# DET NORSKE VERITAS

# EC-TYPE EXAMINATION CERTIFICATE

**[2]** **EQUIPMENT OR PROTECTIVE SYSTEM INTENDED FOR USE IN POTENTIALLY EXPLOSIVE ATMOSPHERES DIRECTIVE 94/9/EC**

[3] EC-Type Examination Certificate Number: **DNV-2007-OSL-ATEX-4076X** Rev. 5

[4] Equipment or Protective System: **Flameproof Enclosures RCU II-ExL & MutliLoad II-ExL**

[5] Applicant – Manufacturer or Authorized representative: **Toptech Systems Inc.**

[6] Address: **1124 Florida Central Pkwy**
**Longwood, FL 32750**
**USA**

[7] This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

[8] DNV, notified body number 0575 in accordance with Article 9 of Council Directive 94/9/EC of 23 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 systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential reports listed in section 14.

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
**EN 60079-0:2012, EN 60079-1:2007 and EN 60079-11:2012**

[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 and construction of the specified equipment or protected system. If applicable, further requirements of this Directive apply to the manufacturer and supply of this equipment or protective system.

[12] The marking of the equipment or protective system shall include the following:

**II 2 G Ex d ib IIB T4 Gb -40°C ≤ $T_{amb}$ ≤ +60°C**

Høvik, 2013-05-23
for Det Norske Veritas AS

Bjørn Spongsveen
*Certification Manager*

NORSK AKKREDITERING
PROD 019

Notice: This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The digitally signed and electronically distributed document is the original and valid certificate. Ref.: **www.dnv.com/digitalsignatures**

**[13]** # Schedule

**[14]** **EC-TYPE EXAMINATION CERTIFICATE No.:** DNV-2007-OSL-ATEX-4076X Rev. 5

**Certificate History**

| Revision | Description | Report no. | Issue date |
|---|---|---|---|
| 1 | Original certificate | 2007-3278 | 2007-07-20 |
| 2 | Alternative cement and aluminium allow added, new external magnetic switch, revised drawings. | 2007-3278 | 2008-11-07 |
| 3 | Add alternate Ex-d bushing and alternate keypad design | 2007-3278 Rev 2 | 2011-03-03 |
| 4 | Change address and add alternate model designation MutliLoad II-ExL | 2007-3278 Rev 3 | 2011-04-08 |
| 5 | Update to latest revisions of standards and incorporate minor design changes not impacting safety. | 2007-3278 Rev 4 | 2013-05-23 |

**[15]** **Description of Equipment or Protective System**

The RCU II and MultiLoad II are user interface units for use in hazardous locations. The electronics are housed in an Ex-d enclosure, and an intrinsic safety barrier board in the Ex-d box provides an intrinsically safe interface to a keypad located on the outside of the enclosure.

**Type Identification**

RCU II-ExL
MutliLoad II-ExL

**Electrical Data**

Intrinsic Safetey Parameters: Um = 250V

**[16]** **Project No.:** PRJC-280693-2010-PRC-USA

**Descriptive Documents**

| Number | Title | Rev. | Date |
|---|---|---|---|
| 1400-A770 | RCU II Barrier Assembly Drawing | 1.1 | 2006-12-11 |
| 1400-B770 | RCU II Barrier BOM | 1.1 | 2006-12-07 |
| 1400-C770 | RCU II Barrier Top and Bottom Copper Layers | 1.1 | 2006-12-11 |
| 1400-S770 | RCU II Barrier Schematic, 2 sheets | 1.1 | 2006-12-06 |
| 1403-A072 | RCU II ExL Base Assembly | 1.1 | 2008-09-02 |
| 1403-A073 | RCU II ExL Cover Assembly | 1.0 | 2007-03-07 |
| 1403-A074 | RCU II ExL Unit Assembly | 1.1 | 2008-09-02 |
| 1403-B070 | RCU II ExL Assembly BOM | - | 2010-12-10 |
| 1403-P070 | RCU II ExL Base | 1.1 | 2008-10-29 |
| 1403-P071 | RCU II ExL Cover | 1.1 | 2008-10-29 |
| 1403-P075 | RCU II ExL Display Bracket | 1.0 | 2007-02-08 |
| 1403-P077 | MultiloadII ExL Regulatory Label | 1.1 | 2010-12-17 |
| 1403-P078 | ExL Cover for iButton Groove Cut for Wire | 1.0 | 2013-04-22 |
| 1403-A670 | Assembly - RCU II ExL Numeric Keypad | 1.0 | 2007-03-02 |
| 1403-S670 | Schematic - RCU II ExL Numeric Keypad | 1.1 | 2011-02-01 |
| 1403-A671 | Assembly - EXL Capacitive Keypad | 1.0 | 2011-02-02 |
| 1403-S671 | Schematic – EXL Capacitive Keypad | 1.1 | 2013-02-21 |

**[17] Special Conditions for Safe Use**

1. Ambient temperature range is -40°C < Tamb < + 60°C
2. Maximum specified gap of flange joint is 0.08 mm
3. Threaded entries shall be fitted with suitable ATEX certified Ex d cable glands or blanking plugs. Where thread adapters are used, they shall be ATEX certified Ex d and shall not be used in conjunction with blanking elements.

**[18] Essential Health and Safety Requirements**

See part 9 of this certificate

END OF CERTIFICATE