



EC TYPE-EXAMINATION CERTIFICATE

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

Certificate Number: **Sira 10ATEX1132U** Issue: **0**

Component: **ARMR and ARFR Range of 90° Adaptors and Reducers**

Applicant: **Peppers Cable Glands Limited**

Address: **Stanhope Road
Camberley
Surrey
GU15 3BT
UK**

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

Sira Certification Service, notified body number 0518 in accordance with Article 9 of Directive 94/9/EC of 23 March 1994, certifies that this component has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of a component 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 60079-0:2009 EN 60079-1:2007 EN 60079-7:2007 EN 60079-31:2009

The sign 'U' is placed after the certificate number to indicate that the product assessed is a component and may be subject to further assessment when incorporated into equipment. Any special conditions for safe use are listed in the schedule to this certificate.

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

The marking of the component shall include the following:



I M2
Ex d I Mb
Ex e I Mb

or



II 2 G D
Ex d IIC Gb/Ex d I Mb
Ex e IIC Gb/Ex e I Mb
Ex tb IIIC Db IP66/68

D R Stubbings BA MIET
Certification Manager

Project Number 21944
C. Index 07

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Sira Certification Service

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13 DESCRIPTION OF COMPONENT

The ARMR and ARFR Range of 90° Adaptors and Reducers are manufactured from a metallic block body with a male thread at one end and a female thread machined into the body at 90° to the male thread, they are intended to provide cable entry options where space is limited or to avoid cable damage, additionally, they may be used to convert an existing cable entry aperture to a different thread form and/or size. Male thread forms may be replaced with an internal female thread. The products may additionally be metallic plated and the male thread may also be fitted with an optional O-ring seal.

General Design Options

Threadforms and sizes

All products may be machined with the following typical thread forms of the nearest equivalent recognised thread size. Thread combinations are such that minimum wall thicknesses are maintained.

M16/ M20/ M25/ M32/ M40/ M50/ M63/ M75/ M80/ M85/ M90/ M100 - ISO Metric to IEC60423:1993, sizes above M75 may be manufactured with a 1.5 mm pitch

$\frac{3}{8}$ "/ $\frac{1}{2}$ "/ $\frac{3}{4}$ "/ 1"/ 1 $\frac{1}{4}$ "/ 1 $\frac{1}{2}$ "/ 2"/ 2 $\frac{1}{2}$ "/ 3"/ 3 $\frac{1}{2}$ " NPT and NPSM to ANSI/ASME B1.20.1:1983 (R2001)

BSPP to BS EN ISO 228-1

BSPT to BS21:1985

PG to DIN 40430

PG48F to NF C 68-312

The Adapters and Reducers may be manufactured with other thread forms, provided that they are in accordance with the applicable requirements of EN/IEC 60079-1:2007 clause 5.3 and C.2.2.

Material of manufacture and product coding:

The Adapters and Reducers may be manufactured from the following materials:

Brass grade CW614 (CuZn 39Pb3)/ CZ121 3Pb

Brass grade CW617N (CuZn 40Pb2)/ CZ122

Brass grade CW614N (CuZn 38Pb4)/ CZ121 4Pb

Brass grade Ecobrass C69300/ C87850

Stainless Steel 1.4401/ 316 S31

Stainless Steel 1.4404/ 316 S11/316L

Stainless Steel 1.4305/ 303

Stainless Steel 1.4301/ 304

Aluminium AW6082/ AW 6262/ 6082TF (Not group I)

Aluminium B21.1.90 AA6262T9/ 6262T9 (Not group I)

Surface coating:

The products may additionally be metallic plated with either: Nickel or Zinc (0.008 mm thick max.) to suit the application.



