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 174 X/04

[4] Product: Command and control units and interface units series **CCA-..** and **GUB-..** and **CCAI-..**

[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 01 ATEX 036 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-B6027455.

[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:

Ex **I M2** **Ex db [ia Ma] I Mb** *(Stainless Steel enclosures only)*

Ex **II2(1) GD** **Ex db [ia Ga] IIC T6, T5 Gb**
Ex tb [ia Da] IIIC T85°C, T100°C Db
IP66

Date 2016.10.31 - Translation issued the 2016.10.31

Prepared	**Verified**	**Approved**
Alessandro Fedato	Mirko Balaz	Roberto Piccin

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

[13] **Schedule**

[14] **SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE no. CESI 03 ATEX 174 X/04**

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

-Updating to standards EN60079-0:2012+A11:2013, EN60079-1:2014, EN60079-11:2012, EN60079-26:2015 and EN60079-31:2014.
-New minimum ambient temperature -60°C.
-Special conditions for safe use (X) added.

Description of equipment

The **GUB-...** and **CCA..** command, control and interface units series are equipments composed by an Ex db or Ex tb flameproof enclosure used to install common electrical devices such as contactors, switches, measuring instruments, programmable logic controllers, contact blocks. Pilot lights, maneuvers and push button **M-0..** series can be mounted on the cover or on the enclosure walls. Furthermore, circular transparent glass windows sealed on the cover to permit instrument reading and extension for the covers to increase the instruments available volume can be installed.
The **GUB-...** and **CCA..** command, control and interface units series can incorporate associated apparatus for interface with intrinsic safety circuits. These associated apparatus are subject of separate certification with type of protection [Ex ia] IIC.
The **GUB-...** and **CCA..** command, control and interface units series have the body and the cover made in aluminium alloy or stainless steel and are in Ex db [ia Ma] I Mb (stainless steel enclosure only), Ex db [ia Ga] IIC Gb and Ex tb [ia Da] IIIC Db execution.
Gaskets between cover and body and for all other accessories are made in silicon to guarantee the protection degree IP66.
The covers of **CCA-..C** and **CCAI..** versions have a cylindrical joint and are fixed with quality A2-70 stainless steel screws.
The walls of the enclosures can be drilled and threaded with maximum size and maximum number of holes as specified in the manufacturer documents annexed. Each enclosure is provided with internal and external earthing screw or bolt.

Electrical characteristics

Rated voltage:	12 ÷ 250	VDC
	24 ÷ 1000	VAC
Nominal frequency:	50/60	Hz
Max. rated current:	400	A
Maximum power for lamps:	3W with $T_{amb.}$ +55°C	

Electrical characteristics for Associated Apparatus: max. voltage Um ≤ 250V.

Constructional characteristics

Degree of protection (EN 60529): IP66

Ambient temperature ranges

The Command, control and interface units shall be used in the following ambient temperature ranges:

- from **-20°C up to +44°C/+55°C**: all versions of Command, control and interface units for group I (made in stainless steel only), group IIC and group IIIC;
- from **-40°C up to +44°C/+55°C**: all versions of Command, control and interface units for group IIC and group IIIC with polycarbonate pilot lights;
- from **-60°C up to +44°C/+55°C** all versions of Command, control and interface units for group IIC and group IIIC without polycarbonate pilot lights.

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.
The associated apparatus shall be certified according to EN 60079-0 and EN 60079-11 standards and with suitable service temperatures.

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Table of typical electrical and electronic equipments inside the boxes:

DESCRIPTION	[V]	DISSIPATED POWER (W)	[A]
Analogical digital instruments	660	10	5
Electronic gear case	400	10	-
PLC, multiplexer, amplifier	240	80	-
Control and gauging device	240	100	-
Automatic breakers	660	-	400
Fuses	660	-	400
Air thermal relays	500	12	10
Electronic control device	660	100	-
Air contactors	660	30	400
Sequence timer	240	5	10
Photoelectrical cell	240	2	-
Capacitors (discharge time 30sec)	660	-	-
Transformers	660	200	-
Resistors	240	300	-
Terminals	660	-	-
Ballasts	277	40	7,5

The ratings above specified are maximum values admitted; 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 utilization category, etc., the manufacturer will define ratings, which will be within the range of these limiting values and will comply with the relevant Standards.

Intrinsic safety circuits:
The electrical characteristics of the intrinsic safety circuits are reported on the label of the associated apparatus used.

