

Government Approved Test Laboratory (Previously AIA)

Issued:

*Expire:

Reg No: 1999/027771/07

ACCREDITED AND APPROVED TEST LABORATORY

IN TERMS OF ARP 0108: "REGULATORY REQUIREMENTS FOR EXPLOSION PROTECTED APPARATUS"

IA CERTIFICATE

BARTEC SAFETY (PTY) LTD PO BOX 58071

NEWVILLE 2114

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03 Oct 2014

03 Oct 2017

Equipment: Smartphones

Manufacturer: Bartec Technor AS

Type: Impact X and Gravity X

Serial No: All items imported between Issued and Expire.

Supplied by

Bartec Safety (Pty) Ltd

Identified by Inspection Authority number

S-XPL/14.1691 X

And as described in the Explolabs file number XPL/15677/14.1691 is hereby certified "Explosion Protected 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", having been examined and inspected in accordance with the relevant requirements of South African Standards.

| SANS 60079-0: 2012 Ed 5 IEC 60079-0: 2011 Ed 6 | Explosive atmospheres Part 0: Equipment — General requirements |
|---|---|
| SANS 60079-11: 2012 Ed 4 IEC 60079-11: 2011 Ed 6 | Explosive atmospheres Part 11: Equipment protection by intrinsic safety "i" |
| SANS 60079-28: 2009 Ed 1 IEC 60079-28: 2006 Ed 1 | Explosive atmospheres Part 28: Protection of equipment and transmission systems using optical radiation |

Locations Zone 1Gb Gas: Surface

Frequency Intermittent as could occur under normal operation

Environment Group IIC Propane to Hydrogen plus Acetylene

Limiting Temp. T4 135 ℃

This certification indicates compliance with R10.1 of the Mines Health and Safety Act and/or EMR 9(2) of the Occupational Health and Safety Act, provided that the apparatus is used as relevant in accordance with:

- i) SANS 10086 and IEC/SANS 61241-14 requirements as applicable;
- (ii) Any conditions mentioned in the above report;
- iii) Any relevant requirements and codes of practice enforced in terms of the Mine Health and Safety Act or Occupational Health and Safety Act; and
- iv) Any restrictions and conditions enforced by the Chief Inspector of Mines or the Principal Inspector or the Chief Inspector: Occupational Health and Safety.
- A revision certificate replaces all previous version of the certificate.
- vi) * Only covers equipment Imported between the "Issued" and "Expire" dates.
- Vii) If and when your QAN (Quality Assurance Notification) Certificate for your equipment manufacturer expires during the valid period of the IA Certification (issued for your equipment) and a new certificate is not submitted the existing IA Certification will then be cancelled. It is thus the client's responsibility to always submit the updated and valid QAN certificate(s) to Explolabs (Pty) Ltd

DOCUMENT No: XPL0213 | RELEASE DATE: 14/01/2014 | REV : 2

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ANNEX TO CERTIFICATE NO S-XPL/14.1691X

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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 |
| lo | 2.757A | 1.502A |
| Po | 2.872W | 1.565W |
| Co | - | 3.5µF |
| Lo | - | 14.7μΗ |
| | | |
| 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 ℃. The minimum resistance at the lower certified ambient temperature is relied upon for safety.

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

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4. MARKING

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

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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 $-20 \,^{\circ}$ C to $+45 \,^{\circ}$ 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

EXPLOLABS EXPLOSION PREVENTION SERVICES

This report/certificate shall not be reproduced except in full without the written approval of the company Explolabs (Pty) Ltd shall not be liable for any losses or damages sustained on account of any failure or omission to properly perform our duties in terms of any contract undertaken by us. This disclaimer is immutable and automatically incorporated in any contract undertaken by us; notwithstanding anything to the contrary, save for the express written waiver of our managing director. The contents of electronic reports/certificates cannot be guaranteed. Original certification documents will be kept on file at Explolabs (Pty) Ltd

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