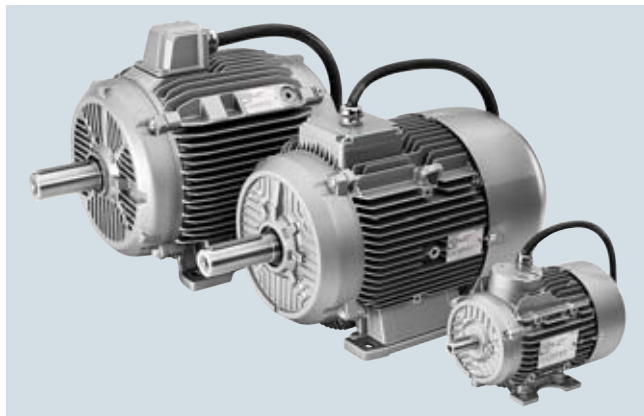


SIMOTICS DP Application-Specific Motors

Smoke-extraction motors

Orientation

Overview



The low-voltage motors with squirrel-cage rotors in efficiency class IE2 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

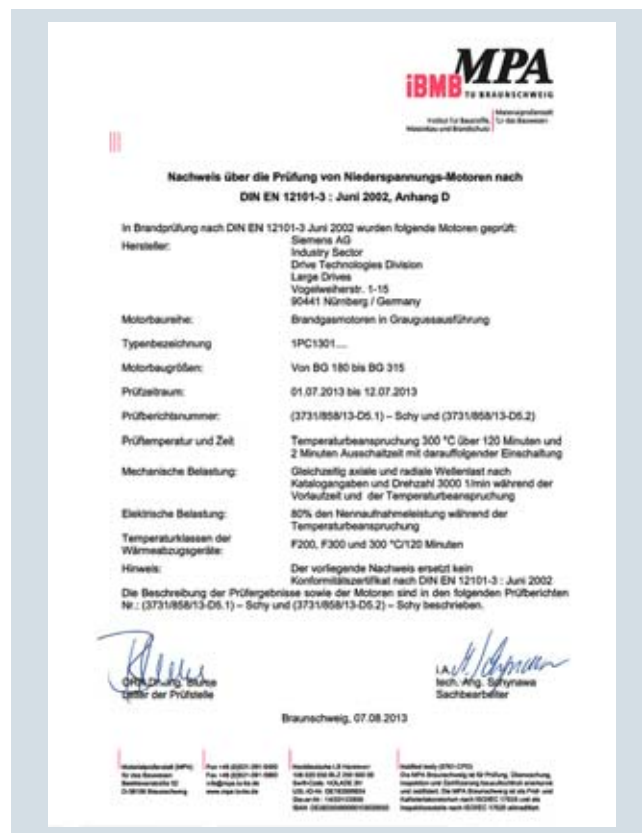
Testing and test certificates

The smoke-extraction motors have been tested in accordance with EN 12101-3 by the Materialprüfanstalt Braunschweig (Material Test Institute, Brunswick, Germany) in the "Institute for Building materials, concrete construction and fire protection".

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 depending on their frame sizes. 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 1PC1300 and cast-iron series 1PC1301 - Version with integrated fan (metal)
- **Forced-air cooled motors** - Aluminum series 1PC1300 and cast-iron series 1PC1301 (in each case Article No. with **-Z** and order code **F90**) - Version without integrated fan; located in the air flow of the driven fan

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 during continuous operation in accordance with Zones A and B according to ISO 10816.

To ensure safe operation of fans under standardized test conditions of 300 °C for a duration of 2 hours, the following limit values for radial vibrations on the bearing plate must be maintained even under these conditions.

Maximum admissible vibration values under standardized test conditions at 300 °C for a duration of 2 h in the test laboratory.

Frame size	Vibration velocity mm/s
80 ... 112	15
132 ... 200	20
225 ... 315	25