

# CESI

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interamente versato  
Codice fiscale e numero  
iscrizione CCIAA 00793580150

Registro Imprese di Milano  
Sezione Ordinaria  
N. R.E.A. 429222  
P.I. IT00793580150

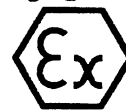
Schema di certificazione

# ATEX CESI

Il CESI è stato autorizzato  
dal governo italiano ad  
operare quale organismo di  
certificazione di apparecchi  
e sistemi destinati a essere  
utilizzati in atmosfera  
potenzialmente esplosiva  
con D.M. 1/3/1983, D.M.  
19/6/1990, D.M. 20/7/1998  
e D.M. 27/9/2000

# CERTIFICATE

1041



## [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 03 ATEX 333**

[4] Equipment: Terminal boxes series SA.

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

[6] Address: Via Aquileia 10, Villesse (Gorizia - 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-A3/043691.

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

**EN 50014: 1997+A1..A2 EN 50019:2000 EN 50020:2002 EN50281-1-1:1998+A1**

[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:

II 2 GD EEx e II T6 o T5 IP 66 T85°C o T100°C

II 2(1) GD EEx e [ia] IIC T6 o T5 IP 66 T85°C o T100°C

II 1 GD EEx ia IIC T6 o T5 IP 66 T85°C o T100°C

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

Date December 19<sup>th</sup> 2003 translation issued on December 19<sup>th</sup> 2003

Prepared  
Mirko Balaz

Approved  
Ulisse Colombo

**CESI**

CENTRO ELETTROTECNICO SPERIMENTALE ITALIANO  
Business Unit Certificazione  
Il Responsabile

[13]

## Schedule

[14] **EC-TYPE EXAMINATION CERTIFICATE n. CESI 03 ATEX 333**

### [15] Description of equipment

The terminal boxes series SA are made in aluminium, in polyester resin or in stainless steel. The terminals installed within boxes are subjects of separate certification with type of protection EEx e II for the non intrinsic safety circuits and/or the intrinsic safety circuits.

The code of the terminal boxes indicates the dimension of the enclosure and the material used:

SA... boxes made in aluminium,  
SA...P boxes made in polyester resin,  
SA...SS boxes made in stainless steel with cover fixed by screws,  
SA...SSF boxes made in stainless steel with cover fixed by screws and walls with gland plates,  
SA...SSC boxes made in stainless steel with cover fixed by lock system,  
SA...SSCF boxes made in stainless steel with cover fixed by lock system and walls with gland plates.

The code of the all terminal boxes subject of this certificate are reported in the descriptive documents annexed.

### Electrical characteristics

Max. rated voltage:	1000 [V]
Rated current:	8 ÷ 400 [A]
Terminal section	1,5; 2,5; 4; 6; 10; 16; 25; 35; 70; ..... 240 [mm <sup>2</sup> ]
Number of conductors	) see technical note with annexes
Conductor section	)

The type and number of terminals which can be installed in the various enclosures is indicated in detail, together with the maximum admissible currents, the number of conductors and the admissible conductors section, in the documentation annexed to this certificate. The terminals shall be suitable for the ambient temperature range of the apparatus.

Degree of protection	IP 66 (EN 60529 – 1991)
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Ambient temperature	- 20 ÷ + 40 °C
	- 20 ÷ + 60 °C
	- 25 ÷ + 40 °C
	- 25 ÷ + 60 °C
	- 50 ÷ + 40 °C
	- 50 ÷ + 60 °C

Temperature class for category 2G. terminal boxes:

T6 for ambient temperature - 20 (-25) ÷ + 40 °C e - 50 ÷ + 40 °C  
T5 for ambient temperature - 20 (-25) ÷ + 60 °C e - 50 ÷ + 60 °C

Maximum surface temperature for category 2D terminal boxes:

T85°C for ambient temperature - 20 (-25) ÷ + 40 °C e - 50 ÷ + 40 °C  
T100°C for ambient temperature - 20 (-25) ÷ + 60 °C e - 50 ÷ + 60 °C

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[13]

