



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 13.0001** Issue No.: **0** Certificate history:

Status: **Current**

Date of Issue: **2013-03-18** Page 1 of 3

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

Electrical Apparatus: **Terminal boxes, series CTB, CSTB and SA**
Optional accessory:

Type of Protection: **Increased safety 'e'; Intrinsic Safety 'i', Dust ignition protection 't'**

Marking: **Ex e IIC T6 or T5 Gb**
Ex tb IIIC T85°C or T100°C Db
IP66 or
Ex Ia IIC T6 or T5 Gb
Ex Ia IIIC T85°C or T100°C Db
IP66 or
Ex e Ia IIC T6 or T5 Gb
Ex tb Ia IIIC T85°C or T100°C Db
IP66

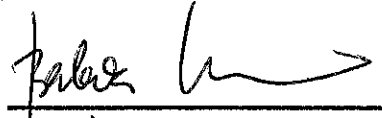
Approved for issue on behalf of the IECEx
Certification Body:

Mirko Balaz

Position:

Head of IECEx CB

Signature:
(for printed version)


18-03-2013

Date:

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




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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 60079-11 : 2011 Edition: 6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
IEC 60079-31 : 2008 Edition: 1	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
IEC 60079-7 : 2006-07 Edition: 4	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"

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/ExTR13.0001/00

Quality Assessment Report:
IT/CES/QAR06.0002/07



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

Terminal boxes series CTB, CSTB and SA consists of enclosures made in aluminium or in stainless steel or in polyester resin with type of protection Increased Safety 'e' and Protection by enclosure 'tb'.

They are equipped with Ex e terminals (CABUR, WEIDMULLER or others certified IECEx in execution Ex e IIC) for circuits with type of protection Increased Safety 'e' or Intrinsic Safety 'ia' or combinations of both.

The cover is fixed to the body with 4, 6 or 8 anti loosening screw. Between body and cover the silicon gasket guarantee the protection degree IP66.

See annex for further description.

CONDITIONS OF CERTIFICATION: NO



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Prot: B3008924

Annex to certificate: IECEx CES 13.0001 Issue No.:0 of 2013-03-18
Applicant: CORTEM S.p.A., Via Aquileia 10,
 I - 34070 Villesse (GO), Italy
Electrical Apparatus: Terminal boxes, series CTB, CSTB and SA

Model Identification:

SA* -

		<p><i>Code of the series:</i> SA: standard boxes. SAG: boxes with walls 7mm thickness.</p>
		<p><i>Size of boxes:</i> see tables 1.</p>
		<p>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.</p>

CTB -

		<p><i>Code of the series:</i> CTB: standard boxes. CSTB: boxes without hinges</p>
		<p><i>Size of boxes:</i> see tables 1 .</p>
		<p>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 M1, M2, M3, M4: for mild steel boxes with 1, 2, 3 or 4 gland plates. M: for mild steel boxes without gland plates.</p>

PAD B3008924 (1872317) - USO RISERVATO

Boxes SA... SAG... series are manufactured in copper free aluminium alloys.
 Boxes SA...SS, CTB and CSTB series are manufactured in sheet stainless steel. CTB... and CSTB can be also made in sheet steel galvanized (mild steel).
 Boxes SA.../P series are made in Polyester resin glass fibre reinforced, black colour.

The walls of the boxes can be drilled and taped with maximum size and maximum number of holes as specified in the manufacturer documents. The cable glands or plugs, with separate IECEx certificate, are mounted using locknut and gasket. Each enclosure is provided with internal and external earthing screw or bolt. Each conductor is provided with terminal lugs.



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Electrical Apparatus: Terminal boxes, series CTB, CSTB and SA

Electrical characteristics:

Max. rated voltage: 1000 Vac/dc
 Max. rated current: 400 A
 Rated frequency: 50 / 60 Hz
 Terminal section: from 1.5mm² to 300mm²

Degree of protection (IEC 60529): IP 66

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 manufacturer documentation. 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.

