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Schema di certificazione

# CESI-ATEX

## [1] EC-TYPE EXAMINATION CERTIFICATE

[2] **Equipment or Protective System intended for use  
in potentially explosive atmospheres  
Directive 94/9/EC**

[3] EC-Type Examination Certificate number:

**CESI 01 ATEX 092 X**

**issue 04/15**

[4] **Equipment:** Control and signalling units series **CSC, EFDC, EFSCO and EMH**

[5] **Manufacturer:** **COR.TEM S.p.A.**

[6] **Address:** Via Aquileia, 10 – 34070 Villesse (GO) – Italy.

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

[8] CESI, notified body n. 0722 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential report n. EX- B5026177.



[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

**EN 60079-0: 2012 EN 60079-1: 2014 EN 60079-31: 2014**

[10] If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

[11] This EC-TYPE EXAMINATION CERTIFICATE relates only to the design, examination and tests of the specified equipment or protective system in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

[12] The marking of the equipment or protective system shall include the following:

	<b>I M2</b>	<b>Ex db I Mb</b>	<i>(Stainless steel and Cast iron only)</i>
		<i>and</i>	
	<b>II2GD</b>	<b>Ex db IIC T6, T5 Gb</b>	
		<b>Ex tb IIC T85°C, T100°C Db</b>	
		<b>IP66</b>	
		<b>Ta min. max.</b>	
		<i>(Example of Ta marking: Ta -50°C +55°C)</i>	

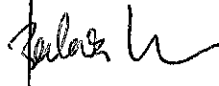
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**Date 14<sup>th</sup> December 2015 - Translation issued the 14<sup>th</sup> December 2015**

**Prepared**  
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**CESI S.p.A.**

Testing & Certification Division  
Business Area Certification  
Il Responsabile

(Roberto Piccin)




PRD N. 018B  
Membro degli Accordi di Mutuo Riconoscimento EA, IAF e ILAC  
Signatory of EA, IAF and ILAC Mutual Recognition Agreements

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## Schedule

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[15] **Description of equipment**

Control and signalling units series **CSC...**, **EFDC...**, **EFSCO...** and **EMH...** consist in a single cylindrical enclosure with mounted a single cover or in a double enclosure with mounted a double cover. 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...**, **EFDC...** 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 connections. Two or plus single enclosures can be connected together with sealed bushings type **NPS..**

All the internal electrical devices are supplied with terminals.

The different executions of Control stations are foreseen:

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

In each control station, different combinations of these equipments 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 operators installed on the cover;
- **EFSCO**: Control station with one operators installed on the cover;
- **EMHA**: Control station with one measuring instrument and window on the cover.

The Control Station enclosures are generally made in Aluminium alloy. On request, they can be made in Stainless steel AISI 303, AISI 304, AISI 316, AISI 316L or Cast iron. For Group I (mines) applications, they are available in Stainless steel or Cast iron only.

All screws are made in stainless steel quality A2-70 (R 700N/mm<sup>2</sup>) UNI EN ISO 3506.

Signalling lamps are made of polycarbonate, while operators bushings and shafts are made of AISI 303, AISI 304 or AISI 316.

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.
- Ambient temperature ranges:
  - 20 ÷ + 40 °C (omitted marking as standard).
  - 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 (EN 60529): IP 66.

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## Schedule

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### 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".

[16] **Report n. EX- B5026177.**

### **Routine tests**

The manufacturer should carry out the routine overpressure test. They shall be carried out on empty enclosure with the static method (paragraph 15.1.3.1 of EN 60079-1 standard), at the following values:

<b>For minimum ambient temperature -20°C</b>	
<b>Series</b>	<b>Pressure values (bar)</b>
<b>CSC..</b> <b>EFDC..</b>	12,6
<b>EFSCO..</b> <b>EMH..</b>	13,2

<b>For minimum ambient temperature -50°C</b>	
<b>Series</b>	<b>Pressure values (bar)</b>
<b>CSC..</b> <b>EFDC..</b>	19,3
<b>EFSCO..</b> <b>EMH..</b>	18,2

### **Descriptive documents (prot. EX- B5026182)**

- Technical note A4-5962 (pg. 9)	rev.1	dated	2015.11.02
- Mounting Instruction F-264 (pg. 7)	rev.3	dated	2015.11.02
- Declaration of Conformity FACSIMILE no.0039 (pg. 1)		dated	2015.11.02
- Drawing A1-3925 (3 sheets)	rev.2	dated	2015.11.02
- Drawing A1-4255 (3 sheets)	rev.2	dated	2015.11.02
- Drawing A4-4951 (1 sheet)	rev.1	dated	2010.01.27
- Drawing A4-4952 (1 sheet)	rev.2	dated	2013.01.29
- Drawing A4-4129 (2 sheets)	rev.2	dated	2013.01.25

One copy of all documents is kept in CESI files..

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[17] **Special conditions for safe use (X)**

*With the updating to the new standards and the adding of Group I (mine), the following special condition for safe use are added; moreover the X suffix is added to the certificate number and beginning from this extension it becomes **CESI 01 ATEX 092X**.*

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

[18] **Essential Health and Safety Requirements**

The Essential Health and Safety Requirements are assured by compliance to the following standards:

- EN 60079-0: 2012 Explosive atmospheres – Part 0: Equipment - General requirements;
- EN 60079-0/A11: 2013 Explosive atmospheres – Part 0: Equipment - General requirements;
- EN 60079-1: 2014 Explosive atmospheres – Part 1: Equipment protection by flameproof enclosure “d”;
- EN 60079-31: 2014 Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure “t”.

Certificate history	Issue Notes
Issue No. 04/15 (2015.12.14)	[General Revision] Descriptive documents B5026182 listed in par [16] are related to update to new edition of applicable standards, new material Cast iron is added, new execution for Group I (mines) and special conditions for safe use (X) are added, the EFD2.. code has been substituted by EFDC.. code, update of nameplate.
Issue No. 03/10 (2010.04.12)	[Extension 03/10] Admitted variations: new minimum ambient temperature up to – 50°C.
Issue No. 02/07 (2007.09.07)	[Extension 02/07] Admitted variations: update to new edition of applicable standards and update of nameplate.
Issue No. 01/03 (2003.05.09)	[Extension 01/03] Admitted variations: new double body enclosure types for CSC.. and EFD...
Issue No. 0 (2001.12.20)	[First Issue of the certificate]