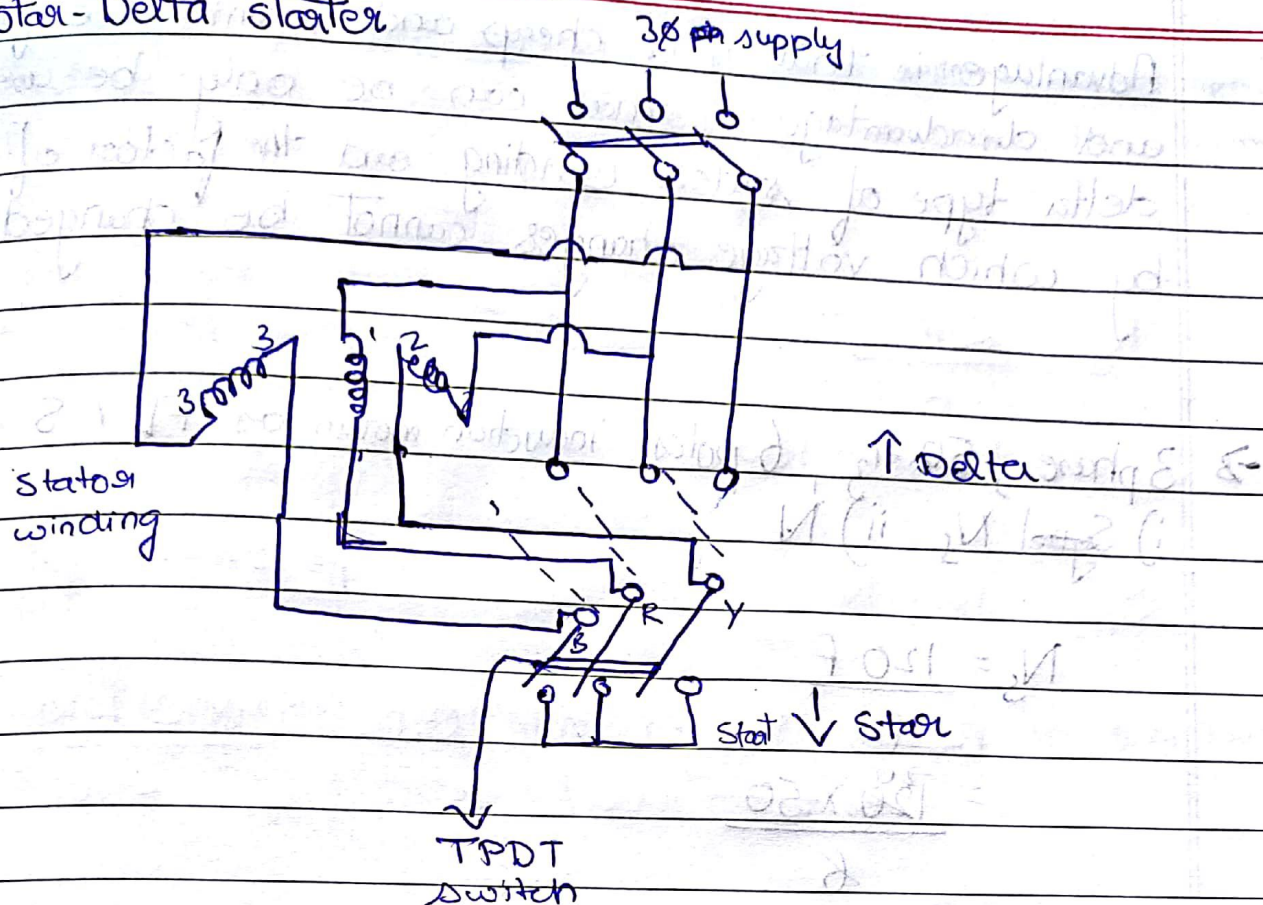


Star-Delta Starter



This is the cheapest of all the starters. It uses TPDT which connects the stator winding in star at the start and then in delta while normal running.

Hence this starter is suitable for those motors designed to run with the delta connected stator winding. Initially while the switch is in start position, the stator winding gets connected in star and hence the phase voltage gets reduced by a factor of $\frac{1}{\sqrt{3}}$. Due to this the starting current also gets reduced by a factor of $\frac{1}{\sqrt{3}}$.

When the motor attains 50-60% of normal speed, the switch is thrown to run position, hence winding gets connected in delta, therefore $V_{ph} = V_L = V_{rated}$. Each phase of the winding gets rated voltage and the operation of the switch can be automatic by using relays. This ensures that the motor will not start with the switch in run position.