Controlling Sleep Mode and the digital output of a SCALANCE W via SIMATIC controller and SNMP

SCALANCE WxM76x-1, Library_Comm_Controller, SNMP

https://support.industry.siemens.com/cs/ww/en/view/57249109

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1 Introduction

1.1 Overview

Starting point

The status of SNMP-capable network components is monitored and controlled, if applicable, by network management systems (such as SINEC NMS) via SNMP (Simple Network Management Protocol).

The blocks of the library "LSNMP" from the Communication Libraries for SIMATIC Controllers (https://support.industry.siemens.com/cs/ww/en/view/109780503) also allow a SIMATIC S7 CPU with PROFINET interface, as a simple SNMP manager, to query information from the network components and, if necessary, also to control them.

Requirements

To save energy and increase the runtimes and maintenance cycles of battery-operated devices in an autonomous transport system (AGV), these devices should be turned off during non-production hours.

By shutting off the digital output or activating the Sleep Mode of the SCALANCE WxM76x-1, the energy consumption of an autonomous transport system (AGV) can be reduced significantly during non-production hours.

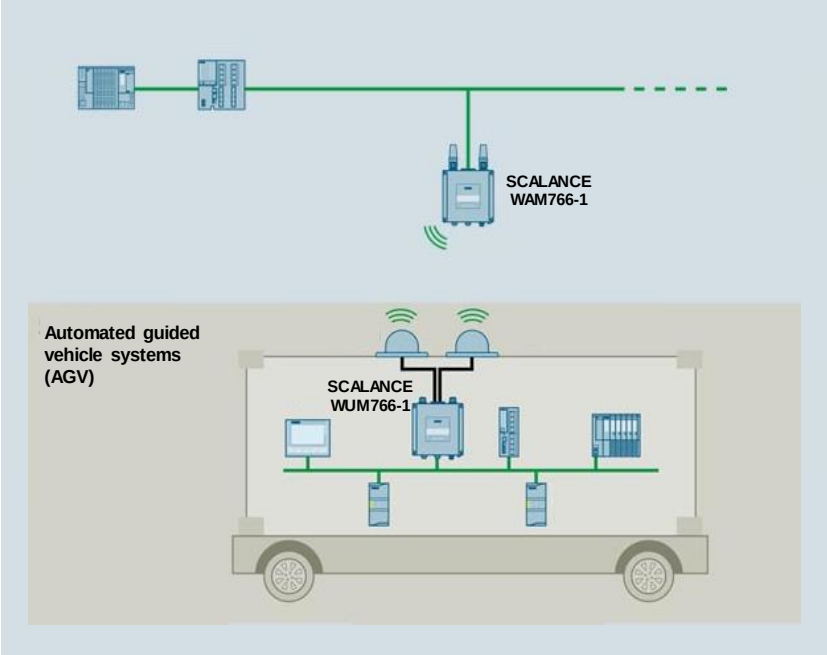
Table 1-1

AGV in non-production hours (depending on concept)	AGV in non-production hours Digital output is turned off (depending on configuration)	AGV in non-production hours Sleep Mode is activated (consumption of the SCALANCE W700)
Typically over 50 Watts	~ 6 Watts	15 mA, max. 0.3 Watts

With this goal in mind, an S7 CPU will either shut off the digital output of the SCALANCE WUM766-1 (Wi-Fi 6 client module) or WAM766-1 (Wi-Fi 6 access point) and enable Sleep Mode.

The following Figure provides an overview of the automation task.

Figure 1-1



Use case

The SCALANCE WxM766-1 device has a digital input/output. As of version V1.1 it also has the Sleep Mode function. By using the "LSNMP" library, you can

- control or query the digital output (DO/1L) and its state via the private MIB tag "snMspsDigitalOutputLevel"
- read out the state of the digital input (DI) via the private MIB tag "snMspsDigitalInputLevel".
- activate the Sleep Mode via the private MIB tag "snMspsSleepModeCommitSettings".

  The device accepts the setting for the duration of the Sleep Mode function via the MIB tag "snMspsSleepModeDuration" and immediately goes to sleep.

Solution approach

1. The "LSNMP_Set" (SNMPv1) block of the "LSNMP" library allows a SIMATIC S7-1200/1500 CPU to control the digital output and Sleep Mode of the SNMP agent SCALANCE W/M as a simple SNMP manager.
2. The "LSNMP_Get" (SNMPv1) block of the "LSNMP" library allows a SIMATIC S7-1200/1500 CPU to read the status of the digital output of the SNMP agent SCALANCE W/M as a simple SNMP manager.

Applies to

This application example is valid for the following SCALANCE W devices:

Table 1-2

SCALANCE W	Switch digital output on/off	Query status of the digital output	Activate Sleep Mode
SCALANCE WUM766-1, V1.1 6GK5766-1GE00-3DA0	x		x
SCALANCE WAM766-1, V1.1 6GK5766-1GE00-7DA0	x		x
SCALANCE WUM763-1, 6GK5763-1AL00-3DA0	x		x
SCALANCE WAM763-1, 6GK5763-1AL00-7DA0	x		x
SCALANCE MUM856-1 6GK5856-2EA00-3DA1	x		x
SCALANCE MUM853-1 6GK5853-2EA00-2DA1	x		x
SCALANCE W748-1 RJ45 6GK5748-1FC00-0AA0	x		-
SCALANCE W788-1 RJ45 6GK5788-1FC00-0AA0	x		-
SCALANCE W788-2 RJ45 6GK5788-2FC00-0AA0	x		-

Note

The SCALANCE WxM766-1 devices of version V1.1 or later support the Sleep Mode function:
SCALANCE W700 IEEE 802.11ax V1.1.0 firmware download

https://support.industry.siemens.com/cs/ww/en/view/109802059

The SCALANCE MUM856-1 device of version V 7.1 or later supports the Sleep Mode function:

Firmware V7.1 for SCALANCE M800 / S615

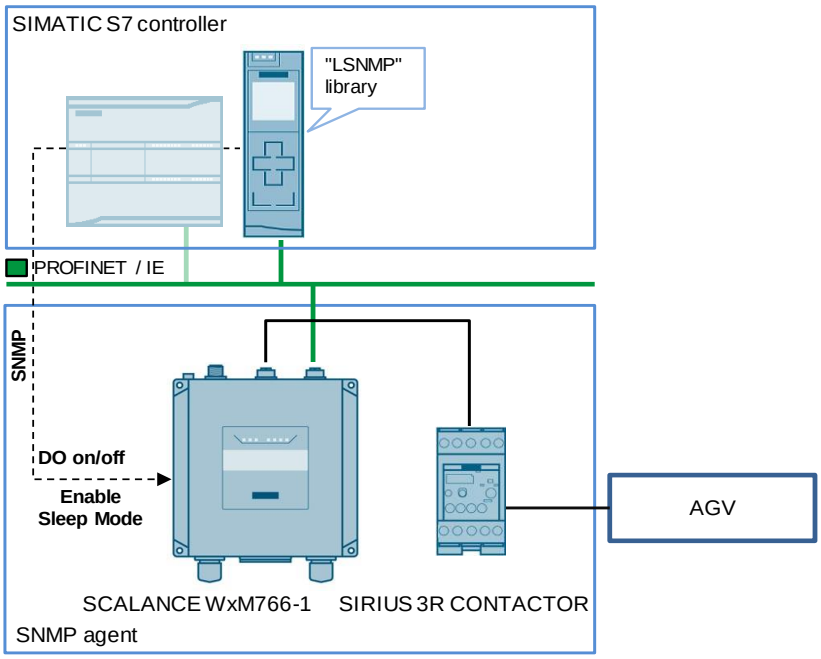
https://support.industry.siemens.com/cs/ww/en/view/109807276

1.2 Principle of operation

Diagram

The following Figure schematically illustrates the most important components of the solution:

Figure 1-2



Note

The communication between the CPU and the SCALANCE WxM766-1 can be implemented either over PROFINET or WLAN. If you are working with WLAN, enable WLAN on the SCALANCE WxM766-1 and establish a connection to the access point (e.g. a SCALANCE WAM766-1), which in turn is connected with the CPU.

An antenna must always be connected to the antenna connector on the SCALANCE WxM766-1 devices once the WLAN interface is switched on. Otherwise, transmission problems may occur.

