S7-To-Excel-Tool

TRAEGER.DE
INDUSTRY COMPONENTS

Documentation for version 2.0.0.0

Summary

The S7-To-Excel-Tool generates an Excel file with process data from a SIMATIC-S7.
Appearance and format (formulas etc.) of the Excel file will be created as a template in the form of an Excel file.
The template contains all the information such as:

- Target directory
- Target file including format specifications for date and time
- Connection parameters to the PLC
- Addresses of the PLC variable
- The condition for generating the target file

This information is stated by means of key words in a random position in the Excel worksheet. Variables from the PLC appear in the same position (cell) on the destination file where the relevant variable address was entered.

Features of the Editions

In version 1.x you can only replace the PLC variables.
With version 2.x you can now append sheets dynamically in horizontal and vertical direction by using regions.

Feature	Standard	Advanced	Expert	Evaluation
Trigger based log file creation	x	x	x	x
Maximum number of channels	1	1	1	1
Maximum number of triggers	1 / Sheet	1 / Sheet	1 / Sheet	1 / Sheet
Interval trigger	x	x	x	x
Value change trigger	x	x	x	x
Boolean trigger	x	x	x	x
Conditional / edge trigger	x	x	x	x
Append Sheet by region(s)			x	x
Maximum number of variables	100	unlimited	unlimited	unlimited

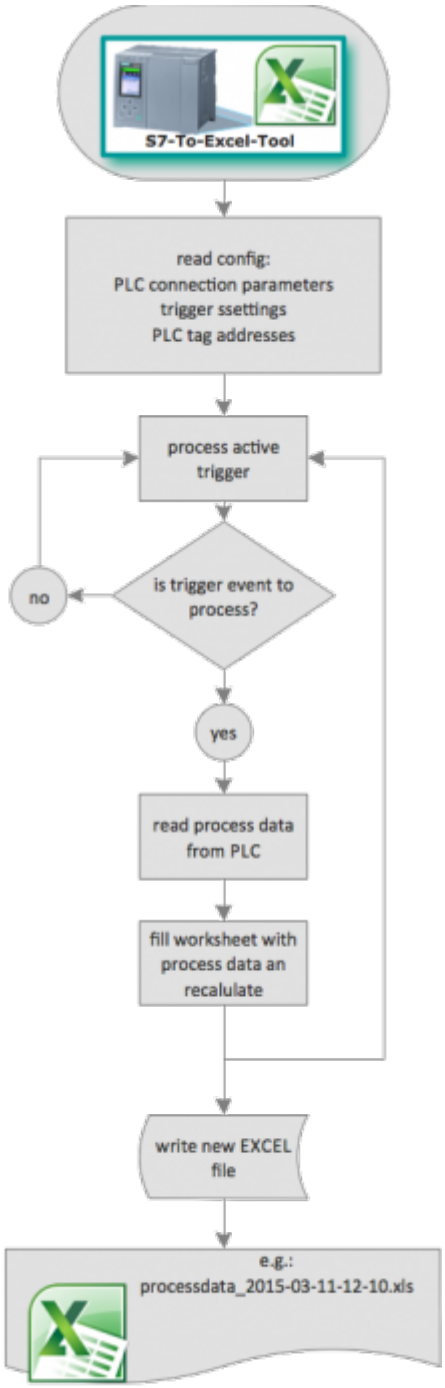
Working with Worksheets

The Excel file can contain any number of worksheets.
However, there are names for worksheets that are specifically reserved for the S7-To-Excel-Tool:

Worksheet name	use
PLC Connection	contains the connection parameters to the PLC such as IP address, rack, slot, and the properties for saving

Otherwise, you can take any name for a worksheet.
The processing / updating is controlled by a trigger (= event in the PLC or time interval) for each worksheet.

Process of the S7-To-Excel-Tool



sample:

template

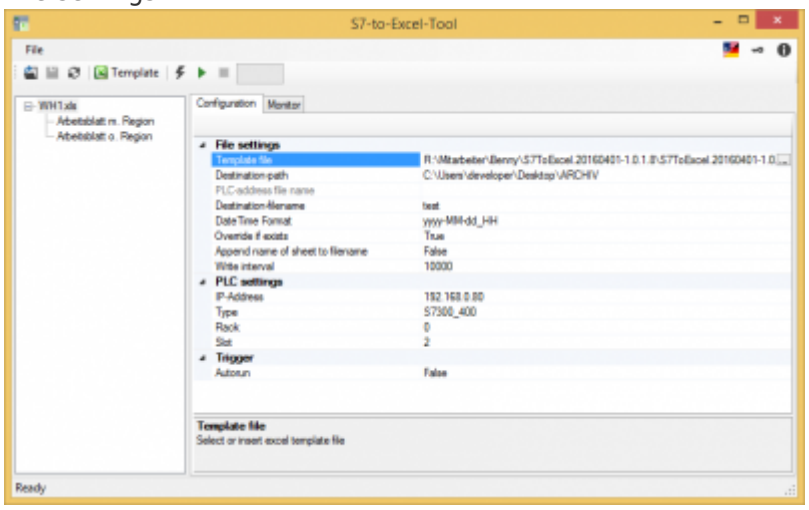
	A	B	C	D	E	
1	Material	Temperatur Granulat	Temperatur Zylinder	Temperatur Form	Druck (bar)	Dauer ms
2	Gran Rot	$PLC_ADDR,DB1000.DBB255,real	$PLC_ADDR,DB1000.DBB260,real	$PLC_ADDR,DB1000.DBB264,real	$PLC_ADDR,DB1000.DBB269,real	$PLC_ADDR
3	Gran Black	$PLC_ADDR,DB1000.DBB285,real	$PLC_ADDR,DB1000.DBB290,real	$PLC_ADDR,DB1000.DBB294,real	$PLC_ADDR,DB1000.DBB299,real	$PLC_ADDR
4						
5		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	

result

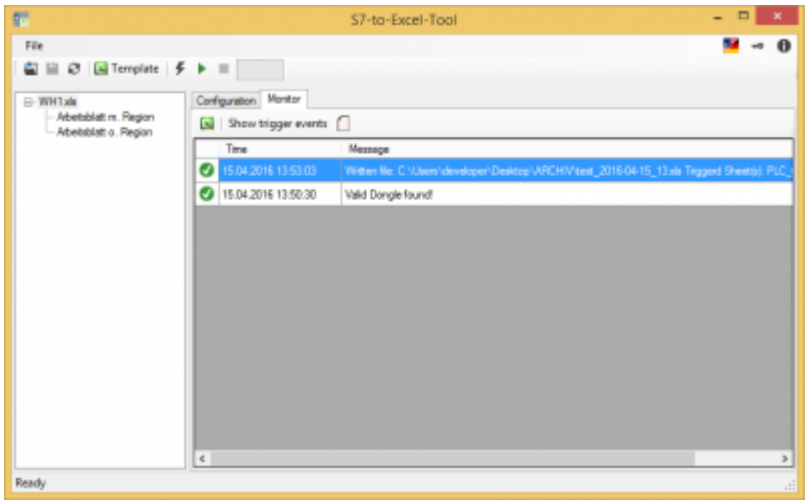
	A	B	C	D	E	
1	Material	Temperatur Granulat	Temperatur Zylinder	Temperatur Form	Druck (bar)	D
2	Gran Rot	10,022 °C	231,732 °C	46,948 °C	2,949156284	
3	Gran Black	42,272 °C	49,989 °C	34,832 °C	12,44607067	
4						
5		26,147 °C	[illegible] °C	[illegible] °C	[illegible] °C	

