



# (1) EC-Type Examination Certificate

- (2) Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Directive 94/9/EC
- (3) EC Type Examination Certificate Number

#### EPS 16 ATEX 1 007 X Revision 0

- (4) Equipment: Limit switch box type: NEK...ED..., NEK...IA... and NEK...K2D...
- (5) Manufacturer: EUROTEC Antriebszubehör GmbH
- (6) Address: Bildstock 37, 88085 Langenargen, Germany
- (7) This equipment and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.
- (8) Bureau Veritas Consumer Products Services Germany GmbH, Notified Body No. 2004 in accordance with Article 9 of the Council Directive 94/9/EC of March 23rd 1994, certifies that this equipment 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 of the Directive. The examination and test results are recorded in the confidential report 16TH0022.
- (9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 60079-0:2012+A11:2013	EN 60079-1:2007	EN 60079-31:2014
EN 60079-7:2007	EN 60079-11:2012	

- (10) If the sign "X" is placed after the certificate number, it indicates that the equipment 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 and the construction of the specified equipment in accordance with Directive 94/9/EC. Further requirements of this Directive apply to the manufacture and supply of this equipment.
- (12) The marking of the equipment shall include the following:

NEKED	II 2G Ex de IIC T4 - T6 Gb II 2D Ex t IIIC T80°C - T135°C Db
NEKIA	II 2G Ex ia IIC/IIB T4 - T6 Gb II 2D Ex ia IIIC T80°C - T135°C Db
NEK.K2D	Ex II 2D Ex t IIIC T80°C - T135°C Db
Certification department of expl	blosion protection Nuremberg, 2016-03-10
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## Annex

### (14) EC-Type Examination Certificate EPS 16 ATEX 1 007 X

**Revision 0** 

#### (15) Description of equipment:

(13)

The limit switch boxes are used for feedback and control of the position of valves, which are actuated by pneumatic actuators. The shaft of the limit switch is positively connected to the shaft of the rotary actuator and is rotated in the rotational movement of the rotary actuator. The fixed to the shaft switching cams actuate thereby the built-in sensors, which are used for electronic signal transduction.

The neptun Ex de / t limit switch boxes type NEK...ED... are, depending on the model, equipped with 1 to 3 mechanical Ex-d switches. Additionally the device serves as a connection box for electrical connections according to kind of protection increased safety. Up to two electrical circuits can be fed through this connection box.

The neptun Ex ia limit switch boxes type NEK...IA... are, depending on the model, equipped with 1 to 4 mechanical micro switches or separately certified intrinsically safe inductive sensors. These include 1 to 4 inductive V3-sensors, 1 to 3 proximity switches, 1 to 2 cylindrical sensors or 1 double sensor. Additionally the device serves as a connection box for up to two intrinsic safe circuits which can be fed through.

The neptun Ex t limit switch boxes type NEK...K2D... are only intended for dust hazardous areas and can be equipped with different switch combinations. As for the type NEK...ED..., electrical signals can be fed through the box type NEK...K2D... which thus serves as a connection box. The maximum allowed internally dissipated power, see section (17), shall never be exceeded.

Electrical data:

NEK...ED... The electrical data depends on the according switch types and can be taken from the according datasheet or the user manual.

Electrical fed through circuits: minimum cross section size 0,5 mm<sup>2</sup>, maximum current 6 A

NEK...IA... The electrical data depends on the according switch types and can be taken from the according datasheet or the user manual.

For mechanical gold contact switches (simple apparatus) the following values shall never be exceeded:

Ui = 11 V ; li = 15 mA ; Pi = 35 mW

The following values for the electrical fed through circuits shall never be exceeded:

- NEK...K2D... Maximum allowed internally dissipated power: 1 W
- (16) <u>Test report</u>: 16TH0022

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### (17) <u>Special conditions for safe use</u>:

Maximum ambient temperature range:

NEKED	T6/T80°C: -55°C/-25°C to +40°C T5/T95°C: -55°C/-25°C to +60°C T4/T135°C: -55°C/-25°C to +75°C
NEKIA	Mechanical gold contact switches:
	T6/T80°C: -55°C/-25°C to +70°C T5/T95°C: -55°C/-25°C to +80°C T4/T135°C: -55°C/-25°C to +100°C
	Certified switches:
	Depends on the according switch type. See user manual and type plate.
NEKK2D	T80°C: -55°C/-25°C to +40°C T95°C: -55°C/-25°C to +60°C T135°C: -55°C/-25°C to +75°C

For the limit switch box type NEK...IA...alternative to the cable glands other, accordingly suited connectors for example M12-connector or plug connectors may be attached. These fasteners shall comply with the separation distances according to Table 5 of EN 60079-11. Unused connectors shall be covered with a dustproof cap.

(18) Essential health and safety requirements:

Met by standards.

D. Zitzmann

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Certification department of explosion protection

Nuremberg, 2016-03-10

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