



## EU-TYPE EXAMINATION CERTIFICATE

Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

Certificate Number: **Sira 02ATEX3092X** Issue: **8**

Equipment: **E1WF, E1WF-C, E1XF, E1ZF, E1WF-IE, E1WF-C-IE, E1XF-IE, & E1ZF-IE Ranges of Cable Glands**

Applicant: **Prysmian Cables & Systems Limited**

Address: Oak road  
Wrexham Industrial Estate  
Wrexham  
LL13 9PH  
UK

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

CSA Group Netherlands B.V., Notified Body Number 2813 in accordance with Articles 17 and 21 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, 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.

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

If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to Specific Conditions of Use identified in the schedule to this certificate.

This EU-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.

The marking of the equipment shall include the following:



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

Project Number 2513

Signed:

Title: Director of Operations

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**CSA Group Netherlands B.V.**  
Utrechtseweg 310,  
6812 AR, Arnhem,  
Netherlands



## SCHEDULE

### EU-TYPE EXAMINATION CERTIFICATE

**Sira 02ATEX3092X**  
**Issue 8**

#### 13 DESCRIPTION OF EQUIPMENT

The E1WF, E1WF-C, E1XF & E1ZF ranges of compression seal cable glands are manufactured from brass to BS 2874:1986 grades CZ121 or 122 or better. The glands are intended to terminate circular cables into flameproof and reased safety enclosures without compromising the explosion protection provided by the enclosures in accordance with relevant codes of practice. They are used with the following cable forms:

- E1WF - Either steel wire armoured or aluminium wire armoured cables
- E1WF-IE - Either steel wire armoured or aluminium wire armoured cables
- E1WF-C - Continental wire/strip armoured cables
- E1WF-C-IE - Continental wire/strip armoured cables
- E1XF - Wire braided cables
- E1XF-IE - Wire braided cables
- E1ZF - Steel tape armoured cables
- E1ZF-IE - Steel tape armoured cables

The glands consist of a male-threaded front entry component, designated the gland body, which is intended to screw into an entry point of its associated enclosure. The gland body contains a polychloroprene seal onto the cable inner sheath. In the case of non-threaded entry points, the glands are fitted with the use of a locking nut. The gland barrel threads onto the gland body and houses an armour-clamping ring and cone. The armour ring effects clamping of the cable armour or braid onto the armour cone when the gland barrel is tightened onto the gland body. An outer seal gland nut, fitted with a polychloroprene seal and a fibre skid washer, screws onto the gland barrel effecting environmental sealing onto the outer sheath of the cable. The E1WF-IE, E1WF-C-IE, E1XF-IE & E1ZF-IE ranges have the same overall design as the E1WF, E1WF-C, E1XF & E1ZF ranges with the exception that an alternative gland body component has a lengthened hexagonal shoulder which houses an external grub screw (earthing feature) to allow the attachment of an earth lead.

#### Design options:

Alternative metallic materials of manufacture:

- Mild steel to BS 970 Part 1:1991
- Stainless steel to BS 970 Part 4:1987
- Aluminium to BS 1471:1972 or better
- Aluminium to BS 1472:1987 or better

Alternative skid washer materials of manufacture:

- Nylon 6
- The same material as the gland

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

Alternative entry threadforms that are within its dimensional parameters and that maintain compliance with the requirements of clause 5.3 of IEC/EN 60079-1:2007.

Alternative profiles of construction of the gland nut, gland barrel and gland body components with the minimum wall sections, the number of threads engaged and the thread engagement length maintained.



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#### E1WF & E1WF-IE ranges for either steel wire armoured or aluminium wire armoured cables

