

Description of the Timer-controlled actions for the Cubis® MCA Balance

This document describes how to use time-controlled actions to have the balance automatically perform certain functions. Examples are given to illustrate how to set up and use the balance in practice.



Executive Summary

Through time-controlled actions, regular tasks, such as the execution of a backup, can be automated or workflows e.g., for daily calibration, can be started at a given time. In addition to increasing efficiency, this function enables you to ensure compliance with your SOPs.

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1 Timer-controlled actions

Timer-controlled actions allow you to trigger individual functions of the balance at a specific time (date/time) and to repeat them automatically after fixed time intervals (minutes to years).

You can create several actions for each of the following functions. Each action is characterized by a unique name. Actions once created can be activated or deactivated as well as deleted.

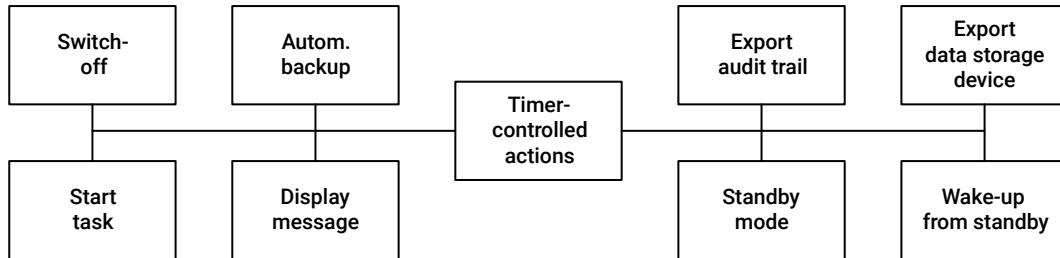


Figure 1: Timer-controlled actions

No timer-controlled actions are available ex-factory, you have to create them as required.

1.1 Default settings for timer-controlled actions

All timer-controlled actions have the same basic settings for the [Execution time] and for the name of the action. Depending on the timer-controlled action, additional special settings are required for the properties of the action, which are described in the individual actions.

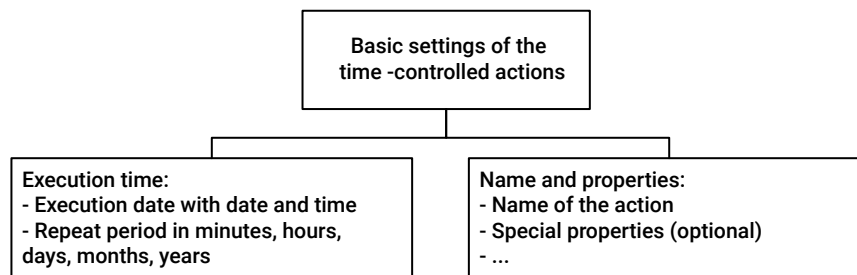


Figure 2: Default settings for timer-controlled actions

1.1.1 Execution date

The [Execution date] with date and time determines when the action should be executed for the first time. If a regular repetition of the action is required, this can be defined in [Repetition period] in minutes, hours, days, months, years.

1.1.2 Name and properties

The [Name] is the unique designation for the action, to distinguish it from other actions, the name should be entered to match the action. The special [Properties] of the action differ depending upon the action.

1.2 Start task

These actions start fixed tasks at a certain time and repeat this at regular intervals, if necessary. The special settings for these actions are [Action execution] and [Task to be started].

- Action execution: Defines whether the execution of the action can be canceled or not.
- Task to be started: This task is activated through the timer-controlled action.

The task can be ended after processing or execution.

You will find an example for setup and use in chapter Action: Start task.

1.3 Display messages

Actions of this kind display messages with a [Message title] and a [Message content] at a certain time and, if necessary, repeated in specific intervals on the display.

- Message title: Designation of the message with max. 80 characters.
- Message content: Message content with max. 250 characters.

The message can be closed after it has been read.

You will find an example for setup and use in chapter Action: Display message.

