

MIAx Pearl Equities Exchange

Port Attributes

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Version 3.0

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1. Port Attributes

Member Firms can configure different attributes for each of their order entry ports/sessions for the MIAX Pearl Equities Exchange. Changes can be requested for each attribute by sending an email to Trading Operations at TradingOperations@MIAxEquities.com or via MIAX's Member Firm Portal. A brief description of each attribute is provided below, for additional details on the functionality please refer to the MIAX Pearl Equities Rules and/or the User Manual.

MIAX Pearl Equities will be referred to as Pearl Equities in the rest of the document.

Sr. No.	Attribute	Description	Mandatory	Valid / Default values	FOI	MEO
1.	ISO Reject	Disallow entry of ISO orders.	No	By default, ISO orders are allowed.	√	√
2.	Allow Short Sale Order	Allow entry of Sell Short orders.	No	By default, Sell Short orders are allowed.	√	√
3.	Allow Short Sale Exempt Order	Allow entry of Sell Short Exempt orders.	No	By default, Sell Short Exempt orders are allowed.	√	√
4.	Market Order Reject	Disallow entry of Market orders.	No	By default, Market orders are allowed.	√	√
5.	Maximum Order Size	Maximum number of shares allowed per order.	Yes	Custom Maximum Order Size limits apply if specified by the member, else exchange default will be applied. <i>Valid values announced via Pearl Equities Regulatory Circular</i>	√	√

Sr. No.	Attribute	Description	Mandatory	Valid / Default values	FOI	MEO
6.	Maximum Order Notional Value	Maximum Order Notional Value in dollars allowed for a limit or market order. Primary Auction (PAC) Market orders do not receive this protection.	No	By default, this protection is disabled and there is no exchange default value. Members can choose to configure a custom value. <i>Valid values announced via Pearl Equities Regulatory Circular</i>	√	√
7.	Auto Cancel on Disconnect (ACOD) for Order Entry Session	In the event a member's session with the exchange is disconnected, orders submitted via that session that are open on the orderbook can be cancelled automatically upon disconnect.	No	<ul style="list-style-type: none"> Cancel All Open Orders Do Not Cancel All Open Orders (Default) 	√	√
7.1	Auto Cancel on Disconnect (ACOD) for Drop Session	In the event that a member's drop session with the exchange is disconnected, orders submitted via the entitled order entry session(s) that are open on the orderbook can be cancelled automatically upon	No	<ul style="list-style-type: none"> Cancel All Open Orders Do Not Cancel All Open Orders (Default) 	N/A	N/A

Sr. No.	Attribute	Description	Mandatory	Valid / Default values	FOI	MEO
		<p>disconnect. Additionally, any new orders or order modification requests received via the entitled order entry session(s) will be rejected. Order cancellation requests will continue to be accepted. After the protection triggers, a reconnect by the member firm with its drop session will reset this protection.</p> <p>Firms can request to enable ACOD on the drop sessions that are entitled only for their own order entry session(s).</p>				
8.	Auto-Cancel on System/Matching Engine Failure (ACOSF) for Order Entry Session	As a result of a MIAX system/matching engine failure, open orders submitted via that session for the impacted matching engine(s) can be cancelled automatically.	No	<ul style="list-style-type: none"> Cancel All Open Orders Do Not Cancel All Open Orders (Default) 	√	√

Sr. No.	Attribute	Description	Mandatory	Valid / Default values	FOI	MEO
8.1	Auto-Cancel on System/Matching Engine Failure (ACOSF) for Drop Session	<p>In the event of a Matching Engine or drop session failure, members may request that their open orders submitted via order entry session(s) entitled on the drop are cancelled automatically. Any new orders or order modification requests received via the entitled order entry session(s) will be rejected. Order cancellation requests will continue to be accepted.</p> <p>Orders submitted via any of the member's other sessions will not be affected. Additionally, orders submitted to any Matching Engines that are not impacted will not be affected.</p> <p>Firms can request to enable ACOSF only</p>	No	<ul style="list-style-type: none"> Cancel All Open Orders Do Not Cancel All Open Orders (Default) 	N/A	N/A

