            |              |
| 58                    | Text | N        | Human-readable explanation |              |
| Trailer               |      |          |                            |              |

## 3.13. Business Message Reject <j>

FIX4.4 Standard

Table 9. Business Message Reject fields:

| Tag                   | Name                | Required | Description  | Valid Values |
|-----------------------|---------------------|----------|--|--------------|
| Header with MsgType=j |                     |          |  |              |
| 45                    | RefSeqNum           | Y        | MsgSeqNum <34> of the rejected message.                    | SeqNum       |
| 58                    | Text                | N        | Human-readable explanation                                 |              |
| 372                   | RefMsgType          | Y        | The MsgType <35> of the rejected message.                  |              |
| 379                   | BusinessRejectRefID | Y        | The value of the business level ID field being referenced. |              |

| Tag     | Name                 | Required | Description   | Valid Values  |
|---------|----------------------|----------|---|---|
| 380     | BusinessRejectReason | Y        | Code to identify the reason for the <a href="#">Business Message Reject &lt;j&gt;</a> message | <p>"0" = Other</p> <p>"1" = Unknown ID</p> <p>"2" = Unknown Security</p> <p>"3" = Unsupported Message Type</p> <p>"4" = Application not available</p> <p>"5" = Conditionally Required Field Missing</p> |
| Trailer |                      |          |   |   |

## 4. Client-Bound Messages

### 4.1. Execution Report <8>

PowerTrade uses the [Execution Report <8>](#) message to:

- confirm the receipt of an order
- confirm the successful cancellation of an order
- relay fill information on orders
- reject orders

Each execution report contains two fields which are used to communicate both the current state of the order as understood by the exchange [OrdStatus <39>](#) and the purpose of the message [ExecType <150>](#).

Table 10. [Execution Report](#) fields:

| Tag                   | Name                    | Required | Description  | Valid Values               |
|-----------------------|-------------------------|----------|--|----------------------------|
| Header with MsgType=8 |                         |          |  |                            |
| 1                     | <a href="#">Account</a> | Y        | Identifier of the party associated with the order. | <a href="#">account_id</a> |

| Tag | Name                             | Required | Description   | Valid Values  |
|-----|----------------------------------|----------|---|---|
| 55  | <a href="#">Symbol</a>           | Y        | Symbol of the Tradeable Entity  | <p><a href="#">.symbol</a> field of <a href="#">tradeable_entity</a></p> <p>PowerTrade provides symbols of listed tradeable entities in Reference Data: * <a href="#">Simplified MD Feeds</a> * <a href="#">Session-based MD Service</a></p> <p>Ignored for Multi-Leg Order</p> |
| 17  | <a href="#">ExecID</a>           | Y        | Unique event ID assigned by PowerTrade.   |   |
| 37  | <a href="#">OrderID</a>          | Y        | The PowerTrade-assigned order ID.   | <p><a href="#">order_id</a></p> <p>"NONE" = Unknown OrderID (if <a href="#">ExecType</a> = "8" Rejected)</p>  |
| 11  | <a href="#">ClOrdID</a>          | Y        | <p>Unique ID of the new Order, Cancel, or Cancel/Replace request as assigned by the firm.</p> <p>It is critical that this ID is unique and monotonically increased and be in range 0..72'057'594'037'927'936 (2^56)</p> <p>Good practice: start with Unix time in <math>\mu</math>s and increment for each request.</p> | <p><a href="#">order_token</a></p>  |
| 198 | <a href="#">SecondaryOrderID</a> | C        | Required if order is visible in the Order Book  | <p>The PowerTrade-assigned <a href="#">display_order_id</a>, appears in Public Market Data: <a href="#">Session-based Service</a>, <a href="#">Simplified MD Feeds</a>.</p> <p><a href="#">display_order_id</a></p>   |
| 526 | <a href="#">SecondaryClOrdID</a> | N        |   | <p>Right 16 bytes from <a href="#">client_reference</a> provided by a client in <a href="#">enter_order</a> request</p> <p>Characters in ASCII range 32-127 are allowed</p>   |