Implemented functions

The following functions are implemented in the application example:

- Integration of the "LSNMP_Get" and "LSNMP_Set" blocks of the "LSNMP" library into the STEP 7 V17 project.
- Switch the digital output of the IWLAN client with the "LSNMP_Set" library block.
- Query the status of the digital output of the IWLAN client with the "LSNMP_Get" library block.
- Activate the Sleep Mode of the IWLAN client with the "LSNMP_Set" library block.

Advantages of this solution

- Implementation of switching actions on the IWLAN APs/clients with an S7 CPU instead of with large network management systems.
- Reusable STEP 7 code. This can be easily customized for querying/writing other SNMP tags.
- Simple implementation of extended SNMP functions, such as GetNextRequests, GetBulkRequests, and sending Traps, using the blocks of the "LSNMP" library from the Communication Libraries for SIMATIC Controllers and with the instructions described in this application example.

1.3 Components used

The following hardware and software components were used to create this application example:

Table 1-3

Component	Quantity	Item number	Note
SIMATIC PM1507/1AC/DC24V/3A	1	6EP1332-4BA00	Regulated power supply for SIMATIC S7-1500
SIMATIC S7-1500 CPU 1511-1 PN	1	6ES7511-1AK01-0AB0	A different SIMATIC S7-1500 CPU or SIMATIC S7-1200 CPU of version V4.0 or later can also be used.
SCALANCE WUM766-1 V1.1 or later	1	6GK5766-1GE00-3DA0	Wi-Fi 6 client module. A different SCALANCE device can also be used (Table 1-2): • A SCALANCE WAM766-1 V1.1 or later • A SCALANCE WxM763-1 • a SCALANCE MUM856-1 V7.1 or later • a SCALANCE W788-x/W748-1 device of the RJ45 variant that only supports DO.
Industrial Ethernet cable IE TP Cord M12-180/ RJ45-180	1	6XV1878-5TH20	For the communication between the controller and the SCALANCE WUM766-1
Digital input/output cables or Digital input/output M12 plug-in connector	1	6XV1801-2CE50	For connecting to the contactor
	1	6GK1908-0DB10-6AA0	
M12 power plug-in cable	1	6XV1801-6D*	For connecting to the power supply
IWLAN antenna ANT795-6MN (optional for this application example)	1	6GK5795-6MN10-0AA6	An antenna must always be connected to the antenna connector on the SCALANCE WxM766-1 once the WLAN interface is switched on. Otherwise, transmission problems may occur.
SIRIUS 3R CONTACTOR	1	3RT1016-1BB41	For disabling the power supply for the AGV components.
STEP 7 V17 Professional	1	6ES7822-1AA07-0YA5	

Component	Quantity	Item number	Note
Libraries for Communication for SIMATIC Controllers: https://support.industry.siemens.com/cs/ww/en/view/109780503			The "LSNMP_Get" and "LSNMP_Set" blocks in the "LSNMP" library were used for switching/reading the digital output and activating Sleep Mode on the SCALANCE WxM766-1.

Note The SCALANCE W788-x/W748-1 devices of the RJ45 variant do not support the Sleep Mode function. You can still use this application example to control their digital output and query its status.

This application example consists of the following components:

Table 1-4

Component	File name
Project	57249109_DigOut_SleepMode_SNMP_PROJ_V20.zip
Documentation	57249109_DigOut_SleepMode_SNMP_DOC_V20_en.pdf

2 Engineering

2.1 Hardware setup

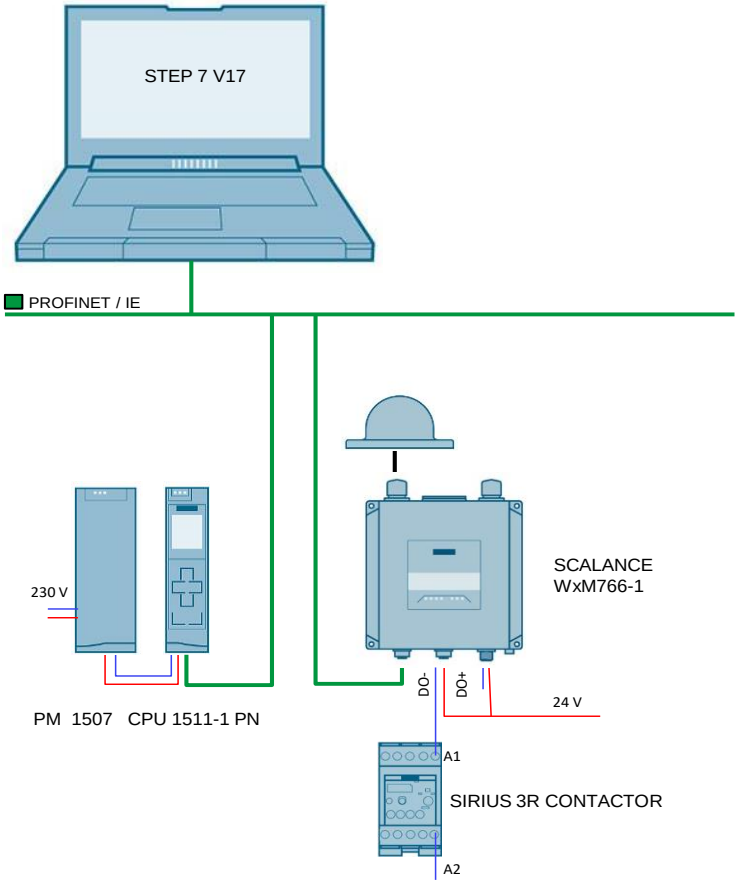
Chapter 1.3 lists the required hardware components.

ATTENTION	**The S7-1500 and SCALANCE WxM766-1 installation guidelines must be observed. Please read the corresponding device manuals.** https://support.industry.siemens.com/cs/ww/en/view/109752841 https://support.industry.siemens.com/cs/ww/en/view/109799201

ATTENTION	**Only switch on the power supply after you have completed and checked the assembly!**

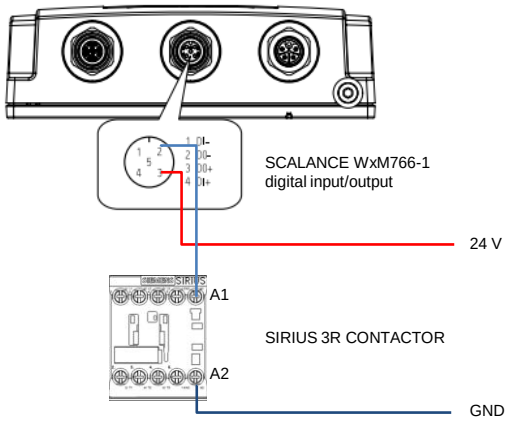
The following graphic shows the hardware setup of the application.

Figure 2-1



1. Plug the individual hardware components from Table 1.3 into a suitable component rack.
2. Connect the PM 1507 to the power supply. Ensure the polarity is correct.

3. Connect the following devices together:
   - PROFINET port of the engineering station with the PROFINET port of the CPU
   - PROFINET port of the SCALANCE WxM766-1 with the second PROFINET port of the CPU
4. Connect the contactor with the digital output of the SCALANCE WxM766-1.



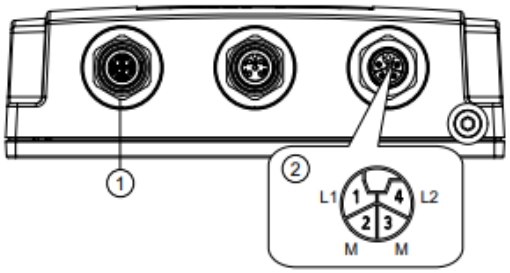
5. Connect the CPU 1511-1 PN and the SCALANCE WxM766-1 to the PM 1507.

Power supply – position and pinout

There are two options for the power supply:

1. Power over Ethernet via the 8-pin M12 Ethernet interface P1 (position 1, Figure 2.3). The power supply cannot be connected redundantly.
2. Direct feed via the 4-pin M12 connection socket (position 2). The power supply can be connected redundantly. The L1/L2 inputs are decoupled. There is no distribution of load. The power supply unit with the higher output voltage supplies the device alone.

Figure 2-2



The four-pin M12 socket has the following pinout:

Table 2-1

Pin	Signal	Function
1	L1+	DC 24 V
2	M	GND
3	M	GND
4	L2+	DC 24 V

Ethernet – position and pinout

The device has an M12 port for connecting to Industrial Ethernet with 10/100/1000 MBit/s: X-coded, 8-pin.

