Reference Manual

Quantos Command Set

for Quantos System

METTLER TOLEDO

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1 Commands and Responses

QRA 20 – Activate/deactivate user input of value/text

Description

Use QRA␣20 to activate or deactivate user input of value or text from the Quantos terminal.

Syntax

Command

QRA␣20␣x1␣"<text1>"␣"<text2>"␣ "<text3>"	Displays an user input dialog.
QRA␣20␣0	Deactivate active user input of value/text.

First Responses

QRA␣20␣B	Command executed, user input follows.
QRA␣20␣A␣"<User␣input>"	The user inputted a value that is returned after pressing "OK".
QRA␣20␣C	QRA␣20 command has been aborted by "C" button.
QRA␣20␣I	Command understood, but not executable at the moment (e.g. there is already an active QRA␣20). No second response follows.
QRA␣20␣L	Command understood, parameter wrong. No second response follows.

Further Responses

QRA␣20␣A	Command executed, i.e. the last QRA 20 is aborted, i.e. the QRA␣20 dialog window is closed.
QRA␣20␣I	Command understood, but not executable at the moment (e.g. no QRA␣20 dialog window is open).

Parameters

Name	Type	Values	Meaning
x1	Integer	8	Alphanumeric input is allowed.
"<text1>"	String		Window title (max. 20 characters).
"<text2>"	String		Text/value to be displayed as default, and to be overwritten by user input (max. 20 characters).
"<text3>"	String		Unit (max. 20 characters).

Comments

- If x1=8, "Text3" can be up to 20 characters. The window title will become "Text1 [Text3]".
- "Home"-, "User Profiles"-, "Select Application"- and "Application Menu"-keys are disabled when softkeys are displayed.

Examples

↓	QRA␣20␣8␣"Sammple␣ID"␣"Sample1"␣"-"	Display input dialog to enter the sample ID.
↑	QRA␣20␣B	Displaying input box.
↑	QRA␣20␣A␣"Test"	User as entered "Test" as sample ID.

QRA 49 – Activate/deactivate message window

Description

Use QRA␣49 to activate or deactivate the message window.

Syntax

Command

QRA␣49␣x1␣x2␣"<text>"	Activates the message window.
QRA␣49␣0	Closes an open message window.

First Responses

QRA␣49␣B	Command executed.
QRA␣49␣A␣1	"OK" button is pressed. QRA␣49 window will also close.
QRA␣49␣A␣2	"C" button is pressed. QRA␣49 window will also close.
QRA␣49␣I	Command understood, but not executable at the moment.
QRA␣49␣L	Command understood, parameter wrong, i.e. text is too long or one of the characters cannot be displayed.

Further Responses

QRA␣49␣A	Command executed, i.e. the last QRA␣49 is aborted, i.e. the QRA␣49 window is closed.
QRA␣49␣I	Command understood, but not executable at the moment (e.g. no QRA␣49QRA 49 window is open).

Parameters

Name	Type	Values	Meaning
x1	Integer	1	Window without any button.
		2	Window with "OK" button only.
		3	Window with "C" button only.
		4	Window with "OK" and "C" button.
x2	Integer	1	Info icon.
		2	Alert icon.
		3	Stop icon.
		4	Question icon.
		5	X-mark icon.
		6	Date/Time icon.
		7	Sound icon.
		8	Alphabetic icon.
		9	Numeric icon.
		9	Sandglass icon.
"<text>"	String		Message in the window (max. 240 characters).

Comments

- "Home"-, "User Profiles"-, "Select Application"- and "Application Menu"-keys are disabled when QRA␣49 window is displayed. The window has to be closed before they can be used again.
- If no button is visible, the window can be closed using the side door opening buttons.

- If there is an active QRA␣49, sending another QRA␣49 command will close the current window before displaying a new window with the new setting.

Example

↓	QRA␣49␣3␣1␣"This␣is␣a␣sample␣text␣window."	Activates a message window containing the text "This is a sample text window.".
↑	QRA␣49␣B	Command executed. This text becomes visible in the window. The window includes "C" button and info icon.
↑	QRA␣49␣A␣2	"C" key is pressed.

QRA 61 1 – DO command powder/liquid dosing

Description

This command starts instantly a powder or liquid dosing.

Syntax

Command

QRA␣61␣1	Starts dosing.

Responses

QRA␣61␣1␣B	Executing command.
QRA␣61␣1␣A	Command executed and complete.
QRA␣61␣1␣I␣<Error␣code>	Command understood but currently not executable, according to the following error code.
QRA␣61␣L	Command understood but not executable (incorrect parameter).

