



# IECEX Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.: IECEx SIR 13.0047X Issue No: 0 Certificate history:  
Issue No. 0 (2014-06-11)

Status: **Current** Page 1 of 4

Date of Issue: **2014-06-11**

Applicant: **Bartec Technor AS**  
Dusavikveien 39  
N-4007 Stavanger  
**Norway**

Electrical Apparatus: **Impact X and Gravity X Smartphones**  
*Optional accessory:*

Type of Protection: **Intrinsic Safety and Optical Radiation**

Marking:  
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 Conditions of Certification

Approved for issue on behalf of the IECEx  
Certification Body:

C Ellaby

Position:

Deputy Certification Manager

Signature:  
(for printed version)

Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](#).

Certificate issued by:

**SIRA Certification Service**  
Rake Lane  
Eccleston  
Chester  
CH4 9JN  
United Kingdom

**sira**  
CERTIFICATION



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Manufacturer: **Bartec Technor AS**  
Dusavikveien 39  
N-4007 Stavanger  
Norway

Additional Manufacturing  
location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

#### STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

<b>IEC 60079-0 : 2011</b> Edition:6.0	Explosive atmospheres - Part 0: General requirements
<b>IEC 60079-11 : 2011</b> Edition:6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
<b>IEC 60079-28 : 2006-08</b> Edition:1	Explosive atmospheres - Part 28: Protection of equipment and transmission systems using optical radiation

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

#### TEST & ASSESSMENT REPORTS:

*A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in*

Test Report:

[GB/SIR/ExTR14.0142/00](#)

Quality Assessment Report:

[NO/NEM/QAR07.0003/07](#)



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## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

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
U <sub>o</sub>	5.3 V	9.5 V
I <sub>o</sub>	2.757 A	1.502 A
P <sub>o</sub>	2.872 W	1.565 W
C <sub>o</sub>	-	3.5 µF
L <sub>o</sub>	-	14.7 µH
U <sub>m</sub> (non-hazardous area connection only)	5.5 V	

Refer to Equipment (continued) for Conditions of Manufacture.

### CONDITIONS OF CERTIFICATION: YES as shown below:

#### Conditions of Certification

The user/installer shall comply with the following:

1. The ambient temperature range of the equipment is -20°C to +45°C.
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 .
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, either part number USB-AC35M, manufactured by Deltaco or part number 1001-0007, manufactured by Ansmann. The maximum input voltage (U<sub>m</sub>) from the charger between the lines is 5.5 V. The ambient temperature during charging shall be in the range 0°C to 45°C.
4. The USB port is also used for data download. The port has been assessed with a U<sub>m</sub> of 5.5 V and shall be installed in accordance with clause 12.2.1 of IEC 60079-14:2007.



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## EQUIPMENT (continued):

### Conditions of manufacture

The Manufacturer shall comply with the following:

1. 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: $\geq 2.19 \Omega$ at -20°C, $\geq 2.89 \Omega$ when measured at a temperature not exceeding 25°C.
?	250mA Belfuse C2Q 250 mA fuse (F1109): $\geq 0.496 \Omega$ at -20°C, $\geq 0.6545 \Omega$ when measured at a temperature not exceeding 25°C.
?	Littelfuse 435-series 1 A fuse (F1101, F1102): $\geq 0.049 \Omega$ at -20°C, $\geq 0.0646 \Omega$ when measured at a temperature not exceeding 25°C.