



1 **EC TYPE-EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 94/9/EC

3 Certificate Number: **Sira 99ATEX1086X** Issue: **4**

4 Equipment: **A1EX, A1EXP, A2EX & A2EXP Range of Cable Glands**

5 Applicant: **Prysmian Cables & Systems Limited**

6 Address: **Oak Road
Wrexham Industrial Estate
Wrexham
LL13 9PH
UK**

7 This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 Sira Certification Service, notified body number 0518 in accordance with Article 9 of Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 14.2.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN 60079-0:2006
EN 60079-7:2007

EN 60079-1:2007

EN 61241-0:2006
EN 61241-1:2004

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

11 This EC type-examination certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

12 The marking of the equipment shall include the following:



II 2GD
Ex d IIC/Ex e II
Ex tD A21 IP66/IP68

Project Number 24796
C. Index 07

C Ellaby
Deputy Certification Manager

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SCHEDULE

EC TYPE-EXAMINATION CERTIFICATE

Sira 99ATEX1086X
Issue 4

13 DESCRIPTION OF EQUIPMENT

The A1EX, A1EXP, A2EX and A2EXP Range of Cable Glands are designed to allow the entry of circular un-armoured or braided cables into flameproof or increased safety enclosures without compromising the explosion protection provided by these enclosures, in accordance with relevant codes of practice.

The A1EX and A2EX types are a single sealed design and comprise:

- a brass gland body with an entry thread to tighten into an associated enclosure
- two skid washers made from either nylon 6 or fibre
- a compression (displacement) seal, the A1EX types utilise polychloroprene seals whereas the A2EX types use silicone
- a brass seal housing that screws onto the gland body and compresses the seal against the cable

The A1EXP and A2EXP types are a dual sealed design and comprise:

- a brass gland body with an entry thread to tighten into an associated enclosure
- four skid washers made from either nylon 6 or fibre
- two compression (displacement) seals, the A1EXP types utilise polychloroprene seals whereas the A2EXP types use silicone
- a brass gland barrel that screws onto the gland body and compresses the first seal against the cable
- a brass seal housing that screws onto the gland barrel and compresses the second seal against the cable

The gland and seal sizes are determined by the associated enclosure entry thread and cable take sizes:

Gland size	Entry Thread	Cable Size (mm)	
		Min.	Max.
16	M16 x 1.5	3.5	8.5
20ss	M20 x 1.5	3.5	8.5
20s	M20 x 1.5	8.0	11.5
20	M20 x 1.5	8.0	16.0
25	M25 x 1.5	11.5	21.0
32	M32 x 1.5	18.5	27.5
40	M40 x 1.5	24.0	34.0
50	M50 x 1.5	31.0	41.0
63	M63 x 1.5	40.0	52.5
75s	M75 x 1.5	52.5	58.0
75	M75 x 1.5	54.5	65.5

Design Options:

Alternative metallic materials of manufacture:

Brass to BS 2874:1986 grades CZ121 or CZ122 or better

Mild Steel to BS 970: Part 1:1991

Stainless Steel to BS 970: Part 4:1987

Aluminium to BS 1474:1987 or BS 1471:1972 grade 6082 T6 or better

All metallic materials may be surface coated to limit electrolytic reaction between dissimilar materials.

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Sira Certification Service

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SCHEDULE

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Sira 99ATEX1086X
Issue 4

Alternative profiles:

Alternative profiles of construction of the seal housing, gland barrel and gland body components may be used; however, the minimum wall sections, the number of threads engaged and the thread engagement length are all maintained.

Alternative entry threads:

All entry threads that are within the dimensional parameters of the gland body and maintain compliance with the requirements of clause 5.3 of IEC/EN 60079-1:2007.

Variation 1 - This variation introduced the following changes:

- i. A change of the Applicant's name on the certificate from Pirelli Cables Limited to Prysmian Cables & Systems Limited was recognised.

Variation 2 - This variation introduced the following changes:

- i. Following appropriate re-assessment to demonstrate compliance, the originally listed standards EN 50014:1997 (+A1 and A2), EN 50018:1994, EN 50019:1994 and EN 50281-1:1991 were replaced by those currently listed, the markings in section 12 were updated accordingly and the conditions were modified to recognise the requirements of the latest standards.
- ii. The change of applicants address, from Hall Lane Prescott L34 5UR, to that currently shown was endorsed.

Variation 3 - This variation introduced the following changes:

- i. The label was modified to allow the trade mark 'DRAKA' to be used as an alternative to the existing 'BICON' trade mark, the reference to the 'BICON' trade mark was removed from the Applicant's details.
- ii. The Condition of Certification for reduced marking criteria was amended to include the Applicant's name and address.

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report number	Comment
0	11 August 1999	R51X5880A	The release of the prime certificate.
1	22 January 2002	R51X5880B	Reissued to permit report number R51X5880B to replace report number R51X5880A.
2	16 May 2006	R51A14278A	The introduction of Variation 1.
3	24 August 2010	R21784A/00	This Issue covers the following changes: <ul style="list-style-type: none">• All previously issued certification was rationalised into a single certificate, Issue 3, Issues 0 to 2 referenced above are only intended to reflect the history of the previous certification and have not been issued as documents in this format.