Error Codes

Name	Type	Values	Meaning
<Error␣code>	Integer	1	Not mounted.
		2	Another job is running.
		3	Timeout.
		4	Not selected.
		5	Not allowed at the moment.
		6	Weight not stable.
		7	Powderflow error.
		8	Stopped by external action.
		9	Safepos error.
		10	Head not allowed.
		11	Head limit reached.
		12	Head expiry date reached.
		13	Sampler blocked.

Comment

- This dosing uses all the parameters previously set, such as: target, tolerance and powder dosing algorithm.

Example

↓	QRA␣61␣1	Command to start dosing.
↑	QRA␣61␣1␣B	Executing command.
↑	QRA␣61␣1␣A	Dosing is finished.

QRA 61 3 – DO command cut label

Description

This command cuts a label that has been printed.

Syntax

Command

QRA␣61␣3	Cuts the label.

Responses

QRA␣61␣3␣B	Executing command.
QRA␣61␣3␣A	Command executed and complete.
QRA␣61␣3␣I␣<Error␣code>	Command understood but currently not executable, according to the following error code.
QRA␣61␣L	Command understood but not executable (incorrect parameter).

Error Codes

Name	Type	Values	Meaning
<Error␣code>	Integer	1	Not mounted.
		2	Another job is running.
		3	Timeout.
		4	Not selected.
		5	Not allowed at the moment.

Comment

- This command cuts the label if it has been printed through the Quantos command set.

Example

↓	QRA␣61	Command to cut label.
↑	QRA␣61␣3␣B	Executing command.
↑	QRA␣61␣3␣A	Command executed and complete.

QRA 61 4 – DO command stop dosing

Description

This command stops the dosing process.

Syntax

Command

QRA␣61␣4	Stops a running dosing process.

Responses

QRA␣61␣4␣B	Executing command.
QRA␣61␣4␣A	Command executed and complete.
QRA␣61␣4␣I␣<Error␣code>	Command understood but currently not executable, according to the following error code.
QRA␣61␣L	Command understood but not executable (incorrect parameter).

Error Codes

Name	Type	Values	Meaning
<Error␣code>	Integer	1	Not mounted.
		2	Another job is running.
		3	Timeout.
		4	Not selected.
		5	Not allowed at the moment.
		6	Weight not stable.
		7	Powderflow error.
		8	Stopped by external action.
		9	Safepos error.
		10	Head not allowed.
		11	Head limit reached.
		12	Head expiry date reached.
		13	Sampler blocked.

Example

↓	QRA␣61␣4	Stops dosing.
↑	QRA␣61␣4␣B	Executing command.
↑	QRA␣61␣4␣A	Dosing process stopped.

QRD 2 3 7 – Enquiry of the front door position

Description

This command returns the position of the Quantos front door.

Syntax

Command

QRD␣2␣3␣7	Requests the front door position.

Responses

QRD␣2␣3␣7␣<FrontdoorPosition>␣A	Command executed and returns front door position.
QRD␣2␣3␣7␣I␣<Error␣code>	Command understood but currently not executable, according to the following error code.
QRD␣2␣3␣L	Command understood but not executable (incorrect parameter).

Parameters

Name	Type	Values	Meaning
<FrontdoorPosition>	Integer	2	Close position.
		3	Open position.
		8	Not detectable.
		9	Running.

Error Codes

Name	Type	Values	Meaning
<Error␣code>	Integer	1	Not mounted.
		2	Another job is running.
		3	Timeout.
		4	Not selected.
		5	Not allowed at the moment.
		8	Stopped by external action.

Comment

- If the front door is unmounted in the system, this command is not executable.

Example

↓	QRD␣2␣3␣7	Requests the front door position.
↑	QRD␣2␣3␣7␣3␣A	The front door is in the open position.

QRD 2 3 8 – Enquiry of the sampler position

Description

This command returns the current position of the Quantos autosampler QS30.

Syntax

Command

QRD␣2␣3␣8	Requests the sampler position.

Responses

QRD␣2␣3␣8␣<SamplerPosition>␣A	Command executed and returns sampler position.
QRD␣2␣3␣8␣I␣<Error␣code>	Command understood but currently not executable, according to the following error code.
QRD␣2␣3␣L	Command understood but not executable (incorrect parameter).

Parameters

Name	Type	Values	Meaning
<SamplerPosition>	Integer	0	Home position.
		1-30	Position.

Error Codes

Name	Type	Values	Meaning
<Error␣code>	Integer	1	Not mounted.
		2	Another job is running.
		3	Timeout.
		4	Not selected.
		5	Not allowed at the moment.
		8	Stopped by external action.

Comment

- Returns QRD␣2␣3␣L when sampler is deactivated or not available.

Example

↓	QRD␣2␣3␣8	Requests the sampler position.
↑	QRD␣2␣3␣8␣3␣A	Sampler is on position 3.

