

Compact vs Modular PLCs

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A Programmable Logic Controller (PLC) is used to manage machinery and operations in the industrial setting for automation. There are two subcategories of PLCs: compact and modular.

Compact PLCs:

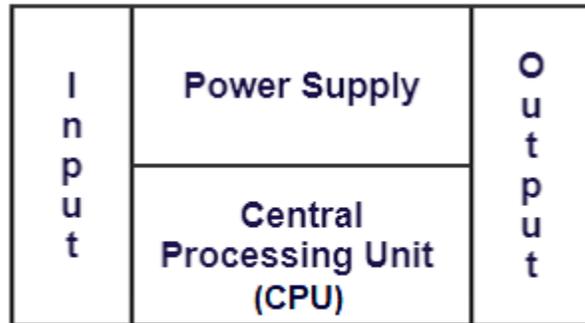
- In comparison to modular PLCs, compact PLCs are generally smaller and contain fewer input/output (I/O) pins.
- They are mostly utilized in small industrial settings and are created for straightforward applications.
- They have a set number of I/O ports and cannot be increased. They cannot be altered or upgraded.
- They have a little environmental impact, are affordable, and are simple to install and maintain.

Modular PLCs:

- Larger and more flexible in terms of I/O ports and expansion options.
- They are used in bigger industrial settings and may be adjusted to meet the exact requirements of a given application.
- They have adjustable components, which enables the addition of I/O pins and other pieces, like a display.
- Have more memory and can add more capacity.

The particular requirements of your application should be taken into account when deciding between a compact and modular PLC. A simpler application could benefit from a compact PLC as the best option. A modular PLC will be more suited if your application is sophisticated. Here is a deeper look into the two subcategories.

Compact PLCs

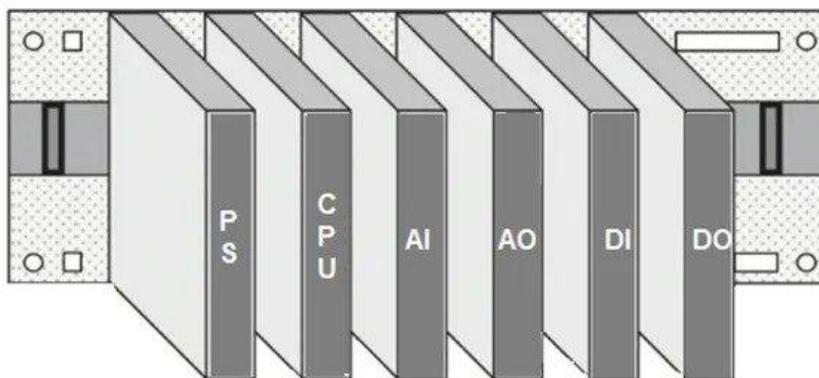


Block Diagram of Compact PLC

DipsLab.com

Compact PLCs have everything in one component. They have a power supply, CPU and the limited I/O pins. Due to its unchanging and limited functionality, if you decided to expand your project, a new compact PLC would need to be added. The compact PLC makes it difficult to repair and troubleshoot since all the components are self contained. The advantages of the compact PLC include that it is small in size and cheaper and can perform basic functions.

Modular PLCs



Modular PLC

Modular PLCs are adaptable to large scale projects. They have multiple compartments that can hold different functional abilities per block. Due to the interchangeability, it is easy to repair modular PLCs. You can easily take out and replace the individual blocks. Modular PLCs have an ability to troubleshoot each section of the PLC since the IO pins/ CPU and power supply are separated. It is much easier to identify any issues due to sensors being on each block for quick troubleshooting.