| Tag | Name                        | Required | Description                                    | Valid Values  |
|-----|-----------------------------|----------|--|---|
| 150 | <a href="#">ExecType</a>    | Y        | Describes the purpose of the Execution Report. | <p>"0" = New</p> <p>"4" = Cancelled</p> <p>"8" = Rejected</p> <p>"A" = Pending New</p> <p>"C" = Expired</p> <p>"D" = Restated</p> <p>"F" = Trade</p> <p>"H" = Trade Cancel</p>                  |
| 39  | <a href="#">OrdStatus</a>   | Y        | Describes the current order status.            | <p>"0" = New</p> <p>"1" = Partially Filled</p> <p>"2" = Filled</p> <p>"4" = Canceled</p> <p>"8" = Rejected</p> <p>"A" = Pending New</p> <p>"C" = Expired</p> <p><a href="#">order_state</a></p> |
| 59  | <a href="#">TimeInForce</a> | Y        | Specifies how long the orders remains alive    | <p>"0" = Cycle</p> <p>"1" = GTC</p> <p>"3" = IOC</p> <p>"4" = FOK</p> <p>"6" = GTD</p> <p><a href="#">time_in_force</a></p>   |

| Tag | Name       | Required | Description  | Valid Values                                |
|-----|------------|----------|--|---|
| 126 | ExpireTime | C        | UTC Time of order expiration<br>Required if TimeInForce=GTD  | YYYYMMDD-HH:mm:ss.nnnnnnnnn<br>time_to_live |
| 40  | OrdType    | Y        | Indicates order type   | "1" = Market<br>"2" = Limit                 |
| 54  | Side       | Y        | Order Side   | "1" = Buy<br>"2" = Sell<br>side             |
| 44  | Price      | C        | Order Price  | Required for OrdType=LIMIT orders           |
| 38  | OrderQty   | Y        | Order Quantity   | Decimal                                     |
| 151 | LeavesQty  | Y        | Quantity open for further execution. If the OrdStatus <39> is 4 = Canceled or 8 = Rejected (in which case the order is no longer active) then LeavesQty <151> could be 0, otherwise LeavesQty <151> = OrderQty <38> - CumQty <14>. | Quantity                                    |
| 31  | LastPx     | C        | Price of this (last) fill. Required if ExecType <150> is F = Trade.<br>For Security Status <f> represents the last price for that security, absent if security has no trades.  | .price field of trade                       |
| 32  | LastQty    | C        | Quantity (e.g. shares) of the fill. This field is only present when the order is updated due to a match on the exchange. Required if ExecType <150> is F = Trade.  | .quantity field of trade                    |
| 6   | AvgPx      | Y        | Calculated average price of all fills on this order.<br>PowerTrade doesn't update this field, so it is always set to 0.  | "0"   |

| Tag   | Name                          | Required | Description   | Valid Values  |
|---|-------------------------------|----------|---|---|
| 555   | <a href="#">NoLegs</a>        | C        | Number of legs. Identifies a Multi-leg Execution if present and non-zero.                 |   |
| Component Block <a href="#">InstrumentLeg</a> : |                               |          |   |   |
| 600   | ⇒ <a href="#">LegSymbol</a>   | Y        | Multileg instrument's individual security's Symbol. See Symbol <55> field for description | <a href="#">legs.tradeable_entity_id</a> field of <a href="#">legs</a>  |
| 623   | ⇒ <a href="#">LegRatioQty</a> | Y        | The ratio of quantity for this individual leg relative to the entire multileg security.   | <a href="#">legs.ratio</a> field of <a href="#">legs</a><br>May be negative to represent Leg's Side as reciprocal to Order's Side |
| The end of Component Block InstrumentLeg        |                               |          |   |   |
| Trailer   |                               |          |   |   |

