



IMC Trading B.V.

IMC Technical Specification Guide for IMC Trading System

V 1.9

**YOUR PARTNER
IN TRADING**

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Introduction

IMC operates an electronic trading system called the IMC Trading System. A Counterparty that has been granted access by IMC to the IMC Trading System (“**User**”) may, subject to the “Terms and Conditions applicable between IMC’s Dutch ETF desk and its approved counterparties”, (i) transmit bids to purchase or offers to sell financial instruments (“**Orders**”) through the IMC Trading System in response to indications of interest (“**IOI**”) being streamed by IMC through the IMC Trading System and (ii) receive certain information.

Location

The IMC Trading System is physically located in LD4 London IBX® Data Center.

Colocation Services

IMC provides colocation services in LD4.

For Users who have a presence in LD4, IMC can provision 1G Single Mode Fiber (SMF) connectivity free of cost. To provision such connectivity, IMC will require a letter of authority (LOA) from the User so that the physical work can be carried out in the data center.

The connectivity can be used to access both the testing and production environment.

Access

A User will have access to two environments via the connectivity: a testing environment and a production environment.

The testing environment allows testing of the various messages and will simulate fills up to a limited number of shares per order.

Prior to production access, a User will need to connect and successfully test in the test environment. IMC will review testing logs to ensure that the User is following the FIX protocol specifications below before providing production access.

Operating Hours

The testing and production environment will have the same operating hours. Connections can be established from 08:30 to 18:00 CET (Amsterdam local time). Orders will be filled during the hours of 9:00 and 17:30 CET (Amsterdam local time).

Protocol

IMC follows the standard FIX protocol specification (www.fixprotocol.org).

FIX 4.2 is used for IOI and Order sessions.

FIX 4.4 is used for Drop Copy sessions.

Please note: IMC does not check the FIX version of Counterparty messages

Sequence numbers will be reset nightly during down time. Messages transmitted with an old sequence number that are not marked as duplicates cause an immediate disconnect of the connection.

Tags (standard and non-standard) can be added in the future and implementations should be prepared to ignore unknown tags.

Sessions

The IMC Trading System provides three different types of sessions: IOI sessions, Order sessions and Drop copy sessions.

The following session messages are supported: Logon, Heartbeat, Test request, Resend request, Reject, Sequence reset, Logout.

Session Logon

The SenderCompID and TargetCompID are to be set to the values provided for the session by IMC.

On logon the correct client sequence number is to be provided. Not doing so will lead to a logout message containing the expected sequence number.

The encryption (tag 98) is to be provided and set to '0'. Only one TCP session can be active at any given time for a SenderCompID and TargetCompID combination. Attempts to logon with the same values will be dropped.

Only Sequence reset messages with a gap fill flag set to 'Y' are accepted, others cause an immediate disconnect of the connection.

Intraday reset of the sequence number is not supported.

Reject messages will be sent for unsupported message types, missing required fields and invalid tag values.

Financial Instrument List

The list of financial instruments available for trading through the IMC Trading System can be retrieved every day from a secure FTP server. Credentials for the SFTP will be provided on a per User basis.

Trading Limits

IMC will only deal in sizes above the Standard Market Size (SMS) where applicable. This will apply to all Orders and will be applied as a minimum quantity on the Order. The minimum quantity per financial instrument will be included in the Financial Instrument List.

System Outages

In case of system outages, Orders that have not yet been filled will be cancelled and any (valid) incoming Orders will be acknowledged and immediately be cancelled.

Order Checks

Incoming Orders are checked based on User profile including, but not limited to, Orders per second, price based checks and risk limit checks.

FIX Messages

New Order Message (35=D)

