

OpenPLC Heater module

Spoken Tutorial Project

<https://spoken-tutorial.org>

National Mission on Education through ICT

<http://sakshat.ac.in>

Harsha Priyanka

IIT Bombay

18 September 2020



Learning Objectives

- OpenPLC Heater module



System Requirements



System Requirements

- **Ubuntu Linux 18.04 operating system**



System Requirements

- **Ubuntu Linux 18.04 operating system**
- **OpenPLC Heater module**



System Requirements

- **Ubuntu Linux 18.04 operating system**
- **OpenPLC Heater module**
- **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
- 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



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



Acknowledgements

Spoken Tutorial project is supported by

- **National Mission on Education through ICT (NMEICT)**
- **Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching**

Initiatives of MHRD, Government of India



THANK YOU!

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