Ambient temperature range:

Enclosure material	Gasket	Temperature class / Max. surface temperature	Ambient temperature
Polyester resin	Silicone VMQ	T6 / T85°C	-40°C / +40°C
		T5 / T100°C	-40°C / +55°C
Aluminium alloy	Silicone VMQ	T6 / T85°C	-50°C / +40°C -40°C / +40°C
		T5 / T100°C	-50°C / +55°C -40°C / +55°C
Stainless steel (SA...SS series)	Silicone 50.011 STD	T6 / T85°C	-40°C / +40°C
		T5 / T100°C	-40°C / +55°C
Stainless steel (CTB, CSTB series)	SILICONCELL 411	T6 / T85°C	-50°C / +40°C -40°C / +40°C
		T5 / T100°C	-50°C / +55°C -40°C / +55°C



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Maximum dissipated power and current:

Enclosure	P _{Dma} x [W]	Maximum current [A] for each conductors cross-section in mm ²															
		1,5	2,5	4	6	10	16	25	35	50	70	95	120	150	185	240	300
SA111108/P	7.5	11	15	21	26	37	49	67	-	-	-	-	-	-	-	-	-
SA171108/P	8.8	11	15	21	26	37	49	67	-	-	-	-	-	-	-	-	-
SA141410/P	7.8	11	15	21	26	37	49	67	-	-	-	-	-	-	-	-	-
SA301410/P	15	11	15	21	26	37	49	67	-	-	-	-	-	-	-	-	-
SA302310/P	16	11	15	21	26	37	49	67	-	-	-	-	-	-	-	-	-
SA302318/P	17.5	11	15	21	26	37	49	67	-	-	-	-	-	-	-	-	-
SA473018/P	42	11	15	21	26	37	49	67	-	-	-	-	-	-	-	-	-
SA623018/P	52	11	15	21	26	37	49	67	-	-	-	-	-	-	-	-	-
SA111108	7.5	11	15	21	26	37	49	67	-	-	-	-	-	-	-	-	-
SA171108	8.8	11	15	21	26	37	49	67	-	-	-	-	-	-	-	-	-
SA141410	7.8	11	15	21	26	37	49	67	-	-	-	-	-	-	-	-	-
SA301410	15	11	15	21	26	37	49	67	-	-	-	-	-	-	-	-	-
SA302310	16	11	15	21	26	37	49	67	-	-	-	-	-	-	-	-	-
SA302318	17.5	11	15	21	26	37	49	67	80	98	122	147	175	196	196	196	227
SA473018	42	11	15	21	26	37	49	67	80	98	122	147	175	196	227	270	312
SAG111108	7.5	11	15	21	26	37	49	67	-	-	-	-	-	-	-	-	-
SAG171108	8.8	11	15	21	26	37	49	67	-	-	-	-	-	-	-	-	-
SAG141410	7.8	11	15	21	26	37	49	67	-	-	-	-	-	-	-	-	-
SAG301410	15	11	15	21	26	37	49	67	-	-	-	-	-	-	-	-	-
SAG302310	16	11	15	21	26	37	49	67	-	-	-	-	-	-	-	-	-
SAG303218	17.5	11	15	21	26	37	49	67	-	-	-	-	-	-	-	-	-
SAG473018	42	11	15	21	26	37	49	67	-	-	-	-	-	-	-	-	-
SAG623018	52	11	15	21	26	37	49	67	80	98	122	147	175	196	227	270	312
SAG606018	52	11	15	21	26	37	49	67	80	98	122	147	175	196	227	270	312



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Electrical Apparatus: Terminal boxes, series CTB, CSTB and SA

Maximum dissipated power and current (follows):

Enclosure	P _{Dmax} [W]	Maximum current [A] for each conductors cross-section in mm ²															
		1,5	2,5	4	6	10	16	25	35	50	70	95	120	150	185	240	300
SA111108SS CSTB121208	5.3	11	15	21	26	37	49	67	-	-	-	-	-	-	-	-	-
SA171108SS SA161610SS SA202020SS SA261210SS SA261610SS CSTB191910 CTB221513	6.2	11	15	21	26	37	49	67	-	-	-	-	-	-	-	-	-
SA141410SS CSTB151509	5.5	11	15	21	26	37	49	67	-	-	-	-	-	-	-	-	-
SA262614SS SA301410SS CTB262616	10.6	11	15	21	26	37	49	67	-	-	-	-	-	-	-	-	-
SA302310SS CTB262620 CTB303016	11.2	11	15	21	26	37	49	67	-	-	-	-	-	-	-	-	-
SA302318SS SA303020SS SA303030SS SA362614SS SA402618SS SA403618SS SA404020SS SA404030SS CTB303020 CTB382616 CTB382620	12.2	11	15	21	26	37	49	67	80	98	122	147	147	147	147	147	147
SA473018SS SA505020SS SA505030SS SA602618SS SA603618SS CTB453816 CTB453820 CTB484816 CTB484820 CTB503516 CTB503520	29.5	11	15	21	26	37	49	67	80	98	122	147	175	196	227	270	312
SA606020SS SA606030SS SA623018SS SA707030SS SA1007030SS SA10010030SS CTB624516 CTB624520 CTB745520 CTB765020 CTB808030 CTB866420 CTB916120 CTB987420	36	11	15	21	26	37	49	67	80	98	122	147	175	196	227	270	312



