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 CML 20.0144X**	Page 1 of 4	Certificate history:
Status:	**Current**	Issue No: 1	Issue 0 (2020-11-26)
Date of Issue:	2022-08-10		
Applicant:	**CORTEM S.p.A** Via Aquileia 10 34070 Villesse Gorizia **Italy**		
Equipment:	**GRDC/GRDE-4200 Earthing System Series**		
Optional accessory:			
Type of Protection:	**Flameproof 'db', increased safety 'eb', encapsulation 'mb', intrinsic safety '[ia]', dust 'tb'**		
Marking:	Ex db eb mb [ia Ga] IIC T6/T5/T4* Gb Ex tb [ia Da] IIIC T85°C Db * For ambient range and T-class information, refer to the description in the certificate annex.		

Approved for issue on behalf of the IECEx Certification Body:	**A Snowdon**
Position:	**Certification Manager**
Signature: (for printed version)	A Snowdon
Date: (for printed version)	2022-08-10

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:

Eurofins E&E CML Limited
Unit 1, Newport Business Park
New Port Road
Ellesmere Port, CH65 4LZ
United Kingdom

IECEx Certificate of Conformity

Certificate No.: **IECEx CML 20.0144X**

Date of issue: 2022-08-10 Issue No: 1

Manufacturer: **CORTEM S.p.A**
Via Aquileia 10
34070 Villesse
Gorizia
Italy

Manufacturing locations:

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 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-1:2014-06 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

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

IEC 60079-18:2017 Explosive atmospheres - Part 18: Protection by encapsulation "m"
Edition:4.1

IEC 60079-31:2013 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2

IEC 60079-7:2017 Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

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/CML/ExTR20.0242/00 GB/CML/ExTR22.0101/00

Quality Assessment Report:

IT/CES/QAR06.0002/16

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

The GRDE-4200 Earthing System Series is a range of grounding systems for use both indoor and outdoor, rated up to 240 Vac There are six models in the range. The models differing in enclosure material, enclosure size and quantity of components fitted. There are three enclosure materials in the range: aluminium (GRDE-4200 and GRDE-4200/2); polyester (GRDE-4200/P and GRDE-4200/2P); stainless steel (GRDE-4200/SS and GRDE-4200/2SS). There are two sizes of enclosure per material with the '/2' or '/2*' models being the larger.

A special model, the GRDC-4200 uses the grounding logic LCZ-4200C which is capable, in addition to detecting resistance, can also measure the capacitance between the device clamp and the earth.

The equipment comprises a separately certified enclosure fitted with a separately certified signalling light mounted and separately certified control operator both mounted through the cover, separately certified cable glands and separately certified plugs mounted through the bottom wall. The enclosure contains separately certified terminal blocks and separately certified grounding control logic.

Refer to Annex for full description and Conditions of Manufacture

SPECIFIC CONDITIONS OF USE: YES as shown below:
Refer to certificate annex for Specific Conditions of Use.

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
Issue 1

This issue introduced the following modifications:

1. Addition of a new model, the GRDC-4200.
2. Expanded ambient temperature and temperature class options.
3. Additional conditions of manufacture.

Annex:

Annex IECEx CML 20.0144X Issue 1.pdf

Annexe to: IECEx CML 20.0144X, Issue 1

Applicant: Cortem S.p.A

Apparatus: GRDC/GRDE-4200 Earthing System Series

Description

The GRDE-4200 Earthing System Series is a range of grounding systems for use both indoor and outdoor, rated up to 240 Vac. There are six models in the range. The models differ in enclosure material, enclosure size and quantity of components fitted. There are three enclosure materials in the range: aluminium (GRDE-4200 and GRDE-4200/2); polyester (GRDE-4200/P and GRDE-4200/2P); stainless steel (GRDE-4200/SS and GRDE-4200/2SS). There are two sizes of enclosure per material with the '/2' or '/2*' models being the larger.

A special model, the GRDC-4200 uses the grounding logic LCZ-4200C which, in addition to detecting resistance, can also measure the capacitance between the device clamp and the earth.

The equipment comprises a separately certified enclosure fitted with a separately certified signalling light and separately certified control operator both mounted through the cover, separately certified cable glands and separately certified plugs mounted through the bottom wall. The enclosure contains separately certified terminal blocks and separately certified grounding control logic.

The smaller enclosures have two signalling lights, one control operator, three entry devices (cable gland/blanking plugs), one control logic and one terminal block. The larger enclosures have four signalling lights, two control operators, six entry devices (cable gland/blanking plugs), two control logics and two terminal blocks.

All models in the series may be wall-mounted, mounted onto a transportable frame or directly to a tanker. All models may be supplied with metallic cover hinges and internal and external earth/equipotential bonding studs as detailed in the enclosure certificate. Non-electrical, simple metallic earthing brackets may be fitted to the sides of the enclosure to support the earthing cable and clamp when not in use. When wall-mounted the equipment is intended for use with a manual cable reel type; the cable reels have not been assessed as part of this approval and it does not fall under the scope of this certification.

The ambient temperatures and temperature class options are detailed in the table below:

Model	Maximum ambient temperature			
	Ta = +40°C	Ta = +50°C	Ta = +55°C	Ta = +60°C
GRDE-4200	T6 (+85°C)	T6 (+85°C)	T5 (+85°C)	T5 (+85°C)
GRDC-4200	T6 (+85°C)	T5 (+85°C)	T5 (+85°C)	T4 (+85°C)

The minimum ambient for all types is -40°C.

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Components covered by Ex Certificates issued to older editions of Standards

Certificate number	Standards (incl Ed)	Assessment result
IECEx CES 11.0030U	IEC 60079-0 Ed 6 IEC 60079-7 Ed 5	No applicable technical differences within this application
IECEx CES 11.0029U	IEC 60079-0 Ed 5 IEC 60079-7 Ed 4 IEC 60079-31 ed 1	Technical differences evaluated and found satisfactory. For detail see ExTR
IECEx CES 11.0008U	IEC 60079-0:2011 Ed. 6 IEC 60079-7:2015 Ed. 5	No applicable technical differences within this application

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.

ii. Equipment must undergo a dielectric strength test between the terminals and earth in accordance with IEC 60079-7 and IEC 60079-11.

iii. Cable glands suitable for an ambient temperature range of at least -40°C to +70°C shall be fitted.

iv. Not all encapsulant options of the component with certificate number IECEx CML 20.0109U are suitable for T4. Refer to document 'Technical Note A4-7823, Rev. 0' to determine the suitability of the applied encapsulant for T4.

Specific Conditions of Use

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

i. Risk of electrostatic charge, clean only with a damp cloth or antistatic product (see instructions).

ii. Do not transport when energised.