

MCB'S

Protek Miniature Circuit Breakers (MCB's) are current limiting Thermal/magnetic type with each part performing a different function:

A) Small Overload Conditions

Overload currents that are light in nature are detected by a bi-metallic strip which bends at a rate dependant upon the size of the overload against a trip mechanism which will release contact after a pre-determined timescale.

B) High Overload Conditions

when the overload current reaches a high enough level (dependant upon the current rating and tripping characteristics of the MCB) the current induces a magnetic flux within the coil sufficient to propel a plunger into the tripping mechanism with enough force to operate this mechanism and trip out the MCB.

C) Short Circuit Conditions

If a fault occurs that is high enough to be classed as a 'short circuit' then the current limiting mechanism comes into action. The fault current generates so much flux in the coil that the plunger is forced to move so fast and with so much force that it i) trips the mechanism and ii) forces the contacts open and therefore restricts the short circuit current. The arc generated between the contacts is quickly quenched by the 'Ark Grid' after it is forced to flow along the 'Arc Runners' into the Grid.

