



The low-voltage motors with squirrel-cage rotors for implementation in automatic smoke and heat extraction units to EN 12101-3 are mainly designed for driving smoke extraction fans. For this reason, they are known as smoke-extraction motors. They are mainly used in buildings or structures in which smoke control is necessary due to their shape and arrangement.

Temperature/time classification according to EN 12101-3

- F200 corresponds to 200 °C for 120 min.
- F300 corresponds to 300 °C for 60 min.
- F400 corresponds to 400 °C for 120 min.

Testing and test certificates

The smoke-extraction motors are tested by the Research and Testing Laboratory of the Department of Air-Conditioning Systems and Building Services Installations of the Technical University of Munich in accordance with EN 12101-3.

Test conditions for F200/F300:

- Temperature **300 °C**
- Time **120 min.**

The test certificates are available.



The motors are manufactured with aluminum or cast-iron housings in accordance with the smoke classes. The smoke-extraction motors are based on the standard motors and comprise the following motor types:

- Temperature/time classes F200 and F300
 - Self-ventilated motors – Aluminum series 1LA7 and 1LA5, cast-iron series 1LG6 – Version with integrated fan (metal)
 - Self-ventilated motors – Aluminum series 1LA7 and 1LA5 **double pole-changing with square-law load torque** – Version with integrated fan (metal)
 - Forced-air cooled motors – Aluminum series 1PP7 and 1PP5, cast-iron series 1PP6 – Version without integrated fan, located in air flow of fan to be driven
 - Forced-air cooled motors – Aluminum series 1PP7 and 1PP5 **double pole-changing with square-law load torque** – Version without integrated fan, located in air flow of fan to be driven
- Temperature/time classes F400
 - Self-ventilated motors – Cast-iron series 1LA6 and 1LG6 – Version with integrated fan (metal)
 - Self-ventilated motors – Cast-iron series 1LA6 **double pole-changing with square-law load torque** – Version with integrated fan (metal)
 - Forced-air cooled motors – Cast-iron series 1PP6 – Version without integrated fan, located in air flow of fan to be driven
 - Forced-air cooled motors – Cast-iron series 1PP6 **double pole-changing with square-law load torque** – Version without integrated fan, located in air flow of fan to be driven

The resonance of mountings and reactions from driven machines can cause high levels of vibration in the overall equipment unit. This has a significant effect on the expected service life of the bearing.

These vibrations are evaluated in accordance with Zones A and B according to ISO 10816.