Table of Contents

Siemens - D:\Documents\Automation\TrafficLight\TrafficLight

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

- TrafficLight
  - Add new device
  - Devices & networks
  - PLC_1 [CPU 1211C DC/DC/DC]
    - Device configuration
    - Online & diagnostics
    - Program 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 alarm text lists
    - Local modules
  - TP1200 Comfort [TP1200 Comfort]
  - Ungrouped devices
  - Security settings
  - Cross-device functions
  - Common data
  - Documentation settings
  - Languages & resources
  - Version control interface
  - Testsuite
- Online access
- Card Reader/USB memory

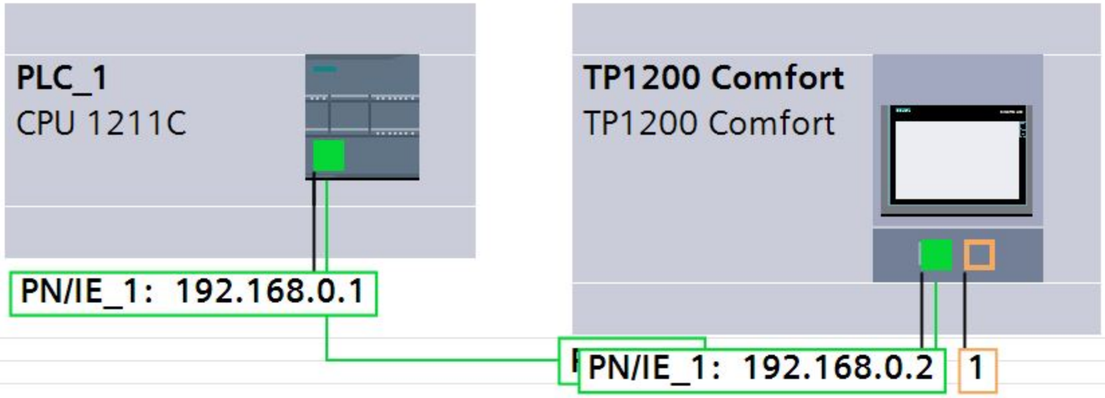
Reference projects

Details view

TrafficLight ▸ Devices & networks

Topology view | Network view | Device view

Network | Connections | HMI connection



213%

Properties | Info | Diagnostics

General

No 'properties' available.

No 'properties' can be shown at the moment. There is either no object selected or the selected object does not have any displayable properties.

Hardware catalog | Online tools | Tasks | Libraries | Add-ins

Portal view | Overview | Devices & ne...

Loading completed (errors: 0; warning...

Siemens - D:\Documents\Automation\TrafficLight\TrafficLight

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

- TrafficLight
  - Add new device
  - Devices & networks
  - PLC_1 [CPU 1211C DC/DC/DC]
    - Device configuration
    - Online & diagnostics
    - Program 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 alarm text lists
    - Local modules
  - TP1200 Comfort [TP1200 Comfort]
  - Ungrouped devices
  - Security settings
  - Cross-device functions
  - Common data
  - Documentation settings
  - Languages & resources
  - Version control interface
  - Testsuite
- Online access
- Card Reader/USB memory

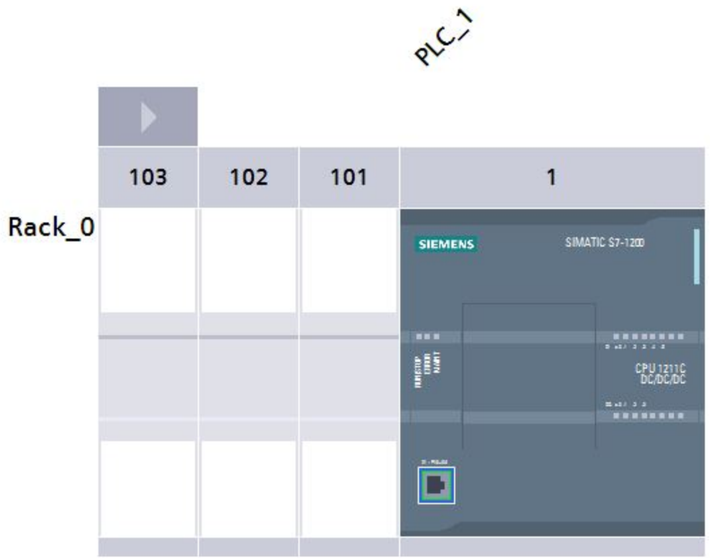
Reference projects

Details view

TrafficLight ▸ PLC_1 [CPU 1211C DC/DC/DC]

Topology view | Network view | Device view

PLC_1 [CPU 1211C]



163%

PROFINET interface_1 [Module]

Properties | Info | Diagnostics

General | IO tags | System constants | Texts

- General
- Ethernet addresses
- Time synchronization
- Operating mode
- Advanced options
  - Interface options
  - Real time settings
  - Port [X1 P1]
- Web server access

Ethernet addresses

Interface networked with

Subnet: PN/IE_1

Add new subnet

IP protocol

Set IP address in the project

IP address: 192 . 168 . 0 . 1

Subnet mask: 255 . 255 . 255 . 0

Use router

Hardware catalog | Online tools | Tasks | Libraries | Add-ins

Devices & networks

Portal view | Overview | PLC_1

Loading completed (errors: 0; warning...

Siemens - D:\Documents\Automation\TrafficLight\TrafficLight

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

- TrafficLight
  - Add new device
  - Devices & networks
  - PLC_1 [CPU 1211C DC/DC/DC]
    - Device configuration
    - Online & diagnostics
    - Program 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 alarm text lists
    - Local modules
  - TP1200 Comfort [TP1200 Comfort]
  - 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

TrafficLight ▸ PLC_1 [CPU 1211C DC/DC/DC]

Topology view | Network view | Device view

PLC_1 [CPU 1211C]

163%

PLC_1 [CPU 1211C DC/DC/DC]

Properties | Info | Diagnostics

General | IO tags | System constants | Texts

- AI 2
- High speed counters (HSC)
- Pulse generators (PTO/PWM)
- Startup
- Cycle
- Communication load
- System and clock memory
- Web server
  - General
  - Automatic update
  - User management
  - Watch tables
  - User-defined pages
  - Entry page
  - Overview of interfaces
- Multilingual support
- Time of day
- Protection & Security
- OPC UA
- Advanced configuration
  - DNS configuration

System and clock memory

System memory bits

☑ Enable the use of system memory byte

Address of system memory byte (MBx):	1
First cycle:	%M1.0 (FirstScan)
Diagnostic status changed:	%M1.1 (DiagStatusUpdate)
Always 1 (high):	%M1.2 (AlwaysTRUE)
Always 0 (low):	%M1.3 (AlwaysFALSE)

Clock memory bits

☑ Enable the use of clock memory byte

Address of clock memory byte (MBx):	0
10 Hz clock:	%M0.0 (Clock_10Hz)
5 Hz clock:	%M0.1 (Clock_5Hz)
2.5 Hz clock:	%M0.2 (Clock_2.5Hz)

Hardware catalog | Online tools | Tasks | Libraries | Add-ins

Portal view | Overview | PLC_1

Loading completed (errors: 0; warning...

Siemens - D:\Documents\Automation\TrafficLight\TrafficLight

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

- TrafficLight
  - Add new device
  - Devices & networks
  - PLC_1 [CPU 1211C DC/DC/DC]
    - Device configuration
    - Online & diagnostics
    - Program blocks
      - Add new block
      - Main [OB1]
      - Startup [OB100]
      - faultOutput [FC1]
      - performReset [FC2]
      - Intersection [FB2]
      - LightOperation [FB1]
      - Intersection_DB [DB3]
    - 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 alarm text lists
    - Local modules
  - TP1200 Comfort [TP1200 Comfort]
  - 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

TrafficLight ▸ PLC_1 [CPU 1211C DC/DC/DC] ▸ Program blocks ▸ Main [OB1]

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	<Add new>			
6	Constant			
7	<Add new>			

Block title: "Main Program Sweep (Cycle)"

Comment

Network 1:

Comment

%DB3
"Intersection_DB"

%FB2
"Intersection"

EN		ENO
northLightGreen	%Q0.0 "northLightGreen"	
northLightYellow	%Q0.1 "northLightYellow"	
northLightRed	%Q0.2 "northLightRed"	
southLightGreen	%Q0.3 "southLightGreen"	
southLightYellow	%Q0.4 "southLightYellow"	
southLightRed	%Q0.5 "southLightRed"	
eastLightGreen	%Q1.0 "eastLightGreen"	
eastLightYellow	%Q1.1 "eastLightYellow"	
eastLightRed	%Q1.2 "eastLightRed"	

100%

Properties | Info | Diagnostics | Plug-ins

Instructions | Testing | Tasks | Libraries | Add-ins

Portal view | Overview | PLC_1 | Main (OB1)

Loading completed (errors: 0; warning...

Siemens - D:\Documents\Automation\TrafficLight\TrafficLight

Project Edit View Insert Online Options Tools Window Help

Save project | Go online | Go offline | <Search in project>

Totally Integrated Automation PORTAL

TrafficLight ▸ PLC_1 [CPU 1211C DC/DC/DC] ▸ Program blocks ▸ Main [OB1]

Project tree

Devices | Plant objects

- TrafficLight
  - Add new device
  - Devices & networks
  - PLC_1 [CPU 1211C DC/DC/DC]
    - Device configuration
    - Online & diagnostics
    - Program blocks
      - Add new block
      - Main [OB1]
      - Startup [OB100]
      - faultOutput [FC1]
      - performReset [FC2]
      - Intersection [FB2]
      - LightOperation [FB1]
      - Intersection_DB [DB3]
    - 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 alarm text lists
    - Local modules
  - TP1200 Comfort [TP1200 Comfort]
  - 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

Block interface

Block title: "Main Program Sweep (Cycle)"

Comment

Network 1:

Comment

%DB3
"Intersection_DB"

%FB2
"Intersection"

EN		ENO
northLightGreen	%Q0.0	"northLightGreen"
northLightYellow	%Q0.1	"northLightYellow"
northLightRed	%Q0.2	"northLightRed"
southLightGreen	%Q0.3	"southLightGreen"
southLightYellow	%Q0.4	"southLightYellow"
southLightRed	%Q0.5	"southLightRed"
eastLightGreen	%Q1.0	"eastLightGreen"
eastLightYellow	%Q1.1	"eastLightYellow"
eastLightRed	%Q1.2	"eastLightRed"
westLightGreen	%Q1.3	"westLightGreen"
westLightYellow	%Q1.4	"westLightYellow"
westLightRed	%Q1.5	"westLightRed"

Network 2:

100%

Properties | Info | Diagnostics | Plug-ins

Instructions | Testing | Tasks | Libraries | Add-ins

Portal view | Overview | PLC_1 | Main (OB1)

Loading completed (errors: 0; warning...

