IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres

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

Certificate No.: **IECEx SIR 14.0032X**

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Issue No: 5

Certificate history:
Issue 4 (2019-04-18)
Issue 3 (2016-12-16)
Issue 2 (2016-06-10)
Issue 1 (2015-09-28)
Issue 0 (2014-12-05)

Status: **Current**

Date of Issue: 2022-02-07

Applicant: **Eaton Electric Limited**
Great Marlings
Butterfield
Luton LU2 8DL
United Kingdom

Equipment: **Gecma Display Module yy**

Optional accessory:

Type of Protection: **Intrinsic Safety & Encapsulation**

Marking: Ex mb ib IIC T4 Gb
Ta = -30°C to +75°C or
Ta = -40°C to +75°C 24" Low Temperature Version

Approved for issue on behalf of the IECEx Certification Body: **N Jones**

Position: **Certification Manager**

Signature:
(for printed version)

Date:

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 www.iecex.com or use of this QR Code.

Certificate issued by:

CSA Group Testing UK Ltd
Unit 6, Hawarden Industrial Park
Hawarden, Deeside CH5 3US
United Kingdom

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Manufacturer: **Eaton Electric Limited**
Great Marlings
Butterfield
Luton
LU2 8DL
United Kingdom

Additional manufacturing locations: **S.C. Cooper Industries Romania S.R.L**
Zona Industriala Vest, Str. III, Nr. 12
310510 Arad
Romania

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 equipment 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 Explosive atmospheres - Part 0: General requirements
Edition:6.0

IEC 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

IEC 60079-18:2014 Explosive atmospheres – Part 18: Equipment protection by encapsulation “m”
Edition:4.0

This Certificate **does not** indicate compliance with 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 Reports:

GB/SIR/ExTR14.0132/00
GB/SIR/ExTR15.0257/00
GB/SIR/ExTR16.0138/00
GB/SIR/ExTR16.0323/00
GB/SIR/ExTR19.0102/00
GB/SIR/ExTR22.0001/00

Quality Assessment Reports:

DE/BVS/QAR11.0006/11
GB/BAS/QAR07.0017/09

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EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

The Gecma Display Module yy is a stand-alone device that comprises a display panel, with or without touchscreen capability, as well as associated printed circuit boards, all encapsulated. The enclosure is manufactured from aluminium alloy and the display is protected by toughened glass.

Refer to the Annexe for additional information

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. The Display Module shall only be powered from an MTL PSU Module, IECEx SIR 14.0030X.
2. The Display Module shall be housed in an enclosure that provides protection against damage to the cables and additionally protects the exposed casting compound at the filling hole from impact and direct exposure to ultra-violet light.
3. 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.
4. The intrinsically safe circuit is not isolated from the enclosure; this shall be considered during installation.
5. The installation of the low temperature version of the Display Module yy (ambient temperature range of -40°C to +75°C) shall ensure that apertures that are in the back of the enclosure are not be exposed to moisture.

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
This issue, Issue 5, recognises the following change; refer to the certificate Annexe to view a comprehensive history:

1. The following manufacturing location was recognised: S.C. Cooper Industries Romania S.R.L, Zona Industriala Vest, Str. III Nr. 12, 310510 Arad, Romania.
2. Administrative changes to certification label drawing.
3. The following Additional manufacturing location was removed from the certificate: Gecma Components GmbH, Heinrich-Hertz-Strasse 12, 50170, Kerpen, Germany.

Annex:

IECEx SIR 14.0032X Issue 5 Annexe.pdf

Connections are made by means of flying leads:

- Power lead from a Gecma PSU Module (IECEx SIR 14.0030X): nominally 22 Vdc power and thermal fuse lines plus a 5 Vdc supply;
- LVDS lead: an intrinsically safe supply from a Gecma COM Module RT (IECEx SIR 14.0031X);
- Optional touchscreen lead: an intrinsically safe supply from a Gecma COM Module RT.

The intrinsically safe connections have the following entity parameters:

LVDS flying lead	USB port (for optional touchscreen controller)
Ui = 4.935 V	Ui = 5.355 V
Ii = 3.266 A	Ii = 0.972 A
Pi = 3.917 W	Pi = 1.676 W
Ci = 22 µF	Ci = 0
Li = 0	Li = 1 µH
Uo = 4.935 V	Uo = 0
Io = 3.275 A	
Po = 3.927 W	
Co = 78 µF	
Lo = 3.3 µH	

Conditions of Manufacture

1. **In accordance with IEC 60079-18:2014 clause 9.1, each manufactured unit 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.**

Full certificate change history

Issue 1 – this Issue introduced the following changes:

1. The introduction of the 19” and 24” display options, requiring a modification to the panel display board.
2. The name of the equipment was changed from ‘Gecma Display Module 22’ to ‘Gecma Display Module yy’, where ‘yy’ indicates the display size, 19”, 22” or 24”, the description was changed to reflect this name change.

Issue 2 – this Issue introduced the following changes:

1. The introduction of an alternative display glass, manufactured by Haller;
2. Modification to a user condition to include protection from ultraviolet light;
3. Minor track layout changes with no effect on safety-critical segregations.

Issue 3 – this Issue introduced the following changes:

1. Change of manufacturer’s name from Measurement Technology Limited to Eaton Electric Limited.
2. Following appropriate assessment to demonstrate compliance with the latest technical knowledge, IEC 60079-18:2009 was replaced by IEC 60079-18:2014; the Condition of Manufacture is revised accordingly.
3. Minor mechanical change to the housing to allow re-routing of the LVDS cable.

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Issue 4 – this Issue introduced the following changes:

1. Increase in the maximum ambient temperature of the module to +75°C to give a new ambient temperature range of -30°C to +75°C.
2. The introduction of a new low temperature version of the 24" module model that had a temperature range of -40°C to +75°C.

Issue 5 – this Issue introduced the following changes:

1. The following manufacturing location was recognised: S.C. Cooper Industries Romania S.R.L, Zona Industriala Vest, Str. III Nr. 12, 310510 Arad, Romania.
2. Administrative changes to certification label drawing.
3. The following Additional manufacturing location was removed from the certificate: Gecma Components GmbH, Heinrich-Hertz-Strasse 12, 50170, Kerpen, Germany.

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