

## Creating and managing user-defined functions (UDF)

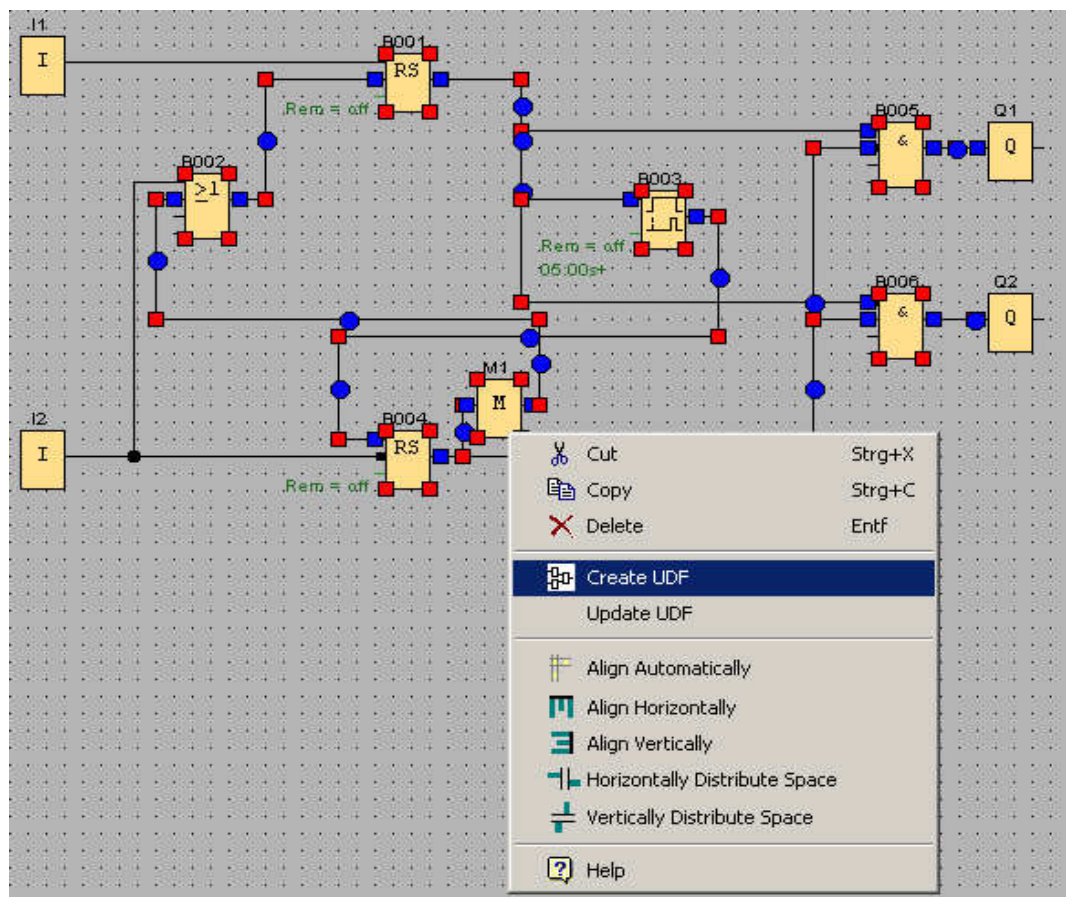
In LOGO! Soft Comfort V7 you can create user-defined functions (UDF – User Defined Function) and save it to a library. These user-defined functions simplify programming because repetitive program sections can simply be inserted as function block into the control program.

### Creating UDF

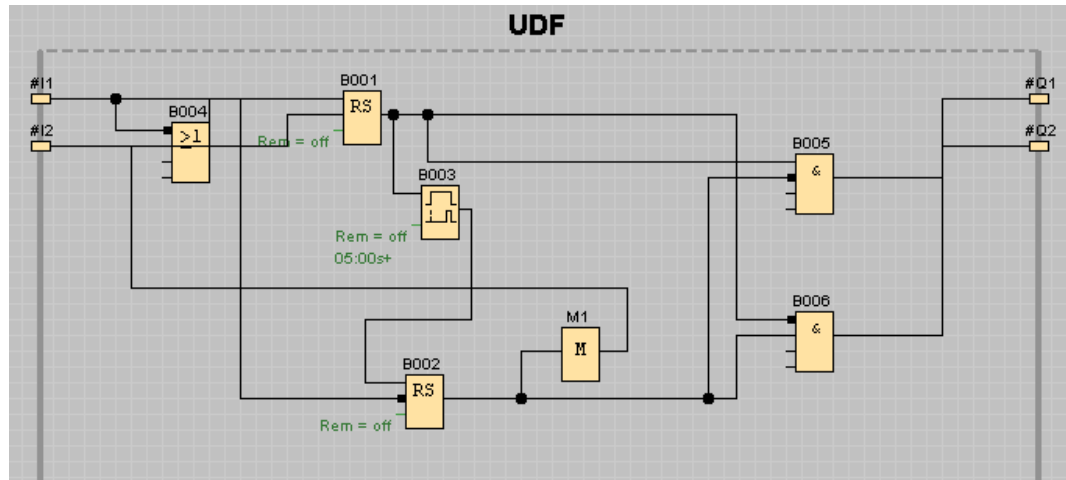
You can either create a UDF from an existing control program or design it in the UDF chart editor.

