



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

Certificate No.: IECEx TSA 10.0021X Issue No: 2 Certificate history:
Status: **Current** Issue No. 2 (2017-05-11)
Date of Issue: **2017-05-11** Issue No. 1 (2012-02-29)
Page 1 of 5 Issue No. 0 (2011-02-28)

Applicant: **Austdac Pty Ltd**
Unit 1, 42 Carrington Road
Castle Hill NSW 2154
Australia

Equipment: **Relay Isolation Barrier type ARST2**
Optional accessory:

Type of Protection: **[Ex Ia], Ex Ia**

Marking:
Austdac Pty Ltd
Relay Isolation barrier type ARST2
IECEX TSA 10.0021X
[Ex ia Ma] I / [Ex ia Ga] IIC
Ex ia I Ma / Ex ia IIC T4 Ga (Ta = 60 degC)
S/N

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://www.iecex.com).

Certificate issued by:

TestSafe Australia
919 Londonderry Road
Londonderry NSW 2753
Australia





IECEX Certificate of Conformity

Certificate No: IECEX TSA 10.0021X Issue No: 2
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, Donggaun 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/ExTR10.0039/00 AU/TSA/ExTR11.0070/00

Quality Assessment Report:

AU/ITA/QAR15.0002/01 AU/ITA/QAR06.0001/11



IECEX Certificate of Conformity

Certificate No: IECEX TSA 10.0021X

Issue No: 2

Date of Issue: 2017-05-11

Page 3 of 5

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The Relay Isolation Barrier Type ARST2 consists of a relay mounted inside a plastic enclosure. Two sets of terminals have been provided for the two separate circuits for which galvanic isolation is provided by the barrier. An electronic circuit inside the enclosure controls the operation of the relay from one set of terminals, and provides the power limitation necessary for use of the relay within its ratings.

The high voltage terminals are marked 4 & 5, 'Contact Port', while the low voltage coil terminals are marked 1, 2, 3, "Coil Port".

The relay has been constructed using a high voltage reed switch connected through appropriate fuses and gas discharge tubes to the terminals marked 4 & 5, 'Contact Port'. The coil used to operate the reed switch is wound on a bobbin with adequate insulating thickness to provide infallible isolation from the reed switch inserted inside it. The circuit feeding the coil has circuit elements to prevent the internal inductance from appearing at the input terminals marked '1, 2, 3'.

When the barrier is installed in the hazardous area, both sets of terminals must only be fed through intrinsically safe barriers or associated equipment appropriate to the Group and Zone of the hazardous area

SPECIFIC CONDITIONS OF USE: YES as shown below:

Refer the annexe of this issue of the certificate.



IECEX Certificate of Conformity

Certificate No: IECEX TSA 10.0021X

Issue No: 2

Date of Issue: 2017-05-11

Page 4 of 5

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Issue 2:

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 10.0021X

Issue No: 2

Date of Issue: 2017-05-11

Page 5 of 5

Additional Information:

None

Annex:

[Annexe_IECEX TSA 10 0021X-2.pdf](#)



IECEX Certificate of Conformity Annexe

Annexe for Certificate No.:	IECEX TSA 10.0021X	Issue No.:	2
-----------------------------	--------------------	------------	---

Drawing list pertaining to Issue 0 of this Certificate:

Drawing/Document Number:	Page/s:	Title:	Revision Level:	Date: (yyyy-mm-dd)
		Relay Isolation Barrier Type ARST2		
57-022-03	1	Type ARST1 Series 2 Isolation Barrier 3.3kV Schematic Diagram	13	2011/02/18
57-023-21	3	PCB0088A ARTS1 Isolation Barrier 3.3kV Artwork Details	02	2000/07/07
57-041-37	2	ARST2 Relay Isolation Barrier 3.3KV Document List	02	2011/02/22
57-042-06	5	ARST2 Enclosure Mechanical Details	01	2010/12/09
57-043-06	1	ARST2 Relay Switch Coil Bobbin Mechanical Details	02	2011/02/07
57-044-11	1	ARST2 Relay Switch Coil Product Specifications	03	2011/02/07
57-045-14	2	ARST2 Relay Isolation Barrier 3.3kV Bill of Materials	02	2010/12/09
57-046-13	1	ARST2 Relay Isolation Barrier 3.3kV LABL 600 Label Details	05	2011/02/15
57-047-07	1	ARST2 Relay Isolation Barrier 3.3KV PCB0088 Component Loading Diagram	02	2011/01/05
57-048-04	3	ARST2 Relay Isolation Barrier 3.3kV Assembly Diagram	03	2011/02/07
57-049-15	1	ARST2 Relay Isolation Barrier 3.3kV General Arrangement	01	2011/01/07