Screenshots

File settings:



Notifications:



Use the USB-Dongle

The License key is also available as a USB-Dongle.
We use the products from MARX Software Security. To use the Dongles you have to do following steps:

- minimum .NET Framework V 4.6.0 (check version / install)
- install MARX "CBIOS Server Windows" as a service"
- plug in the Dongle
- only using S7-FileLogger: install S7-FileLogger for Dongle
- start the program
- Under ℹ you will find the license informations

Create Template

- Create workbook

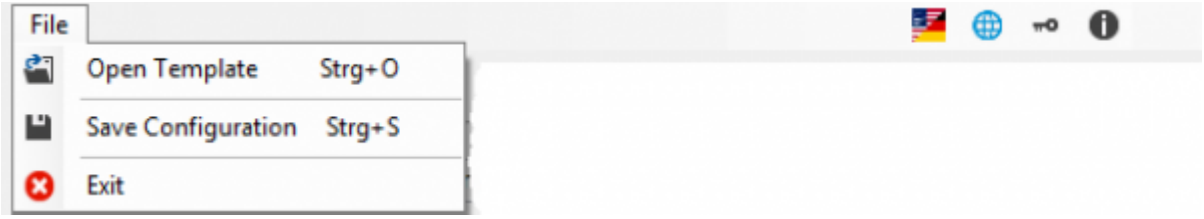
- Create and format worksheets
- Insert the address for the PLC variable register ($PLC_ADDR-value) into the desired cells
- Save workbook, this file is your template
- Start S7ToExcel.exe
- Open Template (File → Select Template)
- Determine target path / file destination
- Edit / set / enable triggers
- Select PLC connection parameters
- Save template, the settings are automatically saved in the template
- Note:
  - By clicking “Stop Trigger” you stop the evaluation.
  - By activating “autorun” the evaluation is started automatically with the template last used when you start the application.
  - “Overwrite file” overwrites, if existing, the file with the same name.

Activate Logging

Launch the application and select the template. Then the available worksheets are presented to you.
By clicking you start the logging.
In the table you can find the last events. Here, the error messages are also displayed.

User Interface

Gray controls are not available at the moment.



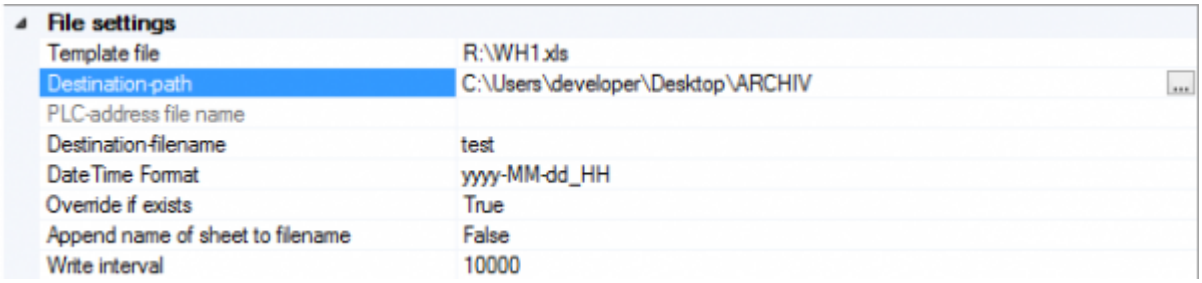
	Insert License	Generate your machine code or insert your license key
	Select Language	Switch between German and English
	Information about the software	Here you can find all information about the software and the currently used license data.

Toolbar

	Opens the selected template file
	Saves all settings from the program and the template (Shortcut STRG+S)
	reloads the current template
	Trys to open the template file with the default program
	All found variables in all sheets will be triggered
	start all triggers
	stop all triggers

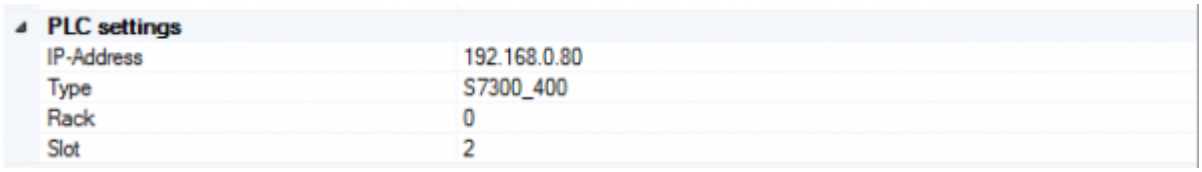
	green bar: shows if analysis was started gray bar: no analysis started

Excel File Settings



Destination file name	Optional file name for the storage. If set, the name plus the current date and time will be saved. For example MASCHINE1_20150203_120304.xls. The issue date can be individually configured.
Time Format	See keyword $PLC_FILENAME_POSTFIX,Format

PLC Settings



PLC Address	Display of the read, defined PLC address in the template
PLC Type	Display of the read, defined PLC
Rack	Display of the read, defined rack number
Slot	Display of the read, defined slot number

Note:
Please also note the settings for S7-1200 / S7-1500 / LOGO!.

Regions

The defined region is extended in the worksheet (below sheet) according to the defined rules.
Each sheet can have multiple regions, please refer to the keyword Region.

The following settings of the cell will be taken on:

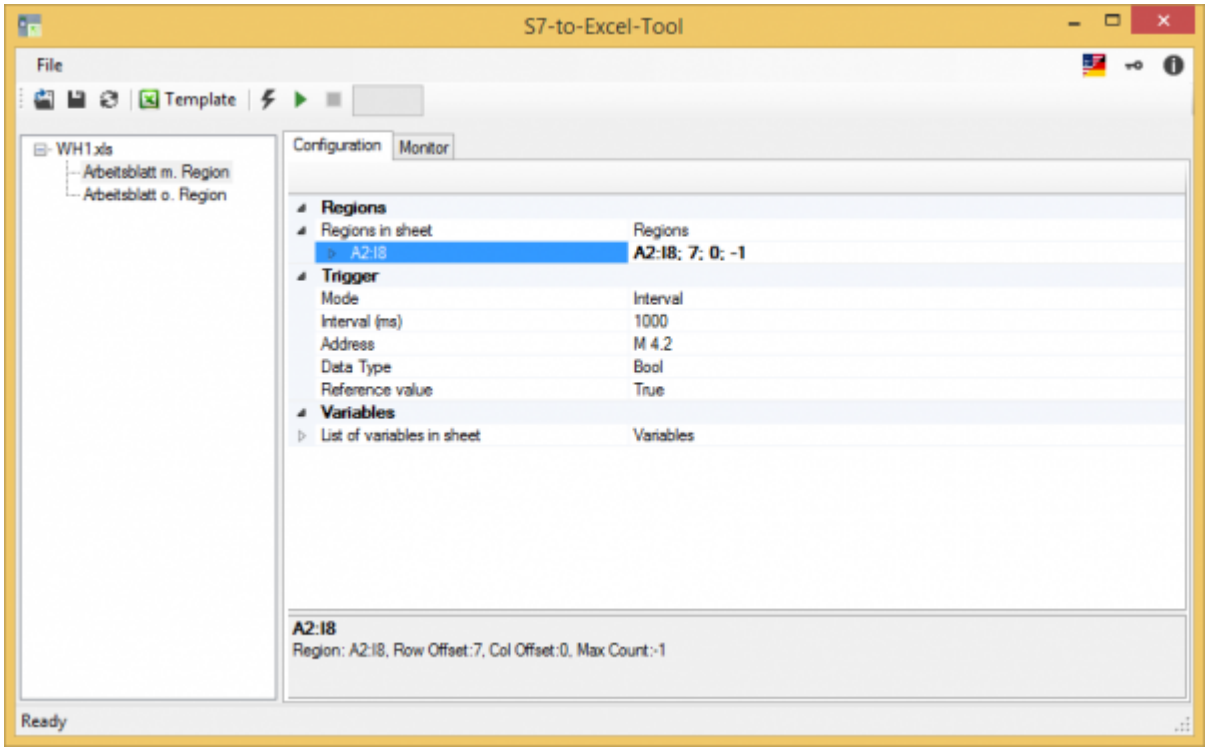
- cell formats (font, font size, formating of the display, colors)
- borders
- column width
- row hight
- formulas

