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Project tree

Devices **Plant objects**

Project tree

Devices & networks

- IOT2050_S7_CompleteProject
 - Add new device
 - Devices & networks
 - PLC_1 [CPU 1512SP F-1 PN]
 - Ungrouped devices
 - Security settings
 - Cross-device functions
 - Common data
 - Documentation settings
 - Languages & resources
 - Version control interface
 - Testsuite
- Online access
- Card Reader/USB memory

Topology view **Network view** **Device view**

Hardware catalog

Online tools

Device data

Tasks

Libraries

Add-ins

PLC_1

Server module_1

Rack_0

Properties **Info** **Diagnostics**

General **Cross-references** **Compile** **Test results** **Generate**

Show all messages

	Message	Go to	?	Date	Time
!	Hardware configuration was loaded successfully.			3/13/2021	1:32:02 PM
!	Connection configuration was downloaded successfully.			3/13/2021	1:32:02 PM
!	Certificate configuration was loaded successfully.			3/13/2021	1:32:02 PM
!	Routing configuration was loaded successfully.			3/13/2021	1:32:02 PM
!	PLC_1 started.			3/13/2021	1:32:07 PM
!	'S7_Data' was loaded successfully.			3/13/2021	1:32:02 PM
!	'motorControl_DB' was loaded successfully.			3/13/2021	1:32:02 PM
!	'motorControl' was loaded successfully.			3/13/2021	1:32:02 PM
!	'LGF_SinusCI' was loaded successfully.			3/13/2021	1:32:02 PM
!	'LGF_RectangleCI' was loaded successfully.			3/13/2021	1:32:02 PM
!	'LGF_RandomInt' was loaded successfully.			3/13/2021	1:32:02 PM
!	'Main' was loaded successfully.			3/13/2021	1:32:02 PM
!	'Cyclic interrupt' was loaded successfully.			3/13/2021	1:32:02 PM
!	'Default tag table' was loaded successfully.			3/13/2021	1:32:02 PM
!	Loading completed (errors: 0; warnings: 0).			3/13/2021	1:32:08 PM

Reference projects

Details view

Portal view **Overview** **PLC_1**

Top **Loading completed (errors: 0; warning...)**

VI6 Siemens - D:\Documents\Automation\IOT2050_S7_CompleteProject\IOT2050_S7_CompleteProject

Project Edit View Insert Online Options Tools Window Help

Save project Go online Go offline Search in project

Totally Integrated Automation PORTAL

Project tree

Devices Plant objects

IOT2050_S7_CompleteProject

- Add new device
- Devices & networks
- PLC_1 [CPU 1512SP F-1 PN]
- Ungrouped devices
- Security settings
- Cross-device functions
- Common data
- Documentation settings
- Languages & resources
- Version control interface
- Testsuite
- Online access
- Card Reader/USB memory

Topology view Network view Device view

Hardware catalog Online tools Device data Tasks Libraries Add-ins

PLC_1 [CPU 1512SP F-1 PN]

Rack_0

Server module_1

Properties Info Diagnostics

General IO tags System constants Texts

Communication load System and clock me... SIMATIC Memory Card

System diagnostics PLC alarms

Web server DNS configuration Multilingual support

Time of day Protection & Security

OPC UA Configuration control

Connection resources Overview of addresses

Runtime licenses

- OPC UA
- ProDiag
- EnergiSuite

Connection mechanisms

Permit access with PUT/GET communication from remote partner

Certificate manager

Global security settings

The global security settings for the certificate manager are not enabled.
Only limited functionality is available.

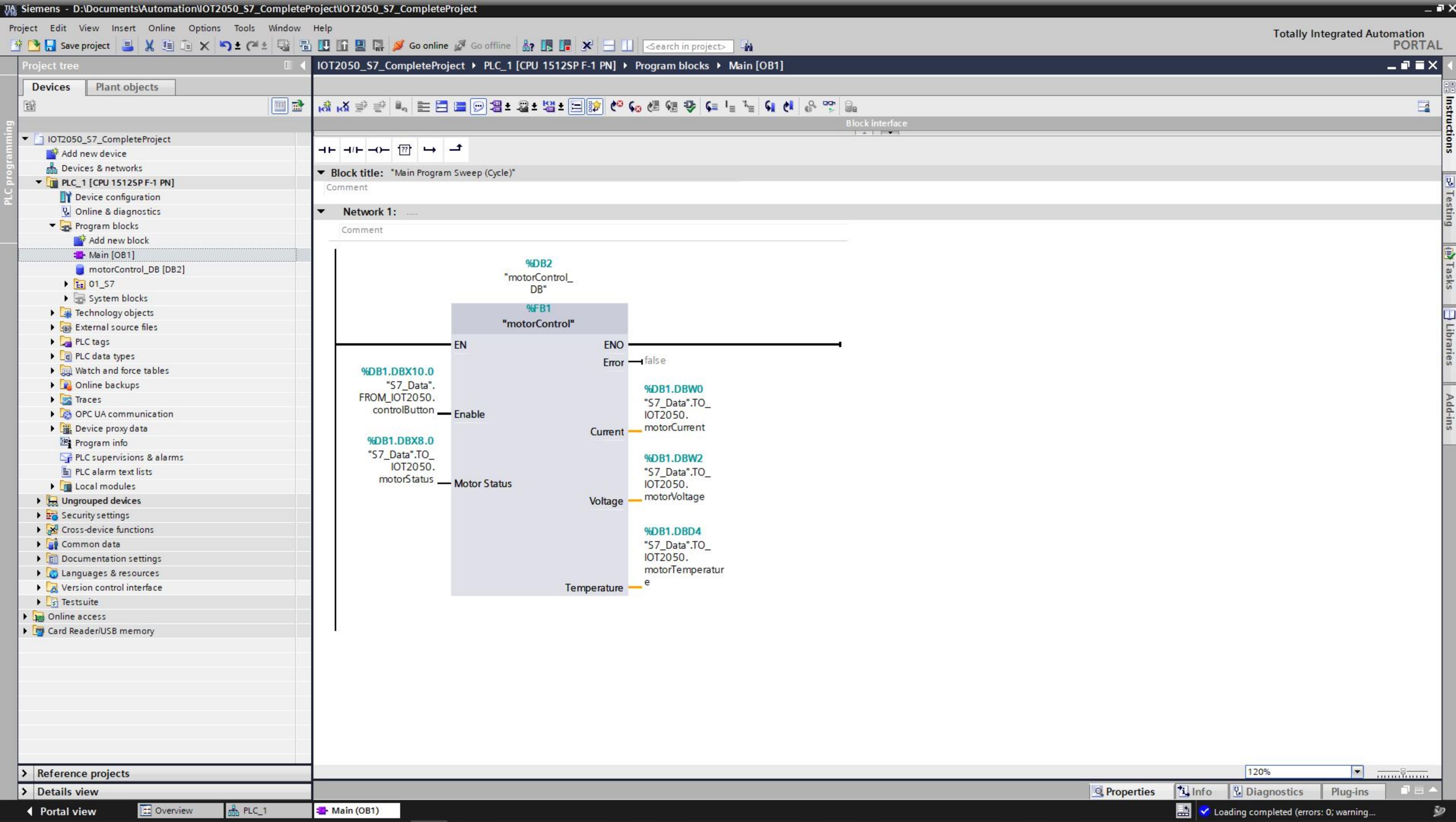
Use global security settings for certificate manager