Siemens - D:\Documents\Automation\TrafficLight\TrafficLight

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

- TrafficLight
  - Add new device
  - Devices & networks
  - PLC_1 [CPU 1211C DC/DC/DC]
    - Device configuration
    - Online & diagnostics
    - Program blocks
      - Add new block
      - Main [OB1]
      - Startup [OB100]
      - faultOutput [FC1]
      - performReset [FC2]
      - Intersection [FB2]
      - LightOperation [FB1]
      - Intersection_DB [DB3]
    - 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 alarm text lists
    - Local modules
  - TP1200 Comfort [TP1200 Comfort]
  - 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

TrafficLight ▸ PLC_1 [CPU 1211C DC/DC/DC] ▸ Program blocks ▸ Startup [OB100]

Startup

	Name	Data type	Default value	Comment
1	Input			
2	LostRetentive	Bool		True if retentive data are lost
3	LostRTC	Bool		True if date and time are lost
4	Temp			
5	<Add new>			
6	Constant			
7	<Add new>			

Block title: "Complete Restart"

Comment

Network 1:

Comment

%M2.0
"systemFAULT"

Network 2:

Comment

100%

Properties | Info | Diagnostics | Plug-ins

Portal view | Overview | PLC_1 | Main (OB1) | Intersection ... | Startup (OB1...

Loading completed (errors: 0; warning...

Instructions | Testing | Tasks | Libraries | Add-ins

Siemens - D:\Documents\Automation\TrafficLight\TrafficLight

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

- TrafficLight
  - Add new device
  - Devices & networks
  - PLC_1 [CPU 1211C DC/DC/DC]
    - Device configuration
    - Online & diagnostics
    - Program blocks
      - Add new block
      - Main [OB1]
      - Startup [OB100]
      - faultOutput [FC1]
      - performReset [FC2]
      - Intersection [FB2]
      - LightOperation [FB1]
      - Intersection_DB [DB3]
    - 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 alarm text lists
    - Local modules
  - TP1200 Comfort [TP1200 Comfort]
  - 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

TrafficLight ▸ PLC_1 [CPU 1211C DC/DC/DC] ▸ Program blocks ▸ Intersection [FB2]

Intersection

	Name	Data type	Default value	Retain	Accessible f...	Writa...	Visible in ...	Setpoint	Comment
1	Input				☐	☐	☐	☐	
2	<Add new>				☐	☐	☐	☐	
3	Output				☐	☐	☐	☐	
4	northLightGreen	Bool	false	Non-retain	☑	☑	☑	☐	
5	northLightYellow	Bool	false	Non-retain	☑	☑	☑	☐	
6	northLightRed	Bool	false	Non-retain	☑	☑	☑	☐	
7	southLightGreen	Bool	false	Non-retain	☑	☑	☑	☐	
8	southLightYellow	Bool	false	Non-retain	☑	☑	☑	☐	
9	southLightRed	Bool	false	Non-retain	☑	☑	☑	☐	
10	eastLightGreen	Bool	false	Non-retain	☑	☑	☑	☐	
11	eastLightYellow	Bool	false	Non-retain	☑	☑	☑	☐	
12	eastLightRed	Bool	false	Non-retain	☑	☑	☑	☐	
13	westLightGreen	Bool	false	Non-retain	☑	☑	☑	☐	
14	westLightYellow	Bool	false	Non-retain	☑	☑	☑	☐	
15	westLightRed	Bool	false	Non-retain	☑	☑	☑	☐	
16	InOut				☐	☐	☐	☐	
17	<Add new>				☐	☐	☐	☐	
18	Static				☐	☐	☐	☐	
19	northLightOperation	"LightOperation"			☑	☑	☑	☑	
20	southLightOperation	"LightOperation"			☑	☑	☑	☑	
21	northInterlock	Bool	false	Non-retain	☑	☑	☑	☑	
22	southInterlock	Bool	false	Non-retain	☑	☑	☑	☑	
23	eastInterlock	Bool	false	Non-retain	☑	☑	☑	☐	
24	westInterlock	Bool	false	Non-retain	☑	☑	☑	☐	
25	eastLightOperation	"LightOperation"			☑	☑	☑	☑	
26	westLightOperation	"LightOperation"			☑	☑	☑	☑	

Block title:

Comment

Network 1: Perform Reset or Start button event either through HMI button or PLC tag input

Comment

100%

Properties | Info | Diagnostics | Plug-ins

Instructions | Testing | Tasks | Libraries | Add-ins

PLC programming

Portal view | Overview | PLC_1 | Main (OB1) | Intersection ...

Loading completed (errors: 0; warning...

Siemens - D:\Documents\Automation\TrafficLight\TrafficLight

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

- TrafficLight
  - Add new device
  - Devices & networks
  - PLC_1 [CPU 1211C DC/DC/DC]
    - Device configuration
    - Online & diagnostics
    - Program blocks
      - Add new block
      - Main [OB1]
      - Startup [OB100]
      - faultOutput [FC1]
      - performReset [FC2]
      - Intersection [FB2]
      - LightOperation [FB1]
      - Intersection_DB [DB3]
    - 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 alarm text lists
    - Local modules
  - TP1200 Comfort [TP1200 Comfort]
  - 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

TrafficLight ▸ PLC_1 [CPU 1211C DC/DC/DC] ▸ Program blocks ▸ Intersection [FB2]

Intersection

	Name	Data type	Default value	Retain	Accessible f...	Writa...	Visible in ...	Setpoint	Comment
14	westLightYellow	Bool	false	Non-retain	☑	☑	☑	☐	
15	westLightRed	Bool	false	Non-retain	☑	☑	☑	☐	
16	InOut				☐	☐	☐	☐	
17	<Add new>				☐	☐	☐	☐	
18	Static				☐	☐	☐	☐	
19	northLightOperation	"LightOperation"			☑	☑	☑	☑	
20	southLightOperation	"LightOperation"			☑	☑	☑	☑	
21	northInterlock	Bool	false	Non-retain	☑	☑	☑	☑	
22	southInterlock	Bool	false	Non-retain	☑	☑	☑	☑	
23	eastInterlock	Bool	false	Non-retain	☑	☑	☑	☐	
24	westInterlock	Bool	false	Non-retain	☑	☑	☑	☐	
25	eastLightOperation	"LightOperation"			☑	☑	☑	☑	
26	westLightOperation	"LightOperation"			☑	☑	☑	☑	
27	eastInterlockFallEdge	Bool	false	Non-retain	☑	☑	☑	☑	
28	westInterlockFallEdge	Bool	false	Non-retain	☑	☑	☑	☐	
29	northInterlockFallEdge	Bool	false	Non-retain	☑	☑	☑	☐	
30	southInterlockFallEdge	Bool	false	Non-retain	☑	☑	☑	☐	
31	northSouthONDelay	TON_TIME		Non-retain	☑	☑	☑	☑	
32	eastWestONDelay	TON_TIME		Non-retain	☑	☑	☑	☑	
33	startNorth	Bool	false	Non-retain	☐	☐	☐	☐	
34	startSouth	Bool	false	Non-retain	☐	☐	☐	☐	
35	startEast	Bool	false	Non-retain	☐	☐	☐	☐	
36	startWest	Bool	false	Non-retain	☐	☐	☐	☐	
37	startNSTimer	Bool	false	Non-retain	☑	☑	☑	☐	
38	startEWTimer	Bool	false	Non-retain	☑	☑	☑	☐	
39	Temp				☐	☐	☐	☐	

Block title:

Comment

Network 1: Perform Reset or Start button event either through HMI button or PLC tag input

Comment

100%

Properties | Info | Diagnostics | Plug-ins

Instructions | Testing | Tasks | Libraries | Add-ins

Portal view | Overview | PLC_1 | Main (OB1) | Intersection ...

Loading completed (errors: 0; warning...

Siemens - D:\Documents\Automation\TrafficLight\TrafficLight

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

- TrafficLight
  - Add new device
  - Devices & networks
  - PLC_1 [CPU 1211C DC/DC/DC]
    - Device configuration
    - Online & diagnostics
    - Program blocks
      - Add new block
      - Main [OB1]
      - Startup [OB100]
      - faultOutput [FC1]
      - performReset [FC2]
      - Intersection [FB2]
      - LightOperation [FB1]
      - Intersection_DB [DB3]
    - 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 alarm text lists
    - Local modules
  - TP1200 Comfort [TP1200 Comfort]
  - 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

TrafficLight ▸ PLC_1 [CPU 1211C DC/DC/DC] ▸ Program blocks ▸ Intersection [FB2]

Intersection

	Name	Data type	Default value	Retain	Accessible f...	Writa...	Visible in ...	Setpoint	Comment
23	eastInterlock	Bool	false	Non-retain	☑	☑	☑	☐	
24	westInterlock	Bool	false	Non-retain	☑	☑	☑	☐	
25	eastLightOperation	"LightOperation"			☑	☑	☑	☑	
26	westLightOperation	"LightOperation"			☑	☑	☑	☑	
27	eastInterlockFallEdge	Bool	false	Non-retain	☑	☑	☑	☑	
28	westInterlockFallEdge	Bool	false	Non-retain	☑	☑	☑	☐	
29	northInterlockFallEdge	Bool	false	Non-retain	☑	☑	☑	☐	
30	southInterlockFallEdge	Bool	false	Non-retain	☑	☑	☑	☐	
31	northSouthONDelay	TON_TIME		Non-retain	☑	☑	☑	☑	
32	eastWestONDelay	TON_TIME		Non-retain	☑	☑	☑	☑	
33	startNorth	Bool	false	Non-retain	☐	☐	☐	☐	
34	startSouth	Bool	false	Non-retain	☐	☐	☐	☐	
35	startEast	Bool	false	Non-retain	☐	☐	☐	☐	
36	startWest	Bool	false	Non-retain	☐	☐	☐	☐	
37	startNSTimer	Bool	false	Non-retain	☑	☑	☑	☐	
38	startEWTimer	Bool	false	Non-retain	☑	☑	☑	☐	
39	Temp				☐	☐	☐	☐	
40	performRESET	Bool			☐	☐	☐	☐	
41	performSTART	Bool			☐	☐	☐	☐	
42	Constant				☐	☐	☐	☐	
43	<Add new>				☐	☐	☐	☐	

Block title:

Comment

Network 1: Perform Reset or Start button event either through HMI button or PLC tag input

Comment

100%

Properties | Info | Diagnostics | Plug-ins

Instructions | Testing | Tasks | Libraries | Add-ins

PLC programming

Portal view | Overview | PLC_1 | Main (OB1) | Intersection ...

Loading completed (errors: 0; warning...

Siemens - D:\Documents\Automation\TrafficLight\TrafficLight

Project Edit View Insert Online Options Tools Window Help

Save project | Go online | Go offline | <Search in project>

Totally Integrated Automation PORTAL

TrafficLight ▸ PLC_1 [CPU 1211C DC/DC/DC] ▸ Program blocks ▸ Intersection [FB2]

Project tree

Devices | Plant objects

- TrafficLight
  - Add new device
  - Devices & networks
  - PLC_1 [CPU 1211C DC/DC/DC]
    - Device configuration
    - Online & diagnostics
    - Program blocks
      - Add new block
      - Main [OB1]
      - Startup [OB100]
      - faultOutput [FC1]
      - performReset [FC2]
      - Intersection [FB2]
      - LightOperation [FB1]
      - Intersection_DB [DB3]
    - 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 alarm text lists
    - Local modules
  - TP1200 Comfort [TP1200 Comfort]
  - 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

Block interface

Block title: .....

