

**Australian/New Zealand  
Certification Scheme for  
EXPLOSION-PROTECTED ELECTRICAL EQUIPMENT**

**ANZEx Scheme**

***Certificate of Conformity***

Certificate No.: ANZEx 13.3001

Issue No.: 0

Date of Issue: 31/01/2014

**Applicant:** Elmako Pty Ltd trading as Wattmaster  
54 Lakewood Boulevard  
Carrum Downs Vic 3201  
Australia

**Electrical Apparatus:** HUW Range of Alco Cable Glands

**Type of Protection:** Ex db I/IIC, Ex eb I/IIC, Ex ta IIIC

**Marking Code:** Alco ALCHUW... M..  
Ex db I/IIC, Ex eb I/IIC, Ex ta IIIC  
ANZEx 13.3001

**Manufacturer:** Elmako Pty Ltd trading as Wattmaster  
54 Lakewood Boulevard  
Carrum Downs Vic 3201  
Australia

**Manufacturing Location(s):** Elmako Pty Ltd trading as Wattmaster  
54 Lakewood Boulevard  
Carrum Downs Vic 3201  
Australia

*The EPEE certification database located at <http://www.anzex.com.au> shows the validity of this Certificate.*

**This certificate and schedule shall not be reproduced except in full**

 <p>Test Safe AUSTRALIA</p>	<p>Certificate issued by:</p> <p style="text-align: center;"><b>TestSafe Australia</b> 919 Londonderry Road, Londonderry NSW 2753 Australia Phone: +61 2 4724 4900 Fax: +61 2 4724 4999 <a href="http://www.testsafe.com.au">http://www.testsafe.com.au</a></p>	 <p>JAS-ANZ</p> <p style="text-align: center;"><a href="http://www.jas-anz.org/register">www.jas-anz.org/register</a></p>
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**Australian/New Zealand  
Certification Scheme for  
EXPLOSION-PROTECTED ELECTRICAL EQUIPMENT**

**ANZEx Scheme**

***Certificate of Conformity***

Certificate No.: ANZEx 13.3001

Issue No.: 0

Date of Issue: 31/01/2014

*This certificate is granted subject to the conditions as set out in Standards Australia/Standards New Zealand Miscellaneous Publication MP87.1:2008.*

**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 60079-0:2007** Explosive atmospheres  
Part 0: Equipment – General requirements
- IEC 60079-1:2007** Explosive atmospheres  
Part 1: Equipment protection by flameproof enclosures ‘d’
- IEC 60079-7:2006** Explosive atmospheres  
Part 7: Equipment protection by increased safety ‘e’
- IEC 60079-31:2008** Explosive atmospheres  
Part 31: Equipment dust ignition protection by enclosure “t”

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

**ASSESSMENT & TEST REPORTS:**

*The equipment listed has successfully met the assessment and test requirements as recorded in:*

Test Report No. and Issuing Body: **33003, TestSafe**  
Quality Assessment Report No. and Issuing Body: **AU/TSA/QAR09.0007/01, TestSafe**

File Reference: **2008/023373**



Ujen Singh

*Signed for and on behalf of issuing body*

Quality & Certification Manager

*Position*

31/01/2014

*Date of Issue*

**This certificate is not transferable and remains the property of the issuing body  
and must be returned in the event of it being revoked or not renewed.**

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**Australian/New Zealand  
Certification Scheme for  
EXPLOSION-PROTECTED ELECTRICAL EQUIPMENT**

**ANZEx Scheme**

***Certificate of Conformity***

Certificate No.: **ANZEx 13.3001**

Issue No.: **0**

Date of Issue: **31/01/2014**

### **Schedule**

#### **EQUIPMENT:**

The HUW range of Alco cable glands is suitable for inserting circular non-armoured cables into flameproof (Ex d) enclosures having threaded entries and increased safety (Ex e) or dust ignition protection (DIP) equipment having either plain or threaded entries. The glands consist of a body, inner seal (A, B or C) and nut. The nuts are provided with a lead-in, as the glands are suitable for use with flexible cables. Attachment of the glands to an enclosure is facilitated by means of the male threaded portion on the body. The cable is passed through the appropriate sized inner seal and sealing of the cable is achieved by compressing the inner seal between the body and nut, when the nut is screwed into the body. The inner seal also clamps the cable to prevent pulling or twisting forces from being transmitted to the conductor connections. The permissible operating temperature range for the HUW range is -20 °C to +80 °C.

