From: EQUIcon
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Subject: Command Reference for the SILA Driver for the QInstruments BioShake devices

This document contains a description of all functions and parameters of the SiLA interface of the following device
Device name: BioShake
Device manufacturer: QUANTIFOIL Instruments GmbH
It is automatically generated from the WSDL of the device.

1. Function: Abort

This command aborts all running and pending asynchronous commands of the device.

Name	Description	Type	Min	Max	Unit	Default	Direction
requestId	This parameter is the unique identification of this command call.	Int32	1	2147483647			IN
lockId	This parameter is the identification of the PMS which has locked the device.	String					IN

2. Function: (S) CloseClamp

The CloseClamp command is used to lock the ELM (edge locking mechanism).

Name	Description	Type	Min	Max	Unit	Default	Direction
requestId	This parameter is the unique identification of this command call.	Int32	1	2147483647			IN
lockId	This parameter is the identification of the SiLA Service Consumer, which has locked the device.	String					IN

3. Function: Delay

This command returns after the specified value. If desired it creates after the specified time an error.

Name	Description	Type	Min	Max	Unit	Default	Direction
requestId	This parameter is the unique identification of this command call.	Int32	1	2147483647			IN
lockId	This parameter is the identification of the Service Consumer which has locked the device.	String					IN
delayTime	This parameter represent the duration the command has to wait. Notation is ISO 8601, e.g. PT5S means 5 seconds.	String				PT0S	IN
waitOnSimulation	If this parameter is set to true, the device waits also in simulation mode till the delay time has been elapsed.	Boolean				false	IN
createErrorTime	The duration after command start the command has to create an error. Notation is ISO 8601. If it is "PT0S" no error has to be created.	String				PT0S	IN
continuationTask	An XML string that describes the error and its continuation possibilities.	String					IN

4. Function: DoContinue

This command enables continuation of paused commands, processes.
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Name	Description	Type	Min	Max	Unit	Default	Direction
requestId	This parameter is the unique identification of this command call.	Int32	1	2147483647			IN
lockId	This parameter is the identification of the PMS which has locked the device.	String					IN

5. Function: GetConfiguration

The GetConfiguration command is used to retrieve the configuration of a device. It can only be invoked in the standby state.

Name	Description	Type	Min	Max	Unit	Default	Direction
requestId	This parameter is the unique identification of this command call.	Int32	1	2147483647			IN
lockId	This parameter is the identification of the Service Consumer which has locked the device.	String					IN
configLevel	This parameter defines the access level.(NOT USED)	Int32	0	0			IN
password	This parameter contains the password for the corresponding configLevel.(NOT USED)	String					IN

6. Function: GetDeviceIdentification

This command reports on details of the device.

Name	Description	Type	Min	Max	Unit	Default	Direction
requestId	This parameter is the unique identification of this command call.	Int32	1	2147483647			IN
lockId	This parameter is the identification of the PMS which has locked the device.	String					IN
deviceDescription	The Device Identification. It is a SOAP complex type.	SiLADeviceIdentification					OUT

7. Function: GetParameters

This command is used to retrieve the available parameter values of the device.

Name	Description	Type	Min	Max	Unit	Default	Direction
requestId	This parameter is the unique identification of this command call.	Int32	1	2147483647			IN
lockId		String					IN

8. Function: GetStatus

This command reports the status of the device.

Name	Description	Type	Min	Max	Unit	Default	Direction
requestId	This parameter is the unique identification of this command call.	Int32	1	2147483647			IN
deviceId	The identification the device returns to identify itself at the PMS.	String					OUT
state	Status of the device.	EState					OUT

subStates	Sub state of the above state. ArrayElementType(0) = CommandDescription. ArrayDimension = 1.	CommandDescription[]				OUT
locked	Lock state of the device.	Boolean				OUT
PMSId	Identification of the PMS that locked the device.	String				OUT
currentTime	Time of reporting status information.	DateTime				OUT

9. Function: Initialize

This command initializes the device.

Name	Description	Type	Min	Max	Unit	Default	Direction
requestId	This parameter is the unique identification of this command call.	Int32	1	2147483647			IN
lockId	This parameter is the identification of the PMS which has locked the device.	String					IN

10. Function: (S) LabwareReceived

This command notifies the device that a labware has been put to it (sent after a "PrepareForInput" command).

Name	Description	Type	Min	Max	Unit	Default	Direction
requestId	This parameter is the unique identification of this command call.	Int32	1	2147483647			IN
lockId	This parameter is the identification of the PMS which has locked the device.	String					IN
position	This parameter indicates the input position, needed if more than one is available.	Int32	1	2147483647		1	IN

11. Function: (S) LabwareRemoved

This command notifies the device that a labware has been removed (sent after a "PrepareForOutput" command).

Name	Description	Type	Min	Max	Unit	Default	Direction
requestId	This parameter is the unique identification of this command call.	Int32	1	2147483647			IN
lockId	This parameter is the identification of the PMS which has locked the device.	String					IN
position	This parameter indicates the output position, needed if more than one is available.	Int32	1	2147483647		1	IN

12. Function: LockDevice

This command locks the device for exclusive use.