## Schedule

[14] EC-TYPE EXAMINATION CERTIFICATE n. CESI 03 ATEX 333

[15] Description of equipment (follows)

### Ranges of ambient temperature admissible for the different versions of the terminal boxes

Enclosure material	Type of gasket	Ambient temperature
Aluminium	NBR	- 20 ÷ + 40/60 °C
	Silicon	- 50 ÷ + 40/60 °C
Stainless steel	NBR	- 20 ÷ + 40/60 °C
	Silicon	- 50 ÷ + 40/60 °C
Polyester resin	NBR	- 20 ÷ + 40/60 °C
	Silicon	- 25 ÷ + 40/60 °C

The accessories used for cable entries and for closing unused apertures shall be certified according to the standards EN 50014, EN 50019 and EN 50281-1-1 and shall guarantee a degree of protection IP 66.

### Warning label

In case of units of temperature class T5:

“Use cables suitable for temperature of 90 °C”

[16] Report n. EX-A3/043691

### Routine tests

The manufacturer shall carry out the routine tests prescribed at clause 24 of the EN 50014 standard.

If factory wired, each terminal box shall be submitted to a dielectric strength test according to Clause 7.1 of EN 50019 Standard.

### Descriptive documents (prot. EX-A3/043704)

- n° A4-4274 Rev. 0 (3 +9 p.)	del	10.10.2003
- n° A1-4273 Rev. 1 (3 p.)	del	10.10.2003
- n° A1-4557 Rev. 1	del	10.10.2003
- n° A3-4658 Rev. 0	del	10.10.2003
- n° A3-4677 Rev. 0	del	10.10.2003
- n° A4-4129 Rev. 0	del	26.06.2000
- n° A3-4009 Rev. 2 (2 p.)	del	10.10.2003
- n° A3-4032 Rev. 2	del	10.10.2003
- Technical sheet for SMC-LS 3803 R25 RF C, LONZA (3 p.)	del	10.10.2003
- Technical sheet of sealing gasket BlueTech	del	10.10.2003
- Technical sheet of sealing gasket Tecnotrex (2 p.)	del	10.10.2003
- Safety instructions F-295 (9 p.)	del	10.10.2003
- EC DECLARATION OF CONFORMITY n° 0048	del	14.12.2003

One copy of all documents is kept in CESI files.

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## Schedule

[13]

[14] **EC-TYPE EXAMINATION CERTIFICATE n. CESI 03 ATEX 333**

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[17] **Special conditions for safe use**

None.

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

Covered by standards.

## EXTENSION n. 01/08

to EC-Type Examination Certificate CESI 03ATEX333



Equipment: Terminal boxes series SA

Manufacturer: **COR.TEM S.p.A.**




Address: Via Aquileia 10, Villesse (Gorizia – Italy)

### Admitted variation

- Update to EN 60079-0 (2006), EN 60079-7 (2003), EN 60079-11 (2007)  
EN 61241-0 (2006), EN 61241-1 (2004) and EN 61241-11 (2006) Standards
- Update of nameplate
- New model SAG-606018 and SA-202012
- New max. ambient temperatures (+55°C, +65°C and +80°C, see table 1 and 2)
- New minimum ambient temperature of -30°C for SA.../P boxes made in polyester resin

### Equipments identification and description

According to the protection mode, the terminal boxes SA shall include the following markings:

	II 2GD	Ex e II T6, T5, T4 ; Ex tD A21 IP66 T 85 °C, T 100 °C, T135°C
	II 2(1)GD	Ex e [ia] IIC T6, T5, T4 ; Ex tD [iaD] A21 IP66 T 85 °C, T 100 °C ; T135°C
	II 1GD	Ex ia IIC T6, T5, T4 ; Ex tD A20 IP66 T 85 °C, T 100 °C, T135°C

This extension and annexed descriptive documents must be annexed to the EC-Type Examination Certificate CESI 03ATEX333.