Model identification :

Aluminium alloy enclosures			**Aluminium alloy enclosures with glass window**	
GUB series	**CCA series**		**GUB series**	**CCA series**
GUB	-	-	-	-
GUB-S	-	-	-	-
GUB-0	CCA-0E	CCA-0C	GUB-0V	CCA-0EH
GUB-01	CCA-01E	CCA-01C	GUB-01V	CCA-01EH
-	CCA-01PF	-	-	-
GUB-02	CCA-02E	CCA-02C	GUB-02V	CCA-02EH
GUB-03	CCA-03E	CCA-03C	GUB-03V	CCA-03EH
GUB-04	CCA-04E	CCA-04C	GUB-04V	CCA-04EH
GUB-05	-	-	-	-

Stainless steel enclosures				**Stainless steel enclosures with glass window**	
GUB series	**CCA series**			**CCAI series**	**CCAIF series**
GUBSS	-	-	-	-	-
GUB-SSS	-	-	-	-	-
GUB-0SS	CCA-0ESS	CCAI2020	CCAIF-2020	CCAI2020H	CCAIF-2020H
GUB-01SS	CCA-01ESS	CCAI3020	CCAIF-3020	CCAI3020H	CCAIF-3020H
GUB-02SS	CCA-02ESS	CCAI3030	-	CCAI3030H	-
GUB-03SS	CCA-03ESS	CCAI4030	CCAIF-4030	CCAI4030H	CCAIF-4030H
GUB-04SS	CCA-04ESS	-	-	-	-
GUB-05SS	-	-	-	-	-

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Maximum dissipated power:

Table 1

Maximum dissipated power inside enclosures					
Enclosure type		**Tamb. = +40°C**		**Tamb. = +55°C**	
		T6 / T85 °C	**T5 / T100 °C**	**T6 / T85 °C**	**T5 / T100 °C**
GUB	-	4 W	6 W	3 W	4 W
GUB-S	-	6 W	9 W	5 W	6 W
GUB-0	GUB-0V	10 W	16 W	8 W	12 W
GUB-01	GUB-01V	15 W	24 W	13 W	19 W
GUB-02	GUB-02V	32 W	51 W	26 W	39 W
GUB-03	GUB-03V	51 W	74 W	37 W	55 W
GUB-04	GUB-04V	112 W	197 W	84 W	150 W
GUB-05	-	165 W	250 W	125 W	190 W

Table 2

Maximum dissipated power inside enclosures							
Enclosure type		**Tamb. = +40°C**			**Tamb. = +55°C**		
		No signalling lamps, only LED are allowed.	With signalling lamps and/or LED	No signalling lamps, only LED are allowed.	No signalling lamps, only LED are allowed.	With signalling lamps and/or LED	No signalling lamps, only LED are allowed.
		T6 / T85 °C	**T5 / T100 °C**	**T5 / T100 °C**	**T6 / T85 °C**	**T5 / T100 °C**	**T5 / T100 °C**
CCA-0E	CCA-0EH	8 W	9 W	13 W	6 W	7 W	9 W
CCA-01E	CCA-01EH	11 W	12 W	17 W	9 W	10 W	13 W
CCA-02E	CCA-02EH	23 W	25 W	36 W	20 W	22 W	28 W
CCA-03E	CCA-03EH	40 W	44 W	58 W	29 W	32 W	43 W
CCA-04E	CCA-04EH	93 W	100 W	164 W	70 W	77 W	125 W

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Table 3.

Maximum dissipated power inside enclosures						
Enclosure type	**Tamb. = +40°C**			**Tamb. = +55°C**		
	No signalling lamps, only LED are allowed.	With signalling lamps and/or LED	No signalling lamps, only LED are allowed.	No signalling lamps, only LED are allowed.	With signalling lamps and/or LED	No signalling lamps, only LED are allowed.
	T6 / T85 °C	**T5 / T100 °C**	**T5 / T100 °C**	**T6 / T85 °C**	**T5 / T100 °C**	**T5 / T100 °C**
CCA-0C	8 W	9 W	13 W	6 W	7 W	9 W
CCA-01C	11 W	12 W	17 W	9 W	10 W	13 W
CCA-02C	23 W	25 W	36 W	20 W	22 W	28 W
CCA-03C	40 W	44 W	58 W	29 W	32 W	43 W
CCA-04C	93 W	100 W	164 W	70 W	77 W	125 W

Table 4.