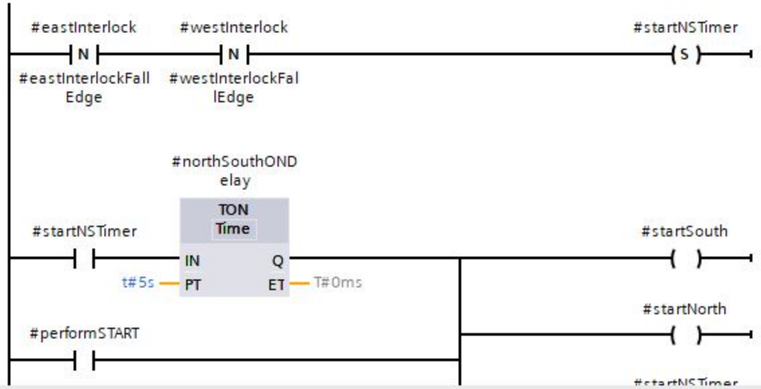
Comment

Network 1: Perform Reset or Start button event either through HMI button or PLC tag input

Comment

Network 2: 5 sec delay between switching on NS signal control. Start button gives precedence to NS and it will start NS...

Comment



100%

Properties | Info | Diagnostics | Plug-ins

Portal view | Overview | PLC_1 | Main (OB1) | Intersection ...

Loading completed (errors: 0; warning...

Siemens - D:\Documents\Automation\TrafficLight\TrafficLight

Project Edit View Insert Online Options Tools Window Help

Save project | Go online | Go offline | <Search in project>

Totally Integrated Automation PORTAL

TrafficLight ▸ PLC_1 [CPU 1211C DC/DC/DC] ▸ Program blocks ▸ Intersection [FB2]

Project tree

Devices | Plant objects

- TrafficLight
  - Add new device
  - Devices & networks
  - PLC_1 [CPU 1211C DC/DC/DC]
    - Device configuration
    - Online & diagnostics
    - Program blocks
      - Add new block
      - Main [OB1]
      - Startup [OB100]
      - faultOutput [FC1]
      - performReset [FC2]
      - Intersection [FB2]
      - LightOperation [FB1]
      - Intersection_DB [DB3]
    - 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 alarm text lists
    - Local modules
  - TP1200 Comfort [TP1200 Comfort]
  - Ungrouped devices
  - Security settings
  - Cross-device functions
  - Common data
  - Documentation settings
  - Languages & resources
  - Version control interface
  - Testsuite
- Online access
- Card Reader/USB memory

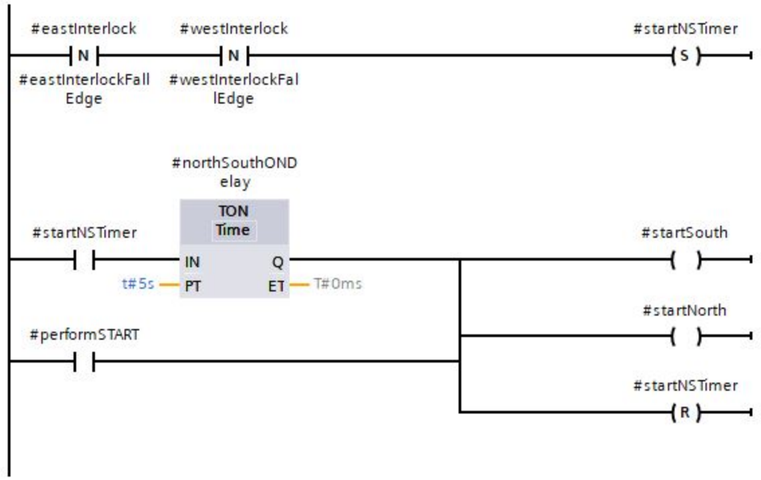
Reference projects

Details view

Block interface

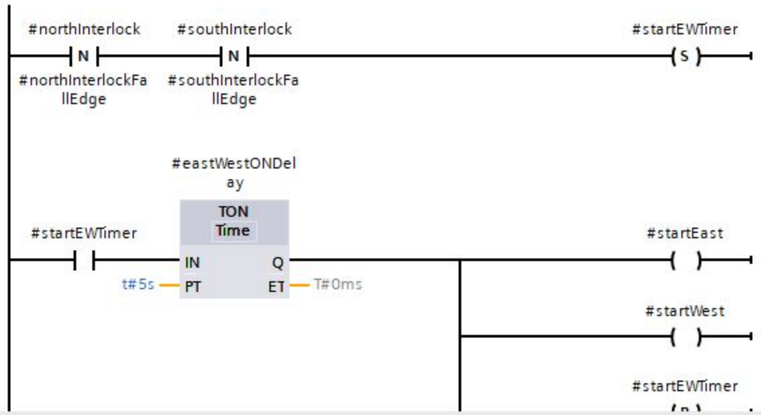
Network 2: 5 sec delay between switching on NS signal control. Start button gives precedence to NS and it will start NS...

Comment



Network 3: 5 sec delay between switching on EW signal control

Comment



100%

Properties | Info | Diagnostics | Plug-ins

Portal view | Overview | PLC_1 | Main (OB1) | Intersection ...

Loading completed (errors: 0; warning...

Instructions | Testing | Tasks | Libraries | Add-ins

Siemens - D:\Documents\Automation\TrafficLight\TrafficLight

Project Edit View Insert Online Options Tools Window Help

Save project | Go online | Go offline | <Search in project>

Totally Integrated Automation PORTAL

TrafficLight ▸ PLC_1 [CPU 1211C DC/DC/DC] ▸ Program blocks ▸ Intersection [FB2]

Project tree

Devices | Plant objects

- TrafficLight
  - Add new device
  - Devices & networks
  - PLC_1 [CPU 1211C DC/DC/DC]
    - Device configuration
    - Online & diagnostics
    - Program blocks
      - Add new block
      - Main [OB1]
      - Startup [OB100]
      - faultOutput [FC1]
      - performReset [FC2]
      - Intersection [FB2]
      - LightOperation [FB1]
      - Intersection_DB [DB3]
    - 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 alarm text lists
    - Local modules
  - TP1200 Comfort [TP1200 Comfort]
  - Ungrouped devices
  - Security settings
  - Cross-device functions
  - Common data
  - Documentation settings
  - Languages & resources
  - Version control interface
  - Testsuite
- Online access
- Card Reader/USB memory

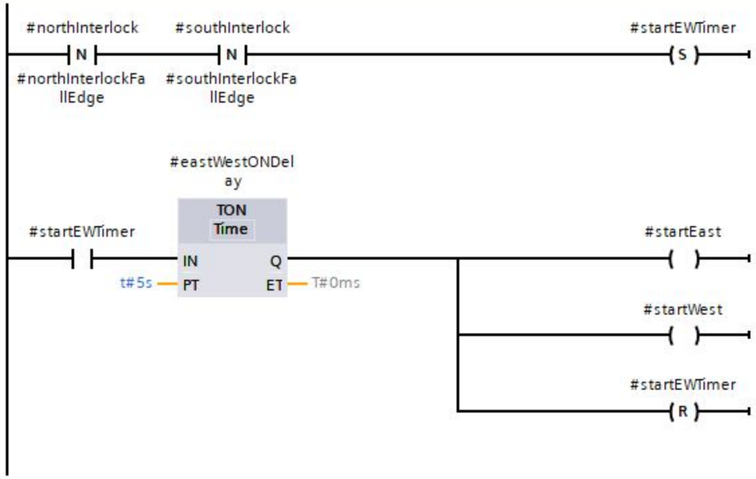
Reference projects

Details view

Block interface

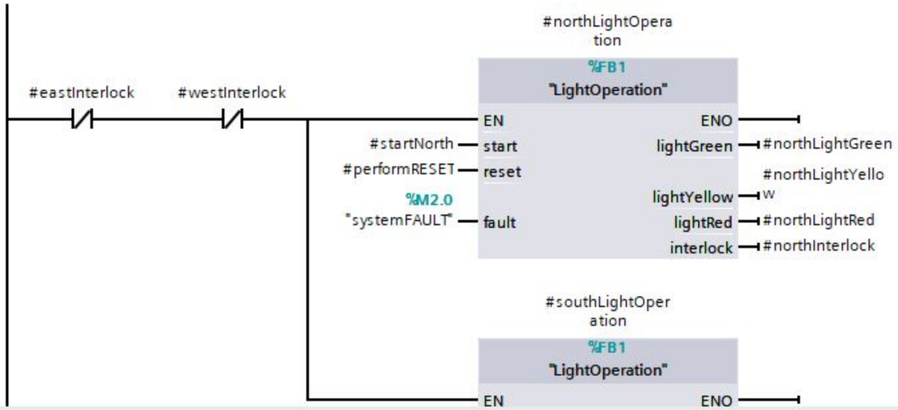
Network 3: 5 sec delay between switching on EW signal control

Comment



Network 4: North South Light operation

Comment



100%

Properties | Info | Diagnostics | Plug-ins

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

Instructions | Testing | Tasks | Libraries | Add-ins

Siemens - D:\Documents\Automation\TrafficLight\TrafficLight

Project Edit View Insert Online Options Tools Window Help

Save project | Go online | Go offline | <Search in project>

Totally Integrated Automation PORTAL

TrafficLight ▸ PLC_1 [CPU 1211C DC/DC/DC] ▸ Program blocks ▸ Intersection [FB2]

Project tree

Devices | Plant objects

- TrafficLight
  - Add new device
  - Devices & networks
  - PLC_1 [CPU 1211C DC/DC/DC]
    - Device configuration
    - Online & diagnostics
    - Program blocks
      - Add new block
      - Main [OB1]
      - Startup [OB100]
      - faultOutput [FC1]
      - performReset [FC2]
      - Intersection [FB2]
      - LightOperation [FB1]
      - Intersection_DB [DB3]
    - 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 alarm text lists
    - Local modules
  - TP1200 Comfort [TP1200 Comfort]
  - Ungrouped devices
  - Security settings
  - Cross-device functions
  - Common data
  - Documentation settings
  - Languages & resources
  - Version control interface
  - Testsuite
- Online access
- Card Reader/USB memory