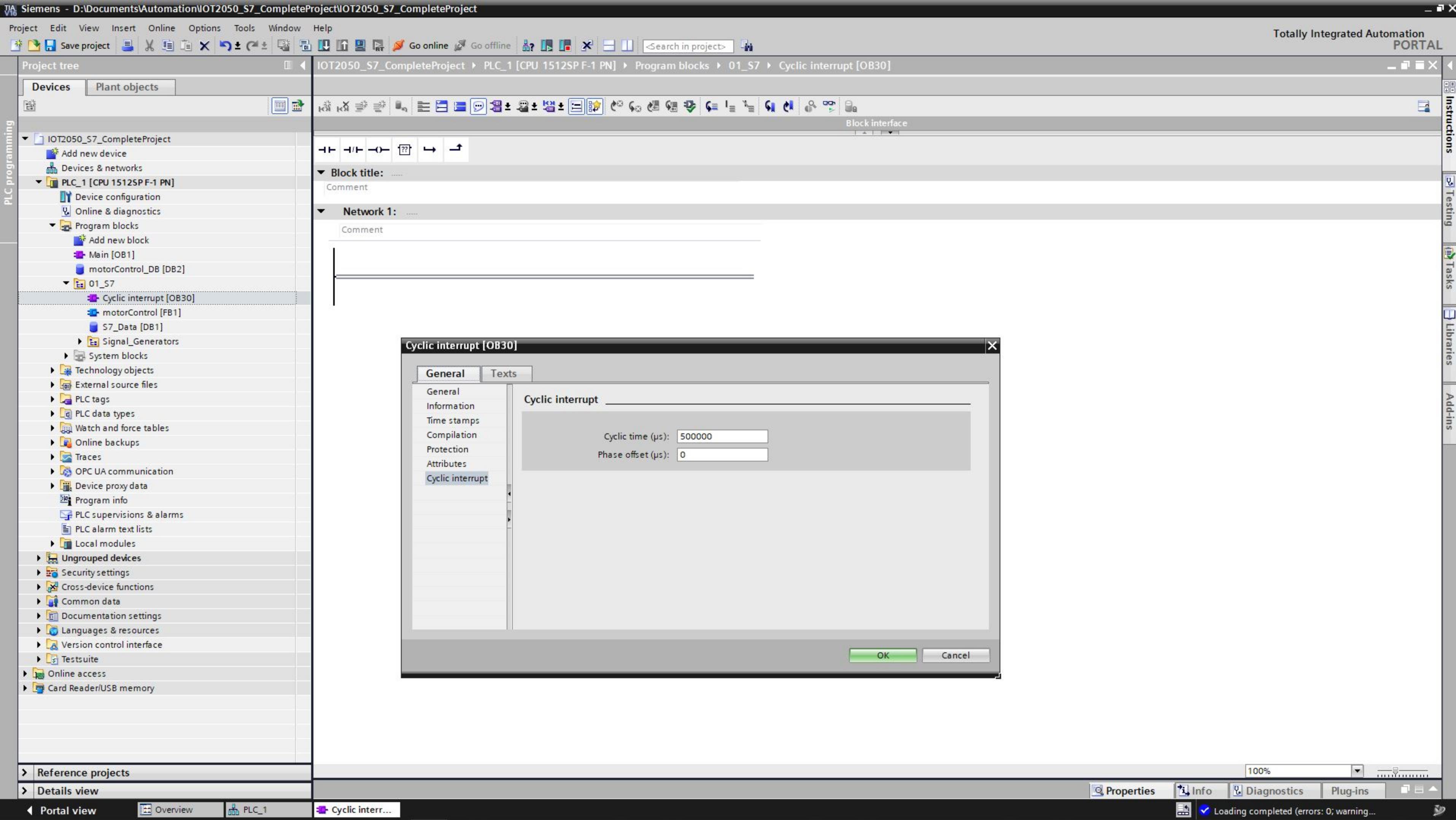
Device certificates

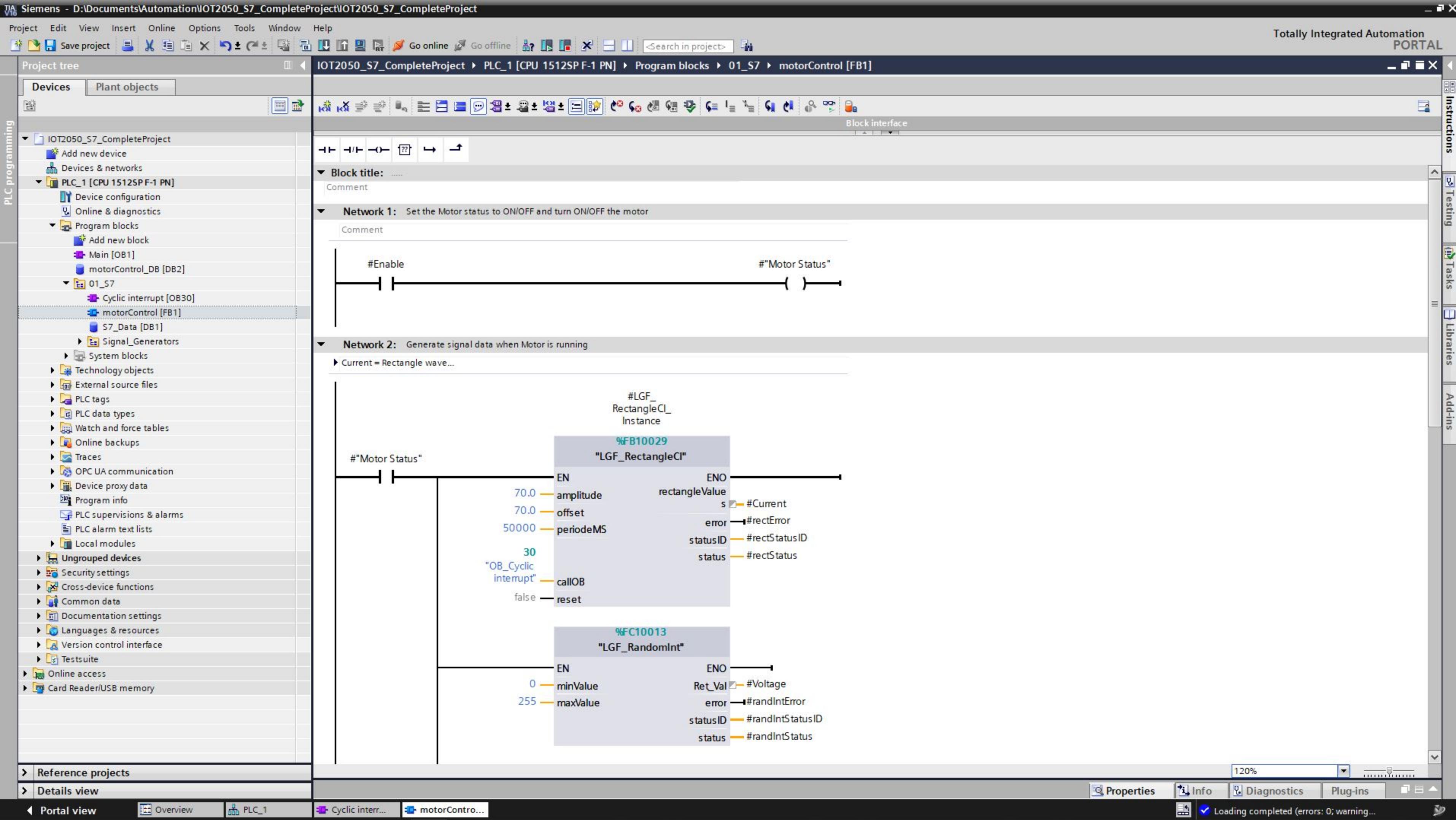
Reference projects Details view

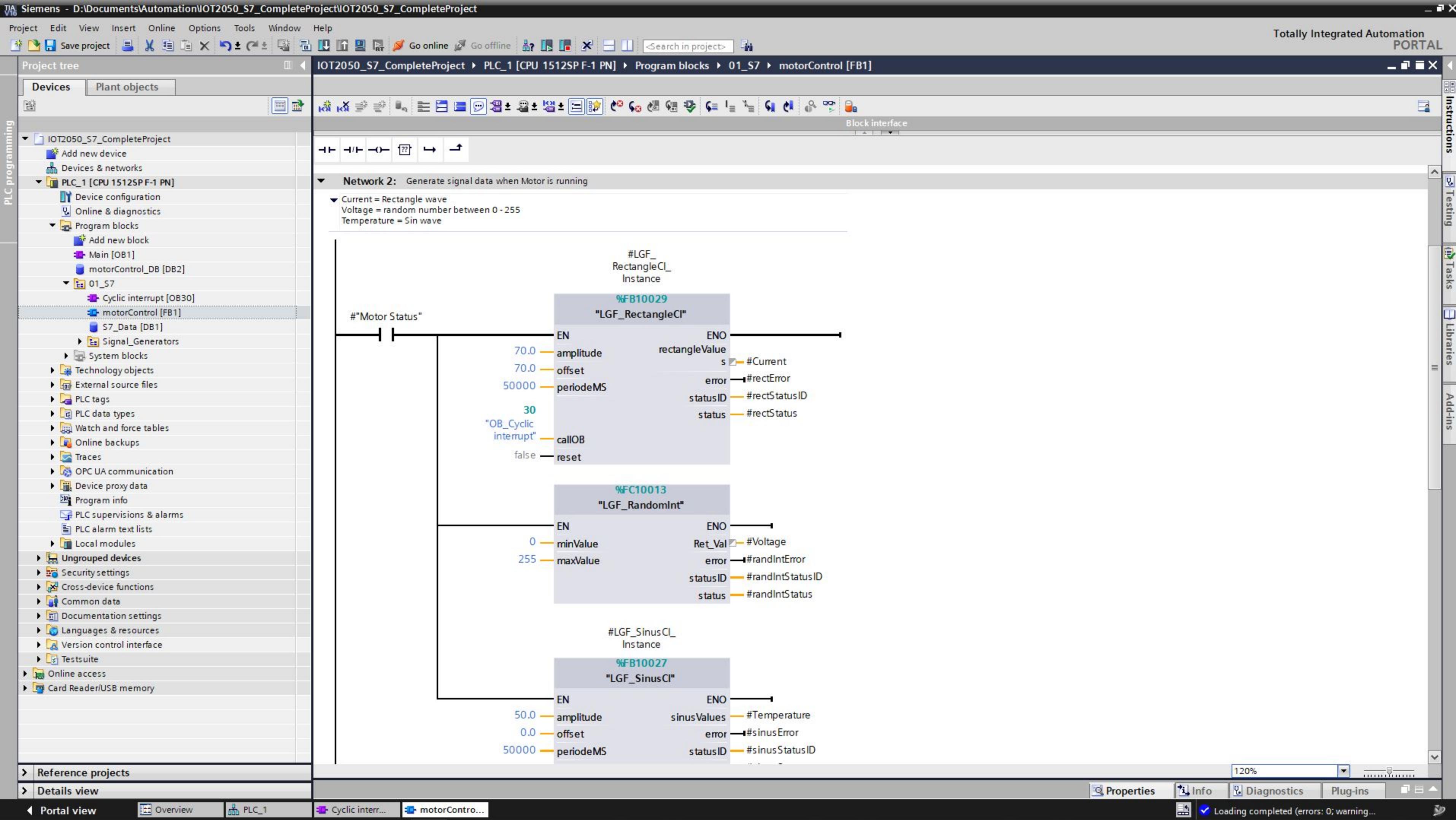
Portal view Overview PLC_1

Loading completed (errors: 0; warning...)









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Project Edit View Insert Online Options Tools Window Help

Save project Go online Go offline Search in project

Totally Integrated Automation PORTAL

Project tree

Devices Plant objects

IOT2050_S7_CompleteProject > PLC_1 [CPU 1512SP F-1 PN] > Program blocks > 01_S7 > motorControl [FB1]

Block interface

#LGF_SinusCI_Instance
%FB10027
"LGF_SinusCI"
EN ENO
50.0 amplitude sinusValues #Temperature
0.0 offset error #sinusError
50000 periodeMS statusID #sinusStatusID
30 "OB_Cyclic interrupt" callOB
false reset

