



1 **EU-TYPE EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

3 Certificate Number: **Sira 16ATEX5180X** Issue: **4**

4 Equipment: **MTL Gecma TC COM Module**

5 Applicant: **Eaton Electric Ltd.**

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

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

8 CSA Group Netherlands B.V., notified body number 2813 in accordance with Articles 17 and 21 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, 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 60079-0:2012/A11:2013      EN 60079-7:2015      EN 60079-11:2012      EN 60079-18:2015  
EN 60079-28:2015

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

11 This EU-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 2(2)G  
Ex eb mb[ib] op is IIC T4 Gb  
Ta = -30°C to +60°C

Project Number 80110232

Signed: J A May

Title: Director of Operations

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SCHEDULE

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13 DESCRIPTION OF EQUIPMENT

The MTL Gecma TC COM Module receives its power from a Gecma PSU Module (Sira 14ATEX5061X) and also connects to a Gecma Display Module (Sira 14ATEX5063X). The MTL Gecma TC COM Module has intrinsically safe external connections for suitably-certified accessories, e.g. keyboard, pointing device, USB, and RS232 data ports in addition to Ex 'e' external data connections (USB, Ethernet, RS232). An intrinsically safe video output connection is provided. An optional fibre-optic Ethernet connection may be provided.

The MTL Gecma TC COM Module must be housed in an enclosure that provides protection against damage to the cables. The MTL Gecma TC COM Module contains four printed circuit boards: Motherboard, SBC board, Main breakout board and Ex 'e' breakout board. The boards are encapsulated within an aluminium alloy enclosure. The intrinsically safe external terminals on the motherboard and the area for external connections on the Ex 'e' board are not encapsulated.

Intrinsically safe motherboard external connections

	RS232 port	USB port 1	USB port 2	USB port 3	USB port 4	External keyboard port	External pointing device port	LVDS (to Display Module)
Ui	12 V	0	0	0	0	0	0	4.935 V
Ii	-	-	-	-	-	-	-	3.275 A
Pi	-	-	-	-	-	-	-	3.927 W
Ci	0	11 nF	11 nF	11 nF	11 nF	0	0	0
Li	0	0	0	0	0	0	0	0
Uo	6.015 V	5.355 V	5.355 V	5.355 V	5.355 V	5.355 V	5.355 V	4.935 V
Io	26 mA	972 mA	972 mA	972 mA	972 mA	267 mA	126 mA	3.266 A
Po	39 mW	1.676 W	1.676 W	1.676 W	1.676 W	613 mW	264 mW	3.917 W
Co	37 µF	64.9 µF	64.9 µF	64.9 µF	64.9 µF	65 µF	65 µF	100 µF
Lo	52 mH	37 µH	37 µH	37 µH	37 µH	498 µH	2239 µH	3.3 µH

Note 1: All outputs in the above table shall be assessed as separate intrinsically safe circuits.

Note 2: The quoted values of Co and Lo apply to distributed capacitance and inductance, as in cable. If non-distributed capacitance and inductance is present, the values shall be reduced in accordance with the relevant code of practice, e.g. IEC 60079-14.

Ex 'e' breakout board external connections

USB A, USB B, Ethernet A, Ethernet B, RS232: 250V maximum.

Variation 1 - This variation introduced the following changes:

- i. Change the entity name from Measurement Technology Ltd. to Eaton Electric Ltd. The address is unchanged.
- ii. Modify the Ex 'e' Board:
  - Change axial fuses to radial
  - Add a new connector to the USB circuits

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- Change fuses from 50mA to 80mA
  - Change capacitance values and voltage ratings.
  - Minor revisions to drawing notes.
- iii. Modify the main breakout board schematic to mark additional components as not inserted.
- iv. The inclusion of additional Manufacturing locations in Germany and the USA were recognised.

**Variation 2** - This variation introduced the following changes:

- i. Modifications to the motherboard.
- ii. The values of  $I_o$ ,  $P_o$  and  $L_o$  for the external keyboard port are amended. The new values are shown below and replace those in the 'Intrinsically safe motherboard external connections' table above:

Parameter	External keyboard port
$I_o$	248 mA
$P_o$	567 mW
$L_o$	578 $\mu$ H

- iii. Permit alternative solid state storage drives.

**Variation 3** - This variation introduced the following changes:

- i. The following manufacturing location was recognised: S.C. Cooper Industries Romania S.R.L, Zona Industriala Vest, Str. III Nr. 12, 310510 Arad, Romania.
- ii. Administrative changes to certification label drawing.
- iii. The following Applicant locations were removed from the certificate:

Azonix Corporation  
101 Billerica Ave, Bldg. 4  
North Billerica,  
Massachusetts 01862  
USA

Gecma Components GmbH  
Heinrich-Hertz-Strasse 12  
50170  
Kerpen  
Germany

## 14 DESCRIPTIVE DOCUMENTS

### 14.1 Drawings

Refer to Certificate Annexe.

