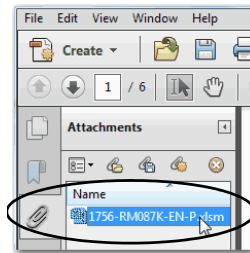


Execution Time and Memory Use for Logix5000 Controller Instructions

Catalog Numbers ControlLogix, GuardLogix, CompactLogix 5370, 1768 CompactLogix, 1768 Compact GuardLogix, 1769 CompactLogix, 20D PowerFlex 700S with DriveLogix Controllers

The Microsoft Excel file attached to this PDF file lists the execution time and memory use data for Logix5000™ controller instructions in RSLogix™ 5000 software or Logix Designer application projects.

To use the Excel file, click the Attachments link, that is, the paper clip icon, and double-click the Excel file.



Publication Changes

This publication has been revised to include information about Logix5000 controllers in the Logix Designer application, version 21, projects. The Logix Designer application is the rebranding of RSLogix 5000 software.

For more information on the Logix Designer application, see [Studio 5000 Environment on page 2](#).

Studio 5000 Environment

The Studio 5000™ Engineering and Design Environment combines engineering and design elements into a common environment. The first element in the Studio 5000 environment is the Logix Designer application. The Logix Designer application is the rebranding of RSLogix 5000 software and is the product to program Logix5000 controllers for discrete, process, batch, motion, safety, and drive-based solutions.



The Studio 5000 environment is the foundation for the future of Rockwell Automation engineering design tools and capabilities. It is the one place for design engineers to develop all the elements of their control system.

Controller and Software Choices [Table 1](#) lists valid controller and software/application choices.

Table 1 - Valid Logix5000 Controller and RSLogix 5000 Software/Application Version Choices

Controller Cat. No.	RSLogix 5000 Software Version				Logix Designer Application Version
	Version 17	Version 18	Version 19	Version 20	Version 21
1756-L71				X	X
1756-L72 1756-L74			X	X	X
1756-L73 1756-L75		X	X	X	X
1756-L72S 1756-L73S				X	X
1756-L61 1756-L62 1756-L63	X	X	X	X	
1756-L61S 1756-L62S 1756-L63S	X	X	X	X	
1756-L64 1756-L65	X	X	X	X	
1769-L16ER-BB1B 1769-L18ER-BB1B 1769-L18ERM-BB1B				X	X
1769-L24ER-QB1B 1769-L24ER-QBFC1B 1769-L27ERM-QBFC1B				X	X
1769-L30ER 1769-L30ERM 1769-L30ER-NSE 1769-L33ER 1769-L33ERM 1769-L36ERM				X	X
1768-L43 1768-L45	X	X	X	X	
1768-L43S 1768-L45S		X	X	X	
1769-L31	X	X			
1769-L32C 1769-L35CR 1769-L32E 1769-L35E	X	X	X	X	
1769-L23E-QB1B 1769-L23E-QBFC1B 1769-L23-QBFC1B	X	X	X	X	
DriveLogix™5730	X	X			

Allen-Bradley Parts

Use the Filter Option

The Microsoft Excel file includes the option to filter data so that each tab shows you only the data that you need to see.

IMPORTANT

Consider the following:

- To use the filter option, you must use Microsoft Excel software, version 2007 and later.
- The file provides information for many Logix5000 controller catalog numbers and for RSLogix 5000 software, versions 17...20, and the Logix Designer application, version 21.

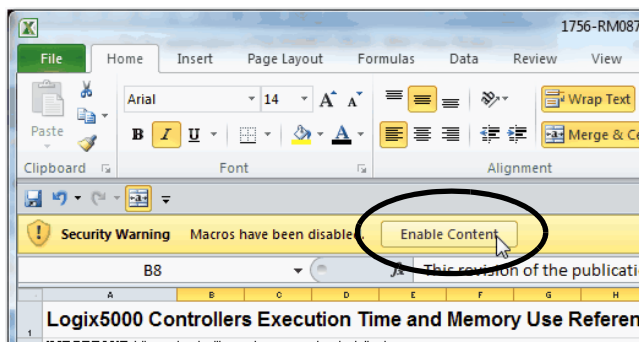
Not all controllers are available with all software/application versions. If you select an invalid controller and software/application combination with Filter Data functionality, the resulting tabs do not show any data.

For more information about valid controllers and software versions choices, see [Table 1 on page 3](#).

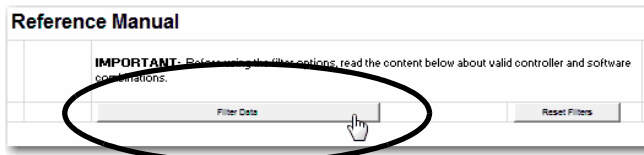
Complete these steps to use the filter option.

1. Verify that macros are enabled.

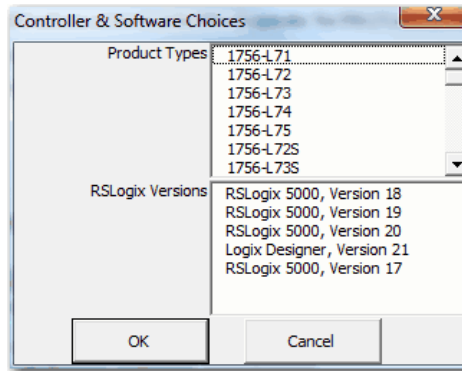
Often, Microsoft Excel software prompts you to enable macros when you open a file that includes them.