The following options are available for the HUW range:

- a) Gland nut with hose barb extension for the HUW20SB, HUW20B, HUW25, HUW32, HUW40 and HUW50 cable glands to facilitate the installation of a protective rubber hose over the cable. The gland code number is suffixed with “-H”. These alternative gland nuts are not suitable for use with flexible cables.
- b) Gland nut with threaded extension for the HUW20SB, HUW20A HUW20B, HUW25, HUW32, HUW40 and HUW50 cable glands to facilitate the installation of a Liquidtight<sup>®</sup> metal conduit fitting for use with a Liquidtight<sup>®</sup> flexible metal conduit over the cable. The gland code number is suffixed with “-LTA”. These alternative gland nuts are not suitable for use with flexible cables.
- c) External protective rubber shroud, orange or black in colour.

The cable glands are manufactured from brass alloy to Japanese Standard JIS C3604 B, which is nickel plated, and have ISO (1.5 mm pitch) mounting threads. All metallic components of the glands are manufactured from the same material. The inner seals are made from ‘NBR 1052 Rubber’. An entry thread seal made of red fibre is provided for Ex t applications and is required to maintain ingress protection of IP66/IP68 (30 m for 4 hours) for the cable glands.

The glands may also be used with intrinsically safe circuits, in which case the glands will have specific parts painted light blue. For detailed installation information, refer to the manufacturer’s fitting instructions.

The HUW range of Alco cable glands is summarized in the following table.

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**ANZEx Scheme**

***Certificate of Conformity***

Certificate No.: ANZEx 13.3001

Issue No.: 0

Date of Issue: 31/01/2014

**HUW Range of Alco Cable Glands**

Gland Code Number	Mounting Thread Diameter x Length (mm)	Tightening Torque (Nm)	Cable Diameter Over Sheath (mm)					
			Seal C		Seal B		Seal A	
			Min	Max	Min	Max	Min	Max
ALCHUW20SB	M20 x 12	13	-	-	4.0	8.0	8.0	10.0
ALCHUW20A	M20 x 12	13	-	-	6.5	8.0	8.0	10.0
ALCHUW20B	M20 x 12	13	-	-	10.0	12.0	12.0	14.0
ALCHUW25	M25 x 12	21	-	-	14.0	16.0	16.0	19.0
ALCHUW32	M32 x 15	35	-	-	19.0	22.0	22.0	25.0
ALCHUW40	M40 x 15	53	-	-	25.0	28.5	28.5	31.0
ALCHUW50	M50 x 20	83	31.0	36.0	36.0	39.0	39.0	42.0
ALCHUW63	M63 x 25	132	42.0	46.5	46.5	50.0	50.0	53.0
ALCHUW75	M75 x 25	188	53.0	57.0	57.0	61.0	61.0	64.0
ALCHUW90	M90 x 30	270	-	-	64.0	68.0	70.0	75.0

**CONDITIONS OF CERTIFICATION:**

None.

**DOCUMENTS:**

Document Number	Document Title	Revision	Date
487-30	HUW20A	-	18/05/2009
487-30-10	HUW20A – Markings	-	06/02/2013
487-31	HUW20B	-	18/05/2009
487-31-10	HUW20B – Markings	-	06/02/2013
487-32	HUW25	-	18/05/2009
487-32-10	HUW25 – Markings	-	06/02/2013
487-33	HUW32	-	18/05/2009
487-33-10	HUW32 – Markings	-	06/02/2013
487-34	HUW40	-	18/05/2009
487-34-10	HUW40 – Markings	-	06/02/2013
487-35	HUW50	-	18/05/2009

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Certificate No.: ANZEx 13.3001