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Installation conditions:

Accessories used for cable entries and for unused holes shall have degree of protection IP 66 and shall be suitably certificate.

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 IEC 60079-7 standard

For terminal boxes with type of protection Ex i the distances between Intrinsic Safety circuits and Non-Intrinsic Safety circuits or between separate intrinsic safety circuits shall be according to IEC 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.

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

Installation instruction document F-375 provides details of dielectric strength routine test of 2U+1000 Vac with a minimum value of 1500 Vac between the supply terminals and earth.

Warning label:

"Do not open when energized".

For terminal boxes series CTB, CSTB and SA with temperature class T5:

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

List of types:

Table 1

Aluminium boxes	Aluminium boxes reinforced (with walls 7mm thickness)	Polyester resin boxes
SA111108	SAG111108	SA111108/P
SA171108	SAG171108	SA171108/P
SA141410	SAG141410	SA141410/P
SA202012	SAG202012	SA202012/P
SA301410	SAG301410	SA301410/P
SA302310	SAG302310	SA302310/P
SA302318	SAG302318	SA302318/P
SA473018	SAG473018	SA473018/P
/	SAG623018	SA623018/P
/	SAG606018	/



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List of types (follows):

Table 2

Stainless steel boxes with cover fixed by screws and hinges when requested				
Without gland plate	With 1 gland plate	With 2 gland plates	With 3 gland plates	With 4 gland plates
SA111108SS	/	/	/	/
SA171108SS	/	/	/	/
SA141410SS	/	/	/	/
SA161610SS	/	/	/	/
SA202020SS	/	/	/	/
SA261210SS	/	/	/	/
SA261610SS	/	/	/	/
SA262614SS	/	/	/	/
SA301410SS	/	/	/	/
SA302310SS	/	/	/	/
SA302318SS	SA302318SSF1	SA302318SSF2	SA302318SSF3	SA302318SSF4
SA303020SS	SA303020SSF1	SA303020SSF2	SA303020SSF3	SA303020SSF4
SA303030SS	SA303030SSF1	SA303030SSF2	SA303030SSF3	SA303030SSF4
SA362614SS	SA362614SSF1	SA362614SSF2	SA362614SSF3	SA362614SSF4
SA402618SS	SA402618SSF1	SA402618SSF2	SA402618SSF3	SA402618SSF4
SA403618SS	SA403618SSF1	SA403618SSF2	SA403618SSF3	SA403618SSF4
SA404020SS	SA404020SSF1	SA404020SSF2	SA404020SSF3	SA404020SSF4
SA404030SS	SA404030SSF1	SA404030SSF2	SA404030SSF3	SA404030SSF4
SA473018SS	SA473018SSF1	SA473018SSF2	SA473018SSF3	SA473018SSF4
SA505020SS	SA505020SSF1	SA505020SSF2	SA505020SSF3	SA505020SSF4
SA505030SS	SA505030SSF1	SA505030SSF2	SA505030SSF3	SA505030SSF4
SA602618SS	SA602618SSF1	SA602618SSF2	SA602618SSF3	SA602618SSF4
SA603618SS	SA603618SSF1	SA603618SSF2	SA603618SSF3	SA603618SSF4
SA606020SS	SA606020SSF1	SA606020SSF2	SA606020SSF3	SA606020SSF4
SA606030SS	SA606030SSF1	SA606030SSF2	SA606030SSF3	SA606030SSF4
SA623018SS	SA623018SSF1	SA623018SSF2	SA623018SSF3	SA623018SSF4
SA707030SS	SA707030SSF1	SA707030SSF2	SA707030SSF3	SA707030SSF4
SA1007030SS	SA1007030SSF1	SA1007030SSF2	SA1007030SSF3	SA1007030SSF4
SA10010030SS	SA10010030SSF1	SA10010030SSF2	SA10010030SSF3	SA10010030SSF4