Borders:
maximum possible column: IP (250 columns)
maximum possible row: 60000

Note:
We have improved the write mechanism and set a write interval of 10 seconds by default.

The result file will be written when

- the write interval has expired.
- a new file shall be generated, because the file name and / or the postfix have been changed.
- one border has been reached.
- the trigger is stopped.

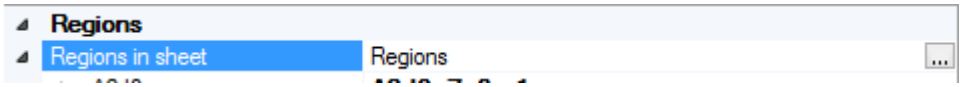


If you click on the arrow, you will see the properties of the region:

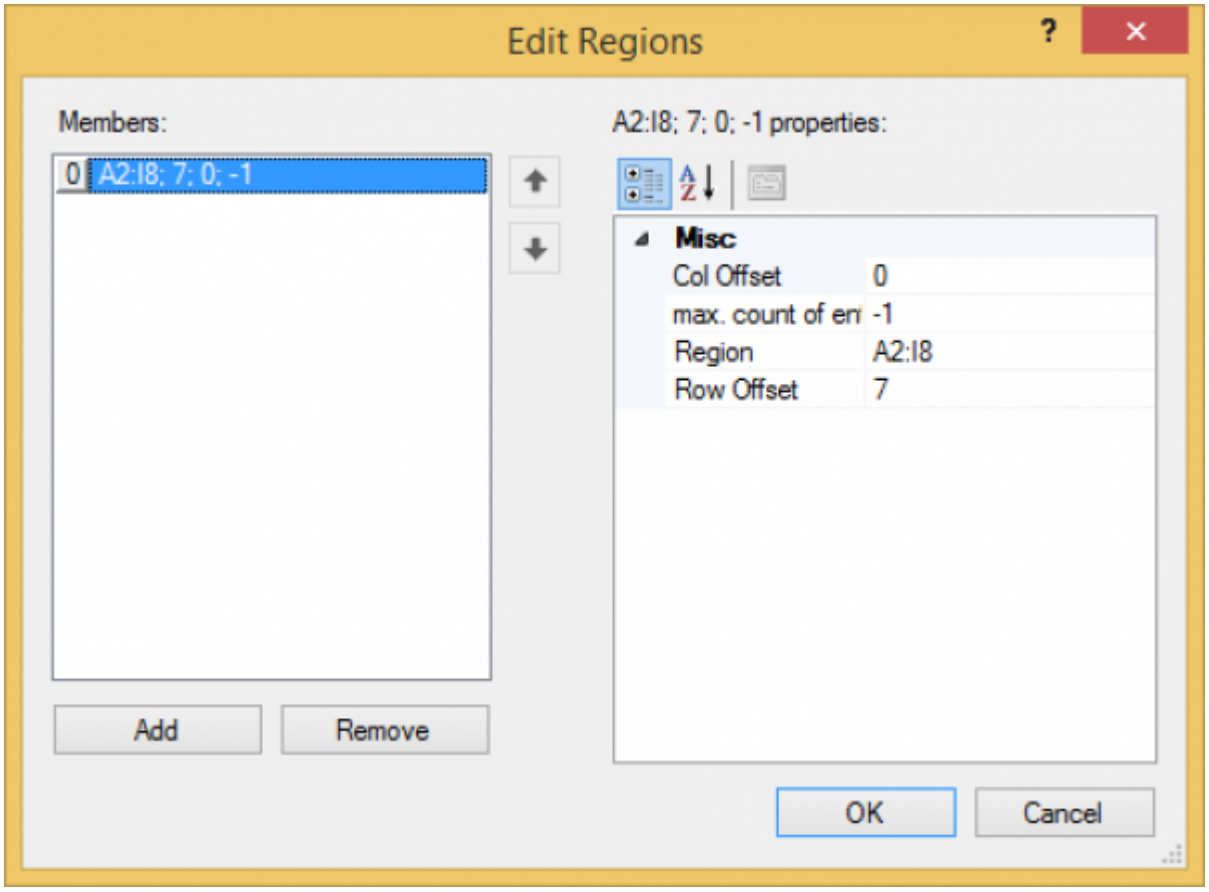
You can find more information under the keyword for the Region

Edit Region(s)

If you want to edit a region or create a new one, there are two possibilities:
Click on "..."



The following dialog for editing the region(s) opens:



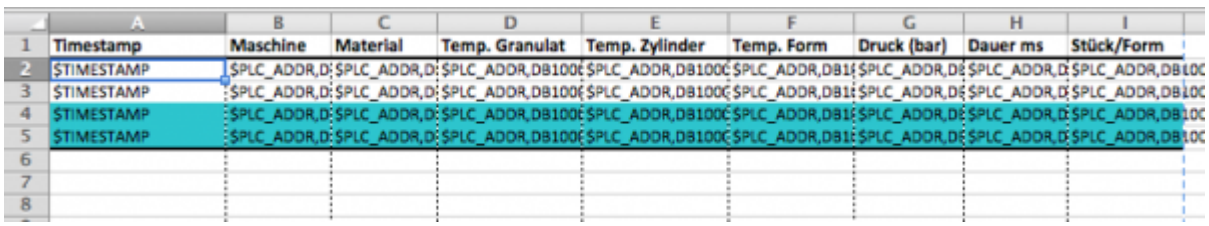
Here you can see, edit and delete all the regions or create a new region on the left side.
On the right side you see the properties of the region.

If you just want to edit the region, click on the arrow and change the data:

Samples:
In descending vertical direction:

If you want to read a lot of data from different machines at the same time, it makes sense to expand the data in descending vertical direction.