## 5. Examples

### 5.1. Logon

#### 5.1.1. Request

```
8=FIX.4.4|9=371|35=A|34=1|49=17b92233f33a4d9a1688fe7d2a5be705|52=20230802-11:01:24.064|56=PT-DC|98=0|108=30|141=Y|554=eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJpc3MiOiJhcGkud3NzLmRldi5wb3dldi50cmFkZSI6InN1YiI6IjE3YjkyMjZjMzYTRkOWExNjg4ZmU3ZDJhNWJlNzA1IiwiaXhwIjojNjkwOTc0MDk5LCJpYXQiOiJlE2OTA5NzQwODR9.T5xBcKI6C9y1slbBkNHw6Gps8bKFTMLwzE1ABxsGe0EwUWjj1Qb4a2tNfpvljALexoQigYcb03ZTL_qBN6aLZA|10=071|
```

HEADER:

```
-----
[ 8] BeginString: FIX.4.4 []
[ 9] BodyLength: 371 []
[ 34] MsgSeqNum: 1 []
[ 35] MsgType: A [LOGON]
[ 49] SenderCompID: 17b92233f33a4d9a1688fe7d2a5be705 []
[ 52] SendingTime: 20230802-11:01:24.064 []
[ 56] TargetCompID: PT-DC []
```

BODY:

```
-----
```

```

[ 98] EncryptMethod: 0 [NONE]
[ 108] HeartBtInt: 30 []
[ 141] ResetSeqNumFlag: Y [YES]
[ 554] Password:
eyJhbGciOiJFUzI1NiIsInR5cCI6IkpXVCJ9.eyJpc3MiOiJhcGkud3NzLmRldi5wb3dldi50cmFkZSI6InN1Y
iI6IjE3YjkyMjZjMzYTRkOWExNjg4ZmU3ZDZhNWJlNzA1IiwiaXhwIjoxNjkwOTc0MDk5LmRlcjE3YjkyMjZjMzY
5NzQwODR9.T5xBcKI6C9y1slbBkNHw6Gps8bKFTMLwzE1ABxsGe0EwUWjj1Qb4a2tNfpvljALexoQigYcb03ZT
L_qBN6aLZA []

TRAILER:
-----
[ 10] CheckSum: 071 []

```

## 5.1.2. Response

```

8=FIX.4.4|9=98|35=A|34=1|49=PT-DC|52=20230802-
11:01:24.066|56=17b92233f33a4d9a1688fe7d2a5be705|98=0|108=30|141=Y|10=022|

HEADER:
-----
[ 8] BeginString: FIX.4.4 []
[ 9] BodyLength: 98 []
[ 34] MsgSeqNum: 1 []
[ 35] MsgType: A [LOGON]
[ 49] SenderCompID: PT-DC []
[ 52] SendingTime: 20230802-11:01:24.066 []
[ 56] TargetCompID: 17b92233f33a4d9a1688fe7d2a5be705 []

BODY:
-----
[ 98] EncryptMethod: 0 [NONE]
[ 108] HeartBtInt: 30 []
[ 141] ResetSeqNumFlag: Y [YES]

TRAILER:
-----
[ 10] CheckSum: 022 []

```

## 5.2. NewOrderSingle: Limit

### 5.2.1. Response: Pending

```

8=FIX.4.4|9=290|35=8|34=6|49=PT-OE|52=20230802-
11:20:11.305|56=17b92233f33a4d9a1688fe7d2a5be705|1=333|6=0|11=1690975211302602|14=0.00
000000|17=P15091429|37=15091429|38=0.15000000|39=A|40=2|44=22150.00|54=1|55=BTC-
USD|59=6|60=20230802-11:20:11.304719000|126=20230803-
11:20:00.000000000|150=A|151=0.15000000|10=117|

```



#### HEADER:

```
[ 8] BeginString: FIX.4.4 []
[ 9] BodyLength: 290 []
[34] MsgSeqNum: 6 []
[35] MsgType: 8 [EXECUTION_REPORT]
[49] SenderCompID: PT-OE []
[52] SendingTime: 20230802-11:20:11.305 []
[56] TargetCompID: 17b92233f33a4d9a1688fe7d2a5be705 []
```

