IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEx CML 15.0009U	Issue No: 0	Certificate history: Issue No. 0 (2015-03-20)
Status:	**Current**	Page 1 of 3	
Date of Issue:	**2015-03-20**		
Applicant:	**Controlled Systems Limited** Ryder Close, Swadlincote, Derbyshire, DE11 9EU **United Kingdom**		
Electrical Apparatus:	**Intrinsically Safe 10/100 Ethernet Interface**		
Optional accessory:			
Type of Protection:	**Intrisically Safe and Dust**		
Marking:	Ex ia I Ma Ex ia IIC T4 Ga Ex ia IIIC T135°C Da Ta = -40°C to +70°C		

Approved for issue on behalf of the IECEx Certification Body: M D Shearman FInstMC

Position: Managing Director

Signature:
(for printed version)

Date: 20/03/2015

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

Certification Management Limited
Unit 1, Newport Business Park
New Port Road
Ellesmere Port
CH65 4LZ
United Kingdom

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Manufacturer: **Controlled System Ltd**
Ryder Close,
Swadlincote,
Derbyshire,
DE11 9EU
United Kingdom

Additional Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Edition:6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-11 : 2011 Edition:6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
IEC 60079-26 : 2006 Edition:2	Explosive atmospheres - Part 26: Equipment with equipment protection level (EPL) Ga

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:

GB/CML/ExTR15.0016/00

Quality Assessment Report:

GB/SIR/QAR07.0023/06

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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The Intrinsically Safe 10/100 Ethernet Interface module provides an interface for standard Cat 5e/Cat 6 Ethernet cabling systems together with Power over IS Ethernet (PoEx) compatibility.

See Annex for full description and Schedule of Limitations

CONDITIONS OF CERTIFICATION: NO

Annex:

Certificate Annex IECEx CML 15_0009U Iss0.pdf

Annexe to:	IECEx CML 15.0009U Issue 0
Applicant:	Controlled Systems Ltd
Apparatus:	Intrinsically Safe 10/100 Ethernet Interface

Description of Equipment

The Intrinsically Safe 10/100 Ethernet Interface module provides an interface for standard Cat 5e/Cat 6 Ethernet cabling systems together with Power over IS Ethernet (PoEx) compatibility. The interface also contains a duplicated Over Voltage Protection (OVP) circuitry that limits the supply to 5.88V intrinsically safe voltage limited circuit. The whole circuit is fully encapsulated and is Component Approved.

Power Supply (PCB Header PL1 or PL2)
Pin1 wrt Pin2

Group	Ui	Uo	Ci	Li
I	12.8Vdc	5.88V	0	0
IIA/IIIA				
IIB/IIIB				
IIC/IIIC				

LAN (10/100 Ethernet)
Pins 1,2,3,4,7,8 wrt each other or Pin5 (0V)

Group	Ui		Uo	Io	Ci	Li
I	17.6V		5.88V	2.18A	0.48µF	0
IIA/IIIA						
IIB/IIIB						
IIC/IIIC	13.1V					

Note: Io = 2.18A is the total for the 4 Ethernet lines (each line 545mA)

The capacitance and either the inductance or the inductance to resistance ratio (L/R) of the load connected to the output terminals must not exceed the following values:

Group	Capacitance (µF)	Inductance (µH)	or	L/R Ratio (µH/Ohm)
I	1000	97.9		145
IIA	1000	59.9		89
IIB	1000	29.9		44
IIC	43	7.5		11

If PoEx is used then the parameters of the PoEx power supply must also be considered.

The 10/100 Ethernet port may be connected to any other equipment having appropriate Entity parameters.

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It is also permissible to be connected to 9400 Ethernet modules covered by these existing certificates (with or without PoEx) –

9400 Ethernet module reference	Certificate No.
9400 Series Ethernet Modules	Sira 07ATEX2064X / IECEx SIR 07.0042X
9468 Ethernet Isolator	Sira 07ATEX2065 / IECEx SIR 07.0043
9468 Ethernet Isolator (Zone 2)	Sira 08ATEX4130X / IECEx SIR 08.0032X

Conditions of Manufacture

The following conditions are required of the manufacturing process for compliance with the certification.

i. Where the product incorporates certified parts or safety critical components the manufacturer shall ensure that any changes to those parts or components do not affect the compliance of the certified product that is the subject of this certificate.

Schedule of Limitations

The following conditions relate to safe installation and/or use of the equipment.

i. The interface is to be connected to a supply that is fused at no greater than 500mA and an input voltage of Ui = 30V.

ii. The device shall be installed in an enclosure that maintains an ingress protection rating of at least IP54 and meets the enclosure requirements of EN 60079-0 and EN 60079-11.