Sr. No.	Attribute	Description	Mandatory	Valid / Default values	FOI	MEO
		on the drop sessions that are entitled for their own order entry session(s).				
9.	Duplicate Order Check	Protects members from sending more than the specified number of duplicate orders in a rolling time window.	No		√	√
9.a	<i>Time Window</i>	The rolling time window, for the Duplicate Order Check		Should be specified in milliseconds. <i>Valid values announced via Pearl Equities Regulatory Circular</i>		
9.b	<i>Count</i>	The maximum number of duplicate orders with the same Symbol, MPID, Side, Price, and OrdQty permitted within the Time Window.		<i>Valid values announced via Pearl Equities Regulatory Circular</i>		
9.c	<i>Trigger Action</i>	Action taken when Duplicate Order Check protection is enabled and triggered.		<ul style="list-style-type: none"> • Reject - Rejects new orders for the remainder of the Time Window for the MPID that triggered the protection • Disable - Disables new order entry on port for the MPID 		

Sr. No.	Attribute	Description	Mandatory	Valid / Default values	FOI	MEO
				that triggered the protection. Must call Trading Operations to re- enable.		
10.	Market Order Price Protection	Protection to reject market orders if there is no contra-side away market price.	No	By default, this protection is disabled.	√	√
11.	Limit Order Price Protection	Protection to reject Limit Orders if their limit price equals or exceeds the NBBO by the greater of the Dollar Limit and Percentage Limit.	Yes	Custom Dollar and Percentage Limits can be set for the following Limit Price Ranges: <ul style="list-style-type: none"> • <\$1 • >= \$1 & < \$10 • >= \$10 & < \$50 • >= \$50 & < \$100 • >= \$100 & < \$500 • >= \$500 	√	√
11.a	<i>Dollar Limit</i>	Custom Dollar Limit if specified by the member, else exchange default Dollar Limit for the price range in which the order's limit price falls.		Should be specified in increments of a penny at or above \$1.00 and in 1/100ths of a penny under \$1.00. <i>Valid values announced via Pearl Equities Regulatory Circular</i>		

Sr. No.	Attribute	Description	Mandatory	Valid / Default values	FOI	MEO
11.b	<i>Percentage Limit</i>	Custom Percentage Limit if specified by the member, else exchange default Percentage Limit for the price range in which the order's limit price falls.		Should be specified in whole percentage increments. <i>Valid values announced via Pearl Equities Regulatory Circular</i>		
12.	Unsolicited Working Price Updates	Enable receipt of all unsolicited Working Price updates on a session	No	By default, Working Price Update will be sent only when <ul style="list-style-type: none"> - the order first rests on the orderbook - the member modifies the order that results in priority loss and the modified order rests on the orderbook 	√	√
13.	List of MPID(s) permitted	MPID(s) that can be submitted on orders via this session.	Yes	Valid NSCC MPID(s)	√	√
14.	Attributable	Members can choose to have all orders automatically attributed on the market data feed upon receipt via this feature. Port attribute can be over-ridden on	No	<ul style="list-style-type: none"> • Attributed to Firm MPID • Attributed "RTAL" to this order • Not Attributable (Default) 	√	X

Sr. No.	Attribute	Description	Mandatory	Valid / Default values	FOI	MEO
		an order by order basis.				
15.	Average Daily Volume (ADV) Check	Reject orders with size exceeding the Average Daily Volume traded in the symbol in the last 20 trading days multiplied by the % specified.	No	By default, this protection is disabled.	√	√
15.a	<i>ADV Percentage</i>	Custom Percentage of the ADV specified by the member.		Minimum value is 1% and increments of full percent thereafter.		
15.b	<i>Minimum Symbol ADV</i>	The minimum ADV required in a symbol for the check to be applied.		<ul style="list-style-type: none"> When opting into the protection this value has to be specified for the check to be applied. A value of 0 will prevent the minimum ADV check being applied. 		
15.1	Average Daily Volume (ADV) Session Symbol Override	Protection to reject orders with size exceeding the Average Daily Volume traded in the symbol in the last 20 trading days multiplied by the percentage specified.	No	<p>By default, this protection is disabled.</p> <p>If an order is received from a session (that has ADV protection enabled) (15) in a security (that has a custom ADV protection) (15.1), the custom ADV protection will trump the session level</p>	√	√