#### BODY:

```
[ 1] Account: 333 []
[ 6] AvgPx: 0 []
[11] ClOrdID: 1690975211302602 []
[14] CumQty: 0.00000000 []
[17] ExecID: P15091429 []
[37] OrderID: 15091429 []
[38] OrderQty: 0.15000000 []
[39] OrdStatus: A [PENDING_NEW]
[40] OrdType: 2 [LIMIT]
[44] Price: 22150.00 []
[54] Side: 1 [BUY]
[55] Symbol: BTC-USD []
[59] TimeInForce: 6 [GOOD_TILL_DATE]
[60] TransactTime: 20230802-11:20:11.304719000 []
[126] ExpireTime: 20230803-11:20:00.000000000 []
[150] ExecType: A [PENDING_NEW]
[151] LeavesQty: 0.15000000 []
```

#### TRAILER:

```
[ 10] CheckSum: 117 []
```

### 5.2.2. Response: New

```
8=FIX.4.4|9=290|35=8|34=7|49=PT-OE|52=20230802-
11:20:11.306|56=17b92233f33a4d9a1688fe7d2a5be705|1=333|6=0|11=1690975211302602|14=0.00
000000|17=N15091429|37=15091429|38=0.15000000|39=0|40=2|44=22150.00|54=1|55=BTC-
USD|59=6|60=20230802-11:20:11.306529000|126=20230803-
11:20:00.000000000|150=0|151=0.15000000|10=084|
```

#### HEADER:

```
[ 8] BeginString: FIX.4.4 []
[ 9] BodyLength: 290 []
[34] MsgSeqNum: 7 []
[35] MsgType: 8 [EXECUTION_REPORT]
```

|       |   |
|-------|---|
| [ 49] | SenderCompID: PT-OE []                            |
| [ 52] | SendingTime: 20230802-11:20:11.306 []             |
| [ 56] | TargetCompID: 17b92233f33a4d9a1688fe7d2a5be705 [] |

BODY:

|        |  |
|--------|--|
| [ 1]   | Account: 333 []                              |
| [ 6]   | AvgPx: 0 []                                  |
| [ 11]  | ClOrdID: 1690975211302602 []                 |
| [ 14]  | CumQty: 0.00000000 []                        |
| [ 17]  | ExecID: N15091429 []                         |
| [ 37]  | OrderID: 15091429 []                         |
| [ 38]  | OrderQty: 0.15000000 []                      |
| [ 39]  | OrdStatus: 0 [NEW]                           |
| [ 40]  | OrdType: 2 [LIMIT]                           |
| [ 44]  | Price: 22150.00 []                           |
| [ 54]  | Side: 1 [BUY]                                |
| [ 55]  | Symbol: BTC-USD []                           |
| [ 59]  | TimeInForce: 6 [GOOD_TILL_DATE]              |
| [ 60]  | TransactTime: 20230802-11:20:11.306529000 [] |
| [ 126] | ExpireTime: 20230803-11:20:00.000000000 []   |
| [ 150] | ExecType: 0 [NEW]                            |
| [ 151] | LeavesQty: 0.15000000 []                     |

TRAILER:

|       |                  |
|-------|------------------|
| [ 10] | Checksum: 084 [] |
|-------|------------------|

### 5.2.3. Response: Trade

8=FIX.4.4|9=314|35=8|34=8|49=PT-OE|52=20230802-11:20:11.307|56=17b92233f33a4d9a1688fe7d2a5be705|1=333|6=0|11=1690975211302602|14=0.15000000|17=E741540|31=21150.00|32=0.15000000|37=15091429|38=0.15000000|39=2|40=2|44=22150.00|54=1|55=BTC-USD|59=6|60=20230802-11:20:11.306529000|126=20230803-11:20:00.000000000|150=F|151=0.00000000|10=168|

