

# CESI

# CERTIFICATE



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Schema di certificazione

# CESI-ATEX

- [1] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE**
- [2] **Equipment or Protective System intended for use  
in potentially explosive atmospheres  
Directive 2014/34/EU**
- [3] Supplementary EU-Type Examination Certificate number:  
**CESI 03 ATEX 115 X /07**
- [4] Product: **Command, control and signaling units series SA..., CTB..., CSTB...**
- [5] Manufacturer: **COR.TEM S.p.A.**
- [6] Address: **Via Aquileia, 10 – 34070 Villesse (GO) – Italy.**
- [7] This supplementary certificate extends EC-Type Examination Certificate CESI 03 ATEX 115 to apply to products designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule attached to this certificate and the documents therein referred to.
- [8] CESI, notified body n. 0722 in accordance with Article 17 of the Directive 2014/34/EU of the Parliament and Council of 26 February 2014, 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- C0009462.
- [9] In accordance with Article 41 of Directive 2014/34/EU, EC-Type Examination Certificates referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20 April 2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. Supplementary certificates to such EC-Type Examination Certificates, and new issues of such certificates, may continue to bear the original certificate number issued prior to 20 April 2016
- [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 EU-TYPE EXAMINATION CERTIFICATE relates only to the design, examination and tests of the specified equipment or protective system in accordance to the Directive 2014/34/EU. 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:

II 2 GD Ex db eb IIC T6 or T5 Gb  
Ex tb IIC T85°C or T100°C Db  
IP66

When on the box is installed only Ammeter or Voltmeter B-0140 type, the marking of the equipment shall include the following:

II 2 GD Ex eb IIC T6 or T5 Gb  
Ex tb IIC T85°C or T100°C Db  
IP66

This certificate may only be reproduced in its entirety and without any change, schedule included.

Date 2020.06.22 - Translation issued the 2020.06.22

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**Verified**  
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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

[14] SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 03 ATEX 115 X /07

[15] **Description of the variation to the product**

- Updating to EN IEC 60079-0:2018 Standard.
- To the Command, Control and Signalling units SA../P series made in polyester resin, new colours for boxes were added.
- The Command, Control and Signalling units SA., CTB.. and CSTB.. series can be supplied with external painting.
- Command, Control and Signalling units SA.. and SAG.. series made of aluminium alloy can be supplied with internal anticondensation/antifungal painting and draining and breathing valve ECD-2.. and ECDE.. series.
- To the Command, Control and Signalling units SA., CTB.. and CSTB.. series can be supplied with fuses B-0305 and B-0306 types.
- To the Command, Control and Signalling units SA., CTB.. and CSTB.. series were updated description and electrical characteristics for components CZ0203 series.

### Description of equipment

Command, Control and Signalling units SA., CTB.. and CSTB.. series are used to hold Ex db and/or Ex eb components such as Pilot LED, Contact blocks, Actuators, Ammeter or voltmeter and Terminals, scope of separated ATEX certification. They consist in enclosures made of Aluminium alloy, Polyester resin glass fibre reinforced or Stainless steel for SA.. series, while CTB.. and CSTB.. series are made of Stainless steel only.

The covers of boxes are fixed to the bodies with Stainless steel screws, whose number depends on the size and on possible accessories. The degree of protection IP66 is guarantee by the EPDM/SBR or Silicon gaskets placed between the covers and the body.

The walls and the bottom of the boxes can be drilled with maximum size and maximum number of holes as specified in the manufacturer documents. The cable glands or plugs, with separate ATEX certificate, are mounted using locknut and gasket.

Each enclosure is provided with internal and external earthing screw or bolt. Each conductor should be provided with terminal lugs.

The products can be supplied with external painting. In this case a warning label shall be applied regarding the risk of electrostatic charge. Furthermore, on request can be applied an internal anticondensation/antifungal painting and draining and breathing valve ECD-2.. or ECDE series, scope of separate certification.

They can be equipped with the following components ATEX certified:

- Pilot LED type M-0612 and M-0487 (CESI 00 ATEX 060U);
- Pilot LED type CZ0201 (Presafe 16 ATEX 8565U);
- Contact blocks type M-0530 and M-0531 (CESI 09 ATEX 016U);
- Contact blocks series CZ0201 (Presafe 16 ATEX 9096U);
- Command and signalling actuators series M-0603, M-0604 and M-0605 (CESI 09 ATEX 075U);
- Manoeuvres and Actuators series CZ4000 (Sira 15 ATEX 3333U);
- Ammeter or voltmeter series B-0140 (CESI 04 ATEX 128U);
- Potentiometers series CZ0203 (Presafe 16 ATEX 9214U);
- Buzzers series CZ1208 (EPT 16 ATEX 2404U);
- Ex e terminals (CABUR, WEIDMULLER or others ATEX certified).
- Ex ia Proximity systems series 3300XL (Sira 16 ATEX 2299X).
- Signal lamp with button module type CZ0212 (Presafe 16 ATEX 9083U);
- Ammeter, Voltmeter Type CZ0205 (Sira 14 ATEX 3169U);
- Fuses types B-0305 and B-0306 (CML 19 ATEX 5473U).

