



1. **TYPE EXAMINATION CERTIFICATE**
2. **Equipment or Protective Systems Intended for use in
Potentially explosive atmospheres
Directive 94/9/EC**
3. Reference: **VTT 06 ATEX 084X**
4. Equipment: **Range of cage induction motors**

Certified types: **M3GM 315...
M3GM 355...
M3GM 400...
M3GM 450...**
5. Manufactured by: **ABB Oy Machines**
6. Address: **Strömbergintie 1
FI-00380 HELSINKI
FINLAND**
7. These equipment and any acceptable variations thereto are specified in the schedule and possible supplement(s) to this certificate and the documents therein referred to.
8. VTT, Inspection Body No. I018 accredited by the Finnish Accreditation Service (FINAS), certifies that these equipment have been found to comply with the Essential Health and Safety Requirements in Annex II to European Union Directive 94/9/EC of March 1994 relating to the design and construction of Category 3 equipment intended for use in potentially explosive atmospheres.
9. The examination and test results are recorded in confidential Reports no. FI/VTT/ExTR06.0002/00 and FI/VTT/ExTR06.0003/00.
10. Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

**EN 60079-0 (2004)
EN 60079-15 (2005)
EN 61241-0 (2006)
EN 61241-1 (2004)**



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11. If the sign "X" is placed after the certificate number, it indicates that these equipment is subject to special conditions for safe use specified in the schedule to this Certificate
12. This Type examination certificate relates only to the design, examination and tests of the specified equipment in accordance to the directive 94/9/EC.

Further requirements of the Directive may apply to the manufacturing process and supply of these equipment. These are not covered by this certificate.

13. The marking of the equipment shall include the following:

**II 3G****Ex nA II T3** and/or**II 3D****Ex tD A22 IP55, IP56, IP65 or IP66 T125 °C**

Espoo, 20.12.2006

VTT TECHNICAL RESEARCH CENTRE OF FINLAND



Martti Siirola
Research scientist



Jari Kettunen
Research engineer

14.

Schedule

15.

TYPE EXAMINATION CERTIFICATE NO. VTT 06 ATEX 084X

16.

Description of Equipment

Three phase squirrel cage induction motors of a closed type with external longitudinal cooling, cast iron frame and fitted out with Exe-certified main and Exi- or Exe-certified auxiliary terminal boxes. The duty type of the motors shall be S1.

Technical data

The Certificate is valid for the range of induction motors having the rated values within the limits in the following table:

Shaft height	U / kV	Number of poles	f / Hz	P / kW
315	up to 3.3	2 - 6	50	up to 800
355	up to 6.6	2 - 6	50	up to 800
400	up to 6.6	2 - 12	50	up to 800
450	up to 6.6	2 - 12	50	up to 800

17.

Report No. FI/VTT/ExTR06.0002/00 and FI/VTT/ExTR06.0003/00.

18.

Special conditions for safe use

The Certificate covers also the frequency converter drive with the converter type ACS 1000-series, manufactured by ABB Group Ltd, at squared torque drive. All the manufacturer's instructions concerning the speed range and the moment restrictions shall be followed.

The motors may be indicated to be used in ambient temperature other than specified in the standards (-20 °C...+40 °C) depending the used auxiliary devices.

As an option motor can be delivered without main terminal box. Before commissioning, terminal arrangement shall be such that the stator connection cables are covered with earthed protective structure (e.g. main terminal box and adequate intermediate box). Main terminal boxes must fill following requirements:

- Ex-certified,
- Enclosure IP55 or higher according to site conditions.

19. Essential Health and Safety Requirements

Met by compliance with the standards EN 60079-15 and EN 61241-1.

Espoo, 20.12.2006

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