QRD 2 2 8 – Get sampler status

Description

Requests the activation status of the Quantos autosampler QS30.

Syntax

Command

QRD␣2␣2␣8	Requests the sampler status.

Responses

QRD␣2␣2␣8␣<SamplerStatus>␣A	Command executed and complete.
QRD␣2␣2␣8␣I␣<Error␣code>	Command understood but currently not executable, according to the following error code.
QRD␣2␣2␣L	Command understood but not executable (incorrect parameter).

Parameters

Name	Type	Values	Meaning
<SamplerStatus>	Integer	0	Sampler is switched off/disabled.
		1	Sampler is switched on/selected.

Error Codes

Name	Type	Values	Meaning
<Error␣code>	Integer	1	Not mounted.
		2	Another job is running.
		3	Timeout.
		4	Not selected.
		5	Not allowed at the moment.
		8	Stopped by external action.

Comment

- Check sampler status before using it to avoid errors.

Example

↓	QRD␣2␣2␣8	Requests the sampler status.
↑	QRD␣2␣2␣8␣1␣A	Sampler is mounted and activated.

QRD 2 2 9 – Get weighing pan status

Description

This command detects whether the weighing pan is empty or contains a vial. Initialise the weighing pan before using this function by calling the set empty pan function, **see** QRD␣1␣1␣9.

Syntax

Command

QRD␣2␣2␣9	Requests the weighing pan status.

Responses

QRD␣2␣2␣9␣<PanStatus>␣A	Command executed and complete.
QRD␣2␣2␣9␣I␣<Error␣code>	Command understood but currently not executable, according to the following error code.
QRD␣2␣2␣L	Command understood but not executable (incorrect parameter).

Parameters

Name	Type	Values	Meaning
<PanStatus>	Integer	0	Pan empty.
		1	Pan not empty.

Error Codes

Name	Type	Values	Meaning
<Error␣code>	Integer	1	Not mounted.
		2	Another job is running.
		3	Timeout.
		4	Not selected.
		5	Not allowed at the moment.
		8	Stopped by external action.

Comment

- Be sure to initialise the empty weighing pan before using this command, **see** QRD␣1␣1␣9.

Example

↓	QRD␣2␣2␣9	Requests the weighing pan status.
↑	QRD␣2␣2␣9␣1␣A	Weighing pan is not empty (there is a vial placed).

QRD 2 4 11 – Get head data

Description

This command reads the content of the dose head RFID chip and returns it as an XML stream.

Syntax

Command

QRD␣2␣4␣11	Get dose head data.

Responses

QRD␣2␣4␣11␣B	Command understood, sending xml.
<XML␣Dataset>	xml result stream.
QRD␣2␣4␣11␣A	Command executed and complete.
QRD␣2␣4␣11␣I␣<Error␣code>	Command understood but currently not executable, according to the following error code.
QRD␣2␣4␣L	Command understood but not executable (incorrect parameter).

Parameters

Name	Tag	Type	Values	Meaning
<XML␣Dataset>	<?xml version="1.0" encoding= "ISO-8 859-1"?> <Info_head xmlns:xsi= "http:// www.w3.org/ 2001/XMLSchema instance" xsi:no NamespaceSchema Location=" Info_head.xsd"> <Timestamp>	String	Text	Time stamp.
	<Substance>	String	Text	Substance name.
	<Lot_ID>	String	Text	Lot number of the substance.
	<User_ID>	String	Text	User ID of the currently logged in user.
	<Filling_date>	String	Text	Filling date of the dose head.
	<Exp._date>	String	Text	Expiry date of the substance.
	<Retest_date>	String	Text	Retest date of the substance.
	<Content Unit="mg">	String	Text	Fill weight of powder.
	<Rem._dosages>	String	Text	Remaining number of doses.
	<Terminal_SNR>	String	Text	Serial number of the terminal.
	<Bridge_SNR>	String	Text	Serial number of the weighing bridge.
	<Balance_Type>	String	Text	Balance type.
	<Balance_ID>	String	Text	Balance ID.
	<Last_cal.>	String	Text	Date of last calibration.
	<Option_SNR>	String	Text	Serial number of the ethernet option.
	<Dose_unit_SNR>	String	Text	Serial number of the dosing unit.
	<Appl._Name>	String	Text	Fixed application name.
	<Var1>	String	Text	User variable 1.

