4052

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 17.0001X

Issue No: 0

Certificate history:
Issue No. 0 (2017-03-31)

Status: **Current**

Date of Issue: **2017-03-31**

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

Equipment: **Signaling and Control Stations, series CSC.., EFD.., EFSCO.. and EMH..**

Optional accessory:

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

Marking:

Ex db I Mb,

Ex db IIC T6, T5 Gb

Ex tb III C T85°C, T100°C Db

IP66

Approved for issue on behalf of the IECEx Certification Body: Mirko Balaz

Position: Head of IECEx CB

Signature:
(for printed version)

Date: 31-3-2017

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
Il Responsabile
(Roberto Piccin)

IECEx Certificate of Conformity

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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 : 2014-06 Edition:7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-31 : 2013 Edition:2	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/ExTR17.0001/00

Quality Assessment Report:

IT/CES/QAR06.0002/11

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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The Signalling and Control Station series CSC.., EFD.., EFSCO.. and EMH.. .

Control station CSC.., EFD.. series consists in a single cylindrical enclosure with mounted a single cover or in a double enclosure with mounted a double cover. EFSCO.. and EMH.. series consists in a single cylindrical enclosure with mounted a single cover only. On each cover can be fitted from one up to four operators type M-0.. depending on the series. Control station series CSC-H and EMHA-9 are designed for instrument housing and their covers are provided with transparent window.

The Control and signalling units series CSC.., EFDC.., EFSCO.. and EMH.. characteristics are further described in the Annexe of this certificate.

SPECIFIC CONDITIONS OF USE: YES as shown below:

Control and signalling units series CSC-H. and EMHA-9 with windows, are available for Group I (Mine) where the impact risk is low.

Annex:

Cortem IECEx CES 17_0001X ANNEX _CSC - EFD control.pdf

IECEx Certificate of Conformity

Prot: B7010892

Annex to certificate: **IECEx CES 17.0001X Issue No.:0** of 2017-03-31

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

Electrical Apparatus: **Signalling and Control Stations,**
series CSC.., EFD.., EFSCO.. and EMH..

Description of the equipment

The Signalling and Control Station series **CSC..**, **EFD..**, **EFSCO..** and **EMH..** .

Control station **CSC..**, **EFD..** series consists in a single cylindrical enclosure with mounted a single cover or in a double enclosure with mounted a double cover. **EFSCO..** and **EMH..** series consists in a single cylindrical enclosure with mounted a single cover only. On each cover can be fitted from one up to four operators type **M-0..** depending on the series. Control station series **CSC-H** and **EMHA-9** are designed for instrument housing and their covers are provided with transparent window.

The coupling between enclosure and cover for series **CSC..**, **EFD..** and **EFSCO..** forms an Ex-d cylindrical joint locked by screws, while for series **EMH..** it forms an Ex-d threaded joint. Covers and enclosure bodies form a complete housing with two opposite entries for rigid metallic conduit or cable gland connection. Two or plus single enclosures can be connected together with sealed bushings type **NPS...**

All the internal electrical devices are supplied with terminals.

Some different executions of Control stations are foreseen:

- with signalling lamps;
- with push-buttons;
- with switches, selector switches, changeover switches, etc.;
- with key mechanism;
- with measuring instruments (control station supplied with sealed window cover).

In each control station different combinations of these equipment are suitable.

They are identified by a code as follows:

- **CSC**: Control station with one equipment installed on the cover or one measuring instrument and window on the cover;
- **EFDC**: Control station with up to four equipment's installed on the cover;
- **EFSCO**: Control station with one equipment installed on the cover;
- **EMHA**: Control station with one measuring instrument and window on the cover.

In each control station different combinations of this equipment are suitable.
The Signalling and Control Station enclosures are made in aluminium alloy. On request can be made in stainless steel or cast iron.
All screws are made in stainless steel quality A2-70 (R 700N/mm^2) UNI EN ISO 3506.
Signalling lamps are made of polycarbonate, while bushings and shafts are made of AISI 303, AISI 304 or AISI 316.
All versions of the Signalling and Control Station units for group I (Ex db I Mb) are made in stainless steel or cast iron only.
The Control station standard entries threads types are 1" or 3/4" NPT/ANSI ASME B1.20.1. Alternative tapered and cylindrical threads are available.

Electrical characteristics

- Maximum rated voltage:	690 V.
- Rated frequency:	50/60 Hz.
- Maximum rated current:	63 A.
- Maximum dissipated power:	3W (signalling lamps), 1.5W (LEDs); 1W for each switch or push-button contact (16 contacts max.); 5W for measuring instruments.

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I - 34070 Villesse (GO), Italy

Electrical Apparatus: **Signalling and Control Stations,**
series CSC.., EFD.., EFSCO.. and **EMH..**

Electrical characteristics *(follows)*

Control station series	Maximum dissipated power (W)	
	Single body	Double body
CSC	5	8
EFDC	12	22
EFSCO	18	--
EMHA-9	12	--

- Ambient temperature ranges:
  - 20 ÷ + 40 °C.
  - 20 ÷ + 55 °C.
  - 50 ÷ + 40°C (for Group II only).
  - 50 ÷ + 55°C (for Group II only).

The control and signalling units for Group II, equipped with polycarbonate pilot lights, are limited at the temperature of -40°C.

- Temperature Class: T6 (max. Ta + 40°C), T5 (max. Ta + 55°C).
- Maximum surface temperature: T85°C (max. Ta + 40°C), T100°C (max. Ta + 55°C).

Degree of protection (IEC 60529): IP66

Cable entries

The accessories used for cable entries and plugs for not used holes shall be subject of separate certification, suitable for type of enclosure execution, according to the applicable standards.

Warning label

- For equipments with ambient temperature of +55 °C:

"Use cables suitable for temperatures of +100°C".