Issue No.: 0

Date of Issue: 31/01/2014

Document Number	Document Title	Revision	Date
487-35-10	HUW50 – Markings	-	06/02/2013
487-36	HUW63	-	15/09/2003
487-36-10	HUW63 – Markings	-	06/02/2013
487-37	HUW75	-	15/09/2003
487-37-10	HUW75 – Markings	-	06/02/2013
487-38	HUW90	-	15/09/2003
487-38-10	HUW90 – Markings	-	06/02/2013
487-117	HUW20SB	-	18/05/2009
487-117-10	HUW20SB – Markings	-	06/02/2013
ALCHUWGEN	Elmako Pty Ltd – Trading as Wattmaster Alco Glands - HUW Range Contents	1.7	31/08/2012
ALCHUWSPEC	Elmako Pty Ltd Alco Glands HUW Range Specifications	1.2	31/08/2012
ALCHUWSCHDRG	Alco Glands - Schedule of Drawings HUW Range - Hazardous Area, Unarmoured Weatherproof	1.7	31/08/2012

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# 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.:  issue No.:

Status:

Date of Issue: **2014-01-31** Page 1 of 3

Applicant: **Elmako Pty Ltd trading as Wattmaster**  
54 Lakewood Boulevard  
Carrum Downs VIC 3201  
**Australia**

Electrical Apparatus: **HUW Range of Alco Cable Glands**  
*Optional accessory:*

Type of Protection: **Ex db, Ex eb, Ex ta**

Marking: **Alco ALCHUW... M..**  
**Ex db I/IIC, Ex eb I/IIC, Ex ta IIIC**  
**IECEX TSA 13.0002**

*Approved for issue on behalf of the IECEx  
Certification Body:* Ujen Singh

*Position:* Quality & Certification Manager

*Signature:*  
*(for printed version)*

*Date:* 31 JANUARY 2014

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 13.0002

Date of Issue: **2014-01-31**

Issue No.: **0**

Page 2 of 3

Manufacturer: **Elmako Pty Ltd trading as Wattmaster**  
54 Lakewood Boulevard  
Carrum Downs VIC 3201  
**Australia**

Additional Manufacturing location  
(s):

Taiwan

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 : 2007-10</b> Edition: 5	Explosive atmospheres - Part 0: Equipment - General requirements
<b>IEC 60079-1 : 2007-04</b> Edition: 6	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
<b>IEC 60079-31 : 2008</b> Edition: 1	Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure 't'
<b>IEC 60079-7 : 2006-07</b> Edition: 4	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"

*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/ExTR11.0019/00

Quality Assessment Report:  
AU/TSA/QAR09.0007/01



# IECEX Certificate of Conformity

Certificate No.: IECEx TSA 13.0002

Date of Issue: 2014-01-31

Issue No.: 0

Page 3 of 3

## Schedule

### EQUIPMENT:

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

The HUW range of Alco cable glands is suitable for inserting circular non-armoured cables into flameproof (Ex d) enclosures having threaded entries and increased safety (Ex e) or dust ignition protection (DIP) equipment having either plain or threaded entries. Refer to the attached Annexe for detailed information and options.

### CONDITIONS OF CERTIFICATION: NO





## IECEX Certificate of Conformity Annexe

Annexe for Certificate No.:	IECEX TSA 13.0002	Issue No.:	0
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### Equipment:

The HUW range of Alco cable glands is suitable for inserting circular non-armoured cables into flameproof (Ex d) enclosures having threaded entries and increased safety (Ex e) or dust ignition protection (DIP) equipment having either plain or threaded entries. The glands consist of a body, inner seal (A, B or C) and nut. The nuts are provided with a lead-in, as the glands are suitable for use with flexible cables. Attachment of the glands to an enclosure is facilitated by means of the male threaded portion on the body. The cable is passed through the appropriate sized inner seal and sealing of the cable is achieved by compressing the inner seal between the body and nut, when the nut is screwed into the body. The inner seal also clamps the cable to prevent pulling or twisting forces from being transmitted to the conductor connections. The permissible operating temperature range for the HUW range is -20 °C to +80 °C.

The following options are available for the HUW range:

- Gland nut with hose barb extension for the HUW20SB, HUW20B, HUW25, HUW32, HUW40 and HUW50 cable glands to facilitate the installation of a protective rubber hose over the cable. The gland code number is suffixed with "-H". These alternative gland nuts are not suitable for use with flexible cables.
- Gland nut with threaded extension for the HUW20SB, HUW20A HUW20B, HUW25, HUW32, HUW40 and HUW50 cable glands to facilitate the installation of a Liquidtight® metal conduit fitting for use with a Liquidtight® flexible metal conduit over the cable. The gland code number is suffixed with "-LTA". These alternative gland nuts are not suitable for use with flexible cables.
- External protective rubber shroud, orange or black in colour.