Region: A2 - I5
Row offset: 4
Column offset: 0
Max. number of entries: 7



Result after triggering three times:

	A	B	C	D	E	F	G	H	I
1	Timestamp	Maschine	Material	Temp. Granulat	Temp. Zylinder	Temp. Form	Druck (bar)	Dauer ms	Stück/Form
2	12.04.2016 09:19:39	EXT1200	GRAN3458	84,50 °C	135,50 °C	137,00 °C	8,10 bar	3000 ms	19200
3	12.04.2016 09:19:39	EXT1400	GRAN3458	90,50 °C	143,00 °C	143,00 °C	7,50 bar	7399 ms	24600
4	12.04.2016 09:19:39	EXT2600	GRAN4573	83,00 °C	128,00 °C	134,00 °C	7,90 bar	6099 ms	30599
5	12.04.2016 09:19:39	EXT2650	GRAN2967	72,50 °C	134,00 °C	125,00 °C	7,30 bar	4000 ms	19200
6	12.04.2016 09:19:40	EXT1200	GRAN3458	84,50 °C	135,50 °C	137,00 °C	8,10 bar	3000 ms	19200
7	12.04.2016 09:19:40	EXT1400	GRAN3458	90,50 °C	143,00 °C	143,00 °C	7,50 bar	7399 ms	24600
8	12.04.2016 09:19:40	EXT2600	GRAN4573	83,00 °C	128,00 °C	134,00 °C	7,90 bar	6099 ms	30599
9	12.04.2016 09:19:40	EXT2650	GRAN2967	72,50 °C	134,00 °C	125,00 °C	7,30 bar	4000 ms	19200
10	12.04.2016 09:19:41	EXT1200	GRAN3458	84,50 °C	135,50 °C	137,00 °C	8,10 bar	3000 ms	19200
11	12.04.2016 09:19:41	EXT1400	GRAN3458	90,50 °C	143,00 °C	143,00 °C	7,50 bar	7399 ms	24600
12	12.04.2016 09:19:41	EXT2600	GRAN4573	83,00 °C	128,00 °C	134,00 °C	7,90 bar	6099 ms	30599
13	12.04.2016 09:19:41	EXT2650	GRAN2967	72,50 °C	134,00 °C	125,00 °C	7,30 bar	4000 ms	19200
14									
15									

In ascending vertical direction:

If you, for example, want to write the data in descending historical order, you can enter a negative offset and the data is written from the bottom up.

Region: A74 - I77
Row offset: -4
Column offset: 0
Max count of entries: 7

73									
74	$TIMESTAMP	$PLC_ADDR,D	$PLC_ADDR,D	$PLC_ADDR,DB100	$PLC_ADDR,DB100	$PLC_ADDR,DB1	$PLC_ADDR,D	$PLC_ADDR,D	$PLC_ADDR,DB1000.DBW32
75	$TIMESTAMP	$PLC_ADDR,D	$PLC_ADDR,D	$PLC_ADDR,DB100	$PLC_ADDR,DB100	$PLC_ADDR,DB1	$PLC_ADDR,D	$PLC_ADDR,D	$PLC_ADDR,DB1000.DBW32
76	$TIMESTAMP	$PLC_ADDR,D	$PLC_ADDR,D	$PLC_ADDR,DB100	$PLC_ADDR,DB100	$PLC_ADDR,DB1	$PLC_ADDR,D	$PLC_ADDR,D	$PLC_ADDR,DB1000.DBW33
77	$TIMESTAMP	$PLC_ADDR,D	$PLC_ADDR,D	$PLC_ADDR,DB100	$PLC_ADDR,DB100	$PLC_ADDR,DB1	$PLC_ADDR,D	$PLC_ADDR,D	$PLC_ADDR,DB1000.DBW33
78									
79									
80	Mittelwert			#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
81	Summe							0	0
82									

Result after triggering three times:

63									
64									
65									
66	12.04.2016 09:19:41	EXT1200	GRAN3458	84,50 °C	135,50 °C	137,00 °C	8,10 bar	3000 ms	19200
67	12.04.2016 09:19:41	EXT1400	GRAN3458	90,50 °C	143,00 °C	143,00 °C	7,50 bar	7399 ms	24600
68	12.04.2016 09:19:41	EXT2600	GRAN4573	83,00 °C	128,00 °C	134,00 °C	7,90 bar	6099 ms	30599
69	12.04.2016 09:19:41	EXT2650	GRAN2967	72,50 °C	134,00 °C	125,00 °C	7,30 bar	4000 ms	19200
70	12.04.2016 09:19:40	EXT1200	GRAN3458	84,50 °C	135,50 °C	137,00 °C	8,10 bar	3000 ms	19200
71	12.04.2016 09:19:40	EXT1400	GRAN3458	90,50 °C	143,00 °C	143,00 °C	7,50 bar	7399 ms	24600
72	12.04.2016 09:19:40	EXT2600	GRAN4573	83,00 °C	128,00 °C	134,00 °C	7,90 bar	6099 ms	30599
73	12.04.2016 09:19:40	EXT2650	GRAN2967	72,50 °C	134,00 °C	125,00 °C	7,30 bar	4000 ms	19200
74	12.04.2016 09:19:39	EXT1200	GRAN3458	84,50 °C	135,50 °C	137,00 °C	8,10 bar	3000 ms	19200
75	12.04.2016 09:19:39	EXT1400	GRAN3458	90,50 °C	143,00 °C	143,00 °C	7,50 bar	7399 ms	24600
76	12.04.2016 09:19:39	EXT2600	GRAN4573	83,00 °C	128,00 °C	134,00 °C	7,90 bar	6099 ms	30599
77	12.04.2016 09:19:39	EXT2650	GRAN2967	72,50 °C	134,00 °C	125,00 °C	7,30 bar	4000 ms	19200
78									
79									
80	Mittelwert			82,63 °C	135,13 °C	134,75 °C	7,70 bar	5125 ms	23400
81	Summe							61494	280797
82									

Expand in horizontal direction, extending to the right:

If you, for example, want to log a record per machine triggered once every hour one below the other, it makes sense to write the data vertically to the right.

Region: B1 - B3
Row offset: 0
Column offset: 1
Max count of entries: 7

	A	B	C	D
1	Zeitstempel	$TIMESTAMP		
2	Material	$PLC_ADDR,DB1000.DBB664,string[35]		
3	Temp. Granulat	$PLC_ADDR,DB1000.DBD254,real		
4				
5				

Result after triggering two times:

	A	B	C
1	Zeitstempel	12.04.2016 10:22:49,029	12.04.2016 10:23:17,755
2	Material	GRAN3458	GRAN3458
3	Temp. Granulat	84,50 ° C	86,00 ° C
4			
5			

Expand in horizontal direction, extending to the left

If you, for example, want to log a record per machine in historically descending order one below the other, it makes sense to use a negative column offset.

Region: F32 - F34
Row offset: 0
Column offset: -1
Max. number of entries: 5

31			
32	Zeitstempel	$TIMESTAMP	
33	Material	$PLC_ADDR,DB1000.DBB664,string[35]	
34	Temp. Granulat	$PLC_ADDR,DB1000.DBD254,real	
35			

Result after triggering two times (Note: All not empty cells are written):

30			
31			
32	Zeitstempel	12.04.2016 10:23:17,755	12.04.2016 10:22:49,028
33	Material	GRAN3458	GRAN3458
34	Temp. Granulat	84,50 ° C	86,00 ° C
35			

Trigger

General settings (File name selected):

Trigger	
Autorun	False

At click on the sheet name:

Trigger	
Mode	Interval
Interval (ms)	1000
Address	M 4.2
Data Type	Bool
Reference value	True

Autorun	True: Triggers start automatically when you start the application and when selecting a template
Address	Trigger address in the PLC, see $PLC_TRIGGER_ADDR

Datatype	Datatype of the trigger address, see PLC-Addressing
Interval (ms)	using an interval trigger: time in ms until the next logging; otherwise: time in ms until the next review of the trigger address
Reference value	using a Boolean trigger: verification value for the edge; otherwise: value on which shall be checked
Mode	Display of the trigger mode, see trigger mode
Manual trigger	All variables found in all sheets will be triggered

Keywords

The configuration is done via the corresponding keywords.
Syntax: $keyword,n,$n_1$,...,$n_x$
The parameters n,n_1,...,n_x are stated as separate by ','.