Network 3: Set all Parameters to 0 when Motor is not running

Comment

#Motor Status

MOVE
EN ENO
0 IN OUT1 #Current

MOVE
EN ENO
0 IN OUT1 #Voltage

MOVE
EN ENO
0.0 IN OUT1 #Temperature

Network 4: Trigger Error flag if any of the Signal Generators give an error

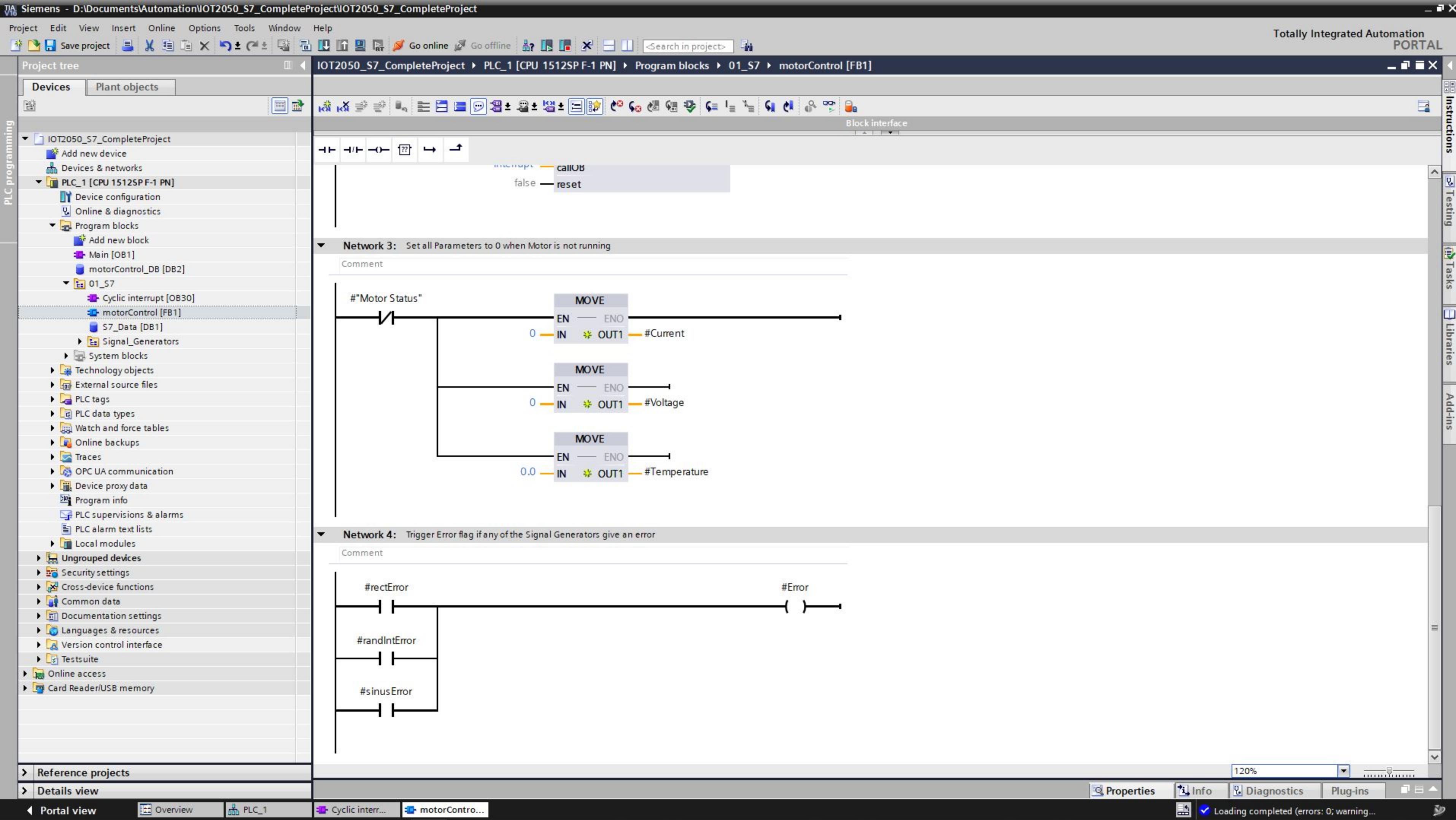
Comment

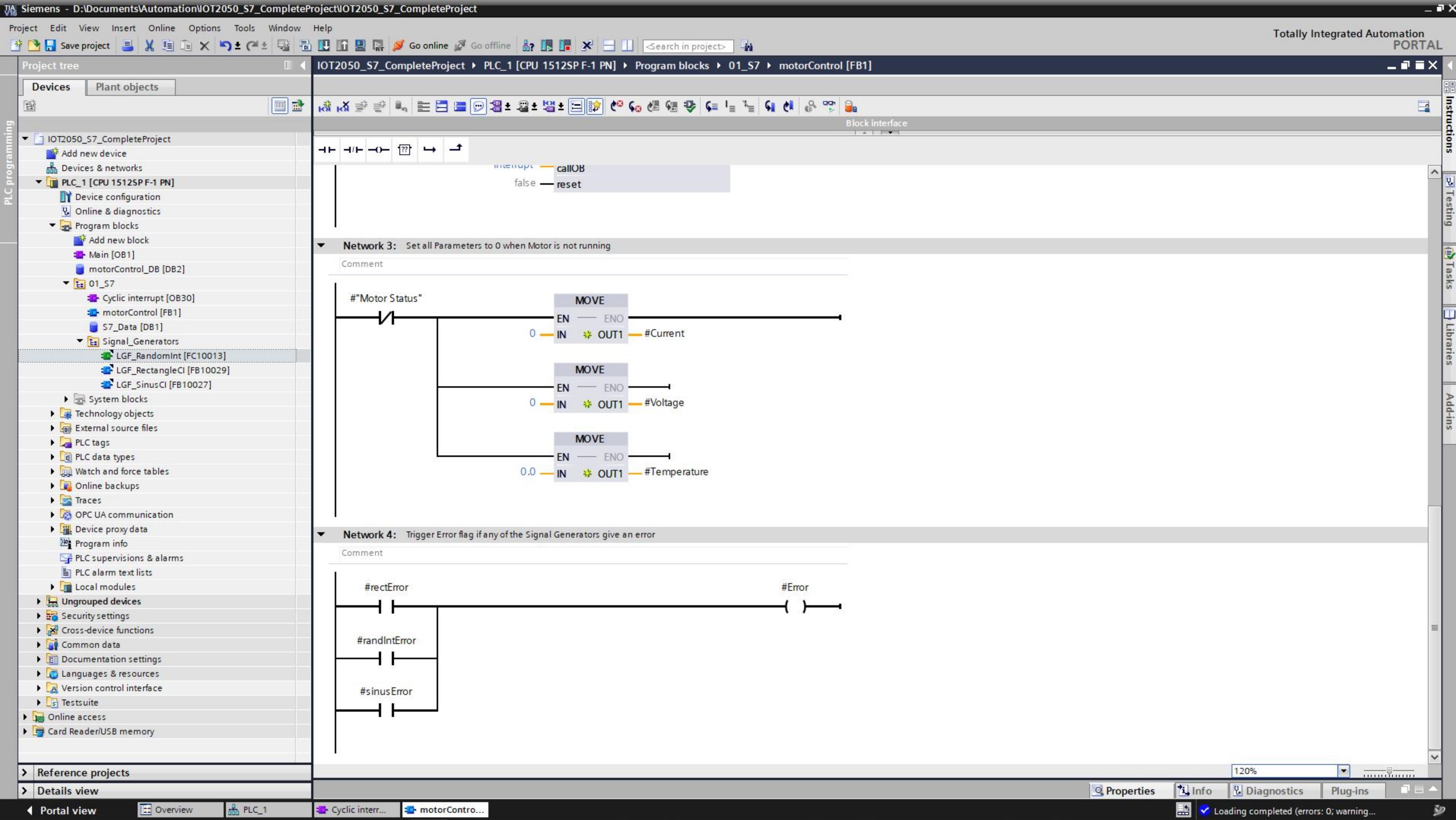
Reference projects

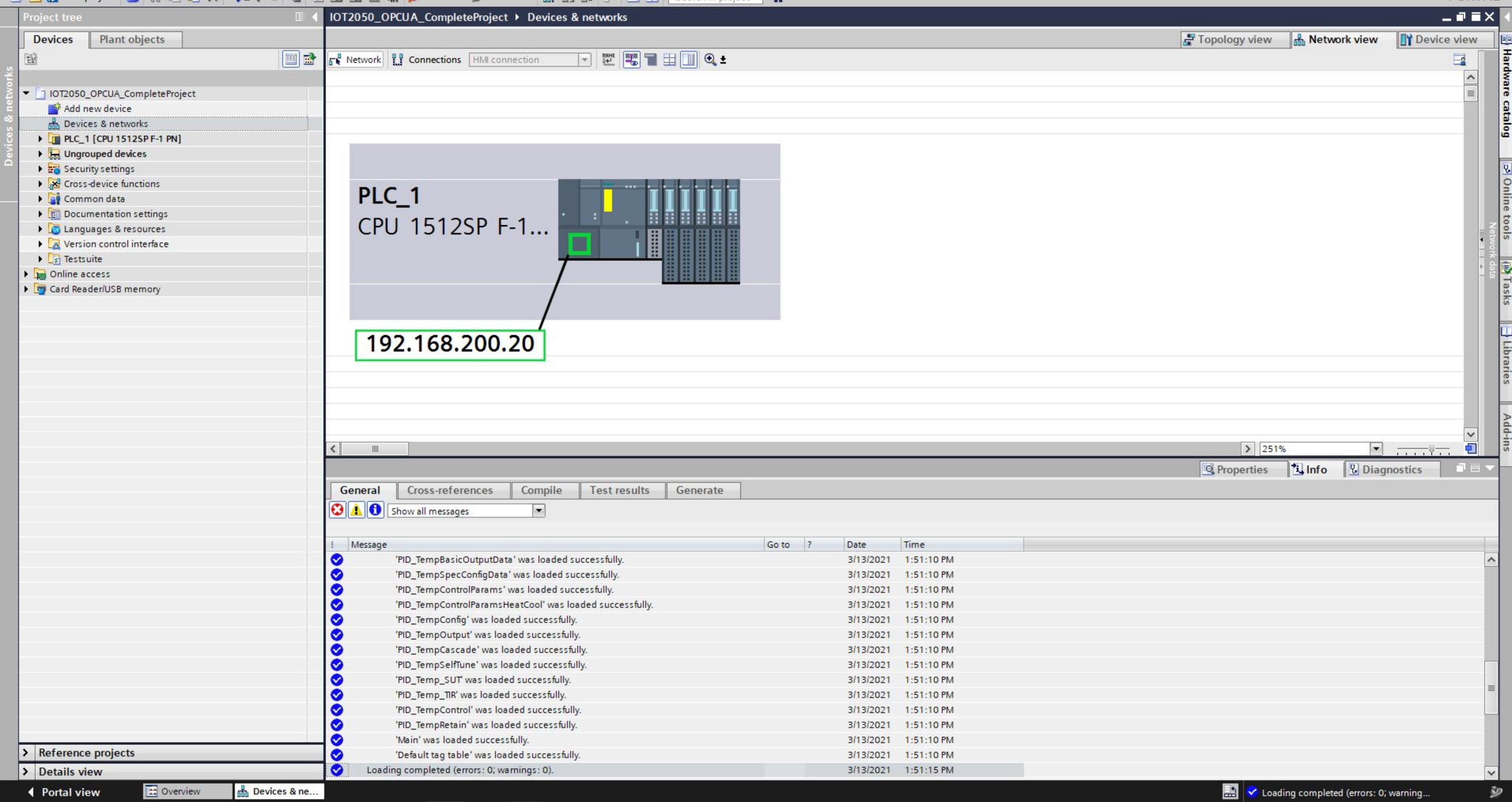
Details view

Portal view Overview PLC_1 Cyclic inter... motorContro... Properties Info Diagnostics Plug-ins Loading completed (errors: 0; warning: 0)

Instructions Testing Tasks Libraries Add-ins









Project tree

- Devices
- Plant objects

IOT2050_OPCUA_CompleteProject > PLC_1 [CPU 1512SP F-1 PN]

Topology view **Network view** **Device view**

Hardware catalog **Online tools** **Device data** **Tasks** **Libraries** **Add-ins**

PLC_1 **Server module_1**

Rack_0

1	2	3	4	5	6	7	8	16	24	32	40	48	56	66
16	24	32	40	48	56	66	-	-	-	-	-	-	-	-

Properties **Info** **Diagnostics**

General **Cross-references** **Compile** **Test results** **Generate**

Show all messages

Message	Date	Time
'PID_TempBasicOutputData' was loaded successfully.	3/13/2021	1:51:10 PM
'PID_TempSpecConfigData' was loaded successfully.	3/13/2021	1:51:10 PM
'PID_TempControlParams' was loaded successfully.	3/13/2021	1:51:10 PM
'PID_TempControlParamsHeatCool' was loaded successfully.	3/13/2021	1:51:10 PM
'PID_TempConfig' was loaded successfully.	3/13/2021	1:51:10 PM
'PID_TempOutput' was loaded successfully.	3/13/2021	1:51:10 PM
'PID_TempCascade' was loaded successfully.	3/13/2021	1:51:10 PM
'PID_TempSelfTune' was loaded successfully.	3/13/2021	1:51:10 PM
'PID_Temp_SUT' was loaded successfully.	3/13/2021	1:51:10 PM
'PID_Temp_TIR' was loaded successfully.	3/13/2021	1:51:10 PM
'PID_TempControl' was loaded successfully.	3/13/2021	1:51:10 PM
'PID_TempRetain' was loaded successfully.	3/13/2021	1:51:10 PM
'Main' was loaded successfully.	3/13/2021	1:51:10 PM
'Default tag table' was loaded successfully.	3/13/2021	1:51:10 PM
Loading completed (errors: 0; warnings: 0).	3/13/2021	1:51:15 PM

Reference projects

Details view

Portal view **Overview** **PLC_1**

Top **Loading completed (errors: 0; warning...)**

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Project Edit View Insert Online Options Tools Window Help

Save project Go online Go offline Search in project

Totally Integrated Automation PORTAL

Project tree IOT2050_OPCUA_CompleteProject > PLC_1 [CPU 1512SP F-1 PN]

Devices Plant objects

IOT2050_OPCUA_CompleteProject Add new device Devices & networks PLC_1 [CPU 1512SP F-1 PN] Ungrouped devices Security settings Cross-device functions Common data Documentation settings Languages & resources Version control interface Testsuite Online access Card Reader/USB memory

Topology view Network view Device view

Hardware catalog Device data Online tools Tasks Libraries Add-ins

PLC_1 Server module_1

Rack_0 1 2 3 4 5 6 7 8 16 24 32 40 48 56 66

Properties Info Diagnostics

General IO tags System constants Texts

General Project information Catalog information Identification & Maintenance Checksums Fail-safe PROFINETinterface [X1] Startup Cycle Communication load System and clock memory SIMATIC Memory Card System diagnostics PLC alarms Web server DNS configuration Multilingual support Time of day Protection & Security OPC UA Configuration control Connection resources Overview of addresses Runtime licenses OPC UA ProDiag Energy Suite

OPC UA General

OPC UA application name Application name: SIMATIC.S7-1500.OPC-UA.Application:PLC_1

Server General

Accessibility of the server Activate OPC UA server

Server addresses Address: opc.tcp://192.168.200.20:4840

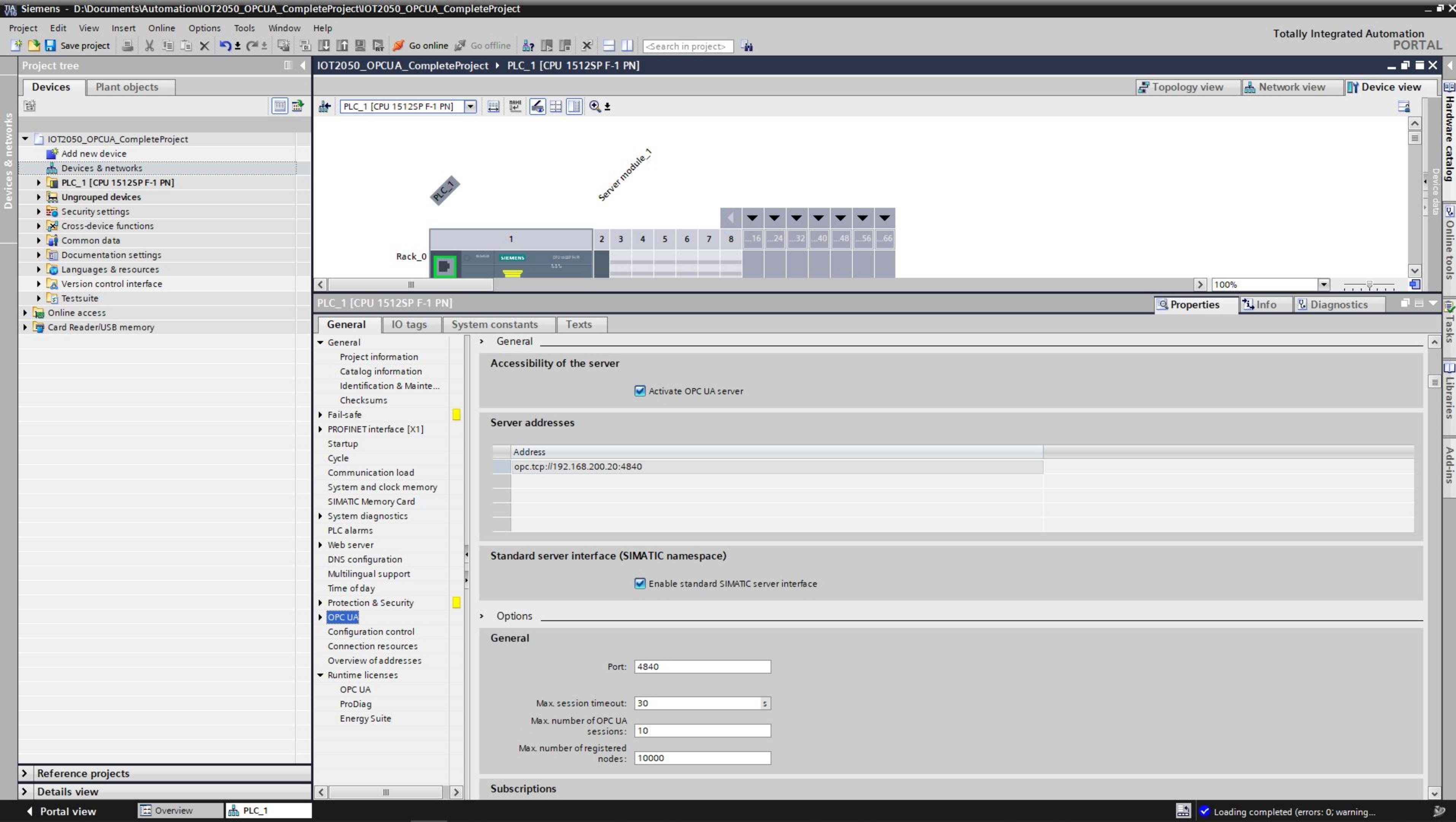
Standard server interface (SIMATIC namespace) Enable standard SIMATIC server interface

Options General

Reference projects Details view

Portal view Overview PLC_1

Loading completed (errors: 0; warning...)



