PowerTrade Order Entry FIX API Specification

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VERSION 1.3 (see Revision History)

1. Introduction

Institutions can use the FIX Order Entry session to submit and cancel orders.

Please note that for FIX Order Entry sessions API key with "Trade" permission is required as a password in Logon <A> .

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

- 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

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 <code>Gancel</code> on <code>Disconnect</code>, 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	Req uire d	Description	Valid Values
8	BeginString	Y	Identifies beginning of new message and protocol version. Must be first field in message	"FIX.4.4"
9	BodyLength	Y	Message length, in bytes, forward to the CheckSum field. Must be second field in message	
35	MsgType	Y	Defines message type. Must be third field in message	
34	MsgSeqNum	Y	Integer message sequence number.	
43	PossDupFlag	N	Indicates possible retransmission of message with this sequence number. Required for retransmitted messages.	"Y" = Possible Duplicate "N" = Original Transmission

Tag	Name	Req uire d	Description	Valid Values
49	SenderCompID	Y	Assigned value used to identify firm sending message. If this message is sent to PowerTrade, then it should contain an API Key.	
56	TargetCompID	Y	Assigned value used to identify firm sending message.	If this message is sent to PowerTrade, then it should contain PowerTrade Server Identifier: "PT-OE" = for Order Entry "PT-DC" = for Drop Copy
52	SendingTime	Y	UTC Time of message transmission	YYYYMMDD-HH:mm:ss.nnnnnnnn

3.5. Standard Trailer

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

Tag	Name	Req uire d	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	Req uire d	Description	Valid Values		
Head	Header with MsgType=A					
98	EncryptMethod	N	PowerTrade does not support encryption.	"0" = None		
108	HeartBtInt	Y	Heartbeat interval in seconds.	"30" = 30 seconds		

Tag	Name	Req uire d	Description	Valid Values
141	ResetSeqNumFla g	Y	Indicates both sides of a FIX session should reset sequence numbers. Required in PowerTrade.	"Y" = Yes, reset sequence numbers
554	Password	Y	Assigned value used to authenticate the firm sending the message.	JWT of PowerTrade API key. API keys can be generated in PowerTrade Web App. Procedure of JWT generation is documented in this article. NOTE: FIX Drop Copy API requires Read-Only API keys, while FIX Order Entry API requires API keys with Trade permission enabled.
Trail	er			

3.7. Heartbeat <0>

FIX4.4 Standard

Table 3. Heartbeat fields:

Tag	Name	Req uire d	Description	Valid Values	
Head	Header with MsgType=0				
112	TestReqID	С	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	Req uire d	Description	Valid Values		
Head	Header with MsgType=1					
112	TestReqID	С	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	Req uire d	Description	Valid Values
Head	ler with MsgType=	2		
7	BeginSeqNo	Y	Message sequence number of first message in range to be resent	
16	EndSeqNo	Y	Message sequence number of last message in range to be resent. If request is for a single message BeginSeqNo <7> = EndSeqNo <16>. If request is for all messages subsequent to a particular message, EndSeqNo <16> = 0 (representing infinity).	
Trail	er			

3.10. Reject <3>

FIX4.4 Standard

Table 6. Reject fields:

Tag	Name	Req uire d	Description	Valid Values	
Header with MsgType=3					

45 RefSeqNum Y MsgSeqNum <34> of the rejected message. 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. "0" = Invalid tag number "1" = Required tag missing "2" = Tag not defined for this message type "3" = Undefined Tag "4" = Tag specified without a value "5" = Value is incorrect (out of range) for this tag "6" = Incorrect data format for value "10" = SendingTime <52> accuracy problem	Tag	Name	Req uire d	Description	Valid Values
RefTagID Y The tag number of the FIX field being referenced. The MsgType <35> of the rejected message. "0" = Invalid tag number "1" = Required tag missing "2" = Tag not defined for this message type "3" = Undefined Tag "4" = Tag specified without a value "5" = Value is incorrect (out of range) for this tag "6" = Incorrect data format for value "10" = SendingTime <52>	45	RefSeqNum	Y	9 1	SeqNum
being referenced. RefMsgType Y	58	Text	N	Human-readable explanation	
rejected message. "0" = Invalid tag number "1" = Required tag missing "2" = Tag not defined for this message type "3" = Undefined Tag "4" = Tag specified without a value "5" = Value is incorrect (out of range) for this tag "6" = Incorrect data format for value "10" = SendingTime <52>	371	RefTagID	Y	_	
"1" = Required tag missing "2" = Tag not defined for this message type "3" = Undefined Tag "4" = Tag specified without a value "5" = Value is incorrect (out of range) for this tag "6" = Incorrect data format for value "10" = SendingTime <52>	372	RefMsgType	Y		
"11" = Invalid MsgType <35> Trailer		son	Y	•	"1" = Required tag missing "2" = Tag not defined for this message type "3" = Undefined Tag "4" = Tag specified without a value "5" = Value is incorrect (out of range) for this tag "6" = Incorrect data format for value "10" = SendingTime <52> accuracy problem

3.11. Sequence Reset <4>

FIX4.4 Standard

Table 7. Resend Request fields:

Tag	Name	Req uire d	Description	Valid Values
Header with MsgType=4				

Tag	Name	Req uire d	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	
Trail	Trailer				

3.12. Logout <5>

FIX4.4 Standard

Table 8. Logout fields:

Tag	Name	Req uire d	Description	Valid Values		
Head	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	Req uire d	Description	Valid Values
Head	ler 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	BusinessRejectRe fID	Y	The value of the business level ID field being referenced.	

Tag	Name	Req uire d	Description	Valid Values
380	BusinessRejectRe ason	Y	Code to identify the reason for the Business Message Reject <j> message</j>	"0" = Other "1" = Unknown ID "2" = Unknown Security "3" = Unsupported Message Type "4" = Application not available "5" = Conditionally Required Field Missing
Trail	er			

4. Exchange-Bound Messages

4.1. New Order Single <8>

FIX4.4 Standard

Table 10. New Order Single fields:

Tag	Name	Req uire d	Description	Valid Values
Head	ler with MsgType=8	3		
11	ClOrdID	Y	Unique ID of the new Order, Cancel, or Cancel/Replace request as assigned by the firm. It is critical that this ID is unique and monotonically increased and be in range 072'057'594'037'927'936 (2^56) Good practice: start with Unix time in µs and increment for each request.	order_token

Tag	Name	Req uire d	Description	Valid Values
18	ExecInst	N	Used to specify values for different order types. If more than one instruction is applicable to an order, this field can contain multiple instructions separated by space.	"6" = Participate Do Not Initiate
40	OrdType	Y	Indicates order type	"1" = Market "2" = Limit
44	Price	С	Order Price	Required for OrdType=LIMIT orders
38	OrderQty	Y	Order Quantity	Decimal
110	MinQty	N	Minimum quantity of an order to be executed. Should not be set for TimeInForce except "3" IOC or "4" FOK.	Quantity .minimum_quantity field of full order
54	Side	Y	Order Side	"1" = Buy "2" = Sell side
55	Symbol	Y	Symbol of the Tradeable Entity	.symbol field of tradeable_entity PowerTrade provides symbols of listed treadable entities in Reference Data: * Simplified MD Feeds * Session-based MD Service Ignored for Multi-Leg Order
65	SymbolSfx	N	ID of the market for corresponding order book	<pre>"0" = normal order book (where firm orders being matched) "none" = indicative order book (RFQ)</pre>

Tag	Name	Req uire d	Description	Valid Values
				"0" = Cycle
				"1" = GTC
59	TimeInForce	Y	Specifies how long the orders remains alive	"3" = IOC
59	Timemrorce	1		"4" = FOK
				"6" = GTD
				time_in_force
60	TransactTime	Y	UTC Time this order request was initiated/released by the trader, trading system, or intermediary.	YYYYMMDD-HH:mm:ss.nnnnnnnn
126	ExpireTime	С	UTC Time of order expiration	YYYYMMDD-HH:mm:ss.nnnnnnnn
126	ryhneimie		Required if TimeInForce=GTD	time_to_live
Trail	er			

4.2. New Order Multileg <AB>

FIX4.4 Standard

Table 11. New Order Multileg fields:

Tag	Name	Req uire d	Description	Valid Values
Header with MsgType=AB				

Tag	Name	Req uire d	Description	Valid Values
11	ClOrdID	Y	Unique ID of the new Order, Cancel, or Cancel/Replace request as assigned by the firm. It is critical that this ID is unique and monotonically increased and be in range 072'057'594'037'927'936 (2^56) Good practice: start with Unix time in µs and increment for each request.	order_token
18	ExecInst	N	Used to specify values for different order types. If more than one instruction is applicable to an order, this field can contain multiple instructions separated by space.	"6" = Participate Do Not Initiate
40	OrdType	Y	Indicates order type	"1" = Market "2" = Limit
44	Price	С	Order Price	Required for OrdType=LIMIT orders
38	OrderQty	Y	Order Quantity	Decimal
110	MinQty	N	Minimum quantity of an order to be executed. Should not be set for TimeInForce except "3" IOC or "4" FOK.	Quantity .minimum_quantity field of full order
54	Side	Y	Order Side	"1" = Buy "2" = Sell side

Tag	Name	Req uire d	Description	Valid Values
55	Symbol	Y	Symbol of the Tradeable Entity	.symbol field of tradeable_entity PowerTrade provides symbols of listed treadable entities in Reference Data: * Simplified MD Feeds * Session-based MD Service Ignored for Multi-Leg Order
65	SymbolSfx	N	ID of the market for corresponding order book	<pre>"0" = normal order book (where firm orders being matched) "none" = indicative order book (RFQ)</pre>
555	NoLegs	С	Number of legs. Identifies a Multi-leg Execution if present and non-zero.	
Comj	oonent Block Instru	ıment	Leg:	
600	⇒ LegSymbol	Y	Multileg instrument's individual security's Symbol. See Symbol <55> field for description	legs.tradeable_entity_id field of legs
623	⇒ LegRatioQty	Y	The ratio of quantity for this individual leg relative to the entire multileg security.	legs.ratio field of legs May be negative to represent Leg's Side as reciprocal to Order's Side
The e	end of Component I	Block 1	InstrumentLeg	
59	TimeInForce	Y	Specifies how long the orders remains alive	"0" = Cycle "1" = GTC "3" = IOC "4" = FOK "6" = GTD time_in_force

Tag	Name	Req uire d	Description	Valid Values	
60	TransactTime	Y	UTC Time this order request was initiated/released by the trader, trading system, or intermediary.	YYYYMMDD-HH:mm:ss.nnnnnnnn	
126	ExpireTime	С	UTC Time of order expiration	YYYYMMDD-HH:mm:ss.nnnnnnnn	
			Required if TimeInForce=GTD	time_to_live	
Trail	Trailer				

4.3. Order Cancel Request <F>

FIX4.4 Standard

Table 12. Order Cancel Request fields:

Tag	Name	Req uire d	Description	Valid Values
Head	ler with MsgType=	F		
11	ClOrdID	Y	Unique ID of the new Order, Cancel, or Cancel/Replace request as assigned by the firm. It is critical that this ID is unique and monotonically increased and be in range 072'057'594'037'927'936 (2^56) Good practice: start with Unix time in µs and increment for each request.	order_token
18	ExecInst	N	Used to specify values for different order types. If more than one instruction is applicable to an order, this field can contain multiple instructions separated by space.	"6" = Participate Do Not Initiate
38	OrderQty	Y	Order Quantity	Decimal

Tag	Name	Req uire d	Description	Valid Values
40	OrdType	Y	Indicates order type	"1" = Market "2" = Limit
44	Price	С	Order Price	Required for OrdType=LIMIT orders
54	Side	Y	Order Side	"1" = Buy "2" = Sell side
55	Symbol	Y	Symbol of the Tradeable Entity	.symbol field of tradeable_entity PowerTrade provides symbols of listed treadable entities in Reference Data: * Simplified MD Feeds * Session-based MD Service Ignored for Multi-Leg Order
59	TimeInForce	Y	Specifies how long the orders remains alive	"0" = Cycle "1" = GTC "3" = IOC "4" = FOK "6" = GTD time_in_force
60	TransactTime	Y	UTC Time this order request was initiated/released by the trader, trading system, or intermediary.	YYYYMMDD-HH:mm:ss.nnnnnnnn
126	ExpireTime	С	UTC Time of order expiration Required if TimeInForce=GTD	YYYYMMDD-HH:mm:ss.nnnnnnnn time_to_live
Trail	er			

4.4. Security Definition Request <c>

FIX4.4 Standard

Subscription to Security Definition Request means subscribing to Security Definition and Security Status updates.

Table 13. Security Definition Request fields:

Tag	Name	Req uire d	Description	Valid Values	
Head	ler with MsgType=c	2			
320	SecurityReqID	Y	Unique ID	String	
321	SecurityRequestT ype	Y	Type of Security Definition Request	"3" = Request List Securities	
55	Symbol	N	Symbol of the Tradeable Entity	.symbol field of tradeable_entity	
Trail	Trailer				

4.5. Security List Request <x>

FIX4.4 Standard

Subscription to Security List Request means subscribing to Security Definition and Security Status updates.

Table 14. Security List Request fields:

Tag	Name	Req uire d	Description	Valid Values
Head	ler with MsgType=>	ζ		
320	SecurityReqID	Y	Unique ID	String
559	SecurityListRequ estType	Y	Identifies the type/criteria	<pre>"0" = Symbol <55> - query by symbol prefix "4" = All Securities</pre>
55	Symbol	N	Symbol of the Tradeable Entity	.symbol field of tradeable_entity
Trail	Trailer			

5. Client-Bound Messages

5.1. 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 15. Execution Report fields:

Tag	Name	Req uire d	Description	Valid Values		
Head	Header with MsgType=8					
1	Account	Y	Identifier of the party associated with the order.	account_id		
55	Symbol	Y	Symbol of the Tradeable Entity	.symbol field of tradeable_entity PowerTrade provides symbols of listed treadable entities in Reference Data: * Simplified MD Feeds * Session-based MD Service Ignored for Multi-Leg Order		
17	ExecID	Y	Unique event ID assigned by PowerTrade.			
37	OrderID	Y	The PowerTrade-assigned order ID.	<pre>order_id "NONE" = Unknown OrderID (if ExecType = "8" Rejected)</pre>		

Tag	Name	Req uire d	Description	Valid Values
11	ClOrdID	Y	Unique ID of the new Order, Cancel, or Cancel/Replace request as assigned by the firm. It is critical that this ID is unique and monotonically increased and be in range 072'057'594'037'927'936 (2^56) Good practice: start with Unix time in µs and increment for each request.	order_token
198	SecondaryOrderI D	С	Required if order is visible in the Order Book	The PowerTrade-assigned display_order_id, appears in Public Market Data: Session-based Service, Simplified MD Feeds.
526	SecondaryClOrdI D	N		display_order_id Right 16 bytes from client_reference provided by a client in enter_order request Characters in ASCII range 32- 127 are allowed
150	ЕхесТуре	Y	Describes the purpose of the Execution Report.	"0" = New "4" = Cancelled "8" = Rejected "A" = Pending New "C" = Expired "D" = Restated "F" = Trade "H" = Trade Cancel

Tag	Name	Req uire d	Description	Valid Values
39	OrdStatus	Y	Describes the current order status.	<pre>"0" = New "1" = Partially Filled "2" = Filled "4" = Canceled "8" = Rejected "A" = Pending New "C" = Expired order_state</pre>
59	TimeInForce	Y	Specifies how long the orders remains alive	"0" = Cycle "1" = GTC "3" = IOC "4" = FOK "6" = GTD time_in_force
126	ExpireTime	С	UTC Time of order expiration Required if TimeInForce=GTD	YYYYMMDD-HH:mm:ss.nnnnnnnn time_to_live
40	OrdType	Y	Indicates order type	"1" = Market "2" = Limit
54	Side	Y	Order Side	"1" = Buy "2" = Sell side
44	Price	С	Order Price	Required for OrdType=LIMIT orders
38	OrderQty	Y	Order Quantity	Decimal

Tag	Name	Req uire d	Description	Valid Values
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	С	Price of this (last) fill. Required if ExecType <150> is F = Trade. For Security Status <f> represents the last price for that security, absent if security has no trades.</f>	.price field of trade
32	LastQty	С	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. PowerTrade doesn't update this field, so it is always set to 0.	"0"
555	NoLegs	С	Number of legs. Identifies a Multi-leg Execution if present and non-zero.	
Comp	ponent Block Instru	ument	Leg:	
600	⇒ LegSymbol	Y	Multileg instrument's individual security's Symbol. See Symbol <55> field for description	legs.tradeable_entity_id field of legs
623	⇒ LegRatioQty	Y	The ratio of quantity for this individual leg relative to the entire multileg security.	legs.ratio field of legs May be negative to represent Leg's Side as reciprocal to Order's Side
The e	end of Component	Block 1	InstrumentLeg	

Tag	Name	Req uire d	Description	Valid Values	
Trail	Trailer				

5.2. Order Cancel Reject <9>

The Order Cancel Reject <9> message is issued by the broker upon receipt of a cancel request or cancel/replace request message which cannot be honored.

