

SCHURTER SMD fuses for LED technology

LED technology has totally revolutionized the lighting market. These devices bring countless advantages, but their sensitive electronic circuits require suitable protection. SCHURTER offers the optimal solution for every need.

Compared to other sources of lighting, LEDs offer clear advantages: They consume up to 90 percent less energy than standard incandescent bulbs. Their service life can extend as long as 50,000 hours. They achieve 100 percent luminosity immediately after being turned on, and total failures are practically unheard of. Due to their small dimensions they also save space, and thanks to a wide selection of colors they are very versatile in terms of applications.

In most cases, the service life of the LEDs exceeds that of the entire lighting fixture. Because there is no expectation of replacing LEDs as is the case with incandescent bulbs, they can be affixed permanently to the lighting fixture. To power the LEDs, an electronic circuit connects to the AC power grid and generates a stable, controlled DC voltage. In case of a malfunction, though, it is possible for high currents to arise which can be hazardous to people and possibly start a fire.

The requirements on the primary protection of LED lighting systems are very high. The simplest and most reliable way to achieve primary protection is with a midget fuse. Such fuses require a sufficiently high I_{2t} value to ensure they are not tripped by inrush current peaks. They also require high breaking capacity so they can, for example, interrupt the current path in case of a short circuit. Further, a compact design is important because power supplies for LEDs are kept very compact. Finally, fuses for the primary protection of LED lamps must guarantee reliable protection over long operating periods and at high temperatures.

SCHURTER fulfills these exact requirements in an optimal way with the UMT 250, UMF 250 and UMT-H SMD fuses. They are very robust in handling high inrush current peaks thanks to their time-lag and quick-acting characteristics, a high I_{2t} value and high breaking capacity of up to 200 A for the UMT 250/UMF 250 and 1500 A for the UMT-H.

The compact dimensions of 5.3x16 mm for the UMT-H and 3x10.1 mm for the UMT 250 and UMF 250 make it possible to use the SMD fuses even in devices where space is very limited. Reliable tripping over a large temperature range during their entire service life, a low voltage drop and an attractive price/performance ratio make the UMT-H, UMT 250 and UMF 250 excellent choices wherever quality and reliability are in high demand.

Technical features UMT 250 and UMF 250:

- Rated voltage of 250-277 VAC and 125 VDC
- High breaking capacity up to 200 A
- 34 rated currents from 50 mA up to 10 A
- Quick-acting (F) characteristics
- Compact, square design, easy PCB assembly and soldering
- Halogen-free and RoHS compliant
- All global main approvals such as VDE, cURus



UMT 250 compact SMD fuse for primary protection of LED lighting systems (source: SCHURTER)

Technical features UMT-H:




- High rated voltages up to 250-277 VAC and 250 VDC
- High breaking capacity (H) of 1500 A at rated voltage
- 19 rated currents from 160 mA to 10 A
- Time-lag (T) characteristics according to UL 248-14
- Compact, square design, easy PCB assembly and soldering
- Halogen-free and RoHS-compliant
- cURus approval



UMT-H, a compact SMD fuse when high breaking capacity is required (source: SCHURTER)

Close to the customer

SCHURTER is your expert partner when it comes to circuit protection. SCHURTER supports its customers with extensive knowledge. And in cases where standard products are not exactly what you need, SCHURTER is happy to work out a customized solution.

Primary Protection			
	UMT 250	UMF 250	UMT-H
Rated Voltage	250-277 VAC 125 VDC	250 VAC 125 VDC	250-277 VAC 125-250 VDC
Rated current	0.08-10 A	0.05-10 A	0.16-10 A
Breaking Capacity	35 A-200 A	100-200 A	1500 A
Characteristic	Time-Lag T	Quick-Acting F	Time-Lag T
Dimension [mm]	3x10.1	3x10.1	5.3x16
Approvals	VDE, UL, cURus, PSE, CQC, KC	VDE, cURus	CURus

Company

SCHURTER continues to be a progressive innovator and manufacturer of electronic and electrical components worldwide. Our products ensure safe and clean supply of power, while making equipment easy to use. We offer a broad range of standard products including circuit protection, connectors, EMC products, switches and input systems, as well as electronic manufacturing services. Moreover, SCHURTER is ready to work with our customers to meet their application specific requirements, not covered in our standard range. You can rely on SCHURTER's global network of companies and partners to guarantee a high level of local service and product delivery.



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