VI6 Siemens - D:\Documents\Automation\IOT2050_OPCUA_CompleteProject\IOT2050_OPCUA_CompleteProject

Project Edit View Insert Online Options Tools Window Help

Save project Go online Go offline Search in project

Totally Integrated Automation PORTAL

Project tree IOT2050_OPCUA_CompleteProject > PLC_1 [CPU 1512SP F-1 PN]

Devices Plant objects

Topology view Network view Device view

Hardware catalog Device data Online tools Tasks Libraries Add-ins

Devices & networks

IOT2050_OPCUA_CompleteProject

- Add new device
- Devices & networks
- PLC_1 [CPU 1512SP F-1 PN]
- Ungrouped devices
- Security settings
- Cross-device functions
- Common data
- Documentation settings
- Languages & resources
- Version control interface
- Testsuite
- Online access
- Card Reader/USB memory

PLC_1 [CPU 1512SP F-1 PN]

General IO tags System constants Texts

Standard server interface (SIMATIC namespace)

Enable standard SIMATIC server interface

Options

General

Port: 4840

Max. session timeout: 30 s

Max. number of OPC UA sessions: 10

Max. number of registered nodes: 10000

Subscriptions

Minimum sampling interval: 1000 ms

Minimum publishing interval: 1000 ms

Max. number of monitored items: 1000

Security

Secure channel

Server certificate

Reference projects

Details view

Portal view Overview PLC_1

Loading completed (errors: 0; warning...)

The screenshot displays the SIMATIC Manager software interface for a project named 'IOT2050_OPCUA_CompleteProject'. The main window shows the hardware rack of the 'PLC_1 [CPU 1512SP F-1 PN]' device, which includes a 'Rack_0' and a 'Server module_1'. The properties dialog for the PLC is open, with the 'OPC UA' tab selected. Under the 'Standard server interface (SIMATIC namespace)' section, the 'Enable standard SIMATIC server interface' checkbox is checked. In the 'General' section, the port is set to 4840. The 'Subscriptions' section defines a minimum sampling interval of 1000 ms and a maximum number of monitored items of 1000. The 'Security' section is partially visible at the bottom. The left sidebar lists various project components like 'Devices & networks', 'Security settings', and 'Cross-device functions'. The bottom navigation bar includes links for 'Portal view', 'Overview', and 'PLC_1'.

VI6 Siemens - D:\Documents\Automation\IOT2050_OPCUA_CompleteProject\IOT2050_OPCUA_CompleteProject

Project Edit View Insert Online Options Tools Window Help

Totally Integrated Automation PORTAL

Save project Go online Go offline Search in project

Project tree IOT2050_OPCUA_CompleteProject > PLC_1 [CPU 1512SP F-1 PN]

Devices Plant objects

Topology view Network view Device view

Hardware catalog Device data Online tools Tasks Libraries Add-ins

PLC_1 [CPU 1512SP F-1 PN]

Server module_1

Rack_0

1 2 3 4 5 6 7 8 16 24 32 40 48 56 66

100% Properties Info Diagnostics

General IO tags System constants Texts

General Project information Catalog information Identification & Maint... Checksums Fail-safe PROFINETinterface [X1] Startup Cycle Communication load System and clock memory SIMATIC Memory Card System diagnostics PLC alarms Web server DNS configuration Multilingual support Time of day Protection & Security OPC UA Configuration control Connection resources Overview of addresses Runtime licenses OPC UA ProDiag Energy Suite

Server certificate: PLC-1/OPCUA-1-1

Security policies

Note: When the 'No security' security policy is activated, any OPC UA client can still connect using this setting, regardless of any security settings that follow.

Security policies available on the server:

Activate sec...	Name
<input checked="" type="checkbox"/>	No security
<input type="checkbox"/>	Basic128Rsa15 - Sign
<input type="checkbox"/>	Basic128Rsa15 - Sign & Encrypt
<input checked="" type="checkbox"/>	Basic256 - Sign
<input checked="" type="checkbox"/>	Basic256 - Sign & Encrypt
<input checked="" type="checkbox"/>	Basic256Sha256 - Sign
<input checked="" type="checkbox"/>	Basic256Sha256 - Sign & Encrypt

Trusted clients

The global security settings for the certificate manager are not enabled. Only limited functionality is available.

To allow a connection to the server to be established for specific clients, their certificates can be added to the following list of trusted clients. To allow any client to establish a connection, you can enable the "Automatically accept all client certificates during runtime" option.

ID	Common name of subject	Issuer	Valid until
<Add new>			

Reference projects Details view

Portal view Overview PLC_1

Loading completed (errors: 0; warning...)

Project tree

- Devices
- Plant objects

IOT2050_OPCUA_CompleteProject > PLC_1 [CPU 1512SP F-1 PN]

Topology view **Network view** **Device view**

Hardware catalog

Device data

Online tools

Tasks

Libraries

Add-ins

PLC_1

Server module_1

Rack_0

1 2 3 4 5 6 7 8 16 24 32 40 48 56 66

Properties **Info** **Diagnostics**

General **IO tags** **System constants** **Texts**

User authentication

Guest authentication

Note: The guest authentication allows access to the server without authentication by username/password.

Enable guest authentication

User name and password authentication

Note: Enabling this option allows users to authenticate themselves by providing a valid user name and password.

Enable user name and password authentication

User management

	Name	Password
<Add new user>		

Reference projects

Details view

Portal view **Overview** **PLC_1**

Loading completed (errors: 0; warning...)

Project tree

Devices Plant objects

IOT2050_OPCUA_CompleteProject > PLC_1 [CPU 1512SP F-1 PN]

Topology view Network view Device view

Hardware catalog Device data

Online tools Tasks Libraries Add-ins

PLC_1 [CPU 1512SP F-1 PN]

General IO tags System constants Texts

OPC UA

Runtime licenses

Type of required license: SIMATIC OPC UA S7-1500 small

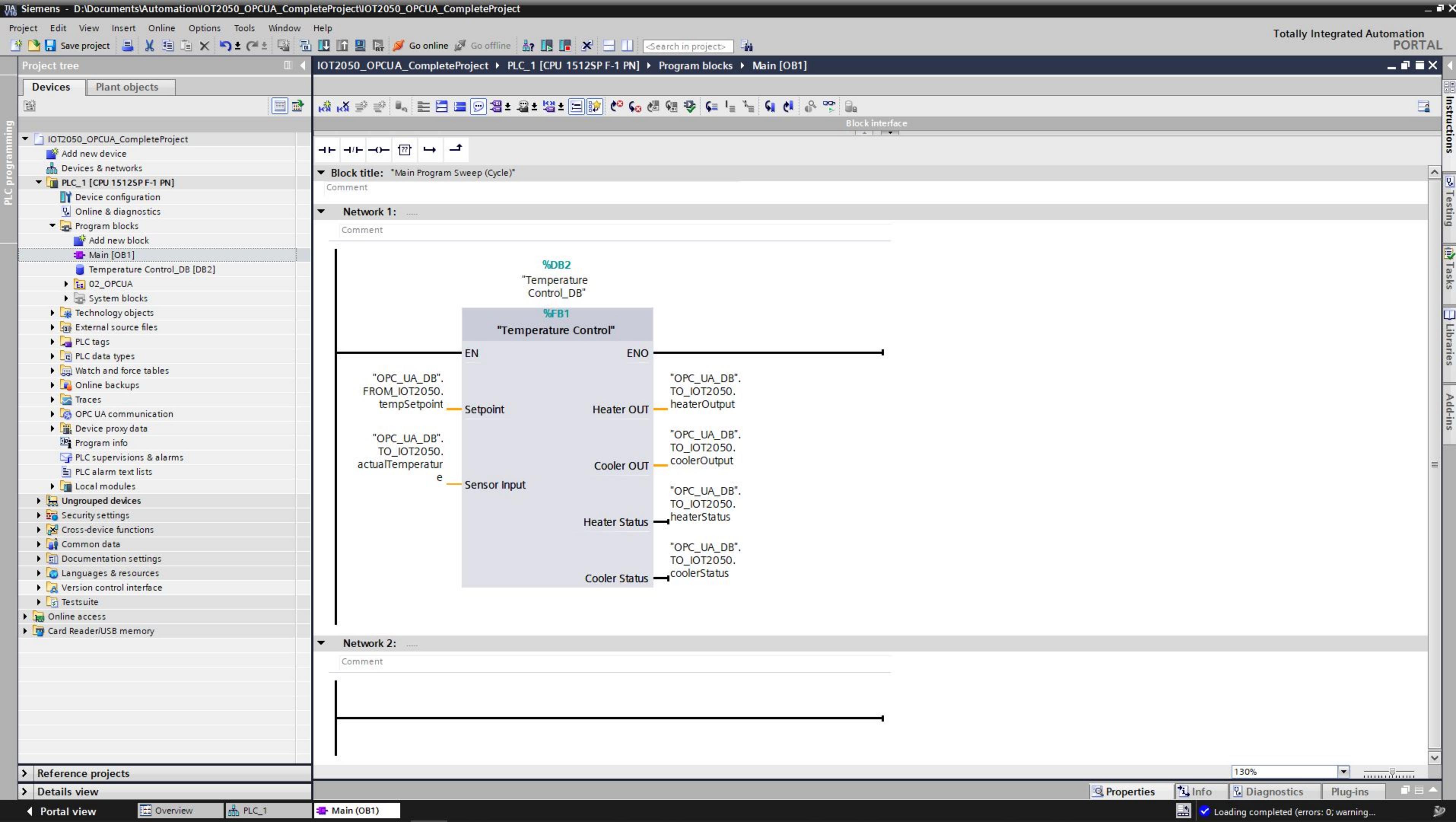
Type of purchased license: SIMATIC OPC UA S7-1500 small

Reference projects Details view

Portal view Overview PLC_1

Loading completed (errors: 0; warning...)

The screenshot shows the SIMATIC Manager interface for a project named "IOT2050_OPCUA_CompleteProject". The main workspace displays the hardware rack configuration for "PLC_1 [CPU 1512SP F-1 PN]". The rack contains a CPU module labeled "Rack_0" and a "Server module_1". The left sidebar, titled "Devices & networks", lists various project components under "IOT2050_OPCUA_CompleteProject", including "Add new device", "Devices & networks", "PLC_1 [CPU 1512SP F-1 PN]", "Ungrouped devices", "Security settings", "Cross-device functions", "Common data", "Documentation settings", "Languages & resources", "Version control interface", "Testsuite", "Online access", and "Card Reader/USB memory". A detailed "Properties" panel is open for "PLC_1 [CPU 1512SP F-1 PN]", showing the "General" tab selected. In the "General" tab, the "OPC UA" section is expanded, specifically the "Runtime licenses" subsection. It shows that the required and purchased license type is "SIMATIC OPC UA S7-1500 small". The bottom status bar indicates "Loading completed (errors: 0; warning...)".