The cable glands are manufactured from brass alloy to Japanese Standard JIS C3604 B, which is nickel plated, and have ISO (1.5 mm pitch) mounting threads. All metallic components of the glands are manufactured from the same material. The inner seals are made from 'NBR 1052 Rubber'. An entry thread seal made of red fibre is provided for Ex t applications and is required to maintain ingress protection of IP66/IP68 (30 m for 4 hours) for the cable glands.

The glands may also be used with intrinsically safe circuits, in which case the glands will have specific parts painted light blue. For detailed installation information, refer to the manufacturer's fitting instructions.

The HUW range of Alco cable glands is summarized in the following Schedule.

Certificate issued by:

	<b>TestSafe Australia</b> 919 Londonderry Road Londonderry NSW 2753 Australia
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# IECEX Certificate of Conformity Annexe

<b>Annexe for Certificate No.:</b>	<b>IECEX TSA 13.0002</b>	<b>Issue No.:</b>	<b>0</b>
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**Schedule:**

**HUW Range**

Gland Code Number	Mounting thread diameter x length (mm)	Tightening torque (Nm)	Cable diameter over sheath (mm)					
			Seal C		Seal B		Seal A	
			Min	Max	Min	Max	Min	Max
ALCHUW20SB	M20 x 12	13	-	-	4.0	8.0	8.0	10.0
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ALCHUW40	M40 x 15	53	-	-	25.0	28.5	28.5	31.0
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ALCHUW75	M75 x 25	188	53.0	57.0	57.0	61.0	61.0	64.0
ALCHUW90	M90 x 30	270	-	-	64.0	68.0	70.0	75.0

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

None.

**Drawing list pertaining to Issue 0 of this Certificate:**

Drawing/Document No.:	Page/s :	Title:	Revision Level:	Date: (yyyy-mm-dd)
487-30	1	HUW20A	-	2009-05-18
487-30-10	1	HUW20A – Markings	-	2013-02-06
487-31	1	HUW20B	-	2009-05-18
487-31-10	1	HUW20B – Markings	-	2013-02-06
487-32	1	HUW25	-	2009-05-18
487-32-10	1	HUW25 – Markings	-	2013-02-06
487-33	1	HUW32	-	2009-05-18
487-33-10	1	HUW32 – Markings	-	2013-02-06
487-34	1	HUW40	-	2009-05-18
487-34-10	1	HUW40 – Markings	-	2013-02-06
487-35	1	HUW50	-	2009-05-18
487-35-10	1	HUW50 – Markings	-	2013-02-06
487-36	1	HUW63	-	2003-09-15

Certificate issued by:

	<p><b>TestSafe Australia</b> 919 Londonderry Road Londonderry NSW 2753 Australia</p>
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## IECEX Certificate of Conformity Annexe

Annexe for Certificate No.:	IECEX TSA 13.0002	Issue No.:	0
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Drawing/Document No.:	Page/s :	Title:	Revision Level:	Date: (yyyy-mm-dd)
487-36-10	1	HUW63 – Markings	-	2013-02-06
487-37	1	HUW75	-	2003-09-15
487-37-10	1	HUW75 – Markings	-	2013-02-06
487-38	1	HUW90	-	2003-09-15
487-38-10	1	HUW90 – Markings	-	2013-02-06
487-117	1	HUW20SB	-	2009-05-18
487-117-10	1	HUW20SB – Markings	-	2013-02-06
ALCHUWGEN	1	Elmako Pty Ltd – Trading as Wattmaster Alco Glands - HUW Range Contents	1.7	2012-08-31
ALCHUWSPEC	1	Elmako Pty Ltd Alco Glands HUW Range Specifications	1.2	2012-08-31
ALCHUWSCHDRG	1	Alco Glands - Schedule of Drawings HUW Range - Hazardous Area, Unarmoured Weatherproof	1.7	2012-08-31

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