	<Var2>	String	Text	User variable 2.
	<Var3>	String	Text	User variable 3.
	<Var4>	String	Text	User variable 4.
	<Label>	String	Text	Description of a user variable.
	<Value>	String	Text	Content of the user variable.
	<Title_1>	String	Text	Title 1.
	<Title_2>	String	Text	Title 2.
	<Date_Time>	String	Text	Date and time stamp.
	<Levelcontrol>	String	Text	Level control setting.
	<Head_prod._date>	String	Text	Production date of dose head.
	<Head_type>	String	Text	Dose head type.
	<Head_ID>	String	Text	Unique ID of the dose head.
	<Dose_limit>	String	Text	Dose head limit.
	<Accuracy Unit="%">	String	Text	Accuracy (not used).
	<Dosing_counter>	String	Text	Number of doses done with this head.
	<Rem._quantity Unit="mg">	String	Text	Remaining amount of powder in the dose head.
	</Info_head>	String	Text	-

Error Codes

Name	Type	Values	Meaning
<Error␣code>	Integer	1	Not mounted.
		2	Another job is running.
		3	Timeout.
		4	Not selected.
		5	Not allowed at the moment.
		8	Stopped by external action.

Comment

- Powder and liquid dose heads have slightly different output files, see the xml output specification.

Example

↓	QRD␣2␣4␣11	Get dose head xml data.
↑	QRD␣2␣4␣11␣B	Sending xml data.
↑	QRD␣2␣4␣11␣A	XML sent completely.

QRD 2 4 12 – Get sample data

Description

Receives the result data from the last dispense (powder or liquid).

Syntax

Command

QRD␣2␣4␣12	Get dose sample data.

Responses

QRD␣2␣4␣12␣B	Command understood, sending xml.
<XML␣Dataset>	xml result stream.
QRD␣2␣4␣12␣A	Command executed and complete.
QRD␣2␣4␣12␣I␣<Error␣code>	Command understood but currently not executable, according to the following error code.
QRD␣2␣4␣L	Command understood but not executable (incorrect parameter).

Parameters

Name	Tag	Type	Values	Meaning
<XML␣Dataset>	<?xml version="1.0" encoding= "ISO-8 859-1"?> <Info_head xmlns:xsi= "http:// www.w3.org/ 2001/XMLSchema instance" xsi:no NamespaceSchema Location=" Info_head.xsd"> <Timestamp>	String	Text	Time stamp.
	<Substance>	String	Text	Substance name.
	<Lot_ID>	String	Text	Lot number of the substance.
	<User_ID>	String	Text	User ID of the currently logged in user.
	<Filling_date>	String	Text	Filling date of the dose head.
	<Exp._date>	String	Text	Expiry date of the substance.
	<Retest_date>	String	Text	Retest date of the substance.
	<Content Unit="mg">	String	Text	Fill weight of powder.
	<Rem._dosages>	String	Text	Remaining number of doses.
	<Terminal_SNR>	String	Text	Serial number of the terminal.
	<Bridge_SNR>	String	Text	Serial number of the weighing bridge.
	<Balance_Type>	String	Text	Balance type.
	<Balance_ID>	String	Text	Balance ID.
	<Last_cal.>	String	Text	Date of last calibration.
	<Option_SNR>	String	Text	Serial number of the ethernet option.
	<Dose_unit_SNR>	String	Text	Serial number of the dosing unit.
	<Appl._Name>	String	Text	Fixed application name.
	<Var1>	String	Text	User variable 1.

	<Var2>	String	Text	User variable 2.
	<Var3>	String	Text	User variable 3.
	<Var4>	String	Text	User variable 4.
	<Label>	String	Text	Description of a user variable.
	<Value>	String	Text	Content of the user variable.
	<Title_1>	String	Text	Title 1.
	<Title_2>	String	Text	Title 2.
	<Date_Time>	String	Text	Date and time stamp.
	<Levelcontrol>	String	Text	Level control setting.
	<Head_prod._date>	String	Text	Production date of dose head.
	<Head_type>	String	Text	Dose head type.
	<Head_ID>	String	Text	Unique ID of the dose head.
	<Dose_limit>	String	Text	Dose head limit.
	<Accuracy Unit="%">	String	Text	Accuracy (not used).
	<Dosing_counter>	String	Text	Number of doses done with this head.
	<Rem._quantity Unit="mg">	String	Text	Remaining amount of powder in the dose head.
	</Info_head>	String	Text	-

Error Codes

Name	Type	Values	Meaning
<Error␣code>	Integer	2	Another job is running.
		3	Timeout.
		5	Not allowed at the moment.
		8	Stopped by external action.

Comment

- The output files from liquid and solid dispenses may differ.

Example

↓	QRD␣2␣4␣12	Get sample xml data.
↑	QRD␣2␣4␣12␣B	Sending xml data.
↑	QRD␣2␣4␣12␣A	XML sent completely.

QRD 2 5 12 – Get label sample data

Description

This command triggers the Quantos label printing function for a sample label.