#### Creating from an existing control program

To create a user-defined function from an existing control program, simply open it. Highlight the program part that you want to save as UDF and select "Create UDF" after a right-click.

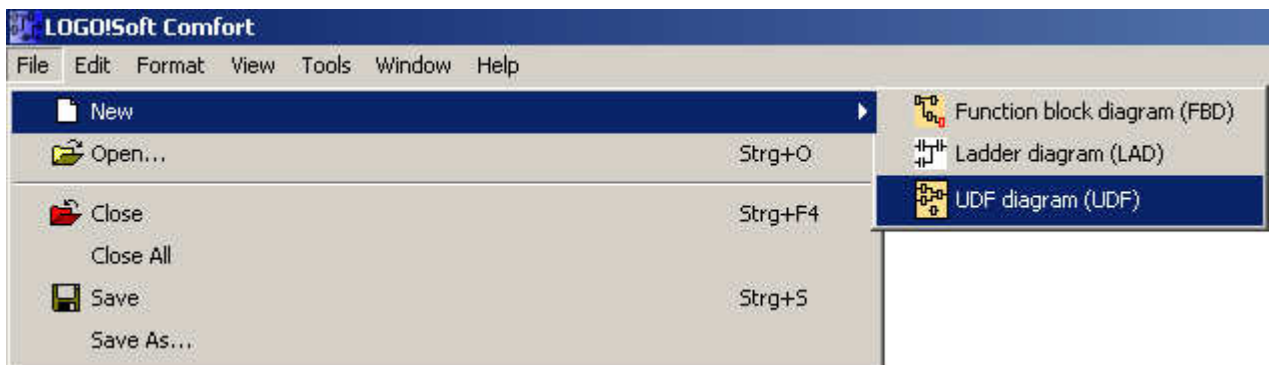


The UDF chart editor opens with the selected partial program.



## Creating new user-defined function

If you want to create a new function, select File; New; UDF diagram in the menu bar. Programming in the UDF chart editor is the same as in the function chart editor.



## Editing UDF properties

To edit the properties of the function, select "Edit UDF properties..." after a right-click. Here you assign a name for the function in the "I/O" window and enter a password to protect the function block.

The screenshot shows the 'Edit UDF properties' dialog box with the 'I/O' tab selected. The 'Identifier' field contains 'SD-Conne'. Below it, there are three input fields for 'UDF password': 'Old password:', 'New password:', and 'Repeat new password:'. The 'Input Connectors' section contains a table with two rows: Index 1, Identifier #I1, Name I\_Start; and Index 2, Identifier #I2, Name I\_Stop. The 'Output Connectors' section contains a table with two rows: Index 1, Identifier #Q1, Name Q\_Star; and Index 2, Identifier #Q2, Name Q\_Delta. At the bottom are 'OK', 'Cancel', and 'Help' buttons.

Index	Identifier	Name
1	#I1	I_Start
2	#I2	I_Stop

Index	Identifier	Name
1	#Q1	Q_Star
2	#Q2	Q_Delta

In the "Parameters" window you can specify which parameters of the included function blocks you want to "export" to adapt them when using the function.

The screenshot shows the 'Edit UDF properties' dialog box with the 'Parameters' tab selected. The 'Parameter Reference' table has three columns: 'Identifier', 'Block', and 'Parameter'. It contains one row: Identifier T, Block B003 [On-Delay], and Parameter On-Delay. Below the table are 'Add' and 'Remove' buttons. At the bottom, there are two panes: 'Block' and 'Parameter'. The 'Block' pane shows a list with 'B003 [On-Delay]'. The 'Parameter' pane shows 'Current Time' and 'Remaining Time' with circular arrows next to them. At the bottom are 'OK', 'Cancel', and 'Help' buttons.

