**SIGNAL CONDITIONING UNIT (SCU):**

The signal conditioning unit accepts input signals from the analog sensors and gives a conditioned output of 0-5V DC corresponding to the entire range of each parameter.  This unit also accepts the digital sensor inputs and gives outputs in 10 bit binary with a positive logic level of +5V.  The calibration voltages\* (0, 2.5 and 5V) and the health bits are also generated in this unit.

Microcontrollers are widely used for control in power electronics. They provide real time control by processing analog signals obtained from the system. A suitable isolation interface needs to be designed for interaction between the control circuit and high voltage hardware. A signal conditioning unit which provides necessary interface between a high power grid inverter and a low voltage controller unit.