Syntax

Command

QRD␣2␣5␣12	Triggers printing of a sample label.

Responses

QRD␣2␣5␣12␣B	Command understood, sending data to the label printer.
QRD␣2␣5␣12␣<Labelprinter>␣A	Command executed and complete.
QRD␣2␣5␣12␣I␣<Error␣code>	Command understood but currently not executable, according to the following error code.
QRD␣2␣5␣L	Command understood but not executable (incorrect parameter).

Parameter

Name	Type	Values	Meaning
<Labelprinter>	String		Print out the sample data to the label printer.

Error Codes

Name	Type	Values	Meaning
<Error␣code>	Integer	1	Not mounted.
		2	Another job is running.
		3	Timeout.
		4	Not selected.
		5	Not allowed at the moment.
		8	Stopped by external action.

Comment

- This command works both with powder and liquid dispenses. The output may differ according to the configuration in the Quantos application settings.

Example

↓	QRD␣2␣5␣12	Send sample data to the label printer.
↑	QRD␣2␣5␣12␣B	Printing started.
↑	QRD␣2␣5␣12␣A	Printing completely sent.

QRD 2 6 12 – Get protocol sample data

Description

This command triggers the printing of the sample label through Quantos using the strip printer.

Syntax

Command

QRD␣2␣6␣12	Prints sample protocol.

Responses

QRD␣2␣6␣12␣B	Command understood, sending protocol data to the strip printer.
QRD␣2␣6␣12␣A	Command executed and complete.
QRD␣2␣6␣12␣I␣<Error␣code>	Command understood but currently not executable, according to the following error code.
QRD␣2␣6␣L	Command understood but not executable (incorrect parameter).

Error Codes

Name	Type	Values	Meaning
<Error␣code>	Integer	1	Not mounted.
		2	Another job is running.
		3	Timeout.
		4	Not selected.
		5	Not allowed at the moment.
		8	Stopped by external action.

Comment

- This command works both with powder and liquid dispenses. The output may differ according to the configuration in the Quantos application settings.

Example

↓	QRD␣2␣6␣12	Trigger printing a sample protocol.
↑	QRD␣2␣6␣12␣B	Printing started.
↑	QRD␣2␣6␣12␣A	Printing completely sent.

QRA 60 2 – Move dosing head pin

Description

This command unlocks or locks the dosing head to the dosing unit.

Syntax

Command

QRA␣60␣2␣OpeningPosition>	Locks or unlocks dosing head.

Responses

QRA␣60␣2␣B	Executing command.
QRA␣60␣2␣A	Command executed and complete.
QRA␣60␣2␣I␣<Error␣code>	Command understood but currently not executable, according to the following error code.
QRA␣60␣L	Command understood but not executable (incorrect parameter).

Parameters

Name	Type	Values	Meaning
<OpeningPosition>	Integer	3	Unlock position.
		4	Lock position.

Error Codes

Name	Type	Values	Meaning
<Error␣code>	Integer	1	Not mounted.
		2	Another job is running.
		3	Timeout.
		4	Not selected.
		5	Not allowed at the moment.

Example

↓	QRA␣60␣2␣3	Command to unlock.
↑	QRA␣60␣2␣B	Executing command.
↑	QRA␣60␣2␣A	Dosing head unlocked.

QRA 60 7 – Move frontdoor

Description

Opens or closes the Quantos front door to allow easy access to the dose head.

Syntax

Command

QRA␣60␣7<FrontdoorPosition>	Open or close the front door.

Responses

QRA␣60␣7␣B	Executing command.
QRA␣60␣7␣A	Command executed and complete.
QRA␣60␣7␣I␣<Error␣code>	Command understood but currently not executable, according to.
QRA␣60␣L	Command understood but not executable (incorrect parameter).

Parameters

Name	Type	Values	Meaning
<FrontdoorPosition>	Integer	2	Close position.
		3	Open position.

Error Codes

Name	Type	Values	Meaning
<Error␣code>	Integer	1	Not mounted.
		2	Another job is running.
		3	Timeout.
		4	Not selected.
		5	Not allowed at the moment.
		8	Stopped by external action.

Comment

- Also check locking and unlocking the dose head, **see** QRA␣60␣2.

Example

↓	QRA␣60␣7␣3	Open the front door.
↑	QRA␣60␣7␣B	Quantos is opening the front door (busy).
↑	QRA␣60␣7␣A	Action completed, front door is open.

QRA 60 8 – Move autosamplerr position

Description

This command moves the autosampler to the selected position.

Syntax

Command

QRA␣60␣8␣<AutosamplerPposition>	Set the autosampler position.

