2.1.1. **What is the logic voltage level, 3.3V or 5V?**

A:- The L293 motor driver IC is typically designed to operate with logic voltage levels of 5V.

2.2

**2.2.1** **What is the input range of this DC/DC Converter?**

A:-. The CHVM series of non-isolated DC-DC converters feature very compact sizes and have a metal case to provide five-sided shielding for lower ripple and noise. Three package sizes cover power levels from 1.4W to 3W and output voltages of 180V to 2kV. The output can be adjusted from 0.5% to 100% of the rated voltage using either an external voltage or resistance.

AS per data sheet CHVM1R5-12-1500N model:- **input voltage:- 11-13 v, output voltage:-0-1500v, maxcurrent:-1ma , max power 1.5 w.**

**2.2.2** I**s it an isolated or non-isolated converter?**

**A:- It is non isolated because** do not provide electrical isolation between input and output circuits. They are directly connected, and there is no physical barrier or isolation barrier between them**.**

2.2.3 **What is the wattage of the converter?**

A:- **1.5 w.**

3

3.1.1 What is a semaphore? How is it different from a mutex?

A:- the main aim of using a **semaphore** is process synchronization and access control for a common resource in a concurrent environment.

**Mutex**:- The mutex locking mechanism ensures only one thread can acquire the mutex and enter the critical section. This thread only releases the mutex when it exits in the critical section.