Worksheet "PLC Configuration"

Configuration of the PLC Connection

keyword	description	sample
$PLC_IPADDR,IP-Address	IP-Address of the PLC, needed for creating the connection to the PLC	$PLC_IPADDR,192.168.0.80
$PLC_RACK,Rack	rack number of the PLC	$PLC_RACK,0
$PLC_SLOT,Slot	slot number of the PLC	e.g. by S7 300: $PLC_SLOT,2
$PLC_DEVICETYPE,PLCtype	Possible PLC device types: - S71500 - S71200 - S7300_400 - S7200 - LOGO!	$PLC_DEVICETYPE,S7300_400

Note:
Please also see settings for S7-1200 / S7-1500 / LOGO!.

Configuration of the Destination File Name

keyword	description	sample
$PLC_SAVEPATH,directory	The directory of target files. If no path is selected, the location is taken from the template file	$PLC_SAVEPATH,C:\Documents\Excel
$PLC_FILENAME,filename	With no input, only the Postfix is used as the name. Use the $ PLC_ADDR keyword for dynamic name generation by the PLC	$PLC_FILENAME,MaschinenWh1 $PLC_FILENAME,$PLC_ADDR,DB1000.DBB 700,string[100]

<table>
<tr><th>keyword</th><th>description</th><th>sample</th></tr>
<tr><td>$PLC_FILENAME_POSTFIX,Format</td><td>By default, a time postfix with the format “yyyy-MM-dd_hh-mm-ss” is always appended to the filename.

You can format it as desired:<table><tr><th>Format</th><th>description</th></tr><tr><td>yy</td><td>year 2-digit</td></tr><tr><td>yyyy</td><td>year 4-digit</td></tr><tr><td>MM</td><td>month 2-digit</td></tr><tr><td>MMM</td><td>short name of the month</td></tr><tr><td>MMMM</td><td>name of the month</td></tr><tr><td>dd</td><td>day 2-digit</td></tr><tr><td>ddd</td><td>short name of day</td></tr><tr><td>dddd</td><td>name of day</td></tr><tr><td>H</td><td>hour 0-23</td></tr><tr><td>h</td><td>hour 1-12</td></tr><tr><td>HH</td><td>hour 00-23</td></tr><tr><td>hh</td><td>hour 01-12</td></tr><tr><td>mm</td><td>minute 2-digit</td></tr><tr><td>s</td><td>seconds 1-59</td></tr><tr><td>ss</td><td>seconds 01-59</td></tr><tr><td>fff</td><td>milliseconds 3-digit</td></tr><tr><td>ffff</td><td>Ten thousandths of a second 4-digit</td></tr></table></td><td>For example, the file name: MaschineWh1_2015-01-13_09-35-22.xls shall be generated:

$PLC_FILENAME,MaschineWh1
$PLC_FILENAME_POSTFIX,yyyy-MM-dd_HH-mm-ss</td></tr>
<tr><td>$APPEND_TRIGGERED_SHEETNAMES,Flag</td><td>When set, the triggered sheet names are appended to the file name. This facilitates, for example, the location of the desired file within several sheets
0 = don't append
1 = append</td><td>$APPEND_TRIGGERED_SHEETNAMES,1</td></tr>
<tr><td>$PLC_OVERRIDEFILE,Flag</td><td>When edge = 1, the file is overwritten. The file name assembles through file name + (sheet name) + postfix</td><td>$PLC_OVERRIDEFILE,1 overwrites the file e.g. when using regions</td></tr>
</table>

Worksheets with Process Data

Define Process Data from the PLC

PLC Addressing

Operand

Name	Abbreviation (Siemens, DE)	Abbreviation(IEC)
Input	E	I
Output	A	Q
Flag	M	M
Peripherals	P	P
Counter	Z	C
Data Block	DB	DB
Timer	T	16

Data types

Name	Abbreviation	Bit size	Range	Description	Array
BOOL	X	1	0 to 1	single bit representing true (1) or false (0)	x
BYTE	B	8	0 to 255	unsigned 8-bit	x
WORD	W	16	0 to 65.535	unsigned 16-bit (Word)	x
DWORD	D	32	0 to 2^{32} -1	unsigned 32-bit (Double Word)	x
CHAR	B	8	A+00 to A+ff	ASCII-Code unsigned 8-bit character	x
INT	W	16	-32.768 to 32.767	signed 16-bit integer	x
DINT	D	32	-2^{31} to 2^{31}-1	signed 32-bit integer (Double Word)	x
REAL	D	32	+-1.5e-45 to +-3.4e38	IEEE754 32-bit single precision floating point number	x
S5TIME	W	16	00.00:00:00.100 to 00.02:46:30.000	binary coded decimal (BCD) number representing a time span	
TIME	D	32	00.00:00:00.000 to 24.20:31:23.647	signed 16-bit integer representing a time span in milliseconds	
TIME_OF_DAY	D	32	00.00:00:00.000 to 00.23:59:59.999	unsigned 16-bit integer representing a time span in milliseconds	
DATE	W	16	01.01.1990 to 31.12.2168	unsigned 16-bit integer representing a date in days	
DATE_AND_TIME	D	64	00:00:00.000 01.01.1990 to 23:59:59.999 31.12.2089	binary coded decimal (BCD) number representing a date and time	
S7String	B	any	A+00 to A+ff	ASCII-Code, max. 254 Bytes	

The variables are composed of operand and data type. Examples:

Examples	Data type	Example Siemens	Example IEC
Input Byte 1, Bit 0	BOOL	E 1.0	I 1.0
Output Byte 1, Bit 7	BOOL	A 1.7	Q 1.7
Flag Byte 10, Bit 1	BOOL	M 10.1	M 10.1
Data Block 1, Byte 1, Bit 0	BOOL	DB1.DBX 1.0	DB1.DBX 1.0
Input Byte 1	BYTE	EB 1	IB 1
Output Byte 10	BYTE	AB 10	QB 10
Flag Byte 100	BYTE	MB 100	MB 100

Examples	Data type	Example Siemens	Example IEC
Peripherals Input Byte 0	BYTE	PEB 0	PIB 0
Peripherals Output Byte 1	BYTE	PAB 1	PQB 1
Data Block 1, Byte 1	BYTE	DB1.DBB 1	DB1.DBB 1

Data Block 1, Data Block 1 Typ bool, Address 1.0 → DB1.DBX 1.0
Data Block 1, Data Block Typ Byte, Address 1 → DB1.DBB 1
Peripherals Input, Typ DWORD, Address 0 → PED 0

Help:
DB#.DBB # = Data Block#.Data Block Byte #
DB#.DBW # = Data Block#.Data Block Word #
DB#.DBD # = Data Block#.Data Block Doubleword #
= Address