Responses

QRA␣60␣8␣B	Executing command.
QRA␣60␣8␣A	Command executed and complete.
QRA␣60␣8␣I␣<Error␣code>	Command understood but currently not executable, according to.
QRA␣60␣L	Command understood but not executable (incorrect parameter).

Parameters

Name	Type	Values	Meaning
<AutosamplerPpo-sition>	Integer	0	Home position.
		1 … 30	Respective position.

Error Codes

Name	Type	Values	Meaning
<Error␣code>	Integer	1	Not mounted.
		2	Another job is running.
		3	Timeout.
		4	Not selected.
		5	Not allowed at the moment.
		8	Stopped by external action.
		13	Sampler blocked.

Comment

- The autosampler configuration in the terminal must be considered to this command. The configuration set the smallest moving step of the autosampler.

Example

↓	QRA␣60␣8␣3	Moves autosampler to position 3.
↑	QRA␣60␣8␣B	Executing command.
↑	QRA␣60␣8␣A	Command executed and complete.

QRD 1 1 1 – Set value tapping before dosing

Description

This command activates or deactivates the tapping before dosing function.

Syntax

Command

QRD␣1␣1␣1␣<TapBeforeDosing>	Sets the tap before dosing function.

Responses

QRD␣1␣1␣1␣A	Setting stored.
QRD␣1␣1␣1␣I␣<Error␣code>	Command understood but currently not executable, according to the following error code.
QRD␣1␣1␣L	Command understood but not executable (incorrect parameter).

Parameters

Name	Type	Values	Meaning
<TapBeforeDosing>	Integer	0	Tap before dosing deactivated.
		1	Tap before dosing activated.

Error Codes

Name	Type	Values	Meaning
<Error␣code>	Integer	2	Another job is running.
		3	Timeout.
		5	Not allowed at the moment.
		8	Stopped by external action.

Comment

- Tapping before dosing can help to dispense powders. This command is parameterised by the tapper intensity and duration.

Example

↓	QRD␣1␣1␣1␣1	Set tap before dosing to ON.
↑	QRD␣1␣1␣1␣A	Setting stored.

QRD 1 1 2 – Set value tapping while dosing

Description

This command activates or deactivates the tap while dosing function.

Syntax

Command

QRD␣1␣1␣2␣<TapWhileDosing>	Activates or deactivates the tap while dosing function.

Responses

QRD␣1␣1␣2␣A	Setting stored.
QRD␣1␣1␣2␣I␣<Error␣code>	Command understood but currently not executable, according to the following error code.
QRD␣1␣1␣L	Command understood but not executable (incorrect parameter).

Parameters

Name	Type	Values	Meaning
<TapWhileDosing>	Integer	0	Deactivate tapping while dosing.
		1	Activate tapping while dosing.

Error Codes

Name	Type	Values	Meaning
<Error␣code>	Integer	2	Another job is running.
		3	Timeout.
		5	Not allowed at the moment.
		8	Stopped by external action.

Comment

- The actual usage of tap while dosing is controlled from the algorithm. Tapper intensity or duration has no impact on this. Note that tapping can lead to compacting effects with some powders.

Example

↓	QRD␣1␣1␣2␣1	Activate tap while dosing function.
↑	QRD␣1␣1␣2␣A	Setting stored.

QRD 1 1 3 – Set tapper intensity

Description

Sets the intensity of the tapper.

Syntax

Command

QRD␣1␣1␣3␣<Intensity>	Set the tapper intensity.

Responses

QRD␣1␣1␣3␣A	Intensity setting stored.
QRD␣1␣1␣3␣I␣<Error␣code>	Command understood but currently not executable, according to the following error code.
QRD␣1␣1␣L	Command understood but not executable (incorrect parameter).

Parameter

Name	Type	Values	Meaning
<Intensity>	Integer	10 - 100	Intensity of the tap before dosing function in percent.

Error Codes

Name	Type	Values	Meaning
<Error␣code>	Integer	2	Another job is running.
		3	Timeout.
		5	Not allowed at the moment.
		8	Stopped by external action.

Comment

- The intensity value only applies on tap before dosing or manual tapping.

Example

↓	QRD␣1␣1␣3␣100	Set tapper intensity to 100%.
↑	QRD␣1␣1␣3␣A	Setting stored.

QRD 1 1 4 – Set tapper duration

Description

This command specifies the duration in seconds of the tap before dosing.

Syntax

Command

QRD␣1␣1␣4␣<Duration>	Set the tapper duration.

Responses

QRD␣1␣1␣4␣A	Setting stored.
QRD␣1␣1␣4␣I␣<Error␣code>	Command understood but currently not executable, according to the following error code.
QRD␣1␣1␣L	Command understood but not executable (incorrect parameter).

