


FGUP «VNIIFTRI» Certification Centre of explosion proof measuring, control and automatic devices, SCVSI «VNIIFTRI» Accreditation License OS No. POCCRU.0001.11ГБ06 dated 27.04.07 Accreditation License TL No. POCCRU.0001.21ИП09 dated 27.04.07 141570, Moscow region, PO "Mendeleyevo", tel./fax+7 (495) 744-8183	
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EX – ANNEX

to Certificate of Conformity **No. TR RU C-GB.GB06.B.00106**
 Period of Validity **from 21.10.2013 until 20.10.2018**

1 Ex-proof Components REDAPT, series A*/R*/P*/D*/U*/T*

Russian Customs code 8536 90 100 0
 OK 005 (OKP) code 35 9900

2 Explosion proof mark

As per Section 5, table 1

3 Manufacturer

Ex Innovations Ltd T/A Redapt(UK)
 Unit 1, 1 Kingsway South, Aldridge, Walsall, WS9 8FS, UK

4 Conditions of use

- 4.1 The explosion proof components are to be used in accordance with explosion proof mark, requirements of GOST R 51330.13, current "Electrical plant arrangement rules" (PUE, art. 7.3), "Technical maintenance rules for electrical plants" (PTEEP, art. 3.4), other normative documents regulating application of electrical equipment in explosive areas, and manufacturer's instruction manual.
- 4.2 Applicable explosive areas and condition of use, categories and groups of explosive air mixtures with gases and vapors are in accordance with GOST R 51330.9, GOST R 51330.11 and requirements of "Electrical plants arrangement rules" (PUE, art.7.3).
- 4.3 Sign «U», coming after marking protection, means that Ex-components are intended for use in explosion-proof assembly with equipment that has the appropriate type of protection
- 4.4 Explosion proof components are certified for use in hazardous areas where combustible dust can be ignited. Characteristics of hazardous area are stated in technical documentation of Manufacturer.
- 4.5 Ex-proof components made of aluminum are not allowed to use for group I equipment.
- 4.6 Sponging (cleaning) of the surface of ex-proof components made of nylon is allowed only with the wet fiber in order to exclude electrostatic charges on the surfaces.

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4.7 The design modification of Ex-components related to explosion proof method is to be coordinated with licensed test laboratory.

5 Structure, design and specification of the products

Certificate of conformity covers the ex-proof components REDAPT series A*/R*/P*/D*/U*/T*. The explosion proof mark of the ex-proof components is stated in table 1.

Table 1

Ex-proof components	Explosion proof mark	Ingress protection as per GOST 14254	Ambienttemperature, °C
Adapters			
seriesAD-U	ExdeIU ExdeIICU	IP66/67/68	from -50to +85
seriesAE-E	ExeIIU	IP54	from -20 to +40
series AD-E AD-E-4 AO-E	ExeIIU	IP66/67/68	from -50to +85
series AR-D AI-D AM-D AD-D	ExdIICU	IP64 IP54 IP64 IP54	from -50 to +180 from -20 to +60 from -50 to +180 from -60 to +400
Reducers			
seriesRD-U	ExdeIU ExdeIICU	IP66/67/68	from -50to +85
seriesRD-D	ExdIICU	IP54	from -60 to +400
series RD-E RD-E-4 RO-E	ExeIIU	IP54 IP54 IP66/67/68	from -60 to +400 from -50 to +85 from -50 to +85
series TA, TC, TD, TP, TQ, TR	ExdIU ExeIU ExeIIU ExdIICU	IP66	from -20 to +60 from -50 to +150 from -50 to +200 from -20 to +60
Plugs			
series PD-U	ExdeIU ExdeIICU	IP66/67/68	from -50to +85
series PA-D, PB-D	ExdIICU	IP54	from -60 to +400
series PD-E, PD-E-4 PH-E	ExeIIU	IP66/67/68 IP54	from -50to +85 from -60 to +400
Breathers seriesDP-E	ExeIU ExeIIU	IP66	from -50to +85
Unions			

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series UN-D, UF-D	ExdIICU	IP64	from -50 to +180
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6 Destination and field of application

Explosion proof components are destined for use in explosion proof electric equipment.

