



[1] **EU-TYPE EXAMINATION CERTIFICATE – TRANSLATION**

[2] Equipment and protective systems intended for use
in potentially explosive atmospheres, directive 2014/34/EU

[3] EU-Type Examination Certificate Number **IBExU20ATEX1131 X** | Issue 0

[4] Equipment: **Limit switch boxes**
Type: DRZ...A and DRIZ...A

[5] Manufacturer: **ROTECH Antriebselemente GmbH**

[6] Address: **Im Katzentach 16-18**
76275 Ettlingen
GERMANY

[7] This product and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

[8] IBExU Institut für Sicherheitstechnik GmbH, Notified Body number 0637 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the essential health and safety requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential test reports IB-20-3-0121 and IB-20-3-0121/1.

[9] Compliance with the essential health and safety requirements has been assured by compliance with:
EN IEC 60079-0:2018 EN 60079-1:2014 EN 60079-11:2012 EN 60079-31:2014
Except in respect of those requirements listed at item [18] of the schedule.

[10] If the sign "X" is placed after the certificate number, it indicates that the product is subject to the specific conditions of use specified in the schedule to this certificate.

[11] This EU-type examination certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

[12] The marking of the product shall include the following:

Type DRZ...A: II 2G Ex db IIC T6...T4 Gb II 2D Ex tb IIIC T80 °C...T105 °C Db

Type DRIZ...A: II 2G Ex ia IIC T6...T4 Gb II 2D Ex ia IIIC T80 °C...T105 °C Db

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(Notified Body number 0637)

Certificates without seal and signature are not valid. Certificates may only be duplicated completely and unchanged. In case of dispute, the German text shall prevail.

Freiberg, 2021-01-07

[13] **Schedule**

[14] **Certificate Number IBExU20ATEX1131 X | Issue 0**

[15] **Description of product**

The Limit switch boxes type DRZ...A and DRIZ...A serve for the end position feedback with mechanical switches, inductive sensors, reed contacts, potentiometers and/or electronic boards of different manufacturers as well as the possibility of connecting separately certified explosion protected actuating magnets of pneumatic valves.

The flameproof enclosure consists of the enclosure base with actuation shaft and mounting console as well as the cover with optional position indicator. The electric connection is made via direct Ex-d cable glands.

Technical data

- IP-degree of protection according to EN 60529: IP65
- Property class fastening screws: A2-70 according to ISO 4014
- Threads for cable glands: M20x1.5, NPT1/2" or NPT3/4"
- Minimum ambient temperature: -60 °C
- Maximum ambient temperature: +60 °C, +75 °C or +85 °C
- Temperature class: T6, T5 or T4
- Max. surface temperature for dust: +80 °C, +95 °C or +105 °C

Electrical values (type DRZ...A)

- Rated voltage: up to 250 V
- Rated current: up to 4 A
- Rated cross section: up to 4 mm²

Only intrinsically safe fed switches or separately certified intrinsically safe sensors are used at the Limit switch box type DRIZ...A.

Intrinsically safe values (type DRIZ...A)

- Voltage U_i (switches, max.): 24 V 30 V 40 V 50 V 60 V
- Current intensity I_i (switches, max.): 160 mA 100 mA 57 mA 38 mA 25 mA
- Inner values switches: $C_i=1$ nF, $L_i=1$ μ H
- Typical voltages of the sensors: 8 V DC
- Measuring plate detected (sensors): ≥ 3 mA
- Measuring plate not detected (sensors): ≤ 1 mA

The accurate values of the used sensors are listed in the operating instruction.

[16] **Test report**

The test results are recorded in the confidential test reports IB-20-3-0121 and IB-20-3-0121/1 of 2021-01-07. The test documents are part of the test reports and they are listed there.

Summary of the test results

The Limit switch box type DRZ...A fulfils the requirements of explosion protection for equipment of Group II, Category 2G, type of protection flameproof enclosure "db" and Category 2D, type of protection dust ignition protection by enclosure "tb".

The Limit switch box type DRIZ...A fulfils the requirements of explosion protection for equipment of Group II, Category 2G and 2D, type of protection intrinsic safety "ia".

[17] Special conditions for use

- The Limit switch boxes type DRZ...A and DRIZ...A can be used in an ambient temperature range from -60 °C up to +60 °C, +75 °C or +85 °C.
- The permissible minimum ambient temperature as well as the maximum service temperature at the installation location depend on the used components. They are specified for the various variants in the operating instructions.
- The temperature class and the maximum surface temperature for dust depends to the used sensors and the maximum ambient temperature.
- The selection of cable glands and connecting cables depends on the respective ambient temperature range. For type DRZ...A the cable glands must be suitable and certified accordingly and the corresponding requirements of EN 60079-14, sections 10.6 and 10.7 must be observed.
- All unused openings for cable entries must be durably closed with suitable blanking elements, for type DRZ...A they must be certified for explosion protection according to EN 60079-1 for group IIC or EN 60079-31 for group IIIC.
- For type DRZ...A, repairs of the flameproof joints must be made in compliance with the constructive specifications provided by the manufacturer. Repairs must not be made on the basis of values specified in tables 2 and 3 of EN 60079-1.
- Only the fastening screws specified by the manufacturer (strength class min. A2-70) according to ISO 4014 may be used for type DRZ...A.
- For type DRIZ...A, the interconnection of intrinsically safe circuits must be tested and certified separately. The detailed characteristic values are specified in the operating instruction. An isolating switch amplifier according to the specification of the sensor manufacturer must be used.

[18] Essential Health and Safety Requirements

In addition to the essential health and safety requirements (EHSRs) covered by the standards listed at item [9], the following are considered relevant to this product, and conformity is demonstrated in the test report:

- not applicable -

[19] Drawings and documents

The documents are listed in the test report.

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