Project tree

- Devices
- Plant objects

Temperature Control

Name	Data type	Default value	Retain	Accessible f...	Writ...	Visible in ...	Setpoint	Supervis...	Comment
1 Input									
2 Setpoint	Real	0.0	Non-retain	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>			temperature setpoint in °C
3 Output									
4 Heater OUT	Real	0.0	Non-retain	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>			0 to 100% output for heater
5 Cooler OUT	Real	0.0	Non-retain	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>			0 to 100% output for cooler
6 Heater Status	Bool	false	Non-retain	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>			0 = Heater is OFF; 1 = Heater is ON
7 Cooler Status	Bool	false	Non-retain	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>			0 = Cooler is OFF; 1 = Cooler is ON
8 InOut									
9 Sensor Input	Real	0.0	Non-retain	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>			actual temperature reading n °C
10 Static									
11 <Add new>									
12 Temp									
13 <Add new>									
14 Constant									
15 <Add new>									

Block title:

Comment

Network 1: Closed Loop PID Temperature Control

By default its in Automatic mode

%DB3
"PID_Temp_Instance"

PID_Temp

```

    graph LR
        EN[EN] --> PID["PID_Temp"]
        Setpoint[Setpoint] --> PID
        Input[Input] --> PID
        InputPER[Input_PER] --> PID
        Disturbance[Disturbance] --> PID
        ScaledInput[ScaledInput<br/>0.0] --> PID
        OutputHeat[OutputHeat<br/># "Heater OUT"] --> PID
        OutputCool[OutputCool<br/># "Cooler OUT"] --> PID
        OutputHeat2[OutputHeat] --> PID
    
```

Properties **Info** **Diagnostics** **Plug-ins**

Reference projects

Details view

Portal view **Overview** **PLC_1** **Main (OB1)** **Temperature...**

150%

Instructions **Testing** **Tasks** **Libraries** **Add-ins**

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Project Edit View Insert Online Options Tools Window Help

Save project Go online Go offline Search in project

Totally Integrated Automation PORTAL

Project tree

Devices Plant objects

IOT2050_OPCUA_CompleteProject > PLC_1 [CPU 1512SP F-1 PN] > Program blocks > 02_OPCUA > Temperature Control [FB1]

Block interface

Block title:

Comment

Network 1: Closed Loop PID Temperature Control
By default its in Automatic mode

% DB3
"PID_Temp_Instance"

PID_Temp

	EN	ENO
# Setpoint	Setpoint	ScaledInput
# "Sensor Input"	Input	OutputHeat
0	Input_PER	OutputCool
0.0	Disturbance	OutputHeat_PER
false	ManualEnable	OutputCool_PER
0.0	ManualValue	OutputHeat_PWM
false	ErrorAck	OutputCool_PWM
false	Reset	SetpointLimit_H
false	ModeActivate	SetpointLimit_L
3	Mode	InputWarning_H
16#0	Master	InputWarning_L
16#0	Slave	State
		Error
		ErrorBits

Reference projects

Details view

Portal view Overview PLC_1 Main (OB1) Temperature... Properties Info Diagnostics Plug-ins

150%

Instructions Testing Tasks Libraries Add-ins

PLC programming

The screenshot shows the SIMATIC Manager software interface for a project named 'IOT2050_OPCUA_CompleteProject'. The main workspace displays a 'Temperature Control [FB1]' function block. The block is titled 'PID_Temp' and has a comment 'Closed Loop PID Temperature Control'. It is set to 'Automatic mode' by default. The block interface shows various input and output parameters: EN, ScaledInput, OutputHeat, OutputCool, OutputHeat_PER, OutputCool_PER, OutputHeat_PWM, OutputCool_PWM, SetpointLimit_H, SetpointLimit_L, InputWarning_H, InputWarning_L, State, Error, and ErrorBits. The inputs include Setpoint, Sensor Input, Input, Input_PER, Disturbance, ManualEnable, ManualValue, ErrorAck, Reset, ModeActivate, Mode, Master, Slave, and a disturbance value of 0.0. The outputs include Heater OUT, Cooler OUT, and PWM signals for both heat and cool. The 'Properties' tab is selected at the bottom.

PLC programming

Project tree

- IOT2050_OPCUA_CompleteProject
 - Add new device
 - Devices & networks
 - PLC_1 [CPU 1512SP F-1 PN]
 - Device configuration
 - Online & diagnostics
 - Program blocks
 - Add new block
 - Main [OB1]
 - Temperature Control_DB [DB2]
 - 02_OPCUA
 - Temperature Control [FB1]
 - OPC_UA_DB [DB1]
 - System blocks
 - Technology objects
 - External source files
 - PLC tags
 - PLC data types
 - Watch and force tables
 - Online backups
 - Traces
 - OPC UA communication
 - Device proxy data
 - Program info
 - PLC supervisions & alarms
 - PLC alarm text lists
 - Local modules
 - Ungrouped devices
 - Security settings
 - Cross-device functions
 - Common data
 - Documentation settings
 - Languages & resources
 - Version control interface
 - Testsuite
 - Online access
 - Card Reader/USB memory

Block interface

Block title:

Comment

Network 1: Closed Loop PID Temperature Control

Comment

```

1 IF #"Heater OUT" > 0 THEN // increase temperature by adding heat
2   #"Sensor Input" := #"Sensor Input" + (#"Heater OUT" / 10000);
3
4 ELSIF #"Cooler OUT" > 0 THEN // decrease temperature by removing heat
5   #"Sensor Input" := #"Sensor Input" - (#"Cooler OUT" / 10000);
6
7 ELSE // do nothing
8 ;
9 END_IF;

```

Network 2: Simulate thermocouple sensor reading

Comment

Network 3: Converts % output of a heater or cooler to Boolean (ON/OFF) for Status

Comment

```

1 IF #"Heater OUT" > 0 THEN
2   #"Heater Status" := TRUE;
3 ELSE
4   #"Heater Status" := FALSE;
5 END_IF;
6
7 IF #"Cooler OUT" > 0 THEN
8   #"Cooler Status" := TRUE;
9 ELSE
10  #"Cooler Status" := FALSE;
11 END_IF;

```

Reference projects

Details view

Properties **Info** **Diagnostics** **Plug-ins**

Portal view **Overview** **PLC_1** **Main (OB1)** **Temperature...**

150% **Loading completed (errors: 0; warning...**

Instructions **Testing** **Tasks** **Libraries** **Add-ins**

Project tree

Devices Plant objects

IOT2050_OPCUA_CompleteProject > PLC_1 [CPU 1512SP F-1 PN] > Technology objects > PID_Temp_Instance [DB3]

Functional view Parameter view

Tasks Libraries Add-ins

Start

Project tree

Devices Plant objects

IOT2050_OPCUA_CompleteProject

- Add new device
- Devices & networks
- PLC_1 [CPU 1512SP F-1 PN]
 - Device configuration
 - Online & diagnostics
 - Program blocks
 - Add new block
 - Main [OB1]
 - Temperature Control_DB [DB2]
 - 02_OPCUA
 - Temperature Control [FB1]
 - OPC_UA_DB [DB1]
 - System blocks
- Technology objects
 - Add new object
 - PID_Temp_Instance [DB3]
 - Configuration
 - Commissioning
 - External source files
 - PLC tags
 - PLC data types
 - Watch and force tables
 - Online backups
 - Traces
 - OPC UA communication
 - Device proxy data
 - Program info
 - PLC supervisions & alarms
 - PLC alarm text lists
 - Local modules
 - Ungrouped devices
 - Security settings
 - Cross-device functions
 - Common data
 - Documentation settings
 - Languages & resources
 - Version control interface
 - Testsuite
- Online access
- Card Reader/USB memory

Reference projects

Details view

Properties Info Diagnostics

Portal view Overview PLC_1 Main (OB1) Temperature... PID_Temp_In... Loading completed (errors: 0; warning...)

Basic settings

- Controller type
- Input / output parameters
- Cascade

Process value settings

- Process value limits
- Process value scaling

Output settings

- Basic settings of output
- Output value limits an...
- Signal flow
- OutputHeat / Outpu...
- OutputHeat_PWM / ...
- OutperHeat_PER / O...

Advanced settings

- Process value monitoring
- PWM limits
- PID Parameters

Controller type

Temperature °C

Activate Mode after CPU restart

Set Mode to: Automatic mode



Project tree

- Devices
- Plant objects

IOT2050_OPCUA_CompleteProject > PLC_1 [CPU 1512SP F-1 PN] > Technology objects > PID_Temp_Instance [DB3]

Functional view **Parameter view**

Tasks **Libraries** **Add-ins**

Input / output parameters

Setpoint: [Input] → [OutputHeat]

Input: [Input] → [OutputHeat]

OutputHeat: [OutputHeat] → [OutputHeat_PWM]

Activate cooling: → [OutputCool]

OutputCool: [OutputCool] → [OutputHeat_PWM]

Basic settings

- Controller type: Input / output parameters (selected)
- Cascade
- Process value settings
- Process value limits
- Process value scaling
- Output settings
- Basic settings of output
- Output value limits an...
- Signal flow
- OutputHeat / Outpu...
- OutputHeat_PWM / ...
- OutperHeat_PER / O...
- Advanced settings
- Process value monitoring
- PWM limits
- PID Parameters

Configuration

- Commissioning
- External source files
- PLC tags
- PLC data types
- Watch and force tables
- Online backups
- Traces
- OPC UA communication
- Device proxy data
- Program info
- PLC supervisions & alarms
- PLC alarm text lists
- Local modules
- Ungrouped devices
- Security settings
- Cross-device functions
- Common data
- Documentation settings
- Languages & resources
- Version control interface
- Testsuite
- Online access
- Card Reader/USB memory

Reference projects

Details view

Properties **Info** **Diagnostics**

Portal view Overview PLC_1 Main (OB1) Temperature... PID_Temp_In... Loading completed (errors: 0; warning...)

Project tree

Devices Plant objects

IOT2050_MQTT_CompleteProject > Devices & networks

Network Connections HMI connection

Topology view Network view Device view

Hardware catalog Online tools Tasks Libraries Add-ins

Reference projects Details view

Properties Info Diagnostics

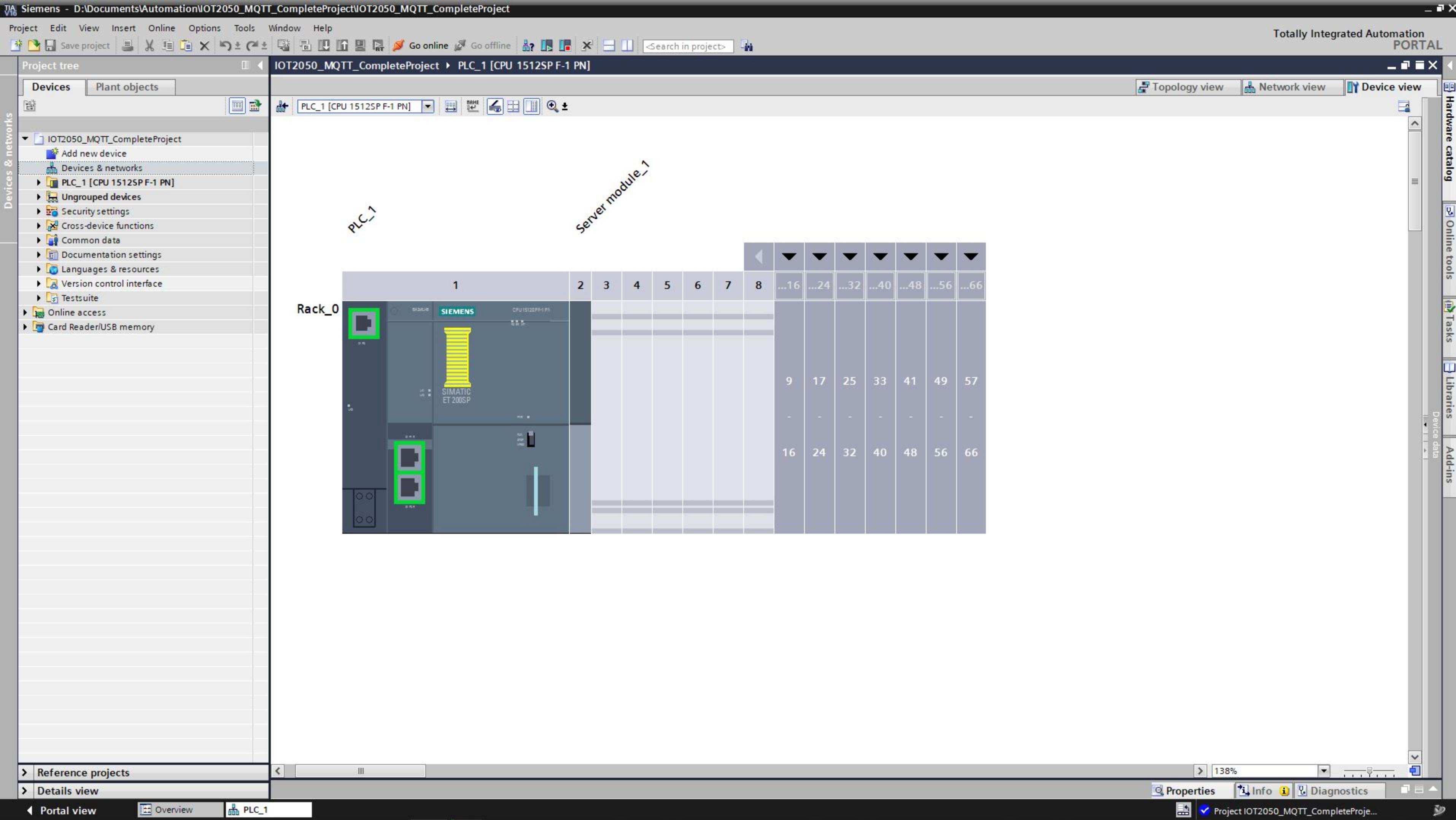
Portal view Overview Devices & ne...

