

CESI

CESI
Centro Elettrotecnico
Sperimentale Italiano
Giacinto Motta SpA

Via R. Rubattino 54
20134 Milano - Italia
Telefono +39 022125.1
Fax +39 0221255440
www.cesi.it

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Sezione Ordinaria
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P.I. IT00793580150

Schema di certificazione

CESI-ATEX

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



EC-TYPE EXAMINATION CERTIFICATE

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

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Date December 19th 2003 translation issued on December 19th 2003

Prepared
Mirko Balaz

Approved
Ulisse Colombo

CESI

CENTRO ELETTROTECNICO SPERIMENTALE ITALIANO
Business Unit Certificazione
PI/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 [mm²]
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)

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**

[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

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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 [mm²]

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)
Polyester resin	NBR or EPDM	-20°C +40°C	T6	Polyamide (PA)
		-20°C +55°C	T5	Melamine (KrG) Wemind Stamin (KrS) Ceramic (Steatite)
	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
"Arca Tecnica Certificazione"
Responsabile

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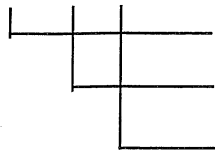
EXTENSION n. 02/09

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 [mm²]

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	Melamine (KrG) Stamin (KrS)
		-50°C +80°C	T4	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"