L293D WORKING & FUNCTION

L293D is a dual H-bridge motor driver integrated circuit (IC). Motor drivers act as current amplifiers since they take a low-current control signal and provide a higher-current signal. This higher current signal is used to drive the Peltier.

L293D contains two inbuilt H-bridge driver circuits. In its common mode of operation, two mode of Peltier can be driven simultaneously, both in forward and also in reverse direction. The Peltier operations (i.e. current flow in the Peltier device either from high to low or low to high) can be controlled by input logic that is taken from Arduino at pins 2 & 7 and 10 & 15. Input logic 00 or 11 will stop the corresponding Peltier mode. Logic 01 and 10 will rotate it in clockwise and anticlockwise directions respectively.

Enable pins 1 and 9 (corresponding to the two motors) must be high for Peltier to start operating. When an enable input is high, the associated driver gets enabled. As a result, the outputs become active and work in phase with their inputs. Similarly, when the enable input is low, that driver is disabled, and their outputs are off and in the high-impedance state.

<http://www.engineersgarage.com/electronic-components/l293d-motor-driver-ic>