

1. **EC-TYPE EXAMINATION CERTIFICATE**
2. **Equipment or Protective System Intended for use  
in Potentially explosive atmospheres  
Directive 94/9/EC**
3. Reference: **VTT 08 ATEX 029X**
4. Equipment: **Portable transformer**  
Certified type: **CentaurSlam Trans 400 Ex**
5. Manufactured by: **Centaurea Oy**
6. Address: **Kipinätie 1  
FI-60510 HYLLEYKALLIO  
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, 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. VTT-S-02327-08.
9. Compliance with the Essential Health and Safety Requirements has been assured by compliance with the standards:

**IEC 60079-0 (2007)**  
**EN 60079-7 (2007)**



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. This certificate does not cover these.
12. The marking of the equipment or protective system shall include the following:

**II 2 G****Ex ed IIC T4 Gb**

Espoo, 27.6.2008

VTT TECHNICAL RESEARCH CENTRE OF FINLAND

Martti Siirola  
Research scientistJari Kettunen  
Research engineer

Certificate without signatures shall not be valid.



13.

## Schedule

14. **EC-TYPE EXAMINATION CERTIFICATE VTT 08 ATEX 029X**15. Description of Equipment:**Portable transformer: CentaurSlam Trans 400 Ex**Rated values:

Power	400 VA
Input voltage	230 VAC
Output voltage	24 VAC or 48 VAC
Output current	11 A
Protection class	IP 56

Documents:

- Instructions for CentaurSlam Trans 400 Ex rev.1.0, dated 23.06.2008 (1 page).
- REPAIR MANUAL CSTR400EX – CENTAURSLAM TRANS 400 Ex, rev. 1.1, dated 25.6.2008 (8 pages).

Basic construction:

Exe - protected portable 400 VA transformer. Primary voltage is 230 VAC and secondary voltages are 24 VAC or 48 VAC. The number of the output sockets is 1-4. The nominal output current is 11 A max. The portable transformer is fitted with a cable H07RN-F or cable having equally robust construction. A plug is not covered by the certificate.

Ex-Components

Transformer:	ATX, EEx e II, LCIE 03 ATEX 0021 U or equivalent Exe-certified types
Fuse holder:	A.T.X, EEx de IIC T4, LCIE 02 ATEX 0003 U or equivalent Exde-certified types
Flush mounting sockets:	ATX S.A., EEx ed IIC T6 or T5, LCIE 02 ATEX 0001U or equivalent Exed-certified types
Cable gland:	AGRO AG; EX, EEx e II, PTB 02 ATEX 1126 C or equivalent Exe-certified types

Certificate without signatures shall not be valid.

16. Report No.

VTT-S-02327-08

17. Special conditions for safe use:

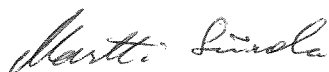
1. If the transformer is used outdoors under direct sunshine for long period the transformer has to be protected against direct sunshine.

18. Essential Health and Safety Requirements:

Compliance is met with the standards referred in point 9.

Espoo, 27.6.2008

VTT TECHNICAL RESEARCH CENTRE OF FINLAND



Martti Siirola  
Research scientist



Jari Kettunen  
Research engineer

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**SUPPLEMENT 1 TO EC-TYPE EXAMINATION CERTIFICATE  
VTT 08 ATEX 029X**

Requested by:

**Centaurea Oy, FINLAND**

Apparatus:

**Portable transformer,**

Certified type: **CentaurSlam Trans 400 Ex**

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 following alternative constructions:

Transformer with voltages 110 V/ 24V or 48V, type TSN/TSCN by ATX, EEx e II, LCIE ATEX 0021U.

Degree of protection IP 66 with added sealing between the sockets and transformer body according to the drawing no: Trans\_IP66b

Transformer body may have yellow or green color.

Espoo, 29.10.2008

VTT, TECHNICAL RESEARCH CENTRE OF FINLAND



Risto Sulonen  
Senior Research scientist



Pertti Kokkonen  
Research engineer

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**SUPPLEMENT 2 TO EC-TYPE EXAMINATION CERTIFICATE**  
**VTT 08 ATEX 029X**

Requested by: **Centaurea Oy, FINLAND**

Apparatus: **Portable transformer,**

Certified type: **CentaurSlam Trans 400 Ex**

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 following added features, alternative constructions and use:

Rated values:

Power	400 VA
Input voltage	110 VAC or 230 VAC,
Output voltage	12 V AC, 24 VAC or 48 VAC
Output current	Max 16 A
Degree of protection	IP 66

The marking of the equipment or protective system may include the following:



**II 2 G Ex ed IIC T4 Gb**  
**II 2 D Ex t IIIC T 60 °C**

Special conditions for safe use:

Within ambient temperature range -20 °C to +25 °C the maximum output current is 16 A without using time limitation. Within ambient temperature range between +25 °C ... +40 °C and depending of output current the using time of the transformer shall not exceed the following time limits:

0 A to 11 A	No time limit
11 A to 13 A	6 h
13 A to 14 A	3,5 h
14 A to 15 A	2,5 h
15 A to 16 A	1,5 h

Espoo, 25.5.2009

VTT, TECHNICAL RESEARCH CENTRE OF FINLAND



Pertti Kokkonen  
Research engineer



Risto Sulonen  
Senior research scientist

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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.

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**SUPPLEMENT 3 TO EC-TYPE EXAMINATION CERTIFICATE**  
**VTT 08 ATEX 029X**

Requested by: **Centaurea Oy, FINLAND**

Apparatus: **Portable transformer,**

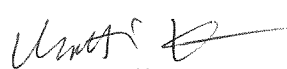
Certified type: **CentaurSlam Trans 400 Ex**


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 following ratings:

Rated values:

Power	400 VA
Input voltage	110 VAC or 230 VAC,
Output voltage	12 V AC, 24 VAC or 48 VAC
Output current	Max 16 A
Frequency	50 Hz or 60 Hz
Degree of protection	IP 66

Espoo, 13.7.2009  
VTT, TECHNICAL RESEARCH CENTRE OF FINLAND

  
Matti Katajisto  
Research scientist

  
Risto Sulonen  
Senior research scientist