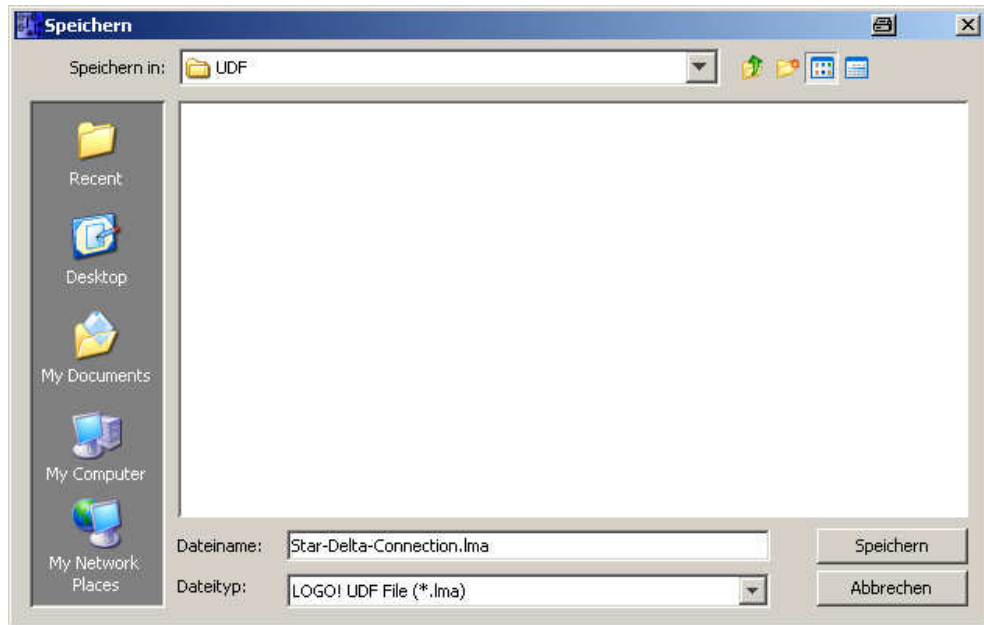
Identifier	Block	Parameter
T	B003 [On-Delay]	On-Delay

Block: B003 [On-Delay]

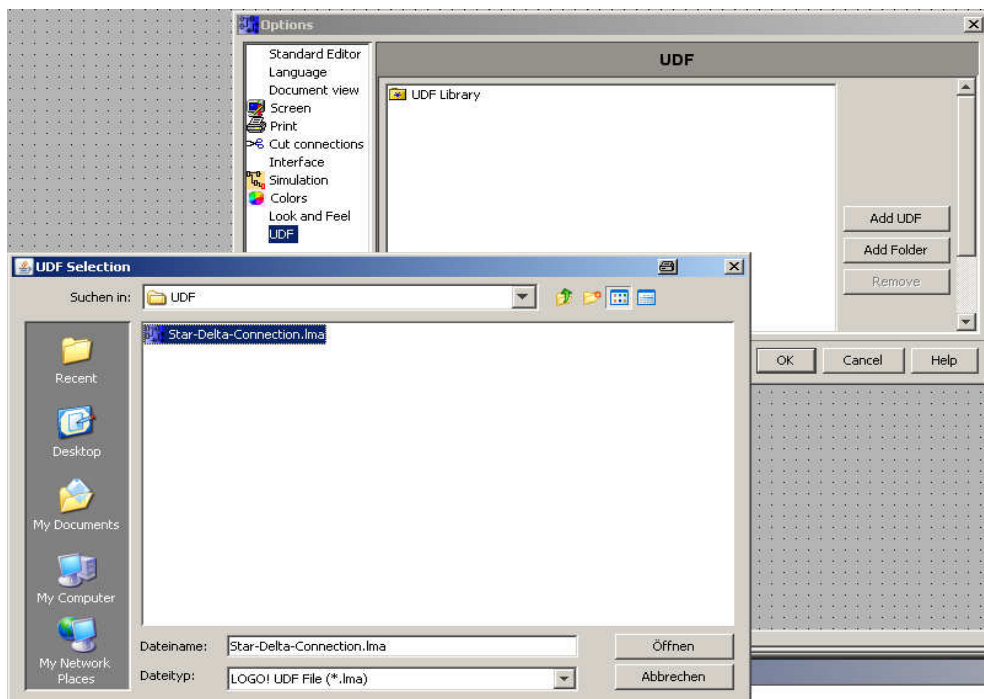
Parameter: Current Time, Remaining Time

## Saving the UDF block and adding it to the library

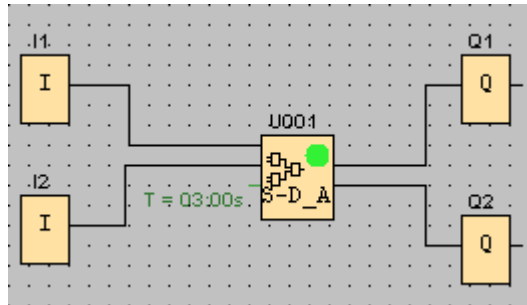
If your function is ready, save it using "File; Save as" in the selected path.



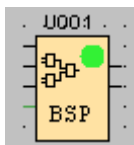
To add the UDF block to your library, open "Tools; Options" and click on the menu item "UDF". Here you can manage your UDF blocks. Use "Add UDF" to add your newly created functions to the library.



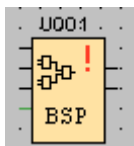
The function is then available in your toolbar and you can use the UDF block as usual in the control program.



## Notes:



If a UDF appears like this in your program, it is current.



If a UDF appears like this in your program, it has to be edited and must be updated.

To update a UDF, select "Update UDF" after a right-click on the UDF.