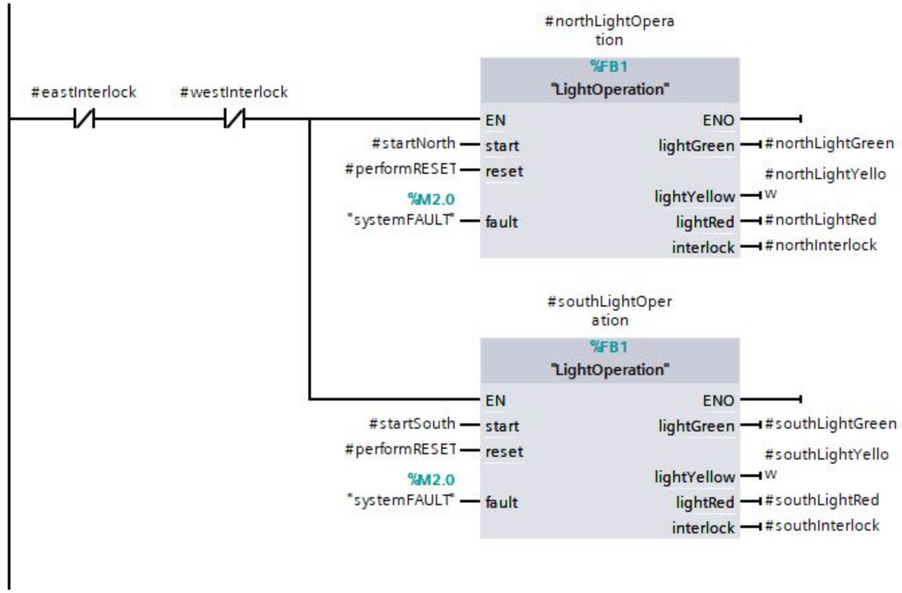
Reference projects

Details view

Block interface

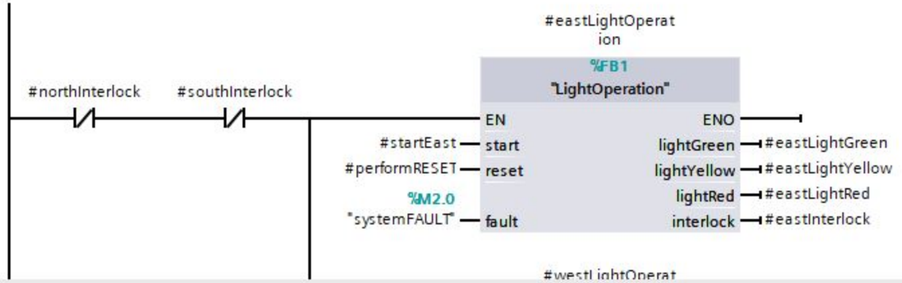
Network 4: North South Light operation

Comment



Network 5: East West Light operation

Comment



100%

Properties | Info | Diagnostics | Plug-ins

Portal view | Overview | PLC_1 | Main (OB1) | Intersection ...

Loading completed (errors: 0; warning...

Siemens - D:\Documents\Automation\TrafficLight\TrafficLight

Project Edit View Insert Online Options Tools Window Help

Save project | Go online | Go offline | <Search in project>

Totally Integrated Automation PORTAL

TrafficLight ▸ PLC_1 [CPU 1211C DC/DC/DC] ▸ Program blocks ▸ Intersection [FB2]

Project tree

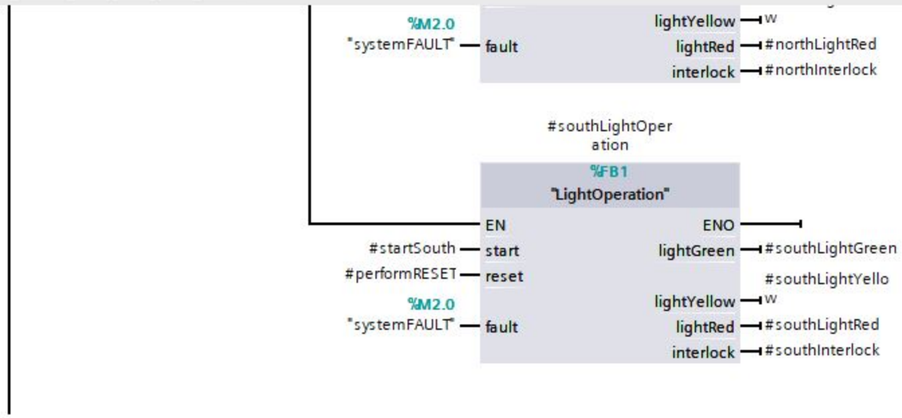
Devices | Plant objects

- TrafficLight
  - Add new device
  - Devices & networks
  - PLC_1 [CPU 1211C DC/DC/DC]
    - Device configuration
    - Online & diagnostics
    - Program blocks
      - Add new block
      - Main [OB1]
      - Startup [OB100]
      - faultOutput [FC1]
      - performReset [FC2]
      - Intersection [FB2]
      - LightOperation [FB1]
      - Intersection_DB [DB3]
    - 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 alarm text lists
    - Local modules
  - TP1200 Comfort [TP1200 Comfort]
  - 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

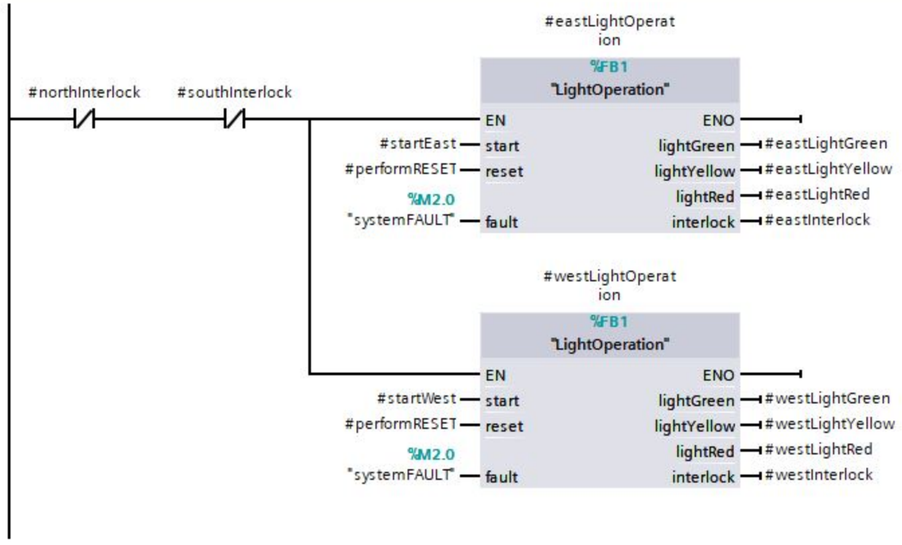
Details view

Block interface



Network 5: East West Light operation

Comment



100%

Properties | Info | Diagnostics | Plug-ins

Portal view | Overview | PLC_1 | Main (OB1) | Intersection ...

Loading completed (errors: 0; warning...

Siemens - D:\Documents\Automation\TrafficLight\TrafficLight

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

- TrafficLight
  - Add new device
  - Devices & networks
  - PLC_1 [CPU 1211C DC/DC/DC]
    - Device configuration
    - Online & diagnostics
    - Program blocks
      - Add new block
      - Main [OB1]
      - Startup [OB100]
      - faultOutput [FC1]
      - performReset [FC2]
      - Intersection [FB2]
      - LightOperation [FB1]
      - Intersection_DB [DB3]
    - 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 alarm text lists
    - Local modules
  - TP1200 Comfort [TP1200 Comfort]
  - 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

TrafficLight ▸ PLC_1 [CPU 1211C DC/DC/DC] ▸ Program blocks ▸ faultOutput [FC1]

faultOutput

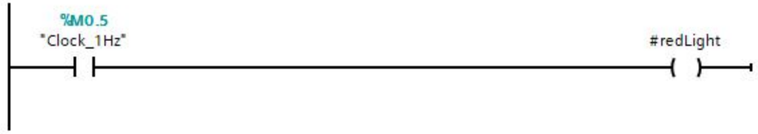
	Name	Data type	Default value	Comment
1	Input			
2	<Add new>			
3	Output			
4	redLight	Bool		
5	greenLight	Bool		
6	yellowLight	Bool		
7	interlock	Bool		
8	InOut			
9	<Add new>			
10	Temp			
11	<Add new>			
12	Constant			
13	<Add new>			
14	Return			
15	faultOutput	Void		

Block title:

Comment

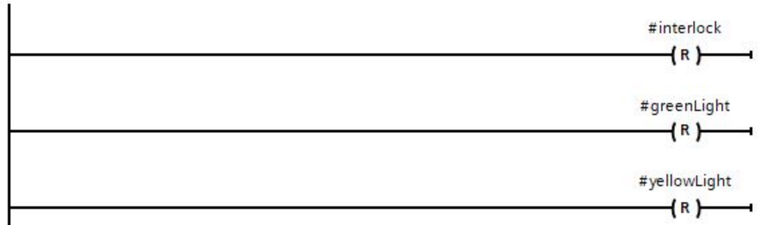
Network 1: Turn ON/OFF Red Light Every 1 second

Comment



Network 2: Remove the interlock and ensure the other lights are OFF

Comment



100%

Properties | Info | Diagnostics | Plug-ins

Portal view | Overview | faultOutput ...

Loading completed (errors: 0; warning...

Instructions | Testing | Tasks | Libraries | Add-ins

PLC programming

Siemens - D:\Documents\Automation\TrafficLight\TrafficLight

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

- TrafficLight
  - Add new device
  - Devices & networks
  - PLC_1 [CPU 1211C DC/DC/DC]
    - Device configuration
    - Online & diagnostics
    - Program blocks
      - Add new block
      - Main [OB1]
      - Startup [OB100]
      - faultOutput [FC1]
      - performReset [FC2]
      - Intersection [FB2]
      - LightOperation [FB1]
      - Intersection_DB [DB3]
    - 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 alarm text lists
    - Local modules
  - TP1200 Comfort [TP1200 Comfort]
  - 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

TrafficLight ▸ PLC_1 [CPU 1211C DC/DC/DC] ▸ Program blocks ▸ performReset [FC2]

performReset

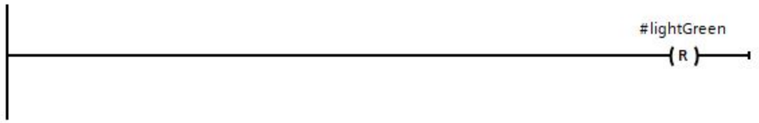
	Name	Data type	Default value	Comment
1	Input			
2	<Add new>			
3	Output			
4	lightRed	Bool		
5	lightYellow	Bool		
6	lightGreen	Bool		
7	fault	Bool		
8	InOut			
9	<Add new>			
10	Temp			
11	<Add new>			
12	Constant			
13	<Add new>			
14	Return			
15	performReset	Void		

Block title: This block performs the RESET operation once the Reset button has been pressed

Comment

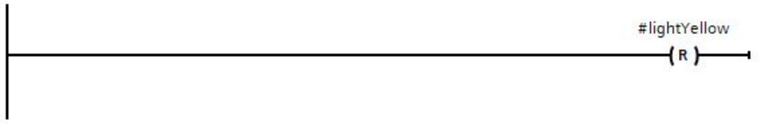
Network 1: Turn OFF Green

Comment



Network 2: Turn OFF Yellow

Comment



Network 3: Turn ON Red

Comment

100%

Properties | Info | Diagnostics | Plug-ins

Instructions | Testing | Tasks | Libraries | Add-ins

PLC programming

Portal view | Overview | performRese...