TAG	FIELD NAME	REQ'D	DESCRIPTION
	Standard Header	Y	FIX 4.2 protocol is used
1	Account	N	Values to be agreed upon with User
11	ClOrdID	Y	Client Order ID. Unique identifier assigned by the user. Must be unique per session (senderCompID) for a single trading day. We will send a rejection if the client order id is duplicated. Max length 20
15	Currency	Y	ISO 4217 currency code For instruments where the native trading book is in penny sterling, the symbol GBp will be used
21	HandInst	Y	Not used by IMC
38	OrderQty	Y	Size of the order expressed in share amount
40	OrdType	Y	Order type. Valid values '2' = Limit
44	Price	Y	Limit Price
47	OrderCapacity	N	Capacity of the firm entering the order. Allowed values: 'A' = Agency 'P' = Principal Defaults to Principal
54	Side	Y	1 = Buy, 2 = Sell
55	Symbol	Y	Uniform Symbology (also known as UMTF)
59	TimeInForce	N	Valid values are '3' = IOC and '4' = FOK. Defaults to IOC
60	TransactTime	Y	Must be in nanosecond precision UTC time
110	MinQty	N	Will assume 0 if not present, ignored if TimeInForce = FOK
20000	QuoteRoomID	N	Identifier matching the value from the IOI messages. Will assume the default room for the session if not present
	Standard Footer	Y	

Notes:

Y = Required, N= Not Required

IMC will ignore tags that are not specified in the table.

Execution Report (35=8)

TAG	FIELD NAME	REQ'D	DESCRIPTION
	Standard Header	Y	FIX 4.2 protocol is used
1	Account	O	Values to be agreed with upon with User
6	AvgPrice	Y	Average price of the filled quantity
11	ClOrdID	Y	Copies Client Order ID from New Order Message
14	CumQty	Y	Quantity of order that has been executed
15	Currency	Y	ISO 4217 currency code For instruments where the native trading book is in penny sterling, the symbol GBp will be used
17	ExecID	Y	Day-unique trade identifier set by IMC. Max length 20
20	ExecTransType	Y	Valid values: 0 – standard execution report
21	HandlInst	Y	Not used by IMC. Copied from order
31	LastPx	Y	Price of execution
32	LastShares	Y	Quantity of execution
37	OrderID	Y	Day-unique order identifier set by IMC. Max length 20
38	OrderQty	Y	Size of the order in shares
39	OrdStatus	Y	Status of the order. 0 = New, 1 = Partially filled, 2 = Filled, 4 = Canceled, 8 = Rejected
40	OrdType	Y	'2' = Limit
44	Price	Y	Order Price
47	OrderCapacity	O	Copy of the OrderCapacity specified on the New Order Message
54	Side	Y	Order Side: 1 = Buy, 2 = Sell
55	Symbol	Y	Uniform Symbology (also known as UMTF)
58	Text	Y	Free text which may indicate a reason for rejection or other information
59	TimeInForce	Y	Valid values are '3' = IOC and '4' = FOK
60	TransactionTime	Y	Published in nanosecond precision UTC time
110	MinQty	O	Minimum quantity
150	ExecType	Y	Standard FIX values used
151	LeavesQty	Y	Quantity of shares left on this order
8013	TrdRegPublicationReasons	N	Valid values are below: '4' = ILQD (Pre-Trade Transparency Waiver for Illiquid Instrument) '5' = SIZE (Pre-Trade Transparency Waiver for Above Standard Market Size) '6' = LRGS (Deferral for Large in Scale) When multiple values are applicable together, they will be separated by a space. For example "5 6"
20000	QuoteRoomID	O	Copied from order
	Standard Footer	Y	

Notes:

Y = Always present, O = Echo from New Order Message, N = Conditionally present

A New Order Message that is valid will be answered with one or more Execution Report messages. The first Execution Report will have an exec type 'New' or 'Reject'. An Order that receives a 'New' response can still receive a 'Reject', if Order checks are not fulfilled.

Indication of Interest (35=6)

TAG	FIELD NAME	DESCRIPTION
	Standard Header	FIX 4.2 protocol is used
15	Currency	ISO 4217 currency code For instruments where the native trading book is in penny sterling, the symbol GBP will be used
23	IOIid	Identifier for the message. Max length 20
26	IOIRefID	Present for Cancel and Replace IOITransType <28> messages. Max length 20
27	IOIShares	Number of shares
28	IOITransType	N = New, C = Cancel, R = Replace
44	Price	Price
54	Side	Side of indication. 1 = Buy and 2 = Sell
55	Symbol	Uniform Symbology (also known as UMTF)
20000	QuoteRoomID	Identifier for the room. To be used in the New Order Message
	Message Trailer	

Trade Capture Report (35=AE)

