1 **EC TYPE-EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 94/9/EC

3 Certificate Number: **Sira 07ATEX2065** Issue: **1**

4 Equipment: **9468-ET Ethernet Isolator**

5 Applicant: **Controlled Systems Limited**

6 Address: Ryder Close
Cadley Hill
Swadlincote
Derbyshire DE11 9EU
UK

7 This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 Sira Certification Service, notified body number 0518 in accordance with Article 9 of Directive 94/9/EC of 23 March 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 intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 14.2.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN 60079-0:2006 EN 60079-11:2007 IEC 61241-0:2004 IEC 61241-11:2005
IEC 60079-26:2006 (For guidance for the Ga and Ma marking)

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 construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

12 The marking of the equipment shall include the following:

II (1) GD

I (M1)
(Ga) [Ex ia] IIC
[Ex iaD]
(Ma) [Ex ia] I
(Ta = -40°C to +70°C)

Project Number 52A17748
C. Index 16

D R Stubbings
Certification Manager

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SCHEDULE

EC TYPE-EXAMINATION CERTIFICATE **Sira 07ATEX2065**
Issue 1

13 **DESCRIPTION OF EQUIPMENT**

The 9468-ET Ethernet Isolator Module, rated supply voltage (terminals T1, T2 wrt T3, T4) 30 Vdc maximum, is intended for location in a non-hazardous (safe) area and is designed to extend an Ethernet network into a hazardous area, it also acts as an isolating interface between a 9400 Series Ethernet network in the hazardous area and equipment in the safe area. The Cat5e/Cat6 Ethernet LAN cable is capable of going into/through Zones 2, 1 and 0 of the hazardous area.

The electronic components of the 9468-ET Ethernet Isolator Module are mounted on printed circuit boards within a plastic enclosure that is designed for mounting on a DIN rail. External electrical connections are made via screw type terminals and/or connectors mounted on the top of the enclosure. The Module may optionally be encapsulated, but this is not a requirement of this certification.

The 9468-ET Ethernet Isolator Module has the following safety description:

(Safe area supply input) Terminals T1, T2 wrt T3, T4		
Um	=	250 V

(Intrinsically safe power supply input – optional PoEx) Terminal T14 wrt T15 coloured blue		
Ui	=	15.4 V
Ci	=	0.075 µF
Li	=	0

RJ45 connector to/from the hazardous area (10/100 Base T) **Coloured blue, marked 'HAZARDOUS AREA' 'LAN'** **For connection to RJ45 connector on other 9400 Series Ethernet Modules only** Ethernet port, intended for connection only to other RJ45 connectors on other 9400 Series Ethernet Modules, all powered from a single intrinsically safe supply. Connection to other Ethernet Systems requires special consideration and is outside the scope of this certificate.		
No power supply connected to terminals T14 wrt T15		
U_o	=	0 Vdc
I_o	=	0 Adc
P_o	=	0 W dc
Ci	=	0.075 µF
Li	=	0
Ui	=	15.4 V Maximum (PoEx)
Intrinsically safe power supply connected to terminals T14 wrt T15		
Uo	=	Uo of intrinsically safe power supply connected to terminals T14 wrt T15
Io	=	Io of intrinsically safe power supply connected to terminals T14 wrt T15
Po	=	Po of intrinsically safe power supply connected to terminals T14 wrt T15
Co	=	Co of intrinsically safe power supply connected to terminals T14 wrt T15 (less 0.075 µF and any cable capacitance at the terminals T14 and T15)
Lo	=	Lo of intrinsically safe power supply connected to terminals T14 wrt T15 (less any cable inductance at the terminals T14 and T15)
Ui	=	0

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RJ45 connector to/from the safe area **Marked 'SAFE AREA' 'LAN'** **(10/100 Base T)**
U_m = 250 V

14 **DESCRIPTIVE DOCUMENTS**

14.1 **Drawings**

Refer to Certificate Annexe.

14.2 **Associated Sira Reports and Certificate History**

Issue	Date	Report no.	Comment
0	8 May 2008	R52A17748B	The release of the prime certificate.
1	16 June 2008	R52A17748D	The re-issue of the prime certificate to correct marking details and clarify the description.

15 **SPECIAL CONDITIONS FOR SAFE USE** (denoted by X after the certificate number)

None

16 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II** (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in the reports listed in Section 14.2.

17 **CONDITIONS OF CERTIFICATION**

17.1 The use of this certificate is subject to the Regulations Applicable to Holders of Sira Certificates.

17.2 Holders of EC type-examination certificates are required to comply with the production control requirements defined in Article 8 of directive 94/9/EC.

17.3 DB1 shall be constructed from two, type 1N5337B, zener diodes that are connected in parallel.

17.4 The following routine tests shall be carried out on transformer T1 (TRF305):

A voltage of 1500 Vrms shall be applied for 60 seconds as required by clause 11.2 of EN 60079-11:2007 between:

- the primary and secondary (1) windings
- the primary and secondary (2) windings
- the secondary (1) and secondary (2) windings

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Certificate Annexe

Certificate Number: **Sira 07ATEX2065**

Equipment: **9468-ET Ethernet Isolator**

Applicant: **Controlled Systems Limited**

Issue 0

Number	Sheet	Rev.	Date	Description
CSL-ZENER	1 of 1	3	28 Jan 03	Zener diode assembly
13003-PCB	1 of 1	Orig.	23 Aug 02	Zener PCB

9468-ET Ethernet Isolator Module

Number	Sheet	Rev.	Date	Description
9468-ASSY	1 of 1	1	26 Oct 07	General Assembly, Ethernet Isolator
9468-PSU	1 of 1	4	04 Apr 08	Circuit Diagram, Ethernet Isolator PSU Board
9468-BX	1 of 1	5	29 Mar 08	Circuit Diagram, Ethernet Isolator Main Board
9468-PSU PCB	1 of 1	4	04 Apr 08	Ethernet Isolator PSU Board Artworks
9468-BX PCB	1 of 1	5	29 Mar 08	Ethernet Isolator Main Board Artworks
TFR305	1 & 2	2	10 Dec 07	Transformer T5 (TRF305) details
9468-Label ATEX	1 of 1	2	25 Apr 08	Label Details, Ethernet Isolator Module

Issue 1

9468-ET Ethernet Isolator Module

Number	Sheet	Rev.	Date	Description
9468-Label ATEX	1 of 1	3	07 Jun 08	Label Details, Ethernet Isolator Module

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