TEXAS STOCK EXCHANGE

FIX Session Layer Protocol

Contents

0.1   Revision History

July 23, 2025	0.1	Initial version.
September 9, 2025	0.6.draft	Alpha release. Refined message layout, identifiers and enumerations in line with early internal feedback.
October 28, 2025	0.7.draft	Updated support contact email.

1 Overview

The **Texas Stock Exchange (TXSE)** supports electronic order entry and market data dissemination using the Financial Information eXchange (FIX) protocol, an industry standard for real-time electronic communication in the global financial markets. TXSE adheres to FIX Protocol version 5.0 Service Pack 2 (FIX 5.0 SP2), as defined and maintained by FIX Trading Community (https://www.fixtrading.org).

This specification outlines TXSE's implementation of the FIX 5.0 SP2 standard session layer protocol.

The document is intended for use by firms integrating with TXSE via FIX, including broker-dealers, trading system vendors, and market participants developing or certifying FIX engines or client applications. Adherence to the TXSE FIX specification ensures consistent and reliable interaction with TXSE's trading platform.

2 FIX Session Layer

The FIX Protocol defines a session layer that ensures reliable, ordered delivery of messages between counter-parties. The session layer is critical for maintaining stateful communication, managing connections, and recovering from network or application failures. TXSE uses the standard session-level messages defined in FIX 5.0 SP2 to establish, maintain, and terminate FIX sessions, as well as to detect and recover from message loss or sequence mismatches.

2.1 FIX Standard Header and Trailer

The FIX Protocol has a standard set of header and trailer tags that need to be present in every FIX message.

2.1.1 Standard Header

The Standard Header must contain the required fields listed and can contain any of the non-required listed fields:

Tag	Field Name	Req'd	Description
8	BeginString	Y	This must be the first field in the message and must always have the value of "FIXT1.1"
9	BodyLength	Y	The length of the FIX Message. Must be the second field in the message.
35	MsgType	Y	The type of message. Must be the third field in the message.
49	SenderCompID	Y	The sender's id, assigned by TXSE at on-boarding time.
56	TargetCompID	Y	The target id, should always be set to "TXSE".
50	SenderSubID	N	Optional Sender Sub Id, assigned by TXSE at on-boarding time.
57	TargetSubID	N	The target sub id.
34	MsgSeqNum	Y	The incoming message sequence number.
52	SendingTime	Y	The time when the message was transmitted in UTC time.
43	PossDupFlag	N	Always required for re-transmitted message, whether prompted by the sending system or as the result of a resend request.
97	PossResend	N	Required when message may be duplicate of another message sent under a different sequence number.
122	OrigSendingTime	N	Required for message resent as a result of a ResendRequest. If data is not available set to same value as SendingTime.

2.1.2 Standard Trailer

The Standard Trailer is required for all messages and contains the message checksum.

Tag	Field Name	Req'd	Description

10	CheckSum	Y	The message checksum. Must be the last field in the message.

2.2   Logon (MsgType=A)

The Logon message is used to initiate a FIX session. It should be the first message that the Member should send to the Exchange. The Member should expect a Logon message from the Exchange in response.

Tag	Field Name	Req'd	Description
	Standard Header	Y	Standard Header with MsgType=A
98	EncryptMethod	Y	Required and should always be set to 0.
108	HeartBtInt	Y	Heartbeat interval, in seconds.
141	ResetSeqNumFlag	N	Indicates both sides of a FIX session should reset sequence numbers.
1137	DefaultApplVerID	Y	The default version of FIX messages used in this session. Should be set to 9, FIX50SP2.
	Standard Trailer	Y	

2.3   Logout (MsgType=5)

The Logout message is used to gracefully terminate a FIX session. The Member should send the Logout message to the Exchange to terminate their FIX session. The Member should expect a Logout message from the Exchange in response.

Tag	Field Name	Req'd	Description
	Standard Header	Y	Standard Header with MsgType=5
58	Text	N	Optional text with logout reason.
	Standard Trailer	Y	

2.4   Heartbeat (MsgType=0)

The Heartbeat message is used to maintain the connection during idle periods and ensure both sides are alive. It is sent in regular intervals from the Member to the Exchange and from the Exchange to the Member. The interval is determined by tag 108, HeartBtInt, from the Logon message. If the Member does not receive a Heartbeat from the Exchange within the specified heartbeat interval, the Member should send a TestRequest. If there is no response from the TestRequest, then the Member should drop the connection to the Exchange. Likewise, if the Exchange does not receive a heartbeat from the Member within the specified heartbeat interval, the Exchange will send a TestRequest to the Member. If the Member fails to respond to the TestRequest from the Exchange with a Heartbeat, the Exchange will drop the connection to the Member.

Tag	Field Name	Req'd	Description
	Standard Header	Y	Standard Header with MsgType=0
112	TestReqID	N	Identifier from Test Request to be echoed back in resulting Heartbeat.
	Standard Trailer	Y	

2.5   TestRequest (MsgType=1)

The TestRequest message is sent from the Member to the Exchange if the Member has not received a Heartbeat within the specified heartbeat interval. Likewise it is sent from the Exchange to the Member when the Exchange has not received a Heartbeat within the specified heartbeat interval. The Member or the Exchange needs to respond to a TestRequest with a Heartbeat containing the matching TestReqID from the TestRequest message.

Tag	Field Name	Req'd	Description
	Standard Header	Y	Standard Header with MsgType=1
112	TestReqID	Y	Identifier TestReqID to be echoed back in resulting Heartbeat.
	Standard Trailer	Y	

2.6   Reject (MsgType=3)

The Reject message is sent from the Exchange to the Member when a message is received but cannot be processed because of a session-level rule or format violation.

Tag	Field Name	Req'd	Description
	Standard Header	Y	Standard Header with MsgType=3
45	RefSeqNum	Y	Sequence number of message that triggered the reject.
371	RefTagID	N	Tag number of the FIX field that triggered the reject.
372	RefMsgType	N	MsgType of FIX message that triggered the reject.
373	SessionRejectReason	N	Code to identify reason for session-level Reject Message.
58	Text	N	Text explanation of reason for the reject.
	Standard Trailer	Y	

2.7   ResendRequest (MsgType=2)

The ResendRequest is sent from the Member to the Exchange to request retransmission of messages.

Tag	Field Name	Req'd	Description
	Standard Header	Y	Standard Header with MsgType=2
7	BeginSeqNo	Y	Sequence number of the first message to be resent.
16	EndSeqNo	Y	Sequence number of the last message to be resent.
	Standard Trailer	Y	

2.8   SequenceReset (MsgType=4)

The SequenceReset message is sent from the Member to the Exchange to reset the incoming expected sequence number from the Member to the Exchange. It is sent from the Exchange to the Member to reset the incoming expected sequence number from the Exchange to the Member.

Tag	Field Name	Req'd	Description
	Standard Header	Y	Standard Header with MsgType=4
123	GapFillFlag	N	Indicates that the reset is replacing admin or application messages which will not be resent.
36	NewSeqNo	Y	New sequence number
	Standard Trailer	Y	