Certificate issued by:

	TestSafe Australia 919 Londonderry Road Londonderry NSW 2753 Australia
---	---



IECEX Certificate of Conformity Annexe

Annexe for Certificate No.:	IECEX TSA 10.0021X	Issue No.:	2
-----------------------------	--------------------	------------	---

Drawing/Document Number:	Page/s:	Title:	Revision Level:	Date: (yyyy-mm-dd)
57-050-09	4	ARST2 Relay Isolation Barrier 3.3KV Test Procedure	01	2010/12/09
09-001-10	6	Sylgard 170 A & B Silicone Elastomer Description, Application and Preparation Technical manual	05	2010/04/28
57-033-12	9	Relay Isolation Barrier Type ARST1 and ARST2 User's Manual	02	2011/01/04

Conditions of Certification pertaining to Issue 0 of this Certificate:

Conditions of manufacture:

Routine dielectric test at voltage 9100 Vrms must be carried out between input and output terminals as per clauses 6.3.12 and 10.3 of IEC 60079-11:2006 standard. The equipment must not exhibit any discharge or insulation damage during testing.

Conditions of safe use:

- The apparatus has been assessed as intrinsically safe equipment under the 'entity' concept, with the option of using it either in the safe area as an 'associated equipment' or in the hazardous area as 'intrinsically safe equipment'. The following parameters must be taken into account during installation:

When used as an 'associated equipment':

At the terminals marked with 4 & 5 'Contact Port':

$U_m = 3300 \text{ V rms}$, $I_m = 10\text{A}$, $P_m = 500 \text{ VA}$

At the terminals marked 1, 2, 3:

U_i (Volts)	I_i (A)	C_i (μF)	L_i (μH)
26.5	2.37	0	0

Certificate issued by:

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



IECEX Certificate of Conformity Annexe

Annexe for Certificate No.:	IECEX TSA 10.0021X	Issue No.:	2
-----------------------------	--------------------	------------	---

When used as an 'intrinsically safe equipment':

At the terminals marked with 4 & 5 'Contact Port':

Ui(Volts)	Ii (A)	Ci (μ F)	Li (μ H)	Pi (W)
26.5	2.37	0	0	10

At the terminals marked 1, 2, 3 'Coil Port' :

Ui(Volts)	Ii (A)	Ci (μ F)	Li (μ H)
26.5	2.37	0	0

- 2) The circuits connected to the two different sets of terminals shall be 'separate circuits' and must be adequately segregated from each other.
- 3) The apparatus shall be installed in a host enclosure which would provide a minimum ingress protection of IP54. The host enclosure would also prevent electrostatic hazard due to the plastic enclosure of the apparatus.

Schedule of Variations

Variations Permitted by Issue 1:

The following changes were made:

1. Raised the maximum ambient temperature from 40 °C to 60 °C;
2. Revised some mechanical drawings to improve quality assurance during production and revised bill of materials to correct an error.

The change has been assessed in test report 33312 (AU/TSA/ExTR11.0070/00).

Condition of Variation Permitted by Issue 1:

There are no additional conditions due to the change.

Drawing Schedule Relating to Issue 1:

Drawing/Document Number:	Page/s:	Title:	Revision Level:	Date: (yyyy-mm-dd)
57-041-37	2	ARST2 Relay Isolation Barrier 3.3KV Document List	04	2012-01-20
57-042-06	5	ARST2 Enclosure Mechanical Details	02	2011-11-21

Certificate issued by:



TestSafe Australia
 919 Londonderry Road
 Londonderry NSW 2753 Australia



IECEX Certificate of Conformity Annexe

Annexe for Certificate No.:	IECEX TSA 10.0021X	Issue No.:	2
------------------------------------	---------------------------	-------------------	----------

Drawing/Document Number:	Page/s:	Title:	Revision Level:	Date: (yyyy-mm-dd)
57-045-14	2	ARST2 Relay Isolation Barrier 3.3kV Bill of Materials	03	2011-11-23
57-047-07	1	ARST2 Relay Isolation Barrier 3.3kV PCB0088 Component Loading Diagram	03	2011-11-22
57-048-04	3	ARST2 Relay Isolation Barrier 3.3kV Assembly Diagram	04	2011-11-22
57-046-13	1	ARST2 Relay Isolation Barrier 3.3kV LABL600 Label Details	06	2012-02-23

Variation permitted by Issue 2:

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, Dongguan City
523460, Guangdong, China

Conditions of Certification pertaining to Issue 2 of this Certificate:

No changes. The previous conditions still apply.

Certificate issued by:

	TestSafe Australia 919 Londonderry Road Londonderry NSW 2753 Australia
---	---