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Product Type Ref:

The product type is derived from the following options:

A-B-C-D-E-F-G

A Product Type

AR**

= ARMR
= ARFR

B Material of manufacture

A = Aluminium
B = Brass
S = Stainless steel

C IP Seal code

0	=	No seal fitted	(-100°C to +400°C)
1	=	Nitrile O-ring	(-30°C to +100°C)
2	=	Neoprene O-ring	(-35°C to +90°C)
3	=	Silicone O-ring	(-60°C to +200°C)
4	=	Fluorosilicone O-ring	(-55°C to +200°C)
5	=	Viton O-ring	(-20°C to +180°C)
6	=	EPDM O-ring	(-50°C to +110°C)

D Certification order code

E Plating

OO = Not plated
NP = Nickel plated
ZP = Zinc

F Male/Female thread size and type

G Female thread size and type

The Adapters and Reducers, when installed in accordance with the manufacturer's instructions, are capable of providing, with an enclosure on which they are fixed, an ingress protection rating of IP 66/68.

The Adapters and Reducers with parallel threads and fitted with sealing rings, when installed in accordance with the manufacturer's instructions, are capable of providing, with an enclosure on which they are fixed, an ingress protection rating of IP 66/IP68 to 100 metres for 7 days.

The Adaptors and Reducers with tapered threads, fitted with sealing rings and installed in clearance holes, when installed in accordance with the manufacturer's instructions, are capable of providing, with an enclosure on which they are fixed, an ingress protection rating of IP 66/IP68 to 100 metres for 7 days.



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Arrangements

			Female thread											
			Metric											
			M16	M20	M25	M32	M40	M50	M63	M75	M80	M85	M90	M100
Male thread	Metric	M16	A	A										
		M20	R	A	A									
		M25	R	R	A	A								
		M32	R	R	R	A	A							
		M40	R	R	R	R	A	A						
		M50	R	R	R	R	R	A	A					
		M63	R	R	R	R	R	R	A	A				
		M75	R	R	R	R	R	R	R	A	A	A		
		M80	R	R	R	R	R	R	R	R	A	A	A	A
		M85	R	R	R	R	R	R	R	R	R	A	A	A
		M90	R	R	R	R	R	R	R	R	R	R	A	A
		M100	R	R	R	R	R	R	R	R	R	R	R	A
	NPT/NPSM/BSP/BSP	3/8"	A	A										
		1/2"	R	A	A									
		3/4"	R	R	A	A								
		1"	R	R	R	A	A							
		1 1/4"	R	R	R	R	A	A						
		1 1/2"	R	R	R	R	R	A	A					
		2"	R	R	R	R	R	R	A	A				
		2 1/2"	R	R	R	R	R	R	R	A	A	A	A	A
		3"	R	R	R	R	R	R	R	R	A	A	A	A
		3 1/2"	R	R	R	R	R	R	R	R	R	R	R	A
	PG	PG9	A	A										
		PG11	A	A	A									
		PG13.5	R	A	A	A								
		PG16	R	A	A	A								
		PG21	R	R	A	A	A							
		PG29	R	R	R	R	A	A						
		PG36	R	R	R	R	R	A	A					
		PG42	R	R	R	R	R	A	A	A				
		PG48	R	R	R	R	R	R	A	A				

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		Female thread									
		NPT/NPSM/BSPT/BSPP									
		3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	3 1/2"
Male thread	Metric	M16	A	A							
		M20	R	A	A						
		M25	R	R	A	A					
		M32	R	R	R	A	A				
		M40	R	R	R	R	A	A			
		M50	R	R	R	R	R	A	A		
		M63	R	R	R	R	R	R	A	A	
		M75	R	R	R	R	R	R	R	A	A
		M80	R	R	R	R	R	R	R	A	A
		M85	R	R	R	R	R	R	R	A	A
		M90	R	R	R	R	R	R	R	R	A
		M100	R	R	R	R	R	R	R	R	A
	NPT/NPSM/BSPP	3/8"	A	A							
		1/2"	R	A	A						
		3/4"	R	R	A	A					
		1"	R	R	R	A	A				
		1 1/4"	R	R	R	R	A	A			
		1 1/2"	R	R	R	R	R	A	A		
		2"	R	R	R	R	R	R	A	A	
		2 1/2"	R	R	R	R	R	R	R	A	A
		3"	R	R	R	R	R	R	R	R	A
		3 1/2"	R	R	R	R	R	R	R	R	A
	PG	PG9	A								
		PG11	A	A							
		PG13.5	A	A	A						
		PG16	A	A	A						
		PG21	R	A	A	A					
		PG29	R	R	A	A	A				
		PG36	R	R	R	A	A	A			
		PG42	R	R	R	R	R	A	A		
		PG48	R	R	R	R	R	A	A		