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List of types (follows):

Table 3

Stainless steel boxes with cover fixed by locking device and hinges				
Without gland plate	With 1 gland plate	With 2 gland plates	With 3 gland plates	With 4 gland plates
SA302318SSC	SA302318SSCF1	SA302318SSCF2	SA302318SSCF3	SA302318SSCF4
SA303020SSC	SA303020SSCF1	SA303020SSCF2	SA303020SSCF3	SA303020SSCF4
SA303030SSC	SA303030SSCF1	SA303030SSCF2	SA303030SSCF3	SA303030SSCF4
SA362614SSC	SA362614SSCF1	SA362614SSCF2	SA362614SSCF3	SA362614SSCF4
SA402618SSC	SA402618SSCF1	SA402618SSCF2	SA402618SSCF3	SA402618SSCF4
SA403618SSC	SA403618SSCF1	SA403618SSCF2	SA403618SSCF3	SA403618SSCF4
SA404020SSC	SA404020SSCF1	SA404020SSCF2	SA404020SSCF3	SA404020SSCF4
SA404030SSC	SA404030SSCF1	SA404030SSCF2	SA404030SSCF3	SA404030SSCF4
SA473018SSC	SA473018SSCF1	SA473018SSCF2	SA473018SSCF3	SA473018SSCF4
SA505020SSC	SA505020SSCF1	SA505020SSCF2	SA505020SSCF3	SA505020SSCF4
SA505030SSC	SA505030SSCF1	SA505030SSCF2	SA505030SSCF3	SA505030SSCF4

Table 4

Stainless steel boxes with cover fixed by screws and hinges (CSTB without hinges)				
Without gland plate	With 1 gland plate	With 2 gland plates	With 3 gland plates	With 4 gland plates
CSTB121208	/	/	/	/
CSTB151509	/	/	/	/
CSTB191910	/	/	/	/
CTB221513	CTB221513S1	CTB221513S2	CTB221513S3	CTB221513S4
CTB262616	CTB262616S1	CTB262616S2	CTB262616S3	CTB262616S4
CTB262620	CTB262620S1	CTB262620S2	CTB262620S3	CTB262620S4
CTB303016	CTB303016S1	CTB303016S2	CTB303016S3	CTB303016S4
CTB303020	CTB303020S1	CTB303020S2	CTB303020S3	CTB303020S4
CTB382616	CTB382616S1	CTB382616S2	CTB382616S3	CTB382616S4
CTB382620	CTB382620S1	CTB382620S2	CTB382620S3	CTB382620S4
CTB453816	CTB453816S1	CTB453816S2	CTB453816S3	CTB453816S4
CTB453820	CTB453820S1	CTB453820S2	CTB453820S3	CTB453820S4
CTB484816	CTB484816S1	CTB484816S2	CTB484816S3	CTB484816S4
CTB484820	CTB484820S1	CTB484820S2	CTB484820S3	CTB484820S4
CTB503516	CTB503516S1	CTB503516S2	CTB503516S3	CTB503516S4
CTB503520	CTB503520S1	CTB503520S2	CTB503520S3	CTB503520S4
CTB624516	CTB624516S1	CTB624516S2	CTB624516S3	CTB624516S4
CTB624520	CTB624520S1	CTB624520S2	CTB624520S3	CTB624520S4
CTB745520	CTB745520S1	CTB745520S2	CTB745520S3	CTB745520S4
CTB765020	CTB765020S1	CTB765020S2	CTB765020S3	CTB765020S4
CTB808030	CTB808030S1	CTB808030S2	CTB808030S3	CTB808030S4
CTB866420	CTB866420S1	CTB866420S2	CTB866420S3	CTB866420S4
CTB916120	CTB916120S1	CTB916120S2	CTB916120S3	CTB916120S4
CTB987420	CTB987420S1	CTB987420S2	CTB987420S3	CTB987420S4