Sr. No.	Attribute	Description	Mandatory	Valid / Default values	FOI	MEO
				protection – regardless of whether it is more conservative or not.		
15.1.a	<i>ADV Threshold Percentage</i>	Custom Percentage of the ADV specified by the member.		Minimum value is 1% and increments of full percent thereafter.		
16.	Regulation SHO Restricted Security List Reject	Disallow entry of Sell Short and Sell Short Exempt orders received in a security that falls within the member provided Regulation SHO Restricted Security List.	No	By default, this protection is disabled. Ticker symbol for the securities in NASDAQ Integrated Platform format.	√	√
17.	Restricted Security List Reject	Disallow entry of orders received in a security that falls within the member provided Restricted Security List.	No	By default, this protection is disabled. Ticker symbol for the securities in NASDAQ Integrated Platform format.	√	√
18.	Non Agency Reject	Disallow entry of orders marked with a capacity of Principal or Riskless Principal.	No	By default, this protection is disabled.	√	√
19.	Override Capacity	Override all orders	No	By default, this override is	√	√

Sr. No.	Attribute	Description	Mandatory	Valid / Default values	FOI	MEO
	to Agency	received to a capacity of “Agency” regardless of the capacity stated on the order (Agency, Principal, Riskless Principal)		off.		
20.	Order Rate Check – For the Session with Automatic Reset	Protects members from sending more than the specified number of order messages (New Orders, Order Modification Requests and Order Cancellation Requests) in a rolling time window on the session.	No		√	√
20.a	<i>Time Window</i>	The rolling time window, for the Order Rate Check		Should be specified in seconds. <i>Valid values to be announced via Pearl Equities Regulatory Circular</i>		
20.b	<i>Count</i>	The number of order messages (New Orders, Order Modification Requests and Order Cancellation Requests)		<i>Valid values to be announced via Pearl Equities Regulatory Circular</i>		

Sr. No.	Attribute	Description	Mandatory	Valid / Default values	FOI	MEO
		(configurable see 20.c)) permitted within the Time Window.				
20.c	<i>Exclude Cancel Request from Count</i>	The ability to select whether Order Cancellation Requests should be excluded from the Count.		By default this is off, Order Cancellation Requests are included in the count.		
20.d	<i>Trigger Action</i>	Action taken when Order Rate Check protection is enabled and triggered.		<ul style="list-style-type: none"> Reject - Rejects new orders and modification requests for the remainder of the Time Window. Order Cancellations will continue to be accepted. 		
20.1	Order Rate Check – For the Session with Manual Reset	Protects members from sending more than the specified number of order messages (New Orders, Order Modification Requests and Order Cancellation Requests) in a rolling	No		√	√

Sr. No.	Attribute	Description	Mandatory	Valid / Default values	FOI	MEO
		time window on one or more sessions.				
20.1.a	<i>Time Window</i>	The rolling time window, for the Order Rate Check		Should be specified in seconds. <i>Valid values to be announced via Pearl Equities Regulatory Circular</i>		
20.1.b	<i>Count</i>	The number of order messages (New Orders, Order Modification Requests and Order Cancellation Requests (configurable see 20.1.c)) permitted within the Time Window.		<i>Valid values to be announced via Pearl Equities Regulatory Circular</i>		
20.1.c	<i>Exclude Cancel Request from Count</i>	The ability to select whether Order Cancellation Requests should be excluded from the Count.		By default this is off, Order Cancellation Requests are included in the count.		

Sr. No.	Attribute	Description	Mandatory	Valid / Default values	FOI	MEO
20.1.d	<i>Trigger Action</i>	Action taken when Order Rate Check protection is enabled and triggered.		<ul style="list-style-type: none"> • Warning Only - Send a warning notification via email to Trade Operations. There will be no impact to the member's order entry activity. • Block Only - Reject all subsequent new orders received. Send an email notification to Trade Operations indicating the block. • Block and Mass Cancel - Reject all subsequent new orders and cancel all open orders. Send an email notification to Trade Operations indicating the action taken. 		

