Smart People. Expert Solutions.

SIEMENS OPEN LIBRARY

2 – Initial Setup

SEPTEMBER 2, 2022

Contents

1. Purpose 3
2. Intended Use 3
3. Revision History 3
4. Open Library License 3
5. System and Clock Memory Bytes 4
6. Retrieve Open Library 5
7. Add Tag Table 7

1. Purpose

The purpose of this document is to provide a guide for the initial use of the Siemens Open Library. The steps contained in this document should be done before attempting to use any library object, or the compilation of the project will result in errors.

2. Intended Use

This document is intended to be the starting point by anyone utilizing the Open Library for PLC and HMI Development.

3. Revision History

Version	Date	Author	Comments
1.0	2016-05-23	DMC	Initial Release
1.1	2016-06-20	DMC	No Changes
1.2	2016-08-23	DMC	No Changes
1.3	2016-10-11	DMC	No Changes
2.0	2017-11-3	DMC	No Changes
3.0	2018-12-05	DMC	No Changes
4.0	2019-02-15	DMC	No Changes
5.0	2022-09-02	DMC	Updated for V17 release

4. Open Library License

Copyright (c) 2019 DMC, Inc.

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

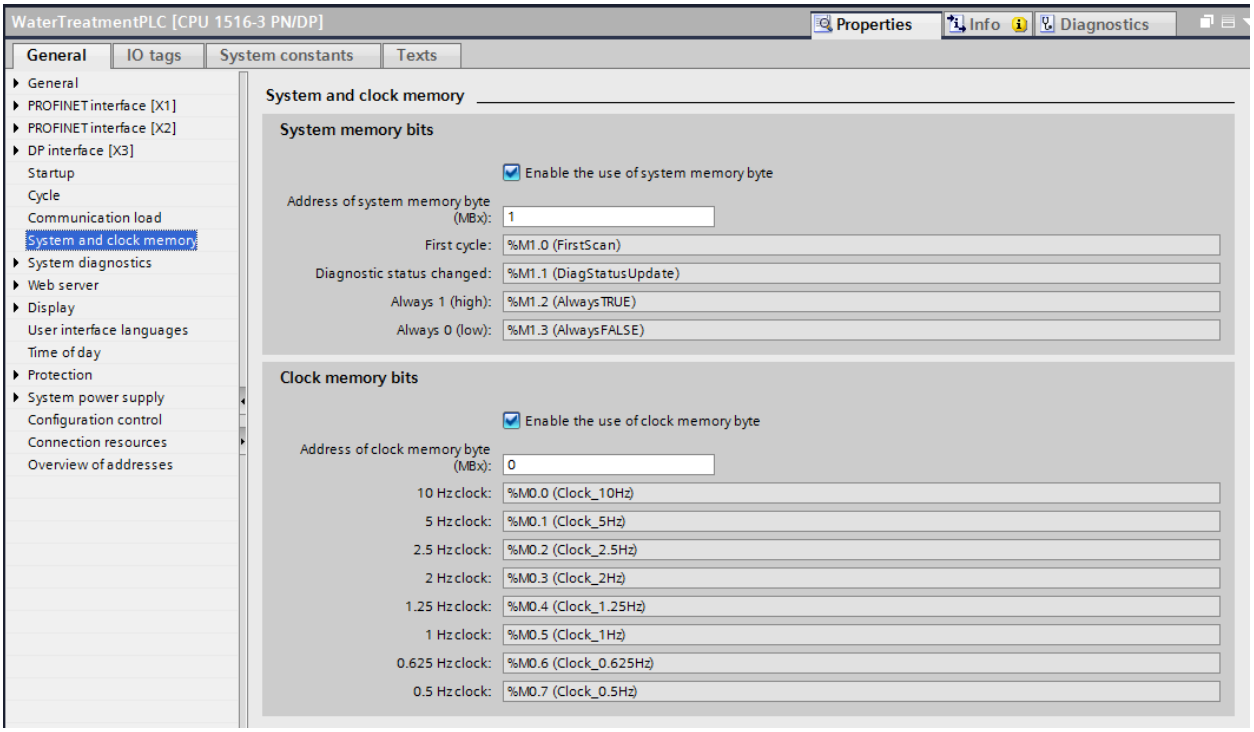
The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

5. System and Clock Memory Bytes

The Open Library Blocks utilize the System and Clock memory bits, which will need to be enabled for the library objects to compile. This will need to be done for each processor that uses the Siemens Open Library. To enable the System and Clock Memory Bytes, complete the following steps.

1. Open the Hardware configuration and select the processor that will be using the library objects.
2. Right click and select 'Properties'
3. In the Properties, find the 'System and clock memory' settings and click the Enable check box for both the 'System memory bits' and the 'Clock memory bits'
4. The addresses can be changed, as all items are accessed symbolically.