Loading completed (errors: 0; warning...

Siemens - D:\Documents\Automation\TrafficLight\TrafficLight

Project Edit View Insert Online Options Tools Window Help

Save project | Go online | Go offline | <Search in project>

Totally Integrated Automation PORTAL

TrafficLight ▸ PLC_1 [CPU 1211C DC/DC/DC] ▸ Program blocks ▸ performReset [FC2]

Project tree

Devices | Plant objects

- TrafficLight
  - Add new device
  - Devices & networks
  - PLC_1 [CPU 1211C DC/DC/DC]
    - Device configuration
    - Online & diagnostics
    - Program blocks
      - Add new block
      - Main [OB1]
      - Startup [OB100]
      - faultOutput [FC1]
      - performReset [FC2]
      - Intersection [FB2]
      - LightOperation [FB1]
      - Intersection_DB [DB3]
    - 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 alarm text lists
    - Local modules
  - TP1200 Comfort [TP1200 Comfort]
  - 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

Block interface

Block title: This block performs the RESET operation once the Reset button has been pressed

Comment

Network 1: Turn OFF Green

Comment

#lightGreen
(R)

Network 2: Turn OFF Yellow

Comment

#lightYellow
(R)

Network 3: Turn ON Red

Comment

#lightRed
(S)

Network 4: Remove the Fault

Comment

#fault
(R)

100%

Properties | Info | Diagnostics | Plug-ins

Portal view | Overview | performRese...

Loading completed (errors: 0; warning...

Instructions | Testing | Tasks | Libraries | Add-ins

PLC programming

Siemens - D:\Documents\Automation\TrafficLight\TrafficLight

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

- TrafficLight
  - Add new device
  - Devices & networks
  - PLC_1 [CPU 1211C DC/DC/DC]
    - Device configuration
    - Online & diagnostics
    - Program blocks
      - Add new block
      - Main [OB1]
      - Startup [OB100]
      - faultOutput [FC1]
      - performReset [FC2]
      - Intersection [FB2]
      - LightOperation [FB1]
      - Intersection_DB [DB3]
    - 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 alarm text lists
    - Local modules
  - TP1200 Comfort [TP1200 Comfort]
  - 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

TrafficLight ▸ PLC_1 [CPU 1211C DC/DC/DC] ▸ Program blocks ▸ LightOperation [FB1]

LightOperation

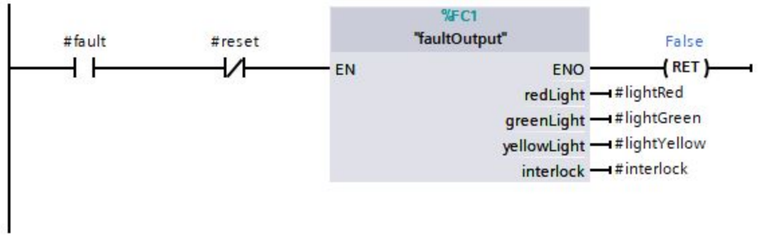
	Name	Data type	Default value	Retain	Accessible f...	Writa...	Visible in ...	Setpoint	Comment
1	Input				☐	☐	☐	☐	
2	start	Bool	false	Non-ret...	☑	☑	☑	☐	
3	reset	Bool	false	Non-retain	☑	☑	☑	☐	
4	Output				☐	☐	☐	☐	
5	lightGreen	Bool	false	Non-retain	☑	☑	☑	☐	
6	lightYellow	Bool	false	Non-retain	☑	☑	☑	☐	
7	lightRed	Bool	false	Non-retain	☑	☑	☑	☐	
8	interlock	Bool	false	Non-retain	☑	☑	☑	☐	
9	InOut				☐	☐	☐	☐	
10	fault	Bool	false	Non-retain	☑	☑	☑	☐	
11	Static				☐	☐	☐	☐	
12	interlockRiseEdge	Bool	false	Non-retain	☑	☑	☑	☐	
13	greenLightPulse	TP_TIME		Non-retain	☑	☑	☑	☑	
14	yellowLightPulse	TP_TIME		Non-retain	☑	☑	☑	☑	
15	greenLightFallEdge	Bool	false	Non-retain	☑	☑	☑	☐	
16	yellowLightFallEdge	Bool	false	Non-retain	☑	☑	☑	☐	
17	redlightRiseEdge	Bool	false	Non-retain	☑	☑	☑	☐	
18	Temp				☐	☐	☐	☐	
19	<Add new>				☐	☐	☐	☐	
20	Constant				☐	☐	☐	☐	
21	<Add new>				☐	☐	☐	☐	

Block title:

Comment

Network 1: Perform fault operation sequence when system is in fault and has not been reset

Comment



Network 2: Perform Reset and Set Red light to Solid

100%

Properties | Info | Diagnostics | Plug-ins

Portal view | Overview | LightOperati...

Loading completed (errors: 0; warning...

Instructions | Testing | Tasks | Libraries | Add-ins

Siemens - D:\Documents\Automation\TrafficLight\TrafficLight

Project Edit View Insert Online Options Tools Window Help

Save project | Go online | Go offline | <Search in project>

Totally Integrated Automation PORTAL

TrafficLight ▸ PLC_1 [CPU 1211C DC/DC/DC] ▸ Program blocks ▸ LightOperation [FB1]

Project tree

Devices | Plant objects

- TrafficLight
  - Add new device
  - Devices & networks
  - PLC_1 [CPU 1211C DC/DC/DC]
    - Device configuration
    - Online & diagnostics
    - Program blocks
      - Add new block
      - Main [OB1]
      - Startup [OB100]
      - faultOutput [FC1]
      - performReset [FC2]
      - Intersection [FB2]
      - LightOperation [FB1]
      - Intersection_DB [DB3]
    - 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 alarm text lists
    - Local modules
  - TP1200 Comfort [TP1200 Comfort]
  - 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

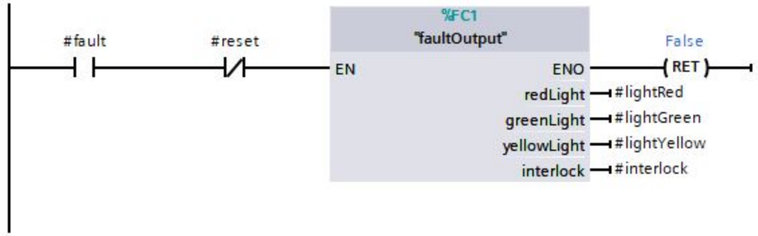
Block interface

Block title: .....

Comment

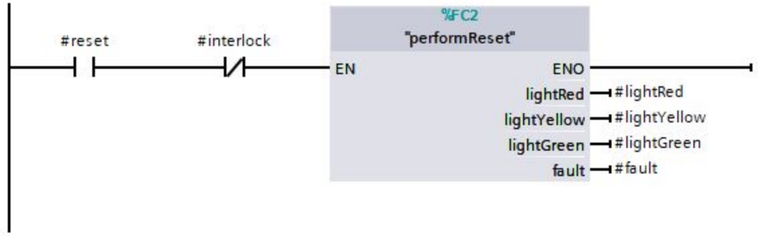
Network 1: Perform fault operation sequence when system is in fault and has not been reset

Comment



Network 2: Perform Reset and Set Red light to Solid

Comment



Network 3: Start the Normal signal light operation by setting the interlock to true so that no external can control the lig...

Comment

Network 4: As soon as Interlock comes to true, turn on GREE light

Comment

100%

Properties | Info | Diagnostics | Plug-ins

Instructions | Testing | Tasks | Libraries | Add-ins

Portal view | Overview | LightOperati...

Loading completed (errors: 0; warning...

Siemens - D:\Documents\Automation\TrafficLight\TrafficLight

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

- TrafficLight
  - Add new device
  - Devices & networks
  - PLC_1 [CPU 1211C DC/DC/DC]
    - Device configuration
    - Online & diagnostics
    - Program blocks
      - Add new block
      - Main [OB1]
      - Startup [OB100]
      - faultOutput [FC1]
      - performReset [FC2]
      - Intersection [FB2]
      - LightOperation [FB1]
      - Intersection_DB [DB3]
    - 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 alarm text lists
    - Local modules
  - TP1200 Comfort [TP1200 Comfort]
  - 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

TrafficLight ▸ PLC_1 [CPU 1211C DC/DC/DC] ▸ Program blocks ▸ LightOperation [FB1]

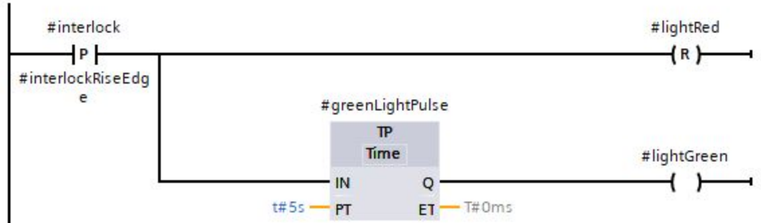
Block interface

Network 3: Start the Normal signal light operation by setting the interlock to true so that no external can control the lig...

Comment

Network 4: As soon as Interlock comes to true, turn on GREE light

Comment



Network 5: Turn ON YELLOW light when Green goes off

Comment

Network 6: Turn ON RED light once yellow goes off, and remove the interlock indicating the signal light operation has b...

Comment

100%

Properties | Info | Diagnostics | Plug-ins

Portal view | Overview | LightOperati...

Loading completed (errors: 0; warning...

Siemens - D:\Documents\Automation\TrafficLight\TrafficLight

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

- TrafficLight
  - Add new device
  - Devices & networks
  - PLC_1 [CPU 1211C DC/DC/DC]
    - Device configuration
    - Online & diagnostics
    - Program blocks
      - Add new block
      - Main [OB1]
      - Startup [OB100]
      - faultOutput [FC1]
      - performReset [FC2]
      - Intersection [FB2]
      - LightOperation [FB1]
      - Intersection_DB [DB3]
    - 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 alarm text lists
    - Local modules
  - TP1200 Comfort [TP1200 Comfort]
  - 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

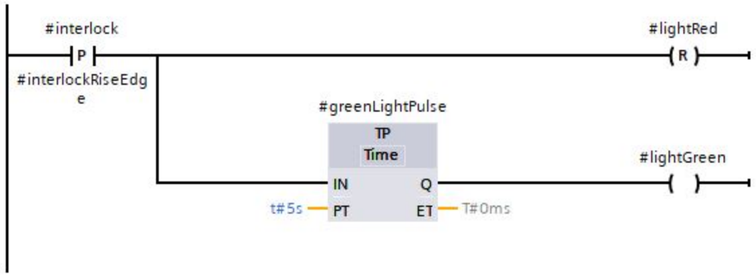
Details view

TrafficLight ▸ PLC_1 [CPU 1211C DC/DC/DC] ▸ Program blocks ▸ LightOperation [FB1]

Block interface

Network 4: As soon as Interlock comes to true, turn on GREE light

Comment

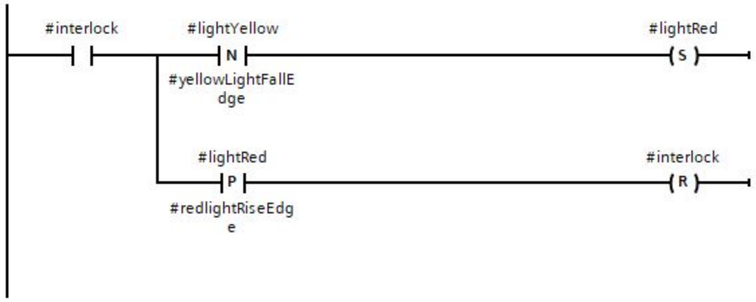


Network 5: Turn ON YELLOW light when Green goes off

Comment

Network 6: Turn ON RED light once yellow goes off, and remove the interlock indicating the signal light operation has b...