Power over Ethernet can also be supplied through this port.

Figure 2-3

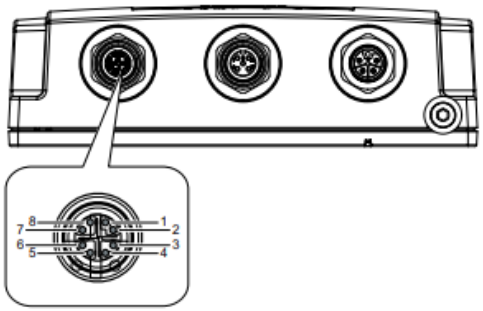


Table 2-2

Pin	Description
1	D0+
2	D0-
3	D1+
4	D1-
5	D3+
6	D3-
7	D2-
8	D2+

Digital input/output – position and pinout

The device has a digital input and output (M12, A-coded).

Figure 2-4

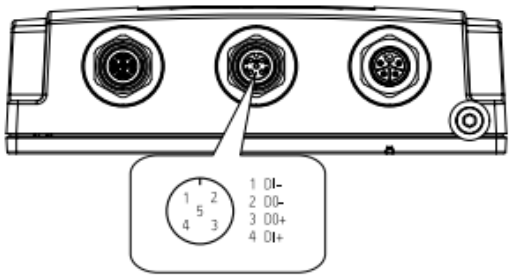


Table 2-3

Pin	Signal	Function
1	DI-	Input Chassis ground
2	D0-	Relay DC 24 V / 0.5 A
3	D0+	Relay DC 24 V / 0.5 A
4	DI+	DC 24 V
5	NC	Not connected

ATTENTION	**Material damage due to voltage that is too high or too low** The voltage of the digital input/output must not exceed DC 30 V and must not fall below DC -30 V; otherwise, the digital input/output will be destroyed.

The following table provides an overview of all IP addresses used in this example. Assignment of static IP addresses is assumed.

Table 2-4

Component	IP address	Description
SIMATIC S7 CPU	192.168.0.1	CPU 1511-1 PN
SCALANCE W device:	192.168.0.2	Wi-Fi 6 client module SCALANCE WUM766-1
Engineering station	192.168.0.10	STEP 7 V17

The subnet mask in all network components is 255.255.255.0.

Note Adjust the IP addresses of the components in your project so that they are on the same subnet.

2.2 Configuration and Project Planning

This section describes the most important steps of the configuration.

2.2.1 Configuration of the SIMATIC S7 CPU

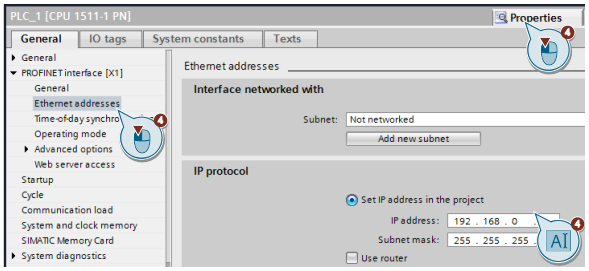
Note The configuration is fully implemented in the example project. This section is for information only.

1. Create a new STEP 7 project or open the existing STEP 7 project.
   Configure the S7 station.

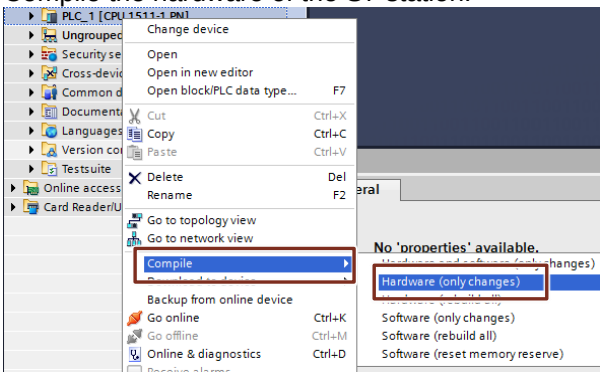
Note A S7-1500 CPU or a S7-1200 CPU from V4.4 of the SIMATIC product range may be used.

2. Go to "Devices & Networks" of the configured S7 station
3. Select the S7 CPU. To do this, click the icon of the CPU in the Network view.

4. In the CPU properties, click "PROFINET interface [X1] > Ethernet addresses" and enter the IP address of the S7 CPU according to Table 2-4.



5. Compile the hardware of the S7 station.



2.2.2 Integration of the "LSNMP" library into the STEP 7 project

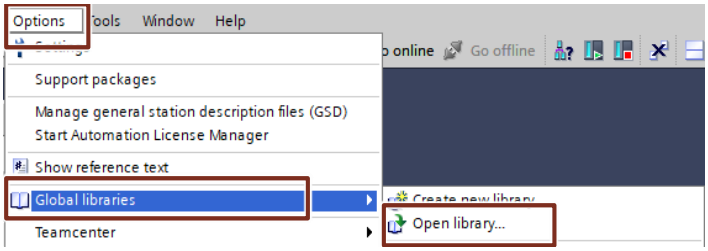
The "LSNMP" library is a part of the "Library_Comm_Controller" library, which is a collection of libraries for the TIA Portal for various communication tasks, functions, and protocols for SIMATIC controllers.

Note The configuration is fully implemented in the project. This section is for information only.

Integration of the "Library_Comm_Controller" library into STEP 7

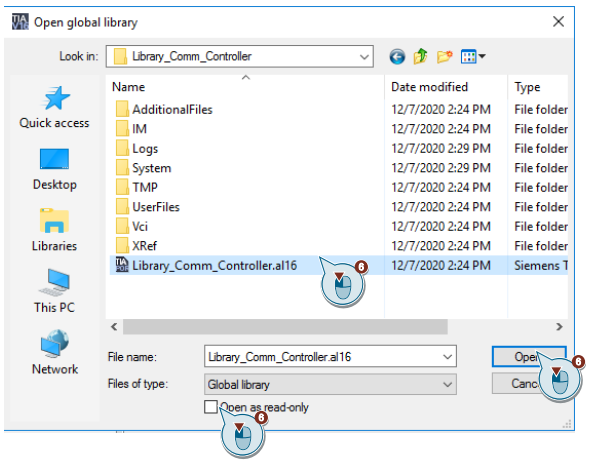
Below are the steps to integrate the "Library_Comm_Controller" library into your STEP 7 project and then use the "LSNMP" library.

1. The library can be found on the HTML page of the Communication Libraries for SIMATIC controllers.
   https://support.industry.siemens.com/cs/ww/en/view/109780503
2. Save the library "109780503_Libraries_Comm_Controller_LIB_V1_x_x.zip" on your hard disk.
3. Unzip the library.
4. Open the already existing STEP 7 project (see chapter 2.2.1).
5. In the toolbar of the "Global libraries" palette, click on "Open global libraries" or in the "Options" menu, click on the command "Global libraries > Open library".

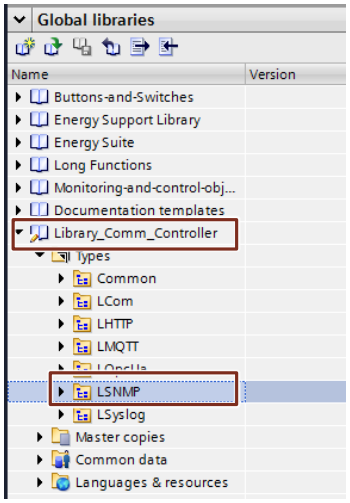


The "Open global library" dialog will open.

6. Select the global library "Library_Comm_Controller".



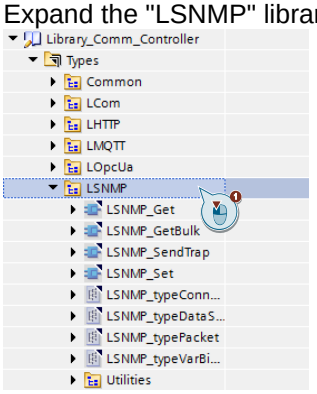
The library "Library_Comm_Controller" will open. You can use the elements of the "LSNMP" library.