Table 16. Order Cancel Reject fields:

Tag	Name	Req uire d	Description	Valid Values
Head	ler with MsgType=9)		
37	OrderID	Y	The PowerTrade-assigned order ID.	<pre>order_id "NONE" = Unknown OrderID (if ExecType = "8" Rejected)</pre>
11	ClOrdID	Y	Unique ID of the new Order, Cancel, or Cancel/Replace request as assigned by the firm. It is critical that this ID is unique and monotonically increased and be in range 072'057'594'037'927'936 (2^56) Good practice: start with Unix time in µs and increment for each request.	order_token
41	OrigClOrdID	С	Unique ID of the Order.	order_token

Tag	Name	Req uire d	Description	Valid Values
			Describes the current order	"0" = New "1" = Partially Filled "2" = Filled "4" = Canceled
39	OrdStatus	Y	status.	"8" = Rejected "A" = Pending New "C" = Expired order_state
Trail	er			

5.3. Security Definition <d>

FIX4.4 Standard

Table 17. Security Definition fields:

Tag	Name	Req uire d	Description	Valid Values
Head	ler with MsgType=c	l		
320	SecurityReqID	Y	Unique ID	String
322	SecurityResponse ID	Y	Unique ID	String
323	SecurityResponse Type	Y	Type of Security Definition <d> message response.</d>	"1" = Accept security proposal as is
55	Symbol	Y	Symbol of the Tradeable Entity	.symbol field of tradeable_entity PowerTrade provides symbols of listed treadable entities in Reference Data: * Simplified MD Feeds * Session-based MD Service Ignored for Multi-Leg Order

Tag	Name	Req uire d	Description	Valid Values
48	SecurityID	N	Required if order is visible in the Order Book	The PowerTrade-assigned tradeable_entity_id.
22	SecurityIDSource	N		"8" = Exchange Symbol
461	CFICode	Y	Indicates the type of security using ISO 10962 standard	See CFICode
711	NoUnderlyings	С	Number of underlying legs that make up the security.	
Com	ponent Block Unde	rlying	Instrument:	
311	⇒ UnderlyingSymb ol	Y	Underlying security's Symbol.	
309	⇒ UnderlyingSecuri tyID	Y		
305	⇒ UnderlyingSecuri tyIDSource	Y		
463	⇒ UnderlyingCFICo de	Y		
318	⇒ UnderlyingCurre ncy	Y		
The	end of Component I	Block	UnderlyingInstrument	
15	Currency	Y	Identifies currency used for price.	String

Tag	Name	Req uire d	Description	Valid Values
				JSON, all fields are strings representing monetary numbers:
				"minimum_price"
				"maximum_price"
	Text			"price_step" - tick size
				"minimum_quantity"
			Additional information:	"maximum_quantity"
58		Y	trading_rule	"quantity_step" - lot size
				"minimum_value"
				"maximum_value"
				e.g.{"minimum_price":"0.50","m aximum_price":"1000000.00","p rice_step":"0.50","minimum_qu antity":"0.00010000","maximum _quantity":"10000.00000000"," quantity_step":"0.00010000"," minimum_value":"0.0000500000","maximum_value":"100000000000000000000000000000000000

5.4. Security Status <f>

FIX4.4 Standard

Table 18. Security Status fields:

Tag	Name	Req uire d	Description	Valid Values		
Head	Header with MsgType=f					
320	SecurityReqID	Y	Unique ID	String		
322	SecurityResponse ID	Y	Unique ID	String		

Tag	Name	Req uire d	Description	Valid Values		
323	SecurityResponse Type	Y	Type of Security Definition <d> message response.</d>	"1" = Accept security proposal as is		
55	Symbol	Y	Symbol of the Tradeable Entity	.symbol field of tradeable_entity PowerTrade provides symbols of listed treadable entities in Reference Data: * Simplified MD Feeds * Session-based MD Service Ignored for Multi-Leg Order		
48	SecurityID	N	Required if order is visible in the Order Book	The PowerTrade-assigned tradeable_entity_id.		
22	SecurityIDSource	N		"8" = Exchange Symbol		
461	CFICode	Y	Indicates the type of security using ISO 10962 standard	See CFICode		
711	NoUnderlyings	С	Number of underlying legs that make up the security.			
Com	Component Block UnderlyingInstrument:					
311	⇒ UnderlyingSymb ol	Y	Underlying security's Symbol.			
309	⇒ UnderlyingSecuri tyID	Y				
305	⇒ UnderlyingSecuri tyIDSource	Y				
463	⇒ UnderlyingCFICo de	Y				
318	⇒ UnderlyingCurre ncy	Y				
The e	end of Component I	Block 1	UnderlyingInstrument			
15	Currency	Y	Identifies currency used for price.	String		

Tag	Name	Req uire d	Description	Valid Values
326	SecurityTradingS tatus	Y	Identifies the trading status applicable to the transaction.	trading_state "2" = Trading Halt "17" = Ready to trade "18" = Not Available for trading
31	LastPx	С	Price of this (last) fill. Required if ExecType <150> is F = Trade. For Security Status <f>represents the last price for that security, absent if security has no trades.</f>	.price field of trade
58	Text	Y	Additional information: trading_rule	JSON, all fields are strings representing monetary numbers: "minimum_price" "maximum_price" "price_step" - tick size "minimum_quantity" "quantity_step" - lot size "minimum_value" "maximum_price":"1000000.00","p rice_step":"0.50","minimum_qu antity":"1000010000","p rice_step":"0.50","minimum_qu antity":"10000.00000000"," quantity":"10000.00000000"," quantity_step":"0.00010000"," minimum_value":"0.0000500000" ,"maximum_value":"1000000000000000" ,"maximum_value":"100000000000000000000000000000000000

Tag	Name	Req uire d	Description	Valid Values	
Trailer					

5.5. Security List <y>

FIX4.4 Standard

Only ready to trade tradeable entities are shown here. If you want to get the list of all tradeable entities including suspended and indicative (e.g. indexes), please use SecurityDefinitionRequest <c>

Table 19. Security List fields:

Tag	Name	Req uire d	Description	Valid Values
Head	ler with MsgType=y	7		
320	SecurityReqID	Y	Unique ID	String
322	SecurityResponse ID	Y	Unique ID	String
560	SecurityRequestR esult	Y	Unique ID	String
146	NoRelatedSym	Y	Specifies the number of repeating symbols specified.	
Com	ponent Block Relate	edSym:		
55	Symbol	Y	Symbol of the Tradeable Entity	.symbol field of tradeable_entity PowerTrade provides symbols of listed treadable entities in Reference Data: * Simplified MD Feeds * Session-based MD Service Ignored for Multi-Leg Order
48	SecurityID	N	Required if order is visible in the Order Book	The PowerTrade-assigned tradeable_entity_id.
22	SecurityIDSource	N		"8" = Exchange Symbol
461	CFICode	Y	Indicates the type of security using ISO 10962 standard	See CFICode
711	NoUnderlyings	С	Number of underlying legs that make up the security.	