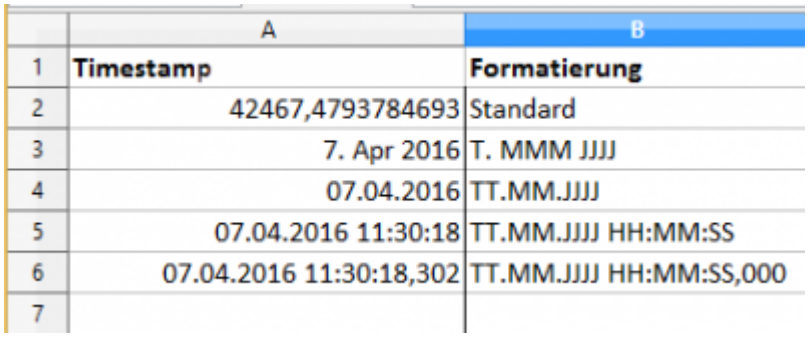
keyword:
$PLC_ADDR,Address,Datatype,Option

description		sample
The PLC address to be read. Is written into the cell to be read		
Address	The PLC address which shall be read. See PLC Addressing	
Data type	The type of the address which shall be read. Option for Type “string”: Number written in **[]** defines the length of the data to be read data types: * BOOL * WORD * DWORD * INT * DINT * REAL * STRING * CHAR * BYTE Not yet implemented: * S5TIME * TIME * TIME_OF_DAY * DATE * DATE_AND_TIME	sample for MW 20 type: WORD $PLC_ADDR,MW 20,WORD sample for DB 1000, address 1 type: String length: 100 $PLC_ADDR,DB1000.DBB 1,string[100]
Option	Optional statement e.g. r = read, w = write back. NOT IMPLEMENTED_	

Timestamp

$TIMESTAMP	Writes the current timestamp in the cell. Your defined formatting is retained. Tip: In Excel milliseconds are defined with the format “,00” for a double-digit output and “,000” for three-digit output.

sample:



	A	B
1	**Timestamp**	**Formatierung**
2	42467,4793784693	Standard
3	7. Apr 2016	T. MMM JJJJ
4	07.04.2016	TT.MM.JJJJ
5	07.04.2016 11:30:18	TT.MM.JJJJ HH:MM:SS
6	07.04.2016 11:30:18,302	TT.MM.JJJJ HH:MM:SS,000
7		

Region

keyword:
$APPEND_REGION,[SheetName],Region,RowOffset,ColOffset,count of entries

parameter	description	sample
Sheet name	If emtpy: actual sheet; otherwise: the sheet name in []	Sheet: “wh1” Region A2 till I5 append max. 8 times $APPEND_REGION,,A2:I5,4,0,8 or $APPEND_REGION,A2:I5,4,0,8 or $APPEND_REGION,[wh1],A2:I5,4,0,8
Region	Region which should be appended. Format: StartColumn StartRow:EndColumn EndRow z.B. A2:I9	
Row offset	Row offset for the next entry of the region. If you have 7 rows and want to expand in row direction, you need to enter an offset of at least 7. A negative offset extends the region in ascending horizontal direction.	
Column offset	Columnn offset for the next entry of the region. If you have 2 columns and want to expand in column direction, you need to enter an offset of at least 2. A neagtive offset extends the region in vertical direction to the left.	
Number of entries	Maximum number of entries before a new file is to be generated when none of the cases described in Regionen applies for the generatation of a file. **-1** marks when a new file is created (file name is changing in Prefix or postfix).	

Define Triggers

To trigger a worksheet, you must set the following three values:

- Trigger address
- Trigger interval
- Trigger mode

The interval time should be at least half of the time the value is kept in the PLC. This ensures that the trigger can identify the changed data reliably .

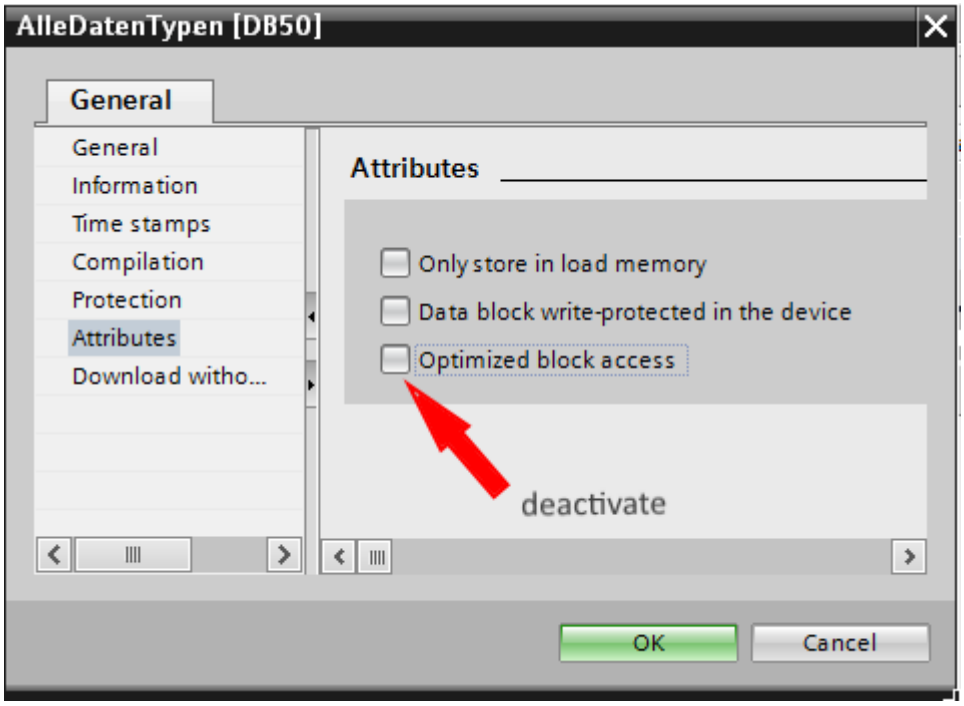
keyword	description		sample
$PLC_TRIGGER_ADDR,Address,Type,Value	PLC address for the trigger		sample for MW 20 type: WORD value: 10 $PLC_TRIGGER_ADDR,MW 20,WORD,10
	Address	Address in the PLC e.g. MW 20. See PLC Addressing for PLC addressing	
	Type	Data type to be read. See $PLC_ADDR for possible types	
	Value	Value on which shall be checked	

<table>
<tr><th>keyword</th><th>description</th><th>sample</th></tr>
<tr><td rowspan="8">$PLC_TRIGGER_INTERVAL,ms</td><td colspan="3">Interval in milliseconds
Option 1: Period in which the trigger variable is checked
Option 2: Period in which a new query is issued in the PLC (interval trigger)</td><td>sample for triggering every second:
$PLC_TRIGGER_INTERVAL,1000</td></tr>
<tr><td colspan="3">trigger modes for generating Excel files
Has to be included in each worksheet in which PLC addresses are to be read</td><td rowspan="7">sample interval trigger:
$PLC_TRIGGER_MODE,0</td></tr>
<tr><td>Mode</td><td>Type</td><td>Description</td></tr>
<tr><td>-1</td><td>No trigger</td><td>Worksheet is not triggered. Defined trigger survives</td></tr>
<tr><td>0</td><td>interval trigger</td><td>Triggering according to a set interval</td></tr>
<tr><td>1</td><td>Value change trigger</td><td>triggers if the value of the trigger address changes</td></tr>
<tr><td>2</td><td>Conditional trigger</td><td>triggers if trigger address has the specified value when checking</td></tr>
<tr><td>3</td><td>Edge trigger</td><td>Cyclically checks the value according to a set interval at the set address and starts the logging when the value becomes equalt to the reference value. Logging is triggered once each time at the transition to the defined area (edge treatment)</td></tr>
</table>