### 14.2 Associated CSA Reports and Certificate History

Issue	Date	Report number	Comment
0	23 August 2016	R70049918A	The release of the prime certificate.
1	14 December 2016	R70100747A	The introduction of Variation 1.
2	25 May 2017	R70110362A	The introduction of Variation 2.
3	31 October 2019	0912	Transfer of certificate Sira 16ATEX5180X from Sira Certification Service to CSA Group Netherlands B.V..
4	07 February 2022	R80110233A	The introduction of Variation 3.

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- 15 **SPECIFIC CONDITIONS OF USE** (denoted by X after the certificate number)
- 15.1 The MTL Gecma TC COM Module shall only be powered from a Gecma PSU Module, Sira 14ATEX5061X
- 15.2 The LVDS connector shall only be connected to a Gecma Display Module, Sira 14ATEX5063X.
- 15.3 The MTL Gecma TC COM Module shall be housed in an enclosure that provides protection against damage to the cables.
- 15.4 The enclosure is manufactured from aluminium alloy. In rare cases, ignition sources due to impact and friction sparks could occur. This shall be considered during installation.
- 15.5 The intrinsically safe circuit is not isolated from the enclosure; this shall be considered during installation.
- 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 MANUFACTURE**
- 17.1 The use of this certificate is subject to the Regulations Applicable to Holders of CSA Certificates.
- 17.2 Holders of EU-Type Examination Certificates are required to comply with the conformity to type requirements defined in Article 13 of Directive 2014/34/EU.
- 17.3 In accordance with EN 60079-18:2015 clause 9.1, each manufactured item shall be subjected to a visual inspection. No damage shall be evident, such as cracks in the compound, exposure of the encapsulated parts, flaking, inadmissible shrinkage, swelling, decomposition, failure of adhesion or softening.

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# Certificate Annexe



Certificate Number: Sira 16ATEX5180X  
Equipment: MTL Gecma TC COM Module  
Applicant: Eaton Electric Ltd.

## Issue 0

Drawing no.	Sheets	Rev.	Sira (Stamp date)	Description
CI6821-624	1 to 8	A.5	21 Jun. 16	COM module, general assembly
CI6821-625	1 to 5	A.1	18 Jun. 16	COM Module, marking control
10-500476	1 to 10	3	22 Jun. 16	COM module, motherboard schematic and sector diag.
11-500476	1 to 15	5	21 Jun. 16	COM module, motherboard artwork
CI6821-621	1 to 2	2	18 Jun. 16	COM module, motherboard critical component list
10-500498	1 to 7	4	14 Jun. 16	COM module Ex 'e' breakout board schematic
11-500498	1 to 7	2	14 Jun. 16	COM module Ex 'e' breakout board details
CI6821-628	1 to 2	5	21 Jun. 16	Ex 'e' breakout board critical component list
19-102236	1 to 4	1	18 Jun. 16	Ex 'e' Board Fuse Rework Instruction
10-500499	1 to 9	2	14 Jun. 16	COM module Main breakout board schematic
11-500499	1 to 13	2	18 Jun. 16	COM module Main Breakout board details
10104080	1 of 1	2	14 Jun. 16	Thermal fuse cable

## Issue 1

Drawing no.	Sheets	Rev.	Sira (Stamp date)	Description
10-500498	1 to 7	5	25 Nov. 16	COM module Ex 'e' breakout board schematic
11-500498	1 to 13	3	25 Nov. 16	COM module Ex 'e' breakout board details
10-500499	1 to 9	3	25 Nov. 16	COM module Main breakout board schematic
CI6821-625	1 to 5	1	25 Nov. 16	COM Module, marking control
CI6821-628	1 to 2	6	28 Nov. 16	Ex 'e' breakout board critical component list

## Issue 2

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
CI6821-620	1 to 10	1	26 Apr 17	Motherboard schematic
CI6821-621	1 to 2	3	26 Apr 17	COM module, motherboard critical component list
CI6821-622	1 to 15	1	27 Apr 17	COM module, motherboard artwork
CI6821-624	1 to 8	1	08 May 17	COM module, general assembly

The following drawings are removed from schedule:

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
10-500476	1 to 10	3	22 Jun 16	Motherboard schematic
11-500476	1 to 15	5	21 Jun 16	COM module, motherboard artwork

Issue 3 – No new drawings were introduced.

## Issue 4

Drawing	Sheets	Rev.	Date (Stamp)	Title
CI6821-625	1 to 5	2	27 Jan 22	Marking Control, GECMA TC COMMS Module

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