1.4 Standby mode

This action allows the balance to be regularly switched to [Standby mode] at a specified time. For the [Action execution], you can determine whether the execution can be aborted or not.

You can switch on the balance from standby by pressing the Standby icon on the display.

1.5 Wake-up from standby

This action switches the balance back on automatically from standby at regular intervals and at a specific time.

1.6 Switch-off

With this action, the balance can be switched off completely automatically. The balance must then be switched back on manually using the power button on the back of the balance. The [Action execution] can be set as can be aborted or cannot be aborted.

1.7 Automatic backup

For regular backups of all settings and all data of the balance, you can use this action to make an [Automatic backup] to a specific [Connector] at a specific time and then at specific intervals. For the [Action execution], you can determine whether the execution can be aborted or not.

- Backup on connector: Defines the connector on which the backup is to be taken e.g. on a USB stick.

With QAPP extensions, which can be activated in the QAPP Center under [Connectivity (QP4)], the backup can also be made via connectors on certain file-based network servers.

The description of the [Connectors] function extension can be found in the printing concept. The [Backup and restore] function of the balance is described in a separate section.

You will find an example for setup and use in chapter Action: Automatic backup.

1.8 Export audit trail

The audit trail with its records can be exported regularly via a connector using this timer-controlled action. The scope of the recordings to be exported, all or only certain entries, can be set by selecting the modules that generate these entries in the audit trail. The action execution can be set so that it can be aborted or not.

Special settings for this action are:

- Export to connector: Defines the connector to which the export is to be done e.g., to a USB stick.
- Modules for export: Selection of the modules with their entries which are to be exported e.g., menu settings, task management, user management, etc.

With QAPP extensions, which can be activated in the QAPP Center under [Connectivity (QP4)], the export can also be done via connectors to certain file-based network servers.

The description of the [Connectors] function extension can be found in the printing concept. The [Audit trail] function extension of the balance is described in a separate section.

The complete scope of the audit trail can be used only after activating the [Audit trail] QAPP extension in the QAPP Center under [Pharma (QP1)].

You will find an example for setup and use in chapter Action: Export audit trail.

1.9 Export data storage device

The data storage device with its records can be exported regularly via a connector using this timer-controlled action. The scope of the recordings to be exported, all or only newly added entries since the last execution, is adjustable via the export period. The action execution can be set so that it can be aborted or not.

Special settings for this action are:

- Export to connector: Defines the connector to which the export is to be done e.g., to a USB stick.
- Modules for export: Selection of the entries to be exported, either all or just the entries added since the last export.

With QAPP extensions, which can be activated in the QAPP Center under [Connectivity (QP4)], the export can also be done via connectors to certain file-based network servers.

The description of the [Connectors] function extension can be found in the printing concept.

You will find an example for setup and use in chapter Action: Export audit trail.

2 Application Examples

The application examples relate to the MCA version from package 09-03-04.01.xx onwards, along with the settings options and functionalities it contains. Appropriate user rights are required for setting up the timer-controlled actions.

2.1 Action: Start task

This example describes the setup and application of a timer-controlled action for starting a task. A regular weekly calibration of the balance should be done with QAPP [User calibration].

The application [User calibration] (UserCal) is a QAPP from the [Pharma] package; it can be used free of charge for 30 days, after which a license must be purchased.

2.1.1 Setting up

Configuration steps:

1. Activate the QAPP [User calibration], if not yet done.
 - a. Open the [Task management] menu, followed by the [QAPP Center].
 - b. Select the software package [Pharma] and QAPP [User calibration] in it. The description and version of the QAPP will be displayed.
 - c. Use the [License] button to activate this QAPP; the order and license information will be displayed.
 - d. If this QAPP was not ordered as [factory licensed], start the test version or enter the license code that you have purchased for this QAPP
2. Create a task with the [User calibration] QAPP, if not yet done so e.g., [My external calibration].
 - a. Open the [Task management] menu.
 - b. Use the [+] button to activate the creation of a new task.
 - c. Select the [User calibration] application.
 - d. Customize the given settings to your requirements e.g., internal adjustment before starting, number of weights, units of limits, etc.
 - e. Enter the values for the test weight, ID, nominal value, deviation and select the warning and intervention limits.
 - f. Define a matching weighing and print profile for your task.
 - g. Thereafter, enter the name and description of the task, select user roles and save the task.
3. Set up a timer-controlled action for starting a task e.g., [My weekly external calibration].
 - a. Open the [Settings] menu.
 - b. Navigate to [Timer-controlled actions].
 - c. Activate the creation of a new action with the [+] button. Select [Start task] to define the type of action.
 - d. Enter the first date and time [Execution date] as e.g., 2020-05-18 and 08:00:00 i.e., Monday 18.05.2020 at 8:00 a.m.
 - e. Open the [Repetition period in days] selection and enter 7 days.
 - f. Using the [Continue] button, switch over to [Name and properties].
 - g. Give a unique name to the timer-controlled action, such as [My weekly external calibration].
 - h. Define, whether the [Action execution] can be canceled or not.
 - i. Select your created [My external calibration] task using [Task to be started].
 - j. Confirm your inputs; the timer-controlled action is now created and the time till execution of the action is displayed.
 - k. Upon selecting the action, the overview of settings is displayed. You can edit, delete or disable the action.

2.1.2 Application

User steps:

1. According to the example, the balance will display the following message on Monday, 18.05.2020 at 8:00 o'clock: [Start task: My weekly external calibration] with the message text: [An automatic task start has been requested. The execution will be started automatically after 60 seconds. The task will be started on opening the main menu next time.]
2. You can now also immediately start the execution of the task using the [Execute now] button.
3. It is also possible not to execute the action, since the execution of the action has been set as can be canceled. In this case, the task must then be started manually from the main menu.
4. Upon starting the [My weekly external calibration] task, the [User calibration] application is executed. You are guided step by step through the application.
5. Starting from now, this process will be repeated every week on Monday at 8 a.m.

Note: If the balance was in standby mode at the time of activation, this action is carried out subsequently when the balance is switched on.

2.2 Action: Display message

This example describes the setup and application of a timer-controlled action for displaying a message. The balance should indicate daily cleaning and testing according to an SOP

2.2.1 Setting up

Configuration steps:

1. Set up a timer-controlled action for displaying a message, such as [My daily cleaning and testing].
 - a. Open the [Settings] menu.
 - b. Navigate to [Timer-controlled actions].
 - c. Use the [+] button to activate the creation of a new action. Select [Display message] to define the type of action.
 - d. Enter the first date and time [Execution date] as e.g., 2020-05-18 and 08:00:00 i.e., Monday 18.05.2020 at 8:00 a.m.
 - e. Open the [Repetition period in days] selection and enter 1 day.
 - f. Using the [Continue] button, switch over to [Name and properties].
 - g. Give a unique name to the timer-controlled action, such as [My daily cleaning and testing].
 - h. Enter a title for the message e.g., [Cleaning and testing].
 - i. Enter the content of the message to be displayed, such as [Carry out daily cleaning and testing of the balance as per the SOP].
 - j. Confirm your inputs; the timer-controlled action is now created and the time till execution of the action is displayed.
 - k. Upon selecting the action, the overview of settings is displayed. You can edit, delete or disable the action.

2.2.2 Application

User steps:

1. According to the example, the balance will display the following message on Monday, 18.05.2020 at 8:00 o'clock: [Cleaning and test] with the message text: [Carry out daily cleaning and testing of the balance as per the SOP].
2. The display of the message can be ended by using the [OK] button.
3. Starting from now, this message is repeated every day at 8 o'clock.

2.3 Action: Automatic backup

This example describes the setup and application of a timer-controlled action for an automatic backup of the balance. All settings and all data should be backed up once a month via the connector [Windows file server] using the SMB network protocol on the target directory of a shared network drive.