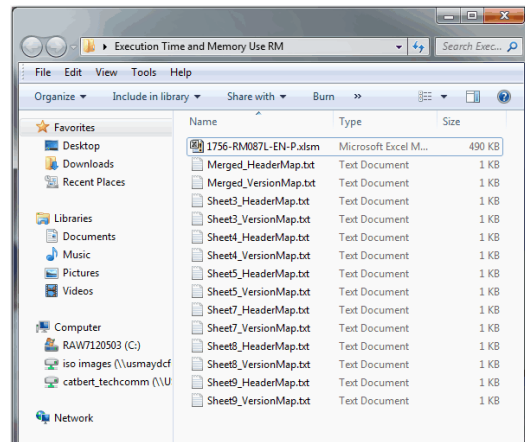
2. Click Filter Data.



For approximately a minute, the file processes data in the workbook to create the Controller & Software Choices dialog box.



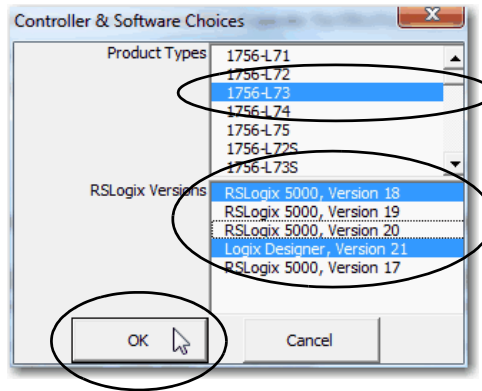
IMPORTANT In addition to creating the Controller & Software Choices dialog box, the file processing creates a number of .TXT files in the same folder as the Excel file, as shown in the example below.



You can delete the .TXT files and still use the filter option.

If you clear filter choices and make new ones, new TXT files are created in the same location.

3. Select the desired controller catalog numbers and RSLogix 5000 software or Logix Designer application combinations and click OK.



For approximately a minute, the file processes the data in the workbook again and shows only the data related to the combination of your selections.

The selections made in the example above result in data appearing on each tab for the 1756-L73 controller, as shown below.

Ladder Instructions

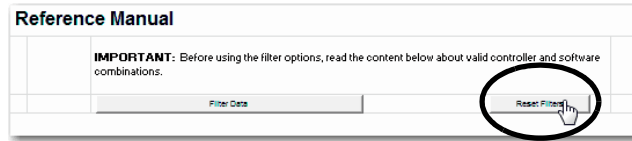
IMPORTANT: Controller family catalog numbers are grouped together when possible. However, not all controller catalog numbers are supported in all RSLogix 5000 software versions. For example, the 1756-L71 controller uses the same instruction execution times in RSLogix 5000 software, version 20, as the 1756-L73 controller. The 1756-L71 controller is not supported in RSLogix 5000 software, version 19 and earlier, though. Therefore, the values in the columns for RSLogix 5000 software, versions 19 and earlier, do not apply to the 1756-L71 controller.

For more information on which controller catalog numbers are supported in each RSLogix 5000 software version, see Valid Controller Catalog Number and RSLogix 5000 Software Version Combinations on the Introduction tab.

Ladder Instruction	Data Type	Notes	Memory (bytes)		Execution Times (µs)			
					RSLogix 5000, Version 18		Logix Designer, Version 21	
			1756-L71 1756-L72 1756-L73 1756-L74 1756-L75 1756-L76S 1756-L73S	1756-L72 1756-L73 1756-L74 1756-L75 1756-L76S 1756-L73S	RSLogix 5000, Version 18	Logix Designer, Version 21	RSLogix 5000, Version 18	Logix Designer, Version 21
ABE	REAL		N/A	N/A	N/A	N/A	N/A	N/A
ABE	DINT		32	32	0.11	0.11	0.11	0.11
ABE	REAL		56	56	0.16	0.16	0.16	0.16
ACB	N/A		N/A	N/A	N/A	N/A	N/A	N/A
ACB	N/A		N/A	N/A	N/A	N/A	N/A	N/A
ACS	N/A		N/A	N/A	N/A	N/A	N/A	N/A
ACS	REAL		48	48	15.43	15.43	15.43	15.43
ADD	DINT		28	28	0.12	0.12	0.12	0.12
ADD	REAL		44	44	0.83	0.84	0.84	0.84
AND	N/A		4	4	0.01	0.01	0.01	0.01
AND	N/A		N/A	N/A	N/A	N/A	N/A	N/A
ALMA	analog_alarm	If is true, Alarm state doesn't change (input value doesn't change alarm level)	240	236	3.10			3.97
ALMA	analog_alarm	One condition triggers	240	236	22.21			18.88
ALMA	analog_alarm	Two conditions trigger	240	236	26.78			22.21
ALMA	analog_alarm	Is FALSE	240	236	3.16			3.97
ALMD	digital_alarm	Alarm state doesn't change (T or F to F)	280	280	4.63			5.50
ALMD	digital_alarm	Alarm state changes (T to F or F to T)	280	280	14.25			15.17

Complete these steps to reset the controller and software/application version selections, and make new selections.

1. Click the Introduction tab.
2. Click Reset Filters.



The file processes the data in the workbook to show all data again. Additionally, .TXT files are created again as described on page [5](#).

3. Make new choices in the Controller and Software Choices dialog box as described in [step 3 on page 6](#) and use the data as desired.

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