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Installation Instructions for Redapt 90° Adaptor Range

These installation instructions give guidance on selection of Redapt products and general instructions for safety and installation of chosen Redapt products. All Redapt products should only be used in applications and environments as detailed in these instructions and other Redapt literature.

Redapt will not take responsibility for any damage, injury or form of loss caused where products are not installed or used as detailed in these instructions. If in doubt, further advice can be obtained from our Technical Department.

Product Certification

Series	CENELEC Certification	CSA / AEx Certification
AR-D	II 2DG E Exd IIC	CL I, Div 1&2, ABCD

Product Information

Series	Approval No.	Certification	IP Rating	Impact Resistance	Operating Temp
AR-D	Sira 99ATEX1195U	II 2DG E Exd IIC	IP54	7 Nm	- 60° C to + 400° C

Notes: Where an installation requires a higher level of Ingress Protection to be maintained than the basic IP rating for the product shown in the Table above, this may be achieved by using IP washers or thread sealant. Please contact Redapt for full details.

Certification and Material Variations for Standard Thread Sizes.

Product		Certification		Material		Plating			
AR	90° Adaptor	**D**	E Exd	**1**	Brass	**0**	Unplated	**6**	Chromatised
				2	Mild Steel	**1**	Nickel	**8**	Electroless Nickel
				3	Stainless Steel	**2**	Zinc		
				5	Aluminium	**3**	Cadmium		

Standard Male and Female Thread Sizes

03	M16	**18**	¾” ET	**34**	2” NPT	**49**	3” NPS	**64**	4” BSPP	**80**	PG 9
04	M20	**19**	1” ET	**35**	2 ½” NPT	**50**	3 ½” NPS	**67**	3/8” BSPT	**81**	PG 11
05	M25	**20**	1 ¼” ET	**36**	3” NPT	**51**	4” NPS	**68**	½” BSPT	**82**	PG 13.5
06	M32	**21**	1 ½” ET	**37**	3 ½” NPT	**54**	3/8” BSPP	**69**	¾” BSPT	**83**	PG 16
07	M40	**22**	2” ET	**38**	4” NPT	**55**	½” BSPP	**70**	1” BSPT	**84**	PG 21
08	M50	**23**	2 ½” ET	**41**	3/8” NPS	**56**	¾” BSPP	**71**	1 ¼” BSPT	**85**	PG 29
09	M63	**24**	3” ET	**42**	½” NPS	**57**	1” BSPP	**72**	1 ½” BSPT	**86**	PG 36
10	M75	**91**	3/8” NPT	**43**	¾” NPS	**58**	1 ¼” BSPP	**73**	2” BSPT	**87**	PG 42
11	M80	**29**	½” NPT	**44**	1” NPS	**59**	1 ½” BSPP	**74**	2 ½” BSPT	**88**	PG 48
12	M85	**30**	¾” NPT	**45**	1 ¼” NPS	**60**	2” BSPP	**75**	3” BSPT	For non-standard sizes see Special Notes.	
13	M90	**31**	1” NPT	**46**	1 ½” NPS	**61**	2 ½” BSPP	**76**	3 ½” BSPT		
14	M100	**32**	1 ¼” NPT	**47**	2” NPS	**62**	3” BSPP	**77**	4” BSPT		
17	5/8” ET	**33**	1 ½” NPT	**48**	2 ½” NPS	**63**	3 ½” BSPP	**79**	PG 7		

Example: AR-D-1-1-04-04 – 90° Adaptor, Certified EExd, Material Brass, Plating Nickel, Size M20 (M) x M20 (F)

Selection

1. All Redapt products should be selected in accordance with all relevant Standards and Codes of Practice.
2. Ensure that the product is certified to the same method of protection as the equipment to which it is to be installed.
3. Ensure that the correct threadform and size is selected for the cable and/or entry hole of the enclosure.
4. Ensure that the material the product is manufactured from is suitable to the enclosure material and cable gland, and also to the surrounding environmental conditions.
5. Ensure that the surrounding conditions do not exceed the Operating Temperatures as stated in the Product Information Table.
6. Ensure that the product is certified to the same Ingress Protection levels as the equipment to which it is to be installed.
7. Ensure that the impact resistance of the product is suitable to that of the equipment to which it is to be installed as stated in the Product Information Table.

Installation Guide

1. All Redapt products should be installed in accordance with all relevant Installation Standards and Codes of Practice. BS EN 60079-14: 1997. Electrical Installations in hazardous areas (other than mines)
2. Installation of Redapt products should only be carried out by an engineer trained in cable gland installation.
3. Under no circumstances should installation be carried out under live conditions.
4. The installer should ensure that no damage occurs to any thread or form of seal during installation. Where component is plated care should be taken to prevent damage or chipping.
5. Threaded Entries – Components can be installed directly into threaded entries and the recommended torque applied.
6. Clearance Holes – Clearance holes should be 0.5 mm to 1mm larger than the major diameter of the male thread. Components installed into clearance holes should be secured with an appropriate sized locknut to the recommended torque.
7. Maintaining IP 54 Rating – In order to maintain such an IP rating the installer should ensure that parallel threads engage to 6 full threads and tapered thread to 5 full threads.
8. Maintaining IP 66-67-68 Rating – In order to maintain the IP Rating of a component, the above thread engagement must be attained. The surface of the enclosure should also be clean and free from dust or moisture before assembly. In order to maintain IP 66-67-68 the installer must ensure that the sealing washer is in the correct position. A non-hardening thread sealant may be used to provide protection.
9. If a serrated washer is used it should not be installed in such a way that it may impair any IP Rating.
10. Recommended Installation Torque – In order to maintain the integrity of the enclosure it is important that an installation torque as detailed below be applied.

Installation Torque

Redapt products should be installed with the same torque as a gland of equivalent size and of the same material. If in doubt the following table should be used as a guide. Torque values apply to non-metric thread equivalents.

Male Thread Size	Recommended Torque (N.m.)
M16 & M20 and Equivalents	32.5
M25 and Equivalents	47.5
M32 and Equivalents	55.0
M40 and Equivalents	65.0
M50 and Equivalents	80.0
M63 and Equivalents	95.0
M75 and Equivalents	110.0
M80 and Above	Major Dia x 2 (i.e. for M80 – 160 N.m.)

Routine Checking and Maintenance

1. All Redapt products should be checked during routine maintenance of the enclosure.

Special Notes

- Non standard threadforms conforming to Table 3 of BS EN 50018 are available as certified components.
- Non standard certified threads - An installation torque appropriate to the nearest metric size should be applied. E.g. Non standard male thread size M24. Use Installation torque of an M25 male thread.
- EExe equipment cannot be used with EExd equipment
- The AR-D series are capable of operating in surrounding temperatures between – 60° C to + 400° C, providing they are not used in conjunction with any sealing device.
- Where the component is to be installed in a threaded entry care should be taken to ensure that the threads are fully engaged to maintain Ex integrity.

For Further Assistance or Details on Redapt's Range Of Products Please Complete Faxback Details.

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POSITION:	
COMPANY:	
ADDRESS:	
TEL:	
FAX:	
NATURE OF ENQUIRY:	

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