Tag	Name	Req uire d	Description	Valid Values	
Com	ponent Block Unde	rlying	Instrument:		
311	⇒ UnderlyingSymb ol	Y	Underlying security's Symbol.		
309	⇒ UnderlyingSecuri tyID	Y			
305	⇒ UnderlyingSecuri tyIDSource	Y			
463	⇒ UnderlyingCFICo de	Y			
318	⇒ UnderlyingCurre ncy	Y			
The	The end of Component Block UnderlyingInstrument				
15	Currency	Y	Identifies currency used for price.	String	

Tag	Name	Req uire d	Description	Valid Values
58	Text	Y	Additional information: trading_rule	JSON, all fields are strings representing monetary numbers: "minimum_price" "maximum_price" "price_step" - tick size "minimum_quantity" "quantity_step" - lot size "minimum_value" "maximum_value" e.g.{"minimum_price":"0.50","m aximum_price":"1000000.00","p rice_step":"0.50","minimum_qu antity":"0.00010000","maximum quantity":"10000.00000000"," quantity_step":"0.00010000"," minimum_value":"0.0000500000"," minimum_value":"1000000000000"," maximum_value":"100000000000000000000000000000000000
The o	end of Component er	Block	RelatedSym	

6. Examples

6.1. Logon

6.1.1. Request

8=FIX.4.4|9=371|35=A|34=1|49=17b92233f33a4d9a1688fe7d2a5be705|52=20230802-11:01:23.047|56=PT-

OE|98=0|108=30|141=Y|554=eyJhbGciOiJFUzI1NiIsInR5cCI6IkpXVCJ9.eyJpc3MiOiJhcGkud3NzLmR1 di5wb3dlci50cmFkZSIsInN1YiI6IjE3YjkyMjMzZjMzYTRkOWExNjg4ZmU3ZDJhNWJlNzA1IiwiZXhwIjoxNjkwOTc0MDk4LCJpYXQiOjE2OTA5NzQwODN9.p_j6e_1dfmuYT9eveIx-ASu-

```
mtT8HuXltQ_O_8K896f8Y5W5CZQiNb0G1Y8XGZoDGryjuGC-YzMoEkqsGSIYAA|10=201|
HFADFR:
    [ 8]
                                 BeginString: FIX.4.4 []
    Γ 91
                                  BodyLength: 371 []
                                  MsgSeqNum: 1 []
    [ 34]
    [ 35]
                                     MsgType: A [LOGON]
    [ 49]
                                SenderCompID: 17b92233f33a4d9a1688fe7d2a5be705 []
                                 SendingTime: 20230802-11:01:23.047 []
    [ 52]
                                TargetCompID: PT-OE []
    [ 56]
BODY:
                           EncryptMethod: 0 [NONE]
    [ 98]
                                  HeartBtInt: 30 []
    [ 108]
                   HeartBtInt: 30 []
ResetSeqNumFlag: Y [YES]
    [ 141]
                                    Password:
    [ 554]
eyJhbGciOiJFUzI1NiIsInR5cCI6IkpXVCJ9.eyJpc3MiOiJhcGkud3NzLmRldi5wb3dlci50cmFkZSIsInN1Y
iI6IjE3YjkyMjMzZjMzYTRkOWExNjg4ZmU3ZDJhNWJlNzA1IiwiZXhwIjoxNjkwOTc0MDk4LCJpYXQi0jE2OTA
5NzQwODN9.p j6e 1dfmuYT9eveIx-ASu-mtT8HuXltQ O 8K896f8Y5W5CZQiNb0G1Y8XGZoDGryjuGC-
YzMoEkqsGSIYAA []
TRAILER:
    [ 10]
                                  CheckSum: 201 []
```

6.1.2. Response

```
8=FIX.4.4|9=98|35=A|34=1|49=PT-0E|52=20230802-
11:01:23.046|56=17b92233f33a4d9a1688fe7d2a5be705|98=0|108=30|141=Y|10=032|
HEADER:
                                BeginString: FIX.4.4 []
    [ 8]
                                BodyLength: 98 []
    [ 9]
                                  MsgSeqNum: 1 []
    [ 34]
    [ 35]
                                    MsgType: A [LOGON]
                               SenderCompID: PT-0E []
    [ 49]
                                SendingTime: 20230802-11:01:23.046 []
    [ 52]
                               TargetCompID: 17b92233f33a4d9a1688fe7d2a5be705 []
    [ 56]
BODY:
                           EncryptMethod: 0 [NONE]
   [ 98]
                                 HeartBtInt: 30 []
    [ 108]
                    ResetSeqNumFlag: Y [YES]
    [ 141]
TRAILER:
```

[10] CheckSum: 032 []

6.2. NewOrderSingle: Limit

6.2.1. Request

```
8=FIX.4.4|9=199|35=D|34=7|49=17b92233f33a4d9a1688fe7d2a5be705|52=20230802-
11:20:11.303|56=PT-OE|11=1690975211302602|38=0.1500|40=2|44=22150.00|54=1|55=BTC-
USD | 59=6 | 60=20230802-11:20:11.302 | 126=20230803-11:20:11.302 | 10=186 |
HEADER:
                                 BeginString: FIX.4.4 []
    [ 8]
                                  BodyLength: 199 []
    [ 9]
                                   MsgSeqNum: 7 []
    [ 34]
                                     MsqType: D [ORDER_SINGLE]
    [ 35]
                                SenderCompID: 17b92233f33a4d9a1688fe7d2a5be705 []
    [ 49]
                                 SendingTime: 20230802-11:20:11.303 []
    [ 52]
                                TargetCompID: PT-OE []
    561
BODY:
    [ 11]
                                     ClordID: 1690975211302602 []
    [ 38]
                                    OrderQty: 0.1500 []
    [ 40]
                                     OrdType: 2 [LIMIT]
    [ 44]
                                       Price: 22150.00 []
    [ 54]
                                        Side: 1 [BUY]
                                      Symbol: BTC-USD []
    [ 55]
                                 TimeInForce: 6 [GOOD_TILL_DATE]
    [ 59]
                                TransactTime: 20230802-11:20:11.302 []
    [ 60]
    [ 126]
                                  ExpireTime: 20230803-11:20:11.302 []
TRAILER:
    [ 10]
                                    CheckSum: 186 []
```

6.2.2. Response: Pending

```
8=FIX.4.4|9=290|35=8|34=6|49=PT-0E|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 []
                                  BodyLength: 290 []
      9]
                                   MsgSegNum: 6 []
      34]
                                     MsqType: 8 [EXECUTION_REPORT]
     35]
                                SenderCompID: PT-OE []
    [ 49]
                                 SendingTime: 20230802-11:20:11.305 []
    [ 52]
                                TargetCompID: 17b92233f33a4d9a1688fe7d2a5be705 []
    [ 56]
BODY:
    [ 1]
                                     Account: 333 []
                                       AvgPx: 0 []
    Γ
      6]
                                     ClOrdID: 1690975211302602 []
    [ 11]
      14]
                                      CumQty: 0.00000000 []
      17]
                                      ExecID: P15091429 []
                                     OrderID: 15091429 []
    [ 37]
                                    OrderQty: 0.15000000 []
     381
                                   OrdStatus: A [PENDING NEW]
    [ 39]
    [ 40]
                                     OrdType: 2 [LIMIT]
                                       Price: 22150.00 []
    [ 44]
    [ 54]
                                        Side: 1 [BUY]
                                      Symbol: BTC-USD []
    [ 55]
                                 TimeInForce: 6 [GOOD_TILL_DATE]
    [ 59]
    [ 60]
                                TransactTime: 20230802-11:20:11.304719000 []
    [ 126]
                                  ExpireTime: 20230803-11:20:00.000000000 []
    [ 150]
                                    ExecType: A [PENDING_NEW]
    [ 151]
                                   LeavesQty: 0.15000000 []
TRAILER:
                                    CheckSum: 117 []
    [ 10]
```

6.2.3. Response: New

```
8=FIX.4.4|9=290|35=8|34=7|49=PT-0E|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-
11:20:00.0000000000|150=0|151=0.15000000|10=084|
HEADER:
    [ 8]
                                 BeginString: FIX.4.4 []
                                  BodyLength: 290 []
    [ 9]
                                   MsgSeqNum: 7 []
    [ 34]
    [ 35]
                                     MsgType: 8 [EXECUTION_REPORT]
    [ 49]
                                SenderCompID: PT-OE []
                                 SendingTime: 20230802-11:20:11.306 []
    [ 52]
                                TargetCompID: 17b92233f33a4d9a1688fe7d2a5be705 []
    [ 56]
```

```
BODY:
      1]
    Account: 333 []
       6]
                                       AvgPx: 0 []
     11]
                                     ClordID: 1690975211302602 []
      14]
                                      CumQty: 0.00000000 []
      17]
                                      ExecID: N15091429 []
      37]
                                     OrderID: 15091429 []
     381
                                    OrderQty: 0.15000000 []
      39]
                                   OrdStatus: 0 [NEW]
      40]
                                     OrdType: 2 [LIMIT]
    [ 44]
                                       Price: 22150.00 []
                                        Side: 1 [BUY]
      54]
    [ 55]
                                      Symbol: BTC-USD []
                                 TimeInForce: 6 [GOOD_TILL_DATE]
    [ 59]
                                TransactTime: 20230802-11:20:11.306529000 []
    [ 60]
                                  ExpireTime: 20230803-11:20:00.000000000 []
    [ 126]
    [ 150]
                                    ExecType: 0 [NEW]
                                   LeavesQty: 0.15000000 []
    [ 151]
TRAILER:
    [ 10]
                                    CheckSum: 084 []
```