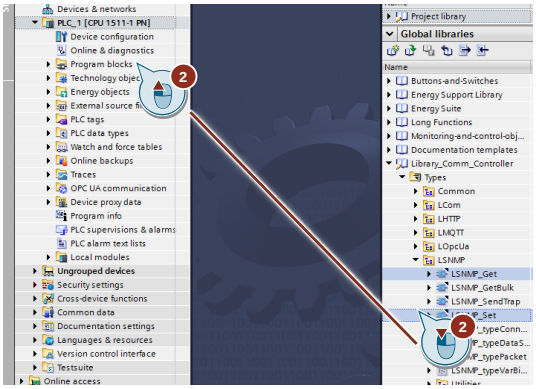
Integration of the library blocks "LSNMP_Get" and "LSNMP-Set" from the "LSNMP" library into your user program

Below are the steps to integrate the blocks "LSNMP_Get" and "LSNMP-Set" of the library "LSNMP" into your STEP 7 project. After that, you will be able to use them.

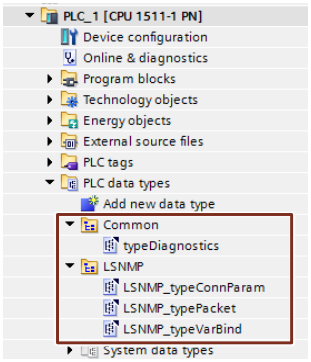
1. Expand the "LSNMP" library.



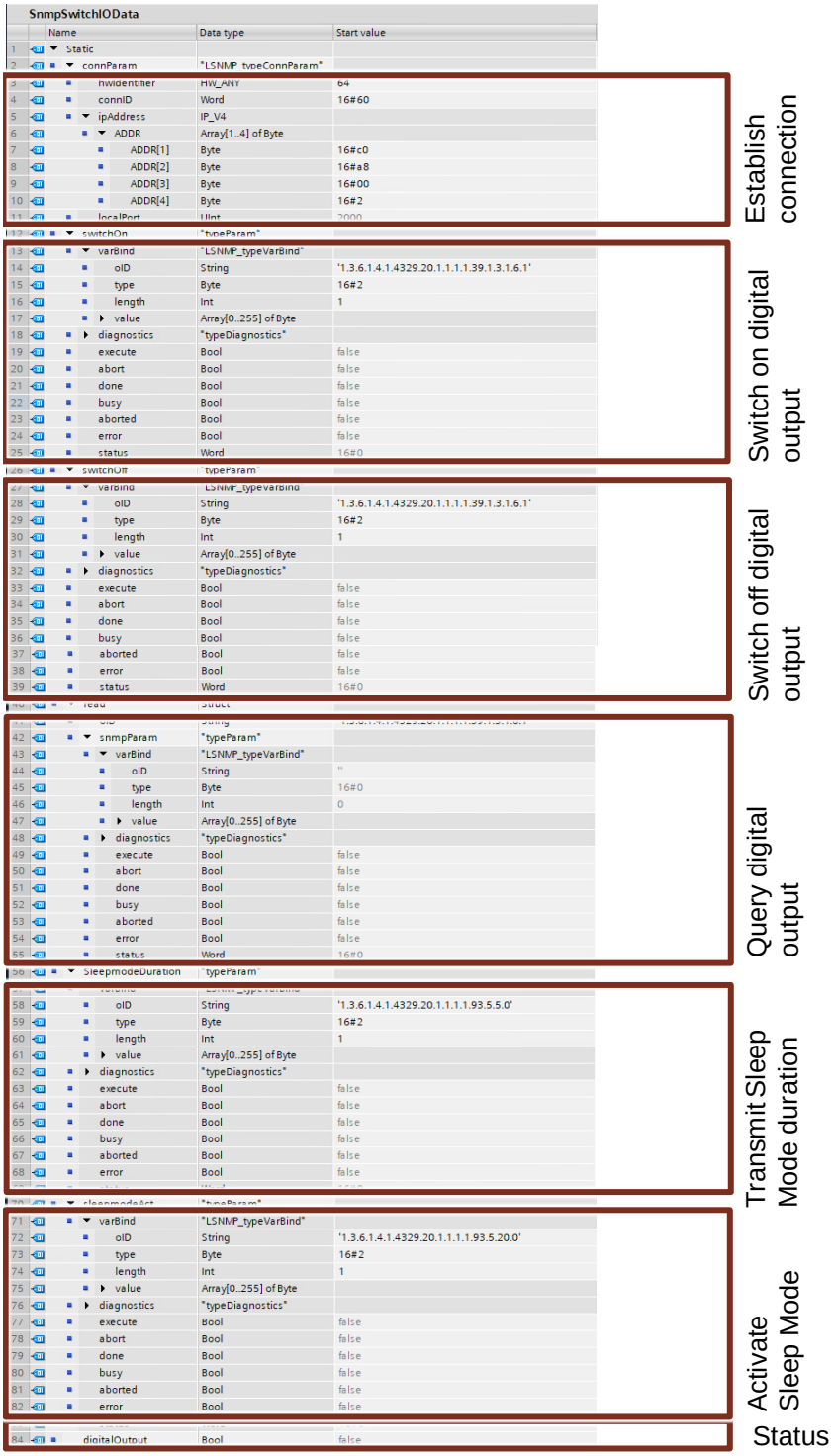
2. Drag & drop the "LSNMP_Get" and "LSNMP_Set" blocks into the "Program blocks" folder of the configured S7 CPU.



3. The PLC data types "typeDiagnostics" "LSNMP_typeConnParam", "LSNMP_typePacket" (not relevant for the user), and "LSNMP_typeVarBind" are automatically copied to the "PLC data types" folder.



4. Create a new global data block with the following tags:
   - the PLC data types "LSNMP_typeConnParam", "LSNMP_typeVarBind", and "typeDiagnostics" for calling the blocks "LSNMP_Set" and "LSNMP_Get" in OB1
   - the input parameters for calling the blocks in OB1
   - the output parameters for calling the blocks in OB1
   - the state of the digital output.

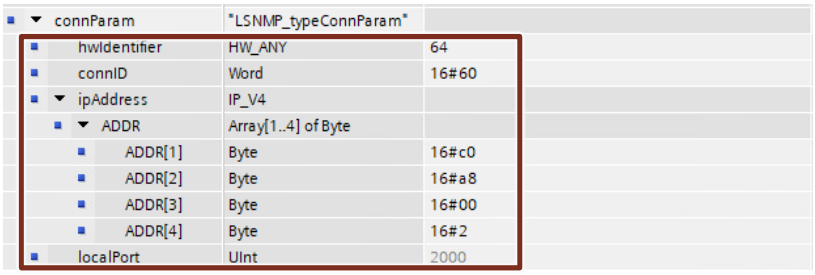


Note

A detailed description about the PLC data types can be found in the description of the library "Library_Comm_Controller" (chapter 6.3.5).

https://support.industry.siemens.com/cs/ww/en/view/109780503

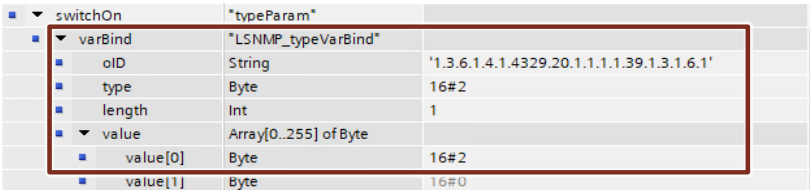
5. Assign values to all parameters required to establish the connection:
   - HW identifier of the Ethernet interface: 64
   - Unique connection ID: 16#60
   - IP address of the SNMP agent: 192.168.0.2
   - local port: 2000



Note

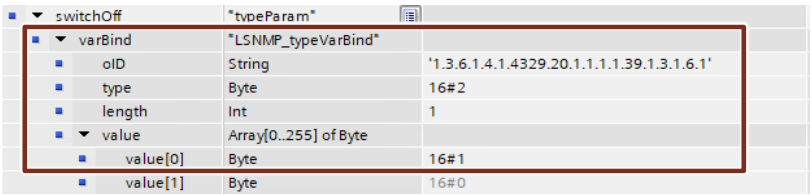
If you want to run multiple blocks of the library or instances of the same block at the same time, the connection parameters "connID" and "localPort" must be unique for each instance.

6. Assign values to all necessary parameters for switching on the digital output:
   - Object identifier for the digital output of the IWLAN client: '1.3.6.1.4.1.4329.20.1.1.1.1.39.1.3.1.6.1'
   - Data type of the tag: 16#2 (integer)
   - Length of the tag: 16#1
   - Value of the tag: 16#2 (switch on digital output).