For transferring files to a Windows file server using the SMB protocol, a QAPP extension from the [Connectivity] package is required. The extension can be used free of charge for 30 days, after which it must be licensed.

A released drive with SMB protocol in your network is a requirement for this application.

2.3.1 Setting up

Configuration steps:

1. Activate the [Connection to Windows File Server] QAPP extension, if this has not yet been done.

- a. Open the [Task management] menu, followed by the [QAPP Center].
 - b. Choose the [Connectivity] software package, and within it the [Connection to Windows File Server] QAPP. The description and version of the QAPP will be displayed.
 - c. Use the [License] button to activate this QAPP; the order and license information will be displayed.
 - d. If this QAPP was not ordered as [factory licensed], start the test version or enter the license code that you have purchased for this QAPP.
2. Set up a connector to a Windows file server e.g., [My SMB server for backup].
 - a. Open the [Settings] menu.
 - b. Navigate to [Connections] -> [Connectors] -> [SMB].
 - c. Use the [+] button to activate the creation of a new connector.
 - d. Assign a unique name to this connector.
 - e. Enter the network path for Host and Share, making sure that you use the correct spelling //Host Name/Share Name.
 - f. Enter the name of a sub-directory on the server, in which to save the files.
 - g. Enter the username and password for access to the authorized drive in your network.
 3. Set up a timer-controlled action for the automatic backup, such as [My monthly backup].
 - a. Open the [Settings] menu.
 - b. Navigate to [Timer-controlled actions].
 - c. Use the [+] button to activate the creation of a new action. Select [Automatic backup] to define the type of action.
 - d. Enter the first date and time [Execution date] as e.g., 2020-05-01 and 18:00:00 i.e., Friday 01.05.2020 at 6:00 p.m.
 - e. Open the [Repetition period in months] selection and enter 1 month.
 - f. Using the [Continue] button, switch over to [Name and properties].
 - g. Give a unique name to the timer-controlled action, such as [My monthly backup].
 - h. Define whether one should be able to cancel the [Action execution] or not.
 - i. Via [Backup to connector], select the connector you have created e.g., [My SMB server for backup].
 - j. Confirm your inputs; the timer-controlled action is now created and the time till execution of the action is displayed.
 - k. Upon selecting the action, the overview of settings is displayed. You can edit, delete or disable the action.

Note: For the time of execution, keep in mind that the balance must be switched on; no execution of this action can be done in the standby mode.

2.3.2 Application

User steps:

1. According to the example, the balance will display the following message on Friday, 01.05.2020 at 6:00 p.m.: [Automatic backup: My monthly backup], with the message text: [An automatic backup has been requested. The execution will be started automatically after 60 seconds.]
2. You can now also immediately start the execution using the [Execute now] button.
3. All settings and data of the balance will be backed up in the target directory of the specified network server using the connector you have set up.
4. Starting from now, this process will be repeated every month at 6 p.m.

2.3.3 Troubleshooting

No backup file on the SMB file server:

1. Ensure that all the configuration steps described above have been followed, in particular, the assignment of the connector [My SMB server for backup].
2. Check the network path in the connector and the correct spelling of Host and Share, as well as the username and password for access rights to the SMB file server.
3. Check that the balance is connected to the network via an Ethernet cable. The IP address of the balance in the network must be displayed in the [Status center] under [Device information].
4. Check whether the SMB file server is present in the network and that a file can be saved there from your PC.
5. Manually execute the backup for testing, via the menu [Settings] -> [Device maintenance] -> [Backup of device data] -> [Connectors: My SMB server for backup].

2.4 Action: Export audit trail

This example describes the setup and application of a timer-controlled action for the regular export of the audit trail

with all the entries to a network server via the network protocol [FTP]. The export should be done every 3 months.

For transferring files to a network server, a [Connection to FTP/FTPS] QAPP extension from the [Connectivity] package is required. The extension can be used free of charge for 30 days, after which it must also be licensed.