The equipment can be equipped with the terminal blocks specified into manufacturer documents or with other terminal blocks scope of separated ATEX certification with identical characteristics.




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[14] SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 03 ATEX 115 X /07

### Marking options

The following marking codes are listed below as possible non-exhaustive options:

	II 2 GD	Ex ia IIC T5 Gb Ex ia tb IIC T85°C Db IP66	Only when single Intrinsically safe components installed.
	II 2 GD	Ex eb ia IIC T6 or T5 Gb Ex ia tb IIC T85°C or T100°C Db IP66	
	II 2 GD	Ex db eb ib mb IIC T6 or T5 Gb Ex ib tb IIC T85°C or T100°C Db IP66	

As well as other combinations of the type of protection symbols and levels of protection based on the relevant marking of component certificate actually selected in combination are available, following the requirement of EN IEC 60079-0.

### Electrical characteristics

Max. rated voltage:	600 Vac/dc;
Max. rated current:	16 A;
Rated frequency	50 / 60 Hz.

The ratings specified are maximum values, actual values will be subject to the electrical equipment/component used from case to case. Depending on the system conditions, the mode of operation, the utilisation category, etc., the manufacturer will define ratings which will be within the range of these limiting values and will comply with the relevant standards.

The type and number of terminals which can be installed in the various enclosures is indicated in detail, together with the maximum admissible currents in the annexed documents. When selecting the permitted continuous current for cross section, the maximum permitted electrical current for the terminals and the connecting cable or conductor should be taken into consideration.

### Component electrical characteristics

Components	Rating Voltage	Current	Power
Pilot LED type M-0612	from 12V up to 240Vac/dc	-	< 1.5W
Pilot LED type M-0487	from 2.1V up to 4Vac/dc	20mA	-
Contact blocks type M-0530 and M-0531	690V	10A	-
Command and signalling actuators series: M-0603, M-0604 and M-0605	-	-	-
Ammeter or voltmeter type B-0140	600Vac/dc	-	1.1 VA (Ammeter) 3.0 VA (Voltmeter)
Proximity System type 3300XL	Ui/Uo 28Vac/dc	Ii/Io 140mA	Pi = 0.91W Po = 0.742W
Operation heads CZ4000	-	-	-
2/4 Pole switch module type CZ0201	400Vac 110Vdc	16A 1A	-
Fuses type B-0305	125Vac/dc	1A	-
Fuses type B-0306	250Vac/dc	1A	-

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**Component electrical characteristics, follows:**

Components	Rating Voltage	Current	Power
Signal lamp module type CZ0202	from 10V up to 28Vac/dc, from 20V up to 250Vac/dc, from 380V up to 400Vac, from 50V up to 277Vac/dc, Ui : 28Vac/dc.	Ii : 93mA	Pi : 0.651W
Control module type CZ0203	200Vdc	-	0.1W
(Flash) Buzzer type CZ1208	from 10V up to 28Vac/dc, from 20V up to 250Vac/dc,	-	-
Signal lamp with button module type CZ0212	Lamp: from 10V up to 28Vac/dc, from 20V up to 250Vac/dc, from 50V up to 277Vac/dc, Ui : 28Vac/dc. Button: 250Vac/dc, 24Vdc, Ui : 30Vac/dc.	Ii : 93mA  10A 1A Ii : 100mA	Pi : 0.651W   Pi : 1W
Ammeter, Voltmeter Type CZ0205	500Vac/dc	40mA 10A	-

Pilot LED type M-0612, contact blocks type M-0530, M-0531 terminals:

section 2.5 mm<sup>2</sup>;

Ammeter and voltmeter type B-0140 terminals:

section 2.5 mm<sup>2</sup>;

Signal and Control equipment CZ.. series:

section 2.5 mm<sup>2</sup>.

Degree of protection (EN 60529):

IP 66.

**Ambient temperature range:**

From -40°C to +40°C (T6 / T85°C);

-40°C to +55°C (T5 / T100°C).

**Installation conditions:**

Accessories used for cable entries and for unused holes shall have degree of protection IP 66 and shall be certificate according to the standards. EN IEC 60079-0 and EN 60079-7.