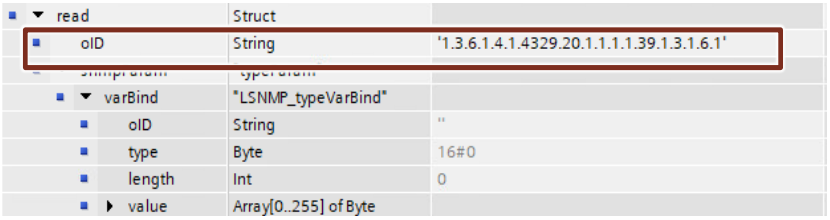


7. Assign values to all necessary parameters for switching off the digital output:
   - Object identifier for the digital output of the IWLAN client: '1.3.6.1.4.1.4329.20.1.1.1.1.39.1.3.1.6.1'
   - Data type of the tag: 16#2 (integer)
   - Length of the tag: 16#1

   Value of the tag: 16#1 (switch off digital output).

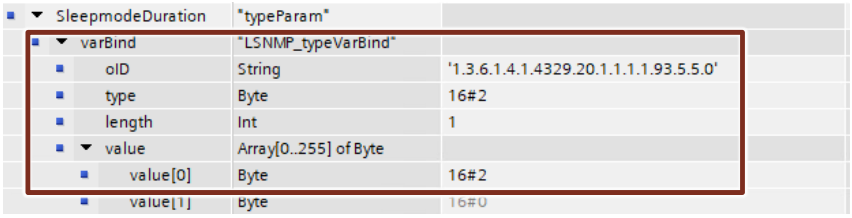


8. Enter the Object identifier for the digital output of the IWLAN client for reading its status:
'1.3.6.1.4.1.4329.20.1.1.1.1.39.1.3.1.6.1'.

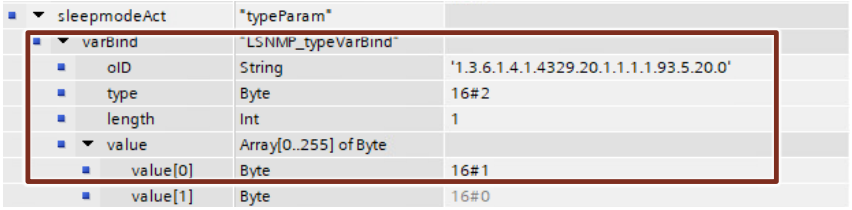


Note During read access ("LSNMP_Get"), the OID, data type, length, and value of the queried tag are automatically determined and entered in "switchReadVarBinding".

9. Assign values to all necessary parameters for transmitting the duration of the Sleep Mode function:
   - Object identifier for the Sleep Mode duration:
   '1.3.6.1.4.1.4329.20.1.1.1.1.93.5.5.0'
   - Data type of the tag: 16#2 (integer)
   - Length of the tag: 16#1
   - Value of the tag: 16#2 (in minutes).



10. Assign values to all necessary parameters for activating the Sleep Mode function:
   - Object identifier for activating Sleep Mode:
   '1.3.6.1.4.1.4329.20.1.1.1.1.93.5.20.0'
   - Data type of the tag: 16#2 (integer)
   - Length of the tag: 16#1
   - Value of the tag: 16#1 (activate Sleep Mode).



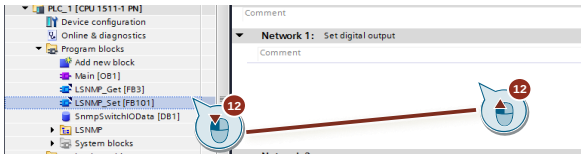
Note

1. If you want to read in another SNMP variable ("LSNMP_Get"), you must enter the corresponding OID of the tag in the "switchReadOID" parameter or in the "oID" input parameter of the "LSNMP_Get" block.
2. If you want to write another SNMP tag ("LSNMP_Set"), you must enter the corresponding OID, data type, length, and value of the tag in the "oID", "type", "length", and "value" parameters of the "LSNMP_typVarBind" PLC data type for the "LSNMP_Set" block.

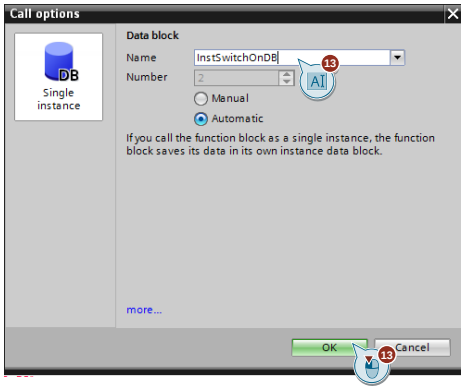
For more SNMP tags for the IWLAN client, see:

https://support.industry.siemens.com/cs/ww/en/view/109802059

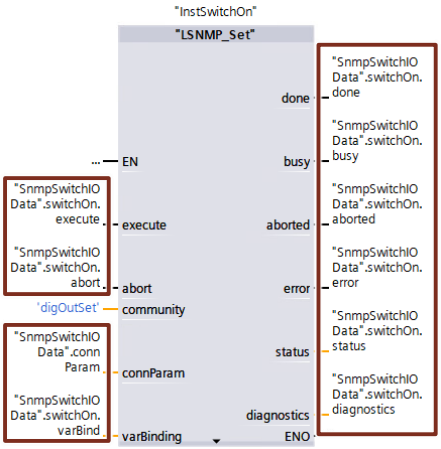
11. Save and compile the newly created data block.
12. Open the organization block OB1 in the folder "Program blocks" on your device and drag & drop the library block "LSNMP_Set" to any network for switching on the digital output.



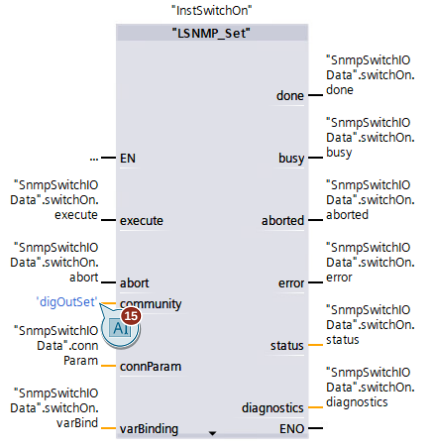
13. Specify the name of the corresponding instance data block. Exit the dialog with "OK".



14. Assign values to all parameters required. Take the values from the newly created data block.



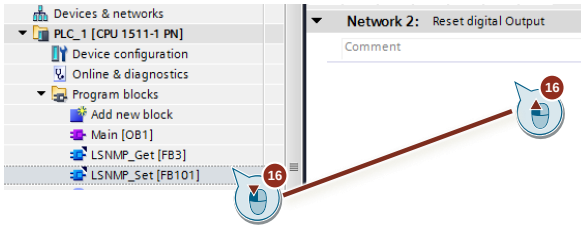
15. Enter the community name for write access in the "community" input parameter.



Note

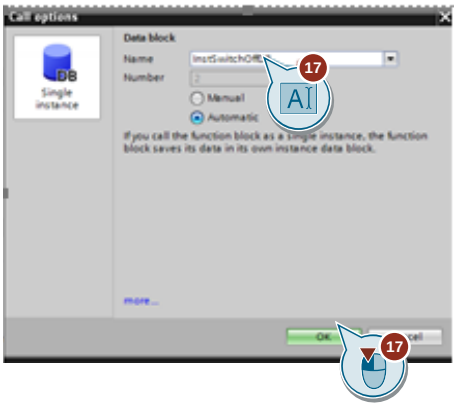
This value must match the value entered in the WBM of the SCALANCE W748-1 (see chapter 2.2.3).