Project IOT2050_MQTT_CompleteProj...

PLC_1
CPU 1512SP F-1...

192.168.200.20

The screenshot shows the SIMATIC Manager software interface for a project named "IOT2050_MQTT_CompleteProject". The main window displays a "Devices & networks" view. A specific device, "PLC_1 [CPU 1512SP F-1 PN]", is selected and shown in detail. The device icon is a grey rack-mounted unit with various slots. To the left of the device icon, its name and model are displayed. Below the device icon, the IP address "192.168.200.20" is highlighted with a green rectangular border. The left sidebar contains a "Project tree" with various project settings and components listed under "Devices & networks". The bottom navigation bar includes links for "Portal view", "Overview", "Devices & ne...", "Properties", "Info", "Diagnostics", and the current project name.



VI6 Siemens - D:\Documents\Automation\IOT2050_MQTT_CompleteProject\IOT2050_MQTT_CompleteProject

Project Edit View Insert Online Options Tools Window Help

Totally Integrated Automation PORTAL

PLC programming

Project tree

Devices Plant objects

Main

	Name	Data type	Default value	Comment
1	Input			
2	Initial_Call	Bool		Initial call of this OB
3	Remanence	Bool		=True, if remanent data are available
4	Temp			
5	brakeTime	Real		
6	Constant			
7	TIME_TO_PUBLISH	Time	t#10s	Default interval to publish data
8	TIME_TO_RECONNECT	Time	T#60s	Default interval to reconnect

Block title: "Main Program Sweep (Cycle)"

Comment

Network 1: Subscribe to topic once connection established

Comment

```

graph LR
    A["MQTTdata.enable"] --> B["MQTTdata.status.tcpOk"]
    B --> C["MQTTdata.status.mqttOk"]
    C --> D["MQTTdata.publishMessage"]
    D --> E["mqttDataSubscribe.subscribeToTopic"]
  
```

MQTTdata.enable

MQTTdata.status.tcpOk

MQTTdata.status.mqttOk

MQTTdata.publishMessage

mqttDataSubscribe.subscribeToTopic

Network 2: Main Call of MQTT Client FB

Comment: Connect to MQTT Broker. When new message received, apply brake and get braking time, then publish braking time to MQTT Broker

%DB2

"InstLMQTT_Client"

%FB2

Reference projects

Details view

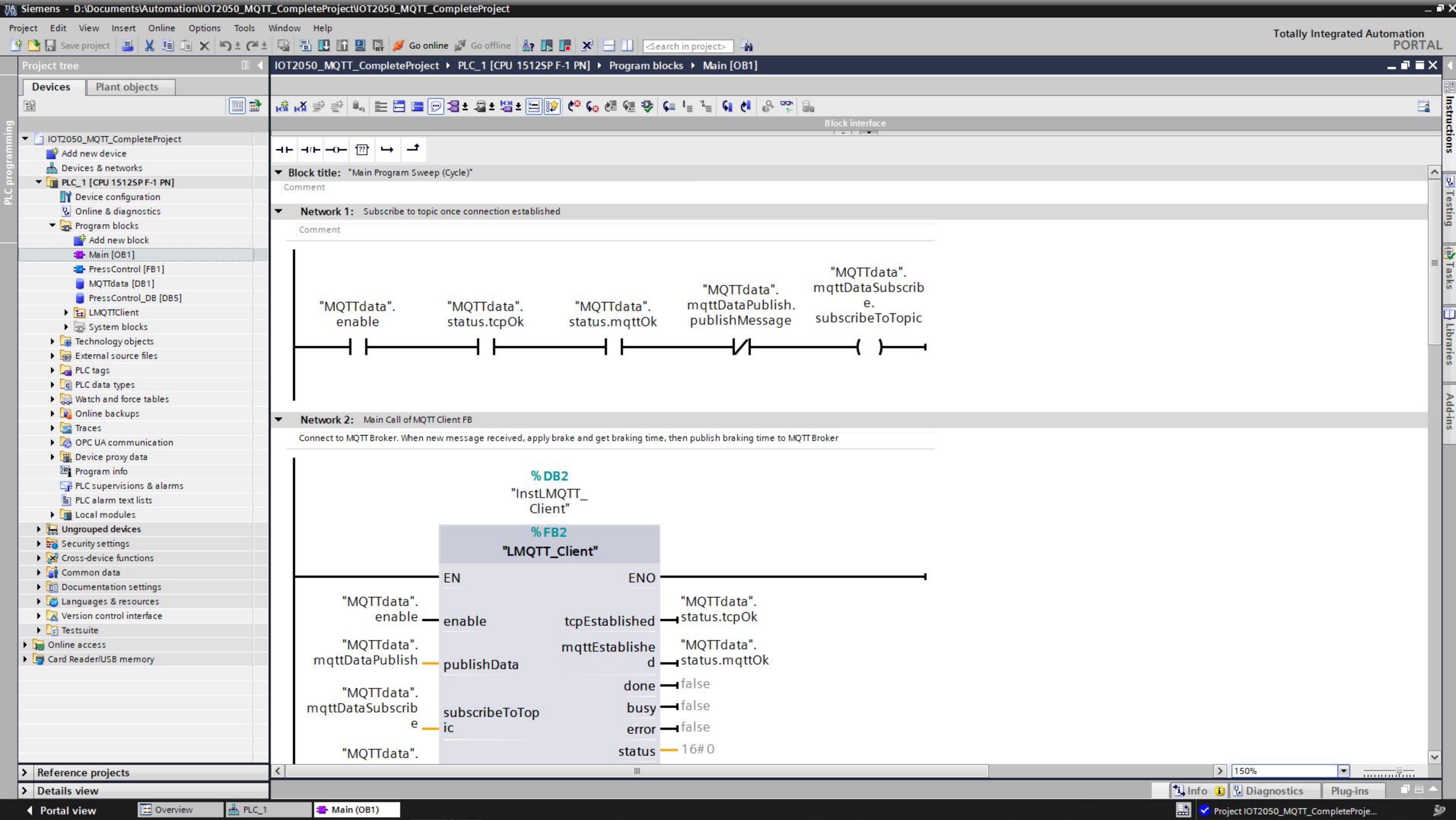
Portal view Overview PLC_1 Main (OB1)

