



IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

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

Certificate No.: IECEx CES 14.0035X issue No.: 0 Certificate history:
 Status: **Current**
 Date of Issue: **2015-01-29** Page 1 of 4
 Applicant: **CORTEM S.p.A.**
 Via Aquileia 10
 I - 34070 Villesse (GO)
 Italy

Electrical Apparatus: **Grounding System, type GRD-4200**
 Optional accessory:

Type of Protection: **Flameproof enclosures 'd'; Intrinsic Safety 'i'; Dust ignition protection 't'**

Marking: **Ex d [Ia Ga] ia IIB T6 Gb
 Ex d [Ia Ga] ia IIB+H2 T6 Gb
 Ex tb [Ia Da] ia IIIC T85°C Db
 IP66**

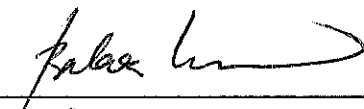
Approved for issue on behalf of the IECEx
 Certification Body:

Mirko Balaz

Position:

Head of IECEx CB

Signature:
 (for printed version)



 29 GEN. 2015

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 the Official IECEx Website.

Certificate issued by:

CESI
 Centro Elettrotecnico
 Sperimentale Italiano S.p.A.
 Via Rubattino 54
 20134 Milano
 Italy

CESI
CESI S.p.A.
 Testing & Certification Division
 Business Area Certification
 Responsabile

 Lorenzo Gregani



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Manufacturer: **CORTEM S.p.A.**
Via Aquileia 10
I - 34070 Villesse (GO)
Italy

Additional Manufacturing location
(s):

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 electrical apparatus 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 Edition: 6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-1 : 2007-04 Edition: 6	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-11 : 2011 Edition: 6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
IEC 60079-31 : 2008 Edition: 1	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"

*This Certificate **does not** indicate compliance with electrical 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 Report:
IT/CES/ExTR14.0042/00

Quality Assessment Report:

IT/CES/QAR06.0002/09



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The Grounding System GRD-4200 is an electronic device for the control and the grounding of tankers or tanks during the operations of loading and unloading of liquids in hazardous atmosphere. The operation is based on the reading of the resistance parameter of the ground. The equipment consists of an explosion-proof enclosure model EJB-3 or EJB3B with IP66 protection degree, inside the enclosure there is an electronic control unit and an intrinsically safe passive barrier CA-8.2-50. On the front panel of the enclosure there are two light signaling and an selector that allows to switch on/off the device. The clamp is connected with a cable of 2x2,5mmq and connected with the intrinsically safe barrier. The System GRD-4200 can be equipped, as accessory on request, with cable reel.

The Grounding System is an assembly of components and associated apparatus, all subject of separate certification; main IECEx certified parts are:

- CORTEM enclosure Ex d/tb EJB-3 or EJB-3B (IECEX CES 14.0017U);
- CORTEM components for command and control, series M-0... Ex d/tb (IECEX TSA 06.0015U);
- CORTEM cable glands, Ex d/e/tb (IECEX CES 14.0015X);
- CORTEM diode safety barriers CA-8.2-50 Ex ia (IECEX CES 14.0014).
- CABUR terminal blocks CBD series Ex e (IECEX CES 09.0009U).

Cable entries: The accessories used for cable entries and for unused holes shall be subject of separate certification. Those accessories shall be certified according to the standards: IEC 60079-0; IEC 60079-1; IEC 60079-31 and shall guarantee a degree of protection IP equal to that of the enclosure according to IEC 60529 standard.

CONDITIONS OF CERTIFICATION: YES as shown below:

The flamepaths are specified in the manufacturer drawings. For information regarding the dimensions of the flameproof joints the manufacturer shall be contacted.



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EQUIPMENT(continued):

Identification of the System

The Grounding System GRD-4200 is manufactured in the following versions:

- GRD-4200: 230Vac; 50/60Hz
- GRD-4200/110: 110Vac; 50/60Hz
- GRD-4200/24: 24Vac/dc

The cable reel is an accessory on request; the version of GRD-4200 with cable-roller is coded as GRD-4200A.

Electrical characteristics

- Rated voltage: 24; 110; 230 Vca 24 Vdc
- Rated frequency: 50 + 60 Hz
- Ambient temperature: from -20°C up to +55°C

Intrinsic safety circuit:

- U_o: 9.8 V Co: 3 µF
- I_o: 0.12 A Lo: 2.5 mH
- P_o: 0.296 W Lo/Ro: 30 µH/Ω

The Grounding System GRD-4200 equipment, satisfies the Degree of Protection IP66.

Warning label:

"Use screws of quality A2-70 UNI 7323 R 700 N/mm²"