EC Type Examination Certificate CML 15ATEX2017U Issue 0

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

2 Component **Intrinsically Safe 10/100 Ethernet Interface**

3 Manufacturer **Controlled Systems Ltd**

4 Address **Ryder Close,**
Swadlincote,
Derbyshire,
DE11 9EU
UK

5 The component is specified in the description of this certificate and the documents to which it refers.

6 Certification Management Limited, Unit 1 Newport Business Park, New Port Road, Ellesmere Port CH65 4LZ, UK, Notified Body Number 2503, in accordance with Article 9 of Directive 94/9/EC, certifies that this component 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 12.

7 The 'U' suffix after the certificate number indicates that the component is subject to conditions of safe use (affecting correct installation or safe use). These are specified in Section 14.

8 This EC Type Examination certificate relates only to the design and construction of the specified equipment or component. Further requirements of Directive 94/9/EC Article 8 apply to the manufacture of the equipment or component and are separately certified.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

EN 60079-0:2012 EN 60079-11:2012 EN 60079-26:2006

10 The equipment shall be marked with the following:

Ex II 1 G D

Ex ia IIC T4 Ga
Ex ia IIIC T135°C Da

Ta= -40°C to +70°C

Ex I M1

Ex ia I Ma

Ta= -40°C to +70°C

M D Shearman FinstMC
Managing Director

11 Description

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.

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

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	20/03/2015	R211A/00	Issue of prime certificate

Note: Drawings that describe the equipment or component are listed in the Annex.

13 Conditions of manufacture

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

13.1 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.

14 Special Conditions for Safe Use (Conditions of Certification)

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

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

14.2 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.

Certificate Annex

Certificate Number	CML 15ATEX2017U
Equipment	Intrinsically Safe 10/100 Ethernet Interface
Manufacturer	Controlled Systems Ltd

The following documents describe the equipment or component defined in this certificate:

Issue 0

Drawing No	Sheets	Rev	Approved date	Title
CSL ExLAN	1 of 1	1	10/03/2015	IS Ethernet I/F Circuit Diagram
ExLAN-PCB	1 of 1	1	10/03/2015	ExLAN Art Works
ExLAN ATEX-IECEx Label	1 of 1	1	10/03/2015	ExLAN Certification Label