Gland Title	Gland Size	ISO Entry Thread	Under Armour Diameter (mm)		Outer Sheath Diameter (mm)		Armour Range (mm)	
			Min	Max	Min	Max	Min	Max
E1WF / E1WF-IE	16	M16	3.81	8.74	7.0	13.2	0.9	-
E1WF / E1WF-IE	20ss	M20	3.81	8.74	7.0	13.2	0.9	-
E1WF / E1WF-IE	20s	M20	8.0	11.79	8.0	15.8	0.9	1.4
E1WF / E1WF-IE	20R	M20	10.19	14.15	11.7	20.8	0.6	1.4
E1WF / E1WF-IE	20	M20	11.79	14.15	11.7	20.8	0.9	1.4
E1WF / E1WF-IE	20SH	M20	11.79	14.15	11.7	20.8	0.9	1.4
E1WF / E1WF-IE	25	M25	14.0	20.12	17.0	27.2	1.25	1.6
E1WF / E1WF-IE	32	M32	19.7	26.55	19.0	33.5	1.6	2.0
E1WF / E1WF-IE	40	M40	26.55	32.42	26.5	39.9	1.6	2.0
E1WF / E1WF-IE	50s	M50	32.42	38.39	38.0	46.3	2.0	2.5
E1WF / E1WF-IE	50	M50	38.39	44.33	36.0	52.6	2.0	2.5
E1WF / E1WF-IE	63s	M63	44.33	50.27	50.0	58.9	2.5	-
E1WF / E1WF-IE	63	M63	50.27	56.24	46.5	65.3	2.5	-
E1WF / E1WF-IE	75s	M75	56.24	62.18	62.0	71.6	2.5	-
E1WF / E1WF-IE	75	M75	62.18	68.13	58.0	78.0	2.5	-
E1WF / E1WF-IE	85	M85	68.0	74.0	68.0	88.0	3.15	-

#### E1WF-C & E1WF-C-IE ranges for continental armoured wire/strip cables

Gland Title	Gland Size	ISO Entry Thread	Under Armour Diameter (mm)		Outer Sheath Diameter (mm)		Armour Range (mm)	
			Min	Max	Min	Max	Min	Max
E1WF-C / E1WF-C-IE	16	M16	3.81	8.74	7.0	13.2	0.6	0.8
E1WF-C / E1WF-C-IE	20ss	M20	3.81	8.74	7.0	13.2	0.6	0.8
E1WF-C / E1WF-C-IE	20s	M20	8.0	11.79	8.0	15.8	0.6	0.8
E1WF-C / E1WF-C-IE	20R	M20	10.19	14.15	11.7	20.8	0.6	0.8
E1WF-C / E1WF-C-IE	20	M20	11.79	14.15	11.7	20.8	0.6	0.8
E1WF-C / E1WF-C-IE	20SH	M20	11.79	14.15	11.7	20.8	0.6	0.8
E1WF-C / E1WF-C-IE	25	M25	14.0	20.12	17.0	27.2	0.6	0.8
E1WF-C / E1WF-C-IE	32	M32	19.7	26.55	19.0	33.5	0.6	0.8
E1WF-C / E1WF-C-IE	40	M40	26.55	32.42	26.5	39.9	0.6	0.8
E1WF-C / E1WF-C-IE	50s	M50	32.42	38.39	38.0	46.3	0.6	0.8
E1WF-C / E1WF-C-IE	50	M50	38.39	44.33	36.0	52.6	0.6	0.8
E1WF-C / E1WF-C-IE	63s	M63	44.33	50.27	50.0	58.9	0.6	0.8
E1WF-C / E1WF-C-IE	63	M63	50.27	56.24	46.5	65.3	0.6	0.8
E1WF-C / E1WF-C-IE	75s	M75	56.24	62.18	62.0	71.6	0.6	0.8
E1WF-C / E1WF-C-IE	75	M75	62.18	68.13	58.0	78.0	0.6	0.8
E1WF-C / E1WF-C-IE	85	M85	68.0	74.0	68.0	88.0	0.6	0.8

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## SCHEDULE

### EU-TYPE EXAMINATION CERTIFICATE

Sira 02ATEX3092X  
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#### E1XF & E1XF-IE ranges for wire braided cable

Gland Title	Gland Size	ISO Entry Thread	Under Armour Diameter (mm)		Outer Sheath Diameter (mm)		Braid Range (mm)	
			Min	Max	Min	Max	Min	Max
E1XF / E1XF-IE	16	M16	3.81	8.74	7.0	13.2	0.2	0.3
E1XF / E1XF-IE	20ss	M20	3.81	8.74	7.0	13.2	0.2	0.3
E1XF / E1XF-IE	20s	M20	8.0	11.79	8.0	15.8	0.2	0.3
E1XF / E1XF-IE	20R	M20	10.19	14.15	11.7	20.8	0.2	0.3
E1XF / E1XF-IE	20	M20	11.79	14.15	11.7	20.8	0.2	0.3
E1XF / E1XF-IE	20SH	M20	11.79	14.15	11.7	20.8	0.2	0.3
E1XF / E1XF-IE	25	M25	14.0	20.12	17.0	27.2	0.2	0.45
E1XF / E1XF-IE	32	M32	19.7	26.55	19.0	33.5	0.3	0.45
E1XF / E1XF-IE	40	M40	26.55	32.42	26.5	39.9	0.3	0.45
E1XF / E1XF-IE	50s	M50	32.42	38.39	38.0	46.3	0.3	0.45
E1XF / E1XF-IE	50	M50	38.39	44.33	36.0	52.6	0.3	0.45
E1XF / E1XF-IE	63s	M63	44.33	50.27	50.0	58.9	0.3	0.45
E1XF / E1XF-IE	63	M63	50.27	56.24	46.5	65.3	0.3	0.45
E1XF / E1XF-IE	75s	M75	56.24	62.18	62.0	71.6	0.3	0.45
E1XF / E1XF-IE	75	M75	62.18	68.13	58.0	78.0	0.3	0.45
E1XF / E1XF-IE	85	M85	68.0	74.0	68.0	88.0	0.3	0.45

