

# OpenPLC Heater module

Spoken Tutorial Project

<https://spoken-tutorial.org>

National Mission on Education through ICT

<http://sakshat.ac.in>

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# Learning Objectives

- **OpenPLC Heater module**



# System Requirements



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- **Ubuntu Linux 18.04 operating system**



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- **OpenPLC Mainboard**



# System Requirements

- **Ubuntu Linux 18.04 operating system**
- **OpenPLC Heater module**
- **OpenPLC Mainboard**
- **24V, 2A SMPS**



# Pre-requisites



# Pre-requisites

- **OpenPLC Mainboard**



# Pre-requisites

- **OpenPLC Mainboard**
- **If not, please refer to the relevant tutorials in this series from <https://spoken-tutorial.org>**



# How the Heater module works?



# How the Heater module works?

- **First it will sense the temperature of the machine**



# How the Heater module works?

- **First it will sense the temperature of the machine**
- **Then it will turn on if it is adequately cold**



# How the Heater module works?

- First it will sense the temperature of the machine
- Then it will turn on if it is adequately cold
- If it exceeds a certain threshold, the machine shuts down and starts the cooler



# Main Components



# Main Components

- Fan



# Main Components

- Fan
- PCB



# Main Components

- Fan
- PCB
  - ① Resistor (heating element)



# Main Components

- Fan
- PCB
  - 1 Resistor (heating element)
  - 2 Thermistor



# Main Components

- Fan
- PCB
  - 1 Resistor (heating element)
  - 2 Thermistor
  - 3 Indicator LEDs



# Main Components

- Fan
- PCB
  - 1 Resistor (heating element)
  - 2 Thermistor
  - 3 Indicator LEDs
  - 4 Connectors



# How can the Heater module be powered?

**Heater module can be powered using the output power pins of the Mainboard**



# Summary

- **OpenPLC Heater module**



# About the Spoken Tutorial Project

- Watch the video available at [https://spoken-tutorial.org/What\\_is\\_a\\_Spoken\\_Tutorial](https://spoken-tutorial.org/What_is_a_Spoken_Tutorial)
- It summarises the Spoken Tutorial project
- If you do not have good bandwidth, you can download and watch it



# Spoken Tutorial Workshops

## The Spoken Tutorial Project Team

- Conducts workshops using spoken tutorials
- Gives certificates to those who pass an online test
- For more details, please write to [contact@spoken-tutorial.org](mailto:contact@spoken-tutorial.org)



# Forum questions

- Questions in THIS Spoken Tutorial?
- Visit <https://forums.spoken-tutorial.org/>
- Choose the minute and second where you have the question
- Explain your question briefly
- The Spoken Tutorial project will ensure an answer

You will have to register to ask questions



# Forum for specific questions

- Questions not related to the Spoken Tutorial?
- Do you have general / technical questions on the Software?
- Please visit the FOSSEE Forum  
<https://forums.fossee.in/>
- Choose the Software and post your question



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# THANK YOU!

For more Information, visit our website  
<https://fossee.in/>