6.2.4. Response: Trade

```
8=FIX.4.4|9=314|35=8|34=8|49=PT-0E|52=20230802-
11:20:11.307|56=17b92233f33a4d9a1688fe7d2a5be705|1=333|6=0|11=1690975211302602|14=0.15
000000 | 17=E741540 | 31=21150.00 | 32=0.15000000 | 37=15091429 | 38=0.15000000 | 39=2 | 40=2 | 44=221
50.00|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:
                                 BeginString: FIX.4.4 []
    [ 8]
                                  BodyLength: 314 []
    [ 9]
      34]
                                   MsgSeqNum: 8 []
     35]
                                     MsgType: 8 [EXECUTION_REPORT]
                                SenderCompID: PT-OE []
    [ 49]
      52]
                                 SendingTime: 20230802-11:20:11.307 []
    [ 56]
                                TargetCompID: 17b92233f33a4d9a1688fe7d2a5be705 []
BODY:
                                     Account: 333 []
    1]
      6]
                                       AvgPx: 0 []
                                     ClOrdID: 1690975211302602 []
     11]
      14]
                                      CumQty: 0.15000000 []
```

```
17]
                                      ExecID: E741540 []
      31]
                                      LastPx: 21150.00 []
      32]
                                     LastQty: 0.15000000 []
                                     OrderID: 15091429 []
     37]
                                    OrderQty: 0.15000000 []
    [ 38]
                                   OrdStatus: 2 [FILLED]
     39]
    [ 40]
                                     OrdType: 2 [LIMIT]
    [ 44]
                                       Price: 22150.00 []
    [ 54]
                                        Side: 1 [BUY]
    [ 55]
                                      Symbol: BTC-USD []
    [ 59]
                                 TimeInForce: 6 [GOOD_TILL_DATE]
                                TransactTime: 20230802-11:20:11.306529000 []
    [ 60]
                                  ExpireTime: 20230803-11:20:00.000000000 []
    [ 126]
                                    ExecType: F [TRADE]
    [ 150]
                                   LeavesQty: 0.00000000 []
    [ 151]
TRAILER:
    [ 10]
                                    CheckSum: 168 []
```

6.3. NewOrderSingle: Market

6.3.1. Request

```
8=FIX.4.4|9=161|35=D|34=3|49=17b92233f33a4d9a1688fe7d2a5be705|52=20230802-
11:01:08.714|56=PT-0E|11=1690974068713638|38=0.0800|40=1|54=2|55=BTC-
USD|59=3|60=20230802-11:01:08.713|10=183|
HEADER:
                                 BeginString: FIX.4.4 []
    [ 8]
                                  BodyLength: 161 []
    [ 9]
    [ 34]
                                   MsqSeqNum: 3 []
                                     MsgType: D [ORDER_SINGLE]
    [ 35]
    [ 49]
                                SenderCompID: 17b92233f33a4d9a1688fe7d2a5be705 []
    [ 52]
                                 SendingTime: 20230802-11:01:08.714 []
                                TargetCompID: PT-OE []
    [ 56]
BODY:
    [ 11]
                                     ClordID: 1690974068713638 []
    [ 38]
                                    OrderQty: 0.0800 []
                                     OrdType: 1 [MARKET]
    [ 40]
    [ 54]
                                        Side: 2 [SELL]
    [ 55]
                                      Symbol: BTC-USD []
                                 TimeInForce: 3 [IMMEDIATE_OR_CANCEL]
      597
                                TransactTime: 20230802-11:01:08.713 []
    [ 60]
TRAILER:
```

[10] CheckSum: 183 []

6.3.2. Response: Pending

```
8=FIX.4.4|9=246|35=8|34=4|49=PT-0E|52=20230802-
11:01:08.716|56=17b92233f33a4d9a1688fe7d2a5be705|1=333|6=0|11=1690974068713638|14=0.00
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:
                                 BeginString: FIX.4.4 []
    [ 8]
                                  BodyLength: 246 []
    [ 9]
                                   MsgSegNum: 4 []
    [ 34]
    [ 35]
                                     MsgType: 8 [EXECUTION_REPORT]
                                SenderCompID: PT-OE []
    [ 49]
    [ 52]
                                 SendingTime: 20230802-11:01:08.716 []
    [ 56]
                                TargetCompID: 17b92233f33a4d9a1688fe7d2a5be705 []
BODY:
    Γ
      1]
                                     Account: 333 []
                                       AvgPx: 0 []
    [ 6]
      11]
                                     ClOrdID: 1690974068713638 []
      14]
                                      CumQty: 0.00000000 []
      17]
                                      ExecID: P15091414 []
                                     OrderID: 15091414 []
    [ 37]
    T 381
                                    OrderQty: 0.08000000 []
      39]
                                   OrdStatus: A [PENDING_NEW]
                                     OrdType: 1 [MARKET]
    [ 40]
                                        Side: 2 [SELL]
    [ 54]
                                      Symbol: BTC-USD []
    [ 55]
    591
                                 TimeInForce: 3 [IMMEDIATE_OR_CANCEL]
                                TransactTime: 20230802-11:01:08.716150000 []
    [ 60]
                                    ExecType: A [PENDING_NEW]
    [ 150]
                                   LeavesQty: 0.08000000 []
    [ 151]
TRAILER:
                                    CheckSum: 083 []
    [ 10]
```

6.3.3. 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=0.00
000000|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=0.080000000|10=063|
```

```
HEADER:
                                 BeginString: FIX.4.4 []
   [ 8]
                                 BodyLength: 246 []
   [ 9]
   [ 34]
                                  MsqSeqNum: 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 []
                                    ClOrdID: 1690974068713638 []
   [ 11]
      14]
                                     CumQty: 0.00000000 []
   [ 17]
                                     ExecID: N15091414 []
     37]
                                    OrderID: 15091414 []
     381
                                   OrderQty: 0.08000000 []
   [ 39]
                                   OrdStatus: 0 [NEW]
     40]
                                    OrdType: 1 [MARKET]
                                       Side: 2 [SELL]
   [ 54]
   [ 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:
                                   CheckSum: 063 []
   [ 10]
```

6.3.4. Response: Trade

```
8=FIX.4.4|9=314|35=8|34=6|49=PT-0E|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-
11:00:00.0000000000|150=F|151=0.07000000|10=209|
HEADER:
    [ 8]
                                 BeginString: FIX.4.4 []
                                  BodyLength: 314 []
    [ 9]
    [ 34]
                                   MsgSeqNum: 6 []
    [ 35]
                                     MsgType: 8 [EXECUTION_REPORT]
                                SenderCompID: PT-OE []
    [ 49]
                                 SendingTime: 20230802-11:01:08.718 []
    [ 52]
```

```
[ 56]
                                TargetCompID: 17b92233f33a4d9a1688fe7d2a5be705 []
BODY:
   [ 1]
                                     Account: 333 []
                                       AvgPx: 0 []
   Γ
      61
                                     ClOrdID: 1690974067710224 []
   [ 11]
     14]
                                      CumQty: 0.08000000 []
     17]
                                      ExecID: E741538 []
   [ 31]
                                      LastPx: 22150.00 []
                                     LastQty: 0.08000000 []
     32]
                                     OrderID: 15091412 []
   [ 37]
                                    OrderQty: 0.15000000 []
   [ 38]
                                   OrdStatus: 1 [PARTIALLY_FILLED]
     391
   [ 40]
                                     OrdType: 2 [LIMIT]
                                       Price: 22150.00 []
   [ 44]
                                        Side: 1 [BUY]
   [ 54]
                                      Symbol: BTC-USD []
   [ 55]
                                 TimeInForce: 6 [GOOD_TILL_DATE]
   [ 59]
                                TransactTime: 20230802-11:01:08.717909000 []
   [ 60]
                                  ExpireTime: 20230803-11:00:00.0000000000 []
   [ 126]
                                    ExecType: F [TRADE]
   [ 150]
                                   LeavesQty: 0.07000000 []
   [ 151]
TRAILER:
   [ 10]
                                    CheckSum: 209 []
```

6.4. NewOrderMultileg: RFQ Limit

6.4.1. Request