#### E1ZF & E1ZF-IE ranges for steel tape armoured cables

Gland Title	Gland Size	ISO Entry Thread	Under Armour Diameter (mm)		Outer Sheath Diameter (mm)		Steel Tape Range (mm)	
			Min	Max	Min	Max	Min	Max
E1ZF / E1ZF-IE	16	M16	3.81	8.74	7.0	13.2	0.15	0.35
E1ZF / E1ZF-IE	20ss	M20	3.81	8.74	7.0	13.2	0.15	0.35
E1ZF / E1ZF-IE	20s	M20	8.0	11.79	8.0	15.8	0.15	0.35
E1ZF / E1ZF-IE	20R	M20	10.19	14.15	11.7	20.8	0.15	0.5
E1ZF / E1ZF-IE	20	M20	11.79	14.15	11.7	20.8	0.15	0.5
E1ZF / E1ZF-IE	20SH	M20	11.79	14.15	11.7	20.8	0.15	0.5
E1ZF / E1ZF-IE	25	M25	14.0	20.12	17.0	27.2	0.15	0.5
E1ZF / E1ZF-IE	32	M32	19.7	26.55	19.0	33.5	0.15	0.55
E1ZF / E1ZF-IE	40	M40	26.55	32.42	26.5	39.9	0.2	0.6
E1ZF / E1ZF-IE	50s	M50	32.42	38.39	38.0	46.3	0.5	0.8
E1ZF / E1ZF-IE	50	M50	38.39	44.33	36.0	52.6	0.5	0.8
E1ZF / E1ZF-IE	63s	M63	44.33	50.27	50.0	58.9	0.5	0.8
E1ZF / E1ZF-IE	63	M63	50.27	56.24	46.5	65.3	0.5	0.8
E1ZF / E1ZF-IE	75s	M75	56.24	62.18	62.0	71.6	0.5	0.8
E1ZF / E1ZF-IE	75	M75	62.18	68.13	58.0	78.0	0.5	0.8
E1ZF / E1ZF-IE	85	M85	68.0	74.0	67.5	88.0	0.5	0.8

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### EU-TYPE EXAMINATION CERTIFICATE

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Issue 8

#### E1WFL, range for either steel wire armoured or aluminium wire armoured cables

Gland Size	ISO Entry Thread	Inner Sheath Diameter (mm)		Over Lead Diameter (mm)		Armour Diameter (mm)		Outer Sheath Diameter (mm)	
		Min	Max	Min	Max	Min	Max	Min	Max
85/75s	M85	56.24	62.18	66.0	73.5	3.15	-	68.0	88.0
85/75	M85	62.18	68.13	66.0	73.5	3.15	-	68.0	88.0

#### E1WF-CL, range for continental wire/strip armoured cables

Gland Size	ISO Entry Thread	Inner Sheath Diameter (mm)		Over Lead Diameter (mm)		Armour Range(mm)		Outer Sheath Diameter (mm)	
		Min	Max	Min	Max	Min	Max	Min	Max
85/75s	M85	56.24	62.18	66.0	73.5	0.6	0.8	68.0	88.0
85/75	M85	62.18	68.13	66.0	73.5	0.6	0.8	68.0	88.0

#### E1XFL range for wire braided cables

Gland Size	ISO Entry Thread	Inner Sheath Diameter (mm)		Over Lead Diameter (mm)		Braid Range(mm)		Outer Sheath Diameter (mm)	
		Min	Max	Min	Max	Min	Max	Min	Max
85/75s	M85	56.24	62.18	66.0	73.5	0.3	0.45	68.0	88.0
85/75	M85	62.18	68.13	66.0	73.5	0.3	0.45	68.0	88.0

