



# Andhra Pradesh State Skill Development Corporation



Andhra Pradesh State Skill Development Corporation



## Basics Of PLC

## Siemens Automation Software



**Andhra Pradesh State Skill Development Corporation (APSSDC)**



## **Siemens Automation Software**





## Languages of the user interface

The screenshot shows the Siemens TIA Portal interface. On the left is the 'Start' screen with options like 'Open existing project', 'Create new project', and 'User interface language'. A yellow box highlights the 'User interface language' button. On the right is the 'Project view' window for 'My\_Project'. A red dashed box highlights the 'Settings' menu item under 'Options'. Another red dashed box highlights the 'User interface language' dropdown in the 'General settings' section, which is set to 'English'. The Siemens logo is visible at the top right.

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TIA-MICRO1 / Introduction TIA Portal

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## Project languages

The screenshot shows the Siemens TIA Portal interface with the title bar "Siemens - My\_Project" and the sub-title "My\_Project > Languages & resources > Project languages". The left sidebar displays the "Project tree" under the "Devices" category, showing a hierarchy including "My\_Project", "PLC\_1 [CPU 1214C DC/DC/DC]", "HMI\_1 [KTP600 Basic PN]", "Common data", "Documentation settings", "Languages & resources", "Project texts", "Project languages" (which is selected), and "Project graphics". The main pane is titled "General" and contains two dropdown menus: "Editing language: English (United States)" and "Reference language: German (Germany)". Below these are two lists of language options, each preceded by a checkbox. The first list includes English (Republic of the Philippines), English (South Africa), English (Trinidad and Tobago), English (United Kingdom), English (United States) (which is checked), English (Zimbabwe), Estonian (Estonia), Faroese (Faroe Islands), Finnish (Finland), French (Belgium), French (Canada), French (France), and French (Luxembourg). The second list includes French (Principality of Monaco), French (Switzerland), Galician (Galician), Georgian (Georgia), German (Austria), German (Germany) (which is checked), German (Liechtenstein), German (Luxembourg), German (Switzerland), Greek (Greece), Hindi (India), Hungarian (Hungary), and Icelandic (Iceland). At the bottom of the main pane are buttons for "Properties", "Info", "Diagnostics", and "Compile". The status bar at the bottom right shows "Project My\_Project opened".

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The screenshot shows the Siemens SIMATIC Manager software interface for a project named "My\_Project". The main window displays the "Project texts" section under the "Languages & resources" category. The left pane shows the "Project tree" with nodes like "Devices", "My\_Project", "Systemfehler m...", and "Languages & resources". The right pane lists "User texts" and "System texts" for various objects such as "HMI\_1" and "PLC\_1". The status bar at the bottom indicates "Project My\_Project opened".

**Project texts**

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Siemens - My\_Project

Project Edit View Insert Online Options Tools Window Help

Totally Integrated Automation PORTAL

Project tree

Devices

Start

My\_Project

Project texts

User texts System texts

Device filter (All objects selected)

German (Ge... Ru

HMI\_1

PLC\_1

Systemfehler m... Re

Baugruppenra... Pack message: @1W%#7... Alarm text

QGR QGR Alarm text My\_ProjectHMI\_1 [KTP600 Basic Pl

Q Q Alarm text My\_ProjectHMI\_1 [KTP600 Basic Pl

Initiator Platz 1 Proximity sensor Bay 3 Text category tag comment My\_ProjectPLC\_1 [CPU 1214C DDC

Initiator Platz 2 Proximity sensor Bay 2 Text category tag comment My\_ProjectPLC\_1 [CPU 1214C DDC

Initiator Ulaz 3 Proximity sensor Bay 1 Text category tag comment My\_ProjectPLC\_1 [CPU 1214C DDC

Betrieb EIN Operation ON Hmi screen My\_ProjectHMI\_1 [KTP600 Basic Pl

Betrieb AUS Operation OFF Hmi screen My\_ProjectHMI\_1 [KTP600 Basic Pl

Betrieb EIN Operation ON Text ListText Category My\_ProjectPLC\_1 [CPU 1214C DDC

Details view

General Cross-references Compile

Portal view Overview Project texts Project lang... Project My\_Project opened.