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date 21 May 2008 - translation issued the 21 May 2008

prepared Pierluigi Molinari

verified Mirko Balaz

approved Fiorenzo Bregani

**CESI** S.p.A.  
Divisione Energia  
"Area Tecnica Certificazione"  
Il Responsabile

*Preparati*

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## EXTENSION n. 01/08

to EC-Type Examination Certificate CESI 03ATEX 333

**Equipments identification and description (follows)**

### Electrical characteristics

Rated voltage 1000 [V]

### Terminals

Terminal section 1,5; 2,5; 4; 6; 10; 16; 25; 35; 70.....240, 300 [mm<sup>2</sup>]

Rated current 8.0 ÷ 400 [A]

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 tables A4-5050 and in the safety instructions annexed to this certificate. The terminals shall be suitable for the ambient temperature range of the apparatus.

The electrical characteristics of junction boxes in the version Ex-i depends on the characteristics of the intrinsic safety circuits used.

Degree of protection IP 66 (EN 60529 – 1991)

### Ranges of ambient temperature admissible for the different versions of the terminal boxes

TABLE 1 - Standard range of temperature:

Boxes material	Type of gasket	Ambient temperature	Temperature class	Terminals material
Aluminium Or Stainless steel	NBR or EPDM	-20°C +40°C	T6	Polyamide (PA)
		-20°C +55°C	T5	Melamine (KrG) Wemind Stamin (KrS) Ceramic (Steatite)
	Silicon	-50°C +40°C	T6	Polyamide (PA)
		-50°C +55°C	T5	Melamine (KrG) Wemind Stamin (KrS) Ceramic (Steatite)
	NBR or EPDM	-20°C +40°C	T6	Polyamide (PA)
		-20°C +55°C	T5	Melamine (KrG) Wemind Stamin (KrS) Ceramic (Steatite)
Polyester resin	Silicon	-30°C +40°C	T6	Polyamide (PA)
		-30°C +55°C	T5	Melamine (KrG) Wemind Stamin (KrS) Ceramic (Steatite)

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## EXTENSION n. 01/08

to EC-Type Examination Certificate CESI 03ATEX 333

The boxes can also be installed with other range of ambient temperatures . In this case shall be used terminals made in material as indicated on following table2.

TABLE 2 - Other range of temperature admitted:

Boxes material	Type of gasket	Ambient temperature	Temperature class	Terminals material
Aluminium Or Stainless steel	EPDM	-20°C +65°C	T4	Melamine (KrG) Wemind Stamin (KrS)
	Silicon	-50°C +65°C	T4	
		-50°C +80°C	T4	Melamine (KrG) Stamin (KrS) Ceramic (Steatite)
Polyester resin	EPDM	-30°C +60°C	T5	Melamine (KrG) Wemind Stamin (KrS) Ceramic (Steatite)

For temperature class T4, the maximum surface temperature is T135°C

For temperature class T5, the maximum surface temperature is T100°C

For temperature class T6, the maximum surface temperature is T85°C

### Cable entries

The accessory used for cable entries and for closing unused aperture shall be certified according to the following Standards:

- terminal boxes in execution "Ex e" : EN 60079-0, EN 60079-7, EN 61241-0, EN 61241-1

- terminal boxes in execution "Ex i" : EN 60079-0, EN 61241-0, EN 61241-1

and shall guarantee a degree of protection IP 66.

### **Warning label**

For boxes made in aluminium or stainless steel material, with ambient temperature Ta -20°C +65°C or Ta -50°C +65°C:  
"use cable suitable for a temperature of 110°C"

For boxes made in aluminium or stainless steel material, with ambient temperature Ta -50°C +80°C:  
"use cable suitable for a temperature of 130°C"

For boxes made in aluminium or stainless steel material, with ambient temperature Ta -20°C +55°C or Ta -50°C +55°C  
and for boxes made in polyester resin material with ambient temperature Ta -20°C +55°C, Ta -30°C +55°C or  
Ta -30°C +60°C:  
"use cable suitable for a temperature of 90°C"

For boxes made in aluminium, stainless steel with ambient temperature Ta -20°C +40°C and Ta -50°C +40°C, no  
warning label is requested.

For boxes made in polyester resin material with ambient temperature Ta -20°C +40°C and Ta -30°C +40°C, no  
warning label is requested.

