



UK Type Examination Certificate CML 22UKEX3252X Issue 0

United Kingdom Conformity Assessment

- 1 Product or Protective System Intended for use in Potentially Explosive Atmospheres UKSI 2016:1107 (as amended) – Schedule 3A, Part 1
- 2 Equipment **Command, control and interface units CCA-.., GUB-.. and CCAI-..series**
- 3 Manufacturer **CORTEM S.p.A**
- 4 Address **Via Aquileia,
10 – 34070 Villesse (Gorizia)
Italy**
- 5 The equipment is specified in the description of this certificate and the documents to which it refers.
- 6 Eurofins E&E CML Limited, Newport Business Park, New Port Road, Ellesmere Port, CH65 4LZ, United Kingdom, Approved Body Number 2503, in accordance with Regulation 42 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended), certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Schedule 1 of the Regulations.

The examination and test results are recorded in the confidential reports listed in Section 12.
- 7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to specific conditions of use (affecting correct installation or safe use). These are specified in Section 14.
- 8 This UK Type Examination certificate relates only to the design and construction of the specified equipment. Further requirements of the Regulations apply to the manufacturing process and supply of the product. These are not covered by this certificate.
- 9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

EN IEC 60079-0:2018 EN 60079-1:2014 EN 60079-11:2012

EN 60079-31:2014
- 10 The equipment shall be marked with the following:



I M2

*(Stainless steel
Equipment only)*

Ex db [ia Ma] I Mb

or



II 2(1) G D

Ex db [ia Ga] IIC T6 or T5 Gb

Ex tb [ia Da] IIIC T85°C or T100°C Db

IP66



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1 of 8

L A Brisk

L A Brisk
Assistant Certification Manager



CML 22UKEX3252X
Issue 0

11 Description

The Equipment **Command, control and interface units series CCA-.., GUB-.. and CCAI-..** are composed by an Ex db or Ex tb enclosure used to install common electrical devices such as contactors, switches, measuring instruments, programmable logic controllers and contact blocks. Pilot lights, maneuvers and push button M-0.. series can be mounted on the cover or on the enclosure walls. Furthermore, 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. They can incorporate associated apparatus for interface with intrinsic safety circuits. The associated apparatus are subject of separate certification with type of protection [Ex ia] IIC.

These command, control and interface units have the body and the cover made in aluminium alloy or stainless steel and are in Ex db [ja Ma] I Mb (stainless steel enclosures only), Ex db [ja Ga] IIC Gb and Ex tb [ja 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 Equipment can be drilled and threaded with maximum size and maximum number of holes as specified in the manufacturer documents annexed. Each Equipment is provided with internal and external earthing screw or bolt.

Identification of Command, control and interface units Series CCA-..., GUB-... and CCAI-..:

Aluminium alloy Equipment			Aluminium alloy Equipment 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	-	-	-	-



CML 22UKEX3252X
Issue 0

Stainless steel Equipment				Stainless steel Equipment 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	-	-	-	-	-

Ambient temperature

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

In all cases, if control-signal operators are installed, they must be suitable for the temperature assigned to the Equipment.

Electrical characteristics

Rated voltage:	12 to 250	Vdc
	24 to 1000	Vac
Nominal frequency:	50/60	Hz
Max. rated current:	400	A
Maximum power for lamps:	3 W with Tamb. +55°C	
Associated Apparatus:	max. Voltage Um ≤ 250V	



CML 22UKEX3252X
Issue 0

Table of typical electrical and electronic Equipment 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 30 sec)	660	-	-
Transformers	660	200	-
Resistors	240	300	-
Terminals	660	-	-
Ballasts	277	40	7,5

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.

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.

Intrinsic safety circuits:

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



CML 22UKEX3252X
Issue 0

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 interface lamps, only LED are allowed	With interface lamps, and/or LED	No interface lamps, only LED are allowed	No interface lamps, only LED are allowed	With interface lamps, and/or LED	No interface 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



CML 22UKEX3252X
Issue 0

Table 3.