Prerequisite for this application is an appropriately set up FTP server in your network.

2.4.1 Setting up

Configuration steps:

1. Activate the [Connection to FTP/FTPS] QAPP extension, if this has not yet been done.
 - a. Open the [Task management] menu, followed by the [QAPP Center].
 - b. Select the [Connectivity] software package, and within it the [Connection to FTP/FTPS] QAPP. The description and version of the QAPP will be displayed.
 - c. Use the [License] button to activate this QAPP; the order and license information will be displayed.
 - d. If this QAPP was not ordered as [factory licensed], start the test version or enter the license code that you have purchased for this QAPP.
2. Set up a connector to an FTP server e.g., [My FTP server for export].
 - a. Open the [Settings] menu.
 - b. Navigate to [Connections] -> [Connectors] -> [FTP].
 - c. Use the [+] button to activate the creation of a new connector.
 - d. Assign a unique name to this connector.
 - e. Enter the IP address of the network server, ensuring that you spell it correctly.
 - f. A port number is required for the connection: the number 21 has been assigned. If required, you can enter a different port number.
 - g. Enter the name of a sub-directory on the server, in which to save the files.
 - h. Enter the username and password for access to the FTP server.
3. Create a timer-controlled action for exporting the audit trail e.g., [My 3 months export audit trail].
 - a. Open the [Settings] menu.
 - b. Navigate to [Timer-controlled actions].
 - c. Activate the creation of a new action with the [+] button. Select [Export audit trail] to define the type of action.
 - d. Enter the first date and time [Execution date] as e.g., 2020-05-01 and 18:00:00 i.e., Friday 01.05.2020 at 6:00 p.m.
 - e. Open the [Repetition period in months] selection and enter 3 months.
 - f. Using the [Continue] button, switch over to [Name and properties].
 - g. Give a unique name to the timer-controlled action, such as [My 3 months export audit trail].
 - h. Define whether one should be able to cancel the [Action execution] or not.
 - i. Via [Export to connector], select the connector you have created e.g., [My FTP server for export].
 - j. Via [Modules for export], select all or only specific modules, which generate entries in the audit trail and which you want to export.
 - k. Confirm your inputs; the timer-controlled action is now created and the time till execution of the action is displayed.
 - l. Upon selecting the action, the overview of settings is displayed. You can edit, delete or disable the action.

Note: For the time of execution, keep in mind that the balance must be switched on; no execution of this action can be done in the standby mode.

2.4.2 Application

User steps:

1. According to the example, the balance will display the following message on Friday, 01.05.2020 at 6:00 p.m.: [Export audit trail: My 3 months export audit trail], with the message text: [An automatic export of the audit trail has been requested. The execution will be started automatically after 60 seconds.]
2. You can now also immediately start the execution using the [Execute now] button.
3. All entries of the selected modules in the audit trail will be backed up in the target directory of the specified network server using the connector you have set up.
4. Starting from now, this process will be repeated every 3 months at 6 p.m.

2.4.3 Troubleshooting

No audit trail export file on the FTP server:

1. Ensure that all the configuration steps described above have been followed, in particular, the assignment of the connector [My FTP server for export].
2. Check the IP address and port number of the FTP server, as well as the username and password for access rights to the server in the connector.
3. Check that the balance is connected to the network via an Ethernet cable. The IP address of the balance in the network must be displayed in the [Status center] under [Device information].
4. Check that the FTP server is present in the network and that a file can be saved there from your PC.
5. For testing, conduct the export of the audit trail manually.
 - a. Open the [Settings] menu.
 - b. Navigate to [Device information] -> [View audit trail].
 - c. Set the filter for all or only specific modules, which generate entries in the audit trail and which you want to export.
 - d. Activate the [Export] symbol and select the connector [My FTP server for export].

2.5 Action: Export data storage device

This example describes the setup and application of a timer-controlled action for the regular export of the data storage device with the newly added entries since the last export to a network server via the network protocol [FTP]. The export should be done every week.