Sr. No.	Attribute	Description	Mandatory	Valid / Default values	FOI	MEO
20.2	Order Rate Check – For Session + MPID with Automatic Reset	Protects members from sending more than the specified number of order messages (New Orders, Order Modification Requests and Order Cancellation Requests) in a rolling time window on the session per MPID.	No		√	√
20.2.a	<i>Time Window</i>	The rolling time window, for the Order Rate Check		Should be specified in seconds. <i>Valid values to be announced via Pearl Equities Regulatory Circular</i>		
20.2.b	<i>Count</i>	The number of order messages (New Orders, Order Modification Requests and Order Cancellation Requests (configurable see 20.2.c)) permitted within the Time Window.		<i>Valid values to be announced via Pearl Equities Regulatory Circular</i>		

Sr. No.	Attribute	Description	Mandatory	Valid / Default values	FOI	MEO
20.2.c	<i>Exclude Cancel Request from Count</i>	The ability to select whether Order Cancellation Requests should be excluded from the Count.		By default this is off, Order Cancellation Requests are included in the count.		
20.2.d	<i>Trigger Action</i>	Action taken when Order Rate Check protection is enabled and triggered.		<ul style="list-style-type: none"> Reject - Rejects new orders and modification requests for the remainder of the Time Window. Order Cancellations will continue to be accepted. 		
20.3	Order Rate Check - For Session + MPID + Symbol with Automatic Reset	Protects members from sending more than the specified number of order messages (New Orders, Order Modification Request and Order Cancellation Request) in a rolling time window on the session per MPID per symbol.	No		√	√

Sr. No.	Attribute	Description	Mandatory	Valid / Default values	FOI	MEO
20.3.a	<i>Time Window</i>	The rolling time window, for the Order Rate Check		Should be specified in seconds. <i>Valid values to be announced via Pearl Equities Regulatory Circular</i>		
20.3.b	<i>Count</i>	The number of order messages (New Orders, Order Modification Requests and Order Cancellation Requests (configurable see 20.3.c)) permitted within the Time Window.		<i>Valid values to be announced via Pearl Equities Regulatory Circular</i>		
20.3.c	<i>Exclude Cancel Request from Count</i>	The ability to select whether Order Cancellation Requests should be excluded from the Count.		By default this is off, Order Cancellation Requests are included in the count.		
20.3.d	<i>Trigger Action</i>	Action taken when Order Rate Check protection is enabled and triggered.		<ul style="list-style-type: none"> Reject - Rejects new orders and modification requests for the remainder of the Time Window sent by the MPID in the 		

Sr. No.	Attribute	Description	Mandatory	Valid / Default values	FOI	MEO
				symbol. Order Cancellations will continue to be accepted.		
21.	Market Impact Collar	Prevent limit orders from executing at prices that are too far through the current market upon entry.	No	<p>Custom Percentage Limits can be set for the following Limit Price Ranges:</p> <ul style="list-style-type: none"> • <\$0.75 • >= \$0.75 & <= \$3 • > \$3 <p>Custom Dollar Limits can be set for the following Limit Price Range:</p> <ul style="list-style-type: none"> • <\$0.75 	√	√
21.a	<i>Dollar Limit</i>	Custom Dollar Limit if specified by the member, else exchange default Dollar Limit for the price range in which the order's limit price falls.		<p>Custom Dollar Limits can be specified in increments of a penny.</p> <p><i>Valid values to be announced via Pearl Equities Regulatory Circular</i></p>		
21.b	<i>Percentage Limit</i>	Custom Percentage Limit if specified by the member.		<p>Should be specified in whole percentage increments.</p> <p><i>Valid values to be announced via Pearl Equities Regulatory Circular</i></p>		

Sr. No.	Attribute	Description	Mandatory	Valid / Default values	FOI	MEO
22.	Cumulative Risk Metrics (CRM): Maximum Gross Notional Trade Value	Protection to limit the gross notional exposure aggregated across multiple trades for a Risk Protection Group, for a day to a specified maximum value. Gross Notional Trade Value = (Sum of Notional Value of Sell Side Trades) + (Sum of Notional Value of Buy Side Trades)	No		√	√
22.1	<i>RiskProtectionGroup / MetricName</i>	Risk Protection Group defined by the member for the session.				
22.2	<i>MaxGrossNotional</i>	Custom Max Gross Notional Trade Value specified by the member.				