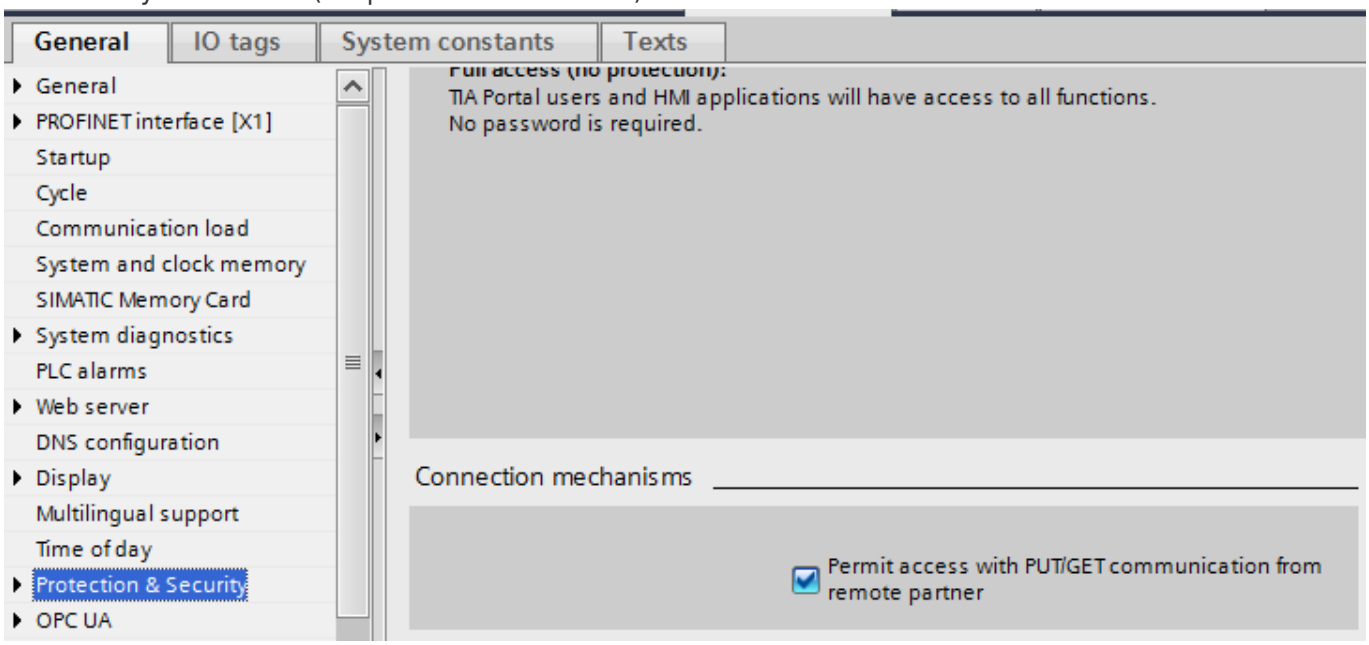
Settings for S7-1200 / S7-1500 / LOGO!

S7-1200/1500

The optimized block access needs to be deactivated in the data block attributes for access to the S7-1500 and S7-1200.

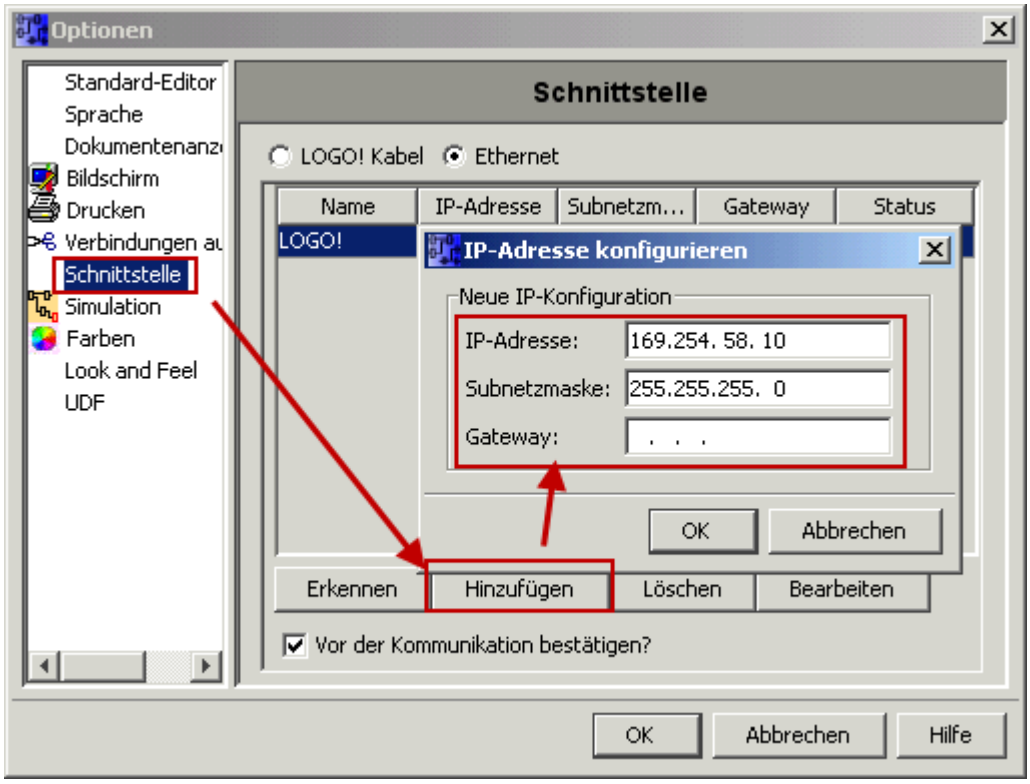


In the S7-1500 must be enabled in the communication setting in addition to the PUT / GET access . How this works you see here (snapshot from TIA Portal) .

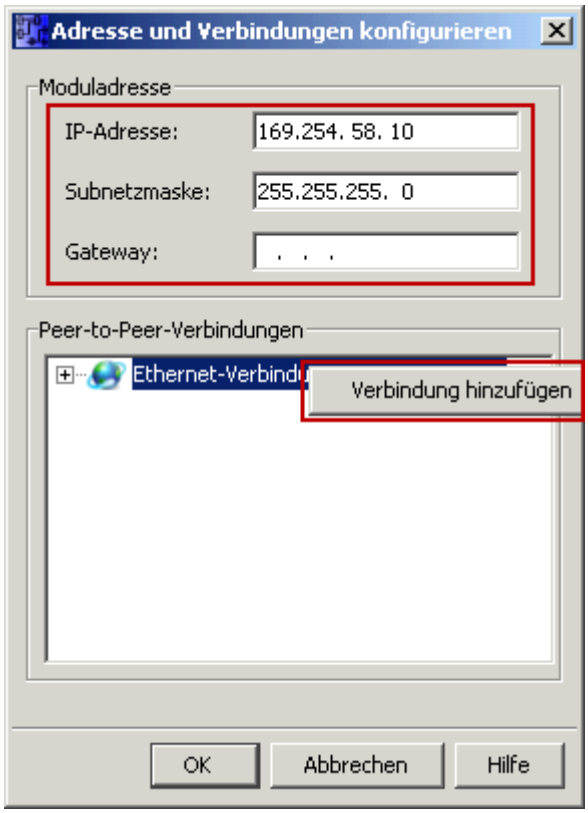


LOGO!