Comment



100%

Properties | Info | Diagnostics | Plug-ins

Portal view | Overview | LightOperati...

Loading completed (errors: 0; warning...

Instructions | Testing | Tasks | Libraries | Add-ins

Siemens - D:\Documents\Automation\TrafficLight\TrafficLight

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

- TrafficLight
  - Add new device
  - Devices & networks
  - PLC_1 [CPU 1211C DC/DC/DC]
    - Device configuration
    - Online & diagnostics
    - Program blocks
      - Add new block
      - Main [OB1]
      - Startup [OB100]
      - faultOutput [FC1]
      - performReset [FC2]
      - Intersection [FB2]
      - LightOperation [FB1]
      - Intersection_DB [DB3]
    - Technology objects
    - External source files
    - PLC tags
      - Show all tags
      - Add new tag table
      - Default tag table [44]
      - TrafficLightTags [17]
    - PLC data types
    - Watch and force tables
    - Online backups
    - Traces
    - OPC UA communication
    - Device proxy data
    - Program info
    - PLC alarm text lists
    - Local modules
  - TP1200 Comfort [TP1200 Comfort]
  - 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

TrafficLight ▸ PLC_1 [CPU 1211C DC/DC/DC] ▸ PLC tags ▸ Default tag table [44]

Tags | User constants | System constants

Default tag table

	Name	Data type	Address	Retain	Acces...	Writa...	Visibl...	Comment
1	Clock_Byte	Byte	%MB0	☐	☑	☑	☑	
2	Clock_10Hz	Bool	%M0.0	☐	☑	☑	☑	
3	Clock_5Hz	Bool	%M0.1	☐	☑	☑	☑	
4	Clock_2.5Hz	Bool	%M0.2	☐	☑	☑	☑	
5	Clock_2Hz	Bool	%M0.3	☐	☑	☑	☑	
6	Clock_1.25Hz	Bool	%M0.4	☐	☑	☑	☑	
7	Clock_1Hz	Bool	%M0.5	☐	☑	☑	☑	
8	Clock_0.625Hz	Bool	%M0.6	☐	☑	☑	☑	
9	Clock_0.5Hz	Bool	%M0.7	☐	☑	☑	☑	
10	System_Byte	Byte	%MB1	☐	☑	☑	☑	
11	FirstScan	Bool	%M1.0	☐	☑	☑	☑	
12	DiagStatusUpdate	Bool	%M1.1	☐	☑	☑	☑	
13	AlwaysTRUE	Bool	%M1.2	☐	☑	☑	☑	
14	AlwaysFALSE	Bool	%M1.3	☐	☑	☑	☑	
15	<Add new>			☐	☑	☑	☑	

Properties | Info | Diagnostics

Portal view | Overview | Default tag t... | PLC tags

Loading completed (errors: 0; warning...

Tasks | Libraries | Add-ins | PLC programming

Siemens - D:\Documents\Automation\TrafficLight\TrafficLight

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

- TrafficLight
  - Add new device
  - Devices & networks
  - PLC_1 [CPU 1211C DC/DC/DC]
    - Device configuration
    - Online & diagnostics
    - Program blocks
      - Add new block
      - Main [OB1]
      - Startup [OB100]
      - faultOutput [FC1]
      - performReset [FC2]
      - Intersection [FB2]
      - LightOperation [FB1]
      - Intersection_DB [DB3]
    - Technology objects
    - External source files
    - PLC tags
      - Show all tags
      - Add new tag table
      - Default tag table [44]
      - TrafficLightTags [17]
    - PLC data types
    - Watch and force tables
    - Online backups
    - Traces
    - OPC UA communication
    - Device proxy data
    - Program info
    - PLC alarm text lists
    - Local modules
  - TP1200 Comfort [TP1200 Comfort]
  - 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

TrafficLight ▸ PLC_1 [CPU 1211C DC/DC/DC] ▸ PLC tags ▸ TrafficLightTags [17]

Tags | User constants

TrafficLightTags

	Name	Data type	Address	Retain	Acces...	Writa...	Visibl...	Comment
1	northLightGreen	Bool	%Q0.0		☑	☑	☑	
2	northLightYellow	Bool	%Q0.1		☑	☑	☑	
3	northLightRed	Bool	%Q0.2		☑	☑	☑	
4	southLightGreen	Bool	%Q0.3		☑	☑	☑	
5	southLightYellow	Bool	%Q0.4		☑	☑	☑	
6	southLightRed	Bool	%Q0.5		☑	☑	☑	
7	eastLightGreen	Bool	%Q1.0		☑	☑	☑	
8	eastLightYellow	Bool	%Q1.1		☑	☑	☑	
9	eastLightRed	Bool	%Q1.2		☑	☑	☑	
10	westLightGreen	Bool	%Q1.3		☑	☑	☑	
11	westLightYellow	Bool	%Q1.4		☑	☑	☑	
12	westLightRed	Bool	%Q1.5		☑	☑	☑	
13	systemFAULT	Bool	%M2.0		☑	☑	☑	
14	start_MEM_TAG	Bool	%M2.2		☑	☑	☑	
15	reset_MEM_TAG	Bool	%M2.1		☑	☑	☑	
16	start_Button_IN	Bool	%I0.0		☑	☑	☑	
17	reset_Button_IN	Bool	%I0.1		☑	☑	☑	
18	<Add new>				☑	☑	☑	

Properties | Info | Diagnostics

Portal view | Overview | Default tag t... | PLC tags | TrafficLightT...

Loading completed (errors: 0; warning...

Siemens - D:\Documents\Automation\TrafficLight\TrafficLight

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

- TrafficLight
  - Add new device
  - Devices & networks
  - PLC_1 [CPU 1211C DC/DC/DC]
  - TP1200 Comfort [TP1200 Comfort]
    - Device configuration
    - Online & diagnostics
    - Runtime settings
    - Screens
    - Screen management
    - HMI tags
    - Connections
    - HMI alarms
    - Recipes
    - Historical data
    - Scripts
    - Scheduled tasks
    - Cycles
    - Reports
    - Text and graphic lists
    - User administration
  - 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

TrafficLight ▸ TP1200 Comfort [TP1200 Comfort]

Topology view | Network view | Device view

TP1200 Comfort [TP1200 Com...

100%

TP1200 Comfort_CP_1 [PROFINET Interface]

Properties | Info | Diagnostics

General | IO tags | System constants | Texts

- General
- PROFINET Interface [X1]
  - General
  - Ethernet addresses
  - Operating mode
  - Advanced options

Ethernet addresses

Interface networked with

Subnet: PN/IE_1

Add new subnet

IP protocol

- (•) Set IP address in the project
  - IP address: 192 . 168 . 0 . 2
  - Subnet mask: 255 . 255 . 255 . 0
- ( ) Use router
  - Router address: 0 . 0 . 0 . 0
- ( ) IP address is set directly at the device

PROFINET

- [ ] PROFINET device name is set directly at the device
- [x] Generate PROFINET device name automatically

Hardware catalog | Online tools | Tasks | Libraries | Add-ins

Portal view | Overview | TP1200 Com...

Loading completed (errors: 0; warning...

Siemens - D:\Documents\Automation\TrafficLight\TrafficLight

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

- TrafficLight
  - Add new device
  - Devices & networks
  - PLC_1 [CPU 1211C DC/DC/DC]
  - TP1200 Comfort [TP1200 Comfort]
    - Device configuration
    - Online & diagnostics
    - Runtime settings
    - Screens
    - Screen management
    - HMI tags
    - Connections
    - HMI alarms
    - Recipes
    - Historical data
    - Scripts
    - Scheduled tasks
    - Cycles
    - Reports
    - Text and graphic lists
    - User administration
  - 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

TrafficLight ▸ Devices & networks

Topology view | Network view | Device view

Network | Connections | HMI connection

100%

Network overview | Connections | I/O communication | VPN | TeleControl

Local connection name	Local end point	Local ID (hex)	Partner ID (hex)	Partner	Connection type
HMI_Connection_1	TP1200 Comfort			PLC_1 [CPU 1211C ...	HMI connection

Properties | Info | Diagnostics

General

No 'properties' available.

No 'properties' can be shown at the moment. There is either no object selected or the selected object does not have any displayable properties.

Hardware catalog | Online tools | Tasks | Libraries | Add-ins

Portal view | Overview | Devices & ne...

Loading completed (errors: 0; warning...