Maximum dissipated power inside enclosures						
Enclosure type	Tamb. = +40°C			Tamb. = +55°C		
	No interface lamps, only LED are allowed	With interface lamps, and/or LED	No interface lamps, only LED are allowed	No interface lamps, only LED are allowed	With interface lamps, and/or LED	No interface 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 interface lamps, only LED are allowed	With interface lamps, and/or LED	No interface lamps, only LED are allowed	No interface lamps, only LED are allowed	With interface lamps, and/or LED	No interface 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

Installation conditions

The accessories used for the cable entries and to close the unused holes, shall be subject of a separate certification, shall be used according to the Safety Instructions reported in the relevant certificate and shall guarantee the same type/degree of protection assigned to the Equipment. Moreover, the accessories shall be suitable to be use in the ambient temperature range assigned to the Equipment.

In case of cylindrical threads, the coupling shall be locked against loosening using thread-lock compound.



CML 22UKEX3252X
Issue 0

Warning labels

"Use screws of quality A2-70 with tensile strength of at least 700 N/mm²." (for covers with cylindrical joint CCA-.C and CCAI.. models).

"Warning - do not open when energized."

For equipment with capacitors:

"After de-energizing, wait 10 minutes before opening".

For equipment 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".

For products complete with external coating in non-metallic material with a thickness > 0.2 mm:

"Warning Potential electrostatic charging hazard - for cleaning use only a damp cloth".

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	02 Aug 2023	R15260G/00	Issue of the prime certificate. CESI 03 ATEX 174X, Issue 05 is attached and shall be referred to in conjunction with this certificate.

Note: Drawings that describe the equipment are listed or referred to in the Annex.

13 Conditions of Manufacture

The following conditions are required of the manufacturing process for compliance with the certification.

- i. The manufacturer shall carry out the routine tests prescribed at paragraph 16 of the EN 60079-1:2014 standard.
- ii. The routine overpressure test shall be carried out with the static method (paragraph 15.2.3 of the EN 60079-1:2014 standard) with the following pressure values:
 - 13.8 bar on all CCA-..., GUB-.. and CCAI-.. for minimum ambient temperature until -20°C;
 - 19.0 bar on all CCA-..., GUB-.. and CCAI-.. for minimum ambient temperature until -60°C.

14 Specific Conditions of Use

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CML 22UKEX3252X
Issue 0

The following conditions relate to safe installation and/or use of the equipment.

- i. The accessories used for cable entries and for closing unused openings shall be certified according to the standards EN IEC 60079-0, EN 60079-1 and EN 60079-31. A minimum degree of protection IP66/67 shall be guaranteed according to EN 60529 standard.
- ii. The Command, control and interface units with Draining or Breathing valves installed are not suitable for Group I (mine).
- iii. The Command, control and interface units shall be used in the following ambient temperature ranges:
 - -20°C to +44°C /+55°C: all Equipment for group I (made in stainless steel only), group IIC and group IIIC;
 - -20°C to +44°C/+55°C: all Equipment for group IIC and group IIIC with polycarbonate pilot lights;
 - -60°C to +44°C/+55°C: all Equipment for group IIC and group IIIC without polycarbonate pilot lights.

Certificate Annex

Certificate Number CML 22UKEX3252X
Equipment Command, control and interface units CCA-.., GUB-.. and CCAI-..series
Manufacturer CORTEM S.p.A



The following documents describe the equipment defined in this certificate:

Issue 0

For drawings describing the equipment, refer to attached certificate CESI 03 ATEX 174X and the associated reports. In addition to the drawings associated with CESI 03 ATEX 174X, the following drawings include the additional marking required for this UK Type Examination certification:

Drawing No	Sheets	Rev	Approved date	Title
A4-8324	1 of 2	0	02 Aug 2023	Marking plate for CCA, GUB command control and interface units