



# 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 TSA 10.0020X Issue No: 1 Certificate history:  
Status: **Current** Issue No. 1 (2017-05-11)  
Date of Issue: **2017-05-11** Issue No. 0 (2010-12-03)  
Applicant: **Austdac Pty Ltd** Page 1 of 5  
Unit 1, 42 Carrington Road  
Castle Hill NSW 2154  
**Australia**  
Equipment: **IS Piezo Alarm Type ALT3 & Undervoltage Detector Type AIVC1**  
*Optional accessory:*  
Type of Protection: **Ex Ia**  
Marking:  
Austdac Pty Ltd  
IS Piezo Alarm Type ALT3  
Ex ia I Ma  
IECEX TSA 10.0020X  
Undervoltage Detector Type AIVC1  
Ex ia I Ma  
IECEX TSA 10.0020X

Approved for issue on behalf of the IECEX  
Certification Body:

Debbie Wouters

Position:

Acting Quality & Certification Manager

Signature:  
(for printed version)

Date:

11 MAY 2017

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](http://Official IECEX Website).

Certificate issued by:

**TestSafe Australia**  
919 Londonderry Road  
Londonderry NSW 2753  
Australia





# IECEX Certificate of Conformity

Certificate No: IECEx TSA 10.0020X Issue No: 1  
Date of Issue: 2017-05-11 Page 2 of 5  
Manufacturer: **Austdac Pty Ltd**  
Unit 1, 42 Carrington Road  
Castle Hill NSW 2154  
**Australia**

Additional Manufacturing location(s):

**Dongguan Hubbell Electrical Products Company Limited (DGHAL)**

Xincheng Industrial Zone  
Hengli Town, Dongguan City  
523460, Guangdong  
China

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:

**IEC 60079-0 : 2004** Electrical apparatus for explosive gas atmospheres - Part 0: General requirements  
Edition:4.0  
**IEC 60079-11 : 2006** Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"  
Edition:5

*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:

AU/TSA/ExTR10.0038/00

Quality Assessment Report:

AU/ITA/QAR15.0002/01

AU/ITA/QAR06.0001/11



# IECEx Certificate of Conformity

Certificate No: IECEx TSA 10.0020X

Issue No: 1

Date of Issue: 2017-05-11

Page 3 of 5

## Schedule

### EQUIPMENT:

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

The I.S. Piezo Alarm TYPE ALT3 mounted in an enclosure containing one or more piezo alarms. The enclosure may be of ENCL109 Series or other as covered by the conditions of safe use. The piezo alarm is made of a piezo-electric component connected through 3 wires to an encapsulated piezo driver circuit. The Alarm is supplied with two wires, which would be terminated within the enclosure of the alarm. Connection is made to external wiring through a terminal block.

The Undervoltage Detector TYPE AIVC1 is a three port device; two input channel ports each terminated in PCB mount screw on terminal block and a two channel output port terminated in a 24-pin socket. The Undervoltage Detector two input channels and the Piezo Alarm input can be powered from the same I.S. power source when used together in the ENCL109 Series universal enclosure. The undervoltage detector output port is powered from a separate I.S. source. The cable entry to the enclosure is through appropriately IP rated cable glands and access to connection facilities is provided through the enclosure cover. The I.S. Piezo Alarm TYPE ALT3 and Undervoltage Detector TYPE AIVC1 can be used as a standalone Alarm and standalone undervoltage detector. When used as standalone each can be housed in an alternative enclosure either with or without other I.S. equipment. In such case the enclosure must be at least IP55 protected.

### SPECIFIC CONDITIONS OF USE: YES as shown below:

Refer the annexe of this certificate.



# IECEX Certificate of Conformity

Certificate No: IECEx TSA 10.0020X

Issue No: 1

Date of Issue: 2017-05-11

Page 4 of 5

## DETAILS OF CERTIFICATE CHANGES (for Issues 1 and above):

### Issue 1:

1. Change of both Applicant address and Manufacturer address from  
"1 / 4 Packard Avenue, Castle Hill, NSW 2154, Australia"

To

"Unit 1, 42 Carrington Road, Castle Hill, NSW 2154, Australia"

### 2. Adding another manufacturing address

Dongguan Hubbell Electrical Products Company Limited (DGHAL)

Xincheng Industrial Zone

Hengli Town, Donggaun City

523460, Guangdong, China



# IECEX Certificate of Conformity

Certificate No: IECEx TSA 10.0020X

Issue No: 1

Date of Issue: 2017-05-11

Page 5 of 5

**Additional Information:**

None

**Annex:**

[Annexe\\_IECEX TSA 10 0020X-1.pdf](#)



# IECEX Certificate of Conformity Annexe

Annexe for Certificate No.:	IECEX TSA 10.0020X	Issue No.:	1
-----------------------------	--------------------	------------	---

Drawing list pertaining to Issue 0 of this Certificate:

