

(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: KEMA 03ATEX1021 X**

(4) **Equipment or protective system: LED lamp of the P861 series**

(5) **Manufacturer: RTK Engineering Ltd.**

(6) **Address: St. Peters Square, Harrogate, North Yorkshire HG2 0NP, England**

(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) KEMA Quality B.V., notified body number 0344 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 no. 2026065

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 50014 : 1997 EN 50020 : 2002

(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.

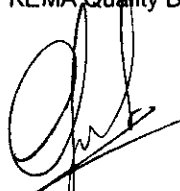
(11) This EC-Type Examination Certificate relates only to the design, examination and tests of the specified equipment or protective system according to the Directive 94/9/EC. Further requirements of the directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

(12) The marking of the equipment or protective system shall include the following:



#2 G EEx ia IIC T4

Arnhem, 21 February 2003
KEMA Quality B.V.



C.G. van Es
Certification Manager

* This Certificate may only be reproduced in its entirety and without any change

SCHEDULE

(13)

to EC-Type Examination Certificate KEMA 03ATEX1021 X

(14)

(15) **Description**

The LED lamp of the P861 series is an illuminator using LED's as lighting medium. The LED lamp is provided with a standard miniature lamp foot and can be fitted into a lamp holder of for instance a switch assembly.

Ambient temperature range -20 °C ... +60 °C

Electrical data

Supply circuit In type of protection intrinsic safety EEx ia IIC, only (centre and side of lamp foot) for connection to certified intrinsically safe circuits, with the following maximum values

- U_i = determined by I_i and P_i
- I_i = 2 A
- P_i = 1 W
- C_i = 0 nF
- L_i = 0 mH

(16) **Report**

KEMA Nr. 2026065.

(17) **Special conditions for safe use**

1. The LED lamp has to be mounted in a lamp holder providing a degree of ingress protection of at least IP20 in accordance with EN 60529. When a higher ingress protection than IP20 is required, this has to be achieved by an additional enclosure which is suitable for the applicable environmental conditions.
2. The lamp holder shall be suitable for the current supplied to the LED lamp (in accordance with EN 50020 for temperature class T4).
3. Circuits of for instance a switch assembly in which the LED lamp is fitted shall be separated from the LED lamp connections in accordance with EN 50020, taking into account a possible voltage addition of the circuits.
4. The terminations of the lamp holder shall be identified as intrinsically safe circuits in accordance with clause 12.2 of EN 50020.
5. For the illuminated push-button assembly as specified in the test documentation listed at (19), the special conditions for safe use are met when all the circuits connected to it are intrinsically safe, have a maximum total peak voltage of 375 V and the required ingress protection has been taken into account.
This assembly has an ingress protection of IP20 in accordance with EN 60529.
This assembly consists of the following parts (or equivalent): Lamp holder DA170-LH, switches DA170-SW on either side of the lamp holder, which are fitted on Body DA170-BD and operated by actuator P861-AC.

(18) **Essential Health and Safety Requirements**

Covered by the standards listed at (9).

(19) **Test documentation**

1. Certificate of Conformity KEMA No. Ex-99.E.3387 X dated
2. Drawing No. CE5542, Issue 1 09.01.2003