Case Study

Pocan® DP BF 4232 for motor-protective circuit breakers

Fig. 1 Motor-protective circuit breaker PKE 32

OEM: Eaton Industries GmbH

Grade: Pocan® DP BF 4232

Moeller has, since April 2008, been part of the Eaton Electrical Sector EMEA and a global leader for products and services for energy distribution, safe power supply and industrial automation. As a specialist for energy management, Eaton Corporation posted sales in 2011 of USD 16 billion. Eaton has a workforce of about 72,000 and supplies customers in more than 150 countries. In 2011, the company celebrated its centenary.

One of the company's products is the motor-protective circuit breaker PKE 32 pictured above.

This circuit breaker with electronic wide-range overload protection up to 32 A protects electric engines from damage due to overheating. This can come from overloading of the motor or failure of one of the three phases of a three-phase motor.

For the production of the circuit breaker, the very highest quality demands are made on all the materials, especially as regards their thermal properties.

The company finally opted for Pocan® DP BF 4232 from LANXESS as the most suitable housing material. This is a flame-retardant polyester reinforced with 30 % glass fiber.

The product has the following properties in its favor:

- UL94 listing V-0 at 0.75 – 3.0 mm
- GWFI (glow wire flammability index) 960 °C at 0.75 – 3.0 mm
- Good laser inscribability
- High heat resistance

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The ability to save weight in vehicles by using plastics such as Durethan®, Pocan® and Tepex® makes an important contribution to fuel-savings and the associated reduction in CO_2 emissions.