Siemens - D:\Documents\Automation\TrafficLight\TrafficLight

Project Edit View Insert Online Options Tools Window Help

Save project | Go online | Go offline | <Search in project>

Totally Integrated Automation PORTAL

Project tree

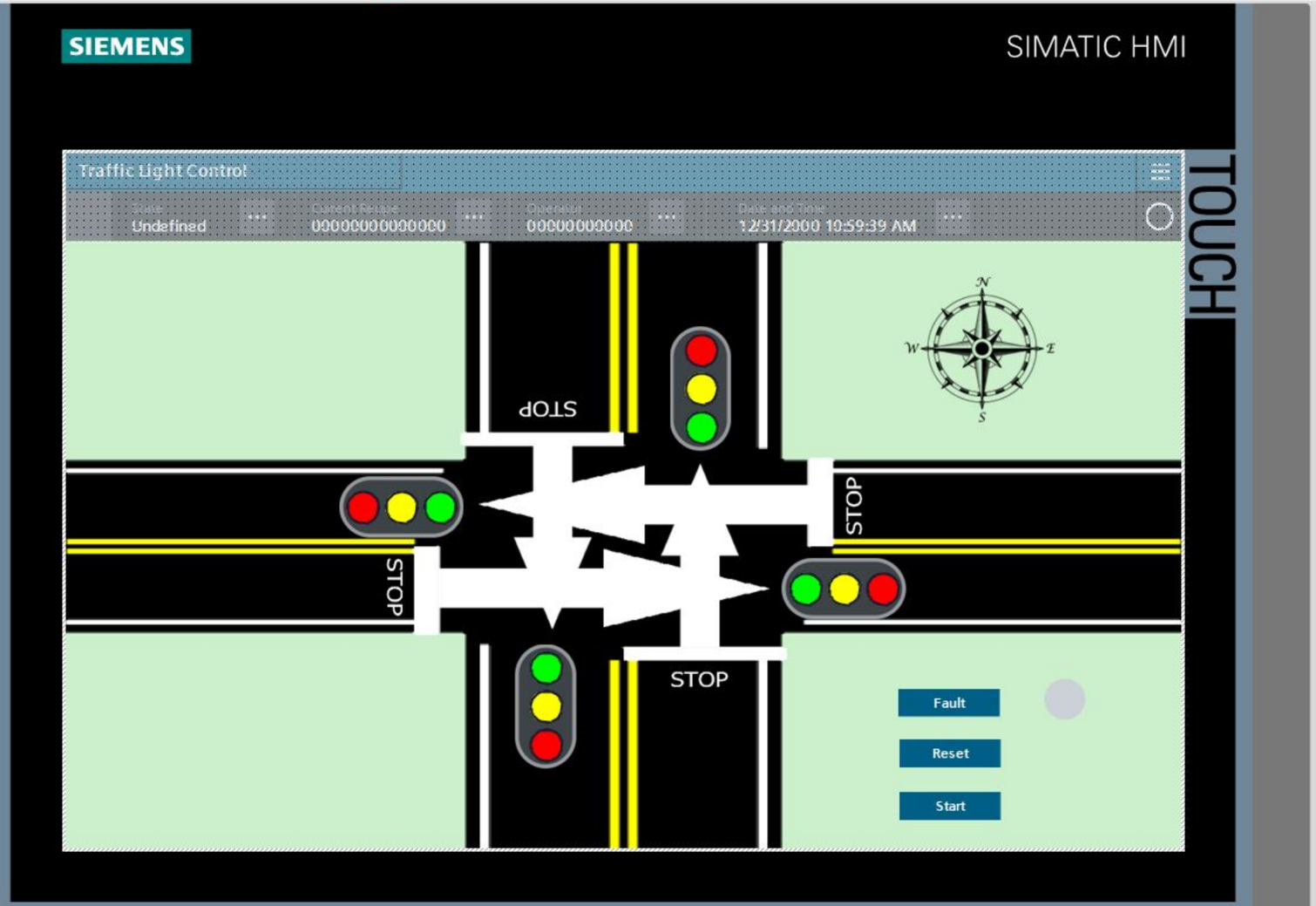
Devices | Plant objects

TrafficLight
- Add new device
- Devices & networks
- PLC_1 [CPU 1211C DC/DC/DC]
- TP1200 Comfort [TP1200 Comfort]
  - Device configuration
  - Online & diagnostics
  - Runtime settings
  - Screens
    - Add new screen
    - 10_Startscreen
    - 20_Messages
    - 30_Diagnostics
    - 40_Settings
  - Screen management
  - HMI tags
  - Connections
  - HMI alarms
  - Recipes
  - Historical data
  - Scripts
  - Scheduled tasks
  - Cycles
  - Reports
  - Text and graphic lists
  - User administration
- 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

TrafficLight ▸ TP1200 Comfort [TP1200 Comfort] ▸ Screens ▸ 10_Startscreen



75%

Properties | Info | Diagnostics | Plug-ins

Portal view | Overview | 10_Startscreen

Loading completed (errors: 0; warning...

Toolbox | Animations | Layout | Instructions | Tasks | Libraries | Add-ins

Siemens - D:\Documents\Automation\TrafficLight\TrafficLight

Project Edit View Insert Online Options Tools Window Help

Save project | Go online | Go offline | <Search in project>

Totally Integrated Automation PORTAL

Project tree

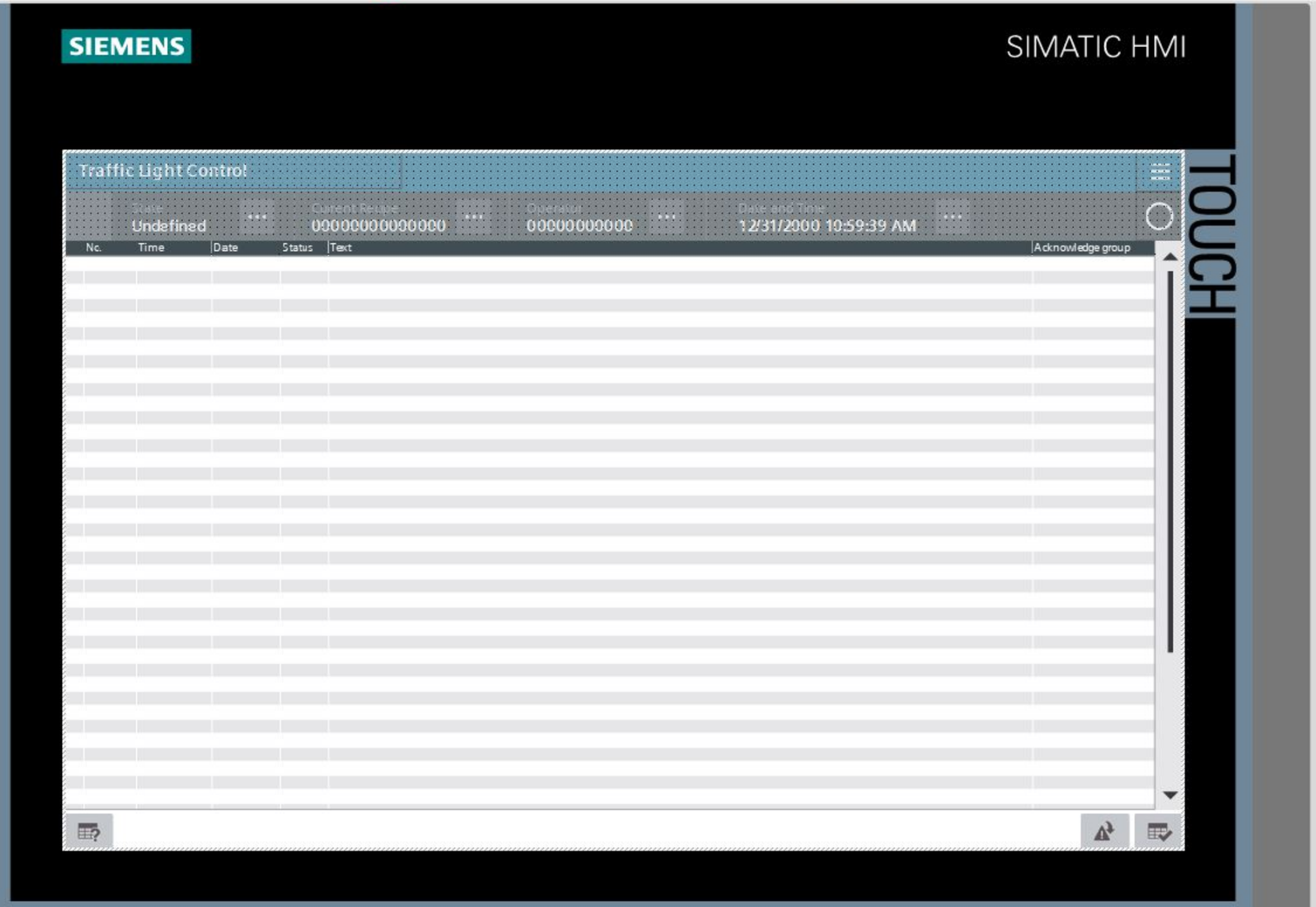
Devices | Plant objects

- TrafficLight
  - Add new device
  - Devices & networks
  - PLC_1 [CPU 1211C DC/DC/DC]
  - TP1200 Comfort [TP1200 Comfort]
    - Device configuration
    - Online & diagnostics
    - Runtime settings
    - Screens
      - Add new screen
      - 10_Startscreen
      - 20_Messages
      - 30_Diagnostics
      - 40_Settings
    - Screen management
    - HMI tags
    - Connections
    - HMI alarms
    - Recipes
    - Historical data
    - Scripts
    - Scheduled tasks
    - Cycles
    - Reports
    - Text and graphic lists
    - User administration
  - 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

TrafficLight ▸ TP1200 Comfort [TP1200 Comfort] ▸ Screens ▸ 20_Messages



75%

Properties | Info | Diagnostics | Plug-ins

Portal view | Overview | 10_Startscreen | 20_Messages

Loading completed (errors: 0; warning...