## EXTENSION n. 01/08

to EC-Type Examination Certificate CESI 03ATEX 333

Report n. EX-A8022239

### Routine tests

The manufacturer shall carry out the routine tests prescribed at par. 27 of the EN 60079-0 and at par. 24 of the EN 61241-0 Standards.

The dielectric test on terminal box "Ex e" assembled by manufacturer, shall be performed according to the par. 7.2 of the EN 60079-7 Standard.

### Descriptive documents (prot. EX-A8022240)

Technical Note A4-4960	(3 pg.)	Rev. 0	dated	18.03.2007
A4-5050 for conductor tables	(19 pg.)	Rev. 0	dated	18.03.2007
A1-4557		Rev. 2	dated	18.03.2007
A3-4009	(only sheet 1 of 2)	Rev. 3	dated	18.03.2007
A3-4032		Rev. 3	dated	18.03.2007
A3-5049	(2 sheets)	Rev. 0	dated	18.03.2007
A4-4619 for new marking	(4 sheets)	Rev. 1	dated	18.03.2007
- EC Declaration of Conformity n° 0048			dated	18.03.2007
- Safety Instruction F-295	(10 pg.)	Rev. 2	dated	18.03.2007
One copy of all documents is kept in CESI files.				

### Essential Health and Safety Requirements

The Health and Safety Requirements are assured by compliance with the following Standards:

- EN 60079-0 : 2006: Electrical apparatus for explosive gas atmospheres. General requirements
- EN 60079-7: 2003 Increased safety "e"
- EN 60079-11: 2007 Intrinsic safety "i"
- EN 61241-0 : 2006 Electrical apparatus for use in the presence of combustible dust. General requirements
- EN 61241-1 : 2004 Protection by enclosures "tD"
- EN 61241-11 : 2006 Protection by intrinsic safety "iD"





## EXTENSION n. 02/09

to EC-Type Examination Certificate CESI 03ATEX333

Equipment: Terminal boxes series SA

Manufacturer: **COR.TEM S.p.A.**




Address: Via Aquileia 10, Villesse (Gorizia – Italy)

### Admitted variation

- New model of stainless steel boxes CTB series

### Equipments identification and description

The terminal boxes CTB shall include the following markings:

	II 2GD	Ex e II T6, T5, T4 ; Ex tD A21 IP66 T 85 °C, T 100 °C, T135°C
	II 2(1)GD	Ex e [ia] IIC T6, T5, T4 ; Ex tD [iaD] A21 IP66 T 85 °C, T 100 °C ; T135°C
	II 1GD	Ex ia IIC T6, T5, T4 ; Ex tD A20 IP66 T 85 °C, T 100 °C, T135°C

The new models of terminal boxes series CTB are made in stainless steel or mild steel and comprise an enclosure with hinged door. Inside the enclosure, combination of a suitably certified, rail mounted terminals may be fitted to support bars. The door has a gasket seal that presses onto raised edge on the base of the enclosure. On each side of the enclosure may be fitted gland plate (maximum four gland plates) also sealed with a gasket.

This extension and annexed descriptive documents must be annexed to the EC-Type Examination Certificate CESI 03ATEX333.

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date 12 May 2009 - translation issued the 12 May 2009

prepared Mirko Balaz

approved Fiorenzo Bregani

**CESI** S.p.A.  
Divisione Energia  
"Area Tecnica Certificazione"  
Responsabile

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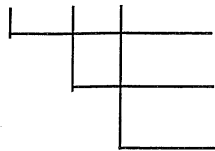
## EXTENSION n. 02/09

to EC-Type Examination Certificate CESI 03ATEX 333

### Equipments identification and description (follows)

The code of the all terminal boxes subject of this certificate are reported in the descriptive documents annexed.

**CTB \*\* \*\***



Code of the series

Size of the boxes (221513, 262616, ... etc.)

Material and Number of gland plates:

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

**Blank** – for stainless steel boxes without gland plates.

**M1, M2, M3, M4** - for mild steel boxes with 1, 2, 3 or 4 gland plates.

**M** – for mild steel boxes without gland plates.

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

### Electrical characteristics

Rated voltage 1000 [V]

#### Terminals

Terminal section 1,5; 2,5; 4; 6; 10; 16; 25; 35; 70.....240, 300 [mm<sup>2</sup>]

Rated current 8.0 ÷ 400 [A]

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 manufacturers documentation annexed to this certificate. The terminals shall be suitable for the ambient temperature range of the apparatus.