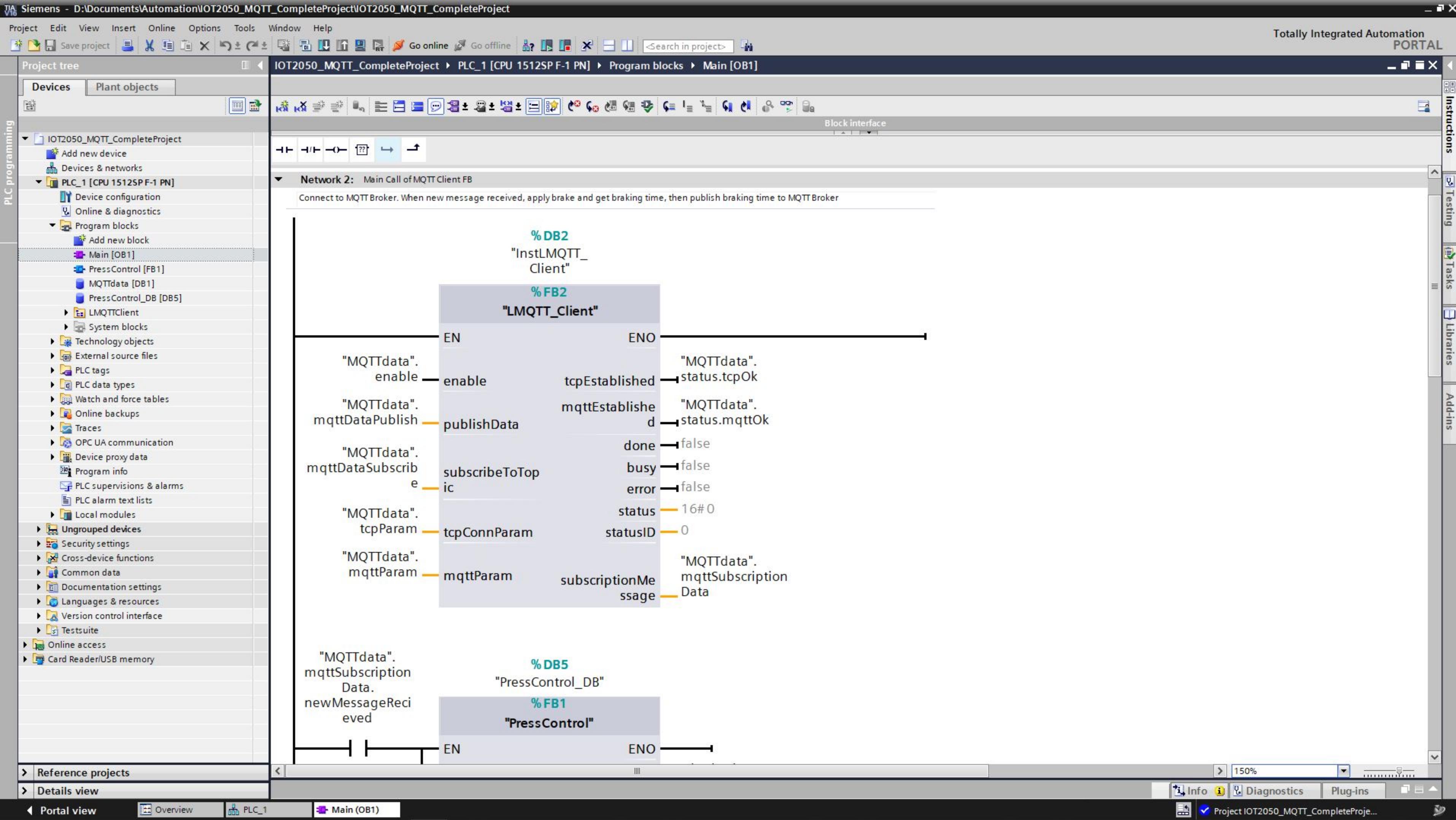
Info Diagnostics Plug-ins

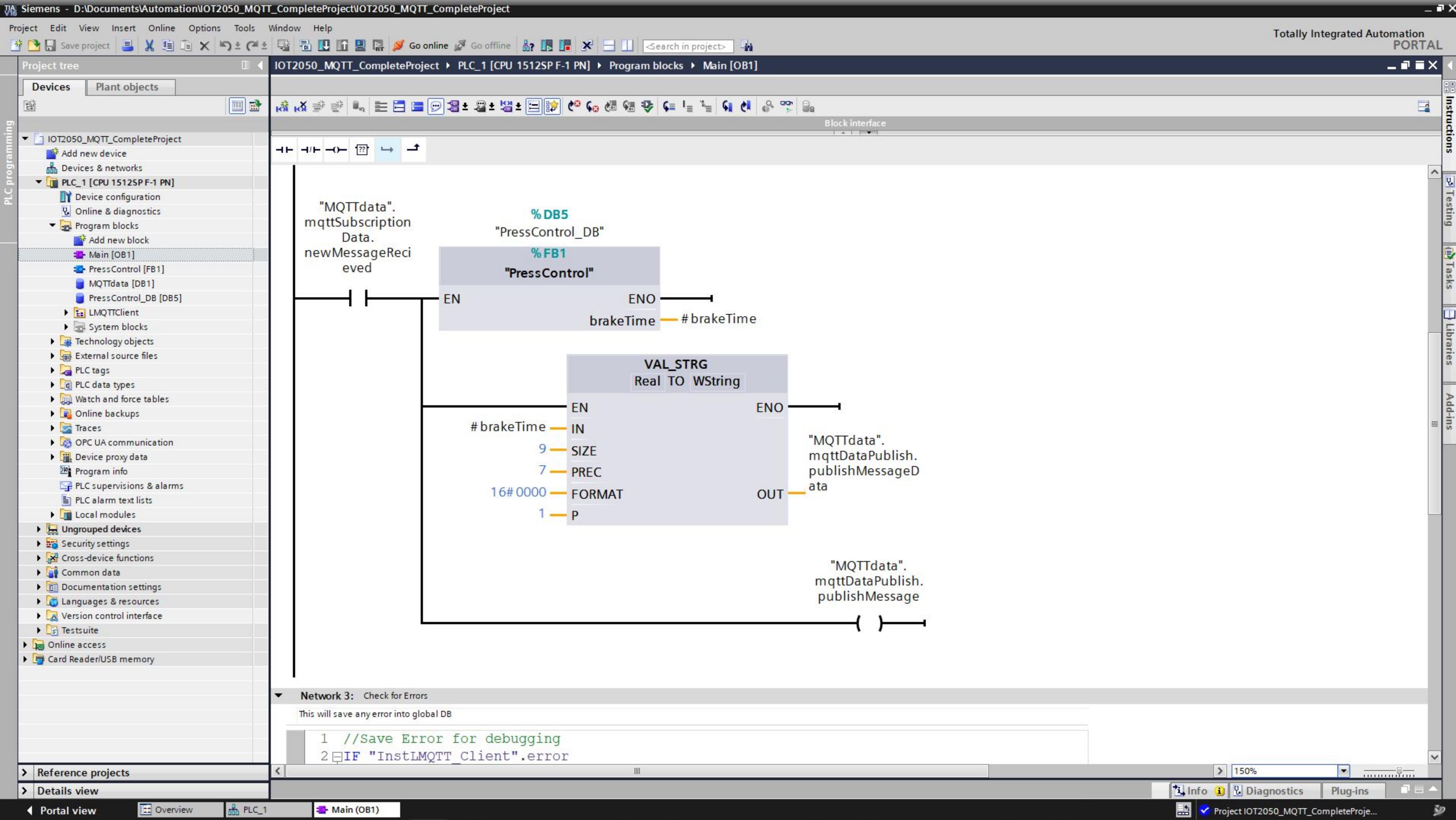
150%

Project IOT2050_MQTT_CompleteProj...

Instructions Testing Tasks Libraries Add-ins







Project tree

- Devices
- Plant objects

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- Online access
- Card Reader/USB memory

Reference projects

Details view

Project tree

PLC_1 [CPU 1512SP F-1 PN] > Program blocks > Main [OB1]

Block interface

Network 3: Check for Errors

This will save any error into global DB

```

1 //Save Error for debugging
2 IF "InstLMQTT_Client".error
3 THEN
4   "MQTTdata".status.error := true;
5   "MQTTdata".status.statusID := "InstLMQTT_Client".statusID;
6   "MQTTdata".status.statusCode := "InstLMQTT_Client".status;
7 END_IF;
8
9 //Clear error when not enabled:
10 IF NOT "MQTTdata".enable
11 THEN
12   "MQTTdata".status.error := false;
13   "MQTTdata".status.statusID := 0;
14   "MQTTdata".status.statusCode := 16#00;
15 END_IF;
16

```

Network 4: Subscription Control

Simple Control of Subscription

```

1 //Reset after successful subscription / unsubscription
2 IF "MQTTdata".mqttDataSubscribe.subscribeToTopic AND "InstLMQTT_Client".done
3 THEN
4   "MQTTdata".mqttDataSubscribe.subscribeToTopic := false;
5 END_IF;
6 IF "MQTTdata".mqttDataSubscribe.unsubscribeFromTopic AND "InstLMQTT_Client".done
7 THEN
8   "MQTTdata".mqttDataSubscribe.unsubscribeFromTopic := false;
9 END_IF;

```

Network 5: Received Message Control

Simple Control of received messages - only valid messages are copied to a buffer-array

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Project Edit View Insert Online Options Tools Window Help

Totally Integrated Automation PORTAL

Save project Go online Go offline Search in project

Project tree IOT2050_MQTT_CompleteProject > PLC_1 [CPU 1512SP F-1 PN] > Program blocks > Main [OB1]

Devices Plant objects

Block interface

```

12      MQTTdata.status.error := false;
13      "MQTTdata".status.statusID := 0;
14      "MQTTdata".status.statusCode := 16#00;
15  END_IF;
16

```

Network 4: Subscription Control
Simple Control of Subscription

```

1 //Reset after successful subscription / unsubscription
2 IF "MQTTdata".mqttDataSubscribe.subscribeToTopic AND "InstLMQTT_Client".done
3 THEN
4     "MQTTdata".mqttDataSubscribe.subscribeToTopic := false;
5 END_IF;
6 IF "MQTTdata".mqttDataSubscribe.unsubscribeFromTopic AND "InstLMQTT_Client".done
7 THEN
8     "MQTTdata".mqttDataSubscribe.unsubscribeFromTopic := false;
9 END_IF;

```

Network 5: Received Message Control
Simple Control of received messages - only valid messages are copied to a buffer-array

```

1 IF "InstLMQTT_Client".subscriptionMessage.newMessageReceived AND NOT "InstLMQTT_Client".subscriptionMessage.messageInvalid
2 THEN//Copy messages from FB to Global DB Buffer
3     "MQTTdata".recievedData["MQTTdata".recDataCounter].receivingTopic := "InstLMQTT_Client".subscriptionMessage.receivingTopic;
4     "MQTTdata".recievedData["MQTTdata".recDataCounter].receivedMessageData := "InstLMQTT_Client".subscriptionMessage.receivedMessageData;
5     "MQTTdata".recDataCounter += 1;//Increment
6 IF "MQTTdata".recDataCounter > 4 // reset counter when hitting max array len of received Data
7 THEN
8     "MQTTdata".recDataCounter := 0;
9 END_IF;
10 END_IF;
11

```

Network 6: Auto Publish

Network 7: Automatic Reconnect

Network 8:

Reference projects

Details view

150% Info Diagnostics Plug-ins

Portal view Overview PLC_1 Main (OB1) Project IOT2050_MQTT_CompleteProj...

Instructions Testing Tasks Libraries Add-ins

VI6 Siemens - D:\Documents\Automation\IOT2050_MQTT_CompleteProject\IOT2050_MQTT_CompleteProject

Project Edit View Insert Online Options Tools Window Help

Totally Integrated Automation PORTAL

Save project Go online Go offline Search in project

Project tree IOT2050_MQTT_CompleteProject > PLC_1 [CPU 1512SP F-1 PN] > Program blocks > Main [OB1]

Devices Plant objects

Block interface

IF... CASE... FOR... WHILE... (*...) REGION

MQTTdata.receiveuserData MQTTdata.recDataCounter := InstMQTT_Client.subscriptionMessage.receiveuserData
"MQTTdata".recDataCounter += 1; //Increment
IF "MQTTdata".recDataCounter > 4 // reset counter when hitting max array len of received Data
THEN
"MQTTdata".recDataCounter := 0;
END_IF;
END_IF;

Network 6: Auto Publish
Automatic publish data when bit automaticPublish = true

```
1 //Start automatic publish timer
2 "InstTimeAutomaticPublish".TON(IN := "MQTTdata".automaticPublish,
3 PT := #TIME_TO_PUBLISH);
4
5 //If timer expired, start publishing
6 IF "InstTimeAutomaticPublish".Q AND NOT "InstLMQTT_Client".busy AND NOT "InstLMQTT_Client".done
7 THEN
8 //set the publish bit to TRUE
9 //This is tricky. If we try to publish in the same cycle as a ping is going on, we can not publish message. So reset publish a
10 "MQTTdata".mqttDataPublish.publishMessage := NOT "MQTTdata".mqttDataPublish.publishMessage;
11 END_IF;
12
13 //check for publish status
14 IF "MQTTdata".mqttDataPublish.publishMessage AND "InstTimeAutomaticPublish".Q AND "InstLMQTT_Client".done
15 //Successfully published
16 THEN
17 "MQTTdata".mqttDataPublish.publishMessage := false;
18 RESET_TIMER("InstTimeAutomaticPublish"); //Reset Timer
19 END_IF;
```

Network 7: Automatic Reconnect
Network 8:

Reference projects

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Project Edit View Insert Online Options Tools Window Help

Totally Integrated Automation PORTAL

PLC programming

Project tree

Devices Plant objects

IOT2050_MQTT_CompleteProject PLC_1 [CPU 1512SP F-1 PN] Program blocks Main [OB1]

Block interface

IF... CASE... FOR... WHILE... TO DO... DO... REGION

```
13 //check for publish status
14 IF "MQTTdata".mqttDataPublish.publishMessage AND "InstTimeAutomaticPublish".Q AND "InstLMQTT_Client".done
15 //Successfully published
16 THEN
17   "MQTTdata".mqttDataPublish.publishMessage := false;
18   RESET_TIMER("InstTimeAutomaticPublish"); //Reset Timer
19 END_IF;
20
21
```

Network 7: Automatic Reconnect

When automatic reconnect is enabled, try to reconnect on connection failure every 60 seconds

```
1 //Check if reconnect is enabled.
2 IF "MQTTdata".automaticReconnect
3 THEN
4 IF "MQTTdata".enable AND "MQTTdata".status.error AND NOT "MQTTdata".status.tcpok
5 THEN
6   "MQTTdata".enable := False; // Reset MQTT Client. Will also reset error Bit
7 END_IF;
8
9
10 END_IF;
11
12 //RECONNECT TIMER
13 InstTimeAutomaticReconnect.TON(IN := "MQTTdata".automaticReconnect AND NOT "MQTTdata".enable,
14 PT := #TIME_TO_RECONNECT);
15
16 //IF Timer expires, reset and try to reconnect
17 IF "InstTimeAutomaticReconnect".Q
18 THEN
19   RESET_TIMER("InstTimeAutomaticReconnect");
20   "MQTTdata".enable := true;
21 END_IF;
```

Network 8:

Reference projects

Details view

Portal view Overview PLC_1 Main (OB1)

Info Diagnostics Plug-ins

150%

Instructions Testing Tasks Libraries Add-ins

Project IOT2050_MQTT_CompleteProj...

PLC programming

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PressControl

	Name	Data type	Default value	Retain	Accessible f...	Writ...	Visible in ...	Setpoint	Supervis...	Comment
1	Input									
2	<Add new>									
3	Output									
4	brakeTime	Real	0.0	Non-retain						time it took to apply brake in seconds
5	InOut									
6	<Add new>									
7	Static									
8	previousValue	Real	0.0	Non-retain	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
9	Temp									
10	<Add new>									
11	Constant									
12	<Add new>									

Code Editor

```

IF... CASE... FOR... WHILE...
OF... TO DO... DO... (*...*) REGION
1 #brakeTime := 0.2 * #previousValue;
2
3 IF #brakeTime < 0 OR #brakeTime > 1.5 THEN
4     #previousValue := 0;
5 ELSE
6     #previousValue := #previousValue + 1;
7 END_IF;

```

Bottom Status Bar

Ln: 7 Cl: 8 INS 100%

Bottom Navigation

- Portal view
- Overview
- PressControl...
- Info
- Diagnostics
- Plug-ins
- Project IOT2050_MQTT_CompleteProj...

