



[1] **EC-TYPE EXAMINATION CERTIFICATE**

[2] **Equipment or Protective System intended for use
in potentially explosive atmospheres
Directive 94/9/EC**

[3] EC-Type Examination Certificate number:

CESI 09 ATEX 068U

[4] Equipment: Multiwire bushings type RSM and adapters type ADP

[5] Manufacturer: **TEPEX Ltd.**

[6] Address: Medarska 69, Hr-10090 Zagreb – Croatia

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

[8] CESI, notified body n. 0722 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential report n. EX-A9033705

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

**EN 60079-0: 2006, EN 60079-1: 2007, EN 60079-7: 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 or protective system 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, examination and tests of the specified equipment or protective system in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

[12] The marking of the equipment or protective system shall include the following:

I M2 Ex d I / II 2G Ex d IIC (for RSM)

II 2 GD Ex de IIC / Ex tD A21 IP66 (for ADP)

This certificate may only be reproduced in its entirety and without any change, schedule included.

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Divisione Energia
"Area Tecnica Certificazione"
Il Responsabile

[13]

Schedule

[14] EC-TYPE EXAMINATION CERTIFICATE n. CESI 09ATEX 068U

[15] Description of equipment

Multiwire bushings type RSM

The multiwire bushings type RSM, made in brass and sealed with resin, serves as electrical connection between flameproof enclosures and between flameproof enclosures and enclosures with another type of protection. The sealing is made by means bicomponent resin set around each conductor.

The bushing type RSM and their characteristics, are identified by the following code:

Type	Wires	Insulation voltage Ui	Connection Thread
RSM 04	6 x 1,5 mm ²	1000 Vac	M25x1,5mm
RSM 05	8 x 1,5 mm ²	1000 Vac	M25x1,5mm
RSM 07	6 x 4 mm ²	1000 Vac	M33x1,5mm
RSM 08	6 x 6 mm ²	1000 Vac	M33x1,5mm
RSM 10	6 x 10 mm ²	1000 Vac	M36x1,5mm
RSM 11	6 x 16 mm ²	1000 Vac	M36x1,5mm
RSM 13	3 x 25 mm ²	1000 Vac	M42x1,5mm
RSM 14	3 x 35 mm ²	1000 Vac	M42x1,5mm

Cable type: RADOX 155 or BETAtherm 155
 Service temperature range of bushing : -20 ÷ +95 °C
 Marking: I M2 Ex d I / II 2G Ex d IIC

Adapters type ADP

The adapters type ADP are increased safety terminal boxes with incorporate sealing bushing. They are suitable to be mounted on flameproof enclosures Ex d IIC and/or dust protected enclosures Ex tD A21. They use a M25 cable gland for non-armoured cable.

The adapters bushing type ADP and their characteristics, are identified by the following code:

Type	Wires	Rated voltage	Connection Thread
ADP 22	2 x 1,5 mm ²	400 V	M20x1,5mm or NPT 1/2"
ADP 23	3 x 1,5 mm ²	400 V	
ADP 24	4 x 1,5 mm ²	400 V	

Degree of protection (EN 60529) : IP 66
 Service temperature range : -20 ÷ +80 °C
 Marking: II 2 GD Ex de IIC / Ex tD A21 IP66

The detailed description of the multiwire bushings type RSM and adapters type ADP and their constructional characteristics are reported into manufacturer documents.

This certificate may only be reproduced in its entirety and without any change, schedule included.

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Schedule

[14] EC-TYPE EXAMINATION CERTIFICATE n. CESI 09ATEX 068U

[16] Report n. EX-A9033705

Routine tests

The manufacturer shall carried out the routine tests prescribed at clause 27 of the EN60079-0 standard and at clause 24 of EN61241-0 standard.

On the adapters type ADP the dielectric test with applied voltage shall be performed (according to clause 7.1 of the EN 60079-7) at $2U + 1000$ V with a minimum value of 1500 V between the supply terminals and earth (U = rated voltage).

Descriptive documents (prot. EX-A9033709)

- Technical description of the explosion proof multiwire bushing type RSM	(pages 2)	dated	09.2009
- Certificated drawing description C61.06.01.00, C61.07.01.00, C61.09.01.00, C61.11.01.00, C61.13.01.00 multiwire bushing type RSM		dated	09.2009
- Technical description of the explosion protected adapter Ex de, type ADP	(pages 2)	dated	07.2009
- Certificated drawing description C72.01.01.00	(pages 4)	dated	09.2009
- drawing C61.06.01.00		dated	09.2009
- drawing C61.07.01.00		dated	09.2009
- drawing C61.09.01.00		dated	09.2009
- drawing C61.11.01.00		dated	09.2009
- drawing C61.13.01.00		dated	09.2009
- drawing C72.01.01.00		dated	09.2009
- User manual TEPEX.RS.033 – rev.0	(pages 2)	dated	22.09.2009
- User manual TEPEX.RS.036 – rev.0		dated	25.11.2009
- Data Sheets Radox	(pages 2)	dated	09.2009
- Data Sheets BetaTherm	(pages 4)	dated	09.2009
- ADP Attestation of conformity		dated	09.2009
- RSM Attestation of conformity		dated	09.2009

One copy of all documents is kept in CESI files.

[17] Schedule of limitations

The multiwire bushings and the adapters shall be coupled with the enclosures as indicated by the manufacturer in the documents annexed to this certificate in order not jeopardise the type of protection of the electrical apparatus on which they are installed.

The multiwire bushings type RSM and the adapters type ADP shall be fixed in the electrical apparatus in such a way that rotation and self-loosening will be prevented.

If the reference pressure of flameproof enclosure exceeds 20 bar, the bushing and/or adapter shall be included in the type test according to EN 60079-1, section 15.1.3 (overpressure test), as required by the classification of the electrical apparatus which they are installed.

The maximum current in the conductors shall be established taking into account the heating caused by the current flow in the conductors, the heating of the enclosure and the ambient temperature.

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Schedule

[14] **EC-TYPE EXAMINATION CERTIFICATE n. CESI 09ATEX 068U**

Multiwire bushings type RSM

The conductors shall be connected inside enclosures conforming with one of the type of protection indicated in the EN 60079-0 and EN 61241-0 standards.

The service temperature of sealing bushings type RSM is $-20 \div +95$ °C.

Adapters type ADP

The installer shall ensure a suitable clamping of the cable.

The service temperature of adapters type ADP is $-20 \div +80$ °C.

[18] **Essential Health and Safety Requirements**

Covered by EN standards mentioned at page 1.