When selecting the permitted continuous current for cross section, the maximum permitted electrical current for the terminals and the connecting cables or conductors should be taken into consideration.

**Warning label:**

- "Do not open when energized".

- For Command, Control and Signalling units SA., CTB.. and CSTB.. series with temperature class T5:

"Use cables suitable for a minimum temperature of 90°C".

- For products complete with external painting made in non-conductive material and for GRP materials different to standard black coloured:

"Warning - Potential electrostatic charging hazard – see instructions".

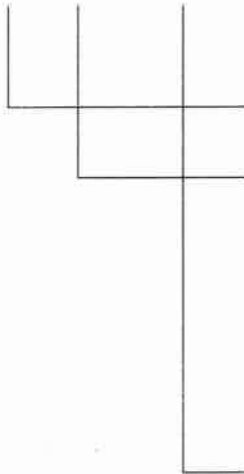
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[14] SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 03 ATEX 115 X /07

### Identification of Command, Control and Signalling units SA.. CTB.. and CSTB..:

SA\*  -



Code of the series:

*SA:* standard boxes.

*SAG:* boxes with walls 7mm thickness

Boxes size (refers to manufacturer documents).

Material and number of gland plates:

*blank:* aluminium alloy boxes

*/P:* polyester resin boxes

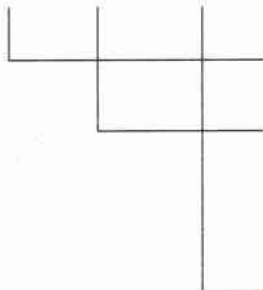
*SS:* stainless steel boxes without gland plates

*SSC:* stainless steel boxes with locking devices on cover and without gland plates

*SSF1, SSF2, SSF3, SSF4:* stainless steel boxes with 1, 2, 3 or 4 gland plates.

*SSFC1, SSFC2, SSFC3, SSFC4:* stainless steel boxes with locking devices on cover and 1, 2, 3 or 4 gland plates

CTB  -



Code of the series

Boxes size (refers to manufacturer documents).

Material and number of gland plates:

*S1, S2, S3, S4:* stainless steel boxes with 1, 2, 3 or 4 gland plates

*blank:* stainless steel boxes without gland plates

*C, CS1, CS2, CS3, CS4:* with locking devices on cover

Other suffix can be added on the code for particular configurations.

[16] Report n. EX- C0009462.

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[14] SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 03 ATEX 115 X /07

### Routine tests

The manufacturer shall carry out the routine tests prescribed at Clause 27 of EN IEC 60079-0 Standard. For Command, Control and Signalling units series SA., CTB. and CSTB. the dielectric test with applied voltage shall be performed (according to Clause 7.1 of the EN 60079-7) at 2U+1000 VAC with a minimum value of 1500 VAC between the supply terminals and earth.

The manufacturer shall carry out the routine design verifications (and document them according its own documented manufacturing process) necessary to ensure that the electrical equipment produced complies with the documentation listed in [19] by selecting them from the approved device list and method of thermal, mechanical and electrical verifications which cover the following main conditions:

- to verify that the maximum temperature class of SA., CTB. and CSTB. series (T6 or T5) will be limited according the power loss budget, the thermal resistance of enclosure/equipment and the ambient temperature; and
- to verify that the temperature-rise limits specified for the different parts of the SA., CTB. and CSTB. series will not exceed the service temperature and the ambient temperature of the Ex Equipment and Ex Components selected in the combination assembled; and
- to verify that all the Condition for safe use "X" of the Ex Equipment and the condition or limit for safe use of Ex Components are implemented according the pertinent certificate and Instructions.

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

- When on the box is installed CORTEM ammeter or voltmeter only (without other devices), the marking on tag shall be Ex eb IIC Gb instead of Ex db eb IIC Gb.
- The pertinent special condition for safe use "X" of the actual enclosure certificate and the actual certificate of the items used in the combination assembled have to be strictly foreseen.
- When terminals and Equipment / Components for intrinsically safe circuits "i" are used, even if the terminals are Ex eb, they are installed in such a way that the clearances and creepage distances between intrinsically safe and non-intrinsically safe circuits are set forth in EN 60079-14 and EN 60079-11 Standards are duly accounted for.
- When using intrinsically safe circuits, the ratings and intrinsically safe parameters of these parts shall be observed.
- When using more than one intrinsically safe circuit, the rules for interconnections required by EN 60079-14, EN 60079-7 and EN 60079-11 Standards shall be observed.