Parameter

Name	Type	Values	Meaning
<Duration>	Integer	1 - 10	Duration in seconds.

Error Codes

Name	Type	Values	Meaning
<Error␣code>	Integer	2	Another job is running.
		3	Timeout.
		5	Not allowed at the moment.
		8	Stopped by external action.

Comment

- The duration value is only applied for tap before dosing or manual tapping.

Example

↓	QRD␣1␣1␣4␣2	Set tap duration to 2 seconds.
↑	QRD␣1␣1␣4␣A	Setting stored.

QRD 1 1 5 – Set target value in mg

Description

Sets the target amount for liquid and solid doses in milligrams.

Syntax

Command

QRD␣1␣1␣5␣<Target>	Set the target value in mg.

Responses

QRD␣1␣1␣5␣A	Setting stored.
QRD␣1␣1␣5␣I␣<Error␣code>	Command understood but currently not executable, according to the following error code.
QRD␣1␣1␣L	Command understood but not executable (incorrect parameter).

Parameter

Name	Type	Values	Meaning
<Target>	Float	0.10 – 250000.00	Enter the target value of substance to be dosed in mg with two decimal places.

Error Codes

Name	Type	Values	Meaning
<Error␣code>	Integer	2	Another job is running.
		3	Timeout.
		5	Not allowed at the moment.
		8	Stopped by external action.

Comment

- Note that both for liquid and solid, the target is specified in milligrams. This value should be set before executing a dose, **see** QRA␣61␣1.

Example

↓	QRD␣1␣1␣5␣50.00	Set target value to 50.00 mg.
↑	QRD␣1␣1␣A	Setting stored.

QRD 1 1 6 – Set target tolerance value in percent

Description

Defines the tolerance value for powder dispensing in percent.

Syntax

Command

QRD␣1␣1␣6␣<Tolerance>	Set the target tolerance value in percent.

Responses

QRD␣1␣1␣6␣A	Setting stored
QRD␣1␣1␣6␣I␣<Error␣code>	Command understood but currently not executable, according to the following error code.
QRD␣1␣1␣L	Command understood but not executable (incorrect parameter).

Parameter

Name	Type	Values	Meaning
<Tolerance>	Float	0.1 – 40.0	Enter the target tolerance value of substance to be dosed in percent with one decimal place.

Error Codes

Name	Type	Values	Meaning
<Error␣code>	Integer	2	Another job is running.
		3	Timeout.
		5	Not allowed at the moment.
		8	Stopped by external action.

Comments

- The tolerance setting only affects the powder dispensing. Note that the tolerance mode, **see** QRD␣1␣1␣7 affects the way the tolerance is handled.
- It is recommended to have a tolerance of (absolute) 0.5 mg in order to achieve repeatable dispensing results.

Example

↓	QRD␣1␣1␣6␣1.0	Set the target tolerance value to 1.0%.
↑	QRD␣1␣1␣6␣A	Setting stored.

QRD 1 1 7 – Set tolerance mode

Description

This command defines the operation of the tolerance. 0/+ tolerance mode only allows overdosing, +/- tolerance mode applies the tolerance band below and above the target value.

Syntax

Command

QRD␣1␣1␣7␣<ToleranceMode>	Set value of the tolerance mode.

Responses

QRD␣1␣1␣7␣A	Setting stored.
QRD␣1␣1␣7␣I␣<Error␣code>	Command understood but currently not executable, according to the following error code.
QRD␣1␣1␣L	Command understood but not executable (incorrect parameter).

Parameters

Name	Type	Values	Meaning
<ToleranceMode>	Integer	0	+/- tolerance mode.
		1	0/+ tolerance mode.

Error Codes

Name	Type	Values	Meaning
<Error␣code>	Integer	2	Another job is running.
		3	Timeout.
		5	Not allowed at the moment.
		8	Stopped by external action.

Comment

- The tolerance mode is used in conjunction with the tolerance setting, **see** QRD␣1␣1␣6 for powder dispensing.

Example

↓	QRD␣1␣1␣7␣0	Set tolerance mode to +/- tolerance.
↑	QRD␣1␣1␣7␣A	Tolerance mode set.

QRD 1 1 8 – Set value sample ID

Description

This command sets an ID for a sample.

Syntax

Command

QRD␣1␣1␣8␣<SampleID>	Sets value of sample ID.

Responses

QRD␣1␣1␣8␣A	Command executed and complete.
QRD␣1␣1␣8␣I␣<Error␣code>	Command understood but currently not executable, according to the following error code.
QRD␣1␣1␣L	Command understood but not executable (incorrect parameter).

Parameters

Name	Type	Values	Meaning
<SampleID>	String	Max. 20 chars	Enter the sample ID.