HEADER:

|       |   |
|-------|---|
| [ 8]  | BeginString: FIX.4.4 []                           |
| [ 9]  | BodyLength: 314 []                                |
| [ 34] | MsgSeqNum: 8 []                                   |
| [ 35] | MsgType: 8 [EXECUTION_REPORT]                     |
| [ 49] | SenderCompID: PT-OE []                            |
| [ 52] | SendingTime: 20230802-11:20:11.307 []             |
| [ 56] | TargetCompID: 17b92233f33a4d9a1688fe7d2a5be705 [] |

BODY:

|      |                 |
|------|-----------------|
| [ 1] | Account: 333 [] |
|------|-----------------|

|        |  |
|--------|--|
| [ 6]   | AvgPx: 0 []                                  |
| [ 11]  | ClOrdID: 1690975211302602 []                 |
| [ 14]  | CumQty: 0.15000000 []                        |
| [ 17]  | ExecID: E741540 []                           |
| [ 31]  | LastPx: 21150.00 []                          |
| [ 32]  | LastQty: 0.15000000 []                       |
| [ 37]  | OrderID: 15091429 []                         |
| [ 38]  | OrderQty: 0.15000000 []                      |
| [ 39]  | OrdStatus: 2 [FILLED]                        |
| [ 40]  | OrdType: 2 [LIMIT]                           |
| [ 44]  | Price: 22150.00 []                           |
| [ 54]  | Side: 1 [BUY]                                |
| [ 55]  | Symbol: BTC-USD []                           |
| [ 59]  | TimeInForce: 6 [GOOD_TILL_DATE]              |
| [ 60]  | TransactTime: 20230802-11:20:11.306529000 [] |
| [ 126] | ExpireTime: 20230803-11:20:00.000000000 []   |
| [ 150] | ExecType: F [TRADE]                          |
| [ 151] | LeavesQty: 0.00000000 []                     |

TRAILER:

|       |                  |
|-------|------------------|
| [ 10] | Checksum: 168 [] |
|-------|------------------|

## 5.3. NewOrderSingle: Market

### 5.3.1. Response: Pending

8=FIX.4.4|9=246|35=8|34=4|49=PT-OE|52=20230802-11:01:08.716|56=17b92233f33a4d9a1688fe7d2a5be705|1=333|6=0|11=1690974068713638|14=0.000000|17=P15091414|37=15091414|38=0.08000000|39=A|40=1|54=2|55=BTC-USD|59=3|60=20230802-11:01:08.716150000|150=A|151=0.08000000|10=083|

HEADER:

|       |   |
|-------|---|
| [ 8]  | BeginString: FIX.4.4 []                           |
| [ 9]  | BodyLength: 246 []                                |
| [ 34] | MsgSeqNum: 4 []                                   |
| [ 35] | MsgType: 8 [EXECUTION_REPORT]                     |
| [ 49] | SenderCompID: PT-OE []                            |
| [ 52] | SendingTime: 20230802-11:01:08.716 []             |
| [ 56] | TargetCompID: 17b92233f33a4d9a1688fe7d2a5be705 [] |

BODY:

|       |                              |
|-------|------------------------------|
| [ 1]  | Account: 333 []              |
| [ 6]  | AvgPx: 0 []                  |
| [ 11] | ClOrdID: 1690974068713638 [] |
| [ 14] | CumQty: 0.00000000 []        |
| [ 17] | ExecID: P15091414 []         |

|        |  |
|--------|--|
| [ 37]  | OrderID: 15091414 []                         |
| [ 38]  | OrderQty: 0.08000000 []                      |
| [ 39]  | OrdStatus: A [PENDING_NEW]                   |
| [ 40]  | OrdType: 1 [MARKET]                          |
| [ 54]  | Side: 2 [SELL]                               |
| [ 55]  | Symbol: BTC-USD []                           |
| [ 59]  | TimeInForce: 3 [IMMEDIATE_OR_CANCEL]         |
| [ 60]  | TransactTime: 20230802-11:01:08.716150000 [] |
| [ 150] | ExecType: A [PENDING_NEW]                    |
| [ 151] | LeavesQty: 0.08000000 []                     |