#### E1ZF range for steel tape armoured cables

Gland Size	ISO Entry Thread	Inner Sheath Diameter (mm)		Over Lead Diameter (mm)		Steel Tape Range (mm)		Outer Sheath Diameter (mm)	
		Min	Max	Min	Max	Min	Max	Min	Max
85/75s	M85	56.24	62.18	66.0	73.5	0.5	0.8	68.0	88.0
85/75	M85	62.18	68.13	66.0	73.5	0.5	0.8	68.0	88.0

**Variation 1** - This variation introduced the following change:

- The details drawing Sira41050 were clarified and the text note was changed.

**Variation 2** - This variation introduced the following change:

- The E1WF, E1WF-C, E1XF, E1ZF, E1WF-IE, E1WF-C-IE, E1XF-IE, & E1ZF-IE ranges of cable glands were permitted to be installed within a service ambient temperature range of  $-60^{\circ}\text{C}$  to  $+90^{\circ}\text{C}$  and the special condition for safe use clause 15.1 was amended to recognise this fact.



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**Variation 3** - This variation introduced the following changes:

- i. The change of the Applicant's name on the certificate from Pirelli Cables Limited (Using the registered trademark of BICON) to Prysmian Cables & Systems Limited (Using the registered trademark of BICON) was recognised. The Applicant will substitute, on the label affixed to the package containing the product, the name Prysmian Cables & Systems Limited for Pirelli Cables Limited Components Unit (trading as BICON), as reduced marking criteria are applicable to this equipment.

**Variation 4** - This variation introduced the following changes:

- i. The introduction of a new gland size, 20SH, for all gland types, details of these glands are included in the appropriate tables above (Note: three typographical errors on the original variation document were corrected whilst transposing this information).

**Variation 5** - This variation introduced the following changes:

- i. The introduction the following, 'hybrid', gland types in specific sizes that are used with circular polymeric/lead/polymeric sheathed cables, refer to main description for sizes and properties.

E1WFL, range for either steel wire armoured or aluminium wire armoured cables

E1WF-CL, range for continental wire/strip armoured cables

E1XFL range for wire braided cables

E1ZFL range for steel tape armoured cables

**Variation 6** - 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 50018:2000, EN 50019:2000 and EN 502841-1:1998 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 Prescot L34 5UR to that currently shown was endorsed.

**Variation 7** - 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 (Note: the references to the 'BICON' trade mark in Variation 3 is now obsolete and remains only to maintain the historic continuity of the certificate).
- ii. The reduced marking criteria was clarified and included in the Conditions of Certification.



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### EU-TYPE EXAMINATION CERTIFICATE

**Sira 02ATEX3092X**  
**Issue 8**

#### 14 DESCRIPTIVE DOCUMENTS

##### 14.1 Drawings

Refer to Certificate Annexe.

##### 14.2 Associated Sira Reports and Certificate History

Issue	Date	Report No.	Comment
0	7 August 2002	R51A8796A	The release of the prime certificate.
1	3 August 2003	R51V9718A	The introduction of Variation 1.
2	28 October 2003	R51A10516A	The introduction of Variation 2.
3	16 May 2006	R51A14278A	The introduction of Variation 3.
4	13 March 2008	R51A17850A	The introduction of Variation 4.
5	14 May 2008	R51A18260A	This Issue covers the following changes: <ul style="list-style-type: none"><li>All previously issued certification was rationalised into a single certificate, Issue 5, Issues 0 to 4 referenced above are only intended to reflect the history of the previous certification and have not been issued as documents in this format.</li><li>The introduction of Variation 5.</li></ul>
6	24 August 2010	R21784A/00	The introduction of Variation 6.
7	27 July 2011	R24796A/00	The introduction of Variation 7.
8	15th October 2019	2513	<ul style="list-style-type: none"><li>Transfer of certificate <b>Sira 02ATEX3092X</b> from Sira Certification Service to CSA Group Netherlands B.V..</li><li>EC Type-Examination Certificate in accordance with 94/9/EC updated to EU Type-Examination Certificate in accordance with Directive 2014/34/EU. <i>(In accordance with Article 41 of Directive 2014/34/EU, EC Type-Examination Certificates referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20 April 2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. Variations to such EC Type-Examination Certificates may continue to bear the original certificate number issued prior to 20 April 2016.)</i></li></ul>

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

- 15.1 The cable glands shall only be used where the temperature at the point of mounting is within the range -60°C to +90°C.
- 15.2 The cable glands shall not be used with flameproof enclosures of Group IIC with a volume greater than 2000 cm<sup>3</sup>.