```
8=FIX.4.4|9=237|35=AB|34=6|49=17b92233f33a4d9a1688fe7d2a5be705|52=20230802-
11:01:11.732|56=PT-
OE | 11=1690974071730671 | 38=0.1000 | 40=2 | 44=16.00 | 54=1 | 59=6 | 60=20230802-
11:01:11.730|65=none|126=20230803-11:01:11.732|555=2|600=BTC-USD|623=1|600=ETH-
USD | 623 = -1 | 10 = 025 |
HEADER:
    [ 8]
                                   BeginString: FIX.4.4 []
    [ 9]
                                   BodyLength: 237 []
                                    MsgSeqNum: 6 []
    [ 34]
    [ 35]
                                       MsgType: AB [NEW_ORDER_AB]
    [ 49]
                                 SenderCompID: 17b92233f33a4d9a1688fe7d2a5be705 []
                                  SendingTime: 20230802-11:01:11.732 []
       52]
                                 TargetCompID: PT-OE []
    [ 56]
BODY:
```

```
ClordID: 1690974071730671 []
    [ 11]
    Γ
     38]
                                    OrderQty: 0.1000 []
    [ 40]
                                     OrdType: 2 [LIMIT]
                                       Price: 16.00 []
    [ 44]
                                        Side: 1 [BUY]
    541
    [ 59]
                                 TimeInForce: 6 [GOOD_TILL_DATE]
    [ 60]
                                TransactTime: 20230802-11:01:11.730 []
    [ 65]
                                   SymbolSfx: none []
                                  ExpireTime: 20230803-11:01:11.732 []
    [ 126]
    [ 555]
                                      NoLegs: 2 []
                                       LegSymbol: BTC-USD []
    [ 600]
    [ 623]
                                     LegRatioQty: 1 []
                                       LegSymbol: ETH-USD []
    [ 600]
    [ 623]
                                     LegRatioQty: -1 []
TRAILER:
    [ 10]
                                    CheckSum: 025 []
```

6.4.2. Response: New

```
8=FIX.4.4|9=323|35=8|34=9|49=PT-0E|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-
11:00:00.0000000000|150=0|151=0.100000|555=2|600=BTC-USD|623=1|600=ETH-USD|623=-
1|10=164|
HEADER:
                                 BeginString: FIX.4.4 []
    [8]
                                  BodyLength: 323 []
      9]
    [ 34]
                                   MsgSeqNum: 9 []
                                     MsgType: 8 [EXECUTION_REPORT]
    [ 35]
                                SenderCompID: PT-0E []
    [ 49]
                                 SendingTime: 20230802-11:01:11.732 []
    [ 52]
    [ 56]
                                TargetCompID: 17b92233f33a4d9a1688fe7d2a5be705 []
BODY:
    [ 1]
                                     Account: 333 []
      6]
                                       AvgPx: 0 []
      11]
                                     ClordID: 1690974071730671 []
                                     CumQty: 0.000000 []
      14]
                                      ExecID: N15091416 []
      17]
      37]
                                     OrderID: 15091416 []
                                   OrderQty: 0.100000 []
    [ 38]
      39]
                                   OrdStatus: 0 [NEW]
```

```
OrdType: 2 [LIMIT]
      40]
                                       Price: 16.0000 []
    [ 44]
                                        Side: 1 [BUY]
    [ 54]
                                 TimeInForce: 6 [GOOD TILL DATE]
    [ 59]
                                TransactTime: 20230802-11:01:11.731938000 []
    [ 60]
                                   SymbolSfx: none []
    [ 65]
    [ 126]
                                  ExpireTime: 20230803-11:00:00.000000000 []
    [ 150]
                                    ExecType: 0 [NEW]
    [ 151]
                                   LeavesQty: 0.100000 []
    [ 555]
                                      NoLegs: 2 []
                                       LegSymbol: BTC-USD []
    [ 600]
                                     LegRatioQty: 1 []
    [ 623]
                                       LegSymbol: ETH-USD []
    [ 600]
                                     LegRatioQty: -1 []
    [ 623]
TRAILER:
                                    CheckSum: 164 []
    [ 10]
```

6.5. Cancel by ClOrdID

6.5.1. Request

```
8=FIX.4.4|9=150|35=F|34=4|49=17b92233f33a4d9a1688fe7d2a5be705|52=20230802-
11:01:09.723|56=PT-0E|11=1690974069723069|41=1690974067710224|54=1|60=20230802-
11:01:09.723|10=131|
HEADER:
    [8]
                                 BeginString: FIX.4.4 []
                                  BodyLength: 150 []
    [ 9]
                                  MsgSeqNum: 4 []
    [ 34]
                                     MsgType: F [ORDER_CANCEL_REQUEST]
    [ 35]
                                SenderCompID: 17b92233f33a4d9a1688fe7d2a5be705 []
    [ 49]
                                 SendingTime: 20230802-11:01:09.723 []
    [ 52]
                                TargetCompID: PT-OE []
    [ 56]
BODY:
    [ 11]
                                     ClordID: 1690974069723069 []
                                 OrigClOrdID: 1690974067710224 []
    [ 41]
    [ 54]
                                        Side: 1 [BUY]
                                TransactTime: 20230802-11:01:09.723 []
    [ 60]
TRAILER:
    [ 10]
                                    CheckSum: 131 []
```

6.5.2. Response

```
8=FIX.4.4|9=310|35=8|34=8|49=PT-0E|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-
11:00:00.0000000000|150=4|151=0.07000000|10=075|
HEADER:
                                 BeginString: FIX.4.4 []
    [ 8]
                                  BodyLength: 310 []
    [ 9]
    [ 34]
                                   MsgSeqNum: 8 []
    [ 35]
                                     MsgType: 8 [EXECUTION_REPORT]
                                SenderCompID: PT-OE []
    [ 49]
                                 SendingTime: 20230802-11:01:09.724 []
    [ 52]
                                TargetCompID: 17b92233f33a4d9a1688fe7d2a5be705 []
    [ 56]
BODY:
    [ 1]
                                     Account: 333 []
      6]
                                       AvgPx: 0 []
                                     ClordID: 1690974069723069 []
    [ 11]
      14]
                                      CumQty: 0.08000000 []
      17]
                                      ExecID: C15091412 []
    [ 37]
                                     OrderID: 15091412 []
                                    OrderQty: 0.15000000 []
     381
                                   OrdStatus: 4 [CANCELED]
    [ 39]
                                     OrdType: 2 [LIMIT]
    [ 40]
                                 OrigClOrdID: 1690974067710224 []
    [ 41]
                                       Price: 22150.00 []
    [ 44]
                                        Side: 1 [BUY]
    [ 54]
                                      Symbol: BTC-USD []
    [ 55]
    [ 59]
                                 TimeInForce: 6 [GOOD_TILL_DATE]
                                TransactTime: 20230802-11:01:09.723523000 []
    [ 60]
    [ 126]
                                  ExpireTime: 20230803-11:00:00.000000000 []
                                    ExecType: 4 [CANCELED]
    [ 150]
    [ 151]
                                   LeavesQty: 0.07000000 []
TRAILER:
                                    CheckSum: 075 []
    [ 10]
```

6.6. Cancel by OrderID

6.6.1. Request

8=FIX.4.4|9=151|35=F|34=17|49=17b92233f33a4d9a1688fe7d2a5be705|52=20230802-

```
11:01:24.103|56=PT-0E|11=1690974084103284|37=15091423|41=NONE|54=1|60=20230802-
11:01:24.103|10=198|
HEADER:
    [ 8]
                                BeginString: FIX.4.4 []
                                 BodyLength: 151 []
    [ 9]
    [ 34]
                                  MsgSeqNum: 17 []
    [ 35]
                                    MsqType: F [ORDER CANCEL REQUEST]
    [ 49]
                               SenderCompID: 17b92233f33a4d9a1688fe7d2a5be705 []
                                SendingTime: 20230802-11:01:24.103 []
    [ 52]
                               TargetCompID: PT-OE []
    [ 56]
BODY:
    [ 11]
                                    ClOrdID: 1690974084103284 []
   [ 37]
                                    OrderID: 15091423 []
                              OrigClOrdID: NONE []
    [ 41]
    [ 54]
                                       Side: 1 [BUY]
                               TransactTime: 20230802-11:01:24.103 []
    [ 60]
TRAILER:
    [ 10]
                                   CheckSum: 198 []
```

6.6.2. Response