Maximum dissipated power inside enclosures						
Enclosure type	**Tamb. = +40°C**			**Tamb. = +55°C**		
	No signalling lamps, only LED are allowed.	With signalling lamps and/or LED	No signalling lamps, only LED are allowed.	No signalling lamps, only LED are allowed.	With signalling lamps and/or LED	No signalling lamps, only LED are allowed.
	T6 / T85 °C	**T5 / T100 °C**	**T5 / T100 °C**	**T6 / T85 °C**	**T5 / T100 °C**	**T5 / T100 °C**
CCAI2020	30 W	35 W	42 W	25 W	27 W	34 W
CCAI3020	50 W	54 W	68 W	39 W	42 W	53 W
CCAI3030	80 W	85 W	120 W	60 W	65 W	100 W
CCAI4030	105 W	112 W	170 W	90 W	100 W	140 W

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.

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Warning labels:
"*Use screws of quality A2-70 according UNI 7323 with tensile strength of at least 700 N/mm^2*";
"*Warning - do not open when energized*".

For equipment with capacitors:
"*After de-energizing. Wait 10 minutes before opening*".

For enclosures with batteries or cells:
"*Warning – Do not open when an explosive atmosphere is present*".

For equipment with Temperature class T5:
"*Use cables suitable for temperature of 90°C*".

[16] **Report n.** EX- B6027455

Routine tests
The routine overpressure test shall be carried out on empty enclosure with the static method (paragraph 15.2.3.2 of EN 60079-1 Standard), at:

- 13.8 bar on all GUB and CCA enclosures for minimum ambient temperature until -20 °C;
- 19.0 bar on all GUB and CCA enclosures for minimum ambient temperature until -60 °C.

[17] **Special conditions for safe use (X)**
*With the updating to the new standards the following special condition for safe use are added; moreover the X suffix is added to the certificate number and beginning from this supplement it becomes **CESI 03 ATEX 174X**.*

- The accessories used for cable entries and for closing unused openings shall be certified according to EN 60079-0, EN 60079-1 and EN 60079-31. A minimum degree of protection IP66 shall be guaranteed according to EN 60529 standard.
- The Command, control and interface units shall be used in the following ambient temperature range:
  - from -20°C up to +44°C/+55°C: all versions of Command, control and interface units for group I (made in stainless steel only), group IIC and group IIIC;
  - from -40°C up to +44°C/+55°C: all versions of Command, control and interface units for group IIC and group IIIC with polycarbonate pilot lights;
  - from -60°C up to +44°C/+55°C all versions of Command, control and interface units for group IIC and group IIIC without polycarbonate pilot lights.

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

EN 60079-0: 2012 + A11:2013 – Explosive atmospheres – Part 0: Equipment - General requirements;
EN 60079-1: 2014 Explosive atmospheres – Part 1: Equipment protection by flameproof enclosure "d";
EN 60079-11: 2012 Explosive atmospheres – Equipment protection by intrinsic safety "i";
EN 60079-26: 2015 Explosive atmospheres – Part 26: Equipment with Equipment Protection Level (EPL) Ga;
EN 60079-31: 2014 Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure "t".

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[19] **Descriptive documents** (prot. EX- B6027458)

- Technical note A4-6575 (pg. 8)	rev.0	dated	2016.07.15
- Safety, maintenance and mounting instructions F-425 (pg. 7)	rev.1	dated	2016.07.15
- Declaration of Conformity Facsimile no. 0206 (pg. 1)		dated	2016.07.15
- Drawing no. A1-6493 (2 sheets)	rev.1	dated	2016.07.15
- ANNEX-1 to technical note A4-6575 (8 sheets)	rev.0	dated	2016.07.15

One copy of all documents is kept in CESI files.

Certificate history

Issue no.	Issue Date	Summary description of variation
04	2016.10.31	Updating to standards EN 60079-0:2012+A11:2013, EN60079-1:2014, EN60079-11:2012, EN60079-26:2015 and EN60079-31:2014. New minimum ambient temperature -60°C. Special condition for safe use have been added.
03	2012.04.19	Updating to standards EN 60079-0:2009, EN60079-1:2007, EN60079-11:2007, EN60079-26:2007 and EN60079-31:2009.
02	2010.05.28	Updating to EN 60079-1: 2007 and EN 60079-26: 2007 standards. New type of protection for group I for stainless steel enclosures. Updating to minimum ambient temperature for group II enclosures. New model of aluminium box type GUB-05.
01	2007.10.08	Updating to standards EN 60079-0 (2006), EN60079-1 (2004), EN60079-11 (2007), EN60079-26 (2004), EN 61241-0 (2006), EN 61241-1 (2004) and EN 61241-11 (2006).
00	2003.07.02	First Issue of the Certificate.