#### 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.

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# Certificate Annexe



**Certificate Number:** Sira 02ATEX3092X

**Equipment:** E1WF, E1WF-C, E1XF, E1ZF, E1WF-IE, E1WF-C-IE, E1XF-IE, & E1ZF-IE  
Ranges of Cable Glands

**Applicant:** Prysmian Cables & Systems Limited  
(Using the registered trademark of BICON)

## Issue 0

Drawing	Sheet	Rev.	Date	Description
SIRA0004	1 of 1	1	12 Apr 02	ATEX Certified E Type IP66 Cable Glands
SIRA41026	1 of 1	1	12 Apr 02	IP66 E Type Gland Bodies
SIRA41050	1 of 1	1	12 Apr 02	IP66 E Type Integral Earth Gland Bodies
SIRA41103E	1 of 1	1	12 Apr 02	E Type IP66 Inner Seals
SIRA41301E	1 of 1	1	12 Apr 02	E Type IP66 Armour Cone S.W.A./A.W.A./Continental Wire
SIRA41315E	1 of 1	1	12 Apr 02	E Type IP66 Armour Cone S.T.A./Braid
SIRA41401E	1 of 1	1	12 Apr 02	E Type IP66 Gland Armour Rings For S.W.A. & A.W.A.
SIRA41408E	1 of 1	1	12 Apr 02	E Type IP66 Gland Armour Rings For Continental Wire
SIRA41413E	1 of 1	1	12 Apr 02	E Type IP66 Gland Armour Rings For Steel Tape
SIRA41414E	1 of 1	1	12 Apr 02	E Type IP66 Gland Armour Rings For Wire Braid
SIRA41504E	1 of 1	1	12 Apr 02	E Type IP66 Gland Barrel
SIRA41605E	1 of 1	1	12 Apr 02	E Type IP66 Gland Outer Seals
SIRA41701E	1 of 1	1	12 Apr 02	E Type IP66 Gland Skid Washers
SIRA41806E	1 of 1	1	12 Apr 02	E Type IP66 Gland Nut

## Issue 1

Drawing	Sheet	Rev.	Date	Description
Sira41050	1 of 1	2	25 Feb 02	IP66 E Type Integral Earth Gland Bodies

## Issue 2

Drawing	Sheet	Rev.	Date	Description
SIRA0004	1 of 1	2	21 Oct 03	ATEX Certified E Type IP66 Cable Glands
SIRA41103E	1 of 1	2	21 Oct 03	E Type IP66 Inner Seals
SIRA41605E	1 of 1	2	21 Oct 03	E Type IP66 Gland Outer Seals

## Issue 3

No new drawings were introduced.

## Issue 4

Drawing	Sheet	Rev.	Date	Description
SIRA0004	1 of 1	3	14 Feb 08	ATEX Certified E Type IP66 Cable Glands
SIRA41527E	1 of 1	1	14 Feb 08	E Type IP66 Short Gland Barrel

## Issue 5

Drawing	Sheet	Rev.	Date	Description
SIRA0011	1 of 1	1	02 May 08	ATEX Certified E Type IP66 Cable Glands for Lead Sheathed Cables
SIRA43127	1 of 1	1	02 May 08	IP66 E Type Gland Bodies For Lead Sheathed Cables
SIRA41321E	1 of 1	1	02 May 08	E Type IP66 Armour Cone S.W.A./A.W.A./Continental Wire For Lead Sheathed Cables
SIRA41325E	1 of 1	1	02 May 08	E Type IP66 Armour Cone S.T.A./Braid For Lead Sheathed Cables

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## Certificate Annexe



**Certificate Number:** Sira 02ATEX3092X

**Equipment:** E1WF, E1WF-C, E1XF, E1ZF, E1WF-IE, E1WF-C-IE, E1XF-IE, & E1ZF-IE  
Ranges of Cable Glands

**Applicant:** Prysmian Cables & Systems Limited  
(Using the registered trademark of BICON)

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SIRA41323	1 of 1	1	07 May 08	Earth Clip Retainer
SIRA47523	1 of 1	1	07 May 08	Earth Clip

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