TRAILER:

|       |                  |
|-------|------------------|
| [ 10] | Checksum: 083 [] |
|-------|------------------|

### 5.3.2. Response: New

8=FIX.4.4|9=246|35=8|34=5|49=PT-OE|52=20230802-11:01:08.718|56=17b92233f33a4d9a1688fe7d2a5be705|1=333|6=0|11=1690974068713638|14=0.0000000|17=N15091414|37=15091414|38=0.08000000|39=0|40=1|54=2|55=BTC-USD|59=3|60=20230802-11:01:08.717909000|150=0|151=0.08000000|10=063|

HEADER:

|       |   |
|-------|---|
| [ 8]  | BeginString: FIX.4.4 []                           |
| [ 9]  | BodyLength: 246 []                                |
| [ 34] | MsgSeqNum: 5 []                                   |
| [ 35] | MsgType: 8 [EXECUTION_REPORT]                     |
| [ 49] | SenderCompID: PT-OE []                            |
| [ 52] | SendingTime: 20230802-11:01:08.718 []             |
| [ 56] | TargetCompID: 17b92233f33a4d9a1688fe7d2a5be705 [] |

BODY:

|        |  |
|--------|--|
| [ 1]   | Account: 333 []                              |
| [ 6]   | AvgPx: 0 []                                  |
| [ 11]  | ClOrdID: 1690974068713638 []                 |
| [ 14]  | CumQty: 0.00000000 []                        |
| [ 17]  | ExecID: N15091414 []                         |
| [ 37]  | OrderID: 15091414 []                         |
| [ 38]  | OrderQty: 0.08000000 []                      |
| [ 39]  | OrdStatus: 0 [NEW]                           |
| [ 40]  | OrdType: 1 [MARKET]                          |
| [ 54]  | Side: 2 [SELL]                               |
| [ 55]  | Symbol: BTC-USD []                           |
| [ 59]  | TimeInForce: 3 [IMMEDIATE_OR_CANCEL]         |
| [ 60]  | TransactTime: 20230802-11:01:08.717909000 [] |
| [ 150] | ExecType: 0 [NEW]                            |
| [ 151] | LeavesQty: 0.08000000 []                     |

TRAILER:

[ 10]

Checksum: 063 []

### 5.3.3. Response: Trade

8=FIX.4.4|9=314|35=8|34=6|49=PT-OE|52=20230802-  
11:01:08.718|56=17b92233f33a4d9a1688fe7d2a5be705|1=333|6=0|11=1690974067710224|14=0.08  
000000|17=E741538|31=22150.00|32=0.08000000|37=15091412|38=0.15000000|39=1|40=2|44=221  
50.00|54=1|55=BTC-USD|59=6|60=20230802-11:01:08.717909000|126=20230803-  
11:00:00.000000000|150=F|151=0.07000000|10=209|

HEADER:

|       |   |
|-------|---|
| [ 8]  | BeginString: FIX.4.4 []                           |
| [ 9]  | BodyLength: 314 []                                |
| [ 34] | MsgSeqNum: 6 []                                   |
| [ 35] | MsgType: 8 [EXECUTION_REPORT]                     |
| [ 49] | SenderCompID: PT-OE []                            |
| [ 52] | SendingTime: 20230802-11:01:08.718 []             |
| [ 56] | TargetCompID: 17b92233f33a4d9a1688fe7d2a5be705 [] |