```
8=FIX.4.4|9=344|35=8|34=22|49=PT-0E|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-
11:00:00.0000000000|150=4|151=0.100000|555=2|600=BTC-USD|623=1|600=ETH-USD|623=-
1|10=174|
HEADER:
                                 BeginString: FIX.4.4 []
    [ 8]
    [ 9]
                                 BodyLength: 344 []
                                  MsgSeqNum: 22 []
    [ 34]
                                     MsqType: 8 [EXECUTION_REPORT]
    [ 35]
    [ 49]
                                SenderCompID: PT-OE []
    [ 52]
                                 SendingTime: 20230802-11:01:24.102 []
    [ 56]
                                TargetCompID: 17b92233f33a4d9a1688fe7d2a5be705 []
BODY:
                                    Account: 333 []
    [ 1]
    [ 6]
                                      AvgPx: 0 []
                                     ClordID: 1690974084103284 []
    [ 11]
```

```
CumQty: 0.000000 []
      14]
                                      ExecID: C15091423 []
     17]
                                     OrderID: 15091423 []
     37]
                                    OrderQty: 0.100000 []
    [ 38]
                                   OrdStatus: 4 [CANCELED]
    [ 39]
                                     OrdType: 2 [LIMIT]
    [ 40]
                                 OrigClOrdID: 1690974077785721 []
    [ 41]
    [ 44]
                                       Price: 16.0000 []
    [ 54]
                                        Side: 1 [BUY]
    [ 59]
                                 TimeInForce: 6 [GOOD_TILL_DATE]
                                TransactTime: 20230802-11:01:24.102096000 []
    [ 60]
                                   SymbolSfx: none []
    [ 65]
                                  ExpireTime: 20230803-11:00:00.000000000 []
    [ 126]
                                    ExecType: 4 [CANCELED]
    [ 150]
                                   LeavesQty: 0.100000 []
    [ 151]
                                      NoLegs: 2 []
    [ 555]
                                       LegSymbol: BTC-USD []
    [ 600]
                                     LegRatioQty: 1 []
    [ 623]
                                       LegSymbol: ETH-USD []
    [ 600]
                                     LegRatioQty: -1 []
    [ 623]
TRAILER:
    [ 10]
                                    CheckSum: 174 []
```

6.7. Reference Data

6.7.1. Security Definition Request

```
8=FIX.4.4|9=107|35=c|34=2|49=17b92233f33a4d9a1688fe7d2a5be705|52=20230810-
11:55:16.128|56=PT-0E|320=1691668516128015|321=3|10=075|
HEADER:
                                   BeginString: FIX.4.4 []
    [ 8]
                                    BodyLength: 107 []
    [ 9]
                                      MsqType: c [SECURITY_DEFINITION_REQUEST]
    [ 35]
    [ 49]
                                  SenderCompID: 17b92233f33a4d9a1688fe7d2a5be705 []
                                 TargetCompID: PT-OE []
    [ 56]
                                    MsgSeqNum: 2 []
    [ 34]
                                  SendingTime: 20230810-11:55:16.128 []
    [ 52]
BODY:
    [ 320]
                                SecurityReqID: 1691668516128015 []
                          SecurityRequestType: 3 [REQUEST_LIST_SECURITIES]
    [ 321]
TRAILER:
```

[10] CheckSum: 075 []

6.7.2. Security Definition: Spot

```
8=FIX.4.4|9=168|35=d|34=8|49=PT-0E|52=20230810-
11:55:16.128|56=17b92233f33a4d9a1688fe7d2a5be705|15=USD|22=8|48=4|55=BTC-
USD|320=1691668516128015|322=R1691668516128015|323=1|461=IFXXXP|10=100|
HEADER:
    [8]
                                   BeginString: FIX.4.4 []
      9]
                                    BodyLength: 168 []
                                       MsgType: d [SECURITY_DEFINITION]
    [ 35]
    [ 49]
                                  SenderCompID: PT-OE []
    [ 56]
                                  TargetCompID: 17b92233f33a4d9a1688fe7d2a5be705 []
    [ 34]
                                     MsgSeqNum: 8 []
                                   SendingTime: 20230810-11:55:16.128 []
    Γ 521
BODY:
    [ 320]
                                 SecurityReqID: 1691668516128015 []
                            SecurityResponseID: R1691668516128015 []
    [ 322]
                          SecurityResponseType: 1 [ACCEPT_SECURITY_PROPOSAL_AS_IS]
    [ 323]
                                        Symbol: BTC-USD []
    [ 55]
                                    SecurityID: 4 []
    [ 48]
                              SecurityIDSource: 8 [EXCHANGE_SYMBOL]
    [ 22]
    [ 461]
                                       CFICode: IFXXXP []
      15]
                                      Currency: USD []
    F 581
                                          Text:
{"minimum_price":"0.10","maximum_price":"1000000.00","price_step":"0.10","minimum_quan
tity":"0.00010000","maximum_quantity":"10000.00000000","quantity_step":"0.00010000","m
inimum_value":"0.0000100000","maximum_value":"10000000000.0000000000"} []
TRAILER:
    [ 10]
                                      CheckSum: 100 []
```

6.7.3. Security Definition: Option

```
MsgType: d [SECURITY_DEFINITION]
      35]
      49]
                                  SenderCompID: PT-0E []
                                  TargetCompID: 17b92233f33a4d9a1688fe7d2a5be705 []
     56]
                                     MsgSegNum: 1420 []
     34]
                                   SendingTime: 20230810-11:55:16.196 []
    [ 52]
BODY:
    [ 320]
                                 SecurityRegID: 1691668516128015 []
    [ 322]
                            SecurityResponseID: R1691668516128015 []
                          SecurityResponseType: 1 [ACCEPT_SECURITY_PROPOSAL_AS_IS]
    [ 323]
                                        Symbol: BTC-20240628-30000C []
    [ 55]
                                    SecurityID: 14548 []
    [ 48]
                              SecurityIDSource: 8 [EXCHANGE SYMBOL]
     221
                                       CFICode: OCECCS []
    [ 461]
                                  MaturityDate: 20240628 []
    [ 541]
                                   StrikePrice: 30000 []
    [ 202]
    [ 231]
                            ContractMultiplier: 1 []
                                 NoUnderlyings: 1 []
    [ 711]
                                  UnderlyingSymbol: BTC []
    [ 311]
                              UnderlyingSecurityID: 3 []
    [ 309]
                        UnderlyingSecurityIDSource: 8 []
    [ 305]
    [ 463]
                                 UnderlyingCFICode: IFXXXP []
    [ 318]
                                UnderlyingCurrency: USD []
    [ 15]
                                      Currency: USD []
                                          Text:
    [ 58]
{"minimum_price":"1.00","maximum_price":"1000000.00","price_step":"1.00","minimum_quan
tity":"0.00010000","maximum_quantity":"10000.00000000","quantity_step":"0.00010000","m
inimum_value":"0.0001000000","maximum_value":"10000000000.0000000000"} []
TRAILER:
    [ 10]
                                      CheckSum: 045 []
```

6.7.4. Security Definition: Future

```
8=FIX.4.4|9=244|35=d|34=1158|49=PT-0E|52=20230810-
11:55:16.184|56=17b92233f33a4d9a1688fe7d2a5be705|15=USD|22=8|48=14245|55=BTC-
20240628 | 231=1 | 320=1691668516128015 | 322=R1691668516128015 | 323=1 | 461=FFCCSX | 541=2024062
8|711=1|311=BTC|309=3|305=8|463=IFXXXP|318=USD|10=018|
HEADER:
    [8]
                                    BeginString: FIX.4.4 []
    [ 9]
                                     BodyLength: 244 []
                                        MsgType: d [SECURITY_DEFINITION]
      35]
                                   SenderCompID: PT-OE []
    [ 49]
                                   TargetCompID: 17b92233f33a4d9a1688fe7d2a5be705 []
    [ 56]
                                      MsgSeqNum: 1158 []
      34]
```