TAG	FIELD NAME	REQ'D	DESCRIPTION
	Standard Header	Y	FIX 4.4 protocol is used
6	AvgPx	Y	Price of execution
15	Currency	Y	ISO 4217 currency code For instruments where the native trading book is in penny sterling, the symbol GBP will be used
17	ExecID	Y	The day-unique trade identifier set by IMC on the execution report. Max length 20
22	IDSource	N	Is present on trades for instruments that have an ISIN. Then it will contain '4' = ISIN
31	LastPx	Y	Price of execution
32	LastShares	Y	Quantity of the execution
37	OrderID	Y	Unique ID from the order. Max length 20
38	OrderQty	Y	Original quantity of the order
47	OrderCapacity	O	Copy of the OrderCapacity specified on the New Order Message
48	SecurityID	N	Instruments that have an ISIN will have it filled in this field. Max length 12
55	Symbol	Y	Uniform Symbology (also known as UMTF)
60	TransactTime	Y	The TransactTime of the ExecutionReport. Published in nanosecond precision UTC time
150	ExecType	Y	2 = Filled or 1 = Partially Filled
207	SecurityExchange	N	Is present on trades for European instruments. It will contain the primary exchange segment MIC. Note that this is not always the same as the operating MIC.
381	GrossTradeAmt	Y	The total traded value in the stated currency

487	TradeReportTransType	Y	0 = NEW
571	TradeReportID	Y	Day unique id for the message. Max length 20
574	MatchType	Y	9 = Systematic Internalizer
1003	TradeID	Y	Day unique Trade ID. Is currently the same as OrderID
8013	TrdRegPublicationReasons	N	Valid values are below: '4' = ILQD (Pre-Trade Transparency Waiver for Illiquid Instrument) '5' = SIZE (Pre-Trade Transparency Waiver for Above Standard Market Size) '6' = LRGS (Deferral for Large in Scale) When multiple values are applicable together, they will be separated by a space. For example "5 6"
20000	QuoteRoomID	O	Copy of the QuoteRoomID specified on the New Order Message
552	NoSides	Y	Indicates the number of instances of the repeating group TrdCapRptSideGrp to follow. It is always 2
<i>The Repeating Group TrdCapRptSideGrp will appear twice, first for the IMC side and then for the clients side.</i>			
1	Account	O	A copy of the Account field on the New Order Single message. Only present on the TrdCapRptSideGrp for the client.
54	Side	Y	The side for party. 1 = Buy and 2 = Sell
453	NoPartyIDs	Y	Indicates the number of instances of the repeating group PartyIDGrp to follow.
<i>The Repeating Group PartyIDGrp will appear at least once in each TrdCapRptSideGrp. Is currently always 1, but might become more unannounced in the future. So will appear at least twice in total.</i>			
447	PartyIDSource	Y	Identifies class or source of the PartyID (448) value. 'D' = Proprietary (Client) 'G' = MIC Code (IMC)
448	PartyID	Y	Party identifier/code. See PartyIDSource (447) and PartyRole (452)
452	PartyRole	Y	Identifies the type or role of the PartyID (448) specified. '1' = Executing Firm (IMC) '3' = Client ID
Message Trailer			

Notes:

Y = Always present, O = Echo from New Order Message, N = Conditionally present

All drop copy sessions for a client will provide a Trade Capture Message whenever a trade is executed on any of a client's order sessions. If a client is not connected to the drop copy session at the moment of the trade, the trades will be sent on (re)connection on the same day. TradeCaptureReportAck messages are not supported.

Change History

DATE	VERSION	SUMMARY OF CHANGES
2018-07-13	1.0	Initial version
2018-09-20	1.1	Confirmed nanosecond precision
2018-09-25	1.2	Made Tag 47 OrderCapacity optional in the New Order Message
2018-10-12	1.3	Formatting changes
2018-11-06	1.4	Added Tag 8013 to the Execution Report
2018-11-15	1.5	Clarified required/optional status of OrderCapacity and TrgRegPublicationReasons
2018-11-22	1.6	Added Trade Capture Report message
2019-01-16	1.7	Provided clarification regarding penny Sterling instruments value for Tag 15
2019-02-26	1.8	Clarified FIX version used per session
2019-08-05	1.9	Changed name of the document to IMC Technical Specification Guide for IMC Trading System