1 **EC TYPE-EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 94/9/EC

3 Certificate Number: **Sira 13ATEX5134X** Issue: **1**

4 Equipment: **Impact X and Gravity X Smartphones**

5 Applicant: **Bartec Technor AS**

6 Address: Dusavikveien 39
N-4007 Stavanger
Norway

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

8 Sira Certification Service, notified body number 0518 in accordance with Article 9 of Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 14.2.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN 60079-0:2012 EN 60079-11:2012 EN 60079-28:2006

The above list of documents may detail standards that do not appear on the UKAS Scope of Accreditation, but have been added through Sira's flexible scope of accreditation, which is available on request.

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment 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. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

12 The marking of the equipment shall include the following:

II 2G
Ex ib op is IIC T4 Gb
The ambient range is -20°C to +45°C – this is not marked on the equipment but is included in the Special Conditions for Safe Use.

Project Number 70049258

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Deputy Certification Manager

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SCHEDULE

EC TYPE-EXAMINATION CERTIFICATE **Sira 13ATEX5134X**
Issue 1

13 **DESCRIPTION OF EQUIPMENT**

The Impact X and Gravity X are hazardous area Smartphones. The Impact X provides a high resolution touch display, camera, laser pointer, LED flashlight, SIM card connector and communication interfaces for Wi-Fi, Bluetooth, GPS and 3G networks. The Gravity X differs only in that it does not have 3G connectivity and has no SIM card connector.

The enclosure is constructed from aluminium, with toughened glass windows and a polycarbonate end cap. There is a port for connection to an intrinsically safe headset.

The Impact X and Gravity X has the following intrinsically safe ports for user connection:

	USB	Headset
Uo	5.3 V	9.5 V
Io	2.757 A	1.502 A
Po	2.872 W	1.565 W
Co	-	3.5 µF
Lo	-	14.7 µH
Um (non-hazardous area connection only)	5.8 V	

Variation 1 - This variation introduced the following changes:

i. An increase in the value of Um from 5.5 V to 5.8 V was endorsed, with a resulting change to the product description and a Special Condition for Safe Use.
ii. Additional chargers are approved and listed in the Special Conditions for Safe Use.
iii. The use of an alternative 3G radio module, specified as UBlox TOBY L2x0, was recognised.
iv. Minor electrical and mechanical changes were allowed, these changes do not affect compliance.

14 **DESCRIPTIVE DOCUMENTS**

14.1 **Drawings**

Refer to Certificate Annexe.

14.2 **Associated Sira Reports and Certificate History**

Issue	Date	Report number	Comment
0	11 June 2014	R70004643A	The release of the prime certificate.
1	07 December 2015	R70049258A	The introduction of Variation 1.

15 **SPECIAL CONDITIONS FOR SAFE USE** (denoted by X after the certificate number)

15.1 The ambient temperature range of the equipment is -20ºC to +45ºC.

15.2 The equipment shall be protected from contamination by liquid and dust; this is normally achieved by the operator carrying the device on their person.

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15.3 The USB port shall only be used for charging the equipment when in the non-hazardous area. The equipment shall only be charged using a charger specifically supplied for use with the unit:

- part number USB-AC35M, manufactured by Deltaco
- part number 1001-0007, manufactured by Ansmann
- part number WR9QA890USB-N(RVB), Model No: GT-41078-0506-0.4-USB, manufactured by Glob Tek
- part number WR9QA1000USB-N(R), Model No: GT-41078-0505-USB, manufactured by Glob Tek

The maximum input voltage (Um) from the charger between the lines is 5.8 V. The ambient temperature during charging shall be in the range 0ºC to 45ºC.

15.4 The USB port is also used for data download. The port has been assessed with a U_m of 5.8 V and shall be installed in accordance with clause 12.2.1 of EN 60079-14:2008.

16 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II** (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in the reports listed in Section 14.2.

17 **CONDITIONS OF CERTIFICATION**

17.1 The use of this certificate is subject to the Regulations Applicable to Holders of Sira Certificates.

17.2 Holders of EC type-examination certificates are required to comply with the production control requirements defined in Article 8 of directive 94/9/EC.

17.3 The manufacturer shall ensure that the following fuses have the stated a minimum resistance when measured at an ambient temperature not exceeding 25°C. The minimum resistance at the lower certified ambient temperature is relied upon for safety.

- Accu-Guard 50mA AVX fuse: ≥2.19 Ω at -20ºC, ≥2.89 Ω when measured at a temperature not exceeding 25ºC.
- 250mA Belfuse C2Q 250 mA fuse (F1109): ≥0.496 Ω at -20ºC, ≥0.6545 Ω when measured at a temperature not exceeding 25ºC.
- Littelfuse 435-series 1 A fuse (F1101, F1102): ≥0.049 Ω at -20ºC, ≥0.0646 Ω when measured at a temperature not exceeding 25ºC.

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