1 # EU - TYPE EXAMINATION CERTIFICATE

2 **Safety Device, Controlling Device or Regulating Device intended for use outside a potentially explosive atmosphere but required for or contributing to the safe functioning of Equipment and Protective Systems with respect to the risks of explosion**
Directive 2014/34/EU

3 EU - Type Examination Certificate Number: **BAS98ATEX7136 – Issue 4**

3.1 In accordance with Article 41 of Directive 2014/34/EU, EC-Type Examination Certificates referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20 April 2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. Supplementary Certificates to such EC-Type Examination Certificates, and new issues of such certificates, may continue to bear the original certificate number issued prior to 20 April 2016.

4 Product: **MTL5314 Standard IS Trip Amplifier Supply**

5 Manufacturer: **Eaton Electric Limited**

6 Address: **Great Marlings, Butterfield, Luton, Bedfordshire, LU2 8DL**

7 This re-issued certificate extends EC Type Examination Certificate No. BAS98ATEX7136 to apply to product designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule attached to this certificate and the documents therein referred to.

8 The original certificate was issued by The Electrical Equipment Certification Service, Notified Body Number 0600, which retains responsibility for its original documentation. SGS Baseefa, Notified Body Number 1180, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, is responsible only for the additional work relating to this re-issued certificate and any other supplementary certificate it has issued.

The examination and test results are recorded in confidential Report No. See Certificate History

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

EN 60079-0:2012 + A11:2013 EN 60079-11:2012

except in respect of those requirements listed at item 18 of the Schedule.

10 If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.

11 This EU - TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

12 The marking of the product shall include the following :

Ⓔx II (1) G [Ex ia Ga] IIC (-20°C ≤ T_a ≤ +60°C)

SGS Baseefa Customer Reference No. **0703** Project File No. **16/0371**

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R S SINCLAIR
TECHNICAL MANAGER
On behalf of SGS Baseefa Limited

13 **Schedule**

14 **Certificate Number BAS98ATEX7136 – Issue 4**

15 **Description of Product**

The MTL5314 Standard I.S. Trip Amplifier Supply is designed to connect to a 2 or 3-Wire 4/20mA Transmitter or current source in the hazardous area. It supplies two configurable alarm signals via changeover relays to the non-hazardous area.

The MTL5314 Standard I.S. Trip Amplifier Supply comprises an isolating transformer and two opto-isolators that provide galvanic isolation between the hazardous and non-hazardous area circuitry, and zener diodes and resistors providing voltage and current limitation. The above, together with other electronic components, are mounted on a single printed circuit board (PCB) and housed in a moulded plastic enclosure. Polarised plug and sockets are provided for hazardous and non-hazardous area connections

Input / Output Parameters

Non-Hazardous Area Terminals 7 to 9, Terminals 10 to 12 & Terminals 13 & 14)

U_m = 250V r.m.s.

The apparatus is designed to operate from a d.c. supply of up to 35V on Terminals 7 to 9, Terminals 10 to 12 & Terminals 13 & 14.
Terminals 7 to 9 and Terminals 10 to 12 associated with the relay contacts must be limited to either 250V a.c. or 125V d.c. 100VA maximum.

Hazardous Area Terminals 1, 2 & 3

U_o = 28V C_i = 0
I_o = 93mA L_i = 0
P_o = 0.65W

Hazardous Area Terminal 1 w.r.t. 3

U_o = 1.0V C_i = 0
I_o = 88mA L_i = 0
P_o = 22mW

Although the apparatus does not comply with the simple apparatus requirements of Clause 5.7 of EN 60079-11: 2012, when terminals 1 w.r.t. 3 are connected in an intrinsically safe circuit the internal stored energy, voltage and current of the interface will not add more than the values specified in Clause 5.7 of EN 60079-11: 2012 to the parameters of the circuit into which it is connected.

Load Parameters

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

GROUP	CAPACITANCE (µF)	INDUCTANCE (mH)	OR	L/R RATIO (µH/ohm)
Hazardous Area Terminals 1, 2 & 3				
IIC	0.083	4.2		54
IIB	0.65	12.6		218
IIA	2.15	33.6		436

GROUP	CAPACITANCE (µF)	INDUCTANCE (mH)	OR L/R RATIO (µH/ohm)
Hazardous Area Terminals 1 w.r.t. 3			
IIC	100	5	1,615
IIB	1,000	20	6,462
IIA	1,000	40	12,925

Notes:

1) The above load parameters apply when one of the two conditions below is given:
- the total L_i of the external circuit (excluding the cable) is < 1% of the L_o value or
- the total C_i of the external circuit (excluding the cable) is < 1% of the C_o value.