BODY:

|        |  |
|--------|--|
| [ 1]   | Account: 333 []                              |
| [ 6]   | AvgPx: 0 []                                  |
| [ 11]  | ClOrdID: 1690974067710224 []                 |
| [ 14]  | CumQty: 0.08000000 []                        |
| [ 17]  | ExecID: E741538 []                           |
| [ 31]  | LastPx: 22150.00 []                          |
| [ 32]  | LastQty: 0.08000000 []                       |
| [ 37]  | OrderID: 15091412 []                         |
| [ 38]  | OrderQty: 0.15000000 []                      |
| [ 39]  | OrdStatus: 1 [PARTIALLY_FILLED]              |
| [ 40]  | OrdType: 2 [LIMIT]                           |
| [ 44]  | Price: 22150.00 []                           |
| [ 54]  | Side: 1 [BUY]                                |
| [ 55]  | Symbol: BTC-USD []                           |
| [ 59]  | TimeInForce: 6 [GOOD_TILL_DATE]              |
| [ 60]  | TransactTime: 20230802-11:01:08.717909000 [] |
| [ 126] | ExpireTime: 20230803-11:00:00.000000000 []   |
| [ 150] | ExecType: F [TRADE]                          |
| [ 151] | LeavesQty: 0.07000000 []                     |

TRAILER:

[ 10]

Checksum: 209 []

## 5.4. NewOrderMultileg: RFQ Limit

### 5.4.1. Response: New

```
8=FIX.4.4|9=323|35=8|34=9|49=PT-OE|52=20230802-  
11:01:11.732|56=17b92233f33a4d9a1688fe7d2a5be705|1=333|6=0|11=1690974071730671|14=0.00  
0000|17=N15091416|37=15091416|38=0.100000|39=0|40=2|44=16.0000|54=1|59=6|60=20230802-  
11:01:11.731938000|65=none|126=20230803-  
11:00:00.000000000|150=0|151=0.100000|555=2|600=BTC-USD|623=1|600=ETH-USD|623=-  
1|10=164|
```

HEADER:

```
-----  
[ 8] BeginString: FIX.4.4 []  
[ 9] BodyLength: 323 []  
[34] MsgSeqNum: 9 []  
[35] MsgType: 8 [EXECUTION_REPORT]  
[49] SenderCompID: PT-OE []  
[52] SendingTime: 20230802-11:01:11.732 []  
[56] TargetCompID: 17b92233f33a4d9a1688fe7d2a5be705 []
```

BODY:

```
-----  
[ 1] Account: 333 []  
[ 6] AvgPx: 0 []  
[11] ClOrdID: 1690974071730671 []  
[14] CumQty: 0.000000 []  
[17] ExecID: N15091416 []  
[37] OrderID: 15091416 []  
[38] OrderQty: 0.100000 []  
[39] OrdStatus: 0 [NEW]  
[40] OrdType: 2 [LIMIT]  
[44] Price: 16.0000 []  
[54] Side: 1 [BUY]  
[59] TimeInForce: 6 [GOOD_TILL_DATE]  
[60] TransactTime: 20230802-11:01:11.731938000 []  
[65] SymbolSfx: none []  
[126] ExpireTime: 20230803-11:00:00.000000000 []  
[150] ExecType: 0 [NEW]  
[151] LeavesQty: 0.100000 []  
[555] NoLegs: 2 []  
[600] LegSymbol: BTC-USD []  
[623] LegRatioQty: 1 []  
[600] LegSymbol: ETH-USD []  
[623] LegRatioQty: -1 []
```

TRAILER:

```
-----  
[ 10] CheckSum: 164 []
```

## 5.5. Cancel by ClOrdID

### 5.5.1. Response

```
8=FIX.4.4|9=310|35=8|34=8|49=PT-OE|52=20230802-  
11:01:09.724|56=17b92233f33a4d9a1688fe7d2a5be705|1=333|6=0|11=1690974069723069|14=0.08  
000000|17=C15091412|37=15091412|38=0.15000000|39=4|40=2|41=1690974067710224|44=22150.0  
0|54=1|55=BTC-USD|59=6|60=20230802-11:01:09.723523000|126=20230803-  
11:00:00.000000000|150=4|151=0.07000000|10=075|
```

