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Introduction to

SCADA For beginners

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Who are we

At Electrical and Electronics Engineering we are team of Electrical and Electronics Engineers working in Power, Control, Automation, Education, and Research industries, Hobbyists, Electrical technologists, authors and writers who want to make Electrical and Electronics Engineering very simple and easy for beginners.

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You are in electrical industry or you have technical writing skills or you are a researcher, professor or education specialist, you can more than welcome to volunteer your services. Write any article or share your technical knowledge on any Electrical and Electronics Engineering topics and mail us at

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SCADA

SCADA or Supervisory control and data acquisition is a set of software and hardware elements which is used in industrial environments for monitoring and gathering information about various processes and for controlling various sensors, valves, pumps, and, motors.



Contents:

1. Practical applications of SCADA
2. The model of SCADA
3. Components of SCADA
4. Global SCADA Vendors



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Practical Applications of SCADA



Power Industry



Oil & Gas



Process Industry



Automation



Recycling

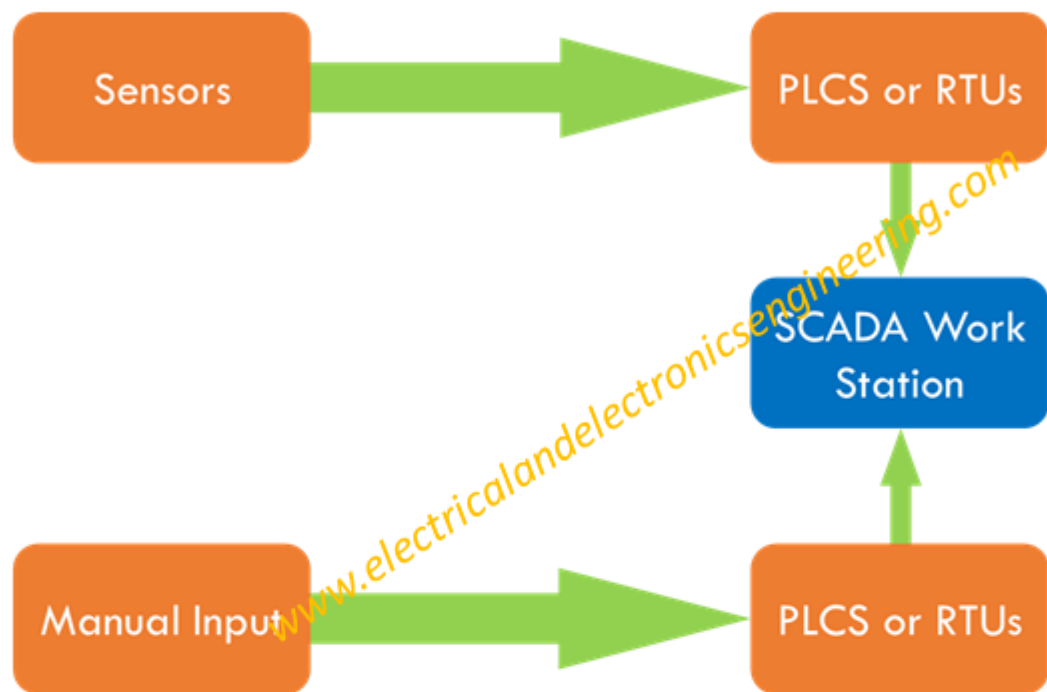


Chemical Industry



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The Model of SCADA



The SCADA System essentially contains 4 components:

1. Sensors
2. Manual input HMI Panels or stations
3. PLCs or RTUs
4. SCADA Work Station



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Components of SCADA

The SCADA System essentially contains 4 components:

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The figure above displays ROC 800 which is an example of RTU. The figure below displays a PLC module MODULE D0-06DD1-D. Remember that PLCs can be used in place of RTUs.



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Components of SCADA

The figure belows displays an HMI panel that is used for user interaction.



An HMI Panel provides various operator Display and Control Functions that are used to:

1. Display real-time status of system on maps
2. Provide interface GUI pan, Zoom functions
3. Display Dynamic coloring to represent various changes



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Global SCADA Market Vendors

The logo for ABB, consisting of the letters 'A', 'B', and 'B' in a stylized, red, blocky font.

ABB

The logo for Emerson, featuring a stylized diamond shape with three horizontal lines above the word 'EMERSON' in a blue, sans-serif font.

Emerson

The logo for Honeywell, featuring the word 'Honeywell' in a red, serif font.

Honeywell

The logo for Schneider Electric, featuring the word 'Schneider' in green and 'Electric' in a smaller green font below it, with a green circular icon.

Schneider Electric

The logo for Siemens, featuring the word 'SIEMENS' in a teal, sans-serif font.

SIEMENS



GE

The logo for Rockwell Automation, featuring the words 'Rockwell' and 'Automation' in a bold, black, sans-serif font.

Rockwell
Automation

The logo for Inductive Automation, featuring a green gear icon with a white arrow pointing right, followed by the words 'inductive' and 'automation.' in a grey, sans-serif font.

Inductive
Automation

The logo for AREVA, featuring a large, red, stylized letter 'A' above the word 'AREVA' in a red, sans-serif font.

AREVA



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