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### Portal and Project view

The screenshot shows the Siemens TIA Portal interface. On the left, there is a sidebar with various project management options like 'Open existing project', 'Create new project', and 'Migrate project'. The main area displays a 'Project tree' for a project named 'My\_Project'. Under 'Devices & networks', it lists 'PLC\_1 [CPU 1214C DODDCD]' which is expanded to show 'Device configuration', 'Online & diagnostics', and 'Program blocks'. The 'Program blocks' section contains several function blocks such as OB\_Cycle [OB1], FC\_ConMotor [FC16], FC\_Count [FC18], FC\_Fault [FC17], FC\_Indicate [FC14], FC\_Mode [FC15], and DIH4DO10. Below the program blocks, there are sections for 'System blocks', 'Technological objects', 'External source files', 'PLC tags', and 'PLC data types'. To the right of the project tree, there is a 'Topology view' showing a ladder logic diagram for 'PLC\_1'. Below the ladder logic, a 'Device overview' table provides details for each module:

Module	Slot	I address	Q address	Type	Order no.
RS232_1	102			CM 1241 (RS232)	6E57 241-
RS485_1	101			CM 1241 (RS485)	6E57 241-
PLC_1	1	0..1	4..5	CPU 1214C DODDCD	6E57 214-
				DIH4DO10	6E57 DQ10

At the bottom of the interface, there are tabs for 'Portal view', 'Overview', 'PLC\_1', and 'Project My\_Project opened'. The Siemens logo is visible in the top right corner.



## SIEMENS

### Portal view

The screenshot shows the Siemens TIA Portal interface. On the left, there's a sidebar with icons for 'Start', 'Devices & networks', 'PLC programming', 'Visualization', and 'Online & Diagnostics'. Below this is a section titled 'Portals for different tasks' containing 'Project view'. A yellow box highlights the 'Actions for the selected portal' menu, which is open and lists options like 'Open existing project', 'Create new project', 'Migrate project', etc. Another yellow box highlights the 'Selection panel for the selected action' on the right, which shows a list of recently used projects ('My\_Project', 'Mein\_Projekt', 'test') with their paths and last change dates. At the bottom, it says 'Opened project: C:\S7\_Courses\S7-1200\My\_Project\My\_Project'.

TIA Siemens - My\_Project

Totally Integrated Automation PORTAL

Actions for the selected portal

- Open existing project
- Create new project
- Migrate project
- Close project
- Welcome Tour
- First steps
- Installed software
- Help
- User interface language

Recently used

Project	Path	Last cha...
My_Project	C:\S7_Courses\S7-1200\My_Project	4/18/2011
Mein_Projekt	C:\S7_Kurse\S7-1200\Mein_Projekt	4/19/2011
test	C:\S7_Kurse\S7-1200\test	4/18/2011

Selection panel for the selected action

Browse Open

Opened project: C:\S7\_Courses\S7-1200\My\_Project\My\_Project

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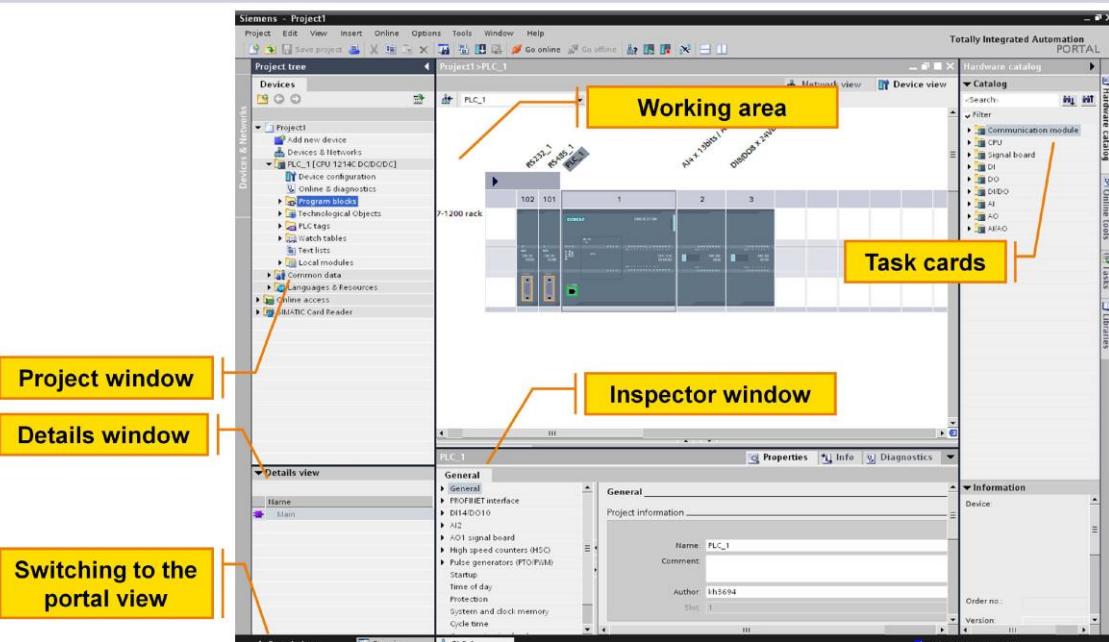
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## Components of the project view