```
[ 52]
                                   SendingTime: 20230810-11:55:16.184 []
BODY:
    [ 320]
                                 SecurityReqID: 1691668516128015 []
    [ 322]
                            SecurityResponseID: R1691668516128015 []
    [ 323]
                          SecurityResponseType: 1 [ACCEPT_SECURITY_PROPOSAL_AS_IS]
    [ 55]
                                        Symbol: BTC-20240628 []
    [ 48]
                                    SecurityID: 14245 []
                              SecurityIDSource: 8 [EXCHANGE_SYMBOL]
    [ 22]
    [ 461]
                                       CFICode: FFCCSX []
                                  MaturityDate: 20240628 []
    [ 541]
                            ContractMultiplier: 1 []
    [ 231]
                                 NoUnderlyings: 1 []
    [ 711]
                                  UnderlyingSymbol: BTC []
    [ 311]
                              UnderlyingSecurityID: 3 []
    [ 309]
                        UnderlyingSecurityIDSource: 8 []
    [ 305]
                                 UnderlyingCFICode: IFXXXP []
    [ 463]
                                UnderlyingCurrency: USD []
    [ 318]
                                      Currency: USD []
    [ 15]
                                          Text:
    [ 58]
{"minimum_price":"0.50","maximum_price":"1000000.00","price_step":"0.50","minimum_quan
tity":"0.00010000","maximum_quantity":"10000.00000000","quantity_step":"0.00010000","m
inimum_value":"0.0000500000","maximum_value":"10000000000.0000000000"} []
TRAILER:
    [ 10]
                                      CheckSum: 018 []
```

6.7.5. Security Definition: Perpetual Future

```
8=FIX.4.4|9=242|35=d|34=26|49=PT-0E|52=20230810-
11:55:16.128|56=17b92233f33a4d9a1688fe7d2a5be705|15=USD|22=8|48=13|55=BTC-USD-
PERPETUAL | 231=1 | 320=1691668516128015 | 322=R1691668516128015 | 323=1 | 461=FFCCSX | 711=1 | 311=
BTC-USD-INDEX|309=14|305=8|463=TICMMX|318=USD|10=169|
HEADER:
                                    BeginString: FIX.4.4 []
    [ 8]
                                     BodyLength: 242 []
    [ 9]
      35]
                                        MsgType: d [SECURITY_DEFINITION]
    [ 49]
                                   SenderCompID: PT-0E []
                                   TargetCompID: 17b92233f33a4d9a1688fe7d2a5be705 []
    [ 56]
     34]
                                      MsgSegNum: 26 []
                                    SendingTime: 20230810-11:55:16.128 []
    [ 52]
BODY:
    [ 320]
                                  SecurityReqID: 1691668516128015 []
```

```
[ 322]
                            SecurityResponseID: R1691668516128015 []
                          SecurityResponseType: 1 [ACCEPT_SECURITY_PROPOSAL_AS_IS]
    [ 323]
                                         Symbol: BTC-USD-PERPETUAL []
    [ 55]
                                    SecurityID: 13 []
    [ 48]
                              SecurityIDSource: 8 [EXCHANGE_SYMBOL]
    [ 22]
                                       CFICode: FFCCSX []
    [ 461]
                            ContractMultiplier: 1 []
    [ 231]
    [ 711]
                                 NoUnderlyings: 1 []
    [ 311]
                                  UnderlyingSymbol: BTC-USD-INDEX []
                              UnderlyingSecurityID: 14 []
    [ 309]
                        UnderlyingSecurityIDSource: 8 []
    [ 305]
                                 UnderlyingCFICode: TICMMX []
    [ 463]
                                UnderlyingCurrency: USD []
    [ 318]
                                      Currency: USD []
    [ 15]
    [ 58]
                                          Text:
{"minimum_price":"0.10", "maximum_price":"1000000.00", "price_step":"0.10", "minimum_quan
tity":"0.00010000","maximum_quantity":"10000.00000000","quantity_step":"0.00010000","m
inimum value":"0.0000100000","maximum value":"10000000000.0000000000"} []
TRAILER:
                                      CheckSum: 169 []
    [ 10]
```

6.7.6. Security Status

```
8=FIX.4.4|9=147|35=f|34=9|49=PT-0E|52=20230810-
11:55:16.128|56=17b92233f33a4d9a1688fe7d2a5be705|15=USD|22=8|48=4|55=BTC-
USD|324=1691668516128015|326=17|461=IFXXXP|10=057|
HEADER:
                                   BeginString: FIX.4.4 []
    [ 8]
                                    BodyLength: 147 []
      9]
    MsqType: f [SECURITY_STATUS]
    [ 35]
                                  SenderCompID: PT-OE []
    [ 49]
                                  TargetCompID: 17b92233f33a4d9a1688fe7d2a5be705 []
    [ 56]
                                     MsqSeqNum: 9 []
    [ 34]
                                   SendingTime: 20230810-11:55:16.128 []
    [ 52]
BODY:
    [ 324]
                           SecurityStatusReqID: 1691668516128015 []
                                        Symbol: BTC-USD []
    [ 55]
                                    SecurityID: 4 []
    [ 48]
                              SecurityIDSource: 8 [EXCHANGE_SYMBOL]
    [ 22]
                                       CFICode: IFXXXP []
    [ 461]
                                      Currency: USD []
    [ 15]
                         SecurityTradingStatus: 17 [READY_TO_TRADE]
    [ 326]
                                        LastPx: 43500.00 []
    [ 31]
```

6.7.7. Security List Request

```
8=FIX.4.4|9=107|35=x|34=2|49=17b92233f33a4d9a1688fe7d2a5be705|52=20230810-
12:14:03.474|56=PT-0E|320=1691669643474450|559=4|10=115|
HEADER:
    [ 8]
                                  BeginString: FIX.4.4 []
                                   BodyLength: 107 []
    [ 9]
                                      MsgType: x [SECURITY_LIST_REQUEST]
    [ 35]
                                 SenderCompID: 17b92233f33a4d9a1688fe7d2a5be705 []
   [ 49]
                                 TargetCompID: PT-OE []
    [ 56]
    [ 34]
                                    MsgSeqNum: 2 []
                                  SendingTime: 20230810-12:14:03.474 []
    [ 52]
BODY:
                                SecurityReqID: 1691669643474450 []
    [ 320]
   [ 559] SecurityListRequestType: 4 [ALL_SECURITIES]
TRAILER:
    [ 10]
                                    CheckSum: 115 []
```

6.7.8. Security List

```
HEADER:
                                  BeginString: FIX.4.4 []
   [ 8]
   [ 9]
                                   BodyLength: 183231 []
                                      MsqType: y [SECURITY LIST]
   [ 35]
                                 SenderCompID: PT-OE []
   [ 49]
                                 TargetCompID: 17b92233f33a4d9a1688fe7d2a5be705 []
   [ 56]
                                    MsgSegNum: 2 []
   [ 34]
                                  SendingTime: 20230810-12:14:03.512 []
   [ 52]
BODY:
   [ 320]
                                SecurityReqID: 1691669643474450 []
```

```
[ 322]
                            SecurityResponseID: R1691669643474450 []
                         SecurityRequestResult: 0 [VALID_REQUEST]
    [ 560]
                                  NoRelatedSym: 1439 []
    [ 146]
    [ 55] #0
                                            Symbol: BTC-USD []
                                        SecurityID: 4 []
    [ 48]
    [ 22]
                                  SecurityIDSource: 8 [EXCHANGE SYMBOL]
                                           CFICode: IFXXXP []
    [ 461]
    [ 15]
                                          Currency: USD []
       581
                                              Text:
    Γ
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7. Revision History

Table 20. revision history:

Date	Version	Notes
2024-08-14	1.3	Add LastPx to SecurityStatus
2023-08-24	1.2	Fill gaps in SecurityDefinitionRequest, SecurityDefinition, SecurityStatus, SecurityListRequest, SecurityList; Add configuration examples for using SSL

Date	Version	Notes
2023-08-10	1.1	SecurityDefinitionRequest, SecurityDefinition, SecurityStatus, SecurityListRequest, SecurityList
2023-08-01	1.0	Public release
2023-07-30	0.1	Initial Order Entry FIX API documentation