Error Codes

Name	Type	Values	Meaning
<Error␣code>	Integer	1	Not mounted.
		2	Another job is running.
		3	Timeout.
		4	Not selected.
		5	Not allowed at the moment.

Comment

- The sample ID set remains the default as long the sample ID question is excluded from the dosing steps.

Example

↓	QRD␣1␣1␣8␣ID1	Set sample ID with value "ID1".
↑	QRD␣1␣1␣8␣A	Sample ID set.

QRD 1 1 9 – Set value pan

Description

This command defines whether the pan is empty.

Syntax

Command

QRD␣1␣1␣9␣<Pan>	Set weighing pan as empty.

Responses

QRD␣1␣1␣9␣B	Executing command.
QRD␣1␣1␣9␣A	Command executed and complete.
QRD␣1␣1␣9␣I␣<Error␣code>	Command understood but currently not executable, according to the following error code.
QRD␣1␣1␣L	Command understood but not executable (incorrect parameter).

Parameters

Name	Type	Values	Meaning
<Pan>	Integer	0	Pan is empty.

Error Codes

Name	Type	Values	Meaning
<Error␣code>	Integer	1	Not mounted.
		2	Another job is running.
		3	Timeout.
		4	Not selected.
		5	Not allowed at the moment.
		6	Weight not stable.

Example

↓	QRD␣1␣1␣9␣0	Set weighing pan as empty.
↑	QRD␣1␣1␣9␣A	Empty weighing pan set.

QRD 1 1 13 – Set value user ID

Description

This command sets an ID for the user.

Syntax

Command

QRD␣1␣1␣13␣<UserID>	Set value of user ID.

Responses

QRD␣1␣1␣13␣A	Command executed and complete.
QRD␣1␣1␣13␣I␣<Error␣code>	Command understood but currently not executable, according to the following error code.
QRD␣1␣1␣L	Command understood but not executable (incorrect parameter).

Parameters

Name	Type	Values	Meaning
<UserID>	String	Max. 20 chars	Enter the user ID.

Error Codes

Name	Type	Values	Meaning
<Error␣code>	Integer	1	Not mounted.
		2	Another job is running.
		3	Timeout.
		4	Not selected.
		5	Not allowed at the moment.

Comment

- The user ID set becomes the default which can be changed during the dosing steps.

Example

↓	QRD␣1␣1␣13␣User1	Set user ID with name "User1".
↑	QRD␣1␣1␣13␣A	User ID set.

QRD 1 1 14 – Set algorithm selection

Description

This command selects the powder dosing algorithm.

Syntax

Command

QRD␣1␣1␣14␣<AlgoSelection>	Set value of the algorithm selection.

Responses

QRD␣1␣1␣14␣A	Setting stored.
QRD␣1␣1␣14␣I␣<Error␣code>	Command understood but currently not executable, according to the following error code.
QRD␣1␣1␣L	Command understood but not executable (incorrect parameter).

Parameters

Name	Type	Values	Meaning
<AlgoSelection>	Integer	0	Select algorithm "Standard".
		1	Select algorithm "Advanced".

Error Codes

Name	Type	Values	Meaning
<Error␣code>	Integer	1	Not mounted.
		2	Another job is running.
		3	Timeout.
		4	Not selected.
		5	Not allowed at the moment.

Comment

- These algorithms only influence the powder dispense.

Example

↓	QRD␣1␣1␣14␣0	Set algorithm.
↑	QRD␣1␣1␣14␣A	Algorithm selection set.

QRD 1 1 15 – Set AntiStatic Kit

Description

This command activates or deactivates the AntiStatic Kit.

Syntax

Command

QRD␣1␣1␣15␣<AntiStaticKit>	Sets the AntiStatic Kit.

Responses

QRD␣1␣1␣15␣A	Setting stored.
QRD␣1␣1␣15␣I␣<Error␣code>	Command understood but currently not executable, according to the following error code.
QRD␣1␣1␣L	Command understood but not executable (incorrect parameter).

Parameters

Name	Type	Values	Meaning
<AntiStaticKit>	Integer	0	AntiStatic Kit deactivated.
		1	AntiStatic Kit activated.

Error Codes

Name	Type	Values	Meaning
<Error␣code>	Integer	1	Not mounted.
		2	Another job is running.
		3	Timeout.
		4	Not selected.
		5	Not allowed at the moment.

Comment

- This command does not recognize whether the AntiStatic Kit is physically connected or not.

Example

↓	QRD␣1␣1␣15␣1	Set AntiStatic Kit ON.
↑	QRD␣1␣1␣15␣A	Setting stored.

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For more information

Mettler-Toledo GmbH
Im Langacher 44
8606 Greifensee, Switzerland
www.mt.com/contact

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