Sr. No.	Attribute	Description	Mandatory	Valid / Default values	FOI	MEO
22.3	<i>Trigger Action</i>	Action taken when Max Gross Notional Trade Value protection is enabled and triggered.		<ul style="list-style-type: none"> Block and Mass Cancel - System will reject all subsequent new orders and cancel all open orders on the exchange for the specified Risk Protection Group. Block Only - System will reject all subsequent new orders but will not cancel all open orders on the exchange for the specified Risk Protection Group. 		
23.	Cumulative Risk Metrics (CRM): Maximum Net Notional Trade Value	<p>Protection to limit the net notional exposure aggregated across multiple trades for a Risk Protection Group, for a day to a specified maximum value.</p> <p>Net Notional Trade Value = Absolute Value of [(Sum of Notional Value of Buy Side Trades) – (Sum</p>	No		√	√

Sr. No.	Attribute	Description	Mandatory	Valid / Default values	FOI	MEO
		of Notional Value of Sell Side Trades)]				
23.1	<i>RiskProtectionGroup / MetricName</i>	Risk Protection Group defined by the member for the session.				
23.2	<i>MaxNetNotional</i>	Custom Max Net Notional Trade Value specified by the member.				
23.3	<i>Trigger Action</i>	Action taken when Max Net Notional Trade Value protection is enabled and triggered.		<ul style="list-style-type: none"> • Block and Mass Cancel - System will reject all subsequent new orders and cancel all open orders on the exchange for the specified Risk Protection Group. • Block Only - System will reject all subsequent new orders but will not cancel all open 		

Sr. No.	Attribute	Description	Mandatory	Valid / Default values	FOI	MEO
				orders on the exchange for the specified Risk Protection Group.		
24.	Cumulative Risk Metrics (CRM): Maximum Gross Notional Open Value	<p>Protection to limit the gross notional exposure aggregated across multiple open orders for a Risk Protection Group, for a day to a specified maximum value.</p> <p>Gross Notional Open Value = (Sum of Notional Value of Sell Side Open Orders) + (Sum of Notional Value of Buy Side Open Orders)</p>	No		√	√
24.1	<i>RiskProtectionGroup / MetricName</i>	Risk Protection Group defined by the member for the session.				
24.2	<i>MaxGrossNotional</i>	Custom Max Gross Notional Open Value specified by the member.				

Sr. No.	Attribute	Description	Mandatory	Valid / Default values	FOI	MEO
24.3	<i>Trigger Action</i>	Action taken when Max Gross Notional Open Value protection is enabled and triggered.		<ul style="list-style-type: none"> • Block and Mass Cancel - System will reject all subsequent new orders and cancel all open orders on the exchange for the specified Risk Protection Group. • Block Only - System will reject all subsequent new orders but will not cancel all open orders on the exchange for the specified Risk Protection Group. 		
25.	Cumulative Risk Metrics (CRM): Maximum Net Notional Open Value	<p>Protection to limit the net notional exposure aggregated across multiple open orders for a Risk Protection Group, for a day to a specified maximum value.</p> <p>Net Notional Open Value = Absolute Value of [(Sum of Notional Value of Buy Side Open Orders) –</p>	No		√	√

Sr. No.	Attribute	Description	Mandatory	Valid / Default values	FOI	MEO
		(Sum of Notional Value of Sell Side Open Orders)]				
25.1	<i>RiskProtectionGroup / MetricName</i>	Risk Protection Group defined by the member for the session.				
25.2	<i>MaxNetNotional</i>	Custom Max Net Notional Open Value specified by the member.				
25.3	<i>Trigger Action</i>	Action taken when Max Net Notional Open Value protection is enabled and triggered.		<ul style="list-style-type: none"> • Block and Mass Cancel - System will reject all subsequent new orders and cancel all open orders on the exchange for the specified Risk Protection Group. • Block Only - System will reject all subsequent new orders but will not cancel all open orders on the exchange for the specified Risk Protection Group. 		

