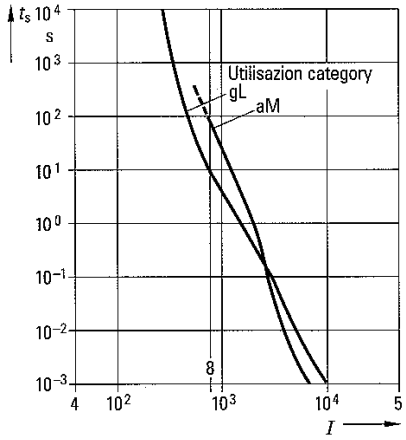
# Comparison of LV HRC fuse gG - aM

| Technical specifications | | |
|---|---|---|
| | **LV HRC fuse gG (3NA...)** | **LV HRC fuse aM (3ND...)** |
| Standards | DIN VDE 0636-201, DIN VDE 0680-4; IEC 60269-1, -2-1; EN 60269-1; HD 630.2.1 S6 | |
| Rated voltage | 400 – 690 V AC<br>250 – 440 V DC | 500 – 690 V AC |
| Rated current | 2 – 1250 A | 6 – 630 A |
| Rated breaking capacity | 120 kA AC<br>25 kA DC | 120 kA AC |
| Utilization category | g – full-range fuses<br>G – general pupose | a – partial range fuses<br>M – switchgear protection in motor circuits |
| Smallest rated breaking current | ≥ $I_{min}$ ($I_n$)<br>(smallest breaking current) | ≥ 4x$I_n$ |
| Characteristics<br>(at the same rated current) | In the upper short-circuit range the aM fuse is faster than the gG fuse. In the overload range the aM fuse is time-delayed<br> | |
| Current limitation | According standard | Better current limitation because tripping faster in upper short-circuit range. |
| Power dissipation<br>(at the same rated current) | According standard | The power dissipation is less than that of the gG fuse. |

| Area of application | | |
|---|---|---|
| | **LV HRC fuse gG (3NA...)** | **LV HRC fuse aM (3ND...)** |
| Utilization category | The utilization category gG is adapted to the load characteristics of cables and wires. | The utilization category aM is adapted to the load characteristics of motors. |
| Overload | Protection against too high warming of electrical devices at overcurrent and overload. | For overload protection an additional protective device is necessary. The fuse doesn´t melt. |
| Short-circuit | Short circuit protection of switchgear, lines and cables and electrical devices | Short circuit protection of switchgear in motor circuits (also for short-circuit protection of the cable) |
| Rating | According the $I_z$ of the cable or line. For motor applications overrating is necessary. | According the motor rated current. |
| Back-up protection | Protection of secondary circuit protective devices | |
| Touch voltage | Protection against the remanence of inadmissibly high touch voltages | |
| Universal application / example | Protection of electrical circuits, panels, motors (General purpose fuses) | Protection of load-contacts against welding in case of high overcurrents / short circuit currents |