16. Drag & drop the library block "LSNMP_Set" a second time into any network for switching off the digital output.

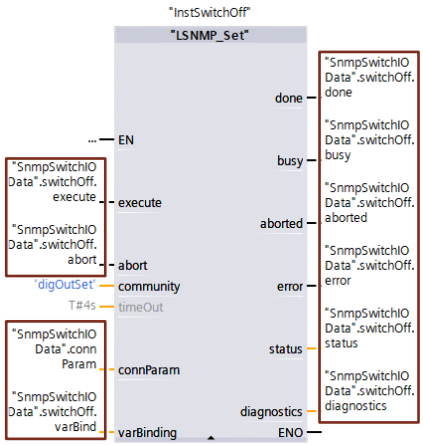


17. Specify the name of the corresponding instance data block. Exit the dialog with "OK".

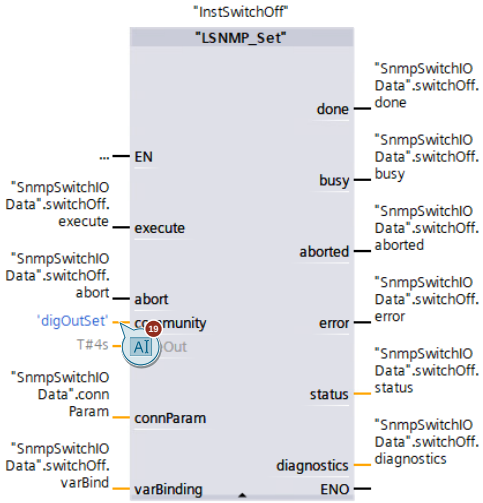
Figure 2-5



18. Assign values to all parameters required. Take the values from the newly created data block.



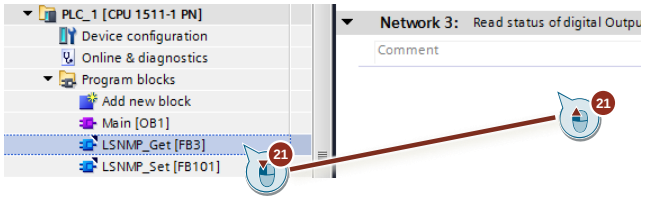
19. Enter the community name for write access in the "community" input parameter.



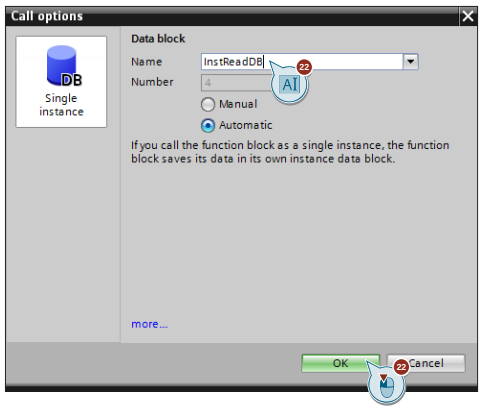
Note

This value must match the value entered in the WBM of the SCALANCE W748-1 (see chapter 2.2.3).

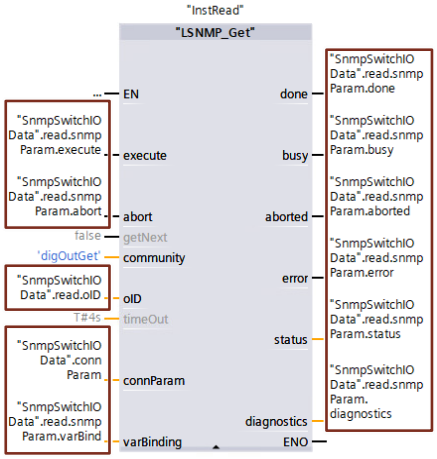
20. Repeat Steps 15-18 for the Sleep Mode duration and for activating the function.
21. Drag & drop the library block "LSNMP_Get" into any network for reading the status of the digital output.



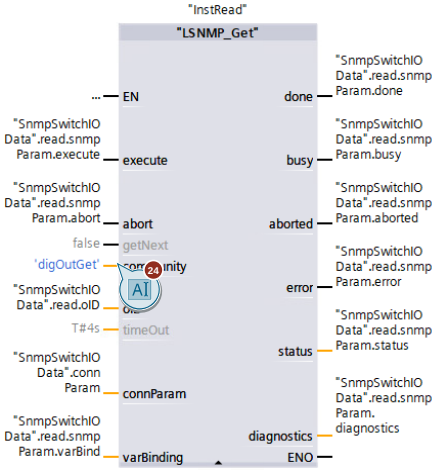
22. Specify the name of the corresponding instance data block. Exit the dialog with "OK".



23. Assign values to all parameters required. Take the values from the newly created data block.



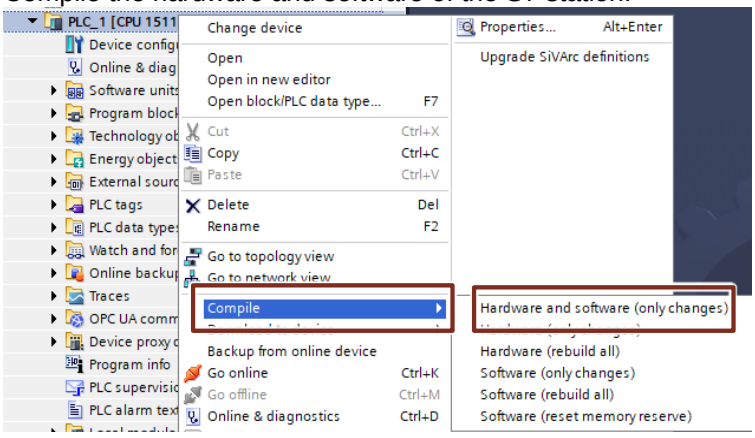
24. Enter the community name for read access in the "community" input parameter.



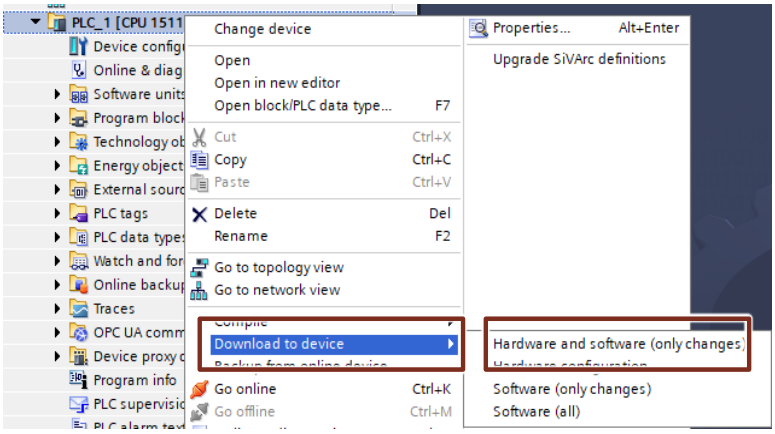
Note

This value must match the value entered in the WBM of the SCALANCE W748-1 (see chapter 2.2.3).

25. Compile the hardware and software of the S7 station.



26. Load the new project into your controller.



Note

Your programming device, the S7 CPU and the SNMP agent must be in the same subnet (see Table 2-4).

2.2.3 Configuring the SCALANCE WxM766-1

To enable the S7 CPU to exchange SNMP data with the IWLAN client, you must make the following settings via the Web Based Management page of the SCALANCE W:

- Enable SNMP access
- Enter community string for read access
- Enter community string for write access

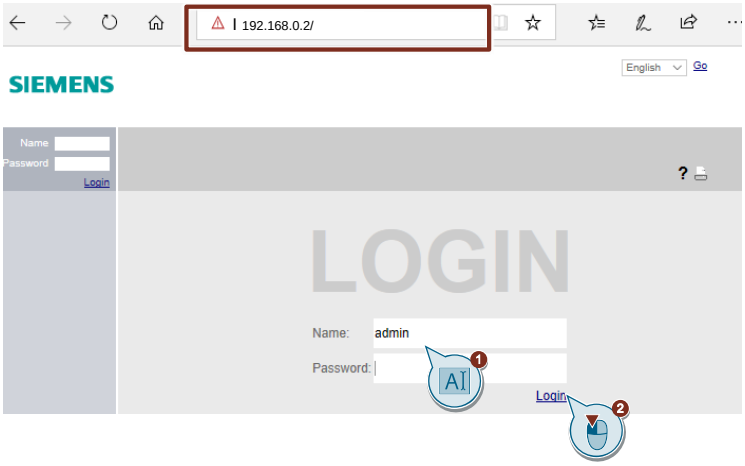
Note General information on configuring the SCALANCE WxM766-1 can be found in the configuration manual for the SCALANCE W700 devices.

https://support.industry.siemens.com/cs/ww/en/view/109797832

The SCALANCE devices are configured via the web-based management:

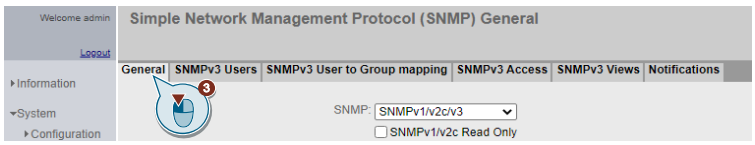
1. Open an internet browser and enter the IP address of the SCALANCE W748-1 RJ45 (192.168.0.2) in the address bar.