The explosion proof components are parts of explosion proof electric equipment, and cannot be used in explosive medium as loose items. Ex-proof components are destined to use in accordance with the assigned ex-proof mark depending on design in mines, mines' ground constructions, or in explosive indoor and outdoor areas together with explosion proof electric equipment.

7 Major technical data

- 7.1. Explosive mixtures as per GOST R 51330.11categories IIA, IIB, IIC
- 7.2. Explosion proof type explosion proof enclosure type "e" protection
- 7.3. Explosion proof markaccording to table 1
- 7.4 Dimensions, mm and weight, kg as per technical documentation

8 Description of design and explosion proof methods

8.1. Adaptors and Reducers (AD-U, AD-E, AO-E, AD-D, RD-U, RD-D, RD-E, RO-E AD-E-4, and RD-E-4 Series) - A range of thread adaptors and reducers with an external male thread and an internal female thread. The devices are used to convert an existing entry thread to a different or same thread form and / or size. Materials: AD-U, AD-E, AO-E, AD-D Series - brass, stainless steel, low carbon steel and aluminum alloy; RD-U, RD-D, RD-E, RO-E Series - brass, 316 stainless steel, low carbon steel and aluminum alloy; AD-E-4 Series - 30% Glass Filled Nylon; and RD-E-4 Series - 30% Glass Filled Nylon.

Insulated Adaptors (AI-D Series) - A range of insulating thread adaptors with an external male thread and an internal female thread. The devices are used to insulate a cable gland or connection device. They may also be used convert an existing entry thread to a different or same thread form and / or size. Materials: brass, stainless steel, low carbon steel and aluminum alloy with nylon insulating insert.

Earth Lead Adaptors and Reducers (AE-E Series) - A range of thread adaptors and reducers with an external male thread and an internal female thread used to provide a connection from a cable gland or termination to earth via a 300 mm long earth lead cable. Additionally they can be used to convert an existing cable entry thread to a different thread form and / or size or to the same ones. Materials: brass, stainless steel, low carbon steel and aluminum alloy.

90° Adaptors and reducers (AR-D Series) - A range of thread adaptors and reducers, with an external male thread and an internal female thread. These devices are designed 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 thread to a different thread form and / or size or to the same ones. Materials: brass, stainless steel, low carbon steel and aluminum alloy.

Swivel Adaptors (T* Series) Swivel adapter - standard adapter - with the addition of a "turning function." Swivel adapter is used both to connect to a line (TA, TC, TD), and for the rotation of 90° (TP, TQ, TR). The adapter consists of two threaded components.

Male to Male Adaptors (AM-D Series) - A range of thread adaptors each with a male thread form at each end. The devices are used to convert an existing cable entry thread to a different or same

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thread form and/or size or to the same ones. Materials:brass, stainless steel, low carbon steel and aluminum alloy.

Plugs (PD-U, PA-D, PB-D, PH-E, PD-E and PD-E-4 Series) - A range of threaded stopping plugs used to fill unused cable entries in associated apparatus. Materials:PD-U Series (metallic domehead plugs) - brass, stainless steel, low carbon steel and aluminum alloy, PA-D, PD-E Series (metallic plug with external hexagon recess) - brass, stainless steel, low carbon steel and aluminum alloy, PB-D Series (metallic plug with internal hexagon recess) - brass, stainless steel, low carbon steel and aluminum alloy, PH-E Series (metallic hexagon head plug) - brass, stainless steel, low carbon steel and aluminum alloy, PD-E-4 Series (domehead plugs) - 30% glass filled nylon.

Breather Drains (DP-E Series) - A range of breather drains designed for the effective removal and prevention of moisture from equipment and providing ventilation to the surrounding atmosphere. Materials:brass, stainless steel, low carbon steel, aluminum and 30% Glass Filled Nylon.