Sr. No.	Attribute	Description	Mandatory	Valid / Default values	FOI	MEO
26.	Cumulative Risk Metrics (CRM): Maximum Gross Notional Trade and Open Value	Protection to limit the gross notional exposure aggregated across multiple trades and open orders for a Risk Protection Group, for a day to a specified maximum value. Gross Notional Trade and Open Value = (Sum of Notional Value of Sell Side Trades) + (Sum of Notional Value of Buy Side Trades) + (Sum of Notional Value of Sell Side Open Orders) + (Sum of Notional Value of Buy Side Open Orders)	No		√	√
26.1	<i>RiskProtectionGroup / MetricName</i>	Risk Protection Group defined by the member for the session.				
26.2	<i>MaxGrossNotional</i>	Custom Max Gross Notional Trade and Open Value specified by the member.				

Sr. No.	Attribute	Description	Mandatory	Valid / Default values	FOI	MEO
26.3	Trigger Action	Action taken when Max Gross Notional Trade and Open Value protection is enabled and triggered.		<ul style="list-style-type: none"> Block and Mass Cancel - System will reject all subsequent new orders and cancel all open orders on the exchange for the specified Risk Protection Group. Block Only - System will reject all subsequent new orders but will not cancel all open orders on the exchange for the specified Risk Protection Group. 		
27.	Cumulative Risk Metrics (CRM): Maximum Net Notional Trade and Open Value	<p>Protection to limit the net notional exposure aggregated across multiple trades and open orders for a Risk Protection Group, for a day to a specified maximum value.</p> <p>Net Notional Trade and Open Value = Absolute Value of [(Sum of Notional Value of Buy Side</p>	No		√	√

Sr. No.	Attribute	Description	Mandatory	Valid / Default values	FOI	MEO
		Open Orders + Buy Side Trades) – (Sum of Notional Value of Sell Side Open Orders + Sell Side Trades)]				
27.1	RiskProtectionGroup / MetricName	Risk Protection Group defined by the member for the session.				
27.2	MaxNetNotional	Custom Max Net Notional Trade and Open Value specified by the member.				
27.3	Trigger Action	Action taken when Max Net Notional Trade and Open Value protection is enabled and triggered.		<ul style="list-style-type: none"> • Block and Mass Cancel - System will reject all subsequent new orders and cancel all open orders on the exchange for the specified Risk Protection Group. • Block Only - System will reject all subsequent new orders but will not cancel all open orders on the exchange for the specified Risk 		

Sr. No.	Attribute	Description	Mandatory	Valid / Default values	FOI	MEO
				Protection Group.		

Notes:

- All the above Risk protections are latency equalized i.e. there is no latency penalty for a member when opting into and leveraging a risk protection available on the exchange as compared to a member not opting into the risk protection.

Appendix A: Revision History

Revision Date	Version	Description
Feb 06, 2020	1.0	First official release
Feb 12, 2021	1.0.a	Added a clarification about the default behavior of Working Price Updates
July 07, 2022	2.0	Added Short Sale Exempt Reject, Market Order Reject, ADV Check, Regulation SHO Restricted List, Restricted Security List, Non Agency Reject, Override Capacity to Agency, Order Rate Check, and Market Impact Collar as available protections and updated Maximum Order Notional Value protection to include MKT orders.
Aug 17, 2022	2.0.a	Added Order Rate Check + MPID scope and Cumulative Risk Metrics (CRM).
Mar 06, 2023	3.0	Added ACOD and ACOSF for Drop copy, Cumulative Risk Metric for Gross and Net Trade and Open Value. Updated Order Rate Protection to have Cancel request as an optional selection. Updated the note to reflect that all Risk protections are latency equalized.



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