Drawing/Document Number:	Page/s:	Title:	Revision Level:	Date: (yyyy-mm-dd)
<b>I.S. Piezo Alarm Type ALT3</b>				
58-029-37	2	I.S. Piezo Alarm Type ALT3 Document List	04	2010/11/23
58-021-03	1	Type ALT3 I.S. Piezo Alarm Schematic Diagram	05	2000/10/16
58-022-06	1	Type ALT3 I.S. Piezo Alarm Mechanical Details	02	2000/09/11
58-023-13	1	Type ALT3 I.S. Piezo Alarm Label Details	05	2010/10/05
58-025-21	1	I.S. Piezo Alarm Type ALT3 PCB MC-10 Artwork Details	01	2000/08/31
58-026-04	1	Type ALT3 I.S. Piezo Alarm Assembly Details	04	2010/09/07
58-030-04	1	I.S. Piezo Alarm Type ALT3 Mounting Instructions	01	2009/01/05
<b>Undervoltage Detector Type AIVC1</b>				
56-017-37	2	Undervoltage Detector Type AIVC1 Document List	05	2010/11/23
56-019-03	1	Type AIVC1 Undervoltage Detector Schematic Diagram	06	2010/07/08
56-020-21	4	PCB0079A Type AIVC1 Under Voltage Detector Artwork Details	04	2000/04/07
56-021-07	1	Type AIVC1 Under Voltage Detector Component Loading Diagram	03	2010/07/08
56-022-14	2	Type AIVC1 Undervoltage Detector Bill Of Materials	05	2010/07/08
56-023-09	3	AIVC1 Undervoltage Detector Test Procedure	02	2004/01/20
56-024-13	2	Type AIVC1 Undervoltage Detector LABL111 Label Details	08	2010/10/05
56-025-04	1	Type AIVC1 Under voltage Detector Assembly Diagram	01	1999/10/26
56-026-08	1	Type AIVC1 Under voltage Detector User Wiring Diagram	03	2010/07/08

Certificate issued by:



**TestSafe Australia**  
919 Londonderry Road  
Londonderry NSW 2753 Australia



# IECEX Certificate of Conformity Annexe

Annexe for Certificate No.:	IECEX TSA 10.0020X	Issue No.:	1
-----------------------------	--------------------	------------	---

ENCL109 Series Universal Enclosure				
90-031-06	2	Panel Mounting Hole Requirements for Plugs, Sockets & Glands Mechanical Details	03	2009/04/16
90-035-06	1	ENCL109 Series Universal Enclosure	01	1999/12/09
90-036-06	1	ENCL110 Series Universal Enclosure Cover Mechanical Details	02	1999/12/09
90-037-06	1	GASKT020 Universal Enclosure Gasket Mechanical Details	01	1999/10/14

### Conditions of Certification pertaining to Issue 0 of this Certificate:

The conditions of manufacture:

- 1) Each apparatus is to be tested to withstand a test voltage of not less than 500 Volts 50 Hz applied between input terminals and case for a period not less than 1 minute.

The following conditions of safe use are to be taken into account when installed:

1. The following parameters are to be taken into account when installed:

#### I.S. Piezo Alarm TYPE ALT3:

Input Parameters	Input to Black and Red wires
Maximum Input Voltage $U_i$	18.36V
Maximum Input Current $I_i$	2.35A
Maximum Internal Capacitance $C_i$	0 $\mu$ F
Maximum Internal Inductance $L_i$	0 mH

#### Undervoltage detector Type AIVC1:

Channel 1 and Channel 2 are supplied with the same power source.

Input Parameters	Input Channels Terminals 3 to 4 (CH1) & 5 to 6 (CH2)	Output Channel Port (24 Pin Socket)
Maximum Input Voltage $U_i$	18.36V	35V
Maximum Input Current $I_i$	2.35A	333mA
Maximum Internal Capacitance $C_i$	0 nF	0 nF
Maximum Internal Inductance $L_i$	0 mH	0 mH

Certificate issued by:

	<b>TestSafe Australia</b> 919 Londonderry Road Londonderry NSW 2753 Australia
---	---



# IECEX Certificate of Conformity Annexe

<b>Annexe for Certificate No.:</b>	<b>IECEX TSA 10.0020X</b>	<b>Issue No.:</b>	<b>1</b>
------------------------------------	---------------------------	-------------------	----------

2. Where the IS Piezo Alarm TYPE ALT3 is used as a standalone apparatus, it has to be installed in an enclosure suitable for Group I and having a degree of protection of at least IP55 after a 20 Joules impact.

3. Where Undervoltage Detector TYPE AIVC1 is used as a standalone apparatus, it has to be installed in an enclosure suitable for Group I and having a degree of protection of at least IP55.

4. Where the I.S. Piezo Alarm TYPE ALT3 and/or the Undervoltage Detector TYPE AIVC1 are used as standalone inside an enclosure with other I.S. equipment, their interconnecting cables shall be installed as either separate cables or as separate screened circuits.

5. Where cable glands are used to provide cable entry to the enclosure, these must be certified to IP55 or better.

### Variation permitted by Issue 1:

1. Change of both Applicant address and Manufacturer address from  
"1 / 4 Packard Avenue, Castle Hill, NSW 2154, Australia"  
To  
"Unit 1, 42 Carrington Road, Castle Hill, NSW 2154, Australia"

2. Adding another manufacturing address  
Dongguan Hubbell Electrical Products Company Limited (DGHAL)  
Xincheng Industrial Zone  
Hengli Town, Donggaun City  
523460, Guangdong, China

### Conditions of Certification pertaining to Issue 1 of this Certificate:

No changes. The previous conditions still apply.

Certificate issued by:

	<b>TestSafe Australia</b> 919 Londonderry Road Londonderry NSW 2753 Australia
---	---