Unions (UN-D and UF-D Series) - A range of unions designed for the connection of equipment where conventional connection is not possible, whilst protecting cables and electric conductors. Materials:UN-D Series (metallic Male x Female Unions) – brass, stainless steel, low carbon steel and aluminum alloy, UF-D Series (metallic Female x Female Unions) - brass, stainless steel, low carbon steel and aluminum alloy.

8.2 The explosion proof of the Ex-proof components is provided with the following means:

8.2.1 “Explosion proof enclosure” protection

Explosion strength of Exd-design component enclosure meets the requirements for electrical equipment of group I and subgroup IIC according to GOST R 51330.1

Parameters of the explosion proof threaded connections (axial length of the thread and number of full continuous threads) comply with the requirements for electrical equipment of group I and II of GOST R 51330.1.

O-rings provide the required resistance to aging, tightness and mechanical strength

The construction of the sealing complies with the requirements of GOST R 51330.1.

8.2.1 “e” protection

Clearances, creepage distances and dielectric strength meets the requirements of GOST R 51330.8. Enclosure as per GOST 14254 provided for adapters, plugs, vent valves and fittings at least IP54, which meets the requirements of GOST R 51330.8.

8.2.3 Maximum temperature of the adapter, plugs, adapters, vent valves and fittings for the given operating conditions determined by the equipment, which is used in the Ex-components

8.2.4 Mechanical strength of adapters (except AD-E-4 and RD-E-4 Series), plugs, adapters, vent valves and fittings meet the requirements of GOST R 51330.0 for electrical equipment of I and II Groups with a high risk of mechanical damage. The materials used meet the requirements to ensure the intrinsic friction GOST R 51330.0.

8.3 Enclosure of adapters, plugs, adapters, vent valves and fittings are marked by Ex protection class.

9 Data of tests

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Design check results, tests of the Ex-proof components, and conformity of explosion proof parameters to requirements of GOST R 51330.0, GOST R 51330.1, GOST R 51330.8 are stated in Protocol No12.1331 dated 24.10.2012 by Test laboratory of VSI "VNIIFTRI".

Maintenance documentation of the explosion proof components contains all the necessary instructions related to installation and safe operation.

10 Explosion proof mark

As per design check results, explosion proof tests and according to requirements of GOST R 51330.0, GOST R 51330.1, and GOST R 51330.8, the explosion proof components REDAPT, series A*/R*/P*/D*/U*/T* are given the explosion proof mark stated in table 1.

11 List of documents containing explosion proof details

11.1 Installation manual no number

11.2 Certificates of conformity

Adapters	EC-type examination certificate
series AD-U	SIRA00ATEX1094X
series AE-E	SIRA00ATEX3093X
series AD-E AD-E-4 AO-E	SIRA00ATEX3092X SIRA00ATEX3091X SIRA99ATEX3095X
series AR-D AI-D AM-D AD-D	SIRA99ATEX1195U SIRA00ATEX1098 SIRA99ATEX1114X SIRA99ATEX1183U
Reducers	
series RD-U	SIRA00ATEX1094X
series RD-D	SIRA99ATEX1183U
series RD-E RD-E-4 RO-E	SIRA00ATEX3092X SIRA00ATEX3091X SIRA99ATEX3194 U
series TA, TC, TD, TP, TQ, TR	SIRA 10ATEX1275U
Plugs	
series PD-U	SIRA00ATEX1094X
series PA-D, PB-D	SIRA99ATEX1113X
series PD-E, PD-E-4 PH-E	SIRA00ATEX3092X SIRA00ATEX3091X SIRA00ATEX3092X
Breathers series DP-E	SIRA99ATEX3050U
Unions series UN-D, UF-D	SIRA00ATEX1096X

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11.3 Test report of Test laboratory of VSI “VNIIFTRI” 13.1550

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