2. Log in as an administrator.

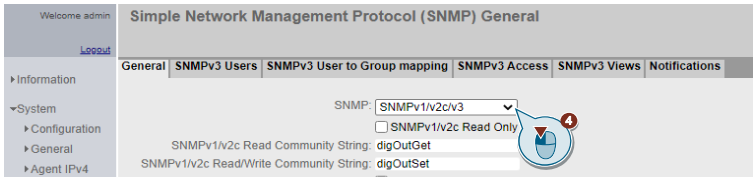


Note When you log in for the first time, you will be prompted to change the password for the "admin" user.

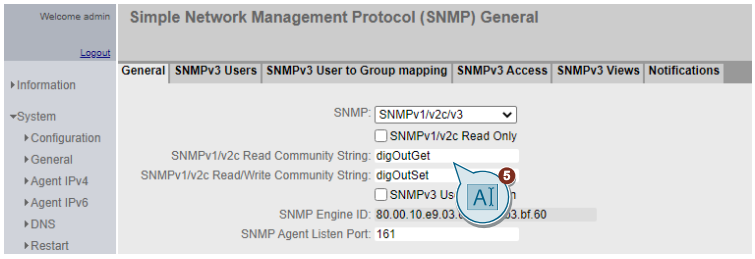
3. Switch to the menu "System > SNMP > General" ("System > SNMP > General").



4. Enable "SNMPv1/v2c/v3".



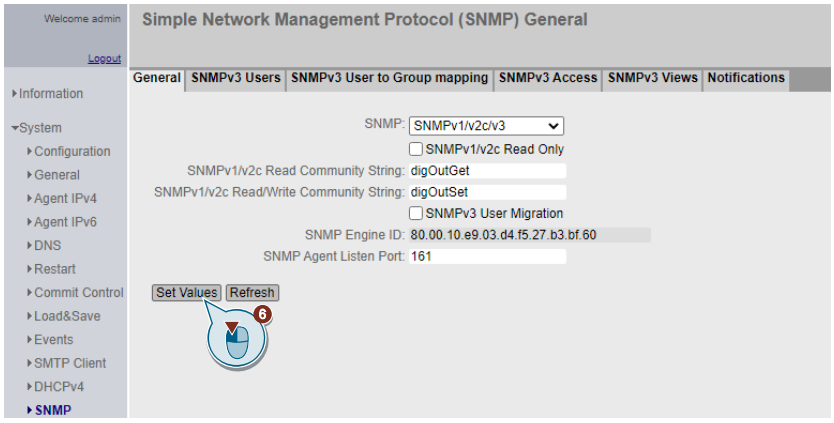
5. Enter the community names for read and write access:
   - For read access: public
   - For write access: private



Note For security reasons, do not use the default values "public" or "private". Change the community strings after the initial installation.

Note These values must match the values entered in the "community" input parameter of the "LSNMP_Get" and "LSNMP_Set" blocks.

6. Apply the change with "Set Values".



2.3 Operation

Introduction

In this section, you will learn how to operate the following functions

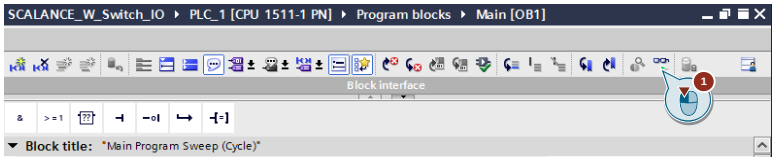
- switch on digital output
- switch off digital output
- read the status of the digital output
- activate Sleep Mode

which are part of the application example.

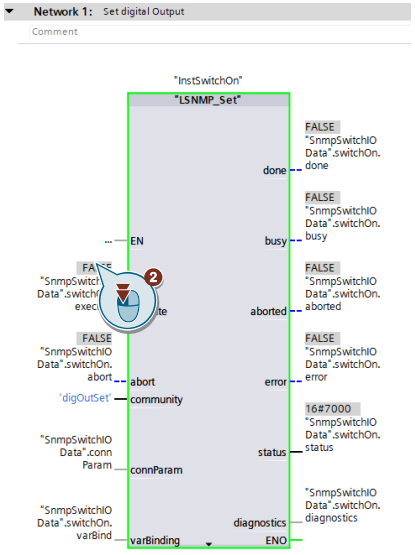
Note The Sleep Mode function is only supported by the SCALANCE WxM766-1 devices with firmware version V1.1 or later.

Procedure

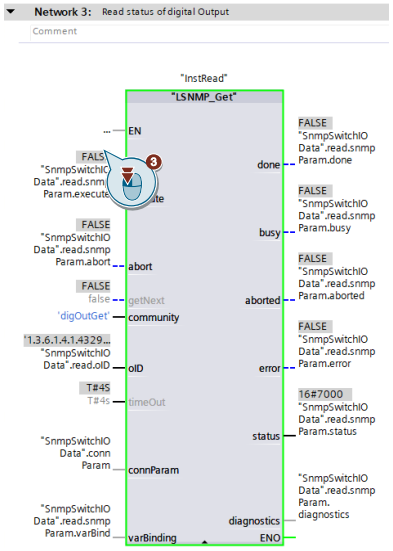
1. Open and activate OB1.



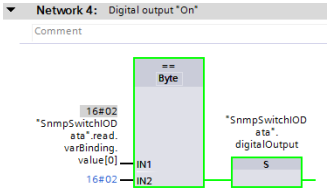
2. Activate the "execute" input of "LSNMP_Set" in network 1 to switch on the digital output.



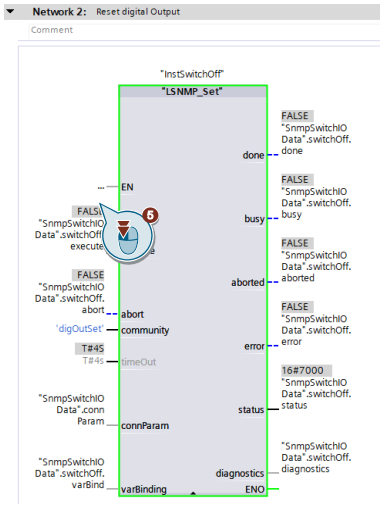
3. Activate the "execute" input of "LSNMP_Get" in network 3 to read the status of the digital output.



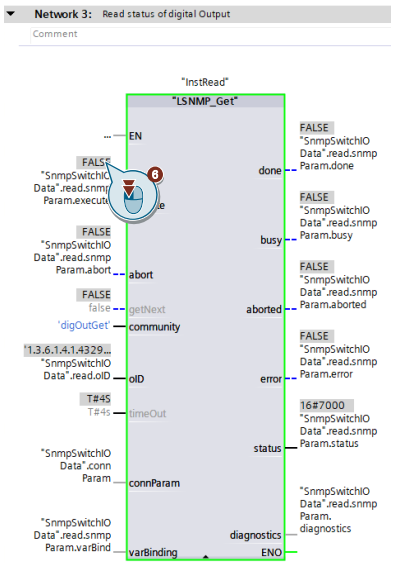
4. In network 4, observe the status of the digital output.



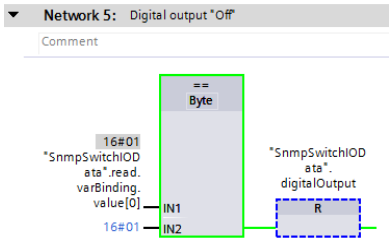
5. Activate the "execute" input of "LSNMP_Set" in network 2 to switch off the digital output.



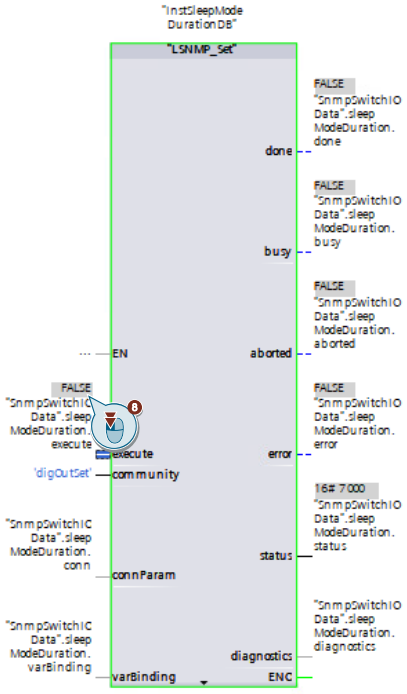
6. Activate the "execute" input of "LSNMP_Get" in network 3 to read the status of the digital output.