For transferring files to a network server, a [Connection to FTP/FTPS] QAPP extension from the [Connectivity] package is required. The extension can be used free of charge for 30 days, after which it must also be licensed.

Prerequisite for this application is an appropriately set up FTP server in your network.

2.5.1 Setting up

Configuration steps:

1. Activate the [Connection to FTP/FTPS] QAPP extension, if this has not yet been done.
 - a. Open the [Task management] menu, followed by the [QAPP Center].
 - b. Select the [Connectivity] software package, and within it the [Connection to FTP/FTPS] QAPP. The description and version of the QAPP will be displayed.
 - c. Use the [License] button to activate this QAPP; the order and license information will be displayed.
 - d. If this QAPP was not ordered as [factory licensed], start the test version or enter the license code that you have purchased for this QAPP.
2. Set up a connector to an FTP server e.g., [My FTP server for export].
 - a. Open the [Settings] menu.
 - b. Navigate to [Connections] -> [Connectors] -> [FTP].
 - c. Use the [+] button to activate the creation of a new connector.
 - d. Assign a unique name to this connector.
 - e. Enter the IP address of the network server, ensuring that you spell it correctly.
 - f. A port number is required for the connection: the number 21 has been assigned. If required, you can enter a different port number.
 - g. Enter the name of a sub-directory on the server, in which to save the files.
 - h. Enter the username and password for access to the FTP server.
3. Create a timer-controlled action for exporting the data storage device e.g., [My weekly data storage device export].
 - a. Open the [Settings] menu.
 - b. Navigate to [Timer-controlled actions].
 - c. Use the [+] button to activate the creation of a new action. Select [Export data storage device] to define the type of action.
 - d. Enter the first date and time [Execution date] as e.g., 2020-05-04 and 06:00:00 i.e., Monday 04.05.2020 at 6:00 a.m.
 - e. Open the [Repetition period in days] selection and enter 7 days.
 - f. Using the [Continue] button, switch over to [Name and properties].
 - g. Give a unique name to the timer-controlled action, such as [My weekly data storage device export].
 - h. Define whether one should be able to cancel the [Action execution] or not.
 - i. Via [Export to connector], select the connector you have created e.g., [My FTP server for export].
 - j. Use [Export period] to select all entries or only those added since the last successful export.
 - k. Confirm your inputs; the timer-controlled action is now created and the time till execution of the action is displayed.

- I. Upon selecting the action, the overview of settings is displayed. You can edit, delete or disable the action.

Note: For the time of execution, keep in mind that the balance must be switched on; no execution of this action can be done in the standby mode.

2.5.2 Application

User steps:

1. According to the example, the balance will display the following message on Monday, 04.05.2020 at 6:00 a.m.:
[Export data storage device: My weekly data storage device export], with the message text: [An automatic export of the data storage device has been requested. The execution will be started automatically after 60 seconds.]
2. You can now also immediately start the execution using the [Execute now] button.
3. The entries of the data storage device that have been added since the last successful export will be backed up in the target directory of the specified network server using the connector you have set up.
4. Starting from now, this process will be repeated every monday at 6 a.m.

2.5.3 Troubleshooting

No data storage device export file on the FTP server:

1. Ensure that all the configuration steps described above have been followed, in particular, the assignment of the connector [My FTP server for export].
2. Check the IP address and port number of the FTP server, as well as the username and password for access rights to the server in the connector.
3. Check that the balance is connected to the network via an Ethernet cable. The IP address of the balance in the network must be displayed in the [Status center] under [Device information].
4. Check that the FTP server is present in the network and that a file can be saved there from your PC.
5. For testing, conduct the export of the data storage device manually.
 - a. Open the [Settings] menu.
 - b. Navigate to [Device information] -> [View data storage device].
 - c. Set the filter for all or only one specific day which you want to export.
 - d. Activate the [Export] symbol and select the connector [My FTP server for export].