

1. **EC-TYPE EXAMINATION CERTIFICATE**

2. **Equipment or Protective System Intended for use in
Potentially explosive atmospheres
Directive 94/9/EC**

3. Reference: **VTT 05 ATEX 060**

4. Equipment: **Portable luminaire**

Certified type: **Slam Tube 3x3W LED**

5. Manufactured by: **Centaurea Oy**

6. Address: **Viilutie 4
FI-60510 Hyllykallio
Finland**

7. This equipment or protective system and any acceptable variations thereto is specified in the schedule and possible supplement(s) to this Certificate and the documents therein referred to.

8. VTT (former VTT Industrial Systems), notified body number 0537, in accordance with Article 9 of the Council Directive 94/9/EC of 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 system 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. TUO26-056008.

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

EN 61241-0 (2006)

EN 61241-1 (2004)

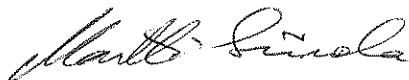


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10. If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.
11. This EC-Type examination certificate relates 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:

**II 2 D****EEx tD A21 IP 66 T75°C**

Espoo, 19.1.2006

VTT

Martti Siirola
Research scientistJari Kettunen
Research engineer

Note. The name of the Notified Body no. 0537 was VTT Industrial Systems until 31.12.2005.



13. **Schedule**

14. **EC-TYPE EXAMINATION CERTIFICATE VTT 05 ATEX 060**

15. Description of Equipment

Rated values

Power 3x3 W
Voltage 24V AC/DC, 42 V AC/DC, 110 V AC/DC, 230 VAC

Construction

Portable luminaire with three LEDs and electronic ballast. The whole assembly, LEDs and ballast, together with connecting devices for supply cable has been built into the enclosure made of polycarbonate tube with vulcanized rubber endplates. The luminaire is fitted with a permanently connected cable H07RN-F. A plug is not covered by the Certificate.

Ex-Components

Cable entries: Agro, EEx e II, PTB 02 ATEX 1125 or equivalent Exe-certified types

Terminal Blocks: Wago 264, EEx e II, PTB 98 ATEX 3128U or equivalent Exe-certified types

Degree of protection: IP 66

Drawings and documents:

1tila3x3hyvräjb	2005-08-17	SH33A, ST33A Main construction
1tila3x3hyvräjb	2005-08-17	SH33A, ST33A Exploded view
Slam Tube 3x3W A 230V, 110V, 42V, 24V	17.1.2006	ST33A Parts list

16. Report No. TUO26-056008

17. Special conditions for safe use

None

18. Essential Health and Safety Requirements


Met by the compliance with the standards:

EN 61241-0 (2006)

EN 61241-1 (2004)

Espoo, 19.1.2006

VTT



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Research scientist



Jari Kettunen
Research engineer


**SUPPLEMENT 1 TO EC-TYPE EXAMINATION CERTIFICATE
VTT 05 ATEX 060**Requested by:**Centaurea Oy, FINLAND**Apparatus:**Portable luminaire,****Certified type: Slam Tube 3 x 3 W LED**Variation of the construction

The Certificate is extended to apply to apparatus designed and constructed in accordance with the specification set out in the Annex of the said Certificate but having **the electronic ballast, type TSK7133B 110VAC/DC, 230 VAC and type TSK7103B 24-42 VAC/DC**, specified in the drawings:

KAK71E	2005-11-22	Circuit diagram
KAK71E_24V-42V	2005-11-22	Circuit diagram
KAK71E.pcb	2006-03-02	Lay-out of the electronic ballast's PCB
KAK71E_24V-42V.pcb	2006-03-03	Lay-out of the electronic ballast's PCB
TSK7133B	2006-03-02	Data sheet by Teknoware Oy
TSK7133B	2006-03-02	Failure analysis by Teknoware Oy
TSK7103B	2006-03-03	Data sheet by Teknoware Oy
TSK7103B	2006-03-03	Failure analysis by Teknoware Oy

Espoo, 17.3.2006

VTT

**Martti Siirola**
Research scientist**Jari Kettunen**
Research engineer

Certificate or supplement without signatures shall not be valid.
This certificate, including the schedule and supplements, may only be reproduced in its entirety and without any change.