

DESCRIPTION

This circuit breaker PCB400M displays a short response time thanks to the integration of a piezoelectric release mechanism piloted with an appropriate electronic driver in order to allow a power cut at zero point. It means that over mains current can be cut off inside its half oscillation while conventional circuit breakers generally cut the electric current after 2 or 3 oscillations at least. The advantage of a powercut at zero point is that no arc over is generated.

PERFORMANCE

The performances of this piezo circuit breaker are summarised in the following table, here below. Note that these performances can be adapted to new technical specifications.

| REFERENCES | UNIT | PCB400M |
|-------------------------|------|---------|
| > Notes | | |
| Technological baseline | | APA400M |
| Length | mm | 65 |
| Width | mm | 30 |
| Height | mm | 50 |
| Mass | g | 125 |
| Volatge supply | V | 100 |
| Delay for release start | ms | 0.5 |
| 3 mm stroke time | ms | 2.5 |
| End stroke time | ms | 4.5 |
| End stroke distance | mm | 7.7 |

APPLICATIONS

Thanks to the lack off arc over, the PCB400M can be used in harsh environment where the lifetime of the contact parts is critical and could also allow the use of electric breaker in explosive environment.

This technology is protected by patents from Norbert Beynard France company

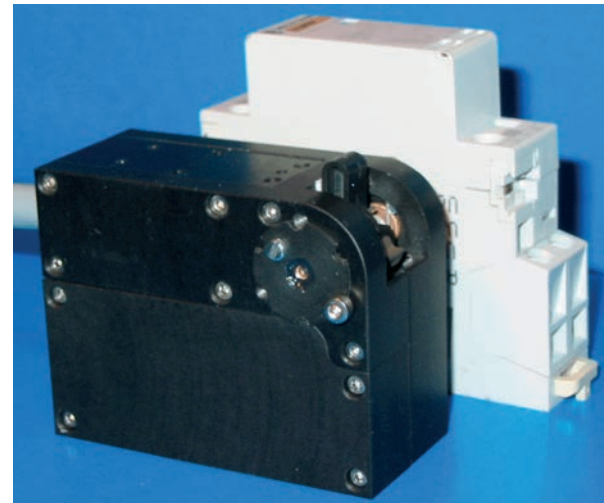


Fig. 2: Piezoelectric circuit breaker compared to a conventional one

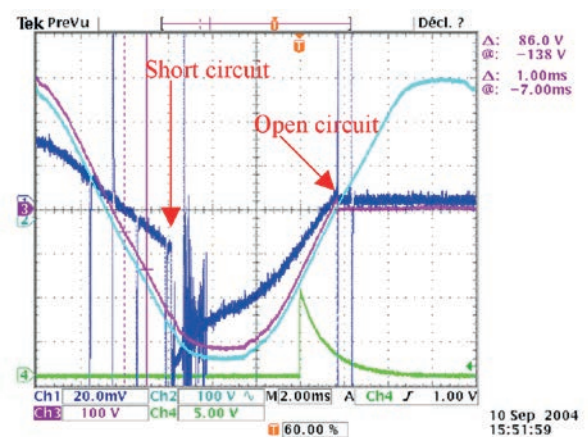


Fig. 1: Oscilloscope display during an over current.
 CH1: Dark blue, current in the circuit breaker (calibre 20A/V)
 CH2: Light blue, voltage up from the circuit breaker
 CH3: Purple, voltage down to the circuit breaker
 CH4: Green, release order of the circuit breaker.