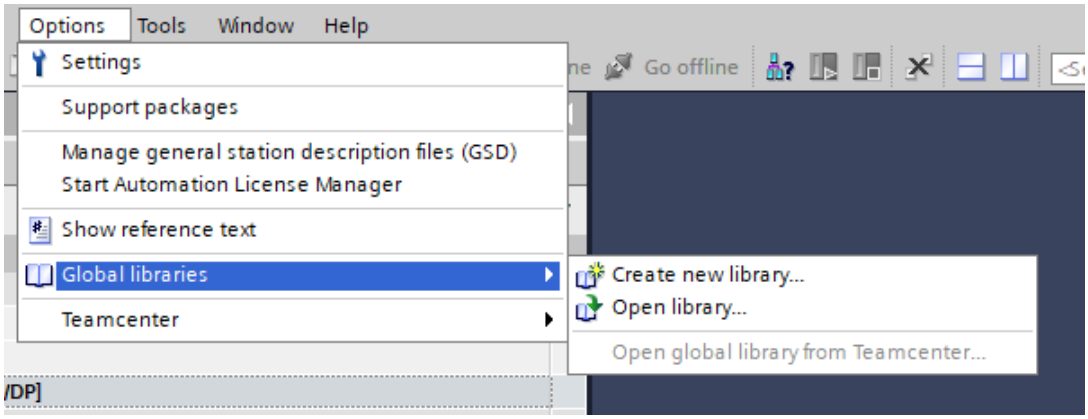
6. Retrieve Open Library

The provided library is an archive file and needs to be retrieved and opened. This only needs to be done once for any computer being used for development. Complete the following steps to open the library:

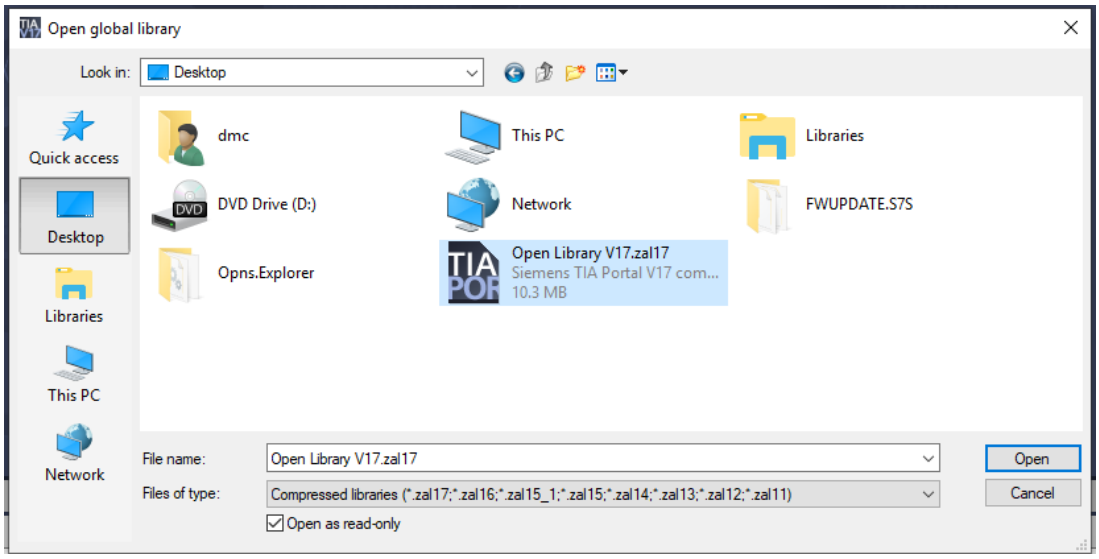
1. Select the library you wish to use. Each .zal17 file contains different library components according to different Siemens products that may be installed on the user's PC.

File Name	S7-1200/S7-1500 PLC Blocks and UDT's	WinCC Comfort/Advanced Faceplates and SiVArc Components	WinCC Professional Faceplates and SiVArc Components	WinCC Unified Faceplates
Open Library V17 PLC.zal17	✓			
Open Library V17 Comfort.zal17	✓	✓		
Open Library V17 Professional.zal17	✓	✓	✓	
Open Library V17 Unified.zal17	✓	✓		✓
Open Library V17.zal17	✓	✓	✓	✓

2. In the file menu of TIA Portal, select Options -> Global libraries ->Open library…



3. Use 'Compressed libraries' as the file type and select the library you wish to use.

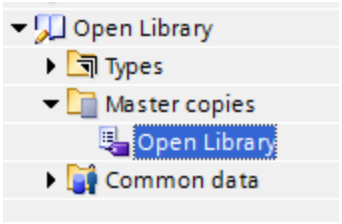


4. Select a place on the development machine to store the library. This will be the place any changes made will also be saved.
5. By default, the Open Library will open as read only. If edits need to be made, close the library, open it again, and deselect the 'Open as read-only' checkbox.

7. Add Tag Table

The Open Library uses many constants to provide meaningful names to values that are regularly used. The library will not compile without the tag table added into the project. To add the tag table, complete the following steps:

1. Inside the 'Master copies' of the Open Library, navigate to the 'Open Library' tag table.



2. Drag the 'Open Library' tag table from the Master copies into the 'PLC tags' of the controller using the Open Library.