HEADER:

```
-----  
[ 8] BeginString: FIX.4.4 []  
[ 9] BodyLength: 310 []  
[34] MsgSeqNum: 8 []  
[35] MsgType: 8 [EXECUTION_REPORT]  
[49] SenderCompID: PT-OE []  
[52] SendingTime: 20230802-11:01:09.724 []  
[56] TargetCompID: 17b92233f33a4d9a1688fe7d2a5be705 []
```

BODY:

```
-----  
[ 1] Account: 333 []  
[ 6] AvgPx: 0 []  
[11] ClOrdID: 1690974069723069 []  
[14] CumQty: 0.08000000 []  
[17] ExecID: C15091412 []  
[37] OrderID: 15091412 []  
[38] OrderQty: 0.15000000 []  
[39] OrdStatus: 4 [CANCELED]  
[40] OrdType: 2 [LIMIT]  
[41] OrigClOrdID: 1690974067710224 []  
[44] Price: 22150.00 []  
[54] Side: 1 [BUY]  
[55] Symbol: BTC-USD []  
[59] TimeInForce: 6 [GOOD_TILL_DATE]  
[60] TransactTime: 20230802-11:01:09.723523000 []  
[126] ExpireTime: 20230803-11:00:00.000000000 []  
[150] ExecType: 4 [CANCELED]  
[151] LeavesQty: 0.07000000 []
```

TRAILER:

```
-----  
[ 10] CheckSum: 075 []
```

## 5.6. Cancel by OrderID

## 5.6.1. Response

```
8=FIX.4.4|9=344|35=8|34=22|49=PT-OE|52=20230802-
11:01:24.102|56=17b92233f33a4d9a1688fe7d2a5be705|1=333|6=0|11=1690974084103284|14=0.00
0000|17=C15091423|37=15091423|38=0.100000|39=4|40=2|41=1690974077785721|44=16.0000|54=
1|59=6|60=20230802-11:01:24.102096000|65=none|126=20230803-
11:00:00.000000000|150=4|151=0.100000|555=2|600=BTC-USD|623=1|600=ETH-USD|623=-
1|10=174|
```

### HEADER:

```
-----
[ 8] BeginString: FIX.4.4 []
[ 9] BodyLength: 344 []
[34] MsgSeqNum: 22 []
[35] MsgType: 8 [EXECUTION_REPORT]
[49] SenderCompID: PT-OE []
[52] SendingTime: 20230802-11:01:24.102 []
[56] TargetCompID: 17b92233f33a4d9a1688fe7d2a5be705 []
```

### BODY:

```
-----
[ 1] Account: 333 []
[ 6] AvgPx: 0 []
[11] ClOrdID: 1690974084103284 []
[14] CumQty: 0.000000 []
[17] ExecID: C15091423 []
[37] OrderID: 15091423 []
[38] OrderQty: 0.100000 []
[39] OrdStatus: 4 [CANCELED]
[40] OrdType: 2 [LIMIT]
[41] OrigClOrdID: 1690974077785721 []
[44] Price: 16.0000 []
[54] Side: 1 [BUY]
[59] TimeInForce: 6 [GOOD_TILL_DATE]
[60] TransactTime: 20230802-11:01:24.102096000 []
[65] SymbolSfx: none []
[126] ExpireTime: 20230803-11:00:00.000000000 []
[150] ExecType: 4 [CANCELED]
[151] LeavesQty: 0.100000 []
[555] NoLegs: 2 []
[600] LegSymbol: BTC-USD []
[623] LegRatioQty: 1 []
[600] LegSymbol: ETH-USD []
[623] LegRatioQty: -1 []
```

### TRAILER:

```
-----
[ 10] CheckSum: 174 []
```



# 6. Revision History

Table 11. revision history:

| Date       | Version | Notes                                    |
|------------|---------|--|
| 2023-08-24 | 1.0     | Add configuration examples for using SSL |
| 2023-08-01 | 1.0     | Public release                           |
| 2023-07-30 | 0.1     | Initial Drop Copy FIX API documentation  |