Transformers, MDB, SDB and FDB

Transformers are devices that transform voltage values from higher to lower or from lower to higher. Because of this advantage they are ubiquitous in any section of the world. Voltage is transferred at high values and is used at far lower values. This became possible because of transformers. Transformers first began during the time where inventors like Thomas Edison and Nicola Tesla existed. They created the direct and alternating transformers respectively and resulted in nationwide transfer of electricity for their country.

Transformers don’t break the law of energy by creating or destroying it. Instead they use concepts of electromagnetism to operate. Higher voltage means lower current and lower voltage means higher current. At the end of the day, power is kept constant. So energy is kept constant as well. By changing the number of turns around a magnetic core, we can change the amount of electromotive force induced by a device, also changing the current generated in an inverse relationship.

MDB means main distribution board. It is part of power distribution system which transfers power from a power plant to individual users effectively and as cheap as possible. The first part of this system is the MDB. It consists of the fuses, circuit breaker and protection mechanisms from leakage. It takes in power typically from one or few sources and has a main circuit breaker, metering system, bus bar and other supporting equipment.

SDB means sub distribution board. It also does power distribution but it is at a lower level than the MDB. It is fed power from the MDB and is installed where the main large cable breaks into smaller sub cables that go to different areas. It is installed in the middle of power distribution and typically has MCCB panels.

FDB means final distribution board. This is the final stage which breaks the power into subsidiary circuits and provides fuses for protection. It is fed from the SDB.