Toolbox | Animations | Layout | Instructions | Tasks | Libraries | Add-ins

Siemens - D:\Documents\Automation\TrafficLight\TrafficLight

Project Edit View Insert Online Options Tools Window Help

Save project | Go online | Go offline | <Search in project>

Totally Integrated Automation PORTAL

Project tree

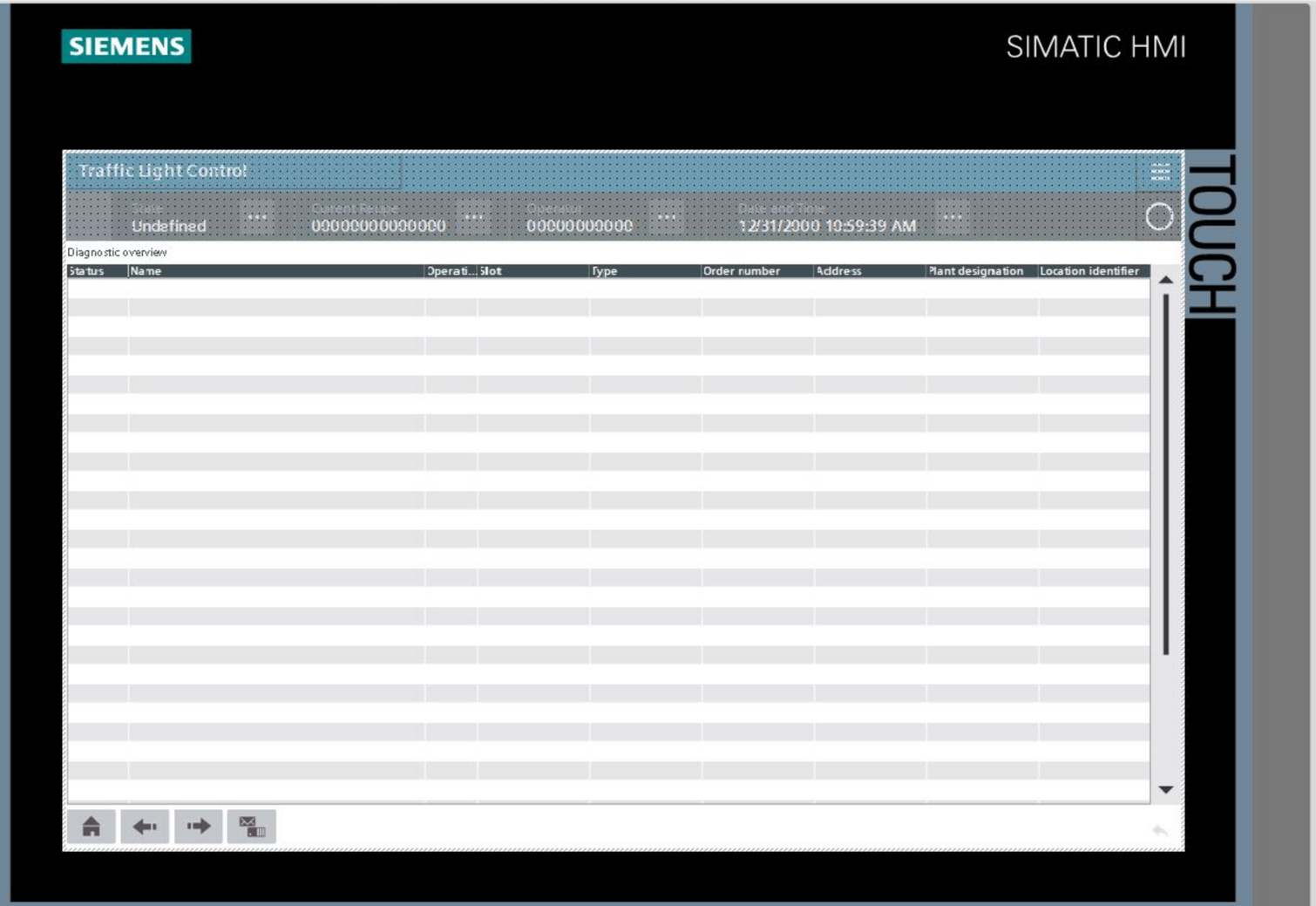
Devices | Plant objects

- TrafficLight
  - Add new device
  - Devices & networks
  - PLC_1 [CPU 1211C DC/DC/DC]
  - TP1200 Comfort [TP1200 Comfort]
    - Device configuration
    - Online & diagnostics
    - Runtime settings
    - Screens
      - Add new screen
      - 10_Startscreen
      - 20_Messages
      - 30_Diagnostics
      - 40_Settings
    - Screen management
    - HMI tags
    - Connections
    - HMI alarms
    - Recipes
    - Historical data
    - Scripts
    - Scheduled tasks
    - Cycles
    - Reports
    - Text and graphic lists
    - User administration
  - 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

TrafficLight ▸ TP1200 Comfort [TP1200 Comfort] ▸ Screens ▸ 30_Diagnostics



75%

Properties | Info | Diagnostics | Plug-ins

Portal view | Overview | 10_Startscreen | 20_Messages | 30_Diagnosti...

Loading completed (errors: 0; warning...

Visualization

Toolbox | Animations | Layout | Instructions | Tasks | Libraries | Add-ins

Siemens - D:\Documents\Automation\TrafficLight\TrafficLight

Project Edit View Insert Online Options Tools Window Help

Totally Integrated Automation PORTAL

Project tree

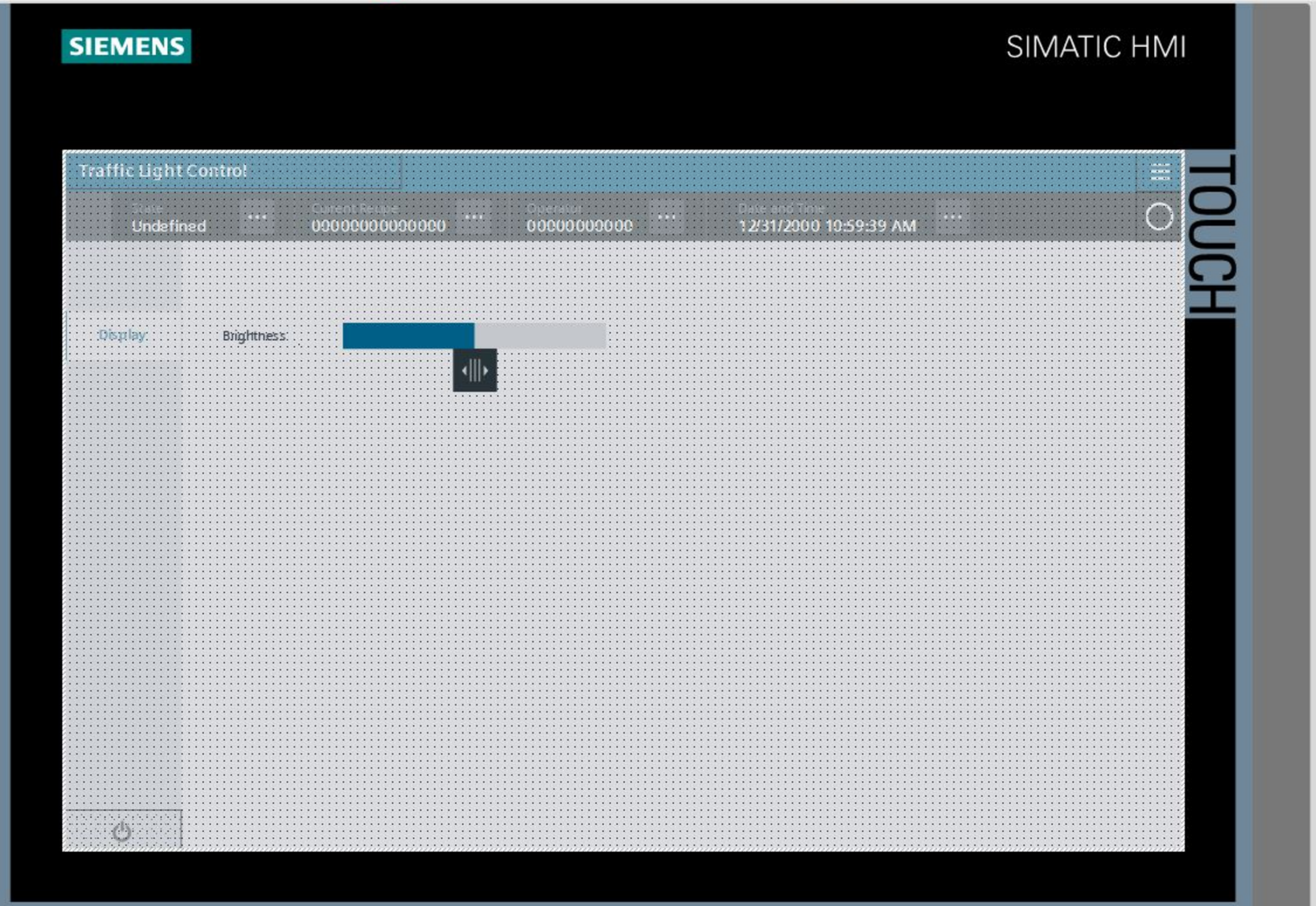
Devices | Plant objects

- TrafficLight
  - Add new device
  - Devices & networks
  - PLC_1 [CPU 1211C DC/DC/DC]
  - TP1200 Comfort [TP1200 Comfort]
    - Device configuration
    - Online & diagnostics
    - Runtime settings
    - Screens
      - Add new screen
      - 10_Startscreen
      - 20_Messages
      - 30_Diagnostics
      - 40_Settings
    - Screen management
    - HMI tags
    - Connections
    - HMI alarms
    - Recipes
    - Historical data
    - Scripts
    - Scheduled tasks
    - Cycles
    - Reports
    - Text and graphic lists
    - User administration
  - 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

TrafficLight ▸ TP1200 Comfort [TP1200 Comfort] ▸ Screens ▸ 40_Settings



75%

Properties | Info | Diagnostics | Plug-ins

Portal view | Overview | 10_Startscreen | 20_Messages | 30_Diagnosti... | 40_Settings

The project TrafficLight was saved succ...

Toolbox | Animations | Layout | Instructions | Tasks | Libraries | Add-ins

Siemens - D:\Documents\Automation\TrafficLight\TrafficLight

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

- TrafficLight
  - Add new device
  - Devices & networks
  - PLC_1 [CPU 1211C DC/DC/DC]
  - TP1200 Comfort [TP1200 Comfort]
    - Device configuration
    - Online & diagnostics
    - Runtime settings
    - Screens
      - Add new screen
      - 10_Startscreen
      - 20_Messages
      - 30_Diagnostics
      - 40_Settings
    - Screen management
      - Templates
      - Pop-up screens
      - Slide-in screens
      - Global screen
      - Permanent area
    - HMI tags
      - Show all tags
      - Add new tag table
      - Default tag table [1]
      - AnimationTags [1]
      - PLC_Tags [15]
      - Template [25]
    - Connections
    - HMI alarms
    - Recipes
    - Historical data
    - Scripts
    - Scheduled tasks
    - Cycles
    - Reports
    - Text and graphic lists
    - User administration
  - Ungrouped devices
  - Security settings
  - Cross-device functions
  - Common data
  - Documentation settings
  - Languages & resources
  - Version control interface

Reference projects

Details view

TrafficLight ▸ TP1200 Comfort [TP1200 Comfort] ▸ HMI tags ▸ PLC_Tags [15]

PLC_Tags

Name	Data type	Connection	PLC name	PLC tag	Address	Access mode	Acquisition cycle	Logged	Source comment
eastLightGreen	Bool	HMI_Conne...	PLC_1	eastLightGreen		<symbolic access>	100 ms		
eastLightRed	Bool	HMI_Connectio...	PLC_1	eastLightRed		<symbolic access>	100 ms		
eastLightYellow	Bool	HMI_Connectio...	PLC_1	eastLightYellow		<symbolic access>	100 ms		
northLightGreen	Bool	HMI_Connectio...	PLC_1	northLightGreen		<symbolic access>	100 ms		
northLightRed	Bool	HMI_Connectio...	PLC_1	northLightRed		<symbolic access>	100 ms		
northLightYellow	Bool	HMI_Connectio...	PLC_1	northLightYellow		<symbolic access>	100 ms		
reset_MEM_TAG	Bool	HMI_Connectio...	PLC_1	reset_MEM_TAG		<symbolic access>	100 ms		
southLightGreen	Bool	HMI_Connectio...	PLC_1	southLightGreen		<symbolic access>	100 ms		
southLightRed	Bool	HMI_Connectio...	PLC_1	southLightRed		<symbolic access>	100 ms		
southLightYellow	Bool	HMI_Connectio...	PLC_1	southLightYellow		<symbolic access>	100 ms		
start_MEM_TAG	Bool	HMI_Connectio...	PLC_1	start_MEM_TAG		<symbolic access>	100 ms		
systemFAULT	Bool	HMI_Connectio...	PLC_1	systemFAULT		<symbolic access>	100 ms		
westLightGreen	Bool	HMI_Connectio...	PLC_1	westLightGreen		<symbolic access>	100 ms		
westLightRed	Bool	HMI_Connectio...	PLC_1	westLightRed		<symbolic access>	100 ms		
westLightYellow	Bool	HMI_Connectio...	PLC_1	westLightYellow		<symbolic access>	100 ms		
<Add new>									

Discrete alarms | Analog alarms | Logging tags

ID	Name	Alarm text	Alarm class	Trigger tag	Trigge..	Trigger address	HMI acknowl...	HMI a...	HMI acknowl...	Report
<Add new>										

Properties | Info | Diagnostics

Portal view | Overview | PLC_Tags

The project TrafficLight was saved succ...

Visualization | Tasks | Libraries | Add-ins