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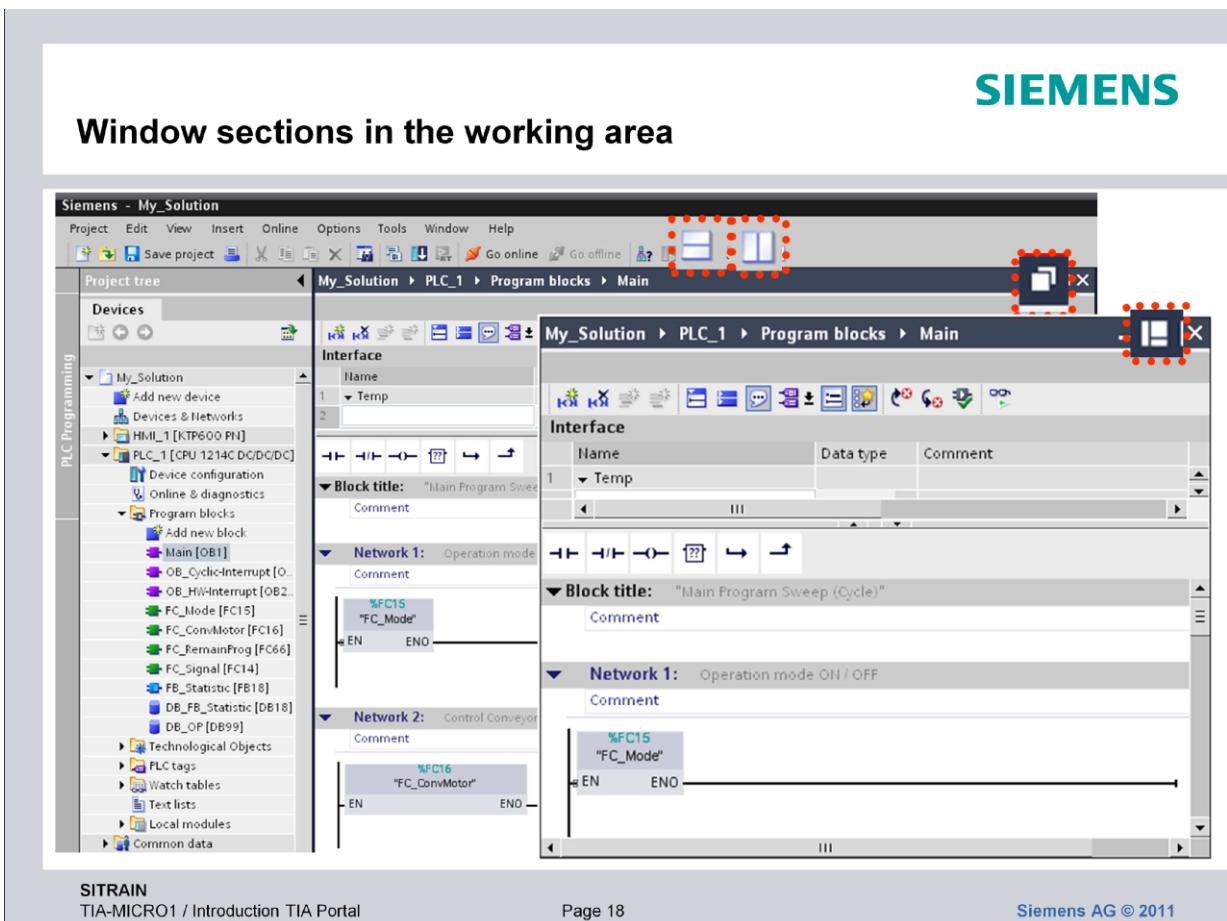
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## Window sections in the working area

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The screenshot shows the Siemens TIA Portal interface. On the left is the Project tree under 'PLC Programming'. The main workspace shows the 'Main' program block. It contains two function block networks: 'Network 1: Operation mode' and 'Network 2: Control Conveyor'. Both networks use the FC15 function block with 'FC\_Mode' as its name. The inputs are labeled 'EN' and the outputs are labeled 'ENO'. The comments in the networks are 'Comment' and 'Control Conveyor' respectively.

**Project tree:**

- My\_Solution
- Add new device
- Devices & Networks
- HMI\_1 [KTP600 PN]
- PLC\_1 [CPU 1214C DC/DC/DC]
  - Device configuration
  - Online & diagnostics
  - Program blocks
    - Main [OB1]
    - OB\_Cyclic-Interrupt [OB...
    - OB\_Mvi-Interrupt [OB2...
    - FC\_Mode [FC15]
    - FC\_ConvMotor [FC16]
    - FC\_RemainProg [FC066]
    - FB\_Signal [FC14]
    - FB\_Statistic [FB18]
    - DB\_FB\_Statistic [DB18]
    - DB\_OP [DB99]
  - Technological Objects
  - FLC tags
  - Watch tables
  - Text lists
  - Local modules
  - Common data

**Main Program Block:**

**Network 1: Operation mode**

```
FC15 "FC_Mode"
EN ENO
```

**Network 2: Control Conveyor**

```
FC15 "FC_ConvMotor"
EN ENO
```