2) The above parameters are reduced to 50% when both of the two conditions below are given:
- the total L_i of the external circuit (excluding the cable) is ≥ 1% of the L_o value and
- the total C_i of the external circuit (excluding the cable) is ≥ 1% of the C_o value.

The reduced capacitance of the external circuit (including cable) shall not be greater than 1µF for Groups IIB & IIA and 600nF for Group IIC.

16 Report Number

GB/BAS/ExTR16.0310/00

17 Specific Conditions of Use

None

18 Essential Health and Safety Requirements

In addition to the Essential Health and Safety Requirements (EHSRs) covered by the standards listed at item 9, the following are considered relevant to this product, and conformity is demonstrated in the report:

Clause	Subject	Compliance
1.2.7	Protection against other hazards (LVD type requirements, etc.)	Manufacturer responsibility
1.2.8	Overloading of equipment (protection relays, etc.)	User/Installer responsibility
1.4.1	External effects	User/Installer responsibility
1.4.2	Aggressive substances, etc.	User/Installer responsibility

19 Drawings and Documents

New drawings submitted for this issue of certificate:

Number	Sheet	Issue	Date	Description
CI5314-1	4 of 6	3	8.16	MTL5314 4/20mA Trip Amplifier for 2- 3- Wire Transmitters General Assembly and Label

The above drawing is associated and held with IECEx Certificate No. IECEx BAS 05.0010 Iss. 4, and also associated with IECEx Certificate No. IECEx BAS 15.0144X Iss. 1

Current drawings which remain unaffected by this issue:

Number	Sheet	Issue	Date	Description
CI5314-1*[1]	1 of 6	2	9.15	MTL5314 Standard IS Trip Amplifier Supply Parts List
CI5314-1	2 of 6	1	2.98	MTL5314 Standard IS Trip Amplifier Supply – Circuit Diagram
CI5314-1	3 of 6	1	2.98	MTL5314 Standard IS Trip Amplifier Supply Component Layout

Number	Sheet	Issue	Date	Description
CI5314-1	5 of 6	1	2.98	MTL5314 Standard IS Trip Amplifier Supply – PCB Track Layout
CI5314-1	6 of 6	1	2.98	MTL5314 Standard IS Trip Amplifier Supply Transformer Winding Details
CI5000-9	1 & 2	2	7.00	TFR316 Assembly Details
CI5000-12*[2]	1 to 4	1	02.02	MTL5000 Ring Terminal

The drawing marked *[1] is associated and held with IECEx Certificate No. IECEx BAS 05.0010 Iss. 3

The drawing marked *[2] is associated and held with ATEX Certificate No. BAS01ATEX7144

20 Certificate History

Certificate No.	Date	Comments
BAS98ATEX7136	6 August 1998	The release of the prime certificate. The associated test and assessment against the requirements of EN 50014: 1992 and EN 50020: 1994 is documented in Test Report No. 98(C)0199.
BAS98ATEX7136/1	9 June 1999	To permit the specification of separate output parameters for pin 1 with respect to pin 3of connector CON1.
BAS98ATEX7136/2	29 April 2002	To permit the connection of MTL5000 Ring Terminal assembly in place of safe and hazardous area screw terminals.
BAS98ATEX7136/3	7 December 2015	i) To permit minor drawing changes not affecting the original assessment. ii) To confirm the current design of the MTL5314 Standard IS Trip Amplifier Supply has been reviewed against the requirements of EN 60079-0: 2012 + A11: 2013 and EN 60079-11: 2012 in respect of the differences from EN 50014: 1992 and EN 50020: 1994, and with exception of the marking and load parameters, none of the differences affect the equipment. The equipment marking was updated in accordance with EN 60079-0: 2012 + A11: 2013 to include the Equipment Protection Level (EPL) marking. The notes associated with the load parameters were revised in accordance with the requirements of EN 60079-11: 2012. The test and assessment is documented in Certification Report No. GB/BAS/ExTR15.0307/00.
BAS98ATEX7136 Issue 4	26 October 2016	This issue of the certificate incorporates previously issued primary & supplementary certificates into one certificate and permits the manufacturer's name to be changed on page 1 of the certificate and on the equipment marking. The associated assessment is documented in Certification Report No. GB/BAS/ExTR16.0310/00.
For drawings applicable to each issue, see original of that issue.		