Right Sidebar

- Instructions
- Testing
- Tasks
- Libraries
- Add-ins

PLC programming

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MQTTdata

Name	Data type	Start value	Retain	Accessible f...	Writ...	Visible in ...	Setpoint	Supervis...	Comment
1 Static									
2 enable	Bool	true		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
3 tcpParam	"LMQTT_typeTcpCo...			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
4 useQdn	Bool	false		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
5 hwIdentifier	HW_ANY	0		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
6 connectionID	CONN_OUC	16#10		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
7 qdnAdressBroker	String[254]	"		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
8 ipAdressBroker	Array[0..3] of USInt			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
9 ipAdressBroker[0]	USInt	192		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		"192"
10 ipAdressBroker[1]	USInt	168		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		"168"
11 ipAdressBroker[2]	USInt	200		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		"0"
12 ipAdressBroker[3]	USInt	1		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		"10"
13 localPort	UInt	0		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Local port number of the CPU
14 mqttPort	UInt	1883		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Remote port of the MQTT broker
15 activateSecureConn	Bool	false		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		When TRUE, the communication is secured via TLS.
16 validateSubjectAlternateNameOfServer	Bool	false		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Only for the client side. When TRUE, the IP address of the server must be validated.
17 idTlsServerCertificate	UDInt	0		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Identifier of X.509 certificate (usually a CA certificate).
18 idTlsOwnCertificate	UDInt	0		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Identifier of own X.509 certificate to validate the server.
19 mqttParam	"LMQTT_typeParam..."			<input checked="" type="checkbox"/>					
20 connectFlag	"LMQTT_typeConn..."			<input checked="" type="checkbox"/>					
21 cleanSession	Bool	true		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		When TRUE, all data from a previous session will be deleted.
22 will	Bool	false		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		When TRUE, activates the last will and testame
23 willQoS1	Bool	false		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		When TRUE, the QoS has level 1 for the last will
24 willQoS2	Bool	false		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		When TRUE, the QoS has level 2 for the last will
25 willRetain	Bool	false		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		When TRUE, the last will is stored at the broker.
26 password	Bool	false		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		When TRUE, the MQTT broker requires a login (name and password).
27 userName	Bool	false		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		When TRUE, the MQTT broker requires a login (name and password).
28 keepAlive	UInt	30		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		KeepAlive in Seconds. 0=No Keepalive
29 clientIdentifier	String[23]	'SIMATIC PLC'		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Unique name of the client used from the client.
30 willTopic	String[100]	"		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		If the will flag is set, the topic for the last will message.
31 willMessage	String[100]	"		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		If the will flag is set, the message for the last will message.
32 userName	String[100]	"		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		If the username flag is set, the username for the MQTT broker.
33 password	String[200]	"		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		If the password flag is set, the password for the MQTT broker.
34 mqttDataPublish	"LMQTT_typePublis..."			<input checked="" type="checkbox"/>					
35 publishMessage	Bool	false		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Set to true. Can be reset to false once done flag is set.
36 publishTopic	WString[250]	WSTRING#'TO_I...		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Size be increased, but must increase MAX_SEN
37 publishMessageData	WString[800]	WSTRING#"		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Size be increased, but must increase MAX_SEN
38 publishQoS	Int	0		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Defines the QoS level for the MQTT message. 0=At most once, 1=At least once, 2=Exactly once.
39 publishRetainFlag	Bool	false		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		If true, message may be saved at the broker.
40 mqttDataSubscribe	"LMQTT_typeSubsc..."			<input checked="" type="checkbox"/>					
41 subscribeToTopic	Bool	false		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		When true, subscribes to the topic indicated by the topic name.
42 unsubscribeFromTopic	Bool	false		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		When true, unsubscribes from the "subscriptionTopic".
43 subscriptionTopic	WString[250]	WSTRING#'FRO...		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Topic name to subscribe to or unsubscribe from.
44 subscriptionQoS	Int	0		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Defines the QoS level for the MQTT message at the subscriber.

PLC programming

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 - Details view

MQTTdata

Name	Data type	Start value	Retain	Accessible f...	Writ...	Visible in ...	Setpoint	Supervis...	Comment
16	Bool	false	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Only for the client side. When TRUE, the IP addre
17	UDInt	0	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Identifier of X.509 certificate (usually a CA certif
18	UDInt	0	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Identifier of own X.509 certificate to validate th
19	"LMQTT_typeParam..."		<input type="checkbox"/>	<input checked="" type="checkbox"/>					
20	"LMQTT_typeConn..."		<input type="checkbox"/>	<input checked="" type="checkbox"/>					
21	Bool	true	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	When TRUE, all data from a previous session wi
22	Bool	false	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	When TRUE, activates the last will and testame
23	Bool	false	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	When TRUE, the QoS has level 1 for the last will
24	Bool	false	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	When TRUE, the QoS has level 2 for the last will
25	Bool	false	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	When TRUE, the last will is stored at the broker
26	Bool	false	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	When TRUE, the MQTT broker requires a login (n
27	Bool	false	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	When TRUE, the MQTT broker requires a login (n
28	UInt	30	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	KeepAlive in Seconds. 0=No Keepalive
29	String[23]	'SIMATIC PLC'	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unique name of the client used from the client
30	String[100]	"	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If the will flag is set, the topic for the last will ne
31	String[100]	"	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	If the will flag is set, the message for the last w
32	String[100]	"	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	If the username flag is set, the username for th
33	String[200]	"	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	If the password flag is set, the password for the
34	"LMQTT_typePublis..."		<input type="checkbox"/>	<input checked="" type="checkbox"/>					
35	Bool	false	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Set to true. Can be reset to false once done fla
36	WString[250]	WSTRING# 'TO_I...'	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Size be increased, but must increase MAX_SEN
37	WString[800]	WSTRING# ''	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Size be increased, but must increase MAX_SEN
38	Int	0	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Defines the QoS level for the MQTT message. 0
39	Bool	false	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	If true, message may be saved at the broker
40	"LMQTT_typeSubsc..."		<input type="checkbox"/>	<input checked="" type="checkbox"/>					
41	Bool	false	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	When true, subscribes to the topic indicated by
42	Bool	false	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	When true, unsubscribes from the "subscription"
43	WString[250]	WSTRING# 'FRO...'	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Topic name to subscribe to or unsubscribe off
44	Int	0	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Defines the QoS level for the MQTT message at
45	"LMQTT_typeSubsc..."		<input type="checkbox"/>	<input checked="" type="checkbox"/>					
46	Array[0..4] of "LMQ...		<input type="checkbox"/>	<input checked="" type="checkbox"/>					
47	"LMQTT_typeSubsc..."		<input type="checkbox"/>	<input checked="" type="checkbox"/>					
48	Bool	false	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Is TRUE for one cycle to signal that new data wa
49	Bool	false	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Is TRUE, when either internal Buffer of FB is too
50	WString[300]	WSTRING# ''	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	The topic for which the message was received
51	WString[1450]	WSTRING# ''	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	The received data (payload)
52	"LMQTT_typeSubsc..."		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
53	Bool	false	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Is TRUE for one cycle to signal that new data wa
54	Bool	false	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Is TRUE, when either internal Buffer of FB is too
55	WString[300]	WSTRING# ''	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	The topic for which the message was received
56	WString[1450]	WSTRING# ''	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	The received data (payload)
57	"LMQTT_typeSubsc..."		<input type="checkbox"/>	<input checked="" type="checkbox"/>					
58	Bool	false	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Is TRUE for one cycle to signal that new data wa
59	Bool	false	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Is TRUE, when either internal Buffer of FB is too
	WString[300]	WSTRING# ''	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	The topic for which the message was received

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MQTTdata

Name	Data type	Start value	Retain	Accessible f...	Writ...	Visible in ...	Setpoint	Supervis...	Comment
37 publishMessageData	WString[800]	WSTRING#''	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Size be increased, but must increase MAX_SEN
38 publishQoS	Int	0	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Defines the QoS level for the MQTT message. 0
39 publishRetainFlag	Bool	false	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If true, message may be saved at the broker
40 mqttDataSubscribe	"LMQTT_typeSubsc...		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
41 subscribeToTopic	Bool	false	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	When true, subscribes to the topic indicated by
42 unsubscribeFromTopic	Bool	false	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	When true, unsubscribes from the "subscription"
43 subscriptionTopic	WString[250]	WSTRING# 'FRO...	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Topic name to subscribe to or unsubscribe off
44 subscriptionQoS	Int	0	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Defines the QoS level for the MQTT message at
45 receivedData	Array[0..4] of "LMQ...		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
46 receivedData[0]	"LMQTT_typeSubsc...		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
47 newMessageReceived	Bool	false	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is TRUE for one cycle to signal that new data wa
48 messageInvalid	Bool	false	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is TRUE, when either internal Buffer of FB is too
49 receivingTopic	WString[300]	WSTRING#''	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The topic for which the message was received
50 receivedMessageData	WString[1450]	WSTRING#''	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The received data (payload)
51 receivedData[1]	"LMQTT_typeSubsc...		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
52 newMessageReceived	Bool	false	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is TRUE for one cycle to signal that new data wa
53 messageInvalid	Bool	false	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is TRUE, when either internal Buffer of FB is too
54 receivingTopic	WString[300]	WSTRING#''	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The topic for which the message was received
55 receivedMessageData	WString[1450]	WSTRING#''	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The received data (payload)
56 receivedData[2]	"LMQTT_typeSubsc...		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
57 newMessageReceived	Bool	false	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is TRUE for one cycle to signal that new data wa
58 messageInvalid	Bool	false	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is TRUE, when either internal Buffer of FB is too
59 receivingTopic	WString[300]	WSTRING#''	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The topic for which the message was received
60 receivedMessageData	WString[1450]	WSTRING#''	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The received data (payload)
61 receivedData[3]	"LMQTT_typeSubsc...		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
62 newMessageReceived	Bool	false	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is TRUE for one cycle to signal that new data wa
63 messageInvalid	Bool	false	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is TRUE, when either internal Buffer of FB is too
64 receivingTopic	WString[300]	WSTRING#''	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The topic for which the message was received
65 receivedMessageData	WString[1450]	WSTRING#''	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The received data (payload)
66 receivedData[4]	"LMQTT_typeSubsc...		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
67 newMessageReceived	Bool	false	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is TRUE for one cycle to signal that new data wa
68 messageInvalid	Bool	false	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is TRUE, when either internal Buffer of FB is too
69 receivingTopic	WString[300]	WSTRING#''	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The topic for which the message was received
70 receivedMessageData	WString[1450]	WSTRING#''	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The received data (payload)
71 recDataCounter	UInt	0	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
72 automaticPublish	Bool	false	<input checked="" type="checkbox"/>	<input type="checkbox"/>					
73 automaticReconnect	Bool	true	<input checked="" type="checkbox"/>	<input type="checkbox"/>					
74 status	Struct		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
75 tcpOk	Bool	false	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
76 mqttOk	Bool	false	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
77 statusID	Int	0	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
78 statusCode	DWord	16#0	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
79 error	Bool	false	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
80 mqttSubscriptionData	"LMQTT_typeSubsc...		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

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MQTTdata

Name	Data type	Start value	Retain	Accessible f...	Writ...	Visible in ...	Setpoint	Supervis...	Comment
49 receivingTopic	WString[300]	WSTRING#''	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The topic for which the message was received
50 receivedMessageData	WString[1450]	WSTRING#''	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The received data (payload)
51 recieveData[1]	"LMQTT_typeSubsc..."		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
52 newMessageReceived	Bool	false	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is TRUE for one cycle to signal that new data wa
53 messageInvalid	Bool	false	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is TRUE, when either internal Buffer of FB is too
54 receivingTopic	WString[300]	WSTRING#''	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The topic for which the message was received
55 receivedMessageData	WString[1450]	WSTRING#''	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The received data (payload)
56 recieveData[2]	"LMQTT_typeSubsc..."		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
57 newMessageReceived	Bool	false	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is TRUE for one cycle to signal that new data wa
58 messageInvalid	Bool	false	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is TRUE, when either internal Buffer of FB is too
59 receivingTopic	WString[300]	WSTRING#''	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The topic for which the message was received
60 receivedMessageData	WString[1450]	WSTRING#''	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The received data (payload)
61 recieveData[3]	"LMQTT_typeSubsc..."		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
62 newMessageReceived	Bool	false	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is TRUE for one cycle to signal that new data wa
63 messageInvalid	Bool	false	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is TRUE, when either internal Buffer of FB is too
64 receivingTopic	WString[300]	WSTRING#''	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The topic for which the message was received
65 receivedMessageData	WString[1450]	WSTRING#''	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The received data (payload)
66 recieveData[4]	"LMQTT_typeSubsc..."		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
67 newMessageReceived	Bool	false	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is TRUE for one cycle to signal that new data wa
68 messageInvalid	Bool	false	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is TRUE, when either internal Buffer of FB is too
69 receivingTopic	WString[300]	WSTRING#''	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The topic for which the message was received
70 receivedMessageData	WString[1450]	WSTRING#''	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The received data (payload)
71 recDataCounter	UInt	0	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
72 automaticPublish	Bool	false	<input checked="" type="checkbox"/>	<input type="checkbox"/>					
73 automaticReconnect	Bool	true	<input checked="" type="checkbox"/>	<input type="checkbox"/>					
74 status	Struct		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
75 tcpOk	Bool	false	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
76 mqttOk	Bool	false	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
77 statusID	Int	0	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
78 statusCode	DWord	16#0	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
79 error	Bool	false	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
80 mqttSubscriptionData	"LMQTT_typeSubsc..."		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
81 newMessageReceived	Bool	false	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Is TRUE for one cycle to signal that new data wa
82 messageInvalid	Bool	false	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Is TRUE, when either internal Buffer of FB is too
83 receivingTopic	WString[300]	WSTRING#''	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	The topic for which the message was received
84 receivedMessageData	WString[1450]	WSTRING#''	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	The received data (payload)

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