



**1. GENERAL**

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	5.3V	9.5V
Io	2.757A	1.502A
Po	2.872W	1.565W
Co	-	3.5 $\mu$ F
Lo	-	14.7 $\mu$ H
Um (non-hazardous area connection only)	5.5V	

Based on the following documentation: IECEx SIR 13.0047X issue No 0

**2. CONDITIONS OF MANUFACTURER**

The Manufacturer shall comply with the following:

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 250mA 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 1A fuse (F1101, F1102):  $\geq 0.049\Omega$  at -20°C,  $\geq 0.0646\Omega$  when measured at a temperature not exceeding 25°C.

**3. SPECIAL CONDITIONS OF USE (X)**

The user/installer shall comply with the following:

- The ambient temperature range of the equipment is -20°C to +45°C.
- The equipment shall be protected from contamination by liquid and dust; this is normally achieved by the operator carrying the device on their person.
- 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 (Um) 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.
- The USB port is also used for data download. The port has been assessed with a Um of 5.5 V and shall be installed in accordance with clause 12.2.1 of IEC 60079-14:2007.

4. MARKING

The following marking must be added to the units in a legible and durable manner:

Supplier : Bartec Safety (Pty) Ltd

Equipment : Smartphones

Type : Impact X and Gravity X

IA Number : S-XPL/14.1691 X

Rating : 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 of Certification

**If the above marking does not appear on the unit, this certificate does not cover it.**



**D Young**  
Testing Officer

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