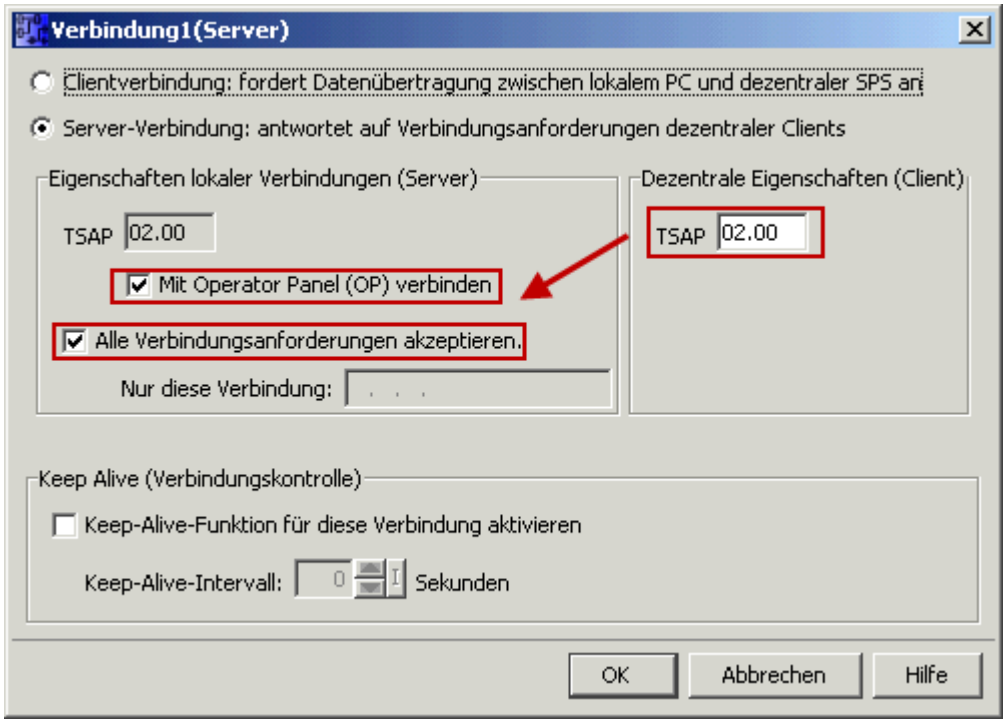
1. Use the Logo Soft Comfort the IP address of a logo! PLCs:



2. Configure PLCs so that connections from an HMI device accepted the Logo!. To do so, go to “Tools- > Ethernet Connections” and then add a new connection.



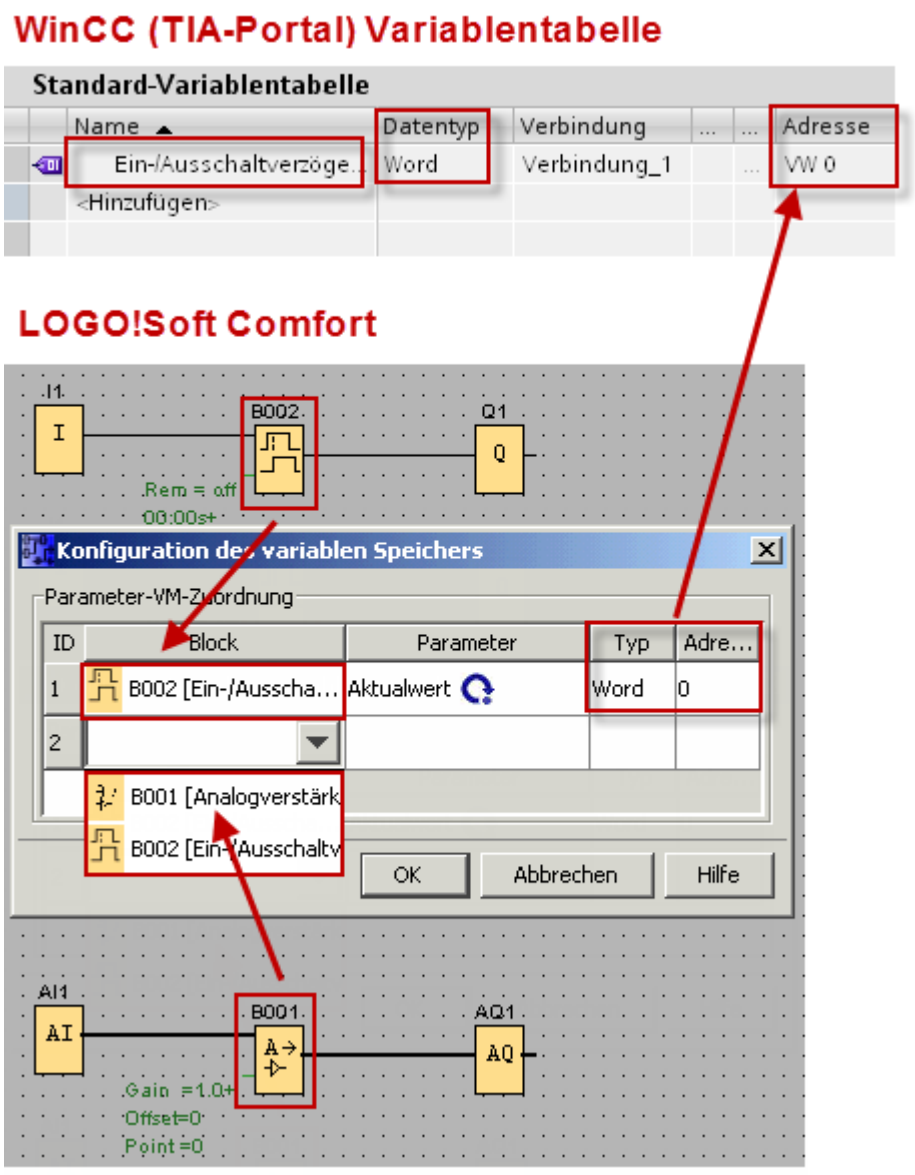
3. Double-click on the newly created connection to access the properties.



Select:

1. Server Connection
2. Local TSAP: 02:00 - 02:00 decentralized TSAP
3. accept all connections.

You can access DB1, inputs , outputs, flags , counters and timers with IP -S7 -LINK . Now put on “ Tools- > VM parameter map ” the variables that are to be transferred to the DB1.



Error List

Data has possibly been lost
When creating or saving documents with LibreOffice Calc.
Sollution: Sage the template file with an Excel application or save the file again with LibreOffice.

ReadExcelSheet: Read Template: Sheet “Worksheet” Row “line number” Column “column number”, PLC Addr: “PLC Address”, Type: “Entered type”
Error: The Address.RawType can not be used for the type specified.
For the entered PLC Address an incorrect type has been specified, see PLC addressing.

The addressed data area does not exist. “PLC Address”: Sheet “Worksheet Name” Row “line number” Cell “column number”
To be read PLC address does not exist.

The specified CPU Could not be found .: “PLC Address”: Sheet “Worksheet” Row “line number” Cell “column number”
Check the connection data to the PLC.

Copy template file to destination: “Error message”
An error occured when copying the template to the destination directory.

CreatePLCConnection: “Error message”
An error occured when opening the PLC connection.

ReadWrite Given Data: “error message”
An error occured when processing the template.

Read PLC Data “error message”
An error occured when obtaining the PLC variables.

PLC: “Status.Text”
An error occured when reading a PLC variable.

Table of Contents