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			Female thread								
			PG								
			PG9	PG11	PG13.5	PG16	PG21	PG29	PG36	PG42	PG48
Male thread	Metric	M16	A	A	A						
		M20	R	A	A	A	A				
		M25	R	R	R	A	A	A			
		M32	R	R	R	R	A	A	A		
		M40	R	R	R	R	R	A	A	A	
		M50	R	R	R	R	R	R	A	A	A
		M63	R	R	R	R	R	R	R	R	A
		M75	R	R	R	R	R	R	R	R	R
		M80	R	R	R	R	R	R	R	R	R
		M85	R	R	R	R	R	R	R	R	R
		M90	R	R	R	R	R	R	R	R	R
		M100	R	R	R	R	R	R	R	R	R
	NPT/ NPSM/ BSPT/ BSPP	½"	R	A	A	A	A				
		¾"	R	R	R	A	A	A			
		1"	R	R	R	R	A	A	A		
		1 ¼"	R	R	R	R	R	A	A	A	
		1 ½"	R	R	R	R	R	R	A	A	A
		2"	R	R	R	R	R	R	R	R	A
		2 ½"	R	R	R	R	R	R	R	R	R
		3"	R	R	R	R	R	R	R	R	R
		3 ½"	R	R	R	R	R	R	R	R	R
	PG	PG9	A	A	A	A					
		PG11	A	A	A	A	A				
		PG13.5	R	A	A	A	A				
		PG16	R	R	A	A	A				
		PG21	R	R	R	R	A	A			
		PG29	R	R	R	R	R	A	A		
PG36		R	R	R	R	R	R	A	A	A	
PG42		R	R	R	R	R	R	R	A	A	
PG48		R	R	R	R	R	R	R	R	A	

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14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report number	Comment
0	1 November 2010	R21944A/00	The release of the prime certificate.

15 SPECIAL CONDITIONS FOR SAFE USE

15.1 Blanking elements shall not be used with the adapters/reducers.

15.2 Where adapters/reducers without sealing rings are installed in protection by enclosure (Ex t) equipment for use in explosive dust atmospheres, they shall only be fitted into enclosures offering a minimum of 5 full threads, in accordance with EN 60079-31:2009 clause 5.1.1.

15.3 Adapters/reducers shall not to be used for the direct inter-connection of enclosures.

15.4 Only one adapter/reducer is to be used with any single cable entry on the associated equipment.

15.5 The products are approved for a temperature range at their point of mounting based upon the interface seal and material combinations of construction:

0	=	No seal fitted	(-100°C to +400°C)
1	=	Nitrile O-ring	(-30°C to +100°C)
2	=	Neoprene O-ring	(-35°C to +90°C)
3	=	Silicone O-ring	(-60°C to +200°C)
4	=	Fluorosilicone O-ring	(-55°C to +200°C)
5	=	Viton O-ring	(-20°C to +180°C)
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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 Aluminium devices shall not be marked with any information indicating that they are suitable for Group I use.

Certificate Annexe

Certificate Number: Sira 10ATEX1132U
Component: ARXX Range of 90° Adaptors and Reducers
Applicant: Peppers Cable Glands Limited



Issue 0

Drawing No.	Sheets	Rev.	Date (Sira Stamp)	Title
PCG/ATX/90	1 of 1	1	23 Sep 10	MARKING AND DRAWING NOTES
PCG/ATX/90-1	1 of 1	1	23 Sep 10	90° ADAPTORS & REDUCERS (METRIC X METRIC)
PCG/ATX/90-2	1 of 1	1	23 Sep 10	90° ADAPTORS & REDUCERS (METRIC X PIPE)
PCG/ATX/90-3	1 of 1	1	23 Sep 10	90° ADAPTORS & REDUCERS (PIPE X METRIC)
PCG/ATX/90-3	1 of 1	1	23 Sep 10	90° ADAPTORS & REDUCERS (PIPE X PIPE)

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