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

Compliance with the Essential Health and Safety Requirements has been assured by compliance to the following standards:

- EN IEC 60079-0: 2018 Explosive atmospheres – Part 0: Equipment - General requirements;
- EN 60079-1: 2014 Explosive atmospheres – Part 1: Equipment protection by flameproof enclosure "d";
- EN 60079-7: 2015 Explosive atmospheres – Part 7: Equipment protection by increase safety "e";
- EN 60079-11: 2012 Explosive atmospheres – Equipment protection by intrinsic safety "i";
- EN 60079-18: 2015 Explosive atmospheres – Part 18: Equipment protection by encapsulation "m".
- EN 60079-31: 2014 Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure "t".

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[14] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE n. CESI 03 ATEX 115 X /07**

[19] **Descriptive documents (prot. EX- C0009465)**

- *Technical note A4-7482 (pg. 13)	rev.0	dated	2019.10.21
- *Safety, maintenance and mounting instructions F-271 (pg. 9)	rev.5	dated	2019.10.21
- *Declaration of Conformity Facsimile no. 0038 (pg. 1)		dated	2019.10.21
- *Drawing no. A3-7497	rev.0	dated	2019.10.21
- Drawing no. A1-5703 (4 sheets)	rev.1	dated	2017.04.10
- Drawing no. A2-4357 (sheet 1 of 2)	rev.1	dated	2006.10.09
- Drawing no. A3-5399 (4 sheets)	rev.00	dated	2010.04.19
- Drawing no. A3-5704 (3 sheets)	rev.1	dated	2017.04.10
- Drawing no. A3-7251 (2 sheets)	rev.0	dated	2018.09.10
- Drawing no. A3-5630 (4 sheets)	rev.0	dated	2012.03.08
- Tables for max number of conductors and max number of terminals no. A4-5050 (35 sheets)	rev.1	dated	2017.04.10
- Drawing n° A3-5514 (2 sheets)	rev. 00	dated	2011.02.10
- *Annex (8 sheets)	rev.0	dated	2019.10.21
- Annex (18 sheets)	rev.0	dated	2017.04.10

*Note: An \* is included before the title of documents that are new or revised annexed to this supplement.*

One copy of all documents is kept in CESI files.

### Certificate history

Issue nr	Issue Date	Summary description of variation
07	2020.06.22	Updating to EN IEC 60079-0:2018 Standard. To the Command, Control and Signalling units SA..P series made in polyester resin, new colours for boxes were added. The Command, Control and Signalling units SA., CTB.. and CSTB.. series can be supplied with external painting. Command, Control and Signalling units SA.. and SAG.. series made of aluminium alloy can be supplied with internal anticondensation/antifungal painting and draining and breathing valve ECD-2.. and ECDE.. series. To the Command, Control and Signalling units SA., CTB.. and CSTB.. series can be supplied with fuses B-0305 and B-0306 types. To the Command, Control and Signalling units SA., CTB.. and CSTB.. series were updated description and electrical characteristics for components CZ0203 series.
06	2019.02.26	Updating to EN 60079-0 : 012+A11 : 2013, EN 60079-1 : 2014, EN 60079-7 : 2015, EN 60079-11 : 2012 and EN 60079-31 : 2014 Standards. The enclosures can be drilled on the bottom side. New thicknesses for plain gaskets, removable plates, bodies and covers, new enclosures sizes CTB916130 and new Signal and Control equipments CZ... series, new Intrinsic safety proximity systems have been added. Special conditions for safe use (X) have been added.
05	2013.07.30	Updating to EN 60079-0: 2012, EN 60079-1:2007, EN 60079-7:2007, EN 60079-18:2008, EN 60079-27:2008 and EN 60079-31:2009. Changed the height of cover for aluminium and polyester boxes. Updated minimum ambient temperature -40°C for polyester resin boxes. Added models SA202012 and new types of silicone gaskets.
04	2012.07.25	Updating to standards EN 60079-0: 2009, EN60079-7:2007, EN 60079-11:2007 and EN60079-31:2014. New application for series SAG.../FDB fieldbus devices assemblies.
03	2011.06.29	New enclosure CTB... sizes with pilot LED M-0612, Contact blocks type M-0530 and M-0531 and command and signaling actuators series M-0603, M-0604 and M-0605 has been added.
02	2010.10.05	New pilot LED M-0612, Contact blocks type M-0530 and M-0531 and command and signaling actuators series M-0603, M-0604 and M-0605 have been added.
01	2008.06.11	Updating to standards EN 60079-0 (2006), EN 60079-1 (2004), EN60079-7 (2006), EN 61241-0 (2006), EN 61241-1 (2004). New size SAG606018 have been added.
00	2003.05.28	First Issue of the Certificate.