

1. **EC-TYPE EXAMINATION CERTIFICATE**
2. **Equipment or Protective System Intended for use in
Potentially explosive atmospheres
Directive 94/9/EC**
3. Reference: **VTT 10 ATEX 010X Issue 1**
4. Equipment: **Safe Disconnection Function of converter drives**
Certified type: **ACS850 and ACQ810 with option code + Q971**
5. Applicant: **ABB Oy Drives
Hiomotie 13
FIN-00381 Helsinki
Finland**
6. Manufacturers: **ABB Oy Drives
Hiomotie 13
FIN-00381 Helsinki
Finland**
**ABB AS/LV Drives
Aruküla tee 59
Rae vald
75301 Harjumaa
Estonia**
7. This equipment or protective system and any acceptable variations thereto is specified in the schedule and possible supplement(s) to this Certificate and the documents therein referred to.
8. VTT Expert Services Ltd, notified body number 0537, in accordance with Article 9 of the Council Directive 94/9/EC of March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective system intended for use in potentially explosive atmospheres given in Annex II to the Directive



9. Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 50495 (2010)

10. If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.
11. This EC-Type examination certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance to the directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.
12. The marking of the equipment or protective system shall include the following:



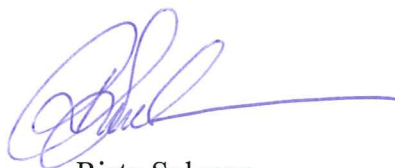
II (2) GD

Espoo, 14.2.2011

VTT Expert Services Ltd



Pertti Kokkonen
Research engineer



Risto Sulonen
Senior research scientist

13. **Schedule**

14. **EC-TYPE EXAMINATION CERTIFICATE VTT 10 ATEX 010X Issue 1**

15. Description

Safe disconnection is achieved by using "Safe Torque Off "(STO)-function which is integrated in the standard drive as an internal hardware-solution. Power that can cause rotation is not applied to the motor. The safety related part of the adjustable speed electrical power drive system PDS (SR) will not provide energy to the motor which can generate torque.

16. Documents

ATEX Safe Disconnection Function, 3AXD10000016980, rev A (dated 10.12.2010)
Report No. SAS-0203/2008TB2 by TÜV Nord. (dated 2010-12-10)
Report No. SLA-0016/2010TB1 by TÜV Nord. (dated 2010-09-27)

17. Special conditions for safe use

Circuit activating Safe Torque Off- function shall be constructed using fail-safe principle and ATEX-certified safety components (eg. thermal relays). All manufacturer's instructions shall be followed.

The drive themselves are to be installed outside potentially explosive atmospheres (article 1, section 2 of the Directive).

18. Essential Health and Safety Requirements

Assessment using standard referred in point 9 have confirmed compliance with the Directive 94/9/EC, Annex II and particular point 1.5.

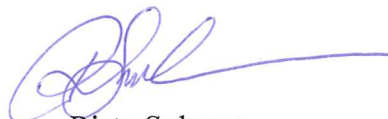
Certificate history

Issue	Date	Comment
0	23.3.2010	Prime certificate
1	14.2.2011	The introduction of new type ACQ810 and the one channel option .The introduction of the new manufacturing site.

Espoo, 14.2.2011
VTT Expert Services Ltd



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Research engineer



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