7. In network 5, observe the status of the digital output.



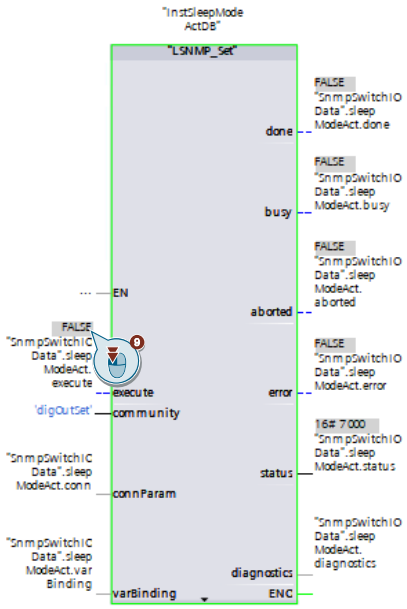
8. Activate the "execute" input of "LSNMP_Set" in network 6 to transmit the Sleep Mode duration to the SCALANCE WxM766-1.



Note

The Sleep Mode function is only supported by the SCALANCE WxM766-1 devices with firmware version V1.1 or later.

9. Activate the "execute" input of "LSNMP_Set" in network 7 to activate Sleep Mode.



Result:

The device accepts the setting for the time duration and immediately switches to sleep mode. Once the time expires, the device returns to the active state.

2.4 Troubleshooting

Information about the status outputs and the diagnostics of the blocks "LSNMP_Get" and "LSNMP_Set" can be found in chapter 6.5 and chapter 9.2 of the "Library_Comm_Controller" library description.

https://support.industry.siemens.com/cs/ww/en/view/109780503

3 Useful information

3.1 Digital input/output and Sleep Mode of the SCALANCE W devices

Introduction

The SCALANCE WxM766-1 and SCALANCE W788-x/W748-x in the RJ45 variant have a digital input/output.

Information on pin assignment can be found in the instruction manuals of the devices:

https://support.industry.siemens.com/cs/ww/en/view/109799201

The SCALANCE WxM766-1 also support the Sleep Mode function with V1.1 or later, which in conjunction with the digital input/output interface allows for targeted shutdown of mobile devices on the network.

Controlling the digital output

You can control the digital output (DO/1L) via CLI and via the private MIB tag snMspsDigitalOutputLevel.

Note When the digital output changes state, an entry is generated in the event log table.

- OID of the private MIB tag snMspsDigitalOutputLevel:
  1.3.6.1.4.1.4329.20.1.1.1.1.39.1.3.1.6.1
- Values of the MIB tag
  - 1: Digital output is open (DO and 1L are interrupted).
  - 2: Digital output is closed (DO and 1L are bridged).

Digital input

You can read out the state of the digital input via the private MIB tag snMspsDigitalInputLevel.

Note When the digital input changes state, an entry is generated in the event log table.

- OID of the private MIB tag snMspsDigitalInputLevel:
  1.3.6.1.4.1.4329.20.1.1.1.1.39.1.2.1.6.1
- Values of the MIB tag
  - 1: Signal 0 at digital input (DI)
  - 2: Signal 1 at digital input (DI)

Sleep Mode activation

You can activate Sleep Mode with the private MIB tag snMspsSleepModeCommitSettings.

- OID of the private MIB tag snMspsSleepModeCommitSettings:
  1.3.6.1.4.1.4329.20.1.1.1.93.5.20.0
- Value of the MIB tag
  1: Sleep Mode activated

The device accepts the setting for the duration of the Sleep Mode function via the MIB tag snMspsSleepModeDuration and immediately goes to sleep.

- OID of the private MIB tag snMspsSleepModeDuration:
  1.3.6.1.4.1.4329.20.1.1.1.93.5.5.0
- Value of the MIB tag
  x: Duration in minutes

Note When Sleep Mode is activated, an entry is generated in the event log table.

3.2 MIB file

Download the MIB of the SCALANCE W via WBM

You can download the MIB of the SCALANCE W in the WBM under "System > Load & Save > HTTP >MIB" via the "Save" button.

For general information on configuring the device with Web Based Management (WBM), refer to the project engineering manual of the SCALANCE W devices:
https://support.industry.siemens.com/cs/ww/en/view/109797832

OID

The Private MIB tags of the SCALANCE W have the following Object Identifier:

iso(1).org(3).dod(6).internet(1).private(4). enterprises(1).siemens(4329) industrialComProducts(20).iComPlatforms(1).simaticNet(1)snMsps(1) snMspsCommon(1).

4 Appendix

4.1 Service and support

Industry Online Support

Do you have any questions or need assistance?

Siemens Industry Online Support offers round the clock access to our entire service and support know-how and portfolio.

The Industry Online Support is the central address for information about our products, solutions and services.

Product information, manuals, downloads, FAQs, application examples and videos – all information is accessible with just a few mouse clicks:

support.industry.siemens.com

Technical Support

The Technical Support of Siemens Industry provides you fast and competent support regarding all technical queries with numerous tailor-made offers – ranging from basic support to individual support contracts.

Please send queries to Technical Support via Web form:

support.industry.siemens.com/cs/my/src

SITRAIN – Digital Industry Academy

We support you with our globally available training courses for industry with practical experience, innovative learning methods and a concept that's tailored to the customer's specific needs.

For more information on our offered trainings and courses, as well as their locations and dates, refer to our web page:

siemens.com/sitrain

Service offer

Our range of services includes the following:

- Plant data services
- Spare parts services
- Repair services
- On-site and maintenance services
- Retrofitting and modernization services
- Service programs and contracts

You can find detailed information on our range of services in the service catalog web page:

support.industry.siemens.com/cs/sc

Industry Online Support app

You will receive optimum support wherever you are with the "Siemens Industry Online Support" app. The app is available for iOS and Android:

support.industry.siemens.com/cs/ww/en/sc/2067

4.2 Industry Mall

The Siemens Industry Mall is the platform on which the entire siemens Industry product portfolio is accessible. From the selection of products to the order and the delivery tracking, the Industry Mall enables the complete purchasing processing – directly and independently of time and location:
mall.industry.siemens.com

4.3 Links and literature

Table 4-1

No.	Subject
\1\	Siemens Industry Online Support https://support.industry.siemens.com
\2\	Link to the article page of the application example https://support.industry.siemens.com/cs/ww/en/view/57249109
\3\	Libraries for Communication for SIMATIC Controllers https://support.industry.siemens.com/cs/ww/en/view/109780503
\4\	SIMATIC S7-1500 CPU 1511-1 PN https://support.industry.siemens.com/cs/ww/en/view/109752841
\5\	SIMATIC NET: Industrial Wireless LAN SCALANCE W780/W740 to IEEE 802.11n Web Based Management https://support.industry.siemens.com/cs/ww/en/view/109759652
\6\	SCALANCE W700 IEEE 802.11ax V1.1.0 firmware download https://support.industry.siemens.com/cs/ww/en/view/109802059
\7\	SIMATIC NET: Industrial Wireless LAN SCALANCE WxM766 https://support.industry.siemens.com/cs/ww/en/view/109799201
\8\	SIMATIC NET: Industrial Wireless LAN SCALANCE WxM763 https://support.industry.siemens.com/cs/ww/en/view/109810558
\9\	SIMATIC NET: Industrial Remote Communication Remote Networks SCALANCE M-800 Web Based Management V7.1 https://support.industry.siemens.com/cs/ww/en/view/109751635
\10\	Firmware V7.1 for SCALANCE M800 / S615 https://support.industry.siemens.com/cs/ww/en/view/109807276

4.4 Change documentation

Table 4-2

Version	Date	Change
V1.0	01/2021	First version
V1.1.1	10/2021	• Small correction to STEP 7 V16 project • Project added for TIA Portal V17
V2.0	12/2021	• Updated for the SCALANCE WxM766-1 devices • Added Sleep Mode function