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SCHEDULE

EC TYPE-EXAMINATION CERTIFICATE

Sira 99ATEX1086X
Issue 4

Issue	Date	Report number	Comment
4	27 July 2011	R24796A/00	<ul style="list-style-type: none">The introduction of Variation 2. The introduction of Variation 3.

15 SPECIAL CONDITIONS FOR SAFE USE (denoted by X after the certificate number)

15.1 The following sizes of cable glands shall only be used for fixed installations; in addition, the user/installer shall ensure that the cables are adequately clamped:

A1EX: M16, M20ss, M20s, M20, M25, M32, M40, M50, M63, M75s & M75

A1EXP: M16, M20ss, M20s, M20, M25, M32, M40, M50, M63, M75s & M75

A2EX: M32, M40, M50, M63, M75 & M75s

A2EXP: M75s & M75

15.2 The PCP compression (displacement) seals used in the A1EX and A1EXP ranges of cable glands have a service temperature range of -20°C to +90°C; therefore, these glands shall only be used with equipment where the surface temperature, at the point of mounting, does not exceed this range.

15.3 The silicone compression (displacement) seals used in the A2EX and A2EXP ranges of cable glands have a service temperature range of -50°C to +200°C; therefore, these glands shall only be used with equipment where the surface temperature, at the point of mounting, does not exceed this range.

15.4 The cable glands shall not be used with flameproof enclosures of Group IIC with a volume greater than 2000 cm³

16 ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in the reports listed in Section 14.2.

17 CONDITIONS OF CERTIFICATION

17.1 The use of this certificate is subject to the Regulations Applicable to Holders of Sira Certificates.

17.2 Holders of EC type-examination certificates are required to comply with the production control requirements defined in Article 8 of directive 94/9/EC.

17.3 Reduced marking criteria are applicable to this equipment, therefore, the Applicant shall apply the information required by the associated Sira reports on the packaging supplied with these products, this shall include the name and address of Prysmian Cables & Systems Limited.

Certificate Annexe

Certificate Number: Sira 99ATEX1086X
Equipment: A1EX, A1EXP, A2EX & A2EXP Range of Cable Glands
Applicant: Prysmian Cables & Systems Limited
(Using the registered trademark of BICON)



Issue 0

Drawing No.	Rev.	Sheet	Date	Title
SIRA 0001	1	1 of 1	17 May 99	Dual Certified EEx de IIC Cable Gland For Braid & Unarmoured Circular Cable
42575-01	3	1 of 1	23 July 99	J.I. For A1EX/A1EXP & A2EX/A2EXP Type Cable Glands
PL43117	1	1 of 1	17 May 99	A1Ex/A1Ex plus/A2Ex & A2Ex plus Gland Body
PL41526	1	1 of 1	17 May 99	A1Ex plus & A2Ex plus Gland Barrel
PL41852	1	1 of 1	17 May 99	A1Ex/A1Ex plus/A2Ex & A2Ex plus Gland Seal Housing
PL41750	1	1 of 1	17 May 99	A1Ex/A1Ex plus/A2Ex & A2Ex plus Skid Washers
PL41650	1	1 of 1	17 May 99	A1Ex/A1Ex plus/A2Ex & A2Ex plus Seals
11861-284	1	1 of 1	14 Sep 95	Silicone Material

Issue 1

Drawing	Rev	Sheet	Date	Title
SIRA 0001	2	1 of 1	03 Mar 01	Dual Certified EEx de IIC Cable Gland For Braid & Unarmoured Circular Cable
PL41526	2	1 of 1	03 Mar 01	A1Ex Plus & A2Ex Plus Gland Barrel
PL41650	2	1 of 1	03 Mar 01	A1Ex/A1Ex Plus/A2Ex & A2Ex Plus Seals
PL41750	2	1 of 1	03 Mar 01	A1Ex/A1Ex Plus/A2Ex & A2Ex Plus Skid Washers
PL41852	2	1 of 1	03 Mar 01	A1Ex/A1Ex Plus/A2Ex & A2Ex Plus Gland Seal Housing
PL43117	2	1 of 1	03 Mar 01	A1Ex/A1Ex Plus/A2Ex & A2Ex Plus Gland Body
11861-284	1	1 of 1	14 Sep 95	Silicone Material

Issue 2 No new drawings were introduced.

Issue 3

Drawing	Rev.	Sheets	Date (Sira Stamp)	Title
SIRA 0001	3	1 of 1	12 Aug 10	Dual Certified Ex de IIC Cable Gland For Braid & Unarmoured Circular Cable

Issue 4

Drawing	Rev.	Sheets	Date (Sira Stamp)	Title
SIRA 0001	4	1 of 1	25 Jul 11	Dual Certified Ex de IIC Cable Gland For Braid & Unarmoured Circular Cable

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