Name	Description	Type	Min	Max	Unit	Default	Direction
requestId	This parameter is the unique identification of this command call.	Int32	1	2147483647			IN
lockId	This parameter hands over the lock identification of the PMS to the device. The	String					IN

lockTimeout	device will only accept further commands, if they use the same lockId. If this parameter is omitted, no timeout will be set. Otherwise the device will unlock itself if it does not receive any commands within the timeout period.	String					IN
eventReceiverURI	Service URI of the Service Consumers event Receiver.	String					IN
PMSId	Id of the PMS in order to identify the PMS that locked a device.	String					IN

13. Function: (S) OpenClamp

The OpenClamp command is used to unlock the ELM (edge locking mechanism).

Name	Description	Type	Min	Max	Unit	Default	Direction
requestId	This parameter is the unique identification of this command call.	Int32	1	2147483647			IN
lockId	This parameter is the identification of the SiLA Service Consumer, which has locked the device.	String					IN

14. Function: Pause

This command pauses the process/workflow in order to enable user intervention.

Name	Description	Type	Min	Max	Unit	Default	Direction
requestId	This parameter is the unique identification of this command call.	Int32	1	2147483647			IN
lockId	This parameter is the identification of the PMS which has locked the device.	String					IN

15. Function: PrepareForInput

This command puts the device into a state where it is ready to accept new labware.

Name	Description	Type	Min	Max	Unit	Default	Direction
requestId	This parameter is the unique identification of this command call.	Int32	1	2147483647			IN
lockId	This parameter is the identification of the PMS which has locked the device.	String					IN
position	This parameter indicates the input position, needed if more than one is available.	Int32	1	2147483647		1	IN

16. Function: PrepareForOutput

This command puts the device into a state to release the processed labware.

Name	Description	Type	Min	Max	Unit	Default	Direction
requestId	This parameter is the unique identification of this command call.	Int32	1	2147483647			IN
lockId	This parameter is the identification of the PMS which has locked the device.	String					IN
position	This parameter indicates the output position, needed if more than one is available.	Int32	1	2147483647		1	IN

17. Function: Reset

This command is used to reset the Service Provider at any time from any state.

Name	Description	Type	Min	Max	Unit	Default	Direction
requestId	This parameter is the unique identification of this command call.	Int32	1	2147483647			IN
lockId	This parameter is the identification of the PMS which has locked the device.	String					IN
deviceId	The identification the device returns to identify itself at the PMS.	String					IN
eventReceiverURI	Connection information of the Service Consumers event Receiver.	String					IN
PMSId	Id of the PMS in order to identify the PMS that locked a device.	String					IN
errorHandlingTimeout	Timeout until an error handling state is changed into an error state.	String					IN
simulationMode	Selects simulation mode.	Boolean					IN

18. Function: SetConfiguration

The SetConfiguration command is used to set the configuration of a device. This command can only be executed in the standby state.

Name	Description	Type	Min	Max	Unit	Default	Direction
requestId	This parameter is the unique identification of this command call.	Int32	1	2147483647			IN
lockId	This parameter is the identification of the Service Consumer which has locked the device.	String					IN
configLevel	This parameter is defines the access level.(NOT USED)	Int32	0	0			IN
password	This parameter contains the password for the corresponding configLevel.(NOT USED)	String					IN
configXML	The XML document of configXML is formatted as stated in the ParameterSet tag.	String					IN

19. Function: SetParameters

This command is used to send new parameter values to the device.

Name	Description	Type	Min	Max	Unit	Default	Direction
requestId	This parameter is the unique identification of this command call.	Int32	1	2147483647			IN
lockId	This parameter is the identification of the Service Consumer which has locked the device.	String					IN
paramsXML	The XML document of paramsXML is formatted as stated in the ParameterSet tag. zzzzzz ...	String					IN

20. Function: Shake

This command is used to shake a labware item.

Name	Description	Type	Min	Max	Unit	Default	Direction
requestId	This parameter is the unique identification of this command call.	Int32	1	2147483647			IN
lockId		String					IN

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Name	Description	Type	Min	Max	Unit	Default	Direction
shakeDuration	This parameter defines the shaking duration. Notation is ISO 8601, e.g. PT5S means 5 seconds.	String				PT5S	IN

21. Function: (S) StartTemperatureControl

The StartTemperatureControl command is used to start the heating or cooling unit targeting a predefined temperature.

Name	Description	Type	Min	Max	Unit	Default	Direction
requestId	This parameter is the unique identification of this command call.	Int32	1	2147483647			IN
lockId	This parameter is the identification of the SiLA Service Consumer, which has locked the device.	String					IN
temperature	The temperature parameter defines the target temperature.	Double	0	99			IN
waitForCompletion	This parameter defines, if the command send its response event only after reaching the target temperature.	Boolean					IN

22. Function: (S) StopTemperatureControl

The StopTemperatureControl command is used to stop the heating or cooling unit even while a StartTemperatureControl is not completed yet.

Name	Description	Type	Min	Max	Unit	Default	Direction
requestId	This parameter is the unique identification of this command call.	Int32	1	2147483647			IN
lockId	This parameter is the identification of the SiLA Service Consumer, which has locked the device.	String					IN

23. Function: UnlockDevice

This command unlocks the device.

Name	Description	Type	Min	Max	Unit	Default	Direction
requestId	This parameter is the unique identification of this command call.	Int32	1	2147483647			IN
lockId	This parameter is the identification of the PMS which has locked the device.	String					IN