

## 460[V]/400[A]/85[kA] 배선용 차단기의 아크런너 변형을 통한 차단성능 향상

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### Improvement of Short Circuit Performance in 460[V]/400[A]/85[kA] Molded Case Circuit Breakers

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**Abstract** : Owing to the increasing number of intelligent homes(or called Smart home), the corresponding cost is much higher. Low voltage circuit breakers are widely used in the intelligent homes to interrupt fault current rapidly and to assure the reliability of the power supply. The distribution of magnetic field induced by arc current in the contact system of molded case circuit breaker(hereafter MCCB) depends on the shape, arrangement, and kinds of material of arc runner. This paper is focused on understanding the interrupting capability, more specifically of the arc runner, based on the shape of the contact system in the current MCCB. The magnetic driving force was calculated by using the flux densities induced by the arc current, which are obtained by three-dimensional finite element method. There is a need to assure that the optimum design required to analyze the electromagnetic forces of the contact system generated by current and the flux density be present. This is paper present our computational analysis on contact system in MCCB..

**Key Words** : Contact system, MCCB, Molded case circuit breaker