The electrical characteristics of junction boxes in the version Ex-i depends on the characteristics of the intrinsic safety circuits used.

Degree of protection IP 66 (EN 60529)

### Ranges of ambient temperature admissible for the different versions of the terminal boxes series CTB

*Standard range of temperature:*

Boxes material	Type of gasket	Ambient temperature	Temperature class	Terminals material
Stainless steel Or Mild steel	NBR or EPDM	-20°C +40°C	T6	Polyamide (PA)
		-20°C +55°C	T5	Melamine (KrG) Wemind Stamin (KrS) Ceramic (Steatite)
	Silicon	-50°C +40°C	T6	Polyamide (PA)
		-50°C +55°C	T5	Melamine (KrG) Wemind Stamin (KrS) Ceramic (Steatite)

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## EXTENSION n. 02/09

to EC-Type Examination Certificate CESI 03ATEX 333

### Equipments identification and description (follows)

The boxes series CTB can also be installed with other range of ambient temperatures . In this case shall be used terminals made in material as indicated on following table.

*Other range of temperature admitted:*

Boxes material	Type of gasket	Ambient temperature	Temperature class	Terminals material
Stainless steel Or Mild steel	EPDM	-20°C +65°C	T4	Melamine (KrG) Wemind Stamin (KrS)
	Silicon	-50°C +65°C	T4	
		-50°C +80°C	T4	Melamine (KrG) Stamin (KrS) Ceramic (Steatite)

For temperature class T4, the maximum surface temperature is T135°C

For temperature class T5, the maximum surface temperature is T100°C

For temperature class T6, the maximum surface temperature is T85°C

### Cable entries

The accessory used for cable entries and for closing unused aperture shall be certified according to the following Standards:

- terminal boxes in execution "Ex e" : EN 60079-0, EN 60079-7, EN 61241-0, EN 61241-1

- terminal boxes in execution "Ex i" : EN 60079-0, EN 61241-0, EN 61241-1

and shall guarantee a degree of protection IP 66.

### **Warning label**

For boxes series CTB with an ambient temperature Ta -20°C +65°C or Ta -50°C +65°C:

"use cable suitable for a temperature of 110°C"

For boxes series CTB with an ambient temperature Ta -50°C +80°C:

"use cable suitable for a temperature of 130°C"

For boxes series CTB with an ambient temperature Ta -20°C +55°C or Ta -50°C +55°C :

"use cable suitable for a temperature of 90°C"

For boxes series CTB with an ambient temperature Ta -20°C +40°C and Ta -50°C +40°C, no warning label is requested.

## EXTENSION n. 02/09

to EC-Type Examination Certificate CESI 03ATEX 333

Report n. EX-A9014104

### Routine tests

The manufacturer shall carry out the routine tests prescribed at par. 27 of the EN 60079-0 and at par. 24 of the EN 61241-0 Standards.

The dielectric test on terminal box "Ex e" assembled by manufacturer, shall be performed according to the par. 7.2 of the EN 60079-7 Standard.

### Descriptive documents (prot. EX-A9014160)

- Technical Note A4-5258	(4 pg.)	Rev. 0	dated	15.02.2009
- A3-5257	(13 sheets)	Rev. 0	dated	15.02.2009
- EC Declaration of Conformity n° 0048			dated	15.02.2009
- Safety Instruction F-331	(9 pg.)	Rev. 0	dated	15.02.2009

One copy of all documents is kept in CESI files.

### Essential Health and Safety Requirements

The Health and Safety Requirements are assured by compliance with the following Standards:

- EN 60079-0 : 2006: Electrical apparatus for explosive gas atmospheres. General requirements
- EN 60079-7: 2007 Increased safety "e"
- EN 60079-11: 2007 Intrinsic safety "i"
- EN 61241-0 : 2006 Electrical apparatus for use in the presence of combustible dust. General requirements
- EN 61241-1 : 2004 Protection by enclosures "tD"
- EN 61241-11 : 2006 Protection by intrinsic safety "iD"



## EXTENSION n. 03/13

to EC-Type Examination Certificate CESI 03ATEX333

Equipment: Terminal boxes series CTB, CSTB and SA


Manufacturer: COR.TEM S.p.A.

Address: Via Aquileia 10, Villesse (Gorizia), Italy


## Admitted variation

- Standard updating according to EN 60079-0:2012, EN 60079-7:2007, EN 60079-11:2012 and EN 60079-31:2009;
- Added ambient temperature -40°C for polyester resin enclosures;
- Added ambient temperature +60°C with temperature class T6;
- Changed the height of cover for aluminium and polyester resin enclosures;
- New type of silicone gaskets.


## Marking:

 II 2 GD Ex e IIC T6, T5 Gb  
 Ex tb IIC T85°C, T100°C Db  
 IP66

or

 II 2 GD Ex ia IIC T6, T5 Gb  
 Ex ia IIC T85°C, T100°C Db  
 IP66

or

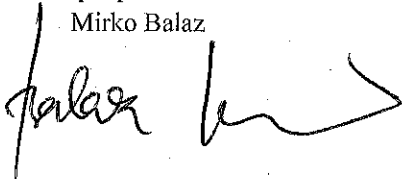
 II 2 GD Ex e ia IIC T6, T5 Gb  
 Ex tb ia IIC T85°C, T100°C Db  
 IP66

This extension and annexed descriptive documents must be annexed to the EC-Type Examination Certificate CESI 03ATEX333.

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Date 19.07.2013

prepared  
Mirko Balaz



approved  
Fiorenzo Bregani

**CESI S.p.A.**  
 Testing & Certification Division  
 Business Area Certification  
 // Responsabile  
 Fiorenzo Bregani

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PRD N. 018B  
 Membro degli Accordi di Mutuo  
 Riconoscimento EA, IAF e ILAC  
 Signatory of EA, IAF and ILAC  
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 e-mail: info@cesi.it  
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Capitale sociale € 8.550.000 interamente versato  
 C.F. e numero iscrizione Reg. Imprese di Milano 00793580150  
 P.I. IT00793580150  
 N. R.E.A. 429222

## EXTENSION n. 03/13

to EC-Type Examination Certificate CESI 03ATEX333

### Model identification:

SA\*  -

<input type="text"/>	<input type="text"/>	<i>Code of the series:</i> <b>SA:</b> standard boxes. <b>SAG:</b> boxes with walls 7mm thickness.
<input type="text"/>	<input type="text"/>	<i>Size of boxes:</i> The code of the all terminal boxes subject of this certificate are reported in the descriptive documents annexed.
<input type="text"/>	<input type="text"/>	Material and number of gland plates <b>blank:</b> aluminium alloy boxes. <b>/P:</b> polyester resin boxes. <b>SS:</b> stainless steel boxes without gland plates. <b>SSC:</b> stainless steel boxes with locking devices on cover and without gland plates <b>SSF1, SSF2, SSF3, SSF4:</b> stainless steel boxes with 1, 2, 3 or 4 gland plates. <b>SSFC1, SSFC2, SSFC3, SSFC4:</b> stainless steel boxes with locking devices on cover and 1, 2, 3 or 4 gland plates.

CTB  -

<input type="text"/>	<input type="text"/>	<i>Code of the series:</i> <b>CTB:</b> standard boxes. <b>CSTB:</b> boxes without hinges
<input type="text"/>	<input type="text"/>	<i>Size of boxes:</i> The code of the all terminal boxes subject of this certificate are reported in the descriptive documents annexed.
<input type="text"/>	<input type="text"/>	Material and number of gland plates <b>blank:</b> stainless steel boxes without gland plates. <b>S1, S2, S3, S4:</b> stainless steel boxes with 1, 2, 3 or 4 gland plates <b>C, CS1, CS2, CS3, CS4:</b> with locking devices on cover <b>M1, M2, M3, M4:</b> for mild steel boxes with 1, 2, 3 or 4 gland plates. <b>M:</b> for mild steel boxes without gland plates.

### Electrical characteristics

Max. rated voltage: 1000 Vac/dc  
 Max. rated current: 400 A or 340 A with ambient temperature +65°C  
 Rated frequency: 50 / 60 Hz  
 Terminal section: from 1.5mm<sup>2</sup> to 300mm<sup>2</sup>

### Terminal boxes for signal circuits:

Max. rated current: 1 A for Not Ex-i circuits  
 100 mA for Ex-i circuits

Degree of protection (EN 60529): IP 66

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## EXTENSION n. 03/13

to EC-Type Examination Certificate CESI 03ATEX333

**Ranges of ambient temperature admissible for the different versions of the terminal boxes**

Boxes material	Type of gasket	Ambient temperature	Temperature class / max. surface temperature	Max. service temperature of terminals
Aluminium, Stainless steel, Mild steel or Polyester resin	Silicon	-40°C +40°C	T6 / T85°C	+80°C
		-40°C +55°C	T5 / T100°C	+100 °C
		-40°C +60°C (*)	T6 / T85°C	+80 °C
Polyester resin	Silicon	-40°C +60°C	T5 / T100°C	+100 °C
Aluminium, Stainless steel or Mild steel	Silicon	-50°C +40°C	T6 / T85°C	+80°C
		-50°C +55°C	T5 / T100°C	+100 °C
		-50°C +65°C	T5 / T100°C	+100°C
		-40°C +65°C	T5 / T100°C	+100°C

(\*) Terminal boxes for signal circuits.

The specified ratings are the maximum values; actual values will be subject to the electrical equipment used from case to case.

The maximum number of the terminals, the permissible rated current and/or maximum dissipated power depends of the size of the enclosure, the range of ambient temperature and the temperature class. These parameters are described in the descriptive documents.

### Maximum dissipated power

The maximum dissipated powers are indicated in the descriptive documents.

### Installation conditions

The accessories used for cable entries and for closing unused openings shall be certified according to EN 60079-0, EN 60079-7, EN 60079-31 standards and a minimum degree of protection IP66 shall be guaranteed according to EN 60529 standard.

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.

The terminals shall be fitted in accordance with the manufacturer's instructions and, when installed, they shall have the minimum clearance and creepage distances required by Table 1 of EN 60079-7 standard.

The service temperature range of the terminals used shall be taken into consideration.

When Ex i circuits are present the distances between Intrinsic Safety circuits and Non-Intrinsic Safety circuits or between separate intrinsic safety circuits shall be according to EN 60079-11 standard. Intrinsically safe circuits shall be clearly identified. Where a colour is used for this purpose, it shall be light blue for the intrinsically safe connections.

With ambient temperature range from -40°C to +60°C and temperature class / maximum surface temperature T6/T85°C the maximum current for Ex e terminals is 1A and for Ex i circuits is 100mA.

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## EXTENSION n. 03/13

to EC-Type Examination Certificate CESI 03ATEX333

Report n. EX-B3020548

### Routine tests

Not changed.

### Descriptive documents (prot. EX-B3020549)

- n. A4-5701	Technical note	(8 pages)	Rev. 0	dated	14.06.2013
- n. F-295	Safety, maintenance and mounting instructions	(10 pages)	Rev. 3	dated	14.06.2013
- n. F-331	Safety, maintenance and mounting instructions	(9 pages)	Rev. 1	dated	14.06.2013
- n. N°0048	Example of declaration of conformity		Rev. 0	dated	14.06.2013
- n. A1-4557	Drawing Terminal boxes series SA..., SA.../P		Rev. 3	dated	14.06.2013
- n. Annex	Datasheet of materials	(9 pages)	Rev. 0	dated	14.06.2013
- n. Annex 1	Tables for max. number of conductors	(23 pages)	Rev. 0	dated	14.06.2013

One copy of all documents is kept in CESI files.

### 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 60079-7: 2007	Explosive atmospheres – Part 7: Equipment protection by increased safety “e”;
EN 60079-11: 2012	Explosive atmospheres – Part 11: